THE IUP GEOSCIENCE ALUMNI NEWSLETTER

GeoTidings

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Volume 6, Number 2

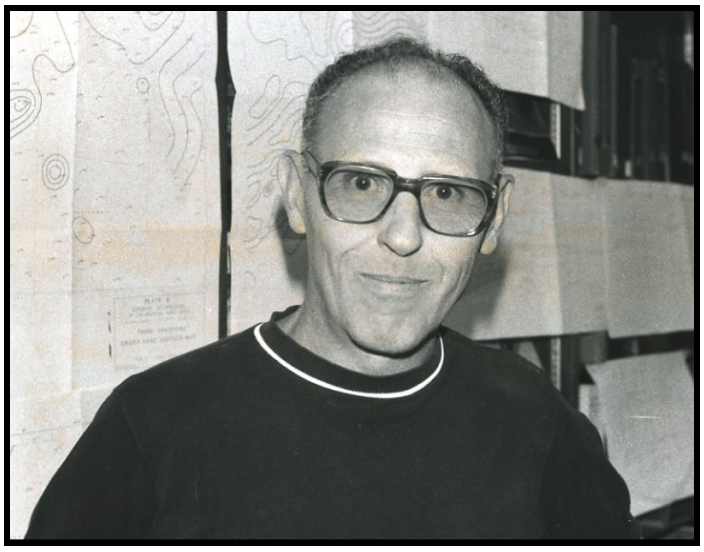
FALL 2013

Cover: Dr. Walt Granata from an IUP field trip to the Florida Keys. Photo courtesy of Tom Moore '76.

Remembering Dr. Walt Granata

Current Department Chair Steve Hovan

We lost one of our department's 'founding members' with the passing this year of Dr. Walter Granata. Walt began his career at IUP in 1967 in the Chemistry Department, along with mineralogist Fred Park. They combined forces with Paul Prince, a climate specialist in the Geography Department, and Bob Woodard, an astronomer from the Physics Department, to form the brand-new Geoscience Department at IUP in 1968.



Walt was instrumental in building our strong reputation as a strong field geology program. He was a great sedimentologist and loved helping train students both in and out of the classroom. Walt served as department Chair from 1972 to 1977, and he continued to lead field trips until he retired from IUP in 1981.

Walt's presence continues to influence students through the Walt Granata Foundation account which supports field geology experiences for our students in the department.

IUP Colleague Joseph Clark

Walt was an excellent geologist, outstanding departmental chairman, and a true friend. He taught a variety of "soft-rock" courses, to which he brought critical industry experience. As testimony to his inspirational teaching, many of his students went on to excel in both the petroleum industry and in academia. As chairman, he guided the Department through its formative years. Walt can be regarded as the father of Geoscience Day, which now in its thirty-ninth year has become one of our most successful programs.

Walt hired me in 1972, and he and Dottie immediately made us feel part of the IUP family. I remember fondly the enjoyable departmental picnics that the Granatas hosted at their farm near Tanoma. Walt Granata was a true gentleman and scholar, who maintained the highest ethical and professional standards. The fruits of his mind and labor ensure that he will long be remembered by former students and colleagues.

John Repetski '69

Doc Granata definitely had a significant influence on my future. When he arrived at IUP I was a senior, with a "life context" framed by being the first in the family to go to college and by growing up within a hundred mile radius of Pittsburgh. By then I had finally settled on Geoscience Education as my academic track, and was pretty much looking at western PA high schools for a teaching career. Then I took Doc G's Historical course, with a bunch of field trips. I managed to ride to most of these in his Karman Ghia (a two-seater by VW, for you youngsters), giving me the one-on-one exposure to not only Doc G.'s geological expertise, but also to hours of anecdotes of life as a professional geologist, and of geology outside of the books. Doc G. recognized that I had the interest, and he clued me in on the rigors, and rewards, of graduate school and geology as a career. I think it was his tales of geology field camp in Wyoming, with its rattlesnakes, mountains, and wide-open spaces that sealed it for me – to at least take a look over my previous horizon and maybe take that leap. Well, Thanks, Doc! You were right, about the rigors, but also about the rewards, the rocks, the satisfaction of learning something very useful and extremely fulfilling.

Remembering Dr. Walt Granata

Linda Stark Ferrant, '74

"Doc G." was a passionate geologist, who loved sharing his knowledge and experience with his students (or anyone whose interest was piqued by his enthusiasm). His excitement over a rock or a fossil was infectious….I could not part with any of the samples I collected during my four years at IUP (my father's parting words to me when I moved out of the house were: "Make sure you take every one of those "darn" rocks with you!"). There were very few females in the Geoscience Dept. when I arrived. Doc G. took me "under his wing" and encouraged me to be involved in department activities and participate in as many field experiences as possible. As a result, I was president of the Geoscience Club for two years, the department "rep" for IUP's student-teaching committee, and (most importantly) I found a whole new "family" through the camaraderie developed on those many field experiences.

And speaking of field experiences, it was Doc G. who first introduced me to "lipidifying juices"…. a "must" on any excursion. Technically, it was a term he used in his paleo class, but everybody soon learned it was his term for a "good, cold beer." And he loved his beer! Who else would have an extra refrigerator in their home, retrofitted to hold a half keg, have a "tap" on the door, and a hose with a pinch clamp, running from the kitchen to his study. I can see that impish grin on his face right now! Doc G. shared his home and his family with me. He and Dottie were my college parents. The door to his house and his office were always open. He always laughed at my stupid jokes and the predicaments I got myself into. Doc G. taught me a lot about geology, but the most important lessons occurred outside the classroom. "Thank you, Doc G.", you will be missed.

John Taylor '75

In September 1971, a group of us descended upon the newly opened Pizza Hut after the first Geoscience Club meeting of the year and were seated along the sides of two long tables. I was a freshman Geology major and found myself seated next to Dr. Hall, and across the table from "Doc G". As the waitress was taking drink orders, I broke the monotony of "beer, beer, beer...." with my choice of beverage; "Pepsi, please." All conversation stopped. Dr. Hall broke the silence, springing to my defense by pointing out that I was too young to order beer. However, not fully grasping the gravity of the situation, I explained that it wasn't that; I just didn't care for the taste of beer. Doc G, hands clasped together and fingers intertwined, looked particularly pensive and leaned forward to ask "Have you considered changing majors?" From the twinkle in his eye, and the laughter that erupted, I knew immediately that I was going to like this marvelously informal department, and thought "This is going to be four great years." Little did I know!

Forty-two years later, all but five of them affiliated with IUP Geoscience, I have to say that no one had a greater influence on my professional life than the guy seated across from me that night in 1971. With my primary interests being carbonates and fossils, I gravitated to Doc G's classes and also conducted my senior research project under his supervision, presenting the results at the very first Geoscience Day in 1975. I eventually selected University of Missouri for my graduate work, in part because Doc G had done his Masters there. In fact, it was he who convinced me to pursue an advanced degree. My goal had been to complete the B.S. in Geology and find employment as a geologist. And that is actually what I did…sort of. For nearly two years after graduation, I worked full time for an outfit in Texas, but did so in the musty basement of Weyandt Hall as "geological assistant" to one W.H. Granata Jr. whom they had contracted to complete a subsurface study of the northern Appalachian Basin. I can't tell you, or even recall, all that I learned in those years, but a few discoveries stand out. 1) What I'd learned in four years wasn't nearly enough, 2) life as a petroleum geologist is hideously devoid of field work that involves rocks and fossils, and 3) (ironically, because Doc G loved them) I absolutely hate working with

Remembering Dr. Walt Granata

logs and subsurface maps! Nothing brightened his day like the arrival of a new wire-line log (we used primarily gamma ray logs) to add to our cross sections. He would unfurl it in front of me and taunt, “Look! Total exposure; not a single covered interval!” The assistant/curmudgeon would respond, “So, how many fossils and sedimentary structures can you make out in that one? None? That’s what I thought. Just like all the others!” And so it would go.

The years in the dungeon stood in stark contrast to the myriad occasions when I had stood alongside Doc G examining outcrops in Maryland (1972), Kentucky (1973; 1976), west Texas (1974), central Texas (1975), Delaware (1977), New York (1977), and Florida (1977), and my enthusiasm matched his. So in Fall of 1977 on to graduate school and a career in academe I went, never looking back, except with profound appreciation for the guidance and the friendship – as do so many others who fell under his influence in those early days of IUP Geoscience. Bon Voyage, Walt. We are diminished by your departure, but will muddle on nonetheless, passing on the many things that you taught us. Well, at least some of them. I still don’t like the taste of beer.

Rich Parrish ‘75

Doc G was my advisor as a geology major in the early 70s. He was also my professor in subsurface geology, among other courses. He was the one who showed us the face of the oil and gas industry, which I went on to join for the next 38 years. His brainchild, the course “Geology of Big Bend”, was a great opportunity to study that amazing part of the country, with the associated field trip to Texas being the ultimate cosmic road trip. I will always remember Doc G as the quiet, sage and amusing geologist and Indiana County sheep farmer that showed me the way.

Tom Watkins ‘75

Regarding Dr. G, I do not seem to recall any particular story to tell about him. However, if asked to describe him I would say, "A soft spoken man of integrity, who consistently demonstrated a sincere interest in sharing his knowledge and mentoring his students."

Tom Moore ‘76

Nearly all of the photographs that I had from my undergraduate days met with disaster, but for a miraculous few. One of those was from the trip we made with Walt to the Florida Keys, about which there are a number of "what happens in Vegas, stays in Vegas" stories. This photo (shown on the cover of this issue) is the one picture, from that trip, that I have of Walt. As you can see, we had just lovely weather...a big storm blew in and although we did not have much rain, it was cloudy, cool and on the water rough. That was particularly hard on Walt, bouncing around in small boats, as he had serious back problems and pain, yet never let on that to be the case. From the photo, it is not patently obvious that it is him, unless one recognizes the hat, particularly, and the gait.

Remembering Dr. Walt Granata

I remember well taking the photo. It was one of the best trips, best courses, I ever had. Later, when working at Phillips, our Carbonate depositional environments course included many of the same stops (before going on to "twinkle our toes in the oolite shoals" on the Bahama Bank), and the fellow from Phillips that was joint leader of the trip with Robert Ginsburg (University of Miami) was astonished that we had driven down there as undergraduates for such a trip, and we had seen so much and had been well taught. I said at the time, and reiterate now, that it was all because of who led that trip and what he was willing to do for his students.

Walt is the primary reason I am doing the petroleum geology course this spring semester at IUP. It is a small token of "giving back". He played an instrumental role in what I have done with my life since I met him, and particularly since I took his Subsurface Geology course. I owe him and the other emeriti from that time an awful lot. For one, I know that--unlike some who may consider themselves each "a self-made man". None of us are. Just like a bit of geology, we are a product of our provenance, our history, and the diagenesis that alters us as we pass through various settings. But if that raw material was different, or lacking, then the product would not be the same. As Adam Sedgwick said of William Smith, when presenting him with the Geological Society (London) first Wollaston medal in 1831, "If in the pride of our present strength, we were disposed to forget our origin, our very speech would betray us; for we use the language which he taught us in the infancy of our science."

John Ellenburger '76

I rarely submit "old stories" about people because I simply don't trust my memory to be faithful to the facts…especially going back 40 years or more, but in this case, an exemption is warranted. I had the privilege of being in a number of classes and travelled on a number of field trips under Doc G. One of the first field trips that comes to mind was a Sedimentation class field trip to the Lewes, Delaware station along with Mr. Prince's Oceanography class. They were the "scientists", and we were immediately classified as the "ditch diggers". Well, our field trip was largely to drive around to different beach areas and dig trenches in the sand. When the trench was long and deep enough, Doc G would "face up" the sides with a machete, and we could examine the bedding orientation and grain size of the sand.

Of course, the "scientists" all had to study in the evening, but the ditch diggers were known to drink a little, after all, digging ditch was hard work. The class, I think there were about 7 of us, decided that we had never seen Doc G ever seem to be influenced by drinking beer, so we decided to keep his glass full and nurse our own. This took place at a local pub, but the name escapes me. In any event after some time in a booth, one of the members of the group needed to make a visit to the necessary room. Doc G was on the end, and rather than step out of the booth, he just stepped up onto the bench, and said, "Watch me get high!" at which time he put his hands over his head and accidentally pushed several suspended ceiling tiles up off their tracks. This was followed by an immediate, "Oops!" as he put the tile back into place. The class considered it to be a mission accomplished.

Joan (Hancharik) Gawlaski '79

The funniest thing I can remember is the time we took the spring break trip in '78 down to Big Bend and the Guadalupes. The last stop before we entered the Park – Doc G. came out with a case of Bud. We thought – wow! For one night!! He failed to tell us there would be no 'shopping' for the next three days! So we sat around the camp fire with him and his smile drinking his beer. Joking aside, I think the Contouring class Doc G offered my senior year had to be one of if not THE most useful course I ever took. It helped at Baylor and needless to say with Exxon. Now I get to 'try' and teach freshman the art of contouring. Yikes!

Remembering Dr. Walt Granata

Paul Weaverling '79
While I never got to experience one of the infamous/famous field trips with Doc G, I have very fond memories of his Paleo class. Who could forget the countless overnight hours spent prepping for the lab exams with the midnight run to the deli across the street for a Capitol Roll. I also recall learning the fine art of logging drill cuttings and the proper "oral" technique for determining the difference between siltstone and claystone when the eyes could not quite discern the difference.

Fast forward about 20 years from that time and I am working on a remediation project at the Rocky Mountain Arsenal that required review of dozens of old boring logs from some rotary holes drilled in what were found to be very highly impacted areas – nasty stuff. On one mud log, prepared by some unknown geologist, clear as day was the notation "tastes salty" and the lithology was claystone. I had to explain to several disbelieving colleagues exactly why that person would have been chewing on the drill cuttings and how I came to know about it – Doc G of course!

Steve Woodward '79
My favorite story of Doc G is one that I am sure you will recall. He told this story while speaking to a large gathering, perhaps at the annual geoscience dinner that we used to have. As the story goes, Doc G was working in the rock lab. He was dressed appropriately, meaning something that appeared less than professorial. While in the lab one of his shoe strings broke, so he borrowed some string from a sample bag to re-tie his shoe. You can imagine the overall picture – casual clothing with some mud here and there, and one shoe tied with white string. After finishing in the lab, he headed toward his office where he was accosted by a woman. Her child had just dropped something on the floor outside the office area – ice cream as I recall. The woman assumed Doc G was the janitor due to his appearance and asked if he would clean the floor. Of course, Doc G just smiled and assured her that he would clean up the mess. And that's just how I remember Doc G: polite and soft spoken with a great sense of humor. Doc G was a great professor and all of us respected him tremendously.

Tony Prave '80
I can recall Doc Granata becoming rather irritated when he would notice upon examining a person's isopach map exercise using pencil and paper (the good ol' days, eh?) that, and I quote, "there's not enough damn eraser marks". He felt that doing the job properly required you to have numerous repeated attempts before an acceptable map could be constructed. The other thing I remember was his skill in sketching and making us sit for hours in a lab drawing fossils.

Dorothy Merritts '80
Doc Granata taught a course on subsurface geology in which we generated contour, isopach, and other types of maps on large sheets of papers. Thinking in 3-D and extending that thinking to the subsurface were challenging and new for me. I remember being in his classroom and staring at those maps, trying to find and interpret various geologic structures. Doc G would come in the room and stand quietly for a while, then ask a short question. I'd try to answer, and after he left the room I would realize that he had guided me in just the right way, giving me just enough information to move past a hump in learning.

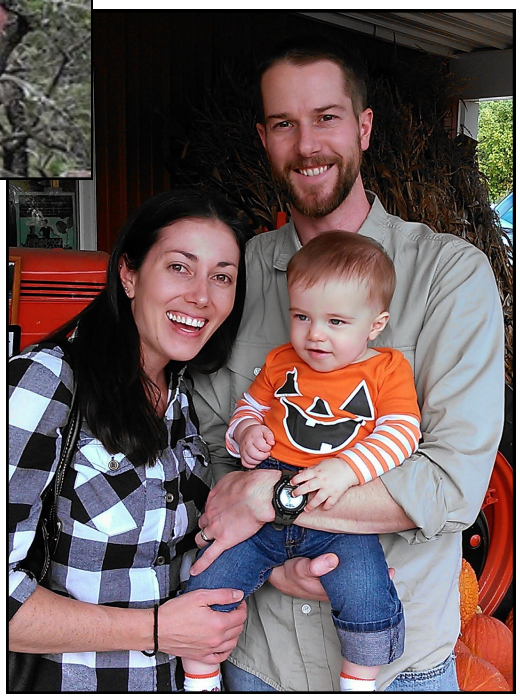
Now that I've taught for 27 years, I realize what a great teacher he was, and how hard it is to be just a guide (i.e., not a driver). Doc G showed up at the right times, said just the right amount, and guided his students to discover a whole new world beneath the Earth's surface.

Dr. Nick Deardorff joins the IUP Faculty

This is my first (hopefully of many) Geo-Tidings update, as I am the new Mineralogist/Petrologist faculty member. As I write this I am only a couple of weeks away from finishing my first semester at IUP and, so far, everything is going very well. The faculty and students have been very welcoming, making me feel right at home as though I have been working here for years, although I really only know how to get from Walsh to Weyendt on campus. This semester I am enjoying torturing my students in Mineralogy & Petrology and introducing geologic concepts to our Dynamic Earth lab non-majors.

Nick jumped right into our field workshop schedule, helping Jon Lewis teach Field Geology this summer.

I suppose I should tell you all a little about myself. I moved to Indiana, PA this previous August with my wife, Jenna, and now nine month old son, Braden. Juggling a new job and trying to help out at home has been a new challenge and a real test on my time-management skills, which have improved dramatically in one semester. We moved here from Minnesota, where I had been teaching for two years after finishing my Ph.D at the University of Oregon. I must admit we are enjoying the tropical southern climate (relative to Duluth, MN).



Jenna, Nick and Braden Deardorff enjoy an autumn day in Indiana County — without parkas!

I am a volcanologist with research interests in eruptive processes of both submarine and subaerial volcanoes. More specifically I characterize volcanic deposits and link them with eruption dynamics. I currently have two ongoing projects. One involves using video of an actively erupting submarine volcano (NW Rota-1, Mariana Arc) and samples collected the day they were created, using a remotely operated vehicle during research cruises. Characterizing vesicularities (from exsolved volatiles) and crystallinities, along with geochemical data, allows me to determine the magma ascent rates and link the observed eruption conditions to the deposits produced. This will help us to characterize eruption dynamics from submarine deposits that were not observed during emplacement.

My second project uses Lidar (Light Detection and Ranging- a type of airborne laser swath mapping) to produce high resolution (<1m horiz.) 3 dimensional topographic data sets of lava flows in central Oregon. Lidar allows me to collect accurate measurements of the lava flow morphologies that are impossible to collect in the field. Simple measurements of the lava flow (such as flow width and slope) can be placed into numerical models to determine emplacement rates and duration for prehistoric flows. This is incredibly helpful in establishing hazard and risk assessments for intermediate lava flows, of which only a few have been witnessed.

I am currently writing a couple of small internal grants to get funding to head out to Oregon next summer for some field work and to purchase a few new datasets to expand my research and create a few projects for students. Hopefully I'll get some IUP students out working in the high cascades of central Oregon soon.

GEOSCIENCE DEPARTMENT NEWS

We are Still Searching for a Geochemist ….

The Geoscience Department has been given the go-ahead to resume our search for a tenure-track Environmental Aqueous Geochemist / Hydrogeologist. Please pass this opportunity along to anyone you think might be interested in joining our department. More information and deadlines for application can be found at our website link: **http://www.iup.edu/geoscience/employment/default.aspx**

… But We Have a New Department Secretary!

We know our alumni correspond frequently with our department secretary, keeping their contact information up-to-date at all times. (You all do that, right??) So we wanted to introduce the newest person to fill this very important post: Mrs. Tracey Emanuel. Tracey says, "I joined the Geoscience Department this past July. This is my first department secretary position since starting at IUP in January 2005. I love it! I feel truly blessed to be working with such wonderful people. I'm proud to be a part of the Geoscience family! Speaking of family... My husband Nick and I have been married for 17 years. We have a son, Nick Jr. who is 14 and 2 furry babies, our dogs, Jake and Star."

Tracey replaces April Mazur, who retired last spring after serving as our secretary for the past 15 years. (For April's update on her retirement, check out page 26.) Tracey can be reached in the mornings at the IUP Geoscience office phone (724-357-2379). In the afternoon, we share Tracey with the Physics Department, but she can still be contacted via email, at tracey.emanuel@iup.edu.

Everyone should take a few minutes to welcome Tracey to the department …. and while you're at it, why don't you update your contact information too?

IUP Geoscience Alumni Council Members

Dave Brezinski '77 ♦ Wendy Straatmann '92 ♦ Heather Renyck '99 ♦ Jeff Dereume '08

If you have any suggestions or ideas for our council members, you can send them to geoscience-info@iup.edu with a subject line of Alumni Council Feedback.

IUP Geoscience Students Win Awards for Research and Scholarship

Indiana University of Pennsylvania

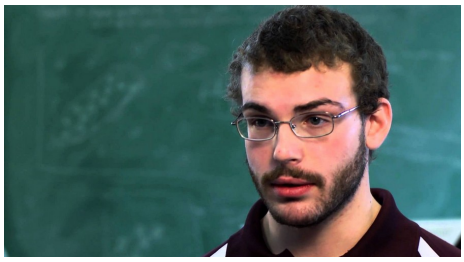
IUP DAILY

IUP's Electronic Newsletter for Faculty and Staff

April 3, 2013

Geoscience Student O'Hara Named Goldwater Scholar

Dan O'Hara, a Geoscience and Computer Science double major, was one of 271 students nationwide awarded a Barry M. Goldwater Scholarship for 2013–2014.



Dan O'Hara, from Ebensburg, Pa., is a McNair Scholar with a passion for understanding earthquakes—what causes them, how they can be predicted. His research and academic achievements earned him a highly competitive Barry M. Goldwater Scholarship. Dan plans to pursue a doctoral degree and become a professor of Geophysics, passing on to the next generation his vast knowledge of the earth and its scientific wonders. Click here for a video of Dan discussing his research, his life, and the opportunities made possible by IUP.

IUP seniors Matt Toland and Anthony Vaiana (center, both in beige shirts) won awards for their research posters at the Pittsburgh Geological Society Student Night, April 2013.

2013 GEOSCIENCE BANQUET AWARDS

Outstanding Research Awards:
Matthew Toland and Dan O'Hara

Note: both Matt and Dan presented such outstanding research that two awards were given out this year.

Best Geoscience Day Presentation Award:
John Corbett Kearney

Dean's Scholarship Awardees:
Savannah J. Irwin *"Dean's Scholarship for Outstanding New Geoscience Student 2013"*

Thomas J. Paronish *"Dean's Scholarship for Early Career Geoscience Student 2013"*

2014 Calendar of Events

March 23-25, 2014— Northeast GSA Section Meeting, Lancaster PA

Join IUP faculty and students at this regional meeting just across the mountains from western PA. Dr. Katie Farnsworth will be bringing her class of senior seminar students to learn more about how to present a talk and poster (or perhaps how NOT to present a talk and poster, depending on how good the exhibitors are). In addition, students working on projects with Dr. Farnsworth and Dr. Jon Lewis are sending in abstracts so they can present their research results. If enough alumni are interested and planning to come, we can even try to arrange an IUP evening get-together.

April 25, 2014 — IUP Geoscience Day and Geoscience Banquet

The annual celebration of IUP Geoscience student research and accomplishments will be held on the traditional last Friday in April this spring. In addition to the usual slate of student research talks, which range from studies of trilobites and Taiwan tectonics to studies of modern stream flow and pollution problems, we have invited alumnus Kalin McDannell '08 to discuss his PhD research project on the geo-chronology of cratons in Mongolia and Canada.

In the evening, the Geological Society of IUP will once again sponsor the Geoscience Banquet at which graduating seniors and other outstanding students will be honored with awards and scholarships.

All alumni are welcome to attend either or both of these events. For more information, keep an eye on the GeoTidings Facebook page, the department website or get in touch with department secretary Tracey Emanual.

ALUMNI SPOTLIGHT: ERIN MCGOWAN '13

Erin McGowan can tell you a lot about the power of alumni networking. After her graduation this past May, she spent the summer working an intern for EQT. IUP is very fortunate to have two alumni (Scott McCallum '00 and Jeff Dereume '08) employed by this growing regional energy company. Each fall, executives from EQT make the long trip up to Indiana to interview our seniors, giving them a shot at highly competitive summer internship positions along with students from West Virginia, Pitt and other larger schools. After completing her internship, Erin headed out to begin her master's degree at Colorado State University in Fort Collins, a program recommended to her by Jeff Dereume. She sent along this update on her recent accomplishments:

"EQT was really fun this past summer, Craig Eckert (head of exploration) was an awesome mentor. I got to work with the exploration team mainly on a North American Shale basins project with Core Labs data. I took Core Lab data imported it into Geographix, mapped, and analyzed certain parameters in only the black shales. To do this, essentially, I had to pick intervals to define black shales in cross-section, average the core data in that interval (parameters like TOC, quartz, pyrite, oil/gas/water saturations), and then created maps for all of them. The outcome was really neat to compare basin to basin and look at relationships between parameters, especially for comparison with Marcellus when EQT looking to explore potential plays outside the Appalachians.

As far as CSU goes, I'm finally settled and just getting into classes. I've been able to get out to Rocky Mountain National Park and had a class to Moab and Green River in Utah to see Arches and Canyonlands (the pictures show entrenched meanders at Dead Horse Point and Mesa Arch). So far, I love it. My field work will take place this October in Elko, Nevada. Not the greatest place to visit - but I really like my thesis. It ties in gamma ray logs and sed/strat work for lacustrine shales working with Noble Energy. Should be fun! "

Editor's Note: Alumni Spotlight is a regular feature of GeoTidings. Any alumni with a story to share or an interesting career path can submit a profile.

ALUMNI NEWS

Rich Parrish '75
I will be retiring from Chevron effective February 2014, after 33 years with the company in Houston. I had started at Getty Oil in 1980, which then became Texaco, which then became Chevron. It has been an interesting ride along the way, to my current position of Exploration Manager for Latin America.

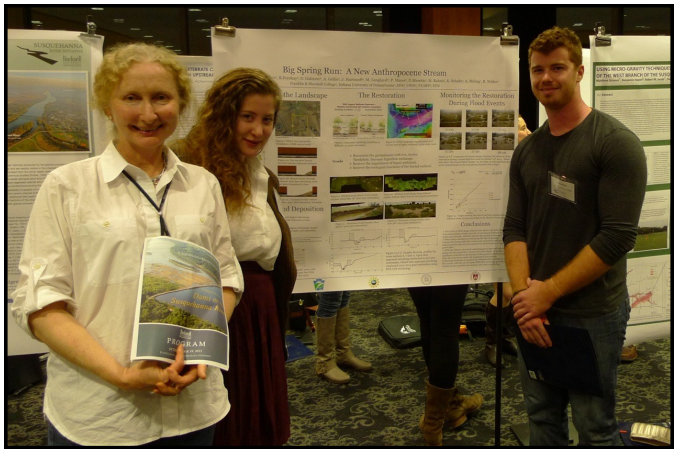
Tom ("P.V.") Watkins '75
Right after I retired, in March, Fran and I went to Australia. The highlights of the trip were snorkeling the Great Barrier Reef and climbing up and over the Bay Harbor Bridge in Sydney. Seeing the opera house was also cool. No, we did not go to Alice Springs. Fran did not seem to get excited about the idea of hiking up the rock. Her feeling was we saw red sandstone in Moab, Utah as well as Monument Valley and once you see 1 big red rock, you've seen them all, i.e., they all begin looking alike. Go figure.

Tom Moore '76
Just yesterday, as I pulled out a old text (Blatt, Middleton, and Murray' that was our text for Joe Clark's Sed-Strat class) to scan a couple figures, out fell a copy of the program for the April 22, 1975 Geoscience Banquet. The event was in celebration after the FIRST annual Geoscience Day--which I understand Walt Granata conceived and promoted. It was held at the Indiana VFW club. An invocation by Dr. J. C. Clark was followed by a smorgasboard dinner, remarks by master of ceremonies Thomas Watkins and by department chairman W.H. Granata, finishing with entertainment by Joanne Merritt and John Taylor. Faculty members were, as I remember, all in attendance: F. R. Park, F. W. Hall, P. A. Prince and C. J. Sutton, in addition to the above.

By the way, the banquet committee consisted of Barry Franz, Sandra Bowen, James Knapik and Thomas Moore. The program had handwritten on it that it was for 'Muffie' Mertz. You know of course that Joanne became Mrs. Taylor, but may not be aware that Sandy Bowen became Mrs. Franz and Miss Mertz didn't want to have her intials change upon marriage, and therefore agreed to become Mrs. Moore. We three can't really blame Walt for those particular outcomes. But while I can't speak for others, I can say that I know how profoundly that Walt and the others who were there at the time, changed my life and in ways directed where it went from there, for which I will be forever grateful.

Steve Woodward '79
I continue to work as an environmental consultant in Seattle. Recently, most of my work has been on waterfront and sediment cleanups. This seems to be the focus of environmental actions over the past several years, at least in the Pacific Northwest. Over the years, I have often thought of Drs Clark, Park and Hall in addition to Doc G. They were all very influential in my life.

Dorothy Merritts '80
In recent months I have been working with IUP undergraduate, Aaron Blair, and Franklin and Marshall alumna, Kayla Schulte, on a state and federally funded wetland/stream restoration project at Big Spring Run in Lancaster County, PA. The project is designed to return the bottom of the Big Spring valley to its historic condition by removing the impairment of legacy sediments and creating a wet meadow with small anabranching streams. In October we had the privilege of presenting our work at the 8th Annual Susquehanna River Symposium at Bucknell University. Our current project is to trace sediment (both fine suspended and coarse bed load) moving into and out of the restored part of the watershed.



Dorothy Merritts with F&M alumna Kayla Schuut and current IUP undergraduate Aaron Blair.

ALUMNI NEWS

Gary Smarsh '81

On Oct. 22nd, I reached 25 years of employment with the New Jersey DEP. Jeff Story, Amy Telford, Tim Nuss, and Jamie Carmargo are all still here too! I was in Indiana around Labor Day and the university is really getting many new structures… Happy Holidays to all!

Scott Ishman '82

My wife Amy ('83 BSN) and I are living in Carbondale, IL where I have been in the geology department of Southern Illinois University Carbondale for 14 years. In January I was appointed Acting Associate Dean of the College of Science. Our son Zach has a BS in Geology from SIUC and is in graduate school at Indiana State pursuing an Master's Degree in GIS. Our daughter graduates in December with a degree in Marketing.

Jeff Miller '87

2013 has been pretty awesome. In January I received an Outstanding Achievement award at work (URS Corporation). The award is given annually to only 10 out of approximately 1000 employees in the Region, and even came with a nice little bonus. Alas, I was laid off in June (along with my wife Anne, who worked in the same office). But! we knew it was coming for many months so made the most of the situation by travelling much of the summer.

Jeff on his fuel truck, parked on sea ice in McMurdo with Mount Erebus smoking in the background.

First we went to Iceland, which was one of the most stunning places ever. The geology is so raw and in your face. Volcanoes and huge waterfalls and glaciers! The original 'geyser'! You can even walk inside a spreading center! I couldn't recommend it more to fellow nerdy geologists. We then spent a couple of months hiking in the Canadian Rockies. Highlights there included seeing a wolverine and finding some sweet Burgess Shale fossils. (It was like $100 to see the original quarry though...so we passed on that).

October found us back to work. We are both in the US Antarctic Program and stationed at McMurdo until next March. I am in the Fuels Department, something completely different from my normal environmental consulting (I like to say I'm now part of the problem). Hopefully Dr. Poage has plans to return and continue his research in the McMurdo Dry Valleys!

Tim Nuss '88

This is Tim Nuss, Class of 1988. I am alive and well and still reside in Mt. Holly, NJ. I still work for the NJ Dept. of Environmental Protection. I did have a slight change in career paths a couple of years ago, and now work in the Immediate Environmental Concern Unit. I basically oversee Immediate Environmental Concern cases, where potable wells, or indoor air quality has been affected by discharges to the environment. (Gasoline discharges, dry cleaner discharges of PCE, TCE etc…) So, I get to manage those types of cases, and make sure the public is protected. I work out of one of the State's field offices, and it gets me out in the field a little more, and is a nice change from the normal types of cleanup cases I was working on for 20 years.

My wife Doreen and I have been married for 17 years now, and our daughter Shauna just turned 13. She is an "A" student in school, and is in many honors classes. She is also a gifted athlete that plays travel Soccer with the Pemberton Chaos, (Ranked #3 in South Jersey) and travel Softball with

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the New Jersey Mystics. She also tried out for the boy's soccer team in her Middle School this year, and made that team as well, and started all season. Maybe she'll end up at IUP, playing softball or soccer for the Lady Hawks!? This is Shauna with me after her team won first place in this Fall's USSSA Fall Classic. By winning, they qualified for the USSSA World Series in Orlando next summer.

We still enjoy our vacation home in the Outer Banks, in Salvo, NC. We invite all IUP Alumni to contact us if they'd like to stay at our home for vacation. We'll work a great deal out for their families. Please pass on my email and contact info.
I still enjoy playing tennis to stay in shape, and also play as much golf as is humanly possible. (Much to my wife's dismay) We are planning a trip to Pittsburgh in the near future and will swing through Indiana to give my daughter a tour of the campus. She is only in 7th grade, but it's not too early to have her start looking around at colleges.

Attached is a picture from the Outer Banks this August. We took an amazing horseback ride through the Buxton Woods Maritime Forest Reserve, and came out on to a deserted section of beach just south of the Cape Hatteras Lighthouse. This is definitely the way to do Sedimentary Petrology!

Scott Mutchler '93

I started my own analytics consulting company about a year ago and within 6 months my company was purchased by Quebit.com. I love what I do... using analytics to reduce fraud, fight crime (with effective police deployment) and help medical patients receive more effective care. I co-authored my first book (IBM SPSS Modeler Cookbook) this year. Writing a book is 10x more work than you first imagine! Cathy, Makena and I live in Erie, Colorado now. It's all Dr. Cercone's fault. She introduced me to Colorado and I've been hooked ever since! The family is traveling to Europe next year so we can renew our wedding vows and expose Makena to some different cultures. I think of my days at IUP often. It was a really special place filled with some amazing people. I would love to reconnect with some of my old IUP classmates on Facebook. Look me up!

John Dembosky '93

Victoria Elizabeth Dembosky was born at 10:52am on June 30, 2013, at Cape Fear Valley Medical Center in Fayetteville, NC. She was 2.5 kg and 46 cm long (Please note that all infant records are now officially in the proper international units) . Her parents are John (Jr.) and Deborah Dembosky. John is a graduate of Marion Center, IUP, and Pitt. The couple currently works at Methodist University where the couple met and Deborah graduated. The girl's grandparents are John (Sr.) and Patricia Dembosky of Indiana PA and Thomas and Arleane Riley of Fayetteville NC.

John Bush '96

Well, I have had mucho changes in my life in the past year....Here's a recap. I received my Profes-

sional Engineer License in Pennsylvania and am now a PE in both Delaware and Pennsylvania. On July 19th, my fiance (Bobbie) and I became the parents of twins, Benjamin Robert Bush, and Annabella Patricia Bush - they are just about 4 months old now. I included a photo of "The Terror Twins" Ohhhhhh...I am so tired...all the time.....

Finally, in September, I "retired" from PENNDOT. (I had 15 years, so I was able to get a pension! Whoo-Hoo!) I now work from McCormick Taylor, an engineering company. It has many offices, but I work out of the Exton, PA office. I mainly deal with bridge repairs and maintenance, but am branching off into other areas

Martin Arford '97

I'm still happily employed in the Geography Department at Saginaw Valley State University. In the past few years I've started some research at the Rocky Mountain Biological Laboratory, near Crested Butte, Colorado, where I'm examining sediment pollen/charcoal from kettle ponds, and also dabbling in some tree-ring analysis. I'm excited to now be teaching Intro Geology (finally!) classes for the Physics Department (we have no Geology Department, gasp!). I'm teaching Intro to Soil Science and serve as steering committee chair for our brand new Agricultural Studies Minor Program. I'm also on the steering committee for SVSU's brand new Saginaw Bay Environmental Science Institute, and I coordinate SVSU's Adopt-a-Beach service-learning program. Life is really, really busy, but it is exciting to be part of new programs and course development.

Marty Arford with SVSU students Jessica Fenner and Jacob Mojica clean up a beach in Michigan.

I never knew Walt Granata, but I certainly do have lots of fond memories from my IUP Geology years, especially the field courses I took: Geology of Newfoundland, Oceanography at Wallops Island, and Carbonate Geology of the Florida Keys & Bahamas.

Wendy (Williams) Smith '05

Over the past year I officially became certified as a K-6 teacher in PA. I am only substituting now and

mostly just being a stay at home mom to our almost 20 month old daughter, Olivia. She is super awe-

some! I am still a Logistics Captain in the Pennsylvania Army National Guard as a traditional weekend soldier. Another big accomplishment I had this year was running my first half marathon in Hershey this October in 2:18!

Caleb LaMont '07

I am now married, in my seventh year of teaching [in the Richmond, VA area], and have just had my first child. Her name is Sydney and she is an absolute joy. Also, I have taken up astro-photography and am absolutely obsessed.

Justin Reed '07

Keisha and I are living in Knoxville now. I am doing my Masters is Science Ed. at the University of Tennessee-Knoxville. It took me some time, but I finally received my TN teaching license. The process wasn't difficult, but it was lengthy. Keisha found a job working in billing at a physician's private practice. I am still deciding whether I will pursue a full-time teaching position or to continue as a full-time student.

Mike Jarvis '08

After looking back on the last couple GeoTidings editions, I realized I hadn't sent an update in a few years, so here we go. I continue to work as a petroleum geologist in Pittsburgh, and have recently started in a new position with Range Resources in Canonsburg. We are working on developing the Marcellus shale, and also looking at opportunities to enhance other Appalachian basin assets that Range has access to.

Over the past couple of years I have been fortunate to have had some great professional experiences while working different projects in North America. While working with Talisman Energy, I spent about 4 months in Calgary, Alberta working on their Montney Shale project in the Western Canadian Sedimentary Basin. While working on the project, I spent time in the Alberta core facility, which houses thousands of feet of core taken in that province. The facility is quite large and offers a great place to get your hands dirty and put all of the skills Dr. Taylor and Dr. Farnsworth gave us to good use. Calgary is a beautiful city and a gateway to the Canadian Rockies, which provided an excellent place to get away while still being close to the city.

Returning to Pittsburgh in 2012, I started a new position with Mountaineer Keystone, a small, privately funded, start-up, looking at the Marcellus and Utica shale plays in Ohio and West Virginia. I worked on a development area for the Marcellus in West Virginia, and was responsible for much of the geologic and geophysical analysis for our area of interest.

During the last couple of years, I have also been serving as an officer for the Pittsburgh Association of Petroleum Geologists, acting as President for the last two years. It has been a rewarding experience, allowing me the chance to interact with many of the oil and gas professionals in the Pittsburgh area. We meet once a month from September to May, and have technical presentations as part of each meeting. The group is looking into new ways to perform professional and community outreach in the Pittsburgh area, and we are hoping to start some of that work in early 2014.

At the same time I was traveling back and forth to Calgary, my wife and I had just purchased our first home in Franklin Park, PA (just north of Pittsburgh) and started to lay down more permanent roots in the area. We have two golden retrievers, Gibbs and Jasper, and spend much of our free time in North Park, hiking and walking with them.
Happy Holidays everyone!!!

Jeff Dereume '08

Career wise, I am still employed in the exploration and production group at EQT Production in Pittsburgh, PA. In May I was promoted to the geology team lead for our northern West Virginia Marcellus development and operations. We had our second IUP summer intern Erin McGowan with us for the summer and she did great work evaluating log and core parameters from shale basins all over the United States. Her work will be used by our outside the basin exploration and acquisition groups.

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I got married last month here in Pittsburgh. My wife is also an IUP grad, and we've been together since meeting at IUP in 2007. We spent the end of October honeymooning in southern Spain which was fantastic if anyone has the chance to get there.

Kalin McDannell '08

I am still at Lehigh University pursuing my Ph.D. in the Earth and Environmental Sciences Dept. (technically geology). I have been officially bumped up to Ph.D. candidate status and just need to finish my research and publish to graduate. My main field is geochronology with a focus on medium-low temperature 40Ar/39Ar and (U-Th)/He thermochronology and thermal modeling. My main field areas are in central Mongolia and the North American craton (Canadian Shield). I also finished an internship with Chevron in Houston last summer working on their hydrocarbon charge team doing geochemistry and basin modeling. Chevron has also given me an offer for this coming summer as well, and I will be going back to Houston.

Editor's Note: Kalin will be our featured alumni speaker at Geoscience Day on April 25, 2014.

Dan Saftner '11

After a two-year service as a physics teacher in Cameroon, I received my RPCV (Returned Peace Corps Volunteer) status in May. Since the completion of service, I have moved back to the Pittsburgh area. I am an active member of the Pittsburgh Area Peace Corps Association. In June, I founded Macroscopic Solutions with fellow IUP Geoscience alum, Mark Smith. Macroscopic Solutions offers high resolution, 3 dimensional imaging technologies that are being used for interdisciplinary scientific research and the digital archiving of scientific specimens.

Anthony LeDonne '11

Hope all is well at the Geo Dept there. I've been doing the mud logging thing for about a year and a half now. Also going to send some apps into grad schools again over these next coming weeks. I think I want to try and go again next year. Other than that just hanging out enjoying life.

Matt Harding '12

Well it has been a little over year since I arrived at Kent State University. During the past summer, I worked for the state of Ohio's Division of Oil and Gas, as an intern well inspector. Right now I am TAing Kent State's Mineralogy- Petrology course. Basically I help the students understand minerals, rocks and thin-sections, for which I am modeling Dr. Lewis' teaching style. Furthermore, I jumped into the fire so to speak, by taking over the KSU student chapter of AAPG and serving as a mentor to undergraduates here at Kent State. My course work has been amazing, and I just completed about a month ago, a field trip to Mammoth Caves. My friends at IUP will be surprised to learn that I survived the trip with only one small luggage bag.

I am currently in the process of completing my thesis work. My thesis project deals with the Upper Silurian Salina Group in the Northeastern Pennsylvania using seismic and analogue models. This year I am finally getting out to the Fall Meeting of AGU, where I will be presenting some of my thesis work, so look for Poster T31C-2521. And I will be presenting down in Houston for the 2014 ACE. So hope to see some of you out at AGU or at AAPG!

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Patrick Boyle '12

It is coming up on two years since leaving IUP and I am wrapping up my masters degree here at Virginia Tech. Right now I am a teaching assistant for our Sedimentology and Stratigraphy course and although I enjoy this role I am looking forward to an industry sponsored research assistantship next semester. Over the past year I have had the opportunity to present my research at AAPG ACE in Pittsburgh, and I am planning to present at AGU in San Francisco this December, along with AAPG ACE in Houston this spring. This past summer I had the good fortune to intern as a geologist with ConocoPhillips in Houston Texas, and will be returning upon graduation as a member of their lower 48-business unit. It will sad to leave the east coast but I am excited to take on this new adventure.

Caz Bejgar '12

I am currently located in Greensburg, PA, continuing my work as a laboratory technician at Alternative Testing Laboratories, Inc. in Latrobe, PA, where I have successfully passed the one-year mark of service as of November 5th. I plan to continue working at Alternative Testing Labs full-time and attend graduate school starting in Fall 2014.

Aaron Brownley '13

I am currently working in Montrose, PA for Selman and Associates, subcontracted through Cabot Oil and Gas. I am a wellsite geologist (mudlogger) on various drill sites around Montrose and other parts of the Susquehanna County, PA. I started the "Selman and Associates Craze" when I was offered the job in mid-June 2013. I traveled to Midland, Texas for training and was offered a position in Montrose, PA after a month. I got Tyson Milbrand '13 and Matt Toland '13 on board with Selman after a month, and now Tyson has joined me in Montrose and we are waiting for another position to open up here in December so Matt can join us. I am happy, at the moment, with what I am doing and I plan to look for other jobs in my field after some experience with Selman and Associates.

Nicole Dawn Mountain '13

I'm living in Niles, Ohio. It's a city and really flat, far cry from the hills and country like feel of home. It is about 2.5 hours from Indiana. I work at the STEAM Academy of Warren in Warren, Ohio. I teach science to grades 5, 6, 7 and 8 in 90 minute block classes....I have a lab room upstairs to use at my disposal. It needs a pile of cleaning before we can use it, but the kids cannot wait to get up there!

Are there any IUP Geoscience alumni here in my area who can help judge a science fair later this school year? If so, please get in touch with me through Professor Ken Coles.

The Geological Society of IUP creates club sweatshirts or t-shirts each year to raise funds for field trips and other activities. You can find out what their next fund-raising project will be by keeping an eye on the club's FaceBook Page.

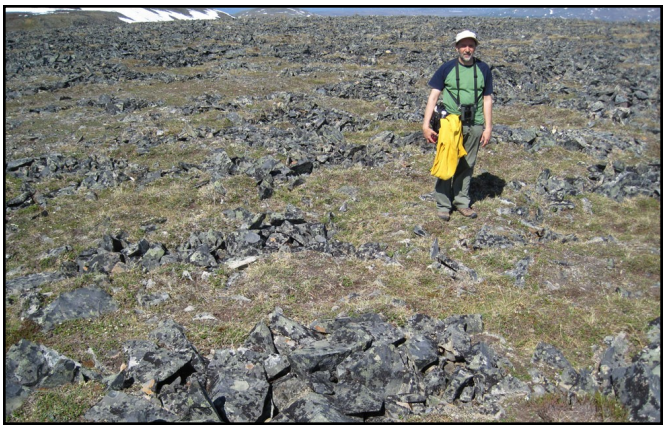
FACULTY NEWS — JOHN TAYLOR

A Fall 2012 sabbatical served as a springboard to an eventful year-and-a-quarter for the Taylors between September 2012 and the present. Adam turned 28 and Kaitie 19; Joanne and John turned….well, never mind. If you want to know, just ask Adam; he relishes volunteering that information about mom and "pop", especially to large groups. The first half of the sabbatical went smoothly, producing lots of new biostratigraphic data from Utah, Virginia, New Mexico, Colorado, and Alaska. The new information from Arctic Alaska upstaged the findings from everywhere else and actually redirected the sabbatical work, delaying fieldwork in the Shenandoah Valley until late in the term. Or at least that was the plan. Life intervened in October, when Joanne underwent an emergency anterior discectomy and fusion, "grounding" John for the last 1.5 months of the semester. The great news is

John and brother Wil on a rare clear day in central Alaska with Mount Denali on the right.

that all went well with both the surgery and Joanne's recovery. The good news is that, despite the impossibility of fieldwork, John was still able to make good use of the latter half of the sabbatical, thanks to the technological marvels of the age (laptop and wireless connections) and two incredibly supportive sisters in the Indiana area. Large collections from Utah yielded the data necessary to contribute the trilobite portion of a journal article now in press on the base of the "Lawsonian Stage" at the top of the Cambrian. Work completed on trilobites from the Nanook Limestone in northeastern Alaska fortified conclusions based on detrital zircon studies by colleagues at several other universities, forming the basis of a paper recently published in the new GSA journal Lithosphere (see Strauss et al. in the October issue), refuting claims of a Siberian origin for at least that part of the north slope. Those findings formed the foundation for a successful proposal, written over IUP's long semester break, to the National Science Foundation for a three-year grant to study the Cambrian-Ordovician faunas of Alaska. If all goes according to plan (like that ever happens), John plans to retire at the end of the grant period in August 2016.

He did manage, as it turns out, to get out in the field a couple times in 2013. In March, he spent a week sampling rocks in central Texas with student John Kearney (whose expenses were defrayed by a scholarship from the Granata Fund) and several other paleontologists, including alumnus Jim Loch ('83). More recently, he finally got around to that fieldwork planned for the Shenandoah Valley, taking current student Zach Tolbart along to conduct sampling for his senior research project, and benefit from interaction with several other paleontological colleagues, including alumnus John Repetski ('67). Everyone in the northeast can guess when that fieldwork was done. Remember winter storm Boreas?



Wil Taylor '82 standing amidst the "stone circles" on the tundra in the Alaska Range.

Aside from professional travels, John did sneak off to Alaska in June with brother (and IUP alumnus) Wil Taylor '82 on a birding adventure to introduce Wil to the charm of the 49th state and dispatch a lingering chore. This time he went late enough to see the Arctic Warblers singing on territory.

FACULTY NEWS — KAREN ROSE CERCONE

After finishing up her service as Director of Academic Assessment and Planning this past spring, Karen Rose returned to full-time teaching in the fall with her usual introductory classes for non-majors and future elementary educators. She is looking forward to the Winter Term, when she will take twelve IUP Geoscience majors and minors down to the Florida Keys in a modern-day version of the field trip Walt Granata created back in the 1970's. The group will be staying at the Newfound Harbor Marine Institute (also known as SeaCamp) on Big Pine Key. Thanks to substantial support from alumni donations, the students will also get to take a day-long trip out to the Dry Tortugas.

Current IUP undergraduate Sage Wagner, Priscilla and Ken Coles, Tom Moore '78, Karen Rose and Terry Kish '99 enjoy the breezy PNC Park seats obtained for us by Steve Smith '00. (Steve was the one who took the picture).

Karen Rose enjoyed seeing many alumni at the national AAPG meeting in Pittsburgh last May, both at IUP's Penn Brewery get-together and at the Pirates Game. Rumor has it that the national AAPG may return to Pittsburgh sometime in the future, so if you missed this year's get-together, you'll get a mulligan on another alumni reunion.

Karen Rose is currently advising four IUP senior projects over a wide range of fields: thermal maturity of the Marcellus Shale, environmental aspects of hydraulic fracturing, a preliminary site assessment of a historic steel mill and geochemical modeling of a local clean-up site. All of this is happening while she's also on sabbatical in the spring! Fortunately, it's a service sabbatical so she will be staying at IUP to work on a computer software template to make it easier for departments to complete their required five-year program reviews.

On the canine front, Karen Rose and her seven-year-old border collie Kyanite won a national agility championship this fall as the top-scoring 16" team in the "Petit Prix Agility Tournament" sponsored by the TeaCup Agility Dog Association. Kya is pretty small for a border collie — just in case you suspected their eligibility was based on the handler's height rather than the dog's!

FACULTY NEWS — STEVE HOVAN

Last summer I had a wonderful opportunity to travel to China to meet and discuss research opportunities with faculty and students from Nanjing University's School of Earth Science and Engineering. They have an amazing new campus just outside the city of Nanjing where they have invested a great deal of time and money to develop scientific research and education. While there I was able to present results from my studies of dust deposition in the North Pacific, downwind from the vast desert regions in northern and central Asia. It was exciting to meet some of the legends of dust research and to see how eager their students are to continue these studies.

My wife, Amy, and our children were able to join me and together we traveled to the ancient cities of Suzhou, Shanghai, and Beijing. We loved the entire adventure, although the kids never could develop a taste for the delicacy dish of duck tongue that was served during one lunch!

Back home at IUP I continue to work with my student, Sierra Davis, to develop one of the first high resolution records of eolian deposits from the Line Islands region of the Pacific Ocean. Our initial results suggest that current winnowing may significantly affect the grain size data. Finding that out is in itself exciting as it may help us identify high-resolution surface current processes in the tropical Pacific.

I've also accepted nominations to serve on two National Science Foundation committees. One is a review panel for the NSF Graduate Research Fellowships, a highly competitive program to identify outstanding candidates for three years of graduate study in geology. The other is for the newly revamped International Ocean Discovery Program serving on the Science Evaluation Panel that helps scientists develop and implement ocean drilling projects. Both of these tasks should keep me busy for the next few years!

FACULTY NEWS — JON LEWIS

Dr. Jon Lewis is happy to report that the two manuscripts mentioned this time last year have finally been published, one in GSA Bulletin and one in G-Cubed. The abstracts and links to the full papers can be found at: http://onlinelibrary.wiley.com/doi/10.1029/2012GC004406/abstract and http://gsabulletin.gsapubs.org/content/125/5-6/857.abstract.

The first paper stems from Jon's participation in Integrated Ocean Drilling Program (IODP) Expedition 315 off the coast of Japan and describes the stress history of the upper plate at this active and dangerous subduction zone. The second paper is the result of multiple field campaigns in Costa Rica, including one with Kalin McDannell ('08) who is currently wrapping up his PhD at Lehigh. Jon also contributed in a small way to a paper that was published in Lithosphere in 2013. The lead author on this paper is David Mirakian who recently completed his MS at UConn. This paper documents the role that inherited lower plate architecture plays in controlling the uplift history of the slate belt of north central Taiwan. It is available at http://lithosphere.gsapubs.org/content/5/1/49.abstract

Jon found that helping IODP by serving as Instructor for the 2012 and 2013 School of Rock on the drilling ship JOIDES Resolution (JR) so rewarding that he and Steve Hovan are planning to host a land-based IODP School of Rock at IUP in the Summer of 2014. Look for updates from us. In the meantime, if you know of geoscience students or in-service teacher in the region that might find this kind of experience exciting please point them our way!

Jon continues to mentor student research on Taiwan but this year has added a new project to the mix: Matthew Magill is working to document microstructures in a sample of the Heart Mountain detachment (shear zone) from Wyoming. Matthew is one of three new students in the lab. Freshman Allie Berry is interested in active tectonics and thanks to support from the University Senate Research Committee, Dean Snavely and the Department, Allie will be traveling with Jon to the southern Central Range of Taiwan in January 2014 to do some field work. Joining Allie and Jon will be the third newbie in lab, Chaz Cavallotti. His travel will be supported by a Research Experience for Undergraduates (REU) Supplement award to Jon's current NSF grant. The three of them aim to document the discrete and distributed structures on the east flank of the range that appear to account for the generation of non-equilibrium topography in the high mountains. The details of Allie and Chaz's projects moving forward will likely depend on their findings in the field. As of this newsletter, Chaz has been looking to pick up on the seismogenic strain work that Joy Kiefer had started, but that could change.

Jon's most senior student, Dan O'Hara, is one of only 3 geoscience students in the country to be honored as a Goldwater Scholar this academic year. Bravo! Dan, Ruey-Juin Rau and I have a manuscript currently in review at the Journal of Geophysical Research. Look for updates on this… Lastly, Tom Paronish continues to try to make sense of unpublished field data assembled by Ellen Lamont ('12) during her stay in Taiwan. As noted last year, this is challenging work but Tom has started to assemble a nice understanding of the deformation history of southwestern Taiwan. Look for an abstract by him at the Northeastern GSA meeting in Lancaster in early 2014.

FACULTY NEWS — KEN COLES

Ken has made use of this past year at IUP to launch or relaunch several equipment and hardware projects. Working with Prof. Ron Freda and Prof. Emeritus Larry Freeman of the Physics Dept., Ken and students have assembled a radio receiver and dipole antennas for observing Jupiter and the Sun at 20 Megahertz (15 meter wavelength). While radio observing works fine when it is cloudy (a big plus for western Pennsylvania), Jupiter (which has active but enigmatic radio emissions) must be observed at night. At press time a test site is being prepared at the Co-op farm for erecting the antennas and doing a test run.

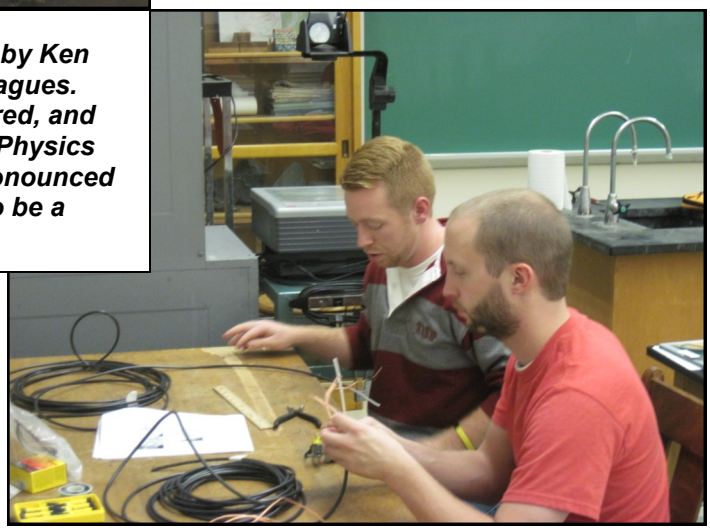
The radio receiver built by Ken Coles and his IUP colleagues. After it was built, soldered, and worked on the first try, Physics Prof. Larry Freeman pronounced Ken Coles, "Qualified to be a ham!"

Some time ago the Geoscience Department was able to obtain a high-quality, broad band, three-axis seismometer. It has been great for lab demos. During Spring 2014, senior Earth and Space Science Education major Cameron Baillie and Ken will try a temporary installation for monitoring regional earthquakes. The plan is to crate a permanent seismic station at IUP.

Another milestone for the Geoscience Department was that the long-awaited GEOS 323 - Geophysics joined the course offerings in Spring 2013. Ken found it challenging and enjoyable to create the course based on past experience with geophysical theory, seismic monitoring in subduction zones, paleomagnetism, and too much of his youth doing math and physics. The first group of students was hard working and found that intuition for the physics of the Earth is not the same as facility with equations. In the future this course could incorporate more field exercises, for example with the Department's gravity meter (which Prof. Emeritus Joe Clark helped to "rediscover" in storage) or other new survey equipment. Advice and input from alumni who employ geophysical techniques in their work is welcome.

Earth and Space Science Education majors continue in the Geoscience program in small but dedicated numbers. Placing them for student teaching and other field experiences is becoming more challenging. Many secondary schools in western Pennsylvania that used to host our students have dropped Earth Science or are folding it into general science courses. Alumni in the region can add their voices to the Department's in advocating to all school districts the need to teach Earth Science, which continues to increase in importance locally and nationally.

Ken continues to collect and edit material for the new Atlas of Mars. This requires learning not only about the Red Planet but also how to motivate coauthors that are past their deadlines. The skills from teaching in university classes are quite useful in this project.



Cameron Baillie (left) and Jeff McCullough prepare wires for the dipole radio astronomy antenna.

All the talk of a new science building is exciting, especially since the College of Natural Science and Mathematics has agreed that fundraising to refurbish the planetarium equipment and lighting is a worthy goal as part of the larger building project. Many of the parts and bulbs that run IUP's 1966-vintage facility are no longer made. Demand for public and school shows is as strong as ever, so we hope for a "bright" future in the dark skies of the IUP planetarium!

FACULTY NEWS — KATIE FARNSWORTH

It has been a fun but busy year. Last summer Karen Rose and I taught the Coastal Carbonates trip, and I followed up this year with a course on Coastal Geology and Processes. It has been fun to once again get a chance to teach courses in my specialty.

This fall included a couple of field-trips, one to the Lake Erie coast and then one to the Delaware Coast to introduce the students to the coastal processes discussed in class. This was just some of the traveling this semester that has kept me running this year. Another one of the trips was with Steve Hovan to attend a workshop on Teaching Oceanography, we came away with many ideas for updating our Oceans and Atmospheres course and labs. We also had a great afternoon sailing on San Francisco Bay!

Katie's Coastal Geology and Processes class studies the impact of beach erosion and deposition along the Delaware shore.

On the research front, I finished up an interdisciplinary project involving using Qualitative Reasoning, an area of Artificial Intelligence that deals with conceptual knowledge, to understand the concepts driving the Carbon Cycle. This project culminated in a publication in Ecological Informatics this last Spring. I have also continued my work on predicting the magnitude and timing of flood delivery from the rivers of the coastal mountains along the west coast, with a presentation at the annual American Geophysical Union meeting this December.

I have a number of students working in the lab this year, on projects ranging from 3D scanning of our stream table, monitoring water quality in local streams and studying the geomorphology of the Nova Scoatian Continental Slope. Students have presented at regional meetings and hope to head to the regional Geological Society of America meeting in Lancaster, PA this Spring.

Also coming up this Spring is my biennial fieldtrip with the College of William and Mary School of Marine Science graduate students to study the coastal rivers of California. I will be bringing two IUP students along this year as part of an independent study. This will be my fourth trip to the California coast in 10 months. I will be returning again in the fall as part of my sabbatical for the 2014-2015 academic year. I plan on working with colleagues at the USGS in Santa Cruz on modeling of coastal waters, river plumes and river mouths.

FACULTY NEWS — YVONNE BRANAN

The past year has been a fast one, as our most recent edition (Finnegan) has been growing fast! He is walking now and keeping mom very busy. But, I have returned to work since my last update, easing back into the Spring semester with a part-time load and concentrating on the elementary education majors. I've enjoyed this course tremendously, especially since I have an 8-year old myself and have a pretty good feel for what they like in the classroom.

This fall I took on something quite new - teaching non-majors at the Punxsutawney campus. This has been a very interesting undertaking and I am enjoying the new surroundings. I was able to get my students there out of the class room to visit a popular local rock outcropping at Bilger's Rocks. We also made a stop at a local rock quarry, where the students were surprised to learn that rocks can mean very big business, as this one sells its sandstone to people all around the world!

I hope to have the opportunity to return to the Punxsutawney campus and continue to bring the geosciences to those who might otherwise miss out on such a great subject!

TRANSITION: TOMMY GERBER TO TOM MOORE

After the birth of his second son, Dr. Tommy Gerber reluctantly decided that it made more financial sense for him and his growing family to leave academia. He accepted an offer as a research scientist at Statoil in Austin TX in May 2013. The IUP Geoscience Department will miss his energy and dedication to helping students prepare for careers in energy.

For the Spring of 2014, the Department has been very fortunate to have local alumnus Tom Moore available to teach The Geology of Oil & Gas as an adjunct professor. Tom's many years in the oil patch and his prior experience working with our students on the Geology of Newfoundland field workshop make him an ideal choice to fill in for Dr. Gerber this year.

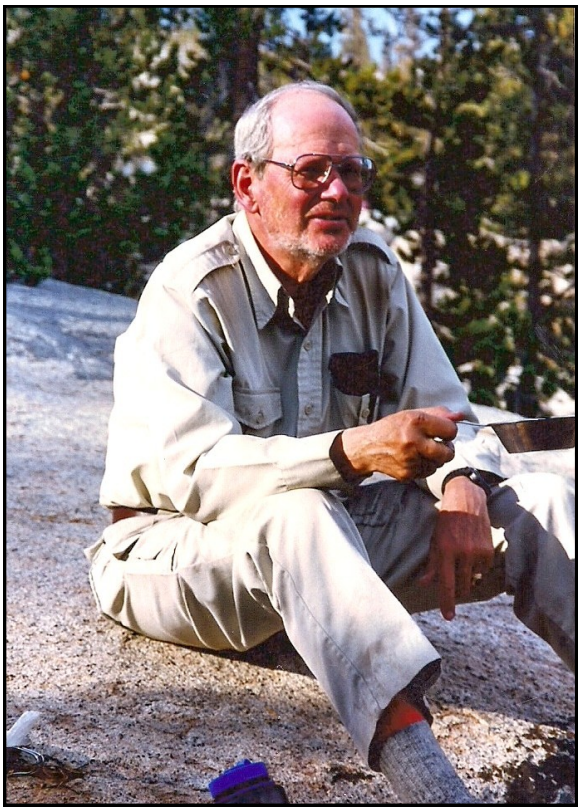
FACULTY NEWS — JOE CLARK

I continue geologizing and presented a paper "Neotectonics of the Greater Monterey Area, California" to the Pacific Section AAPG-SEPM Meeting in the spring.

I am still drilling Upper Devonian "conventional " wells in Indiana and Cambria Counties with Jeffery Greenawalt (IUP 1980) and Bill Hoover (IUP 1975) as part of our team. But increasing "regs" make the operations more difficult and oft times frustrating. Together with pipelining, this seems to demand inordinate amounts of time.

This year's annual backpack was in the High Sierra of California. The attached picture shows a much needed rest on Cretaceous granite of the Sierra Nevada composite batholith.

I try to make it into the Department once a week, maintaining my office in Walsh Hall, but was greatly saddened by the passing of Walt Granata, who hired me at IUP in 1972.



(For more about Dr. Granata, see Dr. Clark's tribute on page 2 of this newsletter.)

A NOTE FROM APRIL MAZUR

Since retiring from IUP in May, I've been spending more time with my family. I especially enjoy and treasure the time with our grandchildren.

Craig and I went to Florida twice this year. Just after my retirement in May, we went to St. Augustine. Our latest visit was to Key Largo, in October. As you can see from the photo, we love to fish!

My fondest memories of IUP, are all of the students I met and got to know in the 15 years working there. I am truly blessed.

Field Geology In the Appalachians

IUP students explore and map our local mountains with Dr. Jon Lewis and Dr. Nick Deardorff

This summer Dr. Lewis and our new faculty member Dr. Deardorff taught GEOS 303— our basic field mapping course for majors. This was a three week summer course during which they spent one week around Indiana, PA learning how to use a Brunton and mapping sections of campus, Whites Woods, and Bilger's Rock, and deriving stream paleo-flow directions from cross-beds in sandstone using stereonets.

Above: the field group on a West Virginia mountain top.

Right: a typical Appalachian outcrop.

In weeks two and three they hit the road, spending one week in western Maryland, near Hancock, and the final week in West Virginia, near Seneca Rocks. These last two weeks were intensive field experiences where the students learned how to do a measured section, do transect mapping and produce geologic maps & profiles, and final reports of the study areas.

Field experiences, such as this, can be transformative experiences (as many of our current students and alumni can attest) where students spend hours to days on real-world geologic problems and have to link theories and knowledge learned in the classroom with newly acquired field techniques. It helps when the weather behaves and there is beautiful scenery, of which Maryland and West Virginia do not lack. Our students had to battle one torrential rain storm, the kind where absolutely nothing on you remains dry, regardless of gear quality, but overall, they were extremely lucky with weather.

The high point of the trip for most was an epic hike near Big Bend Campground, WV to the top of a nearby ridge mapping contacts along the ridge, attempting to map a large doubly-plunging anticline. Many of the students reaffirmed their desire to become geologists that day.

Chair's Note: we try to offer field workshop classes each summer and are adding new trips to in warm locations such as Florida in the winter term as well. In today's economy, however, many IUP students would be unable to afford to take these trips if they weren't also supported by the IUP Geoscience Foundation. We are especially grateful this year to have received extra support from one generous alum who has underwritten a brand-new Next Generation Field Geology Fund to allow Geoscience students to pursue outstanding field opportunities when they arise.

We Hope You'll Stay in Touch…

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IUP Web Pages:
www.iup.edu/geoscience
www.iup.edu/giveagift

Social Media:

GeoTidings
Interesting geology news and department updates delivered to your Facebook wall. Add us to your 'Interests' to see all of our posts.

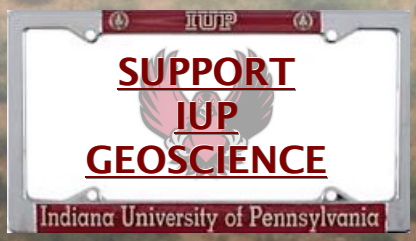
Geological Society of IUP
Facebook updates for student club projects such as t-shirts and trips.

… And We Appreciate Your Support!

Your gifts have helped Geoscience majors conduct field work both nationally and internationally, attend professional conferences including the American Association of Petroleum Geologists meeting in Pittsburgh, and present their research in a variety of settings. Alumni gifts will make this Winter's Carbonate Geology of Florida trip even more special by underwriting an all-day visit to the Dry Tortugas for twelve students.

If you have the ability and desire to continue supporting IUP students, you can make year-end donations to any of the following special funds in the IUP Foundation:

- Geoscience Fund 224530
- Joseph C. Clark Research Scholarship 630545
- Walter Granata Memorial Fund 224784
- Paul Prince Memorial Fund 224783
- Next Generation Field Geology Fund 224789



IUP's secure online donation web-page makes it easy for you to select your areas of support, including the general IUP fund which helps the entire university. Click on the IUP license plate and select 'Specific Area at IUP" to indicate where your year-end gift should go. And thanks again!

Photo: Mountains in Mongolia *Credit: Kalin McDannell '08*