

GEO-TIDINGS

SPRING

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The online Alumni Newsletter of the IUP Geoscience Department

Dr. John F. Taylor & Dr. Karen Rose Cercone, editors

News Flash! Geo-Tidings finally enters cyber-space!

Well, it only took two decades after the arrival of the internet, but the IUP Geoscience Alumni newsletter has finally been brought into the new millennium. (The kicking and screaming you heard was Doc Taylor getting his arm twisted until he was willing to edit hyper-text.) We hope you enjoy the color photos and interesting links that this allows us to include!

The online newsletter is not yet interactive, but we hope to eventually add a guest comment book where alumni can leave updates and perhaps also post new photos of themselves and their families. In the meantime, continue to email your updates and photos to John Taylor (jftaylor@iup.edu). We'll format them and add them to the website every few months, then zap you an email to let you know that new alumni postings have been added for you to browse through.

If you received a postcard notifying you about this web site instead of an email, and you do have a working email address, please send it to the Geoscience secretary April Mazur (amazur@iup.edu) and she will add you to our low-volume alumni announcement list. You will receive only a few emails a month from us, announcing local job opportunities, department events and website updates.



Ken Coles

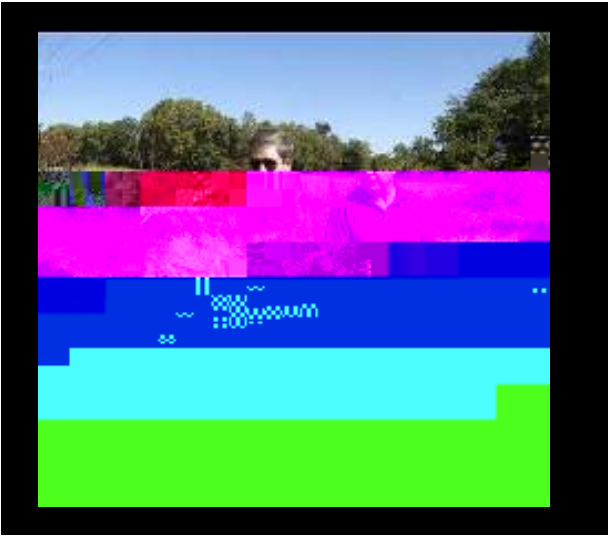
Ken Coles joined the Geoscience Department in 2004 as an Assistant Professor. He fills the position formerly occupied by Professor Emerita Connie Sutton and filled during 2003-2004 by visiting faculty member Dr. Ralph Feather. Ken is a native of Pasadena, California. He reports that growing up in the shadow of the Jet Propulsion Lab (JPL) during the race to the Moon (which he is old enough to remember) is coming in handy in his current teaching. He attended Caltech, earning both Bachelors and Masters degrees in Geology in 1979 and doing a senior project on sound velocity vs. age in granite boulders on stream terraces and glacial moraines in California. Ken attended graduate school at Columbia University in New York City, which he reports is a very fun place to be a student. His Ph.D. dissertation, supervised by Walt Snyder (now at Boise State) and Rich Schweickert (now at University of Nevada-Reno), was on the structure and stratigraphy of mid-Paleozoic marine rocks, primarily phosphate-bearing chert, in central Nevada.

[\[Click here for more\]](#)



Jon Lewis

Jon Lewis joined the Geoscience Department in 2004 as our new structural and environmental geologist. Prior to his arrival at IUP, Dr. Lewis was affiliated with the University of Massachusetts in Amherst as a senior post-doctoral researcher and adjunct professor. He had previously worked as a post-doctoral research fellow at UC-Davis. His research interests include measuring seismogenic strain along plate boundaries, and using kinematic inversion to study earthquake focal mechanisms at active subduction zones such as Japan. Dr. Lewis has already acquired internal IUP grant funding to begin a new pilot project in Costa Rica, and has recruited an IUP undergraduate student to participate in that research project (see [pages 347-351 of the 2000 IUP Report](#)).

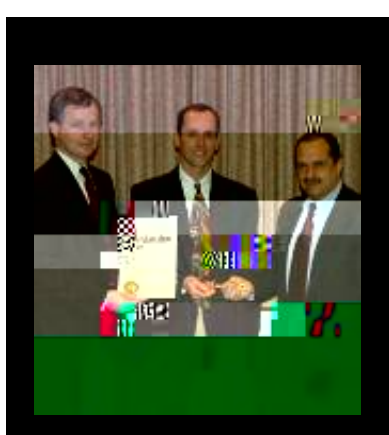


In the Spotlight: Dave Brezinski '77

A four year research project on sinkhole development done by Dave Brezinski was featured in several 2004 articles by the [Washington Post](#) and other Maryland papers. Among other things, the study showed that urban development actually increases the likelihood of sinkholes forming in areas and rock types that are prone to karst. The study mapped karst prone units in the Frederick Valley with field studies and GIS mapping, allowing urban planners and developers to know which areas would be most prone to sinkhole development. As part of his research, Dr. Brezinski examined an area between Frederick and Walkersville MD before and after urban development. "It looks like development tripled or quadrupled the number of sinkholes in the area," he said. Dave continues to work for the Maryland DNR while also serving as an Adjunct Associate Curator at the [Carnegie Museum of Natural History](#).

Al Baker '73

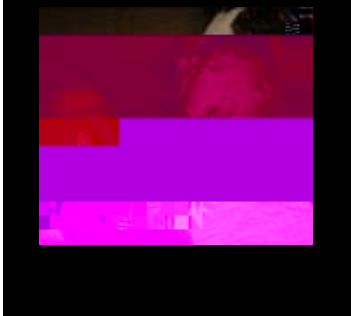
The Baker's are alive and well in Baton Rouge, Louisiana. We evacuated a week ago last Saturday. We have been back to visit our home and my office twice. The house survived with





In the Spotlight: Aaron Steinley '98

As of December, 2005, IUP alumni Aaron Steinley became the newest member of the administrative staff at United School District. His first assignment is that of assistant principal at the high school building. With a teaching and coaching background of seven years, Mr. Steinley joins with Mr. Lewis Kindja in the commitment to make sure each student is challenged and gets a good education. Soon after his appointment, Aaron was recently featured in the Indiana Gazette for participating in the American Library Association's "Teen Read" challenge. Always a good sport, Aaron agreed to exchange places for a day with the two top readers at his school.



In the Spotlight: Barbara (Osgood) Kutchko '96

2004 was a busy year for Barb: She defended her master's thesis at Pitt on August 19th and had a beautiful baby boy September 10th! Barb says, "My committee was scared to death that I would go into labor during my defense. Aidan is a wonderful baby. I couldn't be happier!" In 2005, Barb began work on a PhD thesis in Environmental Studies at CMU. She says, "My first semester has been exhausting and exhilarating. I love working with Dr. Dave Dzombak. He is a great professor and advisor. Aidan is now a toddler with all the toddler tendencies. He loves his "doggy" Dozer (our American Bulldog) and Dozer has found a permanent home under the highchair during mealtimes. It is a great relationship!"

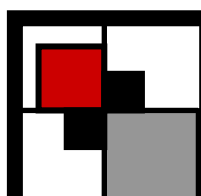
Pat Perfetta '96

Anyway, I'm now with ConocoPhillips since the Phillips Conoco merger about 1 1/2 years ago. Currently making my living in the "frontier" exploration group, working on various Russian basins. As far as the personal life goes, I'm now married (coming up on 1 year) to what else but another geologist. No kids yet, maybe someday.

Marty Arford '97

Greetings, fellow geo-folk! A lot has changed since my last newsletter submission. I am now a resident of Michigan, where I have accepted a tenure-track position at Saginaw Valley State University as an assistant professor of geography. In May, 2005, I defended my dissertation "Mid to Late Holocene Environmental Change and Human Impacts in Tropical Dry Forest of Northwestern Costa Rica: Sedimentary Evidence from Six Lakes," at the University of Tennessee. The first publication from my dissertation appeared in the Journal of Latin American Geography in 2004 ("Pollen Evidence of the Earliest Maize Agriculture in Costa Rica"). Now I'm working on the big manuscript to be submitted to *Ecology* ("Pollen Evidence of the Earliest Maize Agriculture in Costa Rica").





2004 Regional Trip: Florida and the Bahamas

In May 2004, Geoscience Professor Steve Hovan traveled down the east coast with a group of 12 IUP undergraduate students to explore and study clastic and carbonate beach processes. They spent a week exploring and trenching barrier islands of Maryland and the Outer Banks, followed by a brief stopover at Cape Canaveral on their way down to the Florida Keys. For the next week, they almost braved 20ft choppy seas to snorkel Florida Bay, but in the end, opted for the much more stable environment of the ancient Key Largo Limestone in quarries and along road cuts. For their final week, they flew over to Andros Island, Bahamas. The Forfar Biological Field Station served as a base camp for snorkeling adventures along the barrier reef and studies of classic carbonate environments such as the famous oolitic shoals of Joulter's Cay, oceanic blue holes, tidal flats and mangrove swamps.

[\[Click here for more photos\]](#)

2005 Regional Trip: The American Southwest

Geoscience Professors Karen Rose Cercone & Jon Lewis combined their expertise in stratigraphy and extensional tectonics to create a new version of the Southwest trip. After touring the usual stops in the Four Corners region (Petrified Forest, Grand Canyon, etc), Dr. Lewis led the group to several new parts of Death Valley (Mosaic Canyon is seen in the photo) and then onward to the eastern flank of the Sierra Nevada where they studied volcanic and tectonic features around Mono Lake and Big Pine. From there, the group explored Lehman Caverns, Zion, Bryce and Arches before heading home to IUP. Six IUP students kept an internet journal of their travels — we set a new IUP record for number of laptops on a regional trip (5).

[\[Click here for our internet journal\]](#)

The next regional trip in 2006 will be run by Professor Michael Poage and will focus on the Northern Rockies and Yellowstone. If you can take off a few weeks in August, please consider enrolling — especially if you are an earth science educator!

Mark this date on your 2006 calendars! Geoscience Day will be Friday, April 28. The annual Geoscience Banquet will be held that night at Luigi's Restaurant in Clymer.



Student Research: SPLAT – South Pacific Latitudinal Transect

During Spring, 2005, Dr. Steve Hovan and sophomore Geoscience student Matthew Bolyn set sail for the high seas of the South Pacific aboard a 267ft research vessel, the R/V Melville. For the next 5 weeks they endured 90 knots winds, 40 foot seas, and the wrath of Typhoon Percy to help collect geophysical survey data (multichannel seismic, 12 kHz echosounding, and SEABEAM swath mapping) and sedimentary piston cores in large areas of the Southern Pacific Ocean south of Tahiti and east of New Zealand. From these data we hope to learn more about the paleoceanographic and paleoclimatic conditions in the southern hemisphere associated with the Earth's transition from warm polar climates in the Paleogene through the Cenozoic development of Antarctic ice. For some wonderful pictures of the South Pacific, [click here.](#)

Student Research: Earthquakes of Costa Rica

In October, 2005, Dr. Jonathan Lewis and student Adam Boozer of the Geoscience Department presented a coauthored poster entitled "Strain above subducting topography: What do earthquakes in Costa Rica tell us?" at a conference in Price, Utah. The meeting, [a Penrose Conference](#), was organized and sponsored by the Geological Society of America, the British Sedimentological Research Group of the Geological Society of London, and the International Association of Sedimentologists.

The theme of this focused meeting was the geology of tectonic boundaries where volcanic chains have collided, or are currently colliding, with continents. Of the ~50 participants from around the world, which included only a handful of students, Adam was the lone undergraduate student. The meeting organizers were pleased that Adam was an active participant and they even helped defray some of his expenses. Adam was similarly pleased when many of the seemingly basic questions that he formulated during talks were asked by scientists at the meeting!

The penultimate day of the meeting was spent in the field looking at the geology in and around Arches National Park. This was Adam's first trip west of the Mississippi and seeing rocks very much like those we have in western PA, except without any vegetation covering them up, was quite surprising to him. Indeed even many of the well-traveled meeting participants found the geology of the Colorado Plateau to be both scientifically exciting and breathtakingly beautiful.

For those of you wondering about the results of the alumni questionnaire we sent out last year at this time, we've attached the results [here](#). The Geoscience Department used the questionnaire results as part of its required review by the Pennsylvania State System of Higher Education. We're delighted to report that the department was given a very positive review from our two outside evaluators. We are currently in the process of using what we learned about ourselves to completely redesign our curriculum for increased flexibility and deeper involvement of our undergraduate students in cutting-edge research.
