

## A message from the Department Chair

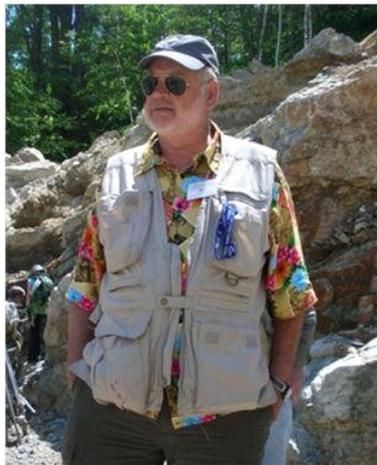
Greetings to all our Students, Faculty, Alumni and Friends:

I'm happy to be able to say that the department is weathering the storm of lost faculty and continued budget cuts amazingly well. It was another year of erosion of EES capability. We lost Denise Reed who took a job at The Water Institute of the Gulf and we have also lost Mostofa Sarwar half time to the UNO honors program. We wish them both well, but certainly will miss their involvement in the department. I tried hard to convince the administration to permit us to hire additional faculty to replace them, but we did not get one of the very few new positions approved by the University. However, by shifting some responsibilities, we are now covering their courses and still managing to keep our research program moving forward - a difficult task at best. We have two adjuncts this semester helping keep program diversity going. Mike Miner is teaching geomorphology and Toby Roesler is teaching a course on Petroleum Geology. Thanks to both.

Enrollment is holding steady at about 140 majors. It is only with the hard work of our dedicated faculty and staff that it has been possible for our department to maintain the excellence in teaching and research that has been the hallmark of our department over the years. External research funding exceeded 1.4 million dollars last year. I extend my thanks to everyone for their hard work and commitment which keeps our department strong and moving forward during these difficult times. I particularly want to thank our Department Manager and Assistant to the Chair, Linda Miller, for her support and dedication. She keeps the department running smoothly and expertly manages the

departmental finances. There is no way I could do this job without her.

A year in, our student mentoring program is impacting a greater number of students, as more realize how helpful it is to have walk-in tutoring



**Department Chair,  
Dr. William (Skip) Simmons**

available 18 hours a week. Thanks to our committed Graduate Students and Sigma Gamma Epsilon Geology Honor Society volunteers for making this program successful. Also, opportunities for undergraduate research have increased greatly. Undergraduate EES majors completed twenty-three undergraduate research projects last year and several were presented at professional meetings.

Through diligent recruiting efforts, we now have a very good group of 22 M.S. and 11 Ph.D. graduate students. Twenty are on either GA or RA support. Eight of these are from outside Louisiana. Sixteen of these are in the coastal and environmental studies concentration, including research on hydrodynamics, geomorphology, environmental management and aquatic ecology. The remaining 17 graduate students are doing research in the more tradi-

tional geologic areas of sedimentology, petroleum geology, igneous petrology and mineralogy.

Thanks to the generosity of our Alumni and Corporate donors, in 2012 we awarded about \$15,000 in scholarships to 45 students. This fall there have been class trips to the Appalachian Mountains for structural geology, to Mississippi for geomorphology and a trip to Arkansas for stratigraphy. Remember those great trips you took years ago? We can use your support more than ever now. Please consider a donation to help us continue to provide EES students with field trip experiences.

Finally, as I finish up my last year at UNO, I want to thank Karen Webber, Al Falster and my great group of graduate students, Drew Boudreaux, Kim Clark, Myles Felch, Leah Grassi, Karen Marchal, Jon Guidry, Sasha Kreinik, and Mark Johnson, for all their support, help and patience with me while I have served as Chair. The research couldn't have continued full-steam-ahead without your help (22 peer-reviewed publications last year). I am so lucky to be surrounded by such great colleagues and such an enthusiastic and dedicated group of students. My sincere thanks to each of you.

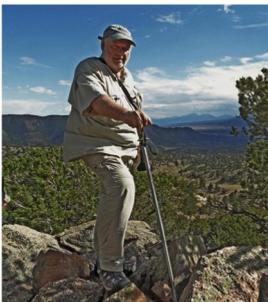
I look forward to seeing you at the annual department mineral auction. Come have some fun, buy some samples, and support your department. Remember, bid high - bid often.

All the best, Skip



### POINTS OF INTEREST

- **Current Faculty and student info.**
- **Student Organizations, SEES, SGE, AAPG**
- **Student Awards and Scholarships**
- **Graduate students highlighted**
- **Dedication to David Jones**



## MP<sup>2</sup> Research Group

\*Dr. William (Skip) Simmons,  
UNO Research Professor, Department Chair  
\*Karen Webber \*Alexander Falster

The MP<sup>2</sup> research group, the final bastion of hard rock geology in Earth and Environmental Sciences, are still here and going strong. MP<sup>2</sup> stands for Mineralogy, Pegmatology, and Petrology (<http://pegmatology.uno.edu/>). Our specialty is Pegmatology - the investigation of pegmatites, including their mineralogy, geochemistry and genesis. We continue our collaboration with the Gemological Institute of America in research on gem minerals, especially tourmaline. We are actively involved in field research on pegmatites, with a number of students working on pegmatites in Maine.

MP<sup>2</sup> HOSTS THE 6th INTERNATIONAL SYMPOSIUM ON GRANITIC PEGMATITES - PEG 2013



More than 110 researchers from 19 countries joined UNO MP<sup>2</sup> researchers meeting in Attitash, New Hampshire

The MP<sup>2</sup> Research group hosted PEG 2013: the 6th International Symposium on Granitic Pegmatites in New Hampshire and Maine from May 26 to June 2, 2013. The meeting was organized by Skip, Karen and Al. Joining them on the international organizing committee were star researchers from other countries, including: Miguel Galliski and Florencia Marquez-Zavalía (CONICET, Argentina), Encarnacion Roda-Robles (Universidad del País Vasco/EHU, Bilbao, Spain), and MP<sup>2</sup> associates and Palermo Mine owners, Bob and Edna Whitmore and Raymond Sprague (Maine Pegmatite Workshop).

The meeting was comprised of two parts. The technical part, with talks and poster presentations, was held at the Attitash Grand Summit Hotel in Bartlett, New Hampshire, from May 26 to 30. This involved three days of technical sessions and a one-day mid-meeting field trip to the phosphate-rich Palermo pegmatites of North Groton, New Hampshire. Special

exhibits of New England pegmatite minerals were displayed by local collectors, miners, and museums, including Don Dallaire, Gary and Mary Freeman, Gordon Jackson, Jeff Morrison, Bob and Edna Whitmore, the Maine Mineral and Gem Museum, and the Capital Mineral Club of New Hampshire. The beautiful displays were a new innovation by PEG 2013 and were a great source of inspiration for scientific discussion. A total of 110 persons from 19 different countries participated, and most attendees gave presentations. Participants presented 90 extended abstracts and 47 oral presentations. UNO graduate students Andrew Boudreaux, Kimberley Clark, Myles Felch, Leah Grassi and Karen Marchal presented papers at the symposium, as did UNO undergraduate students Jon Guidry, Susanna (Sasha) Kreinik, and Christopher Mark Johnson, who joined the MP<sup>2</sup> research group as new graduate students this fall. The MP<sup>2</sup> Research Group students are all pursuing thesis work related to granitic pegmatites. The students not only helped plan and run the meeting, they helped edit and produce the meeting abstracts volume and field trip guidebook printed by Rubellite Press. The Attitash Grand Summit Hotel was a wonderful venue for the meeting, and catering by the hotel was outstanding. The first part of the meeting culminated with a banquet and dancing by the Four



Organizing committee celebrating successful meeting

Winds Native American dance ensemble.

The second part of the meeting consisted of a three-day field trip to gem-bearing, rare-element pegmatites in Oxford and Androscoggin Counties, Maine. While in Maine the group stayed at the Poland Spring Resort in Poland. Sites visited during the trip were the Bennett, Emmons, Havey, Mt. Mica, and Waisanen (sometimes referred to as the Tamminen-Waisanen) pegma-

titles. The trip started with a visit to the new Maine Mineral and Gem Museum in Bethel ([www.mainemineralmuseum.org/](http://www.mainemineralmuseum.org/)). Although the museum was still under construction, the group was given a guided tour and allowed to view many of the specimens scheduled for display.

During the field trips, lunches were elegantly prepared by Appetites Catering of Bangor, Maine. Proprietor and Chef Michael O'Neal is also a geologist and pegmatite miner. It was a real treat to be served gastronomic delights such as lobster rolls, grilled vegetables, and homemade pies with ice cream while studying the pegmatites and digging for specimens. We were also provided fresh exposures at many of the mines. Gary and Mary Freeman sandblasted a portion of the underground mine walls at Mt. Mica so that the zoned mineralization could be seen more clearly, and Frank Perham made several fresh blasts at the Waisanen quarry, one while participants were watching from a safe distance. Many interesting discussions arose during the technical sessions and field trips, and most of the symposium participants joined in a semiformal conversation on reevaluating pegmatite nomenclature. This symposium is held every two years, and this was the first time it was held in the United States. By all accounts it was a tremendous success.

The next meeting in 2015 will be convened in Southwestern Poland, Lower Silesia. Meetings and poster presentations will take place at Książ Castle, the Pearl of Lower Silesia, which was built in the 13th century. Pre- and post-meeting field trips will include pegmatites of the Czech Republic and Poland. We have set the bar high for the next meeting.

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Karen and celebrated special guest Maine pegmatite miner Frank Perham.



Display of tourmaline from the famous Newry pegmatite discovery in 1972 presented by the Maine Mineral and Gem Museum

## MP<sup>2</sup>ers go nuts in Namibia.

by Drew Boudreaux

At the beginning of the year, Dr. Simmons and his loyal crew, "the pegmatite crazies", travelled to Namibia to conduct field work for two EES masters students: myself (Drew Boudreaux) and Leah Grassi. In addition to Leah, me, and Skip, the rest of the group consisted of MP<sup>2</sup> staff Karen Webber and Al Falster and students/rock-carriers and porters Karen Marchal, Kim Clark, Mark Johnson, Mark Schroeder, and Kristen Camp. We left New Orleans on 12/26/12 and returned 1/12/13 several hundred pounds of granite heavier.

The first part of the trip was spent on field research and sample collection in 2 spatially-related yet vastly different pegmatite systems in northwest Namibia. Leah's thesis research involves fractionation trends in tourmaline, K-spar, and mica from the Usakos pegmatite, a large LCT type body (image 1) associated with the Damaran orogen ~500-600 Ma. My research focuses on tourmaline-laden, miarolitic, NYF-type pegmatitic cavities in a nearby early Cretaceous anorogenic granite.

During the days of field work, we stayed at the Hohenstein Lodge and admired our spectacular view of the Erongo subvolcanic complex (images 2 and 3). The view was particularly spectacular on the evening of the day we hiked it. We also really enjoyed the hospitality of the staff and decided to throw them a New Year's Eve Party (image 4)! Note: all Namibians were of drinking age.

While still in the Erongo region, we took day trips to the nearby towns of Omaruru, Usakos, and Tubuis to barter for minerals and visit the locals. We also took a brief trip to the Klein Spitzkoppe granitic pluton where Skip pulled his signature move and got our vehicle stuck.

After we felt we had a sufficient supply of tourmaline, beryl, fluorite, topaz, and other "hard and shinies", we moved west to the town of Swakopmund on the Skeleton Coast. Here, we did a number of fun and educational things including quad-biking in the dunes of the Namib desert (image 5), touring the local gem and mineral museum (image 6), and interacting with the local seal population (image 7).

Of course, no trip to Africa is complete without seeing some beasts. So, the next part of our trip brought us to the Etosha Salt Pan and National Park. Here we were able to ride around safari-style and look for African creatures like the giraffe (image 8), oryx, hyena, wildebeest, elephant, and rhinoceros, all of which were successfully found ...except the rhino.

By this time, we were due to head back to New Orleans. We returned to the capital city of Windhoek, made our connection in Johannesburg, and began our flight home.

However, in an unexpected turn of events, a mid-Atlantic engine failure resulted in a spontaneous visit to the Mid Ocean Ridge (image 9). We spent the night in military barracks on Ascension Island in the South Atlantic while we awaited another plane from Atlanta. This mini-vacation gave us the opportunity to reflect on how precious our lives are, and how granites and pegmatites are much better than basalts.

Since arriving back in New Orleans, research has been underway. Rocks have been crushed, vacuums have been pumped, electrons have been fired, and X-rays have been counted. Leah and I are expecting to defend our theses in Spring 2014, but the memories created with our professors and fellow students in Africa will endure much, much longer.



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## MP<sup>2</sup> Graduate Students:



**Andrew Boudreaux:**  
**Research:** Mineralogy and Geochemistry of Anorogenic Granitic Pegmatites of the Erongo Mountain Intrusive Suite, Namibia

**Kimberly Clark:** **Research:** "Contact Zone Mineralogy and Geochemistry of Mount Mica Pegmatite, Oxford Co., Maine, USA"



**Myles Felch:** **Research:** As an incoming graduate student he will be working on a pegmatite related research project in conjunction with the Maine Mineral & Gem Museum.

**Leah Grassi:** **Research:** Mineralogy and Geochemistry of the Usakos Gem Tourmaline Pegmatite, Usakos, Namibia



**Jon Guidry:** Heavy accessory mineralogy of the biotite schist country rocks around Pegmatites, Oxford County, Maine

**Mark Johnson:** Heavy accessory mineralogy of the Kosnarite-McCrillite unit and Wall Zone in the Mount Mica Pegmatite, Paris, Oxford Co., Maine.



**Susanna Kreinik (Sasha):** Phosphate classification (Spring 2012) Composition of apatite from pegmatites in Oxford Co., Maine.

**Karen Marchal:** **Research:** Chemical Evolution of Muscovite and Lepidolite in the Mt. Mica Pegmatite, Maine





## Dr. Martin (Marty) O'Connell, Associate Professor

My lab, the Nekton Research Laboratory (NRL), continues to conduct various research projects ranging from estuarine organisms in the northern Gulf of Mexico to freshwater mussels in central Louisiana to coral reef work in Madagascar. I recently teamed up with Senior Biologist and Database Manager Meg Uzee O'Connell (right) of the Pontchartrain Institute for Environmental Sciences (PIES) and Christopher Schieble from the Louisiana Department of Wildlife and Fisheries (LDWF) to publish a paper in the journal *Estuaries and Coasts* titled "Response of Lake Pontchartrain Fish Assemblages to Hurricanes

Katrina and Rita". The major results of this research were that while the overall composition of Lake Pontchartrain fish assemblages remains stable, the significant decline of some species and changes in certain environmental variables are cause for concern. Future monitoring should determine if all elements of this estuary will recover from these impacts. Meg Uzee O'Connell and I also published a manuscript in the *Proceedings of the Southeastern Fishes Council* titled "Post-Hurricane Katrina survey for the Blackmouth Shiner (*Notropis melanostomus*) at historical localities in Mississippi". During this research, we discovered a new population of *N. melanostomus* in Luther Lake, Mississippi. While we are encouraged that the species is still present and that more undiscovered populations likely exist, there is concern about the decrease in *N. melanostomus* localities over the last twelve years. For example, recent clear-cutting activities adjacent to one historic site threaten the largest and most consistent population of the species in Mississippi.



Post Doctoral Researcher **Dr. Will Stein** continues his research on Tarpon (*Megalops atlanticus*) and will host a meeting of international tarpon experts in January 2014 on the UNO campus. Recall that Dr. Stein was the first biologist to publish a scientific paper showing evidence that Tarpon spawn off the coast of Louisiana. He continues to promote the conservation of this important fishery species.

**Shane Abeare** (Ph.D. student) successfully completed his General Exams and returned to Bay of Ranobe, Madagascar to complete his dissertation research. This research focuses on the spatiotemporal dynamics of fish populations and ontogenetic shifts in habitat-use.



**Patrick Smith** (Ph.D. student) also completed his General Exams and continues working on a three year grant to study habitat choice in native Red Drum (*Sciaenops ocellatus*) that have been restored to an urban fishery in New Orleans.

**Jonathan Davis** (Ph.D. student) continues his work on Bull Sharks (*Carcharhinus leucas*) in Lake Pontchartrain and his research received international exposure when it was featured on *Shark Week* on the Discovery Channel. The episode can be viewed at the following web site: <http://video.search.yahoo.com/search/video?p=Shark+Week+%22voodoo+sharks%22>.



**Angela Williamson** (M.Sc. student) successfully passed her Qualifying Exam and is finishing her research on the federally threatened Louisiana Pearlshell Mussel (*Margaritifera hembeli*). She continues to work in collaboration with the U.S. Fish and Wildlife service and hopes to assess historical trends in populations of potential fish host species found within the range of this mussel.

**Arnaud Kerisit** (M.Sc. student) successfully passed his Qualifying Exam also and finished the field portion of his field work. He is examining how larval invertebrates use the natural and artificial passes that enter Lake Pontchartrain.





## Dr. Mark Kulp, Associate Professor

It has been another year full of fun and steady work and all is well. For the last several weeks I've been meaning to put together a detailed newsletter description of what has happened this past year but kept getting sidetracked. Now here I sit with only about an hour more of the afternoon and early evening left between classes and am then racing off bright and early tomorrow morning to Mt. Cheaha State park in northern Alabama for 4 days. I've been taking our structural geology classes up there for about 8 years now and it's a fabulous opportunity for our students to do some field mapping of structure and learn about the Appalachian Orogeny. The students seem particularly excited this year and are anxiously awaiting to see how cold it gets this year. Right now the forecast is for nighttime temperatures to fall into the 20's!!!! My northern blood can't wait to camp in some cold weather and take in the changing leaves but I have heard whispers of concern about the cold amongst the rest of the troops. Well my time is up, off to teach a graduate seminar class. I hope all is well with our alums and of course should you be nearby be sure to stop in.



Peter Bilinski showing off his artistic skills on the field trip.



Students from the structure class on field trip to Mt. Cheaha State Park in Alabama thawing out after a very cold night.



## The Dinosaur Man, Dr. Kraig Derstler, Associate Professor and Undergraduate Coordinator

For the past several years, I've been occupied with the undergrad program. Considering the diminishing size of UNO, you'd think this would be an easy job. However, we currently operate with 50% of our normal EES faculty complement and we have three times the number of majors. As a result, the job is pretty consuming. Fortunately, our university rewards such effort with regular, healthy raises and cost-of-living adjustments. During this same time, I've been

revisiting my grad school studies on invertebrate paleo and cycad botany. This means that I've increased my foreign travel. Lately, this has included fieldwork in Quebec, the UK, and Morocco, several stints in the Costa Rican cloud forests, and museum visits to Toronto and the Czech Republic.

Three happy notes: Ben (my yellow lab) continues to thrive as the unofficial ambassador and greeter in Gatehouse, our undergrad majors are getting job offers (!), and a group of alumni held their annual Rocktoberfest in New Orleans. It was great to see so many familiar faces again!



David Paul Jones, unofficial photographer in the UNO geology department at UNO during the 1980's and early 90's passed away at his home on June 23, 2013. He was 76 years young.

Dave was born on November 27, 1936 in Detroit, the oldest of ten children. As the eldest sibling, his parents relied upon him to help raise his brothers and sisters. Understandably, Dave learned to be resourceful and self-reliant. At age 23, he left home to join the U.S. Navy (1959-1963). While in the service, he became a successful boxer in the national Golden Gloves competition. His last duty station was New Orleans. Upon discharge from the Navy, he remained in the city and discovered that he loved the place. Dave enthusiastically embraced the New Orleans life style and stayed here for the next fifty years.

Dave blended his life with the city that he loved. He became an outstanding cook, a clever cabinet maker, and most importantly, a first-class photographic artist. Eventually, he devoted much of adult life to his art. He was a technically-astute camera and darkroom man, but his portraits of women positively glowed. Dave had a genius for revealing the great beauty within every woman he photographed.

Dave gravitated toward other New Orleans bohemians. This frequently led to his association with musicians and other creative folks. It also led him to become a founding member of the Krewe of MOMs (Mystics, Orphans, and Misfits). He was their official photographer for over 20 years. And in 2002, he reigned as MOM's King Quasimodo.

New Orleans was more than just fun and games for Dave. He earned BA and MS degrees at LSU-NO in the 1970's. This led to his association with the geology program, because he needed a darkroom and we needed his photographic services. He lived nearby and essentially joined the department as an unpaid but enthusiastic staff member. Always a gregarious creature, he had a strong intellectual and liberal influence upon countless geology students, staff, faculty, and friends.

I will miss Dave. He was a glorious paradox -- the bon vivant who worked amazingly hard, simultaneously being a life-long child and the Uber-adult. I remember him as a warm, thoughtful, chatty hedonist with a heart of pure gold.

- Kraig Derstler



At a site in Sapelo Sound during low tide; notice the flood and ebb channels around the bar, and the ebb oriented bed forms

## Dr. Ioannis Y. Georgiou, Associate Professor, Graduate Coordinator and Acting Director of PIES

We are nearing fall break, the weather is cooling and soon we will be switching into high gear. My lab – Coastal and Environmental Hydrodynamics and Sediment Transport - continues to perform research centered in coastal Louisiana, while at the same time expanding our research in other areas (through collaborative work) including Brazil, Saint-Pierre, the eastern Mediterranean, South Carolina and Georgia, Texas, the Great Lakes (Ontario and Erie), and along the New England coast. The lab conducts basic and applied research in coastal processes and specifically hydrodynamic and sediment transport processes within the fluvial marine transition (FMT), the coastal ocean, barrier islands and deltas and interior wetlands. We try to understand these systems using both field observations (surface and subsurface) and modeling.

We have recently completed research in Sapelo Sound, GA, with collaborators from Shell Clastics Research Group (N. Howes) and Boston University (Drs. Duncan FitzGerald and Zoe Hughes). Additional hydrodynamic and seismic data collected last year are being processed, and will soon be interpreted further by an incoming doctoral student. The central objective remains to better understand laterally accreting surfaces in shallow marine environments and associated morphodynamic processes governing their evolution. Our presentation at the AGU Fall meeting 2012 in San Francisco was well received, and earned us an invitation for a review paper in Marine Geology anniversary edition, which we submitted earlier this year, and was presented at the 10<sup>th</sup> International Conference on Fluvial Sedimentology in Leeds, UK last month. We continue our research in deltaic sedimentation in the modern Mississippi delta plain, focusing on depositional environments such as mouth bars and crevasse splays. Chris Esposito's research (previous MS student in my lab) was published this year in Geophysical Research Letters (congratulations Chris!). Other notable publications this year include research on sediment dynamics near a proposed sediment diversion in the Mississippi River (with Ehab Meselhe, Mead Allison and Alex McCorquodale), and research discussing the economic value of coastal wetlands in protecting southeast Louisiana from hurricanes, with collaborators from the University of Wyoming (Ed Barbier, Brian Enchelmeier) and the Water Institute of the Gulf (Denise Reed). Our work in the lowermost Mississippi River and Delta continues with collaborators from the Water Institute of the Gulf, the State and the Engineer Research and Development Center at Vicksburg. Using numerical oceanographic models validated with field observations, we are evaluating future changes in water and salt flux as a function of diversions, and the likelihood of changes in flow distribution during these low water conditions. Our most recent project is collaborative in nature with Drs. Sam J. Bentley and Kevin Xu (LSU), and it involves research on the Mississippi Delta front in Louisiana, evaluating physical processes driving delta front instabilities. We are excited to work closely with Sam and Kevin on this project.

**Graduate Students:** First, we welcome our new doctoral student, Kevin Hanegan, who started this fall. Kevin is a Louisiana native with background in Coastal Engineering from LSU, and is an Erasmus Mundus scholar who studied at various universities around the world. Kevin's background in deltaic morphodynamics and numerical modeling from his MS thesis and two years of experience in the industry are an asset to the lab, where he will work on various research topics as part of the doctoral requirement (see Kevin's separate entry for more). Congratulations to Kevin Trosclair (left)



for successfully defending his Masters on "Wave transformation and resulting marsh edge erosion; observations and modeling"; Kevin finalized revisions re-mitted and will be graduating this

working at Stone Energy last has completed his research and is scheduled to doctoral Energy Conversion (OTEC) and the use of costs and reduce environmental impacts to oceans. who has completed data acquisition and analysis in the lab include John Burnette, and Alison Sleath after a two year break, continuing research on

**Undergraduate Students:** Jeremy Henley fall. After a successful deployment and field campaign made possible by most lab students, Jeremy collected important information on the presence of stratification and shear near the northern Chan-



Tara Yocum (EES undergraduate) performing grain size analysis from cores collected at the St. Bernard Shoals offshore of the Louisiana coast.

deleaur Islands, to help explain processes driving stratification in the basin. Emily Harper, working closely with a Master's candidate in the College of Engineering, is looking at how fine sediments flocculate under low energy conditions using Laser In-Situ Scattering and Transmissometry (LISST) methods. Tara Yocum, our most recent lab member is testing whether delta crevasses in the modern Mississippi delta obey similar laws (in terms of their evolution) to larger deltas in nature as well as experimental deltas produced in the laboratory.



Robert Clark, Dallon Weathers and John Burnett

for successfully defending his Masters on "Wave transformation and resulting marsh edge erosion; observations and modeling"; Kevin finalized revisions re-mitted and will be graduating this

month. Michael Eller fend his PhD dissertation this month on Ocean Thered desalination/OTEC methods to offset economic Another student nearing completion is Robert Clark, and is in the process of writing. Other students Grzegorzewski, who returned to the program morphodynamics of barrier island systems. started his senior thesis research in my lab this



Kevin Hanegan (Doctoral Student) at Yosemite falls in Yosemite National Park.



Jeremy Henley and Emily Harper (EES undergraduates) in Chandeleur Sound on R/V Penland in late summer 2013 collecting currents and density data related to shear and stratification of the water column.

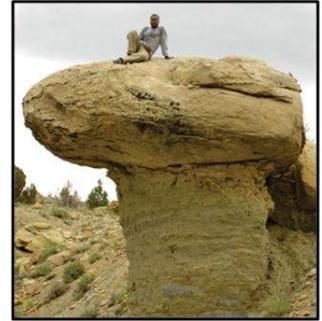
## Dr. Royhan Gani, Assistant Professor



Another busy year has flown by like a blazing comet racing past the night sky. Like previous years, I took my Stratigraphy class to a day-long fieldtrip to Amite River (Denham Springs, LA) and Citronelle quarry (Kentwood, LA), and a weekend-long fieldtrip investigating basin-fill strata of Ouachita Mountain (Arkansas). This year, a noticeable difference was students were riding on the two, brand-new, EES field vans, which were painted in deep red like the Lady in Red song by Chris de Burgh!

A few updates from my research lab. Veteran graduate student Hiranya Sahoo is preparing surely for the

defense of his PhD dissertation looming this semester. He worked on stratigraphic compartmentalization of Cretaceous coastal-plain and fluvial deposits of the Blackhawk Formation (Book Cliffs, Utah), which is an outcrop analog for producing tight-gas reservoirs in the adjacent Uinta and Piceance Basins.



Book Cliffs, Utah, PhD student Hiranya Sahoo



Corey Hinyup,

Another PhD student, Prabhat Neupane, is making headway in his PhD research on late Cenozoic vegetation and climate change from isotopic analysis of the Siwalik strata of the Nepal Himalayas. Over the past year, he produced intriguing isotopic results by analyzing Siwalik samples at Brown University. He is gearing up to present his research at the GSA annual conference in Denver this month, for which he, as one of the selected 125 students across USA, received travel support through "On the Future" program of the GSA designed to celebrate its 125 year anniversary. Prabhat is also planning to go back to the challenging terrain of the Himalayas at the end of this year to conduct further fieldwork, which is made possible by a UNO Summer Research grant.



PhD student Prabhat Neupane



David Cross

Two new MS students have joined my research group this fall. Corey Hinyup, after conducting a senior thesis in my lab, is now ready to pursue his graduate research on 3D connectivity of fluvial sandbody in the Book Cliffs (Utah) using Sirovision software, which produces virtual outcrops. David Cross, who has his undergraduate degree from University of Kentucky, is rapidly adjusting in a new environment and is progressing keenly to work on the Cretaceous strata of the Book Cliffs.

We are excited that the 63<sup>rd</sup> Annual Convention of GCAGS is in New Orleans this year. At the invitation of the organizing committee, I am teaching a short course named "Sequence Stratigraphy: From cakewalk to catwalk", which is for professionals and students.

To learn more about my academic activities, you can visit my webpage:

[http://ees.uno.edu/Gani\\_Royhan/index.html](http://ees.uno.edu/Gani_Royhan/index.html)



### KEVIN HANEGAN

I am a new PhD student in Dr. Georgiou's Coastal and Environmental Hydrodynamics Laboratory. I graduated with a B.S. in Civil Engineering from LSU in 2009 and received my Master's in Coastal Engineering from Delft University of Technology in the Netherlands in 2011. As part of my master's program, I also had the opportunity to study at the Norwegian University of Science and Technology in Trondheim and the Polytechnic University of Catalonia in Barcelona and to work on my research here in New Orleans at both the USACE and UNO. My thesis focused on modeling mouth bar evolution in the Wax Lake Delta with emphasis on reproducing channel bifurcation and mouth bar stratigraphy. For the past two years, I worked in the consulting industry as a coastal engineer in the San

Francisco Bay area. Some of the projects that I worked on included developing a hydrodynamic model of the entire Atchafalaya Basin/Bay system calibrated to the 2011 flood, performing a coastal flooding and wave runup study for the perimeter levees at SFO airport, developing hydrodynamic models of the San Francisco Bay to support marsh restoration and marine terminal dredging projects, determining the extreme wave forces and motions for a floating ferry terminal, and investigating marsh elevation response to sea level rise.

I decided to come back to school to pursue a PhD for the opportunity to both fully focus on interesting projects relevant to the ongoing coastal restoration efforts and study some of the difficult topics and unanswered questions that I encountered in my work, with the added bonus of getting to move back to New Orleans. My research will include investigation of several topics: the interactions among backbarrier marsh degradation, tidal inlet morphology, and barrier island transgression under rising sea levels; nonlinear, hurricane wave-induced sea bed pressure oscillations as a cause of slope instability along the Mississippi River Delta Front; and delta channel network and subaerial land development into receiving basins with existing marsh landscapes.



The Society for Earth and Environmental Sciences (SEES) is a non-profit student organization at the University of New Orleans focused on Earth and Environmental Sciences. The organization hosts the annual Mineral Auction which is a fantastic event and provides all operating funds for the organization. With these funds, SEES provides four Earth and Environmental Sciences students with scholarships. SEES also contributes funds for 1 or 2 students to present their research at field-related scientific conferences. In addition, SEES hosts

the annual Meet and Greet for new and transfer students as a way for them to become familiar with the department. SEES hosts EES-related talks to inform students of the variety of research taking place in their fields. SEES also has several BBQ's, a Crawfish Boil and a Movie Night to bring Earth and Environmental Science students together to form lasting relationships and foster an educational environment that is uniquely the Earth and Environmental Sciences Department. The members also benefitted from the annual End-of-Year Trip. Each year the organization provides transportation and lodging to a geologically-significant destination in order for students

to gain field experience that might not be attained in the normal academic setting, which is so integral to the field of Earth and Environmental Sciences. The Society for Earth and Environmental Sciences continues to promote academic success and community involvement through volunteer activities year after year and remains a vital component of the Earth and Environmental Sciences Department. The current SEES board: President, Susanna (Sasha) Kreinik; Vice-President, Kathryn (Katy) Langley; Treasurer, Andrew Adams; and Secretary, Emily Harper.



### A.A.P.G. UNO, Student Chapter

The UNO student chapter of the American Association of Petroleum Geology helps promote the advancement of the science of geology and technology within the student body. Our goal is to positively impact the future of anyone who is interested in going into the field of petroleum or mining by getting involved with industry professionals.

During the 2012-13 school year the AAPG hosted many educational talks with topics such as sequence stratigraphy, tectonics, the energy market and subsidence in the Gulf of Mexico. We hosted a screening of the *SWITCH Energy* movie and attended monthly luncheons hosted by local organizations such as NOGS.

In May of 2012 our new board was elected. Serving on the board are President, Rachel Carter; Vice President, David Brassieur; Secretary, Corey Hinyup and Treasurer, Ryan Jones. We are led under the guidance of our faculty advisor, Dr. Gani.

Recently over 15 students from our A.A.P.G. student chapter volunteered at the Gulf Coast Association of Geological Societies Convention, helping out by setting up, working the registration desk and judging technical talks.

The student chapter is looking forward to a busy 2013-2014 year. With one educational talk already scheduled for November, a plethora of local organization luncheon invitations and the extreme undertaking of our first large-scale fundraiser, the AAPG will be forging our way into the future.

Rachel Carter, President – UNOSC–AAPG, 2013-2014



### Sigma Gamma Epsilon SGE



As an honor society in the Earth and Environmental Sciences, Sigma Gamma Epsilon's first and foremost goal has been student success. We also feel that students should gather personal and professional experience in addition to their academic experiences. As such, we of SGE dedicate our time and energy to our community and department.

SGE is excited to announce our continuing tutoring program, and the sponsoring of our Graduate Seminar to prepare future graduate students in the department. Our community involvement has consisted of participating in: Save Our Lake – Beach Sweep, judging the John Curtis High School Science Fair, sponsoring an exhibit at Rockin' in the Swamp, volunteering at the Coutrie Forest within City Park, and volunteering with Super Saurus Saturday at the Childrens Museum.

SGE facilitates a departmental mentoring program in which incoming freshmen, or transfer students, are assigned a mentor. This program is designed to integrate incoming students and to help familiarize new members with our department, build student relationships, and to give academic counseling when needed. By providing these services, we hope to increase retention within EES.

This May, Jeremy Henley was awarded the Tarr Award in recognition of his exemplary leadership, commitment to SGE and contribution to the EES department. In addition, students Jon Guidry, Leopold Johnson, Sasha Kreinik, Matthew Santiago, Lilly Thompson, Rachel Carter, and Katy Langley were adorned with honor cords during the graduation commencement ceremony last May.

There are 28 active SGE members, and on Wednesday, November 13, 2013, seven new members will be inducted: Erin Berlin, Andy Adams, Joshua Flathers, Joan Gardner, Justin Hebert, Andrew Stiebing, and Kevin Hanegan.

Jon Guidry, President



## Student Scholarships and Awards 2012-2013

American Association of Petroleum Geologists (AAPG) L. Austin Weeks Undergraduate Scholarship Award: Rachel Carter

International Association of Sedimentary Geologists (IAS) Post-Graduate Research Grant: Hiranya Sahoo

Jefferson Volunteers for Family and Community College Scholarship: Emily Harper

New Orleans Geological Society Memorial Foundation Graduate Scholarship Award: C. Mark Johnson



Lewis Jones looks very happy with his scholarship award.

New Orleans Geological Society Memorial Foundation, Junior Scholarship Award: Andrew Adams

New Orleans Geological Society Memorial Foundation Graduate Scholarship Award: Andrew Boudreaux

New Orleans Geological Society Memorial Foundation Senior Scholarship: Dominik Kardell

Olga Braunstein Scholarship for EES Undergraduates: Rachel Carter, Raechel Fisher, Jon Guidry, Ryan Jones, Elizabeth Thompson

Olga & Jules Braunstein Service Award Undergraduate: Jeremy Henley

Chevron Geology Graduate Student Scholarship: Robert Clark, Emily Harper, Hiranya Sahoo, Christina Varuso

Shell Minority and Women in Science Award: Patricia Borges, Leah Grassi, Susanna Kreinik, Kathryn Langley, Rachel von Bodungen

AAPG Spring Break Student Expo Poster Presentation—received 2nd place in the geology section: Robert Clark

SGE Tarr Award: Jeremy Henley

Magnolia Transfer Award: Emily Harper



(Left to right) Matthew Santiago, Jamin Lopez, Nigel Long, Lewis Jones receiving their awards from Dr. William (Skip) Simmons at the College of Science Honors Convocation.

SEES Scholarship: Andrew Adams, Kimberly Clark, Jon Guidry, Jeremy Henley

Exxon Minority Geoscience Support Scholarship: Lewis Jones, Nigel Long, Jamin Lopez, Matthew Santiago, Carlos Stich

Geology and Geophysics Research Scholarship: Prabhat Neupane and Myles Felch

William W. Craig Memorial Scholarship: Karen Marchal

Jennifer R. Miller Memorial Scholarship: Kimberly Clark

Glenn Hebert Petroleum & Geology Scholarship: Kevin Troclair

Awarded a scholarship to attend the Joint 2013 MBI NIMBios CMBAM Summer Graduate Workshop on Connecting Biological Data with Mathematical Models at the Mathematical Biosciences Institute: Patrick Smith

Outstanding Student Presentation Award—ASLO Oral Presentation: Robert Clark

TOPS Honor Award: Emily Harper

Post graduate grant scheme, International Association of Sedimentologists: Hiranya Sahoo

Society of Sedimentary Geology (SEPM) Award: Prabhat Neupane



(Left to right) Rachel von Bodungen, Kathryn (Katy) Langley, Leah Grassi receiving their awards from Dr. Simmons at the College of Science Honors Convocation.



### KIMBERLY CLARK

I am a Master's candidate in the Earth and Environmental Sciences Department and am part of the MP<sup>2</sup> Research Group working under the most superlative professors and advisors; Dr. William Simmons, Alexander Falster, and Dr. Karen Webber. My Master's thesis, "Contact Zone Mineralogy and Geochemistry of Mount Mica Pegmatite, Oxford Co., Maine, USA" is in progress and I will soon be submitting a paper for publication in *The Canadian Mineralogist: Special Edition on Granitic Pegmatites*.

I currently teach EES 1000 - Dynamic Earth Lecture and have previously taught EES 1004 & 1005 – Earth through Time Lecture & Lab. I have served as president of The Society for Earth and Environmental Sciences (SEES) and am a current active member. Other student organizations I am actively involved in are Sigma Gamma Epsilon (SGE), the National Honor's Society

for Earth Sciences, in which I have previously served as secretary, and the UNO chapter of the American Association of Petroleum Geologists (AAPG).

The EES Department has been an outstanding conduit to study the fascinating world of geology. Not only have I been able to explore my passions for the earth sciences, I have also gained invaluable insight, life-long friendships and have had the honor and privilege of learning from the best. After graduation in May 2014, I hope to secure a career not only utilizing my knowledge, skills and passion for the earth sciences, but also one that can satiate my quest and belief that we should never stop learning.



### LEAH GRASSI

I am a graduate student here at the University of New Orleans. Before entering into the graduate program at UNO I received my BS in geology from UNO. My undergraduate experience was so positive that I couldn't think of attending any different school. So I was extremely delighted when I received a graduate assistantship and teaching assistantship from UNO.

In addition, to being a graduate student I am also a member of the MP<sup>2</sup> Research Group which is a group of researchers dedicated to the study of Pegmatites. My graduate work focuses on the Usakos gem tourmaline pegmatite located in Usakos, Namibia. Traveling to Africa with the MP<sup>2</sup> research group was an amazing experience that I will carry with me for the rest of my life. Working together in tough terrain to gather samples bonded our research group. Even though we worked very hard, we managed to have a bit of fun (please see Drew Boudreaux synopsis of the trip (this issue) to find out more!)

In addition to my study of pegmatites, I have also been preparing, via course work, for a career in the Oil & Gas industry. In fact, just recently, I have been offered and have accepted a position at Chevron post-graduation. UNO offers courses such as: Sequence Stratigraphy, Geophysics, Structural Geology and Petroleum Geology in preparation for Oil & Gas work. I have also served as President of the student chapter of the American Association of Petroleum Geologists at UNO (2012-2013). During that time, I spearheaded a campaign to fund the Petroleum Geology course that is currently being offered.

Life as a graduate student at UNO is challenging, but I feel very fortunate to have this experience in my life. Cheers, Leah Grassi-Schroeder



### KAREN MARCHAL

I first recognized my passion for geology during my undergraduate studies in psychology. In May 2005, I received a Bachelor of Science in Psychology, graduating Summa Cum Laude. The geology courses I had taken really sparked my interests and I decided to return to UNO to pursue an advanced degree in geology. My interest in geochemical processes began during my post-baccalaureate studies of mineralogy and petrology. I received a LA EPSCoR SURE research grant to fund an undergraduate research project, looking at the composition of micas from the Mt. Mica Granitic Pegmatite, Maine. This research experience solidified my decision to pursue a master's degree in Earth and Environmental Science and to focus my master's research on pegmatites. By the end of 2011, I completed all essential courses required for a minor in Geology and became a Master of Science candidate. I am currently in my second year working under the direction of Dr. William "Skip" Simmons, Al Falster, and Dr. Karen Webber. My master's thesis research is entitled "Geochemistry, Mineralogy and Evolution of Mica and Feldspar from the Mount Mica Pegmatite, Maine, USA".

My time in the EES department has been amazing. The knowledge, analytical skills, and research experience I gained is immeasurable. My advisors have been instrumental in giving me the instruction, guidance and tools to be a good scientist. I was given opportunities to travel to Alabama, Arkansas, Tennessee, Maine, New Hampshire, throughout the Rocky Mountains, Namibia, and Ascension Island, further enhancing my knowledge by experiencing geology directly. Teaching has allowed me to hone my comprehension and share my passion for geology with others. As a member of SEES, AAPG, and SGE, I forged valuable relationships with students, faculty and staff, as well as community and corporate leaders. As president of SGE, I implemented a tutoring center for students, and initiated the first departmental peer-mentoring program. These experiences allowed me to grow both personally and professionally by enhancing my scholastic, leadership and organizational skills. I will be graduating in May 2014 with the hopes to work for a company that will utilize my interests, strengths and education.



## Earth and Environmental Sciences

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### DONATIONS AND GIFTS TO EES

The Department of Earth and Environmental Sciences has thrived in large part because of the support of our alumni and friends. Monetary contributions have allowed teaching, research, and scholarship programs within the Department to flourish during periods when state support wavers. Permanent support to the Department has been established with the creation of endowed accounts from which the interest is used to support a specific purpose. These accounts are managed by the UNO Foundation and include:

**William W. Craig Memorial Award (No. 80696)**: an award for students who display excellence in teaching earth science.

**Jennifer R. Miller Memorial Award (No. 80711)**: an award for graduate students who display research excellence in environmental geology

**Jules & Olga Braunstein Undergraduate Scholarship(No.80351)**: merit-based scholarships for undergraduate geology and geophysics majors

**Geology and Geophysics Research Fund (No. 80633)**: a fund to support graduate student thesis research.

The Department maintains the **Earth & Environmental Sciences Fund (No. 90243)** which is used to support special projects, such as the purchase of vans, departmental seminars, special events and faculty and student travel.

Contribution to any of these funds is greatly appreciated. The preferred form of donations is a check that is payable to the **UNO Foundation** and **sent to the Department Office**. If you want to target a specific fund, please indicate the name or number of the fund on the check.

### SPECIAL THANK YOU FOR YOUR GIFT (2012-2013)

**Robert Burnett**

**Chevron**

**Donald & Katherine Dallaire**

**James Deister Jr.**

**Gem & Mineral Society of  
LA, Inc.**

**Gordon Jackson**

**Roy & Mary Walther**

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Society Memorial  
Foundation, Inc.**

**Society of independent  
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tists, New Orleans Chapter**

**Art & Alice Johnson**

**William Whiting**

**Ruggles Mine, Inc.**

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**Stacy Smith**

**Bryan & Mary Stephens**

**David Wahl**