THE UNIVERSITY of NEW ORLEANS

Department of Earth & Environmental Sciences

2015

Newsletter #38 October 2015

A message from the Department Chair

Department Chair, Dr. Martin O'Connell

Hello Students, Alumni, and Friends of EES:

Since the last newsletter, EES and UNO have both experienced many ups and downs. One of the more positive events I experienced, though, occurred at the Annual College of Sciences Honors Convocation in April. This convocation brings together those students in the College who have won departmental awards. It is typically a large gathering of over 100 students and faculty. Our EES Department is always well-represented thanks to the many donations we get from our great alumni and supportive external organizations who fund most of the awards (thank you everyone for your continued support of EES). Before I handed out the EES awards, I felt the need to point out something that had occurred a few days earlier. I told the crowd that a team of EES graduate students had recently won the 2015 Gulf Coast Regional Imperial Barrel Award in Houston and would be advancing to the international finals in Denver to represent UNO. This announcement made the students and faculty cheer loudly and enthusiastically. Then, when I mentioned that in winning the award the UNO team had beaten larger schools such as Auburn, the University of Alabama, Texas A&M, and the "flagship" LSU, the second cheer that followed was twice as loud as the first. The EES team's accomplishments made both the Department and the University very proud.

Another positive action that has occurred since the last newsletter is that we have hired a new Instructor, Dr. Melanie Stiegler. Dr. Stiegler received her B.Sc. in Geology from LSU and her Ph.D. in Geology from Stanford University. Her dissertation research involved analyzing Archean volcaniclastic deposits in Barberton, South Africa in order to evaluate parent magma sources, mechanisms of fragmentation, and depositional environments. She also examined the near surface and metasomatic alteration of the volcaniclastic deposits and investigated particle dispersal and aggregation in volcanic eruption columns. Dr. Stiegler has been teaching a large portion of our introductory courses and this semester has taken on also teaching Earth Materials. Please give her a warm EES welcome if you see her.

As I did last year, I want to thank Michael Fitzgerald and Toby Roesler for their continued help teaching and mentoring our students. As concerned UNO alumni, both Michael and Toby have volunteered their time to help EES during this unstable period when vacated faculty lines are not being re-filled. The students appreciate having experts from the "real world" teach and train them about their potential futures as professional scientists. I have the sense that the actions of Michael and Toby are inspiring other alumni to follow in their footsteps and return something to EES after a successful career.

Our 41st^{h} Annual Mineral Auction will be held on Friday, November 6th at 7:00 p.m. This will be the first time ever that the Mineral Auction will not be run by Skip, Al, and Karen. After over 40 years at UNO, Skip is happily retired and wishes us good luck. Although Skip, Al, and Karen are still helping in significant ways from afar, now the key annual event of our Department is in the capable hands of our EES student organizations. As Chair, I invite alumni and friends to attend and enjoy a night of bidding and buying.

Many of you may have concerns about the future of EES and UNO as a whole based on the State's financial crisis. While I am not a naturally optimistic person, I can honestly say that I feel more confident about the future of EES and UNO now than I did a year ago. Some of the top researchers on campus are our own EES faculty and they are all very effective in passing on their expertise to our graduate and undergraduate students through teaching and mentoring. This fact has been recognized by several top administrators and perhaps gives us some protection from potential future cuts. Hopefully by the time of next year's newsletter we'll have more students, more faculty, and more research grants coming into EES. As always, we appreciate all your support and help.

Thanks,

Martin O'Connell

Dr. Martin O'Connell, Associate Professor, Department Chair, Director of Nekton Research Lab

Nekton Research Laboratory

The scientists and graduate students who work in my lab, the Nekton Research Laboratory (NRL), have been pursuing various interesting research projects over the last year. Senior Biologist and Database Manager Meg Uzee O'Connell of the Pontchartrain Institute for Environmental Sciences (PIES) and I received a grant last autumn to measure the response of fishes to flood gate openings in Bayou St. John. The point of this research was to assess the potential benefits of an adaptive water management plan which involves opening floodgates for the purpose of introducing aquatic organisms from Lake Pontchartrain into Bayou St. John. In a collaborative project with the Louisiana Department of Wildlife and Fisheries (LDWF), NRL personnel radio-tagged Bull Sharks (*Carcharhinus leucas*) in Lake Pontchartrain back in 2013 and now LDWF personnel are collecting the movement data to determine when Bull Sharks enter and leave Lake Pontchartrain. You can actually follow the sharks' movements over the last two years at the following LDWF website: https://louisianafisheries.net/telemetry/fish. Astute visitors to the website will recognize that many of the sharks are named after former EES undergraduate students who helped with this project.

Assistant Professor-Research Dr. William Stein of PIES and I continue to work together on writing research grants and scientific manuscripts on various topics. For example, we currently have a manuscript in revision titled, "A contribution to the life history of Tarpon (*Megalops atlanticus*) in the Gulf of Mexico". Our findings suggest that some Tarpon can complete their life cycle in the waters of southeastern Louisiana.

Patrick Smith successfully defended his dissertation research in June. His research on habitat choice in native Red Drum (*Sciaenops ocellatus*) in Bayou St. John produced new insights as to why these fish choose certain areas in the Bayou over others.

Shane Abeare (Ph.D. student) will be finally returning from his fieldwork in the Bay of Ranobe, Madagascar. His research focused on the spatiotemporal dynamics of fish populations and ontogenetic shifts in habitat-use. Shane hopes to defend his dissertation research sometime in 2016.

Also hoping to defend in 2016 is Angela Williamson (M.Sc. student) who helped identify the fish host for the federally threatened Louisiana Pearlshell Mussel (*Margaritifera hembeli*). Angela is currently working with NOAA's National Marine Fisheries Service on a project concerning the local Gulf Menhaden (*Brevoortia patronus*) fishery.

Arnaud Kerisit (M.Sc. student) has finished his analyses on how larval invertebrates use the natural and artificial passes that enter Lake Pontchartrain. He is now writing his thesis and plans on defending his thesis sometime soon.

Some of the most exciting research that has been conducted in the NRL over the last year has come from the two graduate students working on Turtle Excluder Device (TED) projects. Jeff Gearhart (Ph.D. student) is leading a National Fish and Wildlife Foundation funded project to study the use of TEDs in the Louisiana skimmer trawl shrimp fishery. Jeff coordinates the testing of different TEDs and TED methods in cooperation with local Vietnamese-American and Cambodian-American fishermen.

Geoff Udoff (M.Sc. student) has been working on a NOAA funded project that compared how a newly invented wing trawl system compares to standard trawling practices in regard to reducing bycatch. Jeff completed much of his fieldwork over the last year and has some fairly interesting tales about working in the Gulf with Alabama fishermen.

Dr. Ioannis Y. Georgiou, Associate Professor, Graduate Coordinator and Director of the Pontchartrain Institute for Environmental Sciences (PIES)

Greetings to all students, faculty, alumni and friends. We are excited to provide some updates from our group and hopefully everyone reading this is doing well. It is mid-October, fall break and the campus is quiet; perfect time to catch up on reading and writing after grading midterm exams. We continue to perform research centered in coastal Louisiana, although we are always welcoming, and often expanding our research anywhere that we can find challenging scientific questions to answer, and funds to cover our fieldwork. We conduct basic and applied research in coastal geomorphology and governing surface processes, leading to morphodynamics of the fluvial marine transition, the coastal ocean, barrier islands, deltas and interior wetland systems. We try to understand these systems through both field observations and modeling.

Tara Yocum, MS student and Mike Brown, PIES, in Plum Island Wildlife Refuge, MA

Pricilla Souza

Our research on the lowermost Mississippi River and Delta Plain (MRDP) continues with results highlighting the importance of relative sea level rise in producing changes in flow distribution within the distributary channels in the modern delta, and altering salt-wedge propagation patterns within the lower river. Tidal bar research (Pricilla Souza, PhD student and collaborators) is continuing with key presentations to appear at the Geological Society of America Annual Meeting in Baltimore this fall and at the Coastal and Estuarine Research Federation (CERF) conference in Portland, Oregon. Also at CERF this fall is Kevin Hanegan (PhD student) presenting research on backbarrier-inlet interactions in transgressive systems (with Prof. FitzGerald, Boston University), and Tara Yocum (MS student) presenting research on deltaic sedimentation in developing crevasse splays in the modern Mississippi delta plain, and controlling processes governing their morphodynamic evolution. Our research with the Shell Clastic Reservoir Research Team on the dynamical processes driving morphology within the Fluvial to Marine Transition (FMT) continues, with recent presentations at the 2015 American Association of Petroleum Geologists (AAPG) Annual Convention. Other research with the Shell Team and collaborators focusing on tidal bedding formation and governing controls for systems with and without fluvial influence is currently underway (Joshua Flathers, MS student) where we are conducting morphodynamic experiments to simulate the effects of tidal range, fluvial discharge, channel geometry and initial morphology on the resulting stratigraphic deposit. The Mississippi River Delta Front project is on its third year with collaborators (Prof. Sam J. Bentley and Kevin Xu, Louisiana State University and Dr. Mike Miner, Bureau of Ocean Energy Management - BOEM) evaluating geophysical processes driving delta front instabilities; synthesis reports, papers and presentations of this work will take place at the American Geophysical Union (AGU) 2015 Fall meeting in San Francisco in December, and at the AGU Ocean Sciences meeting which will be held in New Orleans in the spring of 2016. Our collaborations with Prof. FitzGerald (Boston University), Chris Hein (Virginia Institute of Marine Sciences), and Zoe Hughes (Boston University and University of Houston) brings us to Plum Island Sound and the Merrimack River, Massachusetts, where this past summer we completed a 15 day field campaign to explore the hydrodynamics and sediment transport pathways to better understand the Great Marsh sustainability in response to future projections of sea level rise. The effort, funded under the Hurricane Sandy initiative, brought local municipalities, wildlife refuges, the Merrimack River Valley Division, consultants and three academic partners (including our department and PIES) together to study this dynamic basin on the east coast. Tara Yocum (MS student) and Mike Brown (PIES field operations) played a critical role in the field effort for this project. Other notable efforts include recent collaborations with resource economists from LSU (Rex Caffey) and Mississippi State (Daniel Petrolia). This BOEM funded project will investigate the economic and geomorphic viability of utilizing outer continental shelf (OCS) sand versus nearshore sand sources for coastal restoration projects in Louisiana, to determine project initial cost and outcome as a function of both sand quality, strategic placement, and project performance (both in terms of physical response – morphodynamic evolution, and associated economics). We are excited to get started with this challenging project. Other notable research jointly with Dr. Mark Kulp are the Barrier Island Comprehensive Monitoring Program (BICM) sediment sampling (with USGS and the Costal Protection and Restoration Authority - CPRA), a project that brought many of our graduate and undergraduate students to the field this summer, and the Sediment Availability Research Project with Mead Allison from the Water Institute of the Gulf.

Kevin Hanegan

Dr. Ahmed Gaweesh

Installation of a Doppler current profiler in Joppa Flatts, near the Merrimack River, in Massachusetts. Dr. Georgiou (left) and TJ Malgieri (BU, PhD Student)

Graduate Students and Research Associates: First, we welcome our new Masters students, Brittany Kime, Tim Nelson and Joshua Alarcon. While the specifics of their research are still being developed, the general direction of their research is centered on Mississippi River Delta Plain barrier and shoreface dynamics, an exploration among others controls on barrier island evolution as a function of direct and indirect nourishment methods, and examining physical controls governing decadal scale shoreface response along the coastal plain and relating that to barrier evolution. Dr. Ahmed Gaweesh continues his appointment as a post-doctoral scholar (next page)

Brittany Kime, Tim Nelson, Josh Alarcon, no photo available for Josh Flathers

Dr. Mark Kulp, Associate Professor

Hi everyone I hope this newsletter finds you all doing well and in high spirits!!! It has been another whirlwind year for me with plenty of teaching, fieldwork, writing, and travel.

One of the best trips I took this past year was a week-long field trip with 15 students to Kentucky at the end of the Spring 2015 semester. The students had talked me into leading the trip the previous semester while on my annual northern Alabama trip for structural geology. The Kentucky trip was a huge success and the students were able to see some incredible exposures in the Appalachians as well as the central Bluegrass region of Kentucky. If you ever have the chance to visit the outcrop at Pound Gap Virginia on the Virginia and Kentucky border be sure to go…..this magnificent outcrop exposes much of the Devonian to Pennsylvanian Appalachian section and is quite impressive.

This past summer was especially busy because of a large grant from the Louisiana Coastal Protection and Restoration authority to collect sediment samples from onshore and offshore locations along the delta plain. We did this first in 2007 and the project represents a long-term monitoring effort by the state to better understand regional local-scale sediment transport dynamics. The field logistics of this type of state-wide effort are quite challenging and research associate Mike Brown, as well as students involved in the effort, did a fabulous job of keeping everything running smoothly. No easy task when there are multiple vessels operating and as many as 10 people in the field all at once. We still have approximately 2 weeks of fieldwork left to complete the project and are hurriedly trying to wrap things up before the winter cold fronts really limit our ability to be on the water. I hope that by the time you are reading this the field campaign is complete and we are full steam ahead characterizing the samples in the laboratory.

Field trip to Mt Cheaha State Park in Alabama

Students within the Coastal Laboratory continue to excel and Trey Kramer (U. West Florida) will be the next one to graduate in the next few months after completing his work on a tidal inlet and spit platform system of the central south-central coast. Rachelle Thomason (Mississippi State) and Bryan Carter (UNO) are moving along nicely with their work on marsh edge erosion and Joe Frank (Penn State) recently received an industry seismic data set that will allow us to look for deep seated faults that may be affecting the near surface and surface stratigraphy of the northeastern delta plain. Celeste Woock, just arrived from U. Alabama, has started working on mapping subsidence across the delta plain, supported by a Sea Grant Coastal Science Assistantship that was awarded to Dr. Alex Kolker at LUMCON. Rachel Gaspard (UNO) also just entered the graduate program this fall and will in all likelihood be looking at possible Holocene fault-motion in Plaquemine Parish, just waiting to get access to another industry dataset before she can begin in earnest.

Trey Kramer, Rachelle Thomason, Joe Frank and Rachael Gaspard (No photo available for Bryan Carter.)

On a personal note my son Jonah just turned 5 and it is truly amazing how quickly he is growing up. Just recently he told me that he wanted to be a "volcano researcher" and that I could be his assistant. Then I found out (Continued on page 5)

RV Mudlump is the upper Parker River, in Massachusetts. From left to right, Tara Yocum (MS student), Mike Brown (PIES Res. Associate), Dr. FitzGerald, and Dr. Georgiou

(GEORGIOU cont) in PIES, working closely with students and participating in both new and existing research in coastal Louisiana and in Plum Island Sound, MA. Kevin Hanegan and Pricilla Souza should be defending their dissertation proposals and Joshua Flathers and Tara Yocum should be presenting their masters prospectus soon (hopefully this semester). Sean Kenny is refining his research direction further. And Finally, congratulations to Kevin Hanegan for passing his Professional Engineering (PE) certification exam this summer.

Undergraduate Students: This past spring, Jack LeBien (Physics major at UNO) joined our group to help in the analysis of geophysical and hydroacoustic data we collected from various projects, including: analysis of hydrographic data collected in Plum Island Sound, Massachusetts; hydroacoustic hydrodynamic data collected at East Timbalier Island, Louisiana during winter storms; and performing signal processing analysis on both time-series data (tides, velocities and waves) as well as cores (sand-mud frequency). Jack is graduating this semester, congratulations.

A TRIBUTE, Dr. Raymond Stephens

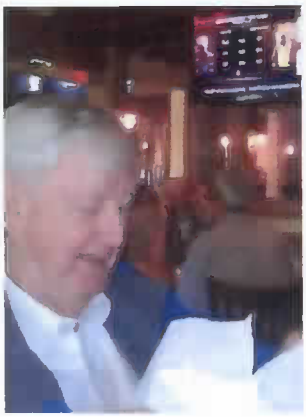
April 20, 1928—October 20, 2015

Dr. Stephens was a professor at the University of New Orleans from 1969 until he retired from academia in 1990 and was named Professor Emeritus. He also served two years as Assistant Dean of the College of Sciences. His favorite work was teaching freshman geology, Subsurface Geological Methods and advising master's candidates. His intro geology class was responsible for recruiting countless geology students.

Ray was my first Geology professor at the University of New Orleans back in 1979. Twenty years later I was fortunate to become his business partner. God blessed Ray with many talents but one of his best talents was teaching geology. The Subsurface Mapping Course Ray taught would be the most important class for my career.

Ray also had a great talent for making you laugh and lifting your spirits. It was usually a joke you heard 20 times before (and you would still laugh) or a new joke you never heard before. Ray's anticipation for the punch line would usually crack him up before even he even got to it.

I also have never met a man who had so many sayings - "In and out like a fiddler's elbow", "faster than two gars can skin a minnow". These are just a few but he had a bunch.



After working with Ray for 15 years I have learned a lot from him:

1) Look out not in
2) Don't take life too seriously
3) Think before answering and never leave them hanging (always respond)
4) Organize and clean your desk before leaving the office
5) Make sure the coffee pot is unplugged and the doors are locked (check twice)
6) Don't eat oysters

Ray always talked about making it to 100 years old and I prayed many times that God would grant him that request, however God had different plans for Ray. During Ray's great life on this earth God was always smiling down on him, now God is smiling with him.

~ Eric Broadbridge, Covington, Louisiana

The UNO EES and PIES sponsored ASBPA meeting field trip "Geology and Floodrisk of New Orleans" This picture shows Dr. Kulp discussing the role of subsurface geology in modern day landform evolution.

(Kulp continued) his plan was for me to be lowered from a helicopter into a volcano so that I could collect samples that he could study. I told him we might have to negotiate a bit on my role in his research program. Mary is also doing well and in the past year she and a colleague at St. Martins Episcopal School were invited to several different venues to present papers on their extremely novel approach to discipline in a private high school.

I wish everyone all the best for the coming year and of course if you happen to be in town be sure to stop by for a visit, we always love seeing faces of yesteryear in the Department.

Rachelle Thomason won the 2015 Best Poster Presentation at the 2015 American Shore and Beach Preservation Association (ASBPA) annual meeting in New Orleans.

Part of the Barrier Island Comprehensive Monitoring (BICM) sediment sampling team in the Chandeleur Islands. L-R, Mike Miner, David Cross, Rachelle Thomason, Mike Brown, Josh Flathers, Andrew Courtois and Mark Kulp

UNO Imperial Barrel Team Wins Regional, Advances to International Finals

(from left) Mark (Leopold) Johnson, Elijah Adedeji, Joshua Flathers, Dr. Royhan Gani, Joseph Frank, Trey Kramer and Toby Roesler.

A team of University of New Orleans graduate students won the 2015 Gulf Coast Regional Imperial Barrel Award in Houston, Texas and will advance to the international finals next month in Denver, Colo. The Imperial Barrel program, which is organized by the American Association of Petroleum Geologists, pits geosciences teams from universities around the world against each other in a competition to analyze an oil and gas reservoir.

UNO's team beat out 10 regional competitors during the April 16-17 event from universities including Auburn, University of Alabama, Texas A&M, University of Texas at Austin, University of Houston and LSU.

The team members are John Norbert Kramer(Trey), Elijah Ayobami Adedeji, Joshua Flathers, Joseph Paul Frank, and Christopher Mark (Leopold) Johnson. The faculty adviser is Dr. Royhan Gani, associate professor of Earth and Environmental Science, and team is assisted by Toby Roesler of Stone Energy and adjunct faculty member Michael Fitzgerald.

The $3,000 prize will go toward scholarships in the Department of Earth and Environmental Science.

"Winning this high profile competition brings fantastic exposure to the University of New Orleans," Gani said. "For both prospective students and industry recruiters, this shows that UNO has one of the top geoscience programs in the region."

In the regional, teams analyze a dataset in the eight weeks prior to the competition and deliver their results in a 25-minute presentation to a panel of industry experts. The judges select a winner based on technical quality, clarity and originality of presentation as well as team's ability to answer questions.

UNO is one of 12 regional winners that participated in the international competition held in Denver, May 2015.

Ganis are in front of the Continental Divide, Rocky Mountain National Park, Colorado. This "Great Divide" separates the Atlantic Ocean drainage from the Pacific Ocean drainage.

Dr. Royhan Gani, Associate Professor

In my very first piece of writing for the departmental Newsletter in 2009, I wrote, "I'm feeling good about coming days. I think I'm ready to put EES on global map – let's work together!" Yes, I am happy to report that together we have achieved this goal of putting EES on the global map this year! This is the story of the prestigious global competition of the AAPG IBA (Imperial Barrel Award), where teams of graduate students from universities around the world compete by analyzing a real-world industry dataset to find hydrocarbon. This year in the Gulf Coast region IBA competition, the UNO team became the champion, defeating 10 other universities in the region including formidable competitors like University of Louisiana at Lafayette (two times world champion), University of Texas at Austin (past world champion), Texas A&M, University of Houston and Louisiana State University. As one Vice President of UNO remarked, "Just being competitive against some of the large, well-funded flagship universities in this region would be an accomplishment; to beat them all is truly remarkable".

UNO team members worked exceptionally hard with the full attention of their brains and souls. For the global IBA competition in Denver in June, where 12 region champions around the world participated, the UNO team was preparing diligently up to the very last moment of their presentation to show their absolute best. They had a flawless presentation and an outstanding Q & A session. Most importantly, none of the questions were outside of their preparation, which is rare. The audiences who sat through all presentations thought UNO had the best performance. According to judges' feedback, UNO was "the most creative out of the box thinkers". Although we were expecting to win the world title and worked accordingly, our dream didn't materialize this time! However, we certainly created a huge buzz in the world stage. Most importantly, we proved that UNO, despite all of its recent economic challenges, has one of the best geoscience programs. It is my sincere expectation that we will be able to hold this momentum. Thanks to our alumni, and local organizations and companies who are supporting EES in various ways to overcome its myriad of challenges since Hurricane Katrina.

On other fronts, teaching and research are in full swing. I'm continuing to teach Earth History, Sed/Strat, Sequence Stratigraphy, Petroleum Play, and IBA courses. My StrataMax (Stratigraphy Maximum) research lab is busier and more crowded than ever. Dr. Hiranya Sahoo is continuing his postdoc, with writing papers and generating research ideas on the Cretaceous coastal-plain and fluvial deposits of the Blackhawk Formation (Book Cliffs, Utah). In collaboration with Dr. Ioannis Georgiou, we are integrating inverse modeling (rock-record interpretation) and forward modeling (numerical experiment) to understand river avulsion mechanisms. After collecting a huge amount of field data and presenting a paper in the AAPG conference in past June, MS student David Cross is very close to finalizing his thesis manuscript on the fluvial Cretaceous Castlegate Formation (Book Cliffs, Utah) with exciting new results regarding the sequence stratigraphy of the heavily studied and much debated Castlegate Formation.

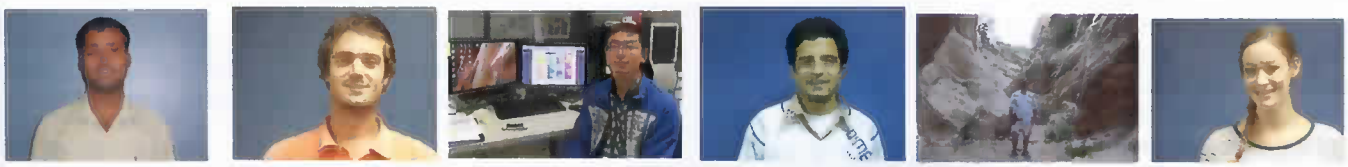
In the Himalayan front, PhD student Prabhat Neupane, who has been awarded a prestigious Explorers Club grant, is making progress with his research on late Cenozoic vegetation and climate change from lipid biomarker isotopic analysis of the Siwalik strata of the Nepalese Himalayas. After successfully presenting a paper in the AGU annual conference in San Francisco past December, he is now writing his second manuscript. New MS student Ryan Jones has joined our lab this fall to participate in our Himalayan research.

In the Martian front, undergraduate student Emily Harper, who had a scholarship from NSF SURE, completed her Senior Honors thesis on the ancient lake deposits of the Gale Crater in Mars. Analysis of a detailed depositional history of the Gale Crater Lake suggests that life could have evolved in Mars during Noachian (3.8-3.5 Ga) in a wet Earth-like climate that is absent today.

In the Gulf of Mexico front, MS student Rachel Carter (co-advised with Dr. Sarwar) has finished investigating Neogene strata of the Mississippi Canyon, Gulf of Mexico using 3D seismic, wireline logs, and other subsurface data. Her research suggests that the rise of the salt domes significantly impacted submarine channel evolution in the study area. She defended her thesis on October 26. New MS student Zexuan Wang (from University of Alberta) has joined our lab this fall to investigate deepwater sequence stratigraphy in the Gulf of Mexico.

In the modern Georgia Bay front, PhD student Pricilla Camoes Souza (co-advised with Dr. Georgiou) is progressing with her research on 3D architecture and evolution of tidal point bars using cores and shallow-seismic data. After finish logging all the cores, she is currently preparing her first manuscript and for her upcoming GSA and CERF presentations.

To learn more about my academic activities, please visit my webpage: http://ees.uno.edu/Gani_Royhan/index.html



Hiranya Sahoo, David Cross, Zexuan Wang, Prabhat Neupane, Ryan Jones, Rachel Carter

2015 Summer Geoscience Minority Program for High School Students

Our group at the Museum of the Rockies, Bozeman, MT.

Students in Montana with Dr. Ivan Gill (far right).
L- R: Aisosa Ogunbor, Juan Martinez, Iveth Ramirez, Langston Swafford, Johann DeJesus, Demire Johnson.

In June 2015 six intrepid high school students, accompanied by Dinah Maygarden (PIES, EES) and Dr. Ivan Gill (College of Education) traveled to Montana to spend 10 days following the Montana Dinosaur Trail (as well as also visiting Yellowstone National Park!).

In Montana, the group from New Orleans met up with counterparts from the San Francisco Bay area, led by University of California Berkeley Museum of Paleontology and El Paso, led by University of Texas, El Paso. This partnership of universities has been working together for several years to introduce minority high school students to the geosciences – through and NSF grant – Minority Education Through Traveling and Learning in the Sciences (METALS). In all 16 high school students traveled with a team of adults who included professors and graduate students.

This year the focus was on vertebrate paleontology (dinosaurs!) as a way to spark an interest in geology as a college major and a possible career path. This topic proved to be a hit with the students. They got to visit the Museum of the Rockies in Bozeman and meet the legendary Jack Horner who showed us around the collection. Then we were off on a tour of sites of dinosaur discovery, visiting the Two Medicine Formation, the Judith River Formation, and the Hell Creek Formation. The students got to work alongside leading scientists from UC museum of Paleontology (UCMP) and other institutions and actually make their own discoveries in the field.

Juan Martinez (Jesuit High School) and Johann DeJesus (Patrick Taylor Academy) work with Dr. Mark Goodwin from UC Museum of Paleontology to record the location of the Champsosaurus fossil they found.

One of several highlights of the trip included the discovery by student Juan Martinez of a fairly intact and therefore potentially valuable Champsosaurus skeleton in the Hell Creek Formation. This was to be later excavated for the UCMP. Another fossil Juan found is now in a museum in Rudyard, MT.

We are hoping that of the six excellent students we recruited from area high schools this summer, some will decide to enroll at UNO to major in geology. Juan is now enrolled at Spring Hill College in Alabama.

Langston Swafford (Holy Cross) Johann DeJesus (Pat Taylor), Iveth Ramirez (East St. John High Schoo), and Aisosa Ogunbor (Destrehan High School) discuss their fossil finds.

C.E.R.F. Center

Did you know that UNO Pontchartrain Institute for Environmental Science (PIES) operates a field station devoted to the coastal sciences? The Coastal Education and Research Facility (CERF), which has been in operation for five years is located on Chef Menteur Pass in eastern New Orleans - or more descriptively, on what is known as the Orleans "land bridge" that separates Lake Borgne from Lake Pontchartrain. This location, while still technically in New Orleans, and easily accessible from Chef Highway, is also out in the tidal coastal zone and therefore a great place for everything to do with researching and educating about our coast and its natural systems.

Currently several education projects and a habitat restoration project are active at CERF, managed by PIES research associate and Coastal Education Program Manager, Dinah Maygarden. K-12 education programs bring pre-college students and teachers to CERF to experience hands on science to learn about coastal systems and their importance to New Orleans.

UNO students have recently become more actively involved at CERF as a result of a greater emphasis on campus being placed on service. EES students recently voiced their curiosity and Society of Earth and Environmental Science (SEES) is encouraging members to get more involved with activities at CERF. Among those volunteering their time are EES students Shara Clark and Lewis Jones who recently volunteered at two events held at CERF – helping to plant trees in the habitat restoration project and teaching 7th graders about the Mississippi River Delta.

CERF has the potential for greater use by UNO students and faculty as a place to learn about the coastal systems and to get involved in volunteerism. If you would like to learn more, please contact Dinah Maygarden at dmaygard@uno.edu.

Lewis Jones and Shara Clark plant a Live Oak tree at CERF in October 2015 – part of a project funded by the National Fish and Wildlife Foundation to enhance the natural habitat around CERF.

Below, 6th Grade students from the International School of Louisiana collect samples at CERF.

Above, UNO Elementary Education students explore the marsh at CERF

SOCIETY FOR EARTH AND ENVIRONMENTAL SCIENCES

The Society for Earth and Environmental Sciences (SEES) at UNO is the student organization for the Earth and Environmental Sciences Department. It is open to all students at the university who have an interest in geology and environmental science, as well as a desire to reach out to the wider community and beyond in the furtherance of earth and environmental science awareness and education. SEES achieves this goal by awarding scholarships, sponsoring educational trips, organizing department and community events and bringing students together, fostering an atmosphere of community within the department. We have a unique commitment to one another in the organization and to the department itself.

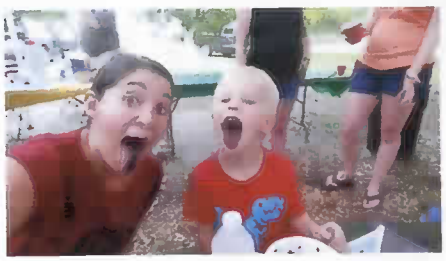
Our annual Mineral Auction, which is our main fundraiser each year, was very successful last year. The fundraiser allowed SEES to grant more and larger scholarships, sponsor a student-organized trip, and sponsor several talks by professors both from this department and visiting. We also held three cookouts, which included our annual meet and greet for new students and faculty, and our famous and popular end of year crawfish boil.

The trip for the 20142015 school year was a weekend trip to Austin, Texas. The first stop was at Enchanted Rock State Natural Area. There we hiked nature trails on and around Enchanted Rock, enormous pink granite pluton batholith located in the Llano Uplift. We climbed to an elevation of 1,825 feet to see the entire beautiful Nature area. After the hike several of the students explored the parks caverns. This consisted of a spine-tingling 40min exploration from start to finish. The next day we went to Zilker Botanical Garden, Austin Nature and Science Center, UT Austin Museum of Natural History, and the Ann W. Richards Congress Avenue Bridge to watch the 1.5 million colony of bats fly into the night sky.

SEES is ready for another great year. We hope you will join us for our monthly meeting on the 1st Tuesday of every month in the Geology/ Psychology building conference room.

The 2015-16 officers are: Scott Hudson, President; Sam Welty, Vice President; Taylor Hux, Secretary and Rachelle Thomason, Treasurer.

--Rachael Gaspard (below), SEES President 2014-2015.



Association of Petroleum Geology-AAPG

The utility of the American Association of Petroleum Geologists (AAPG) UNO Student Chapter is to expose our students to fundamental-topics, events, realities and opportunities in the oil and gas industry. Last year we hosted retired ExxonMobil geoscientist Mike Fitzgerald and current Shell geoscientist Jennifer Connolly as guest speakers. We learned about play concepts in the South Atlantic from Mike and reservoir-compartmentalization from Jennifer. This fall we are welcoming Charlotte Batson who having appeared on CNBC for her technical opinion, is a renowned voice in the oil and gas industry. She plans to explain the current challenges we face with $50 oil and what students can do to be competitive. Additionally, former ExxonMobil researcher Fred Schroeder will be holding a day-course on Seismic Stratigraphy here in the department.

As you may have heard, our Imperial Barrel Award (IBA) Competition team was the 2015 Gulf Coast Region victor! Many of our students attended the annual AAPG Convention this year in Denver, where our IBA team competed internationally. There and at the Deepwater Technical Symposium, graduate students Rachel Carter and David Cross presented posters (please look for these hanging on the department walls) regarding their research. Many of our students also attended 2015 AAPG career expositions in Laramie, WY and Houston, TX.

Our chapter is very grateful for the service provided by the New Orleans Geological Society (NOGS). Their monthly luncheons and events provide our students with vital learning and networking opportunities. We would also like to thank Toby Roesler at Stone Energy for his dedication of time during the past two years teaching Petroleum Geology and guiding our IBA teams. Also, we are very grateful to have Mike Fitzgerald who is teaching a course on Petroleum Exploration this semester and always willing to offer his advice. Lastly, we would like to thank the department's alumni for their financial support contributed at the annual Mineral Auction, as this chapter would be impossible otherwise.

The 2015-2016 officers are: Joshua Flathers, President, Joe Frank, Vice President, Lewis Jones, Treasurer, and Austin Collins, Secretary

David Cross, 2014-15 President.

Student Scholarships and Awards 2014-2015

New Orleans Geological Society Memorial Foundation Graduate Scholarship Award: Rachelle Thomason

New Orleans Geological Society Memorial Foundation Graduate Scholarship Award: Pricilla Souza

New Orleans Geological Society Memorial Foundation Senior Scholarship: Lewis Jones

New Orleans Geological Society Memorial Foundation, Junior Scholarship Award: Scott St. Romain

Olga Braunstein Scholarship for EES Undergraduates: Jarrod Broussard, Scott Hudson, Kory Piley, Gerald Raymond, and Wayne Schexnayder

Olga & Jules Braunstein Service Award Undergraduate: Rachael Gaspard

Chevron Geology Graduate and Undergraduate Scholarship: Graduates: David Cross and Trey Kramer; Undergraduates: Shara Clark and Christina Varuso

Shell Minority and Women in Science Award: Emily Harper, Taylor Hux, Sara Stewart, Rachel Carter and Susanna Kreinik

Exxon Minority Geoscience Support Scholarship: Rossana Cara, Lewis Jones, Nyjah Mitchell and Sarah Roberson

EES Research Scholarship: Prabhat Neupane and Pricilla Souza

William W. Craig Memorial Scholarship: Susanna(Sasha) Kreinik

Jennifer R. Miller Memorial Scholarship: Rachelle Thomason

Glenn Hebert Petroleum & Geology Scholarship: Graduate-Corey Hinyup and Undergraduate-Rosanna Cara

Glenn Hebert Coastal & Environmental Scholarship: Graduate-Geoff Udoff and Undergraduate-Adam Songy

Society of Independent Professional Earth Scientists, New Orleans Chapter: Rachael Gaspard and Joseph Frank

2015 Best Poster Presentation at the 2015 American Shore and Beach Preservation Association (ASBPA) - Rachelle Thomason

SGE Tarr Award: Jon Guidry

SEES Scholarship: Rachel Carter, Scott Hudson, Taylor Hux, Lewis Jones

University of New Orleans Dean's list—Tara Yocum

Graduate Doctoral Award and Licensed Professional Civil Engineer in California—Kevin Hanegan

Sigma Gamma Epsilon SGE

Sigma Gamma Epsilon is the Earth and Environmental Sciences honor society. It is of utmost importance to our organization that our students have every opportunity they need to succeed. We also feel that students should gather personal and professional experience in addition to their academic experiences. We of SGE gain this experience through dedicating our time and energy to our community and department

SGE is excited to announce our continuing tutoring program. Our community involvement has consisted of participating in: Save Our Lake – Beach Sweep, judging the Holy Cross and Ben Franklin School Science Far, sponsoring an exhibit at Rockin' in the Swamp, volunteering at the Couterie 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, John Guidry was awarded the Tarr Award in recognition of his exemplary leadership, commitment to SGE and contribution to the EES department.

Congratulations to the newly elected 2015 – 2016 board of The Omicron Gamma chapter of SGE: Shara Clark- President, Lewis Jones- Vice President, Anna Marie Fraugia- Treasurer, and Rachelle Thomason- Secretary.

Rachael Gaspard , 2014 – 2015 Vice President

THE UNIVERSITY of NEW ORLEANS

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Name, Degree (s) and Graduation Year (s) from UNO:

Current Address: (Note we will not be publishing this but will use it for mailing information to you).

Telephone: Best email address: Current Employment:

Please provide 2-5 sentences about life, career, or whatever else you wish to share.

EMAIL TO : **EESalum@uno.edu**

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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 GIFTS (2014-2015)

Susan Bathke

Donald E. Burch Jr.

Chevron Matching Employee Gift Program

J. Sybil Callaway

Clovelly Oil Company

J. David & Claudia Cope

James Deister Jr.

Debbie Edwards

Exxon Mobil Foundation

Mark and Deborah Gallagher

Gem & Mineral Society of LA, Inc.

Glenn Hebert

Douglas Hill

Art Johnson

New Orleans Geological Society Memorial Foundation, Inc. (NOGS)

James A Lloyd

Robert and Janice Marshall

Mrs. Lesley M Prochaska

Robert and Carol Rooney

The Rosewood Foundation.

Society fo Independent Professionals-Earth Scientists New Orleans Chapter (SIPES)

Stacy Smith

Candace Strahan

Marshall Vinet

Sirelious White