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### Program News

#### AAPG Student Chapter (President - Stephanie Resendez) and Geosciences Club (President-Michael Parker) Highlights 2012-2013

Last year was a very good year for the Geosciences Club! We had a great showing at the 2012 TAMUK Fall Carnival, selling fine rock and mineral specimens, as well as many beautiful pieces of handmade jewelry donated by Lauren Hall. Also in the fall semester the Geosciences Club put on a very fun and informational field trip to the Canyon Lake Gorge located in Canyon Lake, Texas. Many thanks go out to the Canyon Lake Gorge Preservation Society for working with us and providing a great tour guide, Pete Bryant, who was able to walk us through several million years of Texas geology with efficacy and ease. The future of the Geosciences Club is looking up, with a fresh new crop of excited officers right around the corner and a membership list that is steadily expanding. Many thanks also go to our local chapter of the AAPG, who the Geosciences Club has been happily working with, and will continue to work alongside to help people understand more about geosciences.

#### Five Geosciences Majors Graduated in Fall 2012



**Leah Ball, Adam Elzner, Jacob Hansen, Michael Hill, and Aaron Storbeck** graduated during the December graduation ceremonies. We had a well-attended party of 36 majors to wish them the best in their search for graduate school or jobs. Jacob Hansen is working for GISLER Brothers Logging, a second generation mug logging company in Runge, Texas. Aaron Storbeck is working as a geologist for McGovCo Inc. Adam Elzner is working as a mudlogger for Baker Atlas. Michael Hill is working as a geologist for Wallis Energy.

#### Geosciences Program Welcomes 8 New Majors

We are happy to have 8 new majors enroll in classes this Spring 2013.

**Adrian Dancer** is a senior transfer student from Texas A&M University-Commerce.

**Jake Ewing** is a senior transfer student from the College of Agriculture.

**Andrew Hancock** is a post-baccalaureate transfer student from the Beeville area.

**Brandon Walshak** is an internal freshman transfer student from the College of Agriculture.

**Chad Delfino** is a freshman from Port Aransas.

**Justin Kelley** is a sophomore transfer student from Central Texas College in Killeen Texas.

**Erica Massey** is a sophomore internal transfer student from the Biology Department.

**Anissa Medina** is a freshman from Houston Texas.



Adrian Dancer



Andrew Hancock



Anissa Medina



Brandon Walshak



Chad Delfino



Erica Massey



Jake Ewing



Justin Kelley

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### Our Geosciences Program was featured in Javelina Today



Adriana Garza reported on the current state of the Geosciences Program in the Fall 2012 Javelina today. The article entitled “Experience in the field: Hands-on research is cornerstone of Geosciences Program” talks about the growth of our program paralleling the boom in the oil industry. Although the increases in jobs in our industries fuel our growth we feel the quality of education we provide our undergraduate students will improve their job prospects. Check out the article on the TAMUK website.

### Winter Intersession Field Camp



Our Winter Intersession field camp was well attended with 16 geology majors. Devon Cuevas, Stephanie Garza, Christina Jones, Lauren O’Connell, Daniel Rios, Jordan Schwabe, Cesar Serna, Brent Winborne, Cody Barker, Michael Garza, Zachary Hull, Daniella Herrera, Casey Mibb, Jacob Reese, Preston Ridley, and Rafael Villegos completed the third installment of our first field camp. Mike Maxson (Geologist, Mestena Uranium) started the field camp with an overview of Uranium Mining (Uranium 101). He has co-presented this short course at Uranium Conferences for the Society of Mining Engineers. Adrian Garcia (TAMUK Geology Department alumnus 1987 and geologist at Mestena Uranium Inc.) provided us with several subsurface log-interpretation exercises in defining uranium roll-fronts. Professor Vernon Kramer (Del Mar), Dan Jackson and Tom McGehee guided the students through the exercises. The field camp participants “shadowed a uranium geologist in the field at La Palangana Uranium Insitu mine. Jon Pollock (TAMUK geologist alumnus 2005), Lily Alfaro (TAMUK geologist alumnus 2010), and Alexandra Breeding (TAMUK geologist alumnus 2012) organized and presented parts of this days exercise. Dennis Moore (Baker Atlas) provided training and an exercise in well log interpretation. Randy Bissell (geologist at Heddington Oil) presented a short-course in Sequence Stratigraphy and then mentored the students through a seismic interpretation exercise. The Corpus Christi Geological Library introduced our majors to the data available in the library and showed them how to search for and retrieve needed data. Students were then tasked with using well logs and scout tickets in evaluating several prospects. Mike Clifford, a Corpus Christi geologist, joined the faculty in guiding students through the project. The Gisler Brothers Mudlogging Company provided a training exercise to show our students the activities of a mudlogger.

### Undergraduate Research



Undergraduates **Cody Barker, Jacob Byerly, Daniella Herrera, Naomi Pankratz, Jonathan Sulaica, Lisa McLaughlin, Justin Mauck, Robert Villegas, and Juan Zamora** are working with faculty on a number of major research projects this semester. Cody Barker and Jacob Byerly are working with Dr. Brent Hedquist to study the “heat island effect” in Kingsville Texas. The study is funded through the TAMUK Council for Undergraduate Research (TCUR) and will combine geospatial techniques (utilizing GIS, Remote Sensing and GPS) as well as field instrumentation to detect and map the urban heat island and various microclimates across the city. Field instrumentation includes the strategic placement of ten weather sensors across the city, measuring temperature and humidity 24 hours a day, as well as mobile transect measurements of surface/air temperature and humidity across urban-rural landscapes. It is expected that results will aid city planners in designing for heat mitigation as well as a conference presentation and submission to a peer-reviewed journal. Cody Barker, Naomi Pankratz, Jonathan Sulaica, Justin Mauck, Robert Villegas, Juan Zamora and Dr. McGehee are examining a core and defining the aquifer potential of Fredricksburg, Texas. Daniella Herrera is working with Dr. Haibin Su on the shoreline changes of Padre Island using GIS technique. This project is also funded by TCUR Undergraduate Research Award. Juan Zamora is working with Dr. Haibin Su on developing a campus Web-based GIS for TAMUK.



### Fieldtrips Spring

We have planned a fieldtrip March 21-23 to central Texas to look at the Ophiolite on the Willow City Loop and to examine igneous and metamorphic rocks in 3 locations. The second fieldtrip will be April 11-13 to Central Texas. We will be examining Cretaceous outcrops in 3 locations and a core at the University to develop stratigraphic columns and correlate the units from Fredricksburg to Pedernales.

### Faculty New Hires



Bree McClenning



Harriet Cornichone

You may have noticed Professors Bree McClenning (Lecturer) and Harriet Cornichone (Visiting Professor) this semester. They have taken the course overloads that have burdened our faculty in recent semesters. We are extremely fortunate that they accepted these positions and are doing such a marvelous job.

### Hill Country Underground Water District (HCUWD) donated 240 feet of Core

Paul Tybor, the HCUWD manager, donated 240 feet of core that represents the key aquifer rocks in the Central Texas Area. This core contains samples of most of the rock formations we map in our fieldtrips and field camp activities in Central Texas. This is one of the best donations that we received for undergraduate training. Cody Barker (Presidential Scholar) boxed up the collection and drove the donation to TAMUK during the Christmas break.

### Dr. Su Publishes his Research and Wins College Faculty Research and Scholarly Activity Award



Dr. Su's research paper was accepted for publication in *IEEE Transactions on Geoscience and Remote Sensing*, the World's leading journal in Remote Sensing, with the title of "Geographically-adaptive inversion model for improving bathymetric retrieval from satellite multi-spectral imagery". It will be published in Vol. 51, Issue 4.

Also, Dr. Su's proposal ("Optimal Estimation and Prediction of Harmful Algal Blooms for Gulf of Mexico Using Sequential Multi-source Spatio-temporal Satellite") has been selected by College of Arts & Sciences for \$7,500 in funding from the State of Texas Research and Development Fund (RDF). Only eight were funded out of 18 proposals received.

### Photo Gallery: Winter Intersession Field Camp



