



LINDLEY STANDS STRONG AFTER STORM

Early on the morning of Sunday, March 12, faculty and students awoke to the sound of thunder. Many of the faculty and students of the Department of Geology watched what was to come, a storm with a microburst that brought 80 mile-per-hour winds and six-to-seven million dollars in damage to the KU campus. "It seemed to last for less than a minute," said Department Chair **Bob Goldstein**. "I watched the microburst plow through my back yard and saw winds flatten trees briefly in one direction and then the other. I started by watching this from my sliding glass door and then quickly backed away as the intensity of the winds was apparent, supposing we were experiencing a weak tornado." After the winds passed, Goldstein immediately drove to campus through a maze of downed trees and power lines. The power was out in Lindley and he found only one other person in the building, faculty member **Gwen Macpherson**, checking out her lab by flashlight. Lindley Hall stood strong, with almost no damage. This was in marked contrast to other campus buildings, where there was significant damage to 60% of the buildings. The KGS's building, Parker Hall, lost its roof, and Dyche Hall and many other buildings with 20-pound red ceramic roof tiles had many of the tiles crash to the ground. Luckily, this storm came through campus early on Sunday morning, while

campus was practically deserted, and thus no injuries were reported on campus. Two of the Department's graduate students did have a somewhat harrowing experience, though. Ph.D. students **Celina** and **Marina Suarez** were both working in the Department's new lab facility in the Multidisciplinary Research Building when the storm struck. When power was lost, a backup generator kicked in to run fume hoods in the building. Due to a flaw in this new building's system, a significant suction was created, making it impossible for the two to open the external doors and escape the building until help arrived. Although damage to the Department's facilities was comparatively light, it still was significant. Most of its vehicles were damaged during the microburst; windows were broken, not from any apparent flying debris, but from the intense winds and pressure changes. Winds also pushed a fully loaded dumpster back and forth across the parking lot, repeatedly crashing into the Department's fleet of vehicles. Considering all that could have happened during this intense storm, it is difficult not to think of us as lucky. No one was hurt and damage could have been much worse.

IS THERE MONEY IN FOSSILS? ASK BRUCE

If you are faculty member **Bruce Lieberman**, there is money in fossils. Bruce has been selected to be Treasurer of the International Palaeontological Association. He replaces faculty

member **Roger L. Kaesler**, who held the position from 1989 until the end of 2005. The aim of this international organization is to promote and coordinate international cooperation in paleontology, including paleobotany and paleozoology of all geological periods, and to encourage the integration and synthesis of all paleontological knowledge. The Association was founded in 1933 and since then it has provided leadership and support for paleontological activities worldwide. It now boasts corporate sponsorship from thirteen countries and publishes the journal *Lethaia*, an international journal focusing on research in paleontology and stratigraphy. KU hosts its web site, under direction of web master **Michael Cormack**, which houses three electronic databases: *Directory of Paleontologists of the World*, *Directory of Fossil Collections of the World*, and the *PaleoLink Database*. In addition, the Society sponsors numerous paleontological meetings and workshops, for which Bruce will be the moneyman. So, in terms of international support for paleontological publications, databases, and meetings, the buck stops, or starts, with Bruce Lieberman at KU.

KU BEST IN JOURNAL OF SEDIMENTARY RESEARCH

Former Ph.D. student **Anita Csoma**, current faculty member and Chair **Bob Goldstein**, and co-authors Andrea Mindszenty and Lucia Simone, recently were awarded the *Journal of Sedi-*

mentary Research Outstanding Paper Award for their paper "Diagenetic Salinity Cycles and Sea Level Along a Major Unconformity, Monte Composauro, Italy". The *Journal of Sedimentary Research* is the premier journal of SEPM, the Society for Sedimentary Geology, and formerly was named the *Journal of Sedimentary Petrology*. Good things come in threes, apparently. This is the third time the award has found its way to Lindley Hall, with **Louis Dellwig** winning the award back in 1955, **Paul Enos** winning it in 1969 and now Csoma and Goldstein winning it. Goldstein says that three really does seem to be a charm, after being nominated for the award two times previously in recent years. His paper with Carlos Rossi, on recrystallization of quartz, was a finalist in 2004, and his paper with Troy Rasbury and co-authors won the honorable mention in 2003. Bob and Anita are grateful for the recognition once again being brought to KU's program.

CURRENT STUDENTS WIN MORE THAN \$50,000 IN GRANTS AND AWARDS

Over the past year, the Department of Geology's undergraduate and graduate students have been recognized with an exceptionally high number of new external grants and awards. Such recognition coming from organizations external to the Department demonstrates the high quality of our current crop of student G-Hawks. Seventeen students earned a variety of awards, including 8 GSA research grants, 4 Panorama Grants, 3 AAPG Grants-in-Aid, 2 Desk and Derrick Associa-

tion Scholarships, and 4 Kansas Geological Foundation Scholarships. **Jon Smith** and **Julie Retrum** won Kansas Academy of Science Eugene Dehner Awards for Ph.D. Student Oral Presentations. Jon Smith received one of two University-wide Graduate School Dissertation Fellowships, and **Brian Platt** won a prestigious Self Fellowship. Many of our students received multiple awards last year. For example, Julie Retrum received a GSA Research Grant, a Sigma Xi Grant-in-Aid of Research, a Panorama Grant, and a Leaman Harris Biodiversity Scholarship. Other multiple award winners were: Brian Platt, **Rachel Dvoretzky**, **Jeff Schroeder**, **Jessica Poteet**, **Steve Sloan**, and **Natalie Givens**. The total for the external awards garnered by our students exceeds \$50,000. We hope that you will join us in congratulating this excellent group of students.

KAESLER'S SERVICE TO GSA RECOGNIZED

Roger Kaesler has been selected as one of three 2006 GSA Distinguished Service awardees. The Geological Society of America Distinguished Service Award recognizes individuals for exceptional service to the Society. Awardees are selected by the Executive Committee, and ratified by the Council. This award recognizes Roger's outstanding contributions over the years as editor of the *Treatise on Invertebrate Paleontology* and to paleontological pursuits in general. This well-deserved recognition for Roger Kaesler makes us all proud to be G-Hawks.

KANSAS AND PUERTO RICO MEET IN THE SNOW IN NEW MEXICO

The Department's spring break field course this year went to the Sacramento and Guadalupe mountains of West Texas and New Mexico. Led by faculty and courtesy faculty members **Bob Goldstein** and **Evan Franseen**, with contributions by **Luis González**, this 10-day experience brought 12 KU undergraduate and graduate students on a geologic adventure that began in less than ideal conditions (snow and freezing rain) in Palo Duro Canyon, Texas, to study Triassic and Permian rocks. The group continued on to the Sacramento Mountains of New Mexico to study Paleozoic stratigraphy (snow), and finally to study the Permian stratigraphy of the Guadalupe Mountains (just plain cold!). As part of its diversity initiative with the University of Puerto Rico at Mayaguez (UPRM), Exxon-Mobil funded a group of Puerto Rican students and faculty to attend the KU field trip. Ten UPRM students and two UPRM faculty members traveled to the mainland to interact with the KU group and learn from KU faculty and students. In addition to a wealth of geological experience, the trip introduced the group from the tropics to something absolutely new to them, camping in intensely cold weather. The first morning, many of the UPRM students were surprised to climb out of their tents to see their first snow. This was followed by their first snowball fight (instigated by KU faculty, of course) and multiple trips to Wal-Mart for gloves, hats and warmer sleeping bags. Despite

the weather, the trip was a great experience for all, not just great geology, but also a worthwhile exchange of cultures and geologic experience. By the end of the trip, participants were sharing salsa dancing at the campsite and roasting marshmallows around the fire.

THERE IS MORE THAN ONE WAY TO SKIN A DINOSAUR

In a paper recently published by the journal *Palaios*, current student **Brian Platt** and faculty member **Steve Hasiotis** have described finely preserved impressions of the foot morphology and skin of certain dinosaurs. The study, reporting findings on rocks from the Jurassic Morrison Formation of Wyoming, is the first to show toe-like projections on the front feet of brachiosaurs. One sauropod footprint preserved spectacular impressions of the coarse scales on the footpad, only the second such dinosaur skin impression to be described from North America. Significantly, these Jurassic footprints show various types of preservation, mostly controlled by the degree of soupiness of the sediment. In their paper, the researchers actually were able to use this to their advantage to reconstruct the water content of the sediment for paleoenvironmental reconstruction.

VOLCANOLOGY CLASS: A LONG TREK TO LONG VALLEY

In April, faculty members **Dan Stockli** and **Tony Walton** led a group of 11 seniors and graduate students on a week-long exploration of volcanic rocks of the western U.S. Thanks

to funds from the Geology Associates Program, the greatest portion of the long trek took just a few hours, allowing the group to fly to Las Vegas, Nevada. From Las Vegas, bypassing the casinos, the group was well-positioned to drive to study volcanic rocks along the east side of the Sierra Nevada, in Owens, Queen, and Fish Lake Valleys. This was truly a working field course, with many field exercises along the way. The trek in the Long Valley caldera was long on diverse field experiences, with exposures of strombolian cinder cones, tuff rings, tortas of rhyolite, basalts, and volcanoclastic sediments. Two features of this trip were introducing students to characteristics of strike-slip deformation and thermal history in the region. Apparently, the most fruitful discussions of thermal history took place while soaking in hot springs, making the field trip long on luxury!

ENCANA ESTABLISHES ENERGY SCHOLARSHIP

Last fall, KU was pleased to welcome a new energy company to its interviewing schedule, and the company has responded by establishing an endowed scholarship for KU students. EnCana Corporation is one of the largest gas producers in North America. The company concentrates on unconventional energy resources such as coal bed methane, tight gas sands, and shale. About 75% of their North American sales volume comes from resource plays, which are oil or gas reservoirs that produce from thick sections or wide expanses of rock that require extensive development over a long period of time. In

2005, the company hired several KU Geology students for summer internships and subsequently hired them on for permanent positions. EnCana then sent a large group of recruiters from their Denver-based business units to the KU campus. One of their vice presidents gave an information briefing to more than 50 students interested in the company, and over the next several days they interviewed students in geology, geophysics, engineering, and business. Interviewers included G-Hawks **Andrea Steinle** and **Greg Layman**. After their visit, the company successfully hired several new Department of Geology students for internships and permanent positions. To show their support and appreciation, EnCana has now endowed the EnCana Energy Scholarship for the Department of Geology. Income on this fund will be used to recruit new students interested in pursuing careers in the energy industry. EnCana's support for the students in the program is very much appreciated, and will help KU students in perpetuity.

KU WINS RACE ON ULTRA FAST SEISMIC DEPLOYMENT

In a recent paper, published in *Geophysical Research Letters*, KU faculty members **George Tsoflias** and **Don Steeples**, and students **Gerard Czarnecki**, **Steve Sloan**, and **Rob Eslick** almost broke the sound barrier on deployment of geophone arrays for high-resolution seismic imaging. The major factor limiting the acquisition of high-resolution seismic data in shallow subsurface applications is typically the cost of the slow and monotonous planting of

large numbers of closely spaced geophones. The KU group has come up with the solution, an apparatus for automatically planting 72 geophones using hydraulic rams. The technique produces subsurface data comparable to that generated with hand-planted geophones, yet the entire acquisition process takes only three minutes. This major step forward undoubtedly will have wide-ranging implications for the incorporation of high-resolution seismic data into a variety of applications, and should continue KU's excellent reputation for its work in high-resolution imaging of the subsurface using geophysical techniques.

NEW GRANT FROM SHELL FOR RE- SEARCH ON CAR- BONATE DIAGENESIS

Shell has just given KU a grant to work on the relationship between carbonate diagenesis and reservoir properties. The grant, under the direction of faculty members **Jennifer Roberts**, **Luis González**, and **Bob Goldstein**, will focus on developing conceptual and quantitative models for understanding the controls of carbonate diagenesis on oil and gas reservoir and non-reservoir rocks. In addition to working on extant carbonate oil fields and establishing a relationship between geologic

setting, sequence stratigraphy, and reservoir properties, the grant will allow KU researchers to simulate carbonate diagenesis in the lab. In particular, the group will do experiments with low-temperature formation of dolomite induced by microbial processes as well as inorganic precipitation reactions. The \$415,000 grant, under the coordination of KU alumnus **Brad Prather** at Shell, will allow KU students and faculty to explore some of the nagging questions that have plagued the oil and gas industry's attempts to predict the distribution of porosity in carbonate rocks. It will continue to establish KU's leadership role in research on carbonate rocks.

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