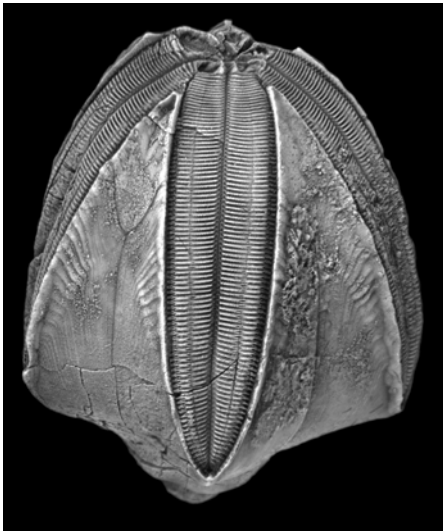


# Department of Earth and Planetary Sciences

 University of Tennessee, Knoxville



## 2005 Annual Newsletter

**2005 Newsletter**  
**Department of Earth and Planetary Sciences**  
**University of Tennessee, Knoxville**

**Editors: Larry McKay and Bill Deane**

**Cover photos:**

**Top Right: Geology 586 – Field and Lab Methods in Hydrogeology – goes caving. Photo courtesy of Larry McKay.**

**Top Left: This specimen measuring 40 mm is *Pentremites robustus* from the Sloan's Valley Member of the Pennington Formation, Upper Mississippian from near Berea, Kentucky. Photo courtesy of Colin Sumrall.**

**Bottom: No, this is not the Vol Navy! Larry McKay and Vijay Vulava are preparing to collect sediments from Chattanooga Creek. Photo courtesy of Larry McKay.**

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## LETTER FROM THE HEAD

Dear Friends,

Greetings from Knoxville! The weather in Tennessee has been so mild this Fall, it is hard to believe we are closing in on the end of the semester. Final exams certainly loom differently when you are on the instructional end of the equation! We hope you will enjoy reading about our new faculty, field trips to Key West and New Mexico, and other special events over the past year. Although we enjoy sharing these vignettes of Department life, we know that you especially enjoy the opportunity to catch up on your UT friends and cohorts. We encourage you to share *your* news and adventures through the Alumni Notes. And, of course, we welcome your visit anytime life puts you at the crossroads (of I-40 and I-75 that is). Join us for a Thursday afternoon seminar and “Liquidus”, or even sit in on Ted Labotka’s Mineralogy class to experience that biaxial indicatrix one more time!



Next March 23-24, we will host the 2006 Southeast Section Meeting of the Geological Society of America. A special alumni event is planned for the evening of the 23rd and we would love to see you there!

Some highlights of the past year:

- Many thanks to Don and Flo Jones and Jim and Virginia Bibee, who established the Jones-Bibee Professor of Geophysics, a new endowed chair. The chair is a great vote of confidence in the Department’s programs and direction!
- We welcomed Drs. Gregory Baker and Christopher Fedo as new faculty (look for more about them inside the newsletter!). As I have traveled to professional meetings and other departments the past 6 months, everyone tells me what super hires we have made. I couldn’t agree more!
- Other new faces in the department include our new Lecturer, Dr. Joel Aquino (more inside) and Dr. Rick Bowersox, a Visiting Professor. Rick is teaching 101 this Fall and will offer Petroleum Geology next Spring. Rick preceded his PhD work with a 25 year career in the oil & gas industry, following the entire career arc from large company intern to private owner, and we hope his presence will be a good resource to our students about the wide world “out there”.
- We now turn our attention to two more faculty hires for the coming year! After several busy years as Associate Dean of the College, Bill Dunne made the difficult decision to stay the administrative course. He has proven to be a very talented

administrator and the Department has benefited significantly from his leadership in the College office. So, we are searching for a new structural geologist, pouch and leather hat optional(!), to join in the daily fray in E&PS. Maria Uhle left this summer to start a new position as Program Officer for the Polar Research Board at the National Academies of Sciences, finding herself three doors down the hall from another alumnus, Dan Walker (PhD 1990), a Research Scholar with the Ocean Studies Board at NAS! A search is on for a new Jones Professor in Environmental Geochemistry. The caliber of people we have met with so far in both searches is very high and we are very excited about the possibility of making two more Super Hires!

- Rick Williams, Jeff Bailey (Tengasco), Gary Bible (Miller Petroleum), and Bob Hatcher teamed up to offer a course in Interpretation of Geophysical Well Logs to 16 undergrads and grad students this past Spring. The course was structured entirely on the Landmark system and was so much fun that Gary and Rick are considering adding a Landmark-based lab in subsurface mapping to the upcoming Petroleum Geology course.
- The faculty had another busy and productive year, authoring 77 refereed articles (including 12 in the prestigious journal, *Science*), with 92% of the faculty contributing. Last year, Larry Taylor predicted a slow down in his research program, beginning the year as a “Lone Ranger,” with a single graduate student in place. Since then, he landed several megabucks in new “Return to the Moon” funding, his research group has grown by four postdocs and several students, and he was recognized as a UT National Alumni Distinguished Service Professor! So much for *that* prediction: we are all eating a lot of Trigger’s dust right now!
- Finally, as you all know, we lost our colleague Otto Kopp in April, after a short illness. He lives on in many endearing ways. Faculty members still invoke “The Otto Rule” in faculty meetings, a measure to declare additional time is needed to give deeper consideration to an issue. Otto was very thoughtful and deliberate in his work and this rule has saved us from ourselves on several important occasions! We know you join us in keeping Otto and his family in mind.

Read all about it! We hope the newsletter helps you appreciate the many successes of the Department and our students. Alumni input and financial support continue to be critical components of being able to offer our students the best educational opportunities possible. We hope you continue to remember us in your annual giving. And please pause to write and fill us in on your own opportunities, changes and successes. The history of this Department makes it strong and sharing it helps us all realize this strength!

Best wishes for the holiday season,

Claudia

## HERE ARE OUR NEWEST FACULTY MEMBERS IN THEIR OWN WORDS

### OUR NEW LECTURER – Joel Aquino



Hello everyone! My name is Joel S. Aquino, and I am a newly hired lecturer. When I moved to this department, I brought with me more than 20 years of professional experience as an academic researcher, mineral explorer and a science teacher. My formal training includes a PhD in geology (porphyry copper) from James Cook University of North Queensland, Australia, and my master (epithermal gold) and bachelor degrees in geology from the University of the Philippines. I also have certificates in mineral exploration (Germany), teaching (Texas) and graduate units in Physics (Univ. of Dallas).

My professional career as an earth scientist has brought me to many countries in the world (Australia, Canada, Germany, Great Britain, Japan, Laos, Philippines and the United States to name a few); thus, exposing me to different cultures and nationalities. The projects that I have been involved with covered a broad spectrum of field-constrained activities in hard rock geology, volcanology, metallic systems and basin analysis in various geological settings (volcanic, ophiolites, island arc and continental terrains). My academe and industry experiences also exposed me to other related works in petrography, geochronology, isotope (stable and radiogenic) and exploration geochemistry (stream, soil, rock and drillcore), geophysics (IP, Resistivity, Gravity, CSAMT, Magnetics and Radiometrics), resource assessment, metallurgy, geotechnical work and other various field activities (drilling, helicopter, survey, heavy equipment, UXO clearance operations, quality control and sampling protocols). The highlight of my exploration career is being a part of a team that led to the discovery and eventual mine production of a world-class gold and copper deposit in Laos (Sepon Project).

When I moved to the US, I added another career path by being a high school science teacher in Texas. I undertook a year of pedagogy training and mentoring and eventually became a board certified 8-12 physical science teacher. My teacher training opened my eyes to being a *facilitator* in a student-centered environment and inquiry-based approach.

My current interests lie in outreach geoscience education and ore systems. In the field of geoscience education, there are many opportunities to do collaborative efforts with the outreach department and the college of education. These opportunities are the development of middle and high school teacher training programs and *field-based* outdoor classrooms. Another opportunity is the pedagogical training of the graduate teaching assistants where alternative career paths in teaching are opened to them. However, ore systems still fascinate me; in particular, the magmatic-metamorphic connections in mineralized basins and how surficial processes modify or enrich buried metallic deposits.

## OUR NEW CLASTIC SEDIMENTOLOGIST PROFESSOR – Chris Fedo



My name is Chris Fedo, and I am the new clastic sedimentologist doing my best to fill the shoes of Steve Driese, who left for Baylor last year. Steve is a good friend of mine and someone I have looked up to for quite a while, so I am well aware how significant a task this is! Although new to UT, I am hardly new to either the region or to being a professor. I completed my Master's Degree at Vanderbilt University in 1990, and my PhD at Virginia Tech in 1994.

Fortunately, I have had the opportunity to see a lot of the geology around here in the 6 years I was a graduate student. As you might imagine, I am eager to see and learn more, and get research projects going in the vicinity. After completing my PhD, I did a two-year post-doc at the University of Western Ontario, and in 1996 joined the staff of George Washington University as an Assistant, then Associate Professor. I am thrilled to now be part of this department.

In broader terms, it is probably fair to label me a "Precambrian-ologist." Much, but not all, of my research in the last 20 years has centered on the Precambrian in different parts of the world. I have been working on the Neoproterozoic through Cambrian transition in the Death Valley area since the mid 1980s, and with superb examples of coeval strata here, expect to be engaged in some of the local sedimentologic and stratigraphic problems. Fortunately, I have a pretty solid foundation in structural geology and metamorphism, since much of my subsequent work focused on rocks that have endured some rather nasty post-depositional "transformations." My PhD. advisor, Ken Eriksson, enticed me to work on a very interesting three-billion-year-old greenstone belt in Zimbabwe. What I hadn't realized was that the three strike-and-dip measurements on the 1960s era map were practically the only recorded structural observations, so I ended up doing a lot of mapping just to organize the stratigraphy. I worked on fantastic rocks of the Paleoproterozoic Huronian Supergroup near Sudbury for a couple years. These rocks have long been recognized as the "type" Paleoproterozoic, and at about 2.2 Ga in age, lie astride the time when free oxygen appeared in the Earth's atmosphere. Research on this Great Oxidation Event is incredibly active right now, so I am planning to return to Canada to start some new projects. Since 1997, I have been fully engaged in a project looking at Earth's oldest surficial rocks, now exposed in SW Greenland. At 3.8 billion years old, these rocks hold a very special place in the development of Earth's history. They formed at the tail end of the Late Heavy Bombardment of the inner solar system and so provide us the first window into what Earth's surface may have looked like as life emerged.

I really enjoy being in the classroom and sharing my experiences with students. I teach historical geology and sedimentology/stratigraphy at the undergrad level. Both are bread-and-butter courses for me, and I very much like teaching them. At the graduate level, I teach courses in clastic petrogenesis, tectonics and sedimentation, sequence stratigraphy, and clastic depositional systems. With Linda Kah, I think we make a pretty formidable combination of clastic and carbonate sedimentology, and I expect a lot of future productivity from the soft-rock wing of the department.

## OUR NEW GEOPHYSICS PROFESSOR – Gregory S. Baker



I currently hold the Jones/Bibee Endowed Professorship in Geophysics in the Department of Earth & Planetary Sciences at the University of Tennessee, where I am an Assistant Professor (up for promotion and tenure this year). My area of specialization is "near-surface geophysics" which deals with remote imaging of the upper 200 m of the Earth's (or Mars') subsurface. I received my BS (1992; Honors) and MS (1994) in geology from Lehigh University, and my Ph.D. (1999; Honors) in geophysics from The University at Kansas under Dr. Don W. Steeples. I was on the faculty of the Department of Geology at the University at Buffalo (SUNY) from 1999-2005 and I retain a position there as Research Associate Professor. I am the Director of the Environmental Geophysics Research (EGR) Laboratory at the University of Tennessee and was Director of the University at Buffalo Summer Geology Field Program (a.k.a., Field Camp) from 2001-2005. In addition, I am currently the Co-Director of the Buffalo Geosciences Program (BGP) which has the objective of promoting diversity in the geosciences by providing unique opportunities to underrepresented minority student populations. Recent research projects include: hydrogeological characterization in Alaska and Nevada; climate-related work on Matanuska Glacier in Alaska and on Baffin Island; archaeological investigations in southern Jordan, Gettysburg (PA), and Fort Niagara (NY); and a range of projects involving advances in the state-of-the-art in near-surface geophysics imaging technology. For more details or contact information visit my web site at:  
[www.geophysics.tennessee.edu](http://www.geophysics.tennessee.edu).

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## EARTH & PLANETARY SCIENCES 2005 GROUP PICTURE



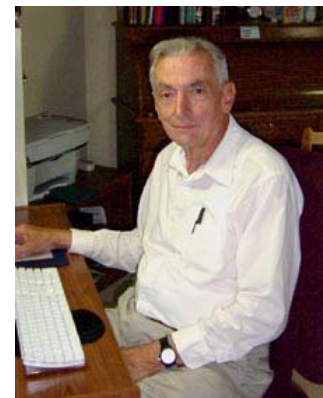
**OTTO C. KOPP 1929–2005**  
**Teacher, Colleague, and Friend**  
**- Bob Hatcher**



Prof. Otto C. Kopp passed away April 18, 2005, leaving behind a legacy of teaching and research at UTK for some 41 years. Otto graduated from the University of Notre Dame in 1951, and served in the U.S. Army from 1951 to 1954. He joined the UT faculty in 1958 after receiving his Phd at Columbia University as a student of Paul Kerr. He taught mineralogy, optical mineralogy, and petrology, and conducted research in experimental mineralogy at ORNL. He later became interested in coal geology and the applications of cathodoluminescence to geologic materials.

Those of us who were fortunate enough to take one or more Dr. Kopp's courses remember his thorough approach to teaching and the superb organization of his classes, something that those of us that pursued careers in colleges and universities did well to emulate. We also remember some of the things he did to improve his courses and make them more useful to the students. The Department was hard-pressed for supplies money in the 1960s, so he made his own refractive index liquids from scratch. They worked well, but those who took optical mineralogy wondered if the foul smell of the liquids might be an indicator of their toxicity. When students mastered grain-mount optical mineralogy and moved on to thin section petrography, they were introduced to the Kranz collection of carefully hewn hand specimens and unique thin sections to examine. The large number of rocks to describe and study in thin section proved frustrating to some graduate students—to the point that one decided to play a practical joke on Otto. One day, while the group was laboring on the latest group of rocks and thin sections, just as Dr. Kopp entered the lab one of the students pushed back from his microscope, rose to his feet, and, loudly exclaiming that he was fed up with the course, smashed what appeared to be one of the Kranz sections on the floor. Of course it was a blank slide, but Otto did not know that until the initial shock wore off.

After leaving UT in 1965, I maintained contact with Otto and regarded him as a friend and professional colleague. In 1986 I returned to UT and became one of his colleagues in the department, and enjoyed being one his colleagues until well after he retired. One day in the late 1990s a term paper I had written as a student appeared in my mailbox in the department office. Upon retrieving it I immediately complained to him about him being so slow in returning my paper. His response was to threaten to lower my grade in the course. Dr. Kopp had a number of graduate students who completed MS and Phd degrees with him through the years, and they have gone on to become successful professionals in a variety of settings. Each of us—friends, former students, and former colleagues—has different memories of Otto Kopp, and I believe that all are positive. We all miss him.





## OTTO KOPP'S LAST RESEARCH PROJECT – Otto Kopp

I've been asked to write a note concerning my activities since I "retired" in December of 1996 (although I continued teaching on a part-time basis for another three and a half years). At that time, I became a "Professor Emeritus" with all of the privileges bestowed upon individuals achieving that status -- well, I did get an Emeritus parking tag that allows me to park almost anywhere on the campus for free. Don't be too awe-struck by the term "Emeritus." Literally, it means "he who deserves to be out." Had I known that retirement would be this much fun I would have done so long ago.

About the time when I first retired, I became acquainted with Dr. Gerald Mattingly, who teaches at the nearby Johnson Bible College, and who is the Director of the Karak Resources Project. Jerry was looking for people knowledgeable in anthropology, archaeology, Biblical studies, geology, geography, remote sensing, soil science, zooarchaeology, and many other fields to collaborate in the study of archaeological materials from the Karak Plateau region of Central Jordan, a region undergoing rapid change and whose archaeological treasures are being looted and destroyed. More than 100 individuals from 36 colleges, universities, and seminaries, including three faculty members from the University of Tennessee, have participated in the Karak Resources Project since 1995. You might wonder whether a geologist and a Biblical scholar would spend their time arguing about the age of the Earth or evolution. The first time we talked about how I might participate, I asked Jerry if he would be concerned because I thought that the Earth was about 4.6 billion years old. He said, "No," that he thought the Earth was about 4.6 billion years old, too.

The application of my skills in mineralogy, petrology, and geochemistry to the study of archaeological materials has been quite fascinating. Some of the materials we have been studying come from the Early Bronze Age dating back more than 5,000 years before the present, from a time when written records were very scarce. Much of what



we know about those ancient peoples has been gained through study of the materials they left behind -- pottery, grinding implements and other tools, bones, seeds, building material, etc...



Geology can aid in our understanding of the materials they used. Did they get these materials locally or were they imported from other places? How did their "technology" for using different materials change with time?

**(Left) Thickened rim of a large bowl where a handle was attached. It contains a high percentage of angular inclusions.**

One thing that stands out from these studies is that the people who lived in this region were skilled at making use of the raw materials close at hand - basalt, soil, clay, limestone, etc., and adapting them to make the wares needed in their daily lives. Although they lacked even simple scientific instruments, they had good brains and they were excellent observers. Many of the "technological" changes they made resulted from trial-and-error "experiments." The ancient potters learned how to make pottery that had less shrinkage, better heating characteristics, and were even more attractive. Pottery that cracked during the firing process was not discarded, but crushed and the fragments added to the raw material being mixed, to make the next batch of pottery less likely to shrink and crack.

Building materials, pottery, grindstones and other implements were used and reused for many centuries. Even today, building materials used thousands of years ago are being scavenged and reused.

Information about the activities of the Karak Resources Project can be found at:

<http://www.vkrp.org/>



**A typical “saddle quern” (lower grinding stone made from vesicular basalt) used to grind wheat or barley into flour. Photo by Reuben G. Bullard, Jr., Karak Resources Project.**

#### **MELVIN SMITH 1927 – 2005**

Dr. Melvin Owen Smith, who taught geology at Tennessee Tech in Cookeville for 18 years, passed away last January. He was very well known for his talks to local schools about geology and gold prospecting. He also was an emergency medical technician who worked with the Putnam County Emergency Medical Services and the Rescue Squad.

#### **ERNEST BLYTHE 1931 – 2005**

Dr. Ernest W. Blythe, UT Martin professor emeritus of geology and longtime director of the UTM Honors Program, passed away in February, 2005. He had earned his PhD in geology at UTK in 1974. Even after retirement, Dr. Blythe continued to attend many university events. In addition to his geology and honors interests, he was a member of the UT Board of Trustees' Athletic Committee.

## THE KEY TO CARBONATES - Claudia Mora



In the month of May, Geology 490/590, *Modern Carbonate Environments*, undertook a one-week field course in the Florida Keys. Twenty undergraduate and graduate students accompanied professors Mona Becker and Colin Sumrall to the Florida Keys.

The weather was fantastic, and even though it was early May, the water temperatures were already about 78°F! Using Marathon, Florida as a base, the students undertook daily activities designed to provide a greater understanding of the carbonate factory and modern carbonate environment. Activities included several traverses of shallow water carbonate environments to observe changes in the flora and fauna, investigation of reef facies in the Pleistocene Key Largo Formation, and a snorkeling trip to the modern reef at Looe Key.

The students undertook group research projects that they had planned during introductory classes carbonate sediments and environments. Research projects examined the chemical and physical characteristics of a shallow water carbonate environment, modal percentages of green algae along a traverse on Anne's Beach, and mapped Pleistocene corals in Windley Key quarry.

In the evenings, the time was spent searching for manatees in the waterway near the hotel (they saw several!), climbing coconut trees, kicking back with a friend, updating field notebooks from the day, and working on research projects.

After a week of "hard work," the trip was concluded with dinner and an evening out in Key West.



## HEAD WEST, YOUNG GEOLOGISTS – Claudia Mora



Six undergraduate and graduate students headed to New Mexico last May for a nine-day field trip. After several classes that gained students some general background on New Mexico geology and a contextual framework to help them understand the geologic features that they would see in the field, the van was loaded and rolled down I-40 (a long way down I-40.....). Led by Visiting Professor Steven Whitmeyer, the class traveled from Taos to the White Sands National Monument, examining geological features associated with the Proterozoic assembly of Laurentian basement in the New Mexico



region, Laramide uplift of the southern Rocky Mountains, Cenozoic volcanism and the Jemez lineament, and evolution and structure of the Rio Grande Rift basins. The trip included brief stops at roadside cliff dwellings of the Anasazi and dinner in Santa Fe to pick up some non-geologic regional culture and introduce students to real *enchiladas* and *chilis rellenos*.

Students submitted a final written report on the geology, activities and field discussions for one of the field stops, including background geology from the literature and data collected in the field, which students interpreted to arrive at a geologic and tectonic history of the area. A dynamic group of students with a diverse array of geologic backgrounds facilitated energetic and enthusiastic discussions of New Mexico geology both in the field and in more informal evening environments.

## ROCK TALKS!!! – Larry McKay

An important part of our department's outreach program involves going to elementary schools to give interactive talks on the rocks, minerals and fossils. Many faculty members have been involved with this over the years. This year, Larry McKay gave "Rock Talks" to over 200 students at West Hills Elementary and Gibbs Elementary. One of these talks was especially significant to our alumni, because Larry's daughter,



Sarah, was in Mrs. Susan Kimberlain's first grade class at West Hills Elementary. Susan Kimberlain is the daughter of Evelyn Swingle and Professor George Swingle who was a faculty member in Geological Sciences. It's great to see that Professor Swingle's legacy is continuing, through our department's efforts to introduce children to the delights of geology.

**Top photo: Professor Larry McKay, with daughter Sarah and the rest of Mrs. Kimberlain's first grade class.**

**Bottom photo: Susan Kimberlain with her mother, Evelyn Swingle, and son, John Kimberlain.**

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## **"DEEP-WATER PROCESSES AND FACIES MODELS: IMPLICATIONS FOR SANDSTONE PETROLEUM RESERVOIRS, 5" - A NEW BOOK BY DR. G. "SHAN" SHANMUGAM**



Published by Elsevier as Volume 5 of their series, "Handbook of Petroleum Exploration and Production," this rock-based book links deep-water process sedimentology with sandstone petroleum reservoirs. In presenting a consistent process interpretation, the author has relied on his description and interpretation of core and outcrop from 35 case studies (which include 32 petroleum reservoirs), totaling more than 30,000 feet, carried out during the past 30 years (1974-2004).



# Summary Report

## UT's 6<sup>th</sup> Annual Earth Science Fair

October 13, 2005

<http://web.eps.utk.edu/earthscifair/html>

The Department of Earth and Planetary Sciences, in collaboration with sponsoring organizations, participates in nationally-proclaimed Earth Science Week by hosting Earth Science Fair, a day-long event that brings people together to meet, learn, and grow.

### OVER 600 PARTICIPANTS

including over 500 students, 45 teachers and parents, and 80 volunteers

#### 10 Schools

Centerview Elementary, Crossroads Christian Academy, Jacksboro Middle, Jellico Elementary,  
Middlesboro High, Northwest Middle, Oak Ridge High, South Doyle High,  
St. John Neumann Catholic Middle, Tellico Plains Jr. High

#### 61 Home Schoolers

Blount Home Education Association, First Baptist Powell Home School Support Group,  
Terri Lyon Home School Group, as well as individual homeschoolers

### 18 ACTIVITIES

Aerial Photo and Satellite Image Interpretation  
Climb Through Time  
GIS and Remote Sensing  
Gold Panning and Mineral Resource Mining  
Groundwater and Contamination (new)  
Impact Craters  
Investigating Volcanic Eruptions  
Is your drinking water safe? Can we get some? (new)  
Journey to the Moon  
Lights, Lasers and Interferometry  
Map Interpretation and Remote Sensing  
Mineral Fluorescence  
Minerals in Everyday Life  
Natural Hazards & Mineral Resources of TN  
The Physics of Magnetism  
Tsunamis, Mars, and Tennessee Mosasaurs  
Understanding Our Solar System  
Using Tree Rings to Date Historical Structures in the Southeastern US (new)

**SIXTH ANNUAL EARTH SCIENCE FAIR OCTOBER 13, 2005**



**Tellico Plains Junior High**



**Mineral Fluorescence**



**Natural Hazards and Mineral Resources**



**Gold Panning – The Perennial Favorite**



**Ground Water Contamination**



**Middlesboro High Leaving**

## KLEPSEK LECTURE PROGRAM – Kula Misra

The Klepser Lecture Program started in 1989 to honor Professor Harry Klepser when he retired after many years of distinguished service as Professor and Department Head. The distinctive feature of this lecture program, compared to traditional seminar lectures, is that it provides an opportunity for interaction of the guest lecturer with students and the faculty through workshops or field trips. The students and faculty benefit significantly from such interaction. We have invited 18 Klepser lecturers since the program began. All were eminent earth scientists, with diverse areas of expertise, as shown below.

It is noteworthy that every year, Mrs. Klepser (Pearl) and other family members show their appreciation by attending the Klepser lecture and the reception that follows.

The lecture program is funded by the Klepser Lecture Endowment, which was established by his former students and colleagues, friends, and Pearl and other family members. The Endowment has a current market value of \$60,480 and supports the annual Klepser lecture, as well as supporting our weekly seminar program. We hope that this fund will grow through donations and investments to expand the program and allow us to continue bringing in outstanding lecturers.

<b>1989 - William Dickinson</b> (Univ. of AZ) <i>Relations between geomorphology and sedimentology</i>	<b>1998 – Thure Cerling</b> (Univ. of Utah) <i>Chemical evolution of the Earth's atmosphere</i>
<b>1990 - James Head</b> (Brown University) <i>Geology of Venus as revealed by the Magellan aircraft</i>	<b>1999 – Hans Machel</b> (Univ. of Alberta) <i>Tectonically induced fluid flow and implications for oil exploration</i>
<b>1991 – Heinrich Holland</b> (Harvard) <i>Chemical evolution of the Earth's atmosphere</i>	<b>2000 – Carlie Peters</b> (Brown University) <i>Remote sensing of planetary bodies</i>
<b>1992 – Andrew Knoll</b> (Harvard) <i>The Earth's earliest life</i>	<b>2000 – Frank Chapelle</b> (USGS) <i>The affect of redox conditions on the reductive and oxidative biodegradation of chlorinated ethenes in groundwater</i>
<b>1993 – Leon Silver</b> (Cal-Tech) <i>Granite batholiths and the growth of continental crust</i>	<b>2001 – Doug Burbank</b> (Penn State) <i>Tectonic implications of landscape evolution in the Himalayas</i>
<b>1994 – John Rogers</b> (Yale) <i>Evolution of orogenic belts</i>	<b>2002 – Jack Farmer (Arizona State)</b> <i>Hydrothermal systems, Mars, stromatolites</i>
<b>1995 – Paul Hoffman</b> (Harvard) <i>The cratons of North America</i>	<b>2003 – Garry Ernst</b> (Stanford) <i>Ultra high-pressure metamorphism and exhumation of continental collision belts</i>
<b>1996 – Susan Kieffer</b> (Univ. of British Columbia) <i>Computational fluid flow dynamics in geology</i>	<b>2004 – Kate Freeman</b> (Penn State Univ.) <i>Molecular and isotopic record of past climate</i>
<b>1997 – Clarence Allen</b> (Cal-Tech) <i>Seismic risks</i>	<b>2005 – John Grotzinger</b> (MIT) <i>Sedimentology on Mars</i>



## **ANNUAL MEETING OF SE SECTION OF GSA TO BE HELD IN KNOXVILLE**

Mark March 23-24, 2006 on your calendars! On that Thursday and Friday, our Department of Earth and Planetary Sciences will host the 55th Annual Meeting of the Southeastern Section of GSA here in Knoxville. The meeting will be held in the luxurious Marriott Hotel, which is located at 500 Hill Avenue SE in downtown Knoxville. A block of rooms has been reserved at the Marriott at \$99 per night. For reservations, please call the toll-free Marriott reservation line at 1-800-836-8031 and request a reservation under SE GSA 2006. Online Registration will start in early December. Plus, on-site registration will be available at the Marriott Hotel during the meeting. Here are a few highlights. In addition to the 20 theme sessions for oral and poster presentations, there will be two pre-meeting field trips, four post-meeting field trips, six symposia, and the Wednesday night Welcome Party. Don't just attend, present a talk or poster! The deadline for submitting abstracts is January 5, 2006. Full information concerning this meeting, including registration forms and abstract submission details, is available on the GSA web site at: <http://www.geosociety.org/sectdiv/southe/06semtg.htm>

**All EPS alumni and department friends are invited to a reunion party on Thursday night!**



**Here is another GSA field trip:**

**Geological Controls on Fish Habitat in a TVA Reservoir (One Day)**, Larry McKay, University of Tennessee at Knoxville, TN,

E-mail Larry at: [lmckay@utk.edu](mailto:lmckay@utk.edu)

Saturday, March 25, 2006. 6:30 a.m. to 4:00 p.m. Cost is \$125/person for fully-guided trip in a bass boat, \$40/person for partially-guided trip in a 6-person pontoon boat. Participants will need to buy a TN fishing license at a cost of \$5.50 for TN Residents and \$16.50 for Non-Residents. Maximum of 20 people, minimum of 4.

**Larry displays typical results!**

## **2005 METEORITICAL SOCIETY MEETING SPONSORED BY EPS - Hap McSween**

The 2005 Annual Meeting of the Meteoritical Society (an international organization devoted to the study of meteorites and cosmochemistry) was held at the Glenstone Lodge in Gatlinburg, Tennessee, USA on September 11-16. The meeting was organized and hosted by Hap McSween and Larry Taylor, and sponsored by the Department of Earth and Planetary Sciences. There were 355 registrants, scientists from all over the world. The meeting began with a welcome barbeque on Sunday evening. During the meeting, many participants enjoyed the scenery afforded by the Great Smoky Mountains National Park. A Thursday afternoon excursion to Asheville, North Carolina included tours of the Biltmore estate and winery and a banquet at the Deer Park Restaurant on the estate grounds. A post-meeting field trip to the Middlesboro, Kentucky and Flynn Creek, Tennessee craters was organized by graduate students Keith Milam and Jonathan Evenick, and technician Bill Deane. In addition, graduate student Cara Mulcahy drove one of the four vans. The field trip was fully subscribed and highly praised.

Thirty travel grants – a new record for METSOC meetings – were awarded to students presenting talks and posters at the meeting. The NASA Cosmochemistry Program, the Barringer Crater Company, the Planetary Studies Foundation, and Pallasite Press sponsored these grants.

The program featured 218 talks and 110 poster presentations. A program highlight was a full-day Symposium on Lunar Samples and Crustal Evolution, honoring Ross Taylor on the occasion of his 80th birthday, followed by a dinner and roast. Other sessions focused on chondrites, differentiated meteorites, martian and lunar meteorites and remote sensing, refractory inclusions, chondrules, presolar grains, interplanetary dust particles, organic compounds, short-lived isotopes, cosmogenic nuclides, asteroid remote sensing, element nucleosynthesis in stars, and impact structures and materials.



**Group picture of the MetSoc 2005 Flynn Creek – Middlesboro Impact Structures Field Trip**

## A WORD FROM OUR GEOCLUB PRESIDENT - Tasha Dunn

The past year has been a busy one for the graduate students. The first in a long line of thesis and dissertation defenses took place last spring, and since then, 5 PhDs and 8 masters have been successfully defended. We're still not done yet, as a few more M.S. defenses are anticipated by the end of fall semester. Of the recently graduated PhD students, **Karen Stockstill** and **Valerie Reynolds** accepted post-doctoral positions at University of Hawaii and the Smithsonian Institute, respectively, and **Ben Tanner** is now a new faculty member at Western Carolina University. Several M.S. recipients have chosen to continue their academic careers, with four students pursuing their PhDs (at UT and elsewhere) and one entering his first year of Law School. We're excited that two of the master's students graduating this fall will also be staying at UT to work on their PhDs. Undergraduate, **Emily Goodman**, finished her BA this summer and stayed in the department to start her MS this fall.

The fall semester started off as usual with TA in-service day, which was followed the same evening by the fall party. In-service day was a big success, thanks in large part to the many undergraduates who gave up their Saturday to help us make more than 1,000 rock kits for Geology 101 students. The fall party, held at **Ted Labotka's** house, was a much deserved break after a long day's work. So many uncooked hotdogs and hamburgers were leftover that the geoclub was able to make a much appreciated food donation to a local homeless shelter.

Our annual Earth Science Fair isn't the only time we get the opportunity to introduce young kids to geology. Outreach is constantly thriving at McClung Museum, where EPS graduate students volunteer their free time to lead student groups through some of the museum's exhibits, including their newest exhibit on the Mars Exploration Rovers (MERs). This program is one that our graduate students have always participated in, and it has continued to be a success this year in large part to the efforts of **Quintin Overocker**, who is currently coordinating the McClung program. With the end of the semester right around the corner, we are working hard to finish projects and class work but look forward to the upcoming holiday break and the start of spring semester.

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## WHERE DO OUR GRADS, POST DOCS AND FACULTY COME FROM??



## ALUMNI NEWS

**Karen Stockstill** (PhD 05) graduated early this summer and is now working as a post doc at the University of Hawaii. She's continuing work she started here on analysis of orbital data from Mars, and she's also working on some instrument development projects for future Mars missions.

**Mike Wyatt** (PhD 01) continues in his post doc at Arizona State University. He has had a very busy travel year - he spent two months this summer traveling in Japan, China, and India for conferences and field work. This fall he went to Chile to help support field testing of a prototype Mars rover as part of the "Life in the Atacama" project that Jeff Moersch has been working on. This winter, he will be in Antarctica participating in this year's ANSMET meteorite collecting expedition.

**Jana Peevler** (MS 01) met UT Faculty member, Larry McKay, in Chattanooga, where she was helping sample some TNT-contaminated wells (actually, she was showing us how to do the sampling properly). Jana got married recently and is working for Tetra Tech consulting in Oak Ridge. She fondly remembers her years at UT, working with Kula Misra. She learned to be patient and is very thankful for the additional help she got in finishing her thesis from a research faculty member, Mostafa Fayek.

**Fred Stanin** (BA 77 and MS 79) is a senior geologist with Malcolm Pirnie Consultants in the San Francisco – Oakland area. UT faculty member, Larry McKay, ran into Fred in a meeting in California on groundwater contamination at the Volunteer Army Ammunition Plant in Chattanooga. Fred enjoys a spectacular view of San Francisco Bay from his office, and said hello to all his friends at UT.

Larry McKay also had the pleasure of meeting with his first two grad students, **Angie Tschantz nee Harton** (MS 96) and **Paige Stafford** (MS 95). Angie is a free-lance environmental consultant in West Virginia, and a member of the department's Alumni Board of Advisors. Paige is with the Network and Computing Technologies Division at Oak Ridge National Laboratory. After completing her MS in groundwater modeling in 1995, she worked several years before pursuing an MS in Computer Science at UT, then returning to ORNL for her present job.

**Clark Cropper** (MS 98) is now a faculty member at Volunteer State Community College in Nashville and is looking at options for pursuing a PhD in I-Sciences (meaning interdisciplinary sciences) at Middle Tennessee State University. His wife, Cheri and two children, Mason and Gracie, are doing fine, after a couple of years of health problems related to their very premature arrival.

**Chris Vandewater** (MS 03) has completed his three new-hire rotations at ExxonMobil and is now involved in South American Resource Assessment, which has led to many hours of improving his Spanish. He also chose to fold his structural geology skills into the Regional Geology skill area at ExxonMobil.

**Melissa Lenczewski** (PhD 01) is having a busy year. She's joining an Antarctic drilling project, was appointed an Associate Editor for "Ground Water" and is going up for tenure and promotion at Northern Illinois University this fall.

**Brent Couzens-Schultz** (MS 92) has moved within Houston to 2714 Centenary St., Houston TX 77005, while continuing in his position at Shell Research. He finally got a cell phone after much peer pressure (number available from Brent!), and is also working on a Habitat for Humanity house, which may have taken on even more significance after the fallout from hurricane Katrina.

**Kevin Smart** (PhD 96) continues to be busy with Yucca Mountain-related work, petroleum industry projects and now Mars-related tectonics at Southwest Research Institute in San Antonio, TX.

**Wendy Lawdermilk Hoffman** (MS 01) gave birth to William Parker Hoffman on June 29th, 2005. Wendy and her husband, Brian, continue to live in Houston and pursue successful petroleum industry careers with different companies, with Wendy at ExxonMobil.

**Chris Heiny** (MS 04) moved to Quantum Environmental and Engineering in the Knoxville area to work in their UST program during the summer so as to pursue environmental work, involving greater responsibilities.

**Eddie Worthington** (BS 01) is currently working for the State of Tennessee with the Department of Environment and Conservation (TDEC) at the Department of Energy-Oversight division (DOEO) in Oak Ridge. He is one of two geologists in the groundwater program of the Environmental Monitoring and Compliance (EMC) Department in this Division. His current mailing address is 709 Island Ford Rd., Lake City, TN 37769

**Jon Bryan** (PhD 91) and **Gray Dean** (PhD 03) are writing a textbook, Environmental Geology, for Jones & Bartlett. It is due to be published in 2006. Gray is teaching at Clemson Univ. in SC and Jon is teaching at Okaloosa-Walton Community College, FL.

Also, **Jim Heller** (MS 95) is doing well at his job in the Alabama Geology Survey and **Dan Frederick** (PhD 94) is excelling at his job as a Professor at Austin Peay.

**Amitabha Ghosh** (PhD 97) has moved to the Washington, D.C. area. He was recently selected as a co-investigator for the Mars Exploration Rovers mission.

Our newest PhD, **Valerie Reynolds nee Slater** (PhD 05) and family have also moved up to the D.C. area. Valerie is expecting her second daughter. She has accepted a postdoctoral appointment at the Smithsonian Institution working with Dr. Tim McCoy.

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**TO KEEP UP WITH EPS DEPARTMENT NEWS PLEASE VISIT OUR WEB SITE AT:**  
**<http://web.eps.utk.edu/index.html>**

## **CRAIG W. OYEN 1963 - 2005**

Dr. Craig W. Oyen, 42, of Shippensburg, PA, died unexpectedly in Arizona on Monday, September 5. Born in Williston, ND on June 27, 1963 to Mr. and Mrs. Walter Herbert (Norma) Oyen, he graduated with honors as the WHS Senior Class President in 1981. He earned his BS at NDSU (Fargo, ND), continued with graduate studies at the University of Tennessee (Knoxville, TN), and completed his Ph.D. in Geology at the University of Florida (Gainesville, FL). Following three years on the faculty of Georgia Southern University (Statesboro, GA), in 1998 he joined the faculty of Shippensburg University (Shippensburg, PA), where he was an Assistant Professor in the Geography and Earth Science Department. Craig maintained an active, enthusiastic involvement in scientific research, resulting in numerous national and international publications and presentations, and travels to locations around the globe. He enjoyed teaching immensely, and his students benefited from worldwide field study locations. At the time of his death he was on sabbatical from Shippensburg University, working with the National Park Service in the Grand Canyon, a place he dearly loved.

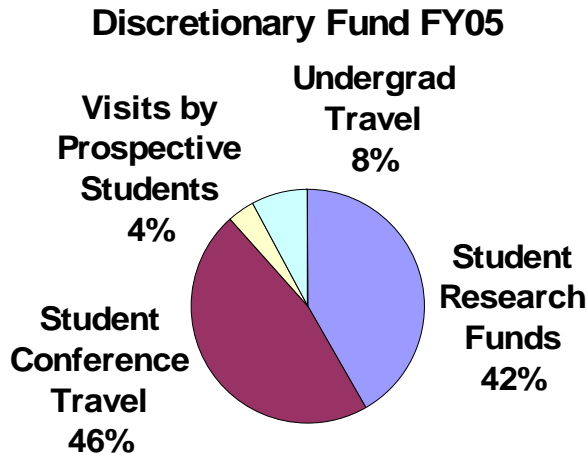
Craig's family is very proud of his dedication and contributions to the profession he cherished. Remembrances may be designated for a student field research scholarship to be established in his memory, and correspondence may be addressed to his parents: Herb and Norma Oyen, 1228 Park Place, Williston, ND 58801.

## **A GOOD START – Claudia Mora**



Dr. Ebrahim Shekarchi (“Abe”), the Department’s very first PhD graduate (1959), presented a talk in our weekly seminar series last January. In his talk, “Observations on international minerals and the U.S. strategic mineral policy”, Abe shared some of the deep understanding he developed over more than 40 years on the job as a specialist in mineral exploration and mineral resources. Abe toured the Department to see the many changes the years had brought and was especially keen to take advantage of the Olympic-sized swimming pool at “T-RECS”, the student athletic facility. He was presented with an official UT swim towel and, in turn, presented the Department with a fabulous carved graphite statue from Sri Lanka. When he shared photos of his visit with his grandchildren (as you can see for yourself, he was quite nattily attired!), they declared he looked “professorial.” “You see,” Abe said, “they think of me always in my field clothes!”

## DISCRETIONARY FUND PAYMENTS FOR FY05 – Larry McKay



The departmental “Discretionary Fund” gives out awards to students for conference/workshop presentations, senior or graduate thesis research and travel expenses for visits by prospective graduate students. Total payments in academic year 2004-05 were \$13,600 and were made possible by generous donations from our Alumni, through the Professor’s Honor Fund. We’ve recently added a new category: Undergraduate Travel Awards. This category is for undergraduate students who would like to attend a

conference to learn more about Earth science research and career opportunities, but are not yet ready to make their own presentations. This past year we gave out four Undergrad Travel Awards, which allowed students to attend GSA in Denver, CO, a Paleo Society meeting in CO, and the TN Water Resources Symposium, near Nashville. The opportunity to attend a major geological or hydrological conference has helped many of our students decide on where to focus their research and career.

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## 2004 ALUMNI ADVISORY BOARD GOLF TOURNAMENT

- hosted by Bob Hatcher in Oak Ridge



(L-R) Steve Welch, Jonathan Evenick, Arthur Merschat, Jeff Nettles, Mike Maitland, Roger Bohanan, Kim Sickafoose

## **AWARDS DAY 2005 – Claudia Mora**

Our Awards Day was dedicated this year to the memory of Otto Kopp, whose funeral was the very morning of our event. It was a sad, yet fitting, dedication, because Awards Day is all about the successes of our students and Otto especially loved to work with students. In addition to the many graduate students he mentored through his career, during his “retirement”, Otto continued to work closely with undergraduates on their senior theses. With Otto in mind, and the generous support of our alumni, we were delighted to be able to make the following awards:

### **UNDERGRADUATE AWARDS**

- **Walls Awards** (for promising academic performance in introductory courses; \$50): John H. Schaad, Anne Tropoli, Julie Bell, Joshua White
- **McLaughlin Undergraduate Awards** (for academic success in core classes;\$150): Abigail Stephens, Julie Mathis, Amanda Reynolds, James Glover, Adam Johnson, Brooke Perini
- **Knoxville Gem and Mineral Society Awards** (\$100 each + rock hammer and pouch, awards sponsored and presented by KGEMS members): Robbie Reynolds, James Glover, Brooke Perini
- **Coffee Cup Award** (for highest GPA w > 4 core courses; coffee cup + \$100): Kirsten Oswald, 4.0
- **Knoxville Gem and Mineral Society Field Camp Scholarship** (\$300; awards sponsored and presented by KGEMS members): Mark Green, Diana Miller
- **Don Jones Field Camp Scholarship** (\$300 ea.): Kirk Eddlemon, Jessica Hanson, Jamie Phillips, Adam Johnson
- **Byerly Field Camp Scholarship:** Kirsten Oswald (\$750), Emily Goodman (\$750), Ching Tu (\$500), Chad Phillips (\$500)
- **Outstanding Senior Award** (tie; \$500 each): Kirsten Oswald, Emily Goodman

### **GRADUATE STUDENT AWARDS**

- **Coffee Cup Award** (for highest GPA w > 4 core courses; coffee cup + \$100): Jennie Cook 4.0; Ryan Thigpen 4.0
- **Knoxville Gem and Mineral Society Awards** (\$200 each); Darren Schnare, Ryan Thigpen
- **Best Student Professional Presentation:** Quintin Overrocker 1st ,(\$250), Tasha Dunn (2nd , \$150)



- **Planetary Geoscience Awards** (\$300 each; sponsored by PGI): Tasha Dunn, Jeffrey Nettles, Livio Tornabene
- **Excellence in Teaching, Graduate Teaching Assistant** (\$200 ea.): Quintin Overocker, Whitney Kocis, Matthew Gatewood
- **Excellence in Outreach** (\$100 ea.): Tasha Dunn, Whitney Kocis, Troy Dexter, Stephanie Drumheller (undergraduate)
- **Excellence in Graduate Coursework** (\$200 ea.): Don Stahr, Keith Milam, Melissa Hage
- **Swingle Fellowship for Outstanding Geological Fieldwork** (\$2000 ea.): Matthew Gatewood, John Bultman, Neil Whitmer
- **Recognition for student award of “Outstanding Paper” at a national meeting** (\$100): Patrick Schuneman, Fall AGU, VGP Section
- **“IRA” Interdisciplinary Research Award** (\$500; sponsored by the Carden Fund and Jones Hydrology Endowment): Ben Tanner
- **Rock Solid Award** (for random, selfless efforts for the Department; \$200): Darren Schnare
- **Gordon Award for Professional Promise** (identified by his peers, \$500): Chris Whisner
- **GeoClub Award for Best Teacher** (student vote only): Dr. Mona Becker
- **Halls Professorship (A Commitment to Serve):** To Dr. Ed Perfect for his stewardship of the very successful Earth Science Fair over 3 years.



**Mike and Dean of Libraries Barbara Dewey**

### **DR. MIKE CLARK HONORED BY UT LIBRARY**

Dr. Mike Clark was recently given the Library Friends Outstanding Service Award for over 20 years of service as the Geology/Earth and Planetary Sciences representative to the UT Library. Mike was cited for his commitment to the library, his ability to find extra funds for expanding the geology collection, and his strong support for the UT Map Library.

**DONATIONS 2004**  
**- THANK YOU!**

**January**

William T. Hill  
Carl E. Merschat  
Richard A. Hopkins  
William R. Sullivan  
David Tieman

**February**

John F. White  
T. Watrous Garrett, Jr.  
Robert K. Davis

**March**

Donald & Florence Jones  
Bobbi Klepser  
David M. Doolin  
Sidney Ann Jackson  
Ian J. Richards  
Donald & Elizabeth Hathaway  
Joseph Paul & Deborah Capaccioli-Paul  
Thomas Kemp  
Charles A. McAllister  
Kula Misra  
Richard T. Williams  
Robert L. Tolliver  
Michael L. McKinney  
Larry D. McKay  
Marvin E. Bennett  
Mary Muchane  
Don W. Byerly  
Jana L. Peevler

**April**

Kim Sickafoose

Pearl Klepser  
Stuart Reese  
Otto Kopp  
Tom Broadhead  
Harry McSween  
Don Byerly  
Kenneth Walker  
Mike Maitland  
Kula Misra  
Richard Arnseth  
Michael Clark  
Steve Driese  
Ted Labotka  
Gil & Virginia Jacobs  
Richard Williams  
Bill Dunne  
Jonathan Bryan  
Mike McKinney

**June**

Denny Bearce  
Billy Glass

**July**

Robert Hatcher  
Tom Broadhead  
Harry McSween  
Edwin Boyd  
Lawrence Taylor  
Kenneth Walker  
Forrest & Susan Orr  
Steve Driese  
Bill Dunne  
Larry McKay  
W. R. Schriver  
Gregory Yanagihara

**October**

Marvin Bennett  
Edwin T. Boyd  
Tom Broadhead  
Dave Cantrell  
Robert K. Davis  
Steve Driese  
Bill Dunne  
Robert Hatcher  
Arthur R. Kasey  
Larry McKay  
Michael McKinney  
Harry McSween  
Kula Misra  
Mary Muchane  
Forrest & Susan Orr  
W.R. Schriver  
Ganapathy Shanmugam  
Kevin Smart  
Kathy Smart  
Lawrence Taylor  
Robert Tolliver  
Kenneth Walker  
Richard Williams  
Gregory Yanagihara

### **November**

Richard Arnseth  
Tom Broadhead  
Jonathan Bryan  
Don Byerly  
Michael Clark  
Marta Corbin  
Steve Driese  
Bill Dunne  
Wendy Hoffman  
Christopher & Janet Kerr  
Otto Kopp  
Ted Labotka  
Mike Maitland  
Michael McKinney  
Harry McSween  
Kula Misra  
Jason Morris

Charles & Dorothy Sandberg  
Kenneth Walker  
Amy Schoner Wandless  
George White  
Richard Williams

### **December**

Edward Bansbach  
Ernest Blythe  
Brent Couzens-Schultz  
Sarah Durall  
Frank Furman  
Robert Greene  
Randal & Barbara Kissling  
Frank & Carol McKenzie  
Carl Merschat  
James Moore  
Claudia Mora  
Michael Neton  
Daniel Popek  
Gary Rutherford  
Brian & Amy Sheldon  
John White  
Steve & Sally Absher  
Parham Cain  
Charles Benziger  
James & Virginia Bibee  
Gregory & Anne Crafts  
Julie M. Heather  
David Jackson  
Nancy Madeoy  
Mike Maitland  
Elizabeth McKenzie  
Mary Mishu  
Prinya Promprated  
Thomas A. Rhen  
William O. Ross  
Richard J. Smith

### **Companies**

East Tennessee Foundation  
Anadarko Petroleum Corporation

## HOW TO CONTACT US

**Faculty and Staff - 2005**  
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Rick Bowersox	Visiting Lecturer (paleoenvironments)	bowersox@utk.edu
Tom Broadhead	Professor (paleontology)	twbroadhead@utk.edu
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Bill Dunne	Professor (structural geology)	wdunne@utk.edu
Chris Fedo	Assistant Professor (sedimentologist)	cfedo@utk.edu
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Linda Kah	Assistant Professor (sedimentology)	lckah@utk.edu
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Mike McKinney	Professor (paleobiology)	mmckinne@utk.edu
Hap McSween	Distinguished Professor (planetary)	mcsween@utk.edu
Kula Misra	Professor (economic geology)	kmisra@utk.edu
Jeff Moersch	Associate Professor (planetary)	jmoersch@utk.edu
Claudia Mora	Carden Professor (isotope geochemistry)	cmora@utk.edu
Ed Perfect	Assistant Professor (paleosols)	eperfect@utk.edu
Larry Taylor	Professor (petrology/geochemistry)	lataylor@utk.edu
Colin Sumrall	Lecturer (paleontology)	csumrall@utk.edu
Ken Walker	Professor Emeritus (sedimentology)	kwalker@utk.edu

### **Teaching/Research Faculty**

### **Staff**

Larry Anovitz	Research Assoc Professor	Melody Branch	Office Manager
Mostafa Fayek	Research Assist Professor	Barbara Burton	Secretarial Staff
Amitabha Ghosh	Research Assist Professor	Nancy Meadows	Secretarial Staff
John McCarthy	Research Assoc Professor	Teresa Parrott	Secretarial Staff
Lee Riciputi	Research Assoc Professor	Diane Pealor	Secretarial Staff

Vijay Vulava	Research Associate
Jie Zhuang	Research Associate

James Day	Post doc	Bill Deane	Technical Staff
Eddy Hill	Post doc	Xhengu-Hua Li	Technical Staff
Yang Liu	Post doc	Allan Patchen	Technical Staff
Jaesung Park	Post doc		
Jennifer Piatek	Post doc	Dawn Taylor	Research Staff
Toma Usui	Post doc		
Chris Whisner	Post doc		

**PLEASE USE THIS FORM TO MAKE A CONTRIBUTION AND/OR TO PROVIDE INFORMATION FOR THE NEXT NEWSLETTER**

If you wish to give to more than one of the accounts below, you need only write one check and indicate below how much is to be applied to each fund. Any gift is tax deductible, and your contribution will be acknowledged by the University. If your employer provides a matching gift, please specify on the matching gift form that the match is also to go to the Department. Please mail this to the Department.

Thank you for your continued support!

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***University of Tennessee, Knoxville  
Department of Earth and Planetary Sciences***

Your name \_\_\_\_\_  
and address: \_\_\_\_\_  
\_\_\_\_\_

[ ] Check here if this is a new address.

**I wish my contribution to be applied to the following fund(s):**

- \$ \_\_\_\_\_ to the Professors Honors Fund in honor of \_\_\_\_\_
- \$ \_\_\_\_\_ to the Fund for Excellence in Undergraduate Education
- \$ \_\_\_\_\_ to the James G. Walls Fund for Introductory Geology
- \$ \_\_\_\_\_ to the Harry J. Klepser Lecture Series Endowment
- \$ \_\_\_\_\_ to the George M. Hall Professorship Endowment
- \$ \_\_\_\_\_ to the George D. Swingle Graduate Fellowship Fund
- \$ \_\_\_\_\_ to the Kenneth R. Walker Professorship Endowment
- \$ \_\_\_\_\_ to the Kula C. Misra Reading Room Fund
- \$ \_\_\_\_\_ to the Don W. Byerly Field Camp Scholarship Fund
- \$ \_\_\_\_\_ to the Otto C. Kopp and G. Michael Clark Library Fund

We'd like to make a special appeal for contributions to support scholarships for students attending field camps across the U.S. and abroad. These donations can be made through the Professors Honors Fund or through the Don Byerly Field Camp Scholarship Fund.

In the space below, please provide some news for the next newsletter; photographs with captions are welcome. These can be sent electronically to the editor: [lmckay@utk.edu](mailto:lmckay@utk.edu).