

Department of Earth and Planetary Sciences

 University of Tennessee, Knoxville



2006 Annual Newsletter

2006 Newsletter
Department of Earth and Planetary Sciences
University of Tennessee, Knoxville

Editors: Larry McKay and Bill Deane

Cover photos:

Top Right: Prof. Ricardo Astini (Univ. of Cordoba), and students, Cara Thompson (Ph.D. UTK), Mary Varnell (M.S. UTK) and Fernando Gomez (Ph.D. Cordoba) in La Chilca Canyon, Argentina. This is Cara's dissertation area. Photo courtesy of Linda Kah.

Center Left: Cara Thompson and Jonathan Evenick exploring Green Point in western Newfoundland, during a field trip led by Linda Kah. Photo courtesy of Linda Kah.

Bottom Right: A 4 meter tall karst hoodoo located in Tennessee. Photo courtesy of Terri Brown.

The University of Tennessee does not discriminate on the basis of race, sex, religion, national origin, age, disability, or veteran status in provision of educational programs and services or employment opportunities and benefits. This policy extends to both employment and admission to the University.

The University does not discriminate on the basis of race, sex or disability in the educational programs and activities pursuant to the requirements of the Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990.

Inquiries and charges of violation concerning Title VI, Title IX, Section 504, ADA or the Age Discrimination in Employment Act (ADEA) or any of the other above referenced policies should be directed to the Office of Equity and Diversity (OED), 1840 Melrose Avenue, Knoxville, TN 37996-3560, telephone (865) 974-2498 (V/TTY available) or 974-2440. Requests for accommodation of a disability should be directed to the ADA Coordinator at the UTK Office of Human Resources, 600 Henley Street, Knoxville, TN 37996-4125.

LETTER FROM THE HEAD



Dear Friends,

Like many parents of bright, energetic, and photogenic children, I always keep a few “bragging photos” in my wallet. I take these out when I meet with friends at professional meetings or other campuses. And, sometimes, I’ll look at the photos just to remind myself how special they are. This annual newsletter serves much the same purpose. The newsletter gives us a chance to pull out a few pictures and brag a bit about how much we’ve grown, about the things we have accomplished, and what great things are in store for us. We hope you will enjoy reading all about your Departmental “family”: the

talented students, the good-looking and successful faculty, the kind and wise alumni (or is it wise faculty and good-looking alumni?!). Lake Wobegone has nothing on the Department of Earth and Planetary Sciences!

Here’s a sneak preview of some of the things we have to “brag” about this year:

- At the annual Geological Society of America meeting in Philadelphia last month, Bob Hatcher received both the Penrose Medal of the Geological Society of America and the Ian Campbell Award of the American Geological Institute. For me, the best moment of the evening was the distinct “clink” of the medals when Bob received the Penrose Medal quite literally right on top of the Campbell Award! Either of these awards represents the highest level of recognition for achievement in our profession. To receive both, and simultaneously, is truly remarkable!
- We welcome Dr. David Finkelstein to the faculty as our new Jones Assistant Professor of Environmental Geochemistry. David comes here from a research position at Indiana University. Looking for some interesting sites to facilitate class projects in environmental geochemistry, he pulled out his local map and rather wisely started with Stinking Creek!
- Many thanks to Gary and Patti West, who established the Otto C. Kopp Endowment for Undergraduate Senior Research. This generous gift reminds us of Otto’s great interest in mentoring undergraduates in independent research projects. The Endowment will support senior thesis research at UTK, and other special undergraduate educational experiences.
- EPS hosted the annual meeting of the Southeastern Section of the Geological Society of America in March 2006, with more than 650 attendees for four days of talks, posters and field trips. It was a great success (but we will relish the ten years before it is our turn to host it again!)
- Concurrent with the SE-GSA meeting, we hosted a “Reconnect to Tennessee” Alumni Party. We had a full house at The Foundry to applaud Don Haney as he was recognized as our newest Distinguished Alumnus and to renew our friendships with our alumni from the southeastern region.

Read all about it! We hope the newsletter gives you a sense of our many successes and a few new “bragging rights” of your own. In the coming year, we encourage you to share *your* news and adventures through the Alumni Notes and a visit to campus. You are always welcome to join in on a Thursday seminar and the “Liquidus” that follows. Or, if you time your visit very carefully, you might find yourself at Spaghetti Supper 2007, which will demonstrate that the more things change (student “skits” are digitally produced and edited), the more they stay the same (the students are still *much* funnier than the faculty and *acutely* observant of faculty mannerisms and foibles).

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

Best wishes for the holiday season,
Claudia

FACULTY AWARDS AND HONORS

Hap McSween Elected Fellow of the American Geophysical Union

In May 2006, Hap McSween was honored as a newly elected Fellow of the American Geophysical Union at its spring meeting in Baltimore, MD. AGU Fellowship is highly selective, with awards to only 0.1% of its members. Hap's citation read: "For leadership in the study of primitive meteorites and their interpretation in terms of processes in planetary bodies and in the study of Martian igneous rocks, and for contributions to our understanding of the early history and evolution of the solar system and geologic processes on Mars."

Hap McSween and Jeff Moersch Receive NASA Award

The National Aeronautics and Space Administration presented UT's Earth and Planetary Sciences faculty members Jeff Moersch and Hap McSween with its Group Achievement Award for their contributions to the Mars Odyssey mission's Thermal Emission Imaging System (THEMIS) team. The THEMIS instrument has been mapping the composition of the Martian surface from orbit for the past five years. Moersch and McSween are Co-Investigators for this instrument. The awards were presented at the Mars Odyssey Project Science Group Meeting in Kona, Hawaii, on November 14.

DON HANEY RECEIVES DISTINGUISHED ALUMNUS RECOGNITION – Bob Hatcher



Don Haney was recognized as a Distinguished Alumnus of the EPS Department in March, 2006, at the Alumni Party during the GSA Southeastern Section Meeting. He is the third alumnus to be so honored, along with **Don Jones** and **Bob Milici**. Don was a 1966 Ph.D. from the department who worked with **George Swingle** and **Harry Klepser**. He rejoined the faculty of Eastern Kentucky University, where he had been before coming to UTK, and served as both a faculty member and then department head. While at EK, Don built that department into one of the best respected small departments with a M.S. program in the Southeast. In 1978, Don accepted the position of Director of the Kentucky Geological Survey and State Geologist. He retired in 1999 having built the KGS into one of the top five state surveys in the country, having brought large amounts of funding from several federal agencies to the KGS, and having built an outstanding professional staff. During his tenure as Kentucky State Geologist, Don was one of the original framers of the bill in Congress that established the National Cooperative Geologic Mapping Program in 1992. He also helped lobby Congress in 1996 to not eliminate the U.S. Geological Survey, during the period of the “Contract with America.” He is well known among the Kentucky congressional delegation, and those of several other states. Don served as President of the Association of American State Geologists, President of the American Geological Institute, and was the recipient of the 1992 AGI Ian Campbell Medal honoring the multifaceted and multitudinous nature of his career successes.

THE DEPARTMENT’S WEBSITE HAS BEEN GREATLY REVISED

Ted Labotka has updated our Department’s website. Touring the EPS website is a good way to keep up with Departmental news, events and people.

Browse us at: <http://web.eps.utk.edu/>

LOCAL BOY MAKES GOOD – Claudia Mora



University of Tennessee Distinguished Scientist and Professor in Earth and Planetary Sciences **Robert Hatcher, Jr.**, received both the 2006 Geological Society of America Penrose Medal and the American Geological Institute Medal in Memory of Ian Campbell, an unprecedented “sweep” of the two lifetime achievement awards. The AGI Medal in Memory of Ian Campbell is awarded in recognition of “singular performance in and contributions to the profession of geology.”

Campbell was a geologist, educator, administrator, and public servant and was known for candor and integrity. The Campbell Medal is the most distinguished American Geological Institute award. The Penrose Medal was established in 1927 by R.A.F. Penrose, Jr., to be awarded in recognition of eminent research in pure geology, for outstanding original contributions or achievements that mark a major advance in the science of geology.

In his citation, Michael Higgins (Geologic Mapping Institute, Clayton, GA) recognized Bob as, “one of those rare geologists who integrates field geology, petrology, geophysics, geochemistry, geochronology, and structural geology to decipher the geology of complex mountain systems, such as the Appalachians”. He was the first to apply plate tectonic concepts to the southern Appalachians. In his acceptance, Bob mentioned the impact of his mentors, including his Ph.D. advisor, George Swingle, who taught him the importance of making careful field observations and synthesizing geology based on sound data. To read the complete citations and responses for these awards, see:



<http://geosociety.org/aboutus/awards/06speeches/penrose.htm>

<http://geosociety.org/aboutus/awards/06speeches/ianCampbell.htm>

The awards were made at the GSA Presidential Address and Awards Ceremonies on October 21, and the crowd assembled for the event heard the distinctive “clink” of the two medals hitting each other, as the Penrose Medal dropped on top of the Campbell Award that was already hanging around Bob’s neck. It was a special moment of recognition for Bob’s many illustrious accomplishments, the many contributions of his former and present students to this body of research, and a great moment of high visibility for the quality of our program.

RECENT BOB TRAVELS – Photos by Bob Hatcher



Dycus Disturbance, a suspected impact crater in Tennessee

With students in the Brushy Mountains



Argentina

Lake Baikal in Russia



MEET ASSISTANT PROFESSOR DAVID FINKELSTEIN



So, what do petroleum source rocks, water chemistry, limnogeology, climate change, characterization and examination of compound-specific isotopes of organic matter, and fire have in common? The simple answer is that they represent the broad range and focus of my research interests as the Jones Assistant Professor of Environmental Geochemistry.

I received my B.S. (1987) and M.S. (1991) in geology from the University of Massachusetts-Amherst, and my Ph.D. (1997) in geology from the University of Illinois-Urbana. After three years of teaching experience, I landed a post-doctoral research fellowship at Indiana University (2000-2006), where I honed my mass-spectrometry and organic-laboratory skills. My research focuses on solving problems that are field based (in both modern and deep time) which provide a temporal and spatial



palette for subsequent laboratory analyses. My interests are interdisciplinary, and are limited only by the number of hours in a day and the amount of caffeine I consume. Recent and on-going research projects include: exploring microbial life and its' organic-molecular and compound-specific ^{13}C signatures at the edge of hydration; characterizing the water chemistry of evaporative, basalt-hosted seeps, lakes, playas, and hot springs; investigating polycyclic aromatic hydrocarbons derived from wildfires in modern and ancient sediments; and characterizing oil-source rock correlations and their environments. Many of my Western U.S. based projects will be finding local counterparts based on my driving up and down Interstate 75. My goals for teaching upper level undergraduate and graduate students are simple - introduce them to the basic concepts and instrumentation and then let their imaginations and analyses (in part) guide them. I look forward to the many possible inter- and intra-departmental collaborations and wearing more Volunteer orange!

MEET VISITING SCHOLAR CALEB HOLYOKE



I am a visiting scholar in the Department of Earth and Planetary Sciences at the University of Tennessee for the 2006/2007 academic year. I will be teaching two introductory geology courses, structural geology and leading the mini-term field trip to explore the Appalachians in Vermont and New Hampshire during my year at UTK. I received my B.S. in geology with an environmental concentration from James Madison University in 1994. I then worked as an environmental consultant for four years before returning to get my

M.S. and Ph.D. at the University of Vermont and Brown University, respectively. My research interests are in the general area of structural geology. In particular my focus is on identifying and characterizing the grain-scale processes which constrain our

understanding of larger scale processes in metamorphic/igneous petrology and structural geology. I use a variety of field or experimental data, such as flow strengths, lattice preferred orientations, microstructures and phase arrangements to infer the mechanisms of solid-state flow of rocks. My overall goal is to better understand how the strength, kinematics and composition of the crust and upper mantle evolve during large-scale tectonic events. I'm excited to be back in the southern Appalachians and to have the opportunity to work on the highly deformed rocks in the Blue Ridge.

MEET LECTURER AND TA CZAR BILL DEANE



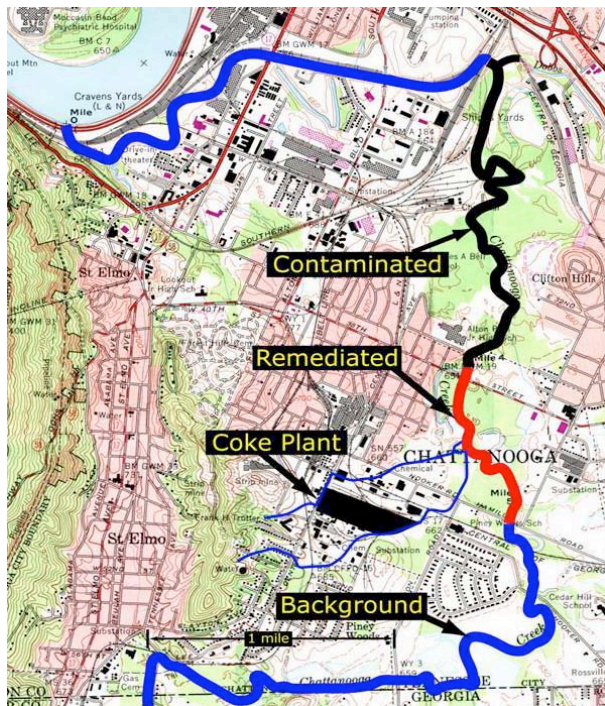
For several years, I ran the XRD and XRF lab for the Department. However, in the summer of 2006, I left the x-rays behind and joined the faculty as a lecturer. I will teach Geology 103 in the spring and 101 in summer. I have several additional duties, including orchestrating the annual Earth Science Fair, honchoing the Graduate Teaching Assistants (GTAs) and creating this newsletter. My primary research interests are terrestrial impact craters, which are caused by an asteroid or comet smashing into the Earth. Perhaps the most famous example is the Barringer Meteor Crater in Arizona. Fortunately, we have two proven (Flynn Creek & Wells Creek) and two suspected (Howell Structure & Dycus Disturbance) impact sites in Tennessee. Over the past couple of years, **Keith Milam**, **Jonathan Evenick** and I made numerous trips to Flynn Creek. Keith's forthcoming paper on the central uplift and Jonathan's spectacular new structure map will add greatly to our understanding of the complex geology of the Flynn Creek impact crater. I am a founding member of the Impact Field Studies Group (IFSG), an international organization devoted to promoting field work on impact sites. Each year, in conjunction with the Lunar and Planetary Science Conference (LPSC) near Houston, Texas, I help lead a field trip to an impact crater. For example, in March 2006, we toured the 12 kilometer diameter, Sierra Madera impact crater near the Big Bend area in Texas.

FALL 2006 GROUP PICTURE – photo by Colin Sumrall



UPDATE ON LARRY MCKAY'S RESEARCH - Larry McKay

I've been busy the past few years, working on some pretty diverse projects. My



research fits into 3 main areas: hydrogeology of shale saprolite and karst residuum, microbial pathogens and fecal indicators and, finally, coal tar contamination in Chattanooga Creek. I'm active in all of these areas, but it's the Chattanooga Creek work that's been hitting the headlines lately, with newspaper articles and radio interviews. This all relates to the environmental "legacy" of the former Chattanooga Coke plant, which between 1918 and 1987 disposed of about 100,000 tonnes of coal tar in the creek and floodplain. In collaboration with researchers at the UT Center for Environmental Biotechnology, we set up a multidisciplinary research program starting in 2001 to investigate processes controlling the fate and transport of PAHs from the coal tar, as well as to investigate their ecological,

health and social/economic impacts on the predominantly African-American residential areas near the creek. The project has been a lot of fun and we've made good progress. I had an M.S. student, **Syreeta (Dickerson) Vaughn** finish her thesis on the impact of seasonal floods on transport of PAH-contaminated sediments. With **Vijay Vulava** (post-doc), I carried out field and lab-scale investigations of coal tar dissolution and transport in groundwater. With collaborators in the UT College of Social Work, we helped teach a course on Environmental Contamination to local residents and hosted a Conference that brought together researchers, government agencies and residents.

All of this was great, but what REALLY caught the public's attention were a few sediment samples we collected from the portion of the creek that had already been "cleaned up" through the EPA SUPERFUND program. Contractors drained a mile of the creek, by building cofferdams and diverting the flow through large pumps and a pipeline, before excavating the tar-contaminated sediments, which were up to 8' thick. Vijay and I came in a few years after the cleanup and tested the remaining

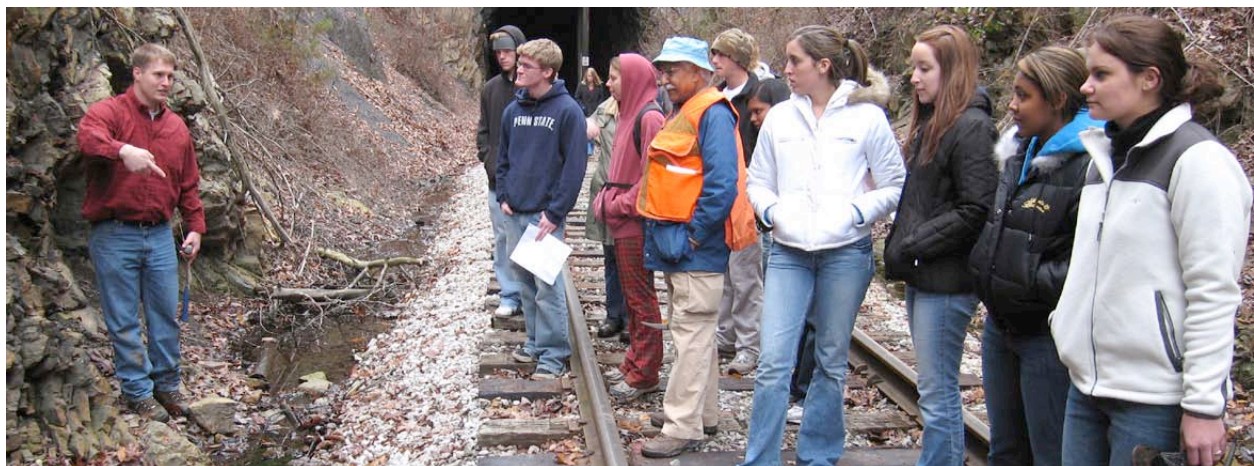


sediments for PAHs. It turns out that the remaining sediments still had contaminant concentrations as high, or higher, than values measured in the portion of the creek which was still awaiting cleanup. We expected this, but it was big news to the public. They had the reasonable expectation that “cleaned up”, meant that the creek would be useable afterwards (and EPA didn’t discourage this wrong impression). Unfortunately, it often takes many decades for concentrations to decline significantly at highly contaminated sites, which is why our research on PAHs is so important for planning and post-cleanup monitoring related to these types of sites. We hope to continue this research for several more years, especially in the public health and outreach areas.

ARTHUR MERSCHAT ACCEPTS OFFER FROM USGS – Bob Hatcher

This past spring and summer the USGS ranked Ph.D. candidates in the eastern U.S. in an effort to identify a field-oriented geoscientist with the capabilities for not only collecting high quality field data in complex terranes, but also interact with a multidisciplinary group of scientists to interactively produce quality papers for publication in top international journals. They identified Arthur Merschat, one of Bob Hatcher’s students, as the top Ph.D. student in the East who could meet these criteria, offered him a non-competed permanent position with USGS upon graduation under the Federal SCEP (Student Career Experience Program), and will pay his remaining academic costs. Arthur has accepted their offer and will begin work in the Eastern Earth Surface Processes Group (formerly Eastern Regional Geology) in Reston, VA, in 2008 after defending his dissertation. He currently is being supported by USGS as an employee.

Arthur’s dissertation involves a combination of detailed field mapping, chemical petrology, isotope geochemistry/SHRIMP geochronology, and structural geology in the North Carolina Blue Ridge and Inner Piedmont. Several papers have already been published or are in press from this research.



Arthur Merschat discusses geologic structure on the Cumberland Plateau during a 101 field trip.

UPDATE ON LINDA KAH'S RESEARCH AND GRAD STUDENTS – Linda Kah (Also see cover photos)

Linda Kah's research interests continue to be in the realm of using the geochemistry of carbonate and evaporite rocks to understand the evolution of the Earth's biosphere, but she has spent 2006 diversifying the focus of this research.

Graduate student **Emily Goodman** (M.S.) has been busy in the lab experimentally precipitating vaterite, a highly unstable calcium carbonate polymorph, to try to understand carbonate precipitation under elevated pCO₂ conditions that likely dominated the Proterozoic.

Graduate student **Cara Thompson** (Ph.D.) just finished field work in lower Paleozoic strata of Newfoundland and the Argentine Precordillera, and is currently preparing samples for C and S isotope analysis. She also collected and will be dating a number of bentonites via high-resolution single zircon geochronology with Dr. Sam Bowring of MIT, creating an unprecedented chronology for ocean chemistry changes in the Ordovician.



Mary Varnell, Heather Byars, Jonathan Evenick and Cara Thompson in Newfoundland

Graduate student **Bryan Shultz** (Ph.D.) has just started writing proposals for a project aimed at using C, S, and Mo isotope modeling to determine the extent of ocean oxygenation during the 2.2 Ga Great Oxidation Event.

Finally, Linda's research has taken an extraterrestrial turn with her involvement with the 2009 Mars Science Laboratory mission. Linda is currently working with colleagues at Malin Space Science Systems and elsewhere to design, build, and test the next-generation microscopic imaging camera to be sent to Mars (nicknamed MaHLI - Mars Hand Lens Imager). Right now, Linda's Martian focus is on mapping and examining stratal packaging in a number of potential landing sites, as well as involving undergraduate student **Tyler Roy** in designing hypothetical Martian fluids for a series of evaporation experiments. The fun never ends!!!

JOBS IN THE GEOSCIENCES – Claudia Mora & Larry McKay

Our commitment to M.S. and B.S. students remains strong during this period of growth of the Ph.D. program. These students are the “bread and butter” of a land grant institution like UT and the administration has emphasized that UT must maintain a strong commitment towards teaching and mentoring of students at all levels. We’ve always had a strong commitment towards teaching in our department, but in the past year we’ve started putting more effort into helping our students prepare for the job market. We’ve always had a “job board” in the department where job listings and graduate school or post-doc opportunities are listed, but now we’re actively searching the internet for positions and regularly sending them to all of the grads and undergrads. An important contributor to this is **Rick Mann**, a geologist at the Office of Surface Mines in Knoxville and a part-time Ph.D. student in hydrogeology. Rick scours the computer job listings for federal and state agencies across the country and, along with Dr. McKay, who has strong ties to environmental consulting firms and ORNL researchers, emails them to the students. We seek stronger ties to the oil industry, which continues to find our graduates to be solidly grounded in geology and ready to contribute as student interns and employees. ExxonMobil continues their annual recruiting trips, which also serve to educate our students on the many opportunities in the exploration industry. We thank Lawrence Walker for his many years of visits. This year, Lawrence passes the torch to alum and Board of Advisors member Kim Sickafoose, who will return next year as our recruiter.

Alumni are our most vital source of information on employment opportunities for our students. A few weeks ago, we welcomed a visit from alum **Gary Rutherford**, a geologist with the US Department of the Interior Minerals Management Service (MMS.). Gary brought recruiting pamphlets and information to introduce students to opportunities with the MMS, which is responsible for management of offshore energy and minerals, including government leasing programs. Thanks, Gary!! This kind of contact is vital to our efforts to get our students to the jobs, and the jobs to our students! We encourage alumni to forward recruiting material or email job opportunities to Larry McKay: lmckay@utk.edu

PEARL KLEPSER

Pearl E. Phelps Klepser, age 94, passed away December 13, 2005 at her home in Knoxville. She was preceded in death by her husband, **Dr. Harry J. Klepser**, Professor Emeritus and former Head of the UTK Department of Geology. She is survived by two sisters, three daughters, four grandchildren and five great grandchildren.

In the spring of each year, the Klepser Lecture is held in memory of Dr. Klepser.

GRADUATE PROGRAM UPDATE – Larry McKay

The graduate programs (Ph.D. and M.S.) in Earth and Planetary Sciences have grown in size and strength over the past few years. Overall, we now have over 50 graduate students (25 Ph.D. and 28 M.S. students) working in a wide variety of research areas, representing virtually all of the disciplines of our faculty. Just as importantly, the quality of our applicants has noticeably increased, with incoming graduate students from strong programs at the University of Wisconsin, Georgia Tech, University of Waterloo, Texas A&M, University of Missouri, Baylor, Colgate, College of William & Mary, Florida State University, West Georgia University and many other institutions.

A key component of the graduate program has been our success in recruiting “non-traditional” students, with backgrounds in fields such as chemistry, physics, soil science, environmental science, geography and microbiology. These students make up only about 10-20% of the grad student total, but their success and contribution to the department is substantial because of the valuable ideas and skills they bring from their previous disciplines. The overall progress in development of the graduate program is due to hard work by our students and our faculty. Contributing factors include strong alumni support (through the Professor’s Honors Fund and the Jones, Bibee and Walker Chairs), recruitment of some very productive Assistant Professors over the past 5 years, as well as the scientific maturation of faculty recruited in the early 1990s, and the outstanding performance of our most senior faculty (especially Drs. Hatcher, Taylor and McSween).

Ph.D. Program

The Ph.D. program is vitally important to our department. It is one of the key areas examined by the National Research Council in their once-a-decade review and ranking of geoscience Ph.D. programs nationwide, with the next NRC review starting in 2007. Ph.D. students play an essential role in research publication and funding, with many funding agencies considering Ph.D. mentoring an important part of proposed research projects. Graduates of the Ph.D. program are ambassadors for UT, with their success speaking highly of the quality of our overall program. As well, they often direct prospective students to our department and in turn provide employment opportunities for our graduates. Finally, the most important benefit of a strong Ph.D. program is that it allows students to compete successfully for highly competitive career positions in academia, research, government and industry.

The graduation rate for Ph.D. students has increased substantially in recent years, with 18 Ph.D.s graduating from 2001-2006, compared to 12 Ph.D.s graduating in the period from 1995-2000. We’re very pleased that many of these graduates have landed tenure-track, career research positions, or good post-doctoral positions that will lead to future success. It takes a long time to build a good Ph.D. program and we feel that our department is on track to sustain our gains and further improve the program over the next few years.

2001

- **Melissa Lenczewski** – hydrogeology, Assoc. Professor at Northern Illinois
- **Prinya Prompated** – geochemistry, teaching
- **Zhensheng Chen** – geochemistry, ICP-MS lab at Baylor College of Medicine
- **Camilo Montes** – structure, Chief Geologist at Cerréjon Coal Mine, Columbia
- **Cynthia Stiles** – paleosols, Assistant Professor at University of Wisconsin

2002

- **Michael Wyatt** – planetary, Assistant Professor at Brown University
- **Rene Wiesli** – geochemistry, currently in Switzerland
- **Katherine Ocker-Stone** – planetary, teaching at Tusculum College

2003

- **Brendan Bream** – structure, Senior Lecturer at Vanderbilt University
- **Gray Dean** - paleontology, Lecturer at Clemson University

2005

- **Valerie Reynolds** – planetary, post-doc at Smithsonian Institute
- **Benjamin Tanner** – environmental geochemistry, Asst. Prof. at W. Carolina
- **Karen Stockstill** – planetary, post-doc at University of Hawai'i
- **Molly Pace** – hydrogeology, Lecturer at Maryville College
- **Dana Miller** – climate change, post-doc at ORNL

2006

- **Jonathon Evenick** – structure, post-doc at UTK
- **Melanie Mayes** – hydrogeology, staff scientist at ORNL
- **Livio Tornabene** – planetary, post-doc at University of Arizona

M.S. Program

Our Masters program continues to be very successful. Masters students have for many years been the “bread and butter” of our department. They play an important role in research and it’s become “standard policy” for M.S. students to write up their thesis in the format of a journal article, with most of these actually being published within a year or two of completion of the student’s thesis. Traditionally, most of our M.S. graduates went to career positions in the environmental consulting industry, the oil industry and government surveys or environmental agencies. This continues, with recent grads going to ExxonMobil, Tetra Tech, Quantum Environmental, AMEC and BWXT-Y12. However, we are also starting to see more of our Masters students going into research positions such as the Centers for Disease Control in Atlanta and several are continuing on to pursue Ph.D. programs at UTK and other highly-ranked universities. Virtually all of our Masters students obtain good jobs within a few months of graduation, which speaks strongly as to the quality of the students and of the program.

FIVE NEW Ph.Ds IN 2005 – photo by Bill Deane



(L-R) Drs. Ben Tanner, Larry McKay, Molly Pace, Jeff Moersch, Karen Stockstill, Valerie Reynolds, Hap McSween, Ted Labotka and Dana Miller

FOCUS ON OUR UNDERGRADS – Linda Kah

It has been a banner time for our undergraduate population. Between spring 2005 and fall 2006, we graduated 24 students with B.S. degrees in Geology!! Of these students, fifteen were involved in undergraduate research (resulting in nine presentations at regional and national conferences, and two University-wide undergraduate research awards), eleven are in or are currently applying to graduate programs (geology, geography, and physics), two are currently serving in the Peace Corps and one spent a year serving in the Americorps program before heading out into the corporate world of geology with at least eight of his classmates. We are particularly excited by both the faculty participation and student response to our recent emphasis on undergraduate research. Some of the more successful recent projects have included:

- **Brittany Davis** – Geophysical analysis of river bottom bed forms (Baker)
- **Stephanie Drumheller** – Snake vertebrae from the Gray Site, TN (Sumrall)
- **James Glover** – Geochemistry of Earth's oldest speleothems (Kah)
- **Emily Goodman** – Geochemical diagnosis of calcitized evaporates (Kah)
- **Julie Mathis** – Sediment sizes resulting from echinoderm breakdown (Sumrall)
- **Shelley Miller** – Petrology of Hawaiian deep drill-core basalts (McSween)
- **Kristen Oswald** – Fluid flow and Edrioasteroid feeding posture (Sumrall)
- **Chad Phillips** – LandMark analysis of the Swan Creek Field (Williams)
- **Jamie Phillips** – Particle size effects on IR spectra (McSween, Moersch)
- **Robby Reynolds** – XRF analysis of bronze-age pottery shards (Kopp)
- **Abigail Stephens** – High Sr feldspars in metamorphic terranes (Labotka)
- **David Teal** – Chemostratigraphy of Proterozoic strata, Mauritania (Kah)
- **Ching Tu** – Colloid transport in vadose zone sandy soils (McKay)

THE OTTO C. KOPP ENDOWMENT FOR UNDERGRADUATE SENIOR RESEARCH – Claudia Mora

In 2006, Gary and Patricia Kopp West have established the Otto C. Kopp Endowment for Undergraduate Senior Research within the Department of Earth and Planetary Sciences. The endowment recognizes the dedication of Dr. Kopp to excellence in scientific research and his special efforts on behalf of undergraduate involvement in research. Dr. Kopp was a professor in our department from 1958 to 1996, and continued his teaching and research, and mentorship of undergraduate scholars, until his passing in 2005. His dedication and love for his work paralleled his devotion to his family and local community, and this endowment was established in memory of their loving father and husband.

The purpose of the Otto C. Kopp Endowment for Undergraduate Senior Research is to support the undergraduate senior thesis program within the Department of Earth and Planetary Sciences and other projects or programs providing special educational opportunities at the senior undergraduate level within the department.

As can be seen from the preceding write-up, our undergraduate majors are increasingly interested in taking on the challenge of independent research, and the new endowment will immediately create new and desired opportunities for our students. It is a fitting memorial to a much-missed mentor and colleague.

FIELD CAMP: THEN AND NOW

1949: The Department of Geology's first field camp near Sequatchie Valley



**Back (L-R): Rinehart, Parrott, Gerwing, Larson, Bozman, J. Dail, Hughes, Guin, Herbert, Hays
Front (L-R): Jones, Morris, MacMillan, Runion, R. Dail, Bueggert, Meredith, Griffin**

Are you in this picture?? Do you have any information about these young students?? If yes, we would love to hear from you! Please e-mail: lmckay@utk.edu

2006: Abigail Stevens and James Glover in Turkey

At our 2006 Awards Day, \$4550 in field camp scholarships were awarded to seven undergraduate students. These pictures come from **James Glover (B.S. 2006)** and **Abigail Stevens (B.S. 2006)**, who attended the South Dakota School of Mines and Technology Field Camp on the North Anatolian Fault Zone in western Turkey! Abi is now in grad school at Oregon State, James is at Washington State. UT is committed to a new plan, "Ready for the World", to internationalize the curriculum and student experience. Field camp has proven to be a popular way for our undergraduates to study abroad. In recent years, our students have attended geologic field camps in Turkey, Argentina, New Zealand, Italy and Ireland.



THIRD ANNUAL GEORGE SWINGLE MEMORIAL GOLF TOURNAMENT – Bob Hatcher

The third annual George Swingle Memorial Golf Tournament was held on September 22 at the Oak Ridge Country Club in Oak Ridge in concert with the EPS Alumni Advisory Board meetings. There were 10 participants this year, with two anchored by Alumni Board members Kim Sickafoose and Mike Maitland, and the third anchored by ExxonMobil recruiter Lawrence Walker. The sole faculty member able to play this year was Bob Hatcher, with the remainder of each flight made up of graduate students and post-docs. Students and post-docs were provided with “scholarships.” For the first time, a woman golfer, first-year graduate student and former college golf team member Heather Byars, played in one of the groups.

The early afternoon began with black clouds and hard rain, raising the possibility that the tournament would have to be called off. Just before the time the first group was to tee off, however, the rains ceased leaving a pleasantly cloudy afternoon for golf. The tournament was played using a “scramble” format, with each member of each team playing the best shot. We were again unable to secure ESPN coverage for the tournament, or even the Goodyear Blimp. It was clear from bits and pieces of information gathered on the course, using the time-honored communication means of shouting back and forth as teams passed each other on adjacent holes, that the lead changed hands several times from Team Sickafoose to Team Walker and back again. As darkness fell, it was Team Walker that posted a one-over-par 73 to take first prize in the tournament, but with Team Sickafoose only one stroke back at 74. The winning team consisted of Lawrence Walker, Jonathan Evenick, Heather Byars, and Tomohiro Usui. We also were not able to obtain major sponsorship for the tournament from Shell, ExxonMobil, Conocophillips, BP, or Apple Computer, except for student scholarships, so first-place consisted of three golf balls to each member of the winning team. This exhausted the prize money; no one on the winning team is likely to challenge Tiger Woods for top money winner in 2006 playing in tournaments like this. Team Sickafoose consisted of Arthur Merschat, and Bob Hatcher, in addition to Kim. Team Maitland consisted of Chris Whisner, and Mike DeAngelis, plus Mike. We expect the 2007 tournament to be an equally competitive, and with even greater participation.



BABIES, BABIES, MORE BABIES ... AND EVEN TWINS!



From **Peter Nester (M.S. 1999)**: **Elizabeth (Humbert)** and I are delighted to introduce into the world lovely **Nora Errett Nester**.

Valerie Reynolds (Ph.D. 2005) and 2 month old **Ada** are shown attending the poster session at LPSC last March. Valerie presented a talk on the work she is doing at the Smithsonian Institute.



Molly Pace (Ph.D. 2005) writes: Since graduating from UT, I have held a position as an adjunct professor at Maryville College. I had my first baby in February 2006. Now, I am a stay at home mom and loving every minute!

Zheng-Hua Li (Senior Research Associate) holds his new daughter, **Chloe**. She was born last September and joins **Zheng-Hua, Li Fei** and big brother **Jack**.



Vijay Vulava (hydro post-doc 2001-06) and his wife, Suresha, had a son, Venkat Aaditya Vulava this summer. They recently moved to Charleston, SC, where Vijay accepted a tenure-track faculty position in the department of Geology and Environmental Geosciences.



Penny King (visiting scholar 2005-06) and her husband **David Lescinsky** are happy and proud to announce the birth of their daughters **Annette Louise** and **Katherine Ruth** at 11:11PM and 11:12PM on June 8th at St. Joseph's Hospital, London Ontario. Annette (Anna) weighed 3 lb 4 oz, while her bigger sister Katherine (Kate) weighed 4 lb 9 oz.

GEOCLUB NEWS – Alyssa Bell

This year has been yet another busy one for the graduate students. Since last spring we have seen quite a bit of turnover in the department, with 6 M.S. and 1 Ph.D. student graduating and 17 (!) graduate students joining the department. In addition to 16 new students, we were pleased to get a couple of former UT M.S. students back to start Ph.D.s. Last year's graduates were a diverse group, with some students going on to Ph.D.s or post-docs at UT and elsewhere, one ExxonMobil recruit, and **Keith Milam** started a tenure-track assistant professorship at Ohio University.



GeoClub has been very active this semester in providing plenty of opportunities for everyone to socialize and experience tons of geology. The year started with the Fall Party at Linda and Colin's house, which was a huge success. We've also started the new tradition of the Grad Student Dinner, which is a pot-luck dinner hosted by a grad student once a month for the entire department. So far we've had Mexican, Italian, and Canadian themed dinners, with more to follow each month. Fieldtrips are also a priority for the GeoClub this year. Our first trip was lead by **Colin Sumrall** to the Ordovician exposures around Cincinnati. Other trips in the works involve caving, camping, rafting, and a possible road trip. Outreach is still an important part of the semester for the grad students. The Earth Science Fair was an important event for all of us, and the McClung Museum keeps us busier than ever, with about 5 sessions per week, although sometimes it's a lot more.

ALUMNI NEWS

Ted Asbury (B.S. 1986) ran into Hap McSween on a plane coming home from GSA. Ted is Divisional Facilities Manager for Pilot Travel Centers, where he's worked for the past 10 years. He also told Hap about his classmate, **Stanley Boyd (B.S. 1986)** who's now the Director of the Division of Underground Storage Tanks, for the TN Department

of Environment and Conservation in Nashville.

Paul Baldauf (B.A. 1985) received his Ph.D. from The George Washington University in 1997. He is a professor at Union Institute & University in Miami, Florida. Currently, he resides with his wife Jennifer Hill and his daughter Billie Joan in Ann Arbor, Michigan. They are returning to Florida this spring when Jennifer finishes her law degree at the University of Michigan. Paul gets to most of the national meetings of the Geological Society of America and looks forward to the UT alumni reception.

Brendan (Ph.D. 2002) and Katy (Dodd) Bream (B.S. 1997) were at the GSA alumni reception and also sent us a note: We returned to TN in 2004. Brendan is a Senior Lecturer at Vanderbilt, after 3 years working for ExxonMobil. Katy is nearing her 10 year anniversary with Shaw Environmental & Infrastructure (formerly IT Group) and is now a senior GIS analyst. Ollie is now 3 years old and is looking forward to the arrival of a new baby sister (or brother) in March.

Jack (J.G.) Bryant writes about surviving Katrina: Our move occurred shortly before Hurricane Katrina. Fortunately, we located on high ground, the Metairie Ridge which is 5' above sea level and just enough to keep us from flooding. We suffered very little wind Damage and are living comfortable, but much altered lives. After retiring as Vice President of Exploration and Development at W&T Offshore and as Executive Vice President of Freeport-McMoran Oil & Gas for a year (and finding I was not good at retirement), I have returned to work as geologic advisor for Woodside Energy. It's difficult to believe people will pay me to do something I enjoy so much.

Gray Dean (Ph.D. 2003) is a Lecturer in Geological Sciences at Clemson University. He was last seen with **Melanie Mayes (Ph.D. 2006)** at Larry McKay's 50th Birthday Party! They braved monsoonal rains to enjoy a Cajun boil on McKay's back deck.

Aaron (B.S. 2002) and Emily (Dienhart) Diefendorf (B.S. 2002) dropped in to say hello at the GSA alumni reception. After graduating from UT, they went to the University of Saskatchewan in Saskatoon, Canada, where they enjoyed a couple of northern Canadian winters while Aaron completed his M.S. in geology. They're now at Penn State University, where Aaron is pursuing a Ph.D. in biogeochemistry and Emily is working on an M.S. in Secondary Education.

Jonathan Evenick (Ph.D. 2006) is doing a post-doc with Bob Hatcher here at UT.

Trisha (Baldwin) Johnson (M.S. 2005) had an exciting year. She and her husband, Brandon, moved to Wyoming where Brandon worked as a strength training coach with the UW football team and Trisha worked for an environmental consulting firm. They really enjoyed Wyoming, but during the winter Brandon received a job offer from the Georgia Tech football team. Now they're in Atlanta and Trisha has a great job with the Centers for Disease control, where she's testing better methods for sampling

pathogenic viruses in drinking water. Larry McKay from UT visited them this summer and is trying to set up a UT-CDC research collaboration.

David McDonald (M.S. 1986) sent an email to Kula Misra. David recently left ConocoPhillips and joined Dallas-based Hunt Oil Company. He and his family live in Cobham, Surrey, outside of London in the UK.

Chuck McNulty (B.S. 2000) and his wife, Sabine, ran into UT faculty member, Larry McKay, at his son's flag football game. Devon McNulty's team routed David McKay's team, but they were friends afterwards. Chuck has been working for the past 5 years at SAIC, an environmental consulting firm. The work has mainly been in the southeast and in Puerto Rico.

Keith Milam (Ph.D. very soon) is an assistant professor at Ohio University. Although, he started this fall, Ohio is on the quarter system and Keith will not start teaching until January.

Craig Oyen (M.S. student 1990-3), who was a faculty member at Shippensburg State University, recently passed away.

Prinya Promprated (Ph.D. 2001) writes: Our highlight for the year is the arrival of Tira in May. Now 6 months old, his first tooth just emerged. Gwin is 2_ years old.

Valerie (Slater) Reynolds (Ph.D. 2005) is doing a post-doc at the Smithsonian Institute in D.C. and gave birth to her second daughter earlier this year (see her picture in the BABIES article).

Bruce Rohrbaugh (M.S., 2000) was married in Hixson, Tennessee, on September 23rd, 2006. The couple went off to a great honeymoon in Mexico. Bruce continues to work in the Chattanooga office of TDEC. Unfortunately, on Oct. 11th, Bruce was involved in a serious one-car accident and is now in an extended recovery.

Steve Ruppel (Ph.D. 1979) sent a note to say hello. He's a Senior Research Scientist at the Bureau of Economic Geology, John A. and Katherine G. Jackson School of Geosciences, at the University of Texas in Austin.

Tony Scales (M.S. 1988) was seen at the SEGSA alumni reception in Knoxville. He now works for the Virginia Department of Mines, Minerals and Energy, and recently published a book on the history and geology of Natural Tunnel State Park.

Ebrahim Shekarchi (Ph.D. 1959) wrote to tell us of his adventures: I attended the World Mining Congress in Nov-2005 in Tehran, Iran and gave the Keynote lecture on "A megadatabase is essential to sustainable development of the future mineral industries of the world".

Karen Stockstill (Ph.D. 2005) and **Josh Cahill (M.S. 2004)** are in Hawai'i and have

recently become engaged to be married. They are planning a wedding in Hawai'i. Karen is doing a post-doc and Josh is finishing his Ph.D.

Kathy Ocker Stone (Ph.D. 2002) writes: I wanted to drop everyone a line to Knoxville to inform you of my current position. If you had not heard, Chris and I decided to move to Greeneville to take over Chris' family farm. We started this adventure at the end of last year. The girls, Alexandra and Riley, now 3 and 1 year old, are enjoying the extra spoilage that Mamaw, Papaw and Aunt Regina bestow. Chris was able to secure a job working for Angus-Palm while I applied for a temporary position here at Tusculum College to teach math and algebra-based physics. I was invited to apply for their permanent position which I did and was hired full-time this past August. Tusculum College is a small private college whose entire science division has less faculty than UT's geology department; excuse me Earth and Planetary Science department. They offer a degree in environmental science and field guide naturalist, however up until now they did not have a geology course offering.

Livio Tornabene (Ph.D. 2006), who just defended in November, is now a post-doc at University of Arizona, working as a targeting specialist for the very high resolution camera on the latest Mars Orbiter. His recent e-mails have expressed astonishment over the quality of these new Martian images.

Syreeta (Dickerson) Vaughn (M.S. 2005) was married last year to Clarence Vaughn, with their wedding attended by many classmates and a few UT faculty members. Syreeta is working in Environmental Safety and Health at the Department of Energy's Y-12 complex in Oak Ridge.

Melvin Whitehead (B.S. 1985) dropped by the Department recently to say hello and to update his mailing address. He now lives in Lenoir City, Tennessee.

Mike Wyatt (Ph.D. 2002) finished his post-doc at Arizona and is now an assistant professor at Brown.

Tom Zondlo (M.S. 1998) is working for Shaw Environmental in Knoxville, although much of his work is at the Redstone Arsenal in Alabama. In January, Tom gave an excellent talk on his investigations to the East TN Geological Society and the TN Section of AIPG titled "Structural Controls on Karst Development and Groundwater Flow Redstone Arsenal, Huntsville, Alabama".

UT-CHINA RESEARCH COLLABORATION – Larry McKay

Our department is starting to get involved with research in China. It all started 3 years ago with the arrival at EPS of Dr. Joe Zhuang, a Research Assistant Professor with strong ties to some of the top environmental researchers in China. This past summer



the collaboration moved to a higher level when Drs. Zhuang and John McCarthy (an EPS Research Professor and former ORNL researcher) visited China with Dr. Gary Saylor (Director of the UT Center for Environmental Biotechnology) to sign

an agreement on the establishment of US-China Joint Research Center for Ecosystem and Environmental Change. The new center involves researchers from UT, ORNL and the Chinese Academy of Science and will initially focus on carbon cycling, especially development of improved methods of increasing carbon sequestration in soils. We intend to try to expand the program to include climate change, hydrogeology and other areas of interest to EPS.

In October a delegation of top-level science policy leaders from the Chinese Academy of Science visited UT and ORNL, at the invitation of Drs. Zhuang and McCarthy. In addition to UT and ORNL, the delegation visited Stanford University and the National Science Foundation. The purpose was mainly to learn more about the interaction between funding agencies and research universities in the U.S., but we also had an opportunity for UT researchers, including EPS Head, Dr. Claudia Mora, to showcase their research and discuss other areas of possible collaboration.

On the last day of their 3-day visit, Drs. Zhuang and McKay took the delegation to Cades Cove in the Smokey Mountains, where the wildlife obliged by giving them up-close views of four black bears and several deer. The delegation said this was the high-point of their trip and we hope that it leads to further faculty and student exchanges in the near future.

At the Ogle Cabin in Cades Cove

**UTK HOSTS 2006 SE-GSA
MEETING IN KNOXVILLE –
Claudia Mora**



More than 650 people attended the 2006 GSA Southeastern Section Meeting in Knoxville this past spring. The technical program, carefully crafted by **Bob Hatcher**, **Linda Kah**, and **Ted Labotka**, attracted 370 abstracts to almost 40 symposia, theme and general sessions. Special symposia honored alumni **Don Haney (Ph.D. 1966)**, as well as **Paul Ragland** (FSU; deceased) and **Frank McKinney** (Appalachian State; retired). There were talks and posters on Frontiers on Appalachian Tectonics, Paleontology, Paleoecology, and Paleoenvironments of the Gray Fossil Site, Impact Structures in the Field, and New Geochronologic and Isotopic Approaches to Constraining Appalachian Tectonics, and many other topics of interest. Packed field trips headed in all directions: to the Grandfather Mountain region, across part of the southern Appalachian foreland fold-thrust belt, to mafic and ultramafic sequences in the central Blue Ridge and to the Lower Pennsylvanian siliciclastics of the northern Cumberland Plateau. The meeting successfully wrapped up with a neat profit returned to SE-GSA to support student grants-in-aid of research.

THE UTK RECONNECT PARTY AT SE-GSA



Larry Taylor



Dawn Taylor
Not-dead-heads



(L-R) Changsheng Lu, Tony Tingle, Beth McClellan, Pete Lemiszki, Carla Sparks, Steve Martin, John Shireman, Mike Neton, Doug Curl, Bosiljka Glumac, Stan Dunagan, Scott Shoup



Jim Cobb

Ted Labotka



Dan Frederick

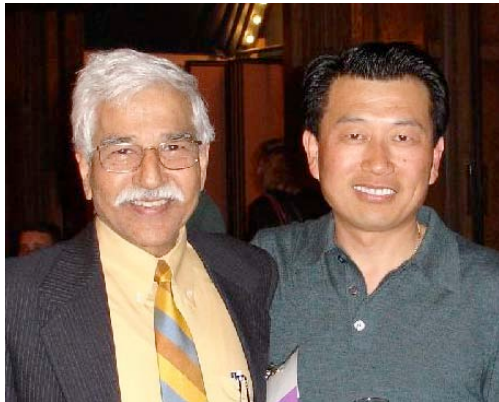
Bosiljka Glumac



**Mike Newton, Carla Sparks, Don Byerly
& Tony Tingle**



**Stan Dunagan, Bosiljka Glumac,
Pete Lemiszki & Mike Neton**



Kula Misra

Changsheng Lu



Tabitha Cavendish, Keith Milam, Gray Dean



Ken Walker

Steve Ruppel

EARTH & PLANETARY SCIENCES 2005 DONOR LIST – THANK YOU!

B. Steven and Sarah Absher

Bruce Ahler

Richard W. Arnseth

Edward L. Bansbach

Denny N. Bearce

Stephen A. Bennett

Marvin E. Bennett III

James M. and Virginia Bibee

Evelyn Blythe

Thomas W. Broadhead

Jonathan R. Bryan

Gene E. Burden

Don W. Byerly

Parham M. Cain

Joseph G. Callis

Dave Lee Cantrell III

G. Michael Clark

Brent Alan Couzens-Schultz

Robert K. Davis

Wesley Diehl

Steven G. Driese

William M. Dunne

Francis C. Furman

T. Watrous Garrett

Heather Gastineau

Oscar Edward Gilbert Jr.

Billy P. Glass

Jeffrey F. Gratz

Robert C. Greene

Michael N. Greenley

Kenneth O. Hasson

Robert D. Hatcher

Donald J. Hathaway

John O. Hawkins

Julie Paque Heather

William T. Hill

Wendy F. Hoffman

Oscar B. Hofstetter III

Suzanne D. Hoyal

David K. Hylbert

Jacq Marie Jack

David E. Jackson

J. Gilbert and Virginia Jacobs

E. Kemp Thomas

Christopher N. Kerr

Randal D. and Barbara A. Kissling

Pearl E. Klepser

Helen Kopp

Theodore C. Labotka

Robert W. Maclay

Nancy E. Madeoy

Micheal R. Maitland

Ronald W. Manus

Edward J. and Penny Masuoka

Charles A. McAllister

Larry D. McKay

Frank C. and Carol L. McKenzie

Michael L. McKinney

Harry Y. McSween

Carl E. Merschat

Sam and Mary Mishu

Kula C. Misra

Claudia I. Mora

Mary Muchane

Christopher D. Olson

Forrest L. Orr

Joseph B. and Deborah Paul-Capaccioli

John C. Philley

Daniel M. Popek

Samuel G. Porter

Prinya Promprated

Thomas A. Rhen

Carey R. Roberts

Thomas A. Roberts

William O. Ross

Stephen C. Ruppel

Gary J. Rutherford

Charles A. Sandberg

David Shafer

Ganapathy Shanmugam

Ebrahim Shekarchi

Donald K. Sickafoose

Kathy F. Smart

Kevin J. Smart

Richard J. Smith

Mary McGill Talley

Lawrence A. Taylor

David John Tieman

Robert L. Tolliver

Kenneth R. Walker

Amy Schoner Wandless

John F. White

Richard T. Williams

Jerry Wayne Wright

James A. Zimmer

ANAM Ceilteach, L.L.C.

Hawkins Production Company

Murphy Oil Company

Science Applications International Corp

Hunter Textbooks

John Wiley & Sons, Inc.

HOW TO CONTACT US

Faculty and Staff - 2006
Department of Earth and Planetary Sciences
<http://web.eps.utk.edu>
865-974-2366 or -2367 (phone), 865-974-2368 (fax)

Faculty

Greg Baker	Jones-Bibee Assoc. Professor (geophysics)	gbaker@utk.edu
Tom Broadhead	Professor (Director UG Admissions)	twbroadhead@utk.edu
Don Byerly	Professor Emeritus (engineering geology)	dbyerly@utk.edu
Mike Clark	Associate Professor (geomorphology)	clarkmorph@utk.edu
Bill Deane	Lecturer / TA Czar (impact processes)	wdeane@utk.edu
Bill Dunne	Professor (Associate Dean, CAS)	wdunne@utk.edu
Chris Fedo	Associate Professor (sedimentology)	cfedo@utk.edu
David Finkelstein	Jones Assistant Professor (geochemistry)	dfinkels@utk.edu
Bob Hatcher	Distinguished Scientist (structure/tectonics)	bobmap@utk.edu
Caleb Holyoke	Visiting Scholar (structure)	cholyoke@utk.edu
Linda Kah	Associate Professor (sedimentology)	lckah@utk.edu
Ted Labotka	Professor (metamorphic petrology)	tlabotka@utk.edu
Larry McKay	Jones Associate Professor (hydrogeology)	lmckay@utk.edu
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	Assistant Professor (planetary)	jmoersch@utk.edu
Claudia Mora	Carden Professor (isotope geochemistry)	cmora@utk.edu
Ed Perfect	Associate 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

Larry Anovitz	Research Assoc Professor
Amitabha Ghosh	Research Assist Professor
John McCarthy	Research Professor
Lee Riciputi	Research Assoc Professor
Jie (Joe) Zhuang	Research Associate
Zhengu-Hua Li	Senior Research Associate
Allan Patchen	Technical Staff

Post-docs

Jeff Anderson
Jonathan Evenick
Eddy Hill
Nick Lang
Yang Liu
Jennifer Piatek
Tomohiro Usui
Elmer Van Den Berg
Chris Whisner

Staff

Melody Branch	Administrative Assistant
Nancy Meadows	Administrative Services Assistant
Teresa Parrott	Secretarial Staff
Diane Pealor	Secretarial Staff
Dawn Taylor	Research Staff

CONTRIBUTING TO THE DEPARTMENT OF EARTH AND PLANETARY SCIENCES

We have a loyal and generous alumni base, whose annual contributions provide vital support for many of the programs described in this newsletter. As Department Head, I am asked, from time to time, to explain how some of our giving programs work and I am happy to address some of these questions here.

What is an “endowed” or “named” professor? What do their endowment funds support? We have five “named” professorships in EPS: the Jones Professors of Hydrology (McKay) and Environmental Geochemistry (Finkelstein), the Jones-Bibee Professor of Geophysics (Baker), the Walker Professor (not named) and the Carden Professor (Mora). In each case, a significant contribution from an alumnus was used to establish a new fund. Income on these investments is generally split, with half being returned to the endowment for growth and half made available to the named recipient for use in support of his/her research programs. None of our named professors presently draws salary from these funds, but choose instead to use them in support of new research efforts, professional travel, and student participation in research and training. For example, in the past year, these funds have supported graduate student participation in an analytical short course, travel by faculty and students to a specialized professional workshop, and undergraduate employment in the lab. Discretionary funds are extremely valuable for enhancing research programs and have provided key support to our efforts to recruit and retain top faculty in a competitive employment environment.

I can't afford to endow a fund. What value is my small contribution?

In a word, enormous!! The vast majority of contributions we receive are modest in size. But, collectively, they are enormous in impact. Last year, your contributions supported more than \$30,000 in undergraduate and graduate field and research scholarships and travel to professional meetings! Our undergraduates received partial support for field camp experiences in Turkey, Ireland, and the Rocky Mountains. They received scholarship awards for excellence in teaching and scholarship. They traveled to the AAPG Student Expo to learn more about their career opportunities and took short courses at GSA and SEPM. Your contributions brought speakers from across the nation to present seminars on cutting-edge research topics. The Department derives its livelihood from operating funds and indirect cost recoveries from grants and contracts. But it thrives because of your donations, whatever their size. Many of you have company plans which enable your contribution to have even greater impact through company matches and auxiliary programs. We encourage you to find out about these programs and use them to benefit your giving plans.

I am pleased to answer any other questions you may have about alumni giving, best uses for alumni support, automatic donations, estate bequests, or any other topic.

- Claudia Mora, Head

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

We'd like to make a special appeal for contributions to support the new Otto C. Kopp Endowment for Senior Research and the Kenneth R. Walker Professorship Endowment. We seek to increase the value of the Kopp Endowment by \$20K in the coming two years to underwrite our burgeoning undergraduate research efforts. In anticipation of selecting the first Walker Professor in the coming year, we seek to raise \$35K for the Walker Endowment, to raise the endowment to \$125K. This endowment will provide a meaningful annual professional development stipend to the named recipient.

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.

Thank you for your continued support!

***Department of Earth and Planetary Sciences
University of Tennessee, Knoxville
1412 Circle Dr.
Knoxville, TN 37996-1410***

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 Otto C. Kopp Endowment for Senior Research
- \$ _____ to the Kenneth R. Walker Professorship Endowment
- \$ _____ 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 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

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