College of Arts & Sciences

Earth & Environmental Sciences

Department Newsletter

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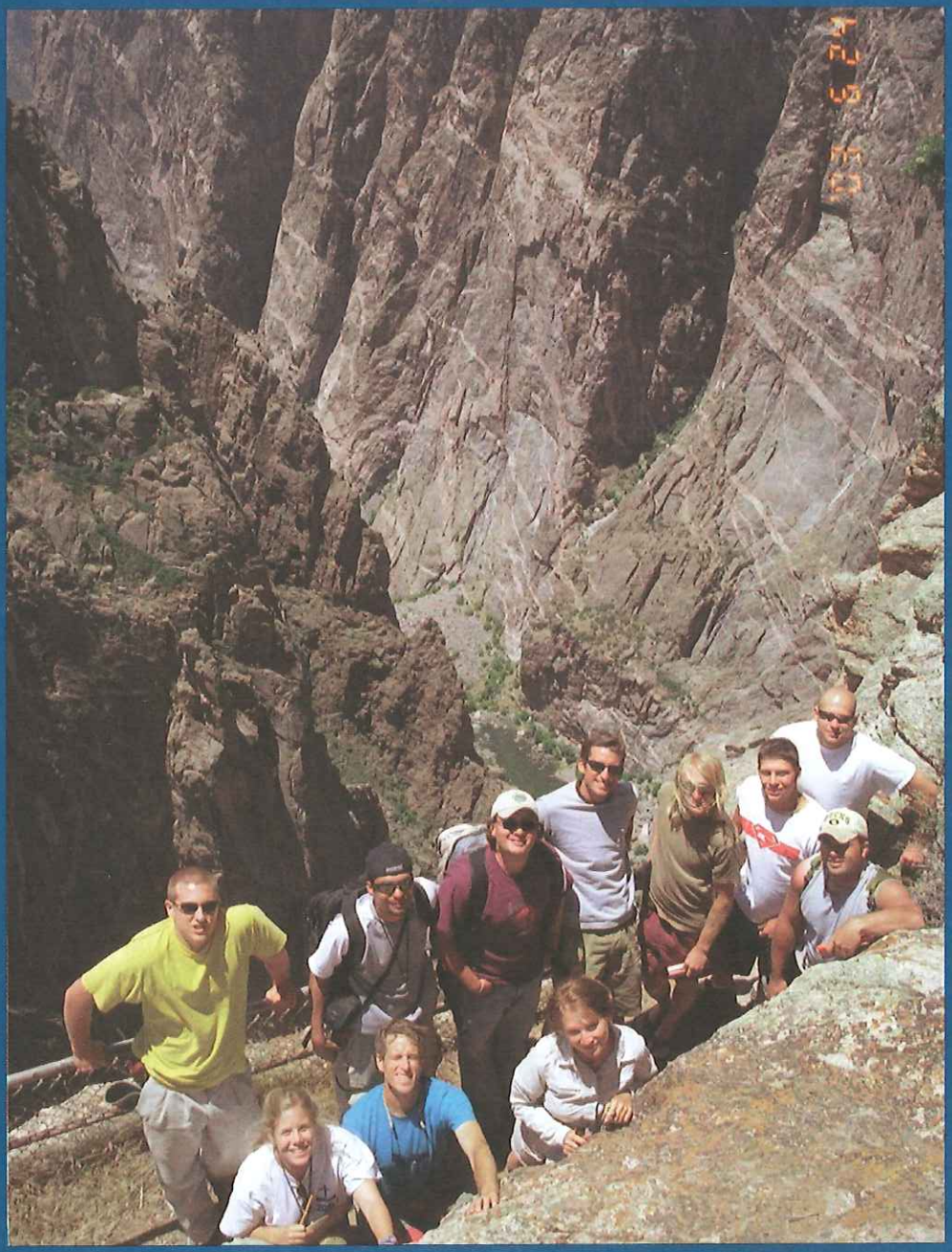
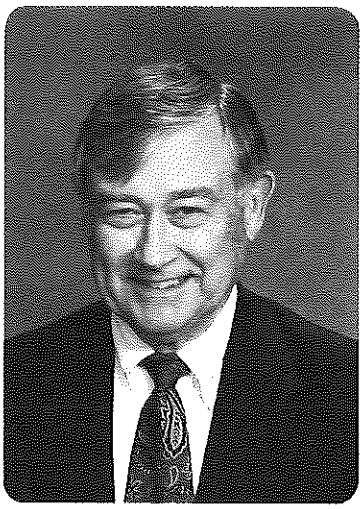


UNIVERSITY OF KENTUCKY
College of Arts and Sciences

Letter From The Chair



Well, it's kinda deja vu all over again. A year ago, Frank Ettensohn completed two terms as department chair on June 30, 2005, and he had earned the right to have a change from that activity. I was asked to take the chair at that point, but I was serving as President of the Geological Society of America. The time requirements of the two positions simply wouldn't work. So Frank and Dave Moecher came to the rescue, each serving as acting chair during one semester last year. Thanks, guys. My term as GSA President ended on June 30, 2006, and the next day, I became department chair, a position I had left (I thought forever) nine years ago. So here I am back, and I've spent the last few months readjusting to the demands of the office. In my admittedly somewhat biased view, the job of department chair is the most difficult one in the administrative structure of higher education. It is a "battlefield position" on the front lines of interactions and negotiations between students, faculty, alumni, and administrative superiors, as well as competitions with chairs of other departments for resources. It is at once gratifying, frustrating, challenging, rewarding, and time-consuming; but it comes with an opportunity to help the department achieve excellence. We'll skip over the others and focus on the latter.

During my term as President of GSA, we launched a discussion of "The Future of the Geosciences." The questions are equally applicable for our department, and I will list the points with which the discussions began, with added comments for the department.

•Recognizing that the diversity of specialties is a great and growing strength in our science, how can we best serve, coordinate, and integrate the increasing diversity of sub-specialties within the broad scope of the geosciences, while maintaining common goals and a sense of family? As a department, our curriculum seeks to adequately balance the fundamentals of the geosciences with the opportunity to specialize. We maintain appropriate dialog between the areas of specialization, so that we do sense a common purpose.

•How can we best construct a powerful coalition of specialties, seeking public and political recognition and support for the corporate whole? The department functions as a unit, seeking broad support for departmental programs.

•What common knowledge base unifies us? We answer this question with the design of our curriculum.

•Recognizing that science education at all levels is essential to the future supply of scientists, how can we best address both immediate specific problems (for example, challenges to teaching of evolution) and long-term needs for increasing the quality of science education? We continue to be reminded of the low performance of students coming from Kentucky high schools and the need for remedial instruction when they reach college-level courses. The department offers a basic geoscience course for students in elementary education, working to correct the common lack of Earth science in pre-college education.

•How can geoscientists best contribute to policy decisions that involve natural causes, ranging from natural hazards to resource supplies, perhaps using geologic principles to modify economic/social goals for development? The department has a high level of activity in studies of earthquake hazards and in water and coal resources. We contribute technical personnel to Kentucky agencies committed to environmental protection. Previously, the department provided numerous geoscientists to the petroleum industry, and we are developing concrete plans to re-establish that program. Placing our graduates in meaningful professional positions remains our first priority.

The department is in position to contribute in a positive way to the future of the geosciences and to those who will shape that future.

Some important changes in State and University funding and budgeting are making an opportunity for progress in the department. The University has received an infusion of new State funding in a positive response to President Todd's Top 20 Business Plan. Those new funds will translate into new faculty positions as student enrollment grows. It is our responsibility as a department to articulate our needs for additional faculty members. The current initiative by the Department Alumni Board to raise funds for an Alumni Endowed Professorship will help us in making the case for faculty development. We are planning for the future, identifying specialties in which the department can make a contribution to the University Top 20 goal.

These and other new budgetary developments have given us new options for scientific equipment for teaching and research. The University has initiated a lab course fee for each course that has a scheduled lab component. These fees paid by students provide for expendable materials (enabling us to replace worn maps and acid-soaked rock and mineral specimens), as well as for replacement of worn teaching equipment (such as microscopes). The increased University budget also makes funds available for purchase of equipment that will be used in teaching, and in this regard, we must be aware of introducing our students to the kind of modern equipment they will be ex-

pected to use as professionals. These resources give us routes to obtain much of the equipment we need; however, the more expensive and sophisticated equipment still requires that we obtain grant funds from outside agencies. We are commonly able to obtain University funds for required matching of grant funds for equipment purchases. From time to time, the department has received contributions of research equipment that a company is replacing, and this is to ask our alumni to be alert for opportunities to help the department obtain contributions of equipment. It may be last year's model for the company, but it may significantly improve our equipment inventory.

Because of these new potentials for obtaining equipment, we can now concentrate our departmental contributed funds on supporting programs for students, and we are restructuring some of our contributed funds to enhance our student support. Many of those programs rely almost entirely on contributed funds. The Brown-McFarlan Fund and the Ferm Fund provide support for thesis and dissertation research, as well as funds for students to go to professional meetings to present their research. The Haynes Field Trip Fund supports student expenses on field trips; and part of the Hudnall Endowment specifically provides scholarships for students to attend the summer field course. The Support Fund is used for student activities not specifically covered by support from the other funds. The Rast-Holbrook Endowed Fund supports the department seminar, in which we have a weekly lecture by an expert in some aspect of the geosciences. Through this program we broaden our students' scientific perspectives, and we provide an opportunity for interaction with the speakers. The Pirtle Endowment, the Hudnall Endowment, and the Glenn Rice Endowment each provide funds for student scholarships; when adequately funded, the Hagan Endowment will also provide a scholarship. Part of the Hudnall Endowment provides research funds for the Hudnall Professor. The income from endowed funds is used to support the specified programs. These funds are well managed, and part of the annual income is returned to the principle of the endowment to maintain each fund relative to inflation, insuring the sustainability of the support received from those funds. The funds that are not fully endowed rely on annual contributions. Our support for those student programs depends on the generosity of our alumni and friends. We are grateful to the alumni who have generously supported these funds over the years.

Perhaps the greatest challenge facing the department is the condition of our home, the Slone Building. It is a common whimsical observation that "geology gets the oldest building on campus." Well, for us, that is true. The department is in the oldest, least well maintained building that houses any department in the College of Arts and Sciences. We have been fortunate to have tours of the building with Dean Hoch, Provost Subbaswamy, and a consultant for the Council on Post-Secondary Education, all of whom have seen the condition of our building. Realistically, we must recognize that the budget for a new building is not likely; however, we must have some improvement. We are currently in the second year of a room-by-room renovation within the building. It is a long, slow process, but we now have two class rooms that are in very good condition. We are establishing a priority ranking for improvement of all of our facilities.

The department is undergoing an unprecedented growth in the number of undergraduate majors with a 50% increase in less than a year. Growing pains include the need to schedule two lab sections in the upper-division courses, because the number of microscopes sets a limit on the number of students in one section. We will increase the number of microscopes to the limits of table space in the room, and we will schedule two sections. Not only are the numbers up, but these are good students. The atmosphere and intensity at our weekly seminars shows just how serious these students are.

Graduate enrollment remains approximately constant. The number of graduate students is constrained by the number of assistantships we have to award. Some of the older alumni may remember when graduate students paid their own tuition and lived on their own funds. That situation no longer exists. With increasing costs and growing responsibility for independence, graduate students need an assistantship stipend and support for tuition. Our number of University funded Teaching Assistantships is static, and we can't expect any substantial increase. It becomes the responsibility of faculty to obtain research grants that include funds for Graduate Research Assistants. When we are successful at obtaining grants, our number of graduate students can increase. When we think about what faculty do, we must remember that it is not just showing up for class. Faculty responsibility now includes conducting research at a level that is competitive for grants to support graduate students. Of course, the program benefits in other ways, as well, when we are conducting top-level research here in the department.

Here I am, back in the chair of a department that is facing many challenges. I believe, however, that this is a time for optimism. Many factors are coming into line to support the program, beginning with the College and University administration. New sources of funding and new opportunities to develop our ideas for growth are appearing almost daily. The future is in our hands, that is the collective "our"—faculty, students, and ALUMNI. Working together, we can have an academic program that will complement the University goal of Top 20.

William A. Thomas
Department Chair
UK B.S. 1956, M.S. 1957

Contents

Cover Image: Students in UK's Geology Field Camp class from Summer 2003 on the edge of the north rim of Black Canyon of Gunnison, western Colorado.

2006 Degrees

Bachelor Of Arts

Brooke Bennett
Tom Connelly
Lee Clark
Jason Heck

Bachelor Of Science

Cora Anderson

Master of Science

Kristopher (Kit) Clemons
Title of Thesis: Petrofabric and geochemical analysis of the Great Smokey-Snowbird Group contact, western Blue Ridge, North Carolina.

Sarah Hawkins
Title of Thesis: Fossil charcoal in Devonian-Mississippian shales: Implications for the explasion of land plants, paleo-atmospheric oxygen levels and organic-rich black shale accumulation.

Sally Maharaj
Title of Thesis: Distinguishing and quantifying "new carbon" from "old carbon" on reclaimed coal mine sites using themogravimetry: method development and field validation."

Joshua Sexton
Title of Thesis: Lilthologic and stratigraphic complication of near-surface sediments for the Paducah Gaseous Diffusion Plant, McCracken County, KY.

David Vance
Title of thesis: Shear-wave velocity database and derivative mapping for the upper Mississippi Embayment.

Doctor of Philosophy

John Coates
Title of Dissertation: Developing a temporal framework for the Upper Ordovician Lexington Limestone, central Kentucky, USA: Biostratigraphy, chemostratigrapy, and event-stratigraphy.

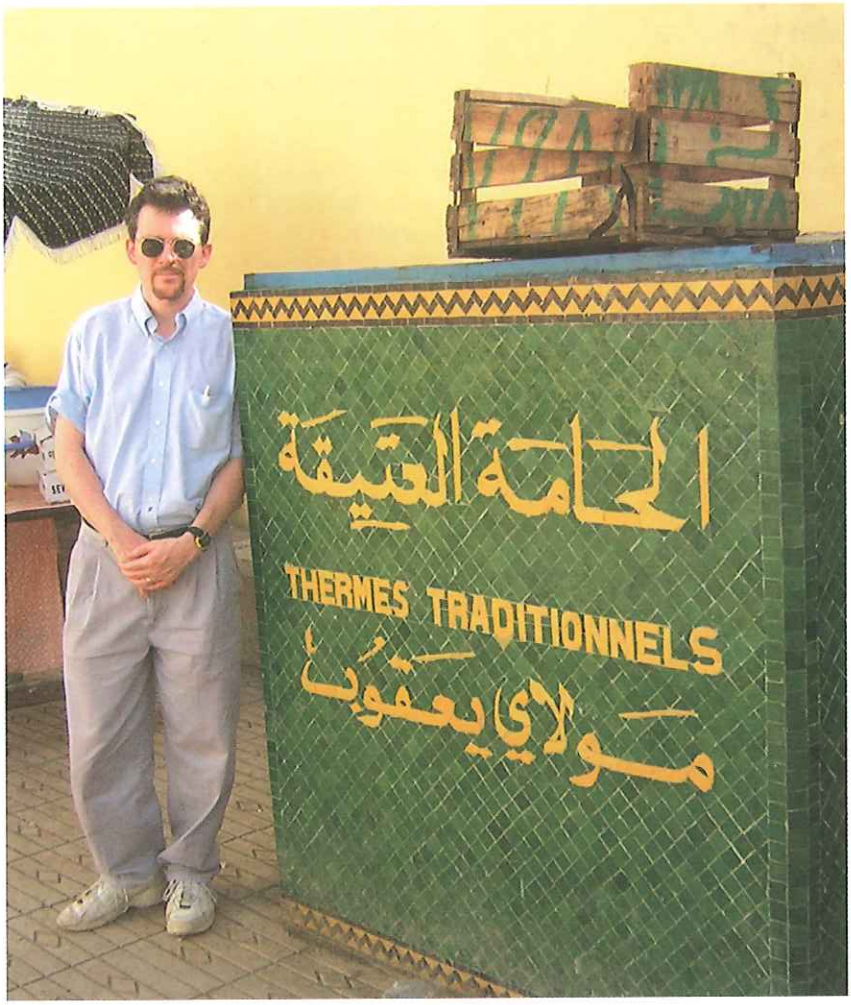
Abhijit Mukherjee
Title of Dissertation: Deeper groundwater flow and chemistry in the arsenic affected western Bengal basin, West Bengal, India.

Faculty Happenings: What's going on?

Alan Fryar

The hydrogeology group has had another active year. Two of my four students in residence finished during summer 2006. Josh Sexton completed his thesis on developing a stratigraphic framework model of the Paducah Gaseous Diffusion Plant and vicinity. He showed that contaminated ground-water discharge to a stream in the West Kentucky Wildlife Management Area is in part stratigraphically controlled, a result that has implications for remediation at the site. He presented his results at the GSA Southeastern Section meeting in Knoxville in March. Josh returned to southwest Virginia to help run his family's drilling company. Abhijit Mukherjee finished his dissertation on deep ground-water flow and chemistry in the western Bengal basin in India. Among other contributions, he developed what may be the first conceptual hydrostratigraphic model for his study area, and he showed that many deep public-supply wells in the area are contaminated by arsenic, probably in part because of irrigation pumpage. He and I gave presentations in an arsenic session that we co-chaired at the 2005 GSA Annual Meeting. Abhijit is continuing his research as a postdoctoral fellow at the Bureau of Economic Geology, University of Texas at Austin, where I worked before coming to UK.

Among my continuing students, James Ward advanced to doctoral candidacy and made progress studying bacterial transport in a karst ground-water basin in Woodford County. James received a research grant from the Kentucky Water Resources Research Institute, which has supported his tracer tests. He presented his preliminary findings at the National Ground Water Association's Ground Water Summit in San Antonio in April. Estifanos Haile joined the PhD program in January after completing a licenciate (equivalent to a master's) in hydrogeochemistry at the Royal Institute of Technology in Sweden. Estifanos is from Eritrea, a country on the Red Sea in the horn of Africa. He and I spent 12 hot, sweaty days in July sampling municipal wells in Missouri and Arkansas for his study of chemical evolution and isotope hydrology in the Wilcox aquifer.



One highlight of my year was a 3-week trip to Morocco in May and June. I gave a talk on our research in India at an international congress on water-resources management and development in Marrakech, where I also chaired a session using my virtually non-existent French. I was the only presenter from the USA; most attendees were from North Africa, Europe, and the Middle East. After the meeting, I spent two weeks with my colleague Lahcen Benaabidate, who spent summer 2005 at UK as a Fulbright Scholar. We worked on a couple of manuscripts and took day trips to various parts of the country. Another highlight was the end, on June 30, of my 4-year terms as Director of Graduate Studies and co-editor of the journal Environmental & Engineering Geoscience. I am grateful to Sue Rimmer for taking on the DGS role as I take leave during 2006-07.

An Unusual Sabbatical in Nepal (and elsewhere).

Frank Ettensohn

Ecuador, Nepal, India, Pakistan, Tibet, China and Russia — these are the places that have occupied most of my time thus far in 2006, following the end of eight and a half years as chair on December 31, 2005. My travels are briefly outlined below. My semester-long sabbatical began in January, 2006, and I immediately followed up on an earlier invitation that had been extended to me to help develop a graduate program in geology at Escuela Superior Politécnia del Litoral (ESPOL) in Guayaquil, Ecuador. At the invitation of U.K. alumnus in geology, Eugenio Nuñez del Arco (M.S., 1979), I arrived in Guayaquil to work on a graduate program in geology and saw some excellent geology in the process.

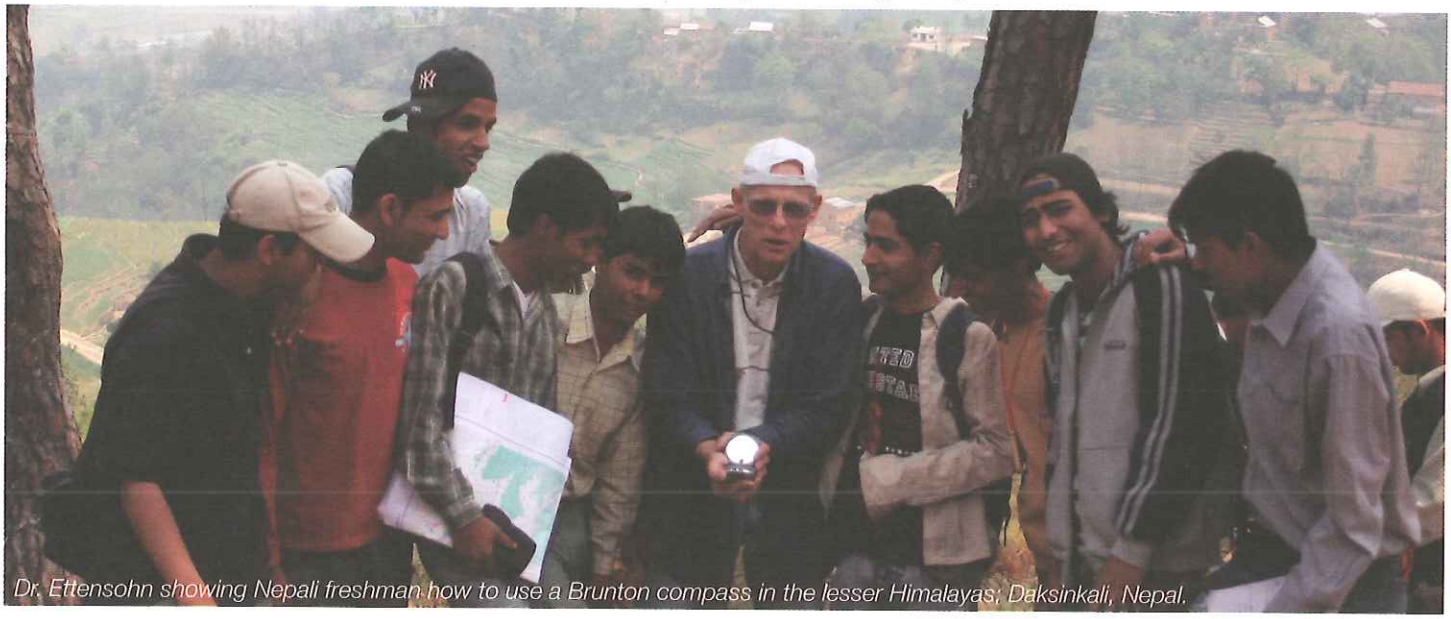
I returned from Ecuador in mid-January and prepared to leave in a month for a six-month, Fulbright teaching/research award in Nepal. My teaching (see picture below), however was cut short by student and faculty strikes accompanying the "Peoples' Revolution," or Jana Andolan, and much of my time in Nepal was spent in daily curfews.

My first teaching assignment lasted only for about a month when the Jana Andolan began, and the entire country went on strike. What happened in the revolution was not unexpected. In fact, from the moment I arrived, one could sense that something was going to happen, and it was going to happen soon. Military and police were everywhere; Maoist rebels had Kathmandu encircled and were sneaking into town under cover of darkness; prices of all goods and gas were skyrocketing as the Maoist blockade became more successful; students were continually challenging police who would respond with latti charges (beating students with long bamboo sticks called latti).

Eventually, the U.S. embassy evacuated all non-essential employees from Nepal, and I went to Pakistan for two weeks. Among the other places I was able to visit because of my inability to do anything in Nepal were India, Pakistan, Tibet, China (Beijing), and Russia. My first trip was to Visakhapatnam, India, for a Fulbright conference, where I presented my Fulbright project on foreland basins and spoke to the geology students at Andhara University.

In Pakistan, despite intense security, I was able to relax, as well as to visit Quaid-i-Azam University, where I met Professor Zulifqar Ahmad, chair of the Geology Department and an alumnus of our Department (Ph.D., 1992). Professor Ahmad would like very much like to see more collaboration between our Department and his. I was even on a Pakistani TV talk show, when I was asked to discuss seismicity and hazards in South Asia, which had been the subject of my Pakistani Fulbright presentation.

As soon as I was back in Nepal after the Jana Andolan, I invited my son to visit Nepal, and we booked a trip to Tibet. While on the bus ride to Tibet, we were held up by Maoist rebels (sorry, no pictures). Tibet, however, is a place of stark contrasts with a native population of pastoralists and farmers, for whom the Buddhist religion is the center of life, and Chinese immigrants who are pushing for development of resources and for new living space where some of China's population pressure can be relieved. You can imagine the potential for growing conflict here.



Dr. Ettensohn showing Nepali freshman how to use a Brunton compass in the lesser Himalayas; Daksinkali, Nepal.

Two weeks after I went to Tibet, I went to Beijing, China, to participate in the Second International Paleontological Congress, where I presented a paper on trace fossils and went on several local field trips. The Congress met at Peking University, just down the road from the China University of Geosciences, where I had taught for three months last summer, and so my friends there asked if I would teach two, two-week short courses in my spare time. I agreed to do this and did an encapsulated intro geology course and a course in carbonate petrology while I was there.

My final trip was to Russia to present a paper at the International Symposium on Palaeogeography and Global Correlation of Ordovician events in Novosibirsk, based on work that my former Ph.D. student John Coates had recently finished. An old friend from my first Fulbright in the former Soviet Union had visited me in Nepal, and so he agreed to take me to the Gorno Altai Mountains in southern Siberia to see glaciers while I was in town. We had a spectacular trip into Tertiary rift valleys, the formation of which had accompanied the rise of the Himalayas. The intervening peneplaned highs are now in the process of being eroded by my major glaciation.

When I finally did get into the field in Nepal, I found that field work was not very easy. It took a lot of planning, and even at that, nothing could be counted on to be as it should have been. Everything was a challenge. Despite it all, however, the geology and culture were well worthwhile, and I was able to see the Himalayas from afar, as well as from within the range itself during a four-day trek to 14,000 feet.

I saw so many new and interesting geological features that it is difficult to show them all, but I will end with a picture of spectacular terraces.

As you may gather from my brief description above, this sabbatical trip was not the easiest I have ever taken, but it was the most transforming. I have a greater appreciation for all kinds of geology, especially tectonics, as I was able to see the results of plate collision and related deformation first-hand. Having actually seen an active, modern foreland basin, foreland basins have a somewhat different meaning to me now. Moreover, the constructive and destructive processes that are so important in shaping our planet's surface are so much more apparent here, and leave me, at least, with a whole different perspective about how our planet functions, and it is a perspective that can only make me a better teacher and researcher. I also have a greater appreciation for everything that we have in this country and realize at the same time that all we have entails a much greater responsibility for global well-being than most of us are willing to assume. I also realize that any education we give our students in Kentucky is incomplete without some sort of international, third-world experience that exposes them to the rest of the world. Otherwise, our educational system will only continue to reinforce a national isolationism and parochialism, which is not helpful for planetary well-being or our image abroad; to this end, I plan on working toward some sort of "internationalizing" of our geology curriculum.

Left: Dr. Ettensohn and his field assistant, Sudharson, meet a local man and his two kids, while trekking in the High Himalayas, near Syabrubensai, Nepal.

Undergraduate & Graduate Update

Departmental Awards to Students

Pirtle Graduate Fellowships
John Allen
Brian Cook
Ken Macpherson
Sarah Mardon
Matt Massey
Abhijit Mukherjee
David Vance

Pirtle Graduate Scholarships
Eric Anderson
Rachael Von Mann
Lois Yoksoulian

Pirtle Undergraduate Award
Travis Richards

Tarr Award
Wes Buchanan

Brown-McFarlan Travel Awards
Eric Anderson
Brian Cook
Estifanos Haile
Jason Heck
Sarah Mardon
Rachael Von Mann
Lois Yoksoulian

Brown-McFarlan Research Awards
Jennifer O'Keefe

Ferm Research Awards
Brian Cook
Julie Floyd
Rachel Galvin
Sarah Mardon
Matthew Massey
Brent Wilhelm

It's an exciting time in the Earth Sciences, with the growth in hiring of our graduate students in the petroleum field. After many years of flat enrollment of undergraduate majors in Geology, we have experienced a veritable explosion of students declaring Geology as a major. The number has doubled to more than 60 since one year ago! This is a great problem to have. We will need to do some creative scheduling and distribution of resources in the coming years to accommodate the number of new students.

We were also fortunate last spring in that we were able to award 8 Glenn Rice Tuition Scholarships for the first time in the history of that endowed fund. These scholarships are awarded to academically qualified juniors and seniors, and are greatly appreciated by students in these times of increasing tuition and fees. The Spring 2005 recipients were Betzy Almy, Shannon Daugherty, Colton Jayne, Nathan Landrum, Brian O'Dea, Neil Russell, Anne Satterwhite, and Brian Scott.

Finally, we offered a new course entitled GLY 295 Orientation to the Geosciences, a one credit professional development course, in the Spring 2005 term. We had several guest speakers from various fields in Earth and Environmental Sciences, discussing career options and career preparation. Guest speakers included the following UK Geology alumni; Justin Biliter (TetraTech), Peter Goodmann (Kentucky Department of Environmental Protection), Steve Sullivan (Corrodino Group), Chuck Taylor (United States Geological Survey), Ernie Thacker (Alliance Resource Partners), and Bill Thomas (UK and Geological Society of America).

We hope to include other alumni when we offer the course again in 2008. Please feel free to contact us if you are interested in being a guest speaker.

Dave Moecher, Director of Undergraduate Studies

Rachael Von Mann wins TSOP Spackman Award

Rachael Von Mann (M.S. candidate) was selected by The Society for Organic Petrology (TSOP) as the winner of the 2006 Spackman Award for her proposal, "Influence of Primary Productivity on Organic Matter Preservation in the Middle Ordovician Decorah Formation and the Late Ordovician Maquoketa Group of Eastern Iowa." The Spackman Award attracts applications from graduate students attending universities around the world and provides $1000 to be used toward research expenses. Candidates are also encouraged to present their research at a TSOP meeting; next year's meeting will be held in British Columbia. Rachael, who is working under the direction of Dr. Sue Rimmer, presented her preliminary results in April 2006 at the NC GSA meeting held in Akron OH. This is the second year in a row that a student from UK has won this prestigious award; Sarah Hawkins (M.S., 2006) was the 2005 recipient.

Rast-Holbrook Seminar Series

Fall 2005

August

• Dr. Lahcen Benaabidate, Université Mohamed Ben Abdellah, Faculté des Sciences et Techniques Fès - Saïss, Morocco: *"Hydrogeology, Hydrochemistry, and Geochemistry of Thermal Waters in the Sebou Watershed, Morocco"*

September

• Dr. Jerry Weisenfluh, Kentucky Geological Survey: *"Kentucky Geologic Map Information on the Web"*
• Professor Kip Soloman, University of Utah, Department of Geological Sciences: National Groundwater Association Darcy Distinguished Lecturer: *"Inert Gas Tracers in Groundwater"*
• Dr. Ruren Xie, Institute of Crustal Dynamics, China Earthquake Administration: *"Tectonic Stress Field and Earthquakes in China"*
• Professor Margie Chan, University of Utah, Department of Geological Sciences: Association of Women Geoscientists Distinguished Lecturer: *"Red Rock and Red Planet Diagenesis: Comparisons of Earth and Mars Concretions"*
• Professor Chris Pool, University of Kentucky, Department of Anthropology: *"Geology and the Olmecs: Pots, Rocks, Disasters, and the Origins of Mesoamerican Civilization"*
• Professor Jerry Dickens, Rice University, Department of Earth Science: *"Rethinking the Global Carbon Cycle with Seafloor Methane"*

October

• Van Safety presentation by UK Department of Safety
• Professor Nick Clifford, University of Nottingham, School of Geography: *"Dynamics of the Lower Mississippi River: Some Insights from a Multi-scale Geomorphological Study"*
• Dr. Robert Seal, U.S. Geological Survey, Reston, VA: *"Geology in a Bottle: The Relationship of Geology to Mine Drainage Composition"*

November

• Dr. Jim Hower, University of Kentucky, Center for Applied Energy Research: *"Coal Chemistry"*
• Professor Liz Widom, Miami University of Ohio, Department of Geology: *"Use of Re-Os Geochemistry Date Bolide Impacts"*
• Professor Hap McSween, University of Tennessee, Department of Earth and Planetary Sciences: *"Discoveries of the Mars Exploration Rovers"*

December

• Professor Don Steeples, University of Kansas, Department of Geology: *"Stupid Seismic Experiments I Have Done"*
• Professor Frank Ettensohn, University of Kentucky, Department of Geological Sciences: *"Travels in China"*

Spring 2006

January

• Jennifer Wies, University of Kentucky Women's Place *"Women's Safety Training"*
• Professor Marty Parris, Kentucky Geological Survey *"Deformation and the Timing of Gas Generation and Migration in the Eastern Brooks Range Foothills, Arctic National Wildlife Refuge, Alaska"*
• Professor Wally Borowski, Eastern Kentucky University *"Does Methane Consumption Occurring Within Methane Gas Hydrate Localities Result in Focused Authigenic Sulfide Mineral Formation? Evidence and Implications"*

February

• Professor Ricardo Astini, Universidad Nacional de Cordoba, Argentina *"Recent Advances on Early Paleozoic Paleogeography of (Argentina) Western Gondwana and an Update on the Laurentian Derived Precordillera Terrane"*
• Professor Mary Reid, Department of Geology, Northern Arizona University *"Crystal-Scale Records of Silicic Magma Storage and Evolution"*
• Professor William A. Thomas, University of Kentucky, Department of Earth and Environmental Sciences, McFarlan Lecture *"Tectonic Inheritance at a Continental Margin"*
• UK Department of Earth and Environmental Sciences Graduate Students: Brian Cook "Preliminary Studies in Strain Symmetry and Vorticity of Flow at the Base of the Moine Nappe, Northwest Scotland" and Abhijit Mukherjee *"Hydrogeologic Characterization of the Arsenic-Affected Western Bengal Basin"*

March

• Professor Isabel Montanez, Department of Geology, University of California-Davis *"Global Biogeochemical Cycling, Paleoceanography, and Basin Analysis"*
• Professor Linda Kah, Department of Earth and Planetary Sciences, University of Tennessee *"Carbon, Sulfur, Oxygen, and the Evolution of the Proterozoic Biosphere"*
• Professors David McConnell and David Steer, Department of Geology, University of Akron *"The Tourist, the Gunslinger, and the Gardener: Rethinking Metaphors of Teaching and Learning to Enhance Student Reasoning"*

April

• Professor Jeff Moersch, Department of Earth and Planetary Sciences, University of Tennessee *"Composition of the Martian Surface from Orbital Infrared Remote Sensing"*
• Professor Claudia Mora, Department of Earth and Planetary Sciences, University of Tennessee *"Seasonally Resolved Tree-Ring Isotope Proxies of Hurricanes and Climate"*
• Professor David Kennedy, Victoria University of Wellington (NZ) *"The Coastal Landforms of New Zealand: Evolution and Process on a Plate Boundary in the Southernmost Pacific"*
• Professor Matt Saltzman, Department of Geological Sciences, Ohio State University *"Evolution of the Paleozoic Carbon Cycle"*

Alumni News

Julie Wood (M.S. 2001)
July 7, 2006, was my last day working as a UST project manager at Hinkle Environmental in Lexington. I am changing careers and will be teaching 9th grade earth science and advanced earth science at Bryan Station High School for the 2006-07 school years. I plan to finish my MAT degree at EKU the summer of 2007.

Todd Zuiderhoek (B.S. 1986)
I am back at Wright-Patterson Air Force Base a second time as a construction manager with All Cities Enterprises. All Cities is the SABER contractor and I design, estimate, and manage retrofit/renovation and demolition projects on base. Working at a military base is extremely rewarding. Although geology is not a part of my daily activities, I did put some glacial geology into practice a couple years ago while removing an old UST on base. We have three (3) boys and one baby girl.

Eric Jason Dew (B.S. 2005)
I am pursuing my M.S. at the University of Louisiana Lafayette. Thesis research involves 3-D modeling of the Wilcox Group for coal-bed methane exploration. Currently, I am finishing up a subsurface mapping project for Vision Energy. This summer, I will be working as an intern for Samson Exploration in Tulsa, Oklahoma.

Peter Price (B.S. 1968, M.S. 1979)
I am now Associate Professor of Geographic Information Systems & Geology at North Harris College. I consult, mostly in the summer, through my company, TerraView. I really enjoy using my consulting projects to connect my teaching to the "real world." Our sons are in Denver and Seattle, so Gretchen and I have lots of incentive to travel west.

Brent Garry (M.S. 2001)
I graduated in May, 2006, from the University of Buffalo with my Ph.D. in Geology. I am currently a Post Doc at the Center for Earth & Planetary Studies, National Air & Space Museum, Smithsonian Institution.

Alumni Advisory Board Update

Greetings, fellow alumni! This past year has been a very busy and productive year for our alumni advisory board. I'd like to recap some of our successes for the past year and give you a preview of some of the things we are planning for the year ahead.


Photo courtesy of Sarah Mardon

The alumni board, with the support of the Department of Earth and Environmental Sciences and the College of Arts and Sciences Office of Development, has hosted four major alumni events in 2006. All of these events were sponsored by the Department and the College of Arts and Sciences and were free to all who wished to attend.

In January, we were able to visit with alumni in the petroleum industry at a reception in Houston, Texas. In April, we again made the trip to Houston for the American Association of Petroleum Geologists meeting and reconnected with a new group of petroleum industry professionals and alumni. A BBQ picnic in Denver, Colorado, brought a small but enthusiastic group together for some piggy and slaw with a bit of unpredictable Colorado weather thrown in.

The weekend of October 13th was a tribute to our 2006 Distinguished Alumnus, Mr. Charles E. Holbrook ('62, '64). A seminar by Mr. Jim Pear ('80) of Chevron Corporation entitled "The Deepwater Gulf of Mexico: Evolution of a World Class Hydrocarbon Province" was attended by many current students and alumni. An afternoon at Keeneland was followed by an award reception at the Hyatt Lexington. The attendance at this event was phenomenal and many alumni as well as students and faculty were in attendance.

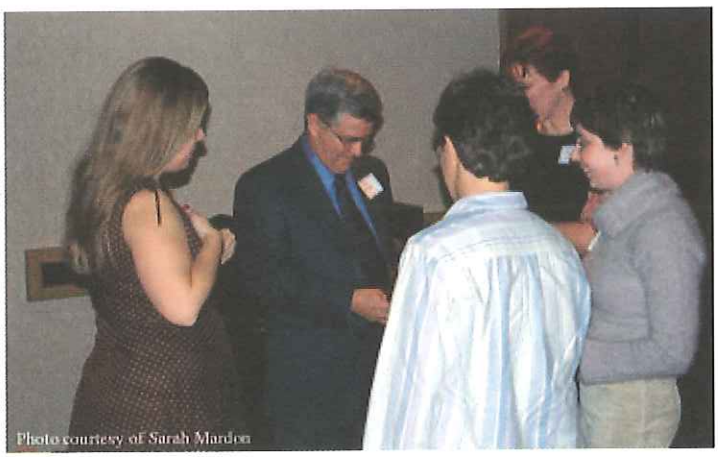
Our final event of the year was a get-together at the annual Geological Society of America (GSA) meeting in Philadelphia, PA.

The alumni board has also been actively involved in fundraising activities for the Department and the support of our alumni

Alumni News

has been tremendous. Two of our recent alums, Matt ('98) and Jill Krukoski ('99) Gregory have initiated the Boone Fellowship, a graduate student supported fellowship which will begin with an endowment of $100,000. An endowment to support a professorship within the Department has garnered $115,000 and a scholarship in support of women's studies is in the works and has currently generated about $25,000 in donations. The Boone Fellowship and endowed professorship have received matching funds from the Research Challenge Trust Fund provided by the state of Kentucky. In addition to these donations, Mr. Jay Henthorne ('64) has gifted the Geology library collection with a permanently endowed subscription to the AAPG/Datapages Combined Publications database in honor of Professor Lois Campbell. This database is accumulating much of the regional geological archives that relate directly to exploration and production of oil and gas in the USA and around the world. All in all, nearly $250,000 has been raised in the past six months.

The past year has brought together many alumni and fostered new friendships and renewed old ones. We plan to continue a series of events for 2007 including our Distinguished Alumni Award reception, the reception at the annual GSA meeting, and others. Please keep an eye out for future mailings regarding these events and others that may be in your area. As always, should you have any suggestions or would like to host an event in your part of the country, we would be pleased to hear from you. If you would like to contribute to any of the ongoing fundraising activities mentioned above, please contact the Department at (859) 257-3758.



Charles E. Holbrook Awarded 2006 Distinguished Alumni Award

The 2006 Distinguished Alumni Award has been awarded to Mr. Charles E. Holbrook. The award is given to an alumnus/alumna of the University of Kentucky Department of Earth & Environmental Sciences (formerly Geological Sciences) who has shown significant achievement in their career and/or in service to the Department or community.

Holbrook has demonstrated his commitment to the students and the Department on many occasions and in many ways. Although other alumni have been active in the Department, no one has been as influential in helping our students both financially and with offers of employment opportunities.

Although he spent most of his childhood in northeastern Kentucky, near Ashland, Charlie spent his last two years in Lexington and graduated from Lafayette Sr. High School in 1958. Holbrook graduated with both BS (1962) and MS (1964) degrees in geology from UK.

After graduation from UK, Holbrook went on to a 32-year career with Chevron Corporation in various phases of petroleum exploration.

While working for Chevron, Holbrook has served as District Supervisor, Assistant to the General Manager, Chief Geologist, Division Manager and VP for New Ventures in Chevron affiliate Caltex Pacific Indonesia.

It is, however, Charlie's efforts as a recruiter that have played such an important role for UK. As a recruiter for Chevron beginning in 1978, Holbrook found employment for many geology graduates, some of whom continue to work for Chevron to this day.

Holbrook and his wife, Jewell, have two children and six grandchildren and currently reside in Pinehurst, NC.

This year's reception in honor of Charlie Holbrook was held on Saturday, October 14th, at the Hyatt Regency in downtown Lexington.

Department Begins Efforts Toward Endowed Professorship

The Alumni Advisory Board, Department of Earth and Environmental Sciences, and the College of Arts and Sciences have begun efforts toward support of an endowed professorship within the Department of Earth and Environmental Sciences. This fund will ultimately provide a portion of support for research activities of the faculty receiving the award and a stipend to a graduate student research assistant.

The Department currently has one endowed professorship, the Hudnall Professorship, but no other endowed funds that provide support for a faculty member's research. This fund is a tremendous asset for the Department in a number of important ways. It has the potential to be a recruiting tool for hiring of new faculty, and it provides a measure of support for the faculty member's research that can be counted upon on an annual basis. Perhaps most importantly, it provides the means to recruit and support graduate students. This is a crucial benefit to the Department at a time when there is diminished support within the University for graduate students subsidies and an increase in the cost of supporting those students.

With the support of an initial group of donors, we have currently accrued $115,000 including matching funds from the Research Challenge Trust Fund provided by the state of Kentucky. To fund the endowment to its minimum potential, at least $250,000 will need to be raised. Although this seems like a large amount of money, it only provides an annual return of about four and a half percent (~$12,000/year) of the total endowed amount to the faculty member who receives the award. This barely covers the stipend of the graduate student and provides nothing for research costs. The Department and the Alumni Advisory Board ask your help in funding this project. It may make the difference between recruiting and keeping a talented graduate student and may also provide that bit of extra support for the research of both the faculty and student. If you can and would like to make a contribution of any amount toward this fund, please contact us in the Department of Earth and Environmental Sciences at (859) 257-3758. We will also be mailing out more information regarding this fund in the near future. When you receive this mailing, consider supporting the endowed professorship and the Department of Earth and Environmental Sciences.

College of Arts & Sciences

Earth & Environmental Sciences Alumni News

Name _____

Degree(s) _____

Class Year(s) _____

Current Address _____

_____

_____

E-Mail Address _____

Stay Connected...

Please provide a brief statement of what you are doing and/or any recent changes.

We will include your news in an upcoming edition of the *Earth & Environmental Sciences Newsletter*. Updating your mailing and email addresses enables us to communicate with you through future newsletters and other correspondence to Earth & Environmental Sciences alumni.

Mail to:
Rebecca Hisel, Staff Support
Dept. of Earth & Environmental Sciences
101 Slone Building
University of Kentucky
Lexington, Kentucky 40506-0053

UK
UNIVERSITY OF KENTUCKY
College of Arts and Sciences
Department of Earth & Environmental Sciences

College of Arts & Sciences

Earth & Environmental Sciences

Department Contribution

Name _____

Degree(s) _____

Class Year(s) _____

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Support Opportunities...

I would like to support the UK Department of Earth & Environmental Sciences with a contribution of $_____. Please indicate where you would like your contribution to be designated:

Brown-McFarlan Fund _____
Supports student research and travel to present papers and the annual McFarlan Lecture.

Geology Support Fund _____
Supports programs for students.

Glenn Rice Memorial Fund _____
Supports undergraduate scholarships.

Haynes Field-Trip Support Fund _____
Supports student travel on field trips.

J. C. Ferm Graduate Research Fund _____
Graduate student support for field-related research.

Rast-Holbrook Fund _____
Supports Department Seminar program.

GEOFund
Will support general Departmental needs. _____

Wallace Hagan Scholarship Fund
Will support undergraduate scholarships. _____

Mail to:
Rebecca Hisel, Staff Support
Dept. of Earth & Environmental Sciences
101 Slone Building
University of Kentucky
Lexington, Kentucky 40506-0053

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Ralph N. Freeman

J.C. Ferm Graduate Research Fund

Bruce C. Amig
(B.F. Goodrich Company matching)
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Peter D.Warwick

Glenn Rice Fund

Thomas D. Spalding


Photo courtesy of D. Matthew Sarles

UK
UNIVERSITY OF KENTUCKY
College of Arts and Sciences
Department of Earth & Environmental Sciences

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