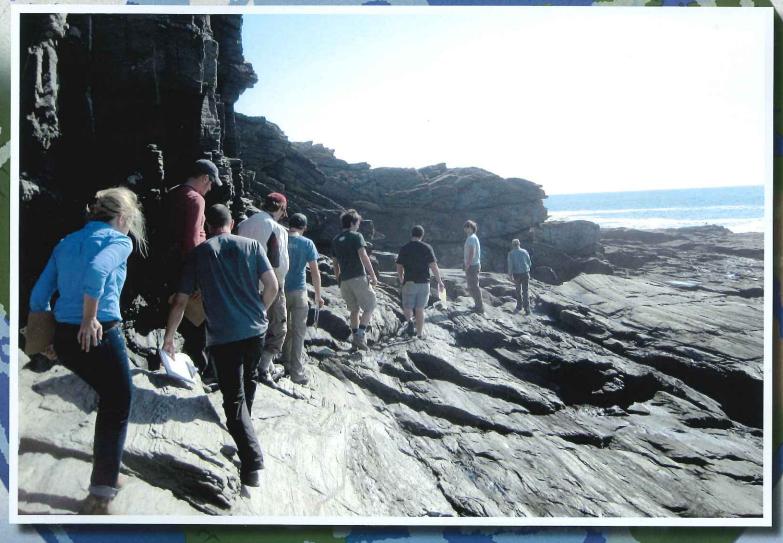
RENVIRONMENTAL SCIENCES





2012 DEPARTMENT NEWSLETTER

U.K.
UNIVERSITY OF
KENTUCKY

College of Arts & Science Department of Earth &

# LETTER FROM THE DEPARTMENT CHAIR



Dear UK Geology Alumni and Friends,

Before diving into the status of the department I would like to acknowledge the dedication and hard work of my predecessor as Department Chair, Professor Dhananjay (Tiku) Ravat. We are coming out of a

challenging time during which we saw our faculty numbers drop to its lowest level in 20 years. Tiku successfully negotiated the hiring and startup of three new faculty and two lecturers, and major renovations to four laboratories in Slone Building. As a result of his hard work we now have a state-of-the-art stable isotope laboratory as our showcase research facility and several enthusiastic new faculty members that are the foundation for another 20 years of Geology at UK. He will be taking a well-earned sabbatical leave next academic year.

In addition to Professor Ravat, there are several other people to acknowledge and thank for their contributions to moving the department forward. On arriving at UK as the new Dean of the College of Arts and Sciences, Dr. Mark Kornbluh recognized the need to re-invest college resources in rebuilding faculty numbers in Earth and Environmental Sciences. Our Alumni Advisor Board, led by Liz Haynes (UK MS '00) and Steve Sullivan (UK B.S. '79, MS '82; see Steve's Note from the Alumni Board Chair on pg. 10), helped maintain alumni enthusiasm for their alma mater and reinvigorate giving to the department. Pioneer Natural Resources and UK Geology alumni, led by Tom Spalding, established a major gift that will permit us to hire a faculty member in stratigraphy. Our department staff members, Pam Stephens, Pete Idstein, and George White, have had to learn to negotiate an increasingly complex University management system under an ever increasing work load. Our ever-enthusiastic graduate and undergraduate students inspire and push us to provide the resources and environment to launch them on careers as scientists and professionals. Finally, several faculty members helped shoulder the burden of carrying the department forward through this time. Prof. Alan Fryar did yeoman's work as Director of Graduate studies (among innumerable other department and campus committee responsibilities). Alan will be stepping down as DGS at the end of the academic year and taking a welldeserved year-long sabbatical leave. Ed Woolery chaired innumerable faculty search committees,

including chairing the past two chair searches, one of which was during a sabbatical. I greatly appreciate their willingness to serve with a "someone's gotta do it" attitude when there are few hands on deck to keep the ship afloat.

Several exciting developments are underway as I write this at the end of 2012. Slone building is again noisy with the clunking and clanging and buzzing of renovations. A first-floor lab and two offices are being renovated for the impending arrivals of new faculty members Dr. Audrey Sawyer and Dr. Derek Sawyer (see their Faculty News items on pg. 7). The first floor hallway and front foyer/stairwell are being renovated to improve the quality of the environment in which our students and faculty live and learn. All this activity plus the hum of activity from Prof. Kevin Yeager's research lab will make the first floor of Slone Building an exciting place. We are in the throes of a search for a new faculty member (search committee again chaired by Ed Woolery), the Pioneer Natural Resources Professor in Stratigraphy, and we are heavy into recruiting more highly qualified undergraduate majors. We recently held alumni receptions during Homecoming Week at UK and at the Annual Meeting of the Geological Society of America. Plans are being made for the first ever UK Geology Field Camp Reunion to be held in Crested Butte-Gunnison, Co. area during the July 4-6, 2013, weekend (see p10 for information).

Let me call your attention to several Alumni Board initiatives. The GeoFund fund raising campaign, chaired by alumni board member Curt Hull will reinfuse a fund started in the early 1990s that gives the department the flexibility to provide resources for a range of needs, including student scholarship and student research support. Please consider a gift to the GeoFund, including a company match should your employer offer it. Our Development Fund is also critical in permitting the department the flexibility to support other alumni fund-raising events, and partially augment the Rast-Holbrook Seminar fund for supporting visiting lecturers that interact with our students. Please consider supporting these funds.

Finally, our department web page is always a resource for information about the department. And never hesitate to call me or send me an e-mail if you have questions, comments, suggestions, or just to introduce yourself. I am also on Facebook and open to friend invites from alumni.

Best wishes for a productive and healthy 2013.

Dave Moecher, Professor and Chair

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### STAY CONNECTED...

You can keep track of department events, the Rast-Holbrook seminar schedule, our contact information, and alumni events via the department web page:

http://ees.as.uky.edu

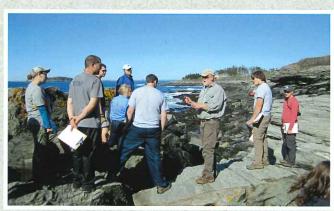
### AND KEEP IN TOUCH

Please let us know if your address or contact information change. Send a note to, email, or call George White, the department Administrative Assistant:



George White

Department of Earth and Environmental Sciences University of Kentucky 101 Slone Bldg. Lexington KY 40506-0053 gtwhit2@uky.edu 859-257-3758



ABOVE: UK Geology students listening to Prof. Mark Swanson, University of Southern Maine, describing Norumbega fault rocks, coast of Maine.

COVER PHOTO: UK Geology students traversing along bedrock exposures on the coast of Maine, Spring 2012 New England Field Trip (photo by Susan Leib, M.S. 2013)

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UK Geology students and Prof. Moecher on graffiti-covered outcrop, central Connecticut, Spring 2012 UK Geology field trip.

### **DEPARTMENT NEWS:**

### **DISTINGUISHED ALUMNUS**



2012 Distinguished Geology Alumnus Dave Scott with his mother Anne and wife Susan.

The UK Geology Alumni Advisory Board named Mr. David Scott (UK Geology B.S. '77)

as the 2012 Distinguished Alumnus. Dave's career included stints in the environmental consulting and energy exploration fields in the U.S. and overseas. He was the Chief Geologist and Mineral Assessor for the Kentucky

Revenue Cabinet. Dave was appointed to the Kentucky Board of Registration for Professional Geologists by Governors Wallace Wilkinson and Brereton Jones, and was Board Chair from 1992 to 1993. Dave was instrumental in establishing professional registration for geologists in Kentucky. He received the AIPG Outstanding Service Award in 1993. Dave is currently a consulting geologist who remains active in regional planning and environmental management issues in south Florida. Dave joins Dr. William Thomas, Mr. Charles Holbrook, Ms. Almy Paty, and Dr. Sam Boggs as Distinguished Geology Alumni.

### SPRING 2012 NEW ENGLAND FIELD TRIP

Fifteen UK geology students in two vans suffered through the day-long drive to and from New England, and experienced freezing weather one day in northwest Maine and then got sunburned the next day on the coast of Maine, during the Spring 2012 EES field trip. Our route took us from Massachusetts through New Hampshire, western and southern Maine, through Connecticut and finally New York City. Favorite stops include the fluorescent mineral mines of the Franklin-Sterling area (New Jersey), detachment faults in the basement rocks of eastern Connecticut, the American Museum of Natural History in New York, mineral collecting in the pegmatites of western Maine, and the Norumbega Fault Zone along the coast of Maine (voted "Top Stop" of the trip).

Other highlights of the trip include getting stuck in the mud looking for an abandoned pegmatite mine, being turned away from driving up the road to the top of Mount Washington (no vans!), and taking the final exam in Central Park (don't worry, everyone aced the exam!).

These trips are semi-annual events and are supported in part by alumni donations.

Please consider a contribution to the Haynes Field Trip Fund in order to continue to provide these opportunities for our students.



Scenic view of Mooselookmeguntic Lake, western Maine



UK students and a covered bridge in New Hamphire

# DEGREES AND AWARDS

### 2012 DEGREES

### **UNDERGRADUATE DEGREES**

### Bachelor of Arts

Eric Altobellis
James Calhoun
Lucas Campbell
Trent Denyes
Anthony Glenn
Chris Manning (Cum Laude)
Chase Noakes
Casey O'Daniel
Ethan Settlemires
Daniel Spaulding
Eric Storie
Andrew Sullivan

### **Bachelor of Sciences**

Tim Carroll David Cross Mark Cross Chris Kennedy

### **GRADUATE DEGREES**

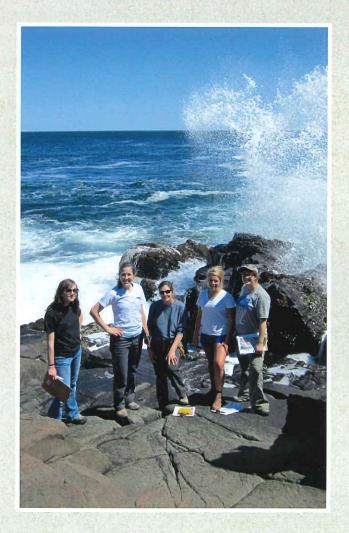
### Master of Science

Jamin Frommel, MS, "Integrated Geophysical Investigation of Karst Features - Inner Bluegrass Region of Kentucky" (Ed Woolery)

Bethany Overfield, MS, "Ordovician Core Characterization in Central and North-Central Kentucky: Relating Rock Properties to Geotechnical Parameters" (Ed Woolery)

Ryan Quinn, M.S.: "The Evolution of Grenville Basement in the Eastern Great Smoky Mountains; Constraints from U-Pb Zircon Geochronology, Whole Rock Sm-Nd, and Feldspar Pb Geochemistry" (Dave Moecher)

Carrington Wright, MS, "SH-Wave Refraction and Reflection Investigation of Quaternary Geology - Central United States Seismic Observatory" (Ed Woolery)



The ladies of the 2012 UK Geology field trip about to get drenched by a breaking Atlantic Ocean wave, coast of Maine, Spring 2012 UK Geology field trip.

# DEGREES AND AWARDS

### **2012 STUDENT AWARDS**

### UNDERGRADUATE AWARDS

PIRTLE OUTSTANDING SENIOR SCHOLARSHIP Anna C. Roa

GLENN RICE MEMORIAL TUITION SCHOLARSHIP Alyssa C. Eliopoulos, Joshua DeVore, Patrick Taylor, Jennifer Whitney

SIGMA GAMMA EPSILON TARR AWARD Alyssa C. Eliopoulos

PIONEER NATURAL RESOURCES SCHOLARSHIPS Brittany Shelton, Victoria G. Oberc, Bailee N. Hodelka, Benjamin F. Overstreet



### **GRADUATE AWARDS**

UK GRADUATE SCHOOL FELLOWSHIP FOR SELECTED AREAS Alice Orton

LYMAN T. JOHNSON AWARD Carrington Wright

REEDY QUALITY ACHIEVEMENT FELLOWSHIP Alice Orton

NASA EARTH AND SPACE SCIENCE FELLOWSHIP Nicholas Levitt

ALASKA GEOLOGICAL SOCIETY, DON RICHTER MEMORIAL SCHOLARSHIP Sara Federschmidt

CONSORTIUM OF UNIVERSITIES FOR THE ADVANCEMENT OF HYDROLOGIC SCIENCE, INC., PATHFINDER FELLOWSHIP Ashley Bandy

### **2012 SUMMER INTERNSHIPS**

USGS-NAGT: David Cross

**EQT**: Melissa Ditty

PIONEER NATURAL RESOURCES: Evan Kelly

# DENALI NATIONAL PARK & PRESERVE RESEARCH FELLOWSHIP

Sara Federschmidt

# GEOLOGICAL SOCIETY OF AMERICA STUDENT RESEARCH GRANTS

Ashley Bandy, Cory Black Eagle, Sara Federschmidt (John T. Dillon Alaska Research Award), Lucas Rohrer, Evan Kelly (Southeastern Section Grant)

KENTUCKY ACADEMY OF SCIENCES, GEOLOGY RESEARCH PRESENTATION (GRADUATE) Susan Leib (First Place), Ann Harris (Third Place)

SIGMA XI GRANT-IN-AID Olivia Woodruff

ABOVE: UK Geology students standing on Manhattan Schist, Central Park, New York City, just after the final exam of the 2012 UK Geology spring field trip.

### **NEW FACULTY**

#### PROFESSOR AUDREY SAWYER



Dr. Audrey Sawyer joined the faculty in January. Her research focuses on surface water-groundwater interactions in streams and coastal settings. Audrey uses a variety of approaches to

characterize surface water-groundwater exchange, including field measurements, laboratory flume experiments, and numerical models. Audrey comes to us from a post doc at the University of Delaware, where she studied surface water-groundwater mixing in an estuary. This past summer, she conducted shallow geophysical surveys, deployed seepage meters, and collected shallow groundwater samples to understand how fresh groundwater transports nutrients to the estuary. The estuary has several buried paleochannels that run offshore. Audrey's research shows that these paleochannels

influence the flow of fresh groundwater from the aguifer to the estuary. The paleochannels act as buried conduits that convey fresh groundwater farther offshore. Fresh groundwater discharges far from shore beneath the paleochannels but close to shore between paleochannels. The chemistry of the discharging groundwater also varies near paleochannels. Nitrate concentrations are much higher in fresh groundwater that discharges between paleochannels because flow paths are shorter and groundwater is less reducing. Nitrate contributions to the bay drive algal blooms, so a better understanding of nitrate inputs to the estuary can inform best management decisions in the watershed. Audrey has also studied the influence of wood debris on surface water-groundwater exchange in streams during her doctoral research at the University of Texas. Audrey will teach EES 385 hydrology and Water Resources.

### PROFESSOR DEREK SAWYER



Derek's research focus is marine geology and geophysics. He integrates field expeditions, lab work, and numerical modeling techniques to understand sediment transport processes on continental margins. He earned his

Ph.D. in geological sciences from the University of Texas, at Austin in 2010. Derek joins us after spending two years at the ExxonMobil Exploration Co., in Houston, Texas where he held a specialist position as an operations geologist. Derek's technical skills include pre-drill pore pressure prediction, wellsite pressure surveillance, seismic stratigraphy, geohazards

assessments, core-log-seismic integration, and interpretation of engineering geophysical site surveys for susbsea field development projects. Derek has worked international projects which include the Gulf of Mexico, offshore Australia, Niger Delta, Qatar, and field operations aboard drill rigs in the deepwater Gulf of Mexico and the Black Sea (pictured). Derek is an active member in the International Ocean Discovery Program (IODP) and was selected to serve on the site survey panel to review drilling proposals. Also in 2012, Derek published a manuscript in the journal Marine Geology and presented this work at the annual meeting of the American Geophysical Union in San Francisco. Derek is teaching EES 511 Petroleum Geology this semester.

### **FEATURED EES NEWS**

### KENT RATAJESKI



Kent Ratajeski is in his sixth year at EES and was recently recommended for a promotion to Senior Lecturer by the department. This year, his teaching assignments have included EES 110 (Environmental Geology)

EES 220 (Physical Geology), EES 230 and EES 235 (Fundamentals of Geology I and II), and EES 360 (Mineralogy). Each year, Kent enjoys leading several field trips in central and western Kentucky, Illinois, and Alabama, as well as teaching a summer field course for Wheaton College in the Black Hills of South Dakota. The Ratajeski family recently welcomed their new baby girl Josephine ("Josie") into the world in October.



Flourescent mineral display at the Franklin (N.J.) Mineral Museum, visited and sampled during the Spring 2012 UK Geology field trip.

### ALAN E. FRYAR



My students and I stay busy. Ashley Bandy is pursuing her Ph.D. on transport of bacteria in epikarst and karst aquifers. She received funding from the UK College of Agriculture, a GSA Research Grant.

and a Pathfinder Fellowship from the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (Ashley also married Ralph Bandy, another graduate student, in Junecongratulations!) Cory Black Eagle, a Ph.D. candidate co-advised with Jim Dinger. also received a GSA Research Grant for his work on development and distribution of karst terrain features in the Inner Bluegrass region. Ganesh Tripathi is writing his dissertation on groundwater discharge along Little Bayou Creek downstream of the Paducah Gaseous Diffusion Plant. Catherine Skees finished field work for her thesis on sources of solutes and water in the headwaters of the Cane Run/Royal Spring basin.

My most unusual activity this year was leading a U.S. State Department-funded project (Building Opportunity Out of Science and Technology [BOOST]) working with graduate students in hydrology from Egypt and Morocco, together with faculty from those countries and the USA. I spent 12 days in June driving 11 students in a rented 15-passenger bus from Atlanta to San Angelo, Texas, and back. James Ward (Ph.D. 2008, Assistant Professor at Angelo State University) and his wife Katy Ward (MS 2009, an engineer with the Texas Railroad Commission) hosted the students for a week of field training and cultural activities. John Warden (MS 2010, now a Ph.D. candidate at the University of Texas) drove up from Austin to help us for a couple of days. The students returned to the USA to present posters at the GSA Annual Meeting in Charlotte in November. In September, we received a second grant to expand the program to Turkey and Indonesia.

#### KEVIN MICHAEL YEAGER



Greetings! Well, after 1.5 years here at UK, I am finally starting to settle in. My wife Julia (faculty in UK's English Department) and I have been enjoying the process of getting to know Lexington, and the surrounding region. On the personal side of

things, Julia and I bought a historic home in Lexington this past year, and I was able to travel throughout Italy with my daughter Hannah in the summer, which was a blast!

I am a sedimentary geologist, and my research group is interested primarily in the interactions between humans and Earth's surface. So, most of our work is done in modern or geologically "young" (< 1 million years old) sedimentary systems (rivers, lakes, estuaries, marshes, oceans). We were very busy in 2012, focusing on getting our research off the ground at UK, including getting our group of outstanding graduate (4) and undergraduate (2) students involved in various projects. I have been active in teaching as well, having taught "Marine Sedimentology" in the spring and "Endangered Planet: Introduction to Environmental Geology" in the fall. Over the coming year, we plan to grow and further diversify our research group through the addition of new graduate and undergraduate students, and the expansion of our analytical capabilities into new areas.

Our current research agenda is diverse and exciting! We have begun work to engage with colleagues at UK and throughout the region to address research questions close to home, and we continue work in the U.S. Gulf Coast. Some of our active projects include: (1) Research to understand the ecological impacts and fate of mercury (Hg) derived from large-scale industrial releases in the Penobscot River and Estuary in coastal Maine; (2) Research looking at how coastal growth faulting in the northern Gulf of Mexico can fundamentally influence things like the rate of relative sea level rise, the rate of marsh vertical accretion, the supply and quality of freshwater and the sustainability of vegetation communities; and (3) Research focused on the possible impacts of the Deepwater Horizon oil spill on a wide range of sedimentary environments and coupled bottom (benthic) ecosystems in the Gulf of Mexico, from the coastal marsh margin to the deep sea (2.700+ meters).

Finally, should you or your family be visiting our department this coming year, please stop by the Sedimentary, Environmental and Radiochemical Research Laboratory (SER2L) on the first floor of the Slone Research Building and say hello; we will give you the grand tour and would be happy to show you what we are up to!

### REBECCA FREEMAN



I am enjoying my second year in central Kentucky and have added Oceanography and Environmental Geology to my line-up of classes. The Oceanography class has been especially fun to organize. I emphasize working with real data using

both Google Earth and GeoMapApp. Kentucky may be nowhere near the ocean, but we can still get a sense of what oceanographers actually do. I teach Oceanography in a traditional format during spring semesters, then online during the summer. Any trepidation I felt toward the online format was dispelled by my delightful Summer 2012 students.

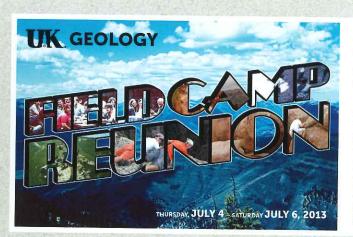
I continue to enjoy exploring the local strata and fossils. I haven't lost the sense of wonder over being able to walk out the door and encounter Ordovician limestone just feet away. I've discovered the great professional advantage of living right in the middle of the field area! I've enjoyed meeting a lot of my colleagues in the field and at conferences, and will serve a two-year term as North-Central section chair of the Paleontological Society starting this spring. I am still working on several projects in the Cambrian—Ordovician of the Great Basin and Texas/Oklahoma, however, and hope to get papers out about both field areas old and new this year.

## ALUMNI BOARD NEWS

### FROM THE ALUMNI BOARD CHAIR

Greetings from the Alumni Board! This year has been a positive one for the Board thanks to the hard efforts of all the Board members, the faculty and staff of EES. I want to give a special shout out to David Moecher, the department's new chair for his enthusiasm and hard work during this past year. Our meetings in the spring and fall covered a wide range of initiatives the Board is undertaking including fundraising, alumni outreach and interface with the College and University. At our fall meeting this past October, we had 27 alumni, faculty and staff attend including Dean Mark Kornbluh. This show of strong support by and for the department is extremely important and is one of the many things that sets EES apart from most departments on campus.

THANKS TO EVERYONE WHO JOINED US! David Scott was the recipient of the Distinguished Alumni Award for his many contributions to the geosciences and his leadership in the geologist registration effort in Kentucky. In honor of David and the others who have received this award, a permanent plaque is now displayed in the department. We continue with fundraising efforts and during these challenging fiscal times, alumni support for EES is more important than ever. We know there are many causes worthy of your support—PLEASE CONSIDER A CONTRIBUTION TO THE GEOFUND.



Finally, there is going to be a field camp reunion in Create Butte this coming July. Please come if you can—it will be a blast. From all of us on the Board to all of you, have a great 2013.

http://ees.as.uky.edu/alumni/reunion

For those not able to access the web site, contact
The Department of Earth and Environmental Sciences
University of Kentucky
101 Slone Bldg.
Lexington KY 40506-0053
gtwhit2@uky.edu
859-257-3758

### WENDELL OVERCASH ESTABLISHES MAJOR BEQUEST

Mr. Wendell Overcash (UK Geology B.S., '77, UK J.D. '80) has committed to making a generous bequest to establish the Wendell H. Overcash Earth and **Environmental Sciences Student Travel** Fund. The fund is intended to assist graduate or undergraduate students in obtaining a unique field geology experience beyond the usual places we visit in the eastern U.S. As a geologist and attorney, Wendell had a diverse career that included working in industry (Ashland Coal and Exxon Minerals), Travelers Insurance Company and the public sector (Kentucky's Natural Resources and Environmental Protection Cabinet and the Cabinet for Health and Family

Services). Wendell's bequest follows in the tradition of the Overcash family. Wendell's father established the W. Hugh Overcash Scholarship in Tax Law at the University of Tennessee College of Law. A scholarship was also established in the name of Mrs. Myra Overcash in the School of Education at Carson Newman University (Tennessee).

Bequests are a way to ensure one's legacy by making a deferred donation to UK Geology. The College of Arts and Sciences Office of Development can provide more information for alumni who might consider establishing such a fund.

### **DONATIONS 2012**

### CORPORATE DONATIONS

Appalachian Geologging

BP America

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Continental Resources

Encana Oil & Gas

**Encana Cares Foundation** 

ExxonMobil Corporation

**Newfield Exploration Company** 

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### **INDIVIDUAL DONORS**

### **Alumni Professor Fund**

Mr. Timothy D. Elam

### Brown-McFarlan Fund

Ms. Patricia Anderson

Drs. Natasha and Thomas Becker

Mr. Edward L. Crisp

Mr. J. Monroe Hall

Mr. Jay G. Henthorne

Mrs. Jo Allan Napier

Dr. Devi Udgata

Mr. A.P. Whipple (in honor of Dr. Frank Ettensohn)

Samuel Roberts Noble Foundation

### GeoFund

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Mr. Jon Armstrong

Drs. Natasha and Thomas Becker

Mr. Brian W. Bottom

Mr. Calvin Butler II

Mr. Richard M. Byrne

Mr. J. Dennis Clay

Mr. Kristopher Clemons

Dr. Thomas D. Coskren

Mr. Michael T. Currie

Ms. Emily Eastridge

Mr. Robert Flynn

Mr. Curtis G. Hull

Mr. David A. Jackson

Mr. Robert Lieber (in memory of Prof. W.C. MacQuown, Jr.)

Mr. Donald Loughry

Mr. Gerald Markowitz

Mr. Gary B. McReary

Dr. Rodney V. Metcalf

Mr. Wendell H. Overcash

Dr. Hiram A Norton, Jr.

Mr. Frank H. Nicholson

Ms. Alma Paty

Mr. Kennon V. Pavona

Mr. James L. Pear

Mr. Kenneth A. Shubak

Mr. William J. Sims

Mr. Kenneth G. Smith

Mr. Mark E. Snider

Mr. Thomas D. Spalding

Ms. Diane Spies (in honor of Mr. William Spies)

Mr. Stephen Sullivan

Mr. Charles J. Taylor

Mrs. Karen E. Thompson

Mr. Charles C. Tribble

### **Geology Development Fund**

Mr. Michael W. Bourque

Mr. Robert F. Flege, Jr.

Mr. Scott L. Huang

Mr. John Johnson

Mr. David C. Metzner

Mr. Richard E. Phillips

Mr. Lawrence E. Spangler

Mr. Ralph O. Wilson II

### **Geology Support Fund**

Mr. William A. Spies

### Haynes Field Trip Fund

Dr. Gary W. Jacobs

### James S. Hudnall Scholarship Fund

Mr. Robert W. Flynn

### John C. Ferm Graduate Fellowship Fund

Dr. Stephen F. Greb

Mr. Peter D. Warwick

### Rast-Holbrook Fund

Mr. Bruce C. Amig

Mr. Charles Holbrook

Dr. John W. Kuehne

Dr. Kenneth E. Neavel



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# SUPPORT OPPORTUNITIES

Your support of the UK Department of Earth & Environmental Sciences helps provide opportunities for our outstanding undergraduate and graduate students. All contributions to the department are tax deductible.

RAST-HOLBROOK FUND Supports the department seminar program, an opportunity for students to interact with researchers outside the department

GEOFUND Supports general departmental needs including undergraduate and graduate scholarships

WALLACE HAGAN SCHOLARSHIP FUND Supports undergraduate scholarships

GLENN RICE MEMORIAL FUND Supports undergraduate tuition scholarships

HAYNES FIELD-TRIP SCHOLARSHIP FUND Supports student travel on field trips

DEVELOPMENT FUND
Provides resources for graduate student
recruitment and alumni development functions

GEOLOGY SUPPORT FUND Supports initiatives for long-term quality of the department

Donations can be made via the on-line donation process at:

http://www.as.uky.edu/giving

Or you may send donations directly to:

Mr. George White University of Kentucky Dept. Earth and Environmental Sciences 101 Slone Bldg. Lexington KY 40506-0053