American Institute of Professional Geologists
Kentucky Section
Newsletter

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2007 Executive Committee

President: Dan Phelps
President-elect: Jim Howard
Vice President: Faith Fiene
Secretary: Wesley Turner
Treasurer: Gil Cumbee
Editor: Richard Smath

Outgoing president's message:

Every year when I read the articles of past presidents as they sum up their term as head officer, there seems to be at least one commonality. They all seem to agree that the year goes by quicker than was anticipated. I must agree. It's very easy to let the year slip away from you, especially given that we all manage to stay so busy.

When the year started, one of my primary goals was to try to figure out how our organization could make the public aware of the importance of geology and how AIPG could facilitate the dissemination of information. I must admit I was having a difficult time trying to figure out how we could provide a service that no other professional geologic organization was already providing. The answer came to me during our spring field trip after hearing Dr. James Howard speak. Dr. Howard gave many suggestions as to how AIPG and KSPG can "thrust" themselves into the public eye by functioning as sort of the clearinghouse for geologic information. After his talk, I realized that an approach that more closely resembled what Dr. Howard discussed would be more likely to have the desired effect than what I had considered. It became apparent to me that my initial approach could be construed as being competitive, which was a stark contrast to the collaborative approach suggested by Dr. Howard. We don't have to reinvent the wheel. When you pause to think about it, we are a pretty close-knit profession in that we often rely on data and research provided by others in the field. We are all working to better the geologic sciences, and as such, would it not be appropriate for the entire professional community to focus our efforts to reach that end? Quite a bit of work has already been done by the individual professional

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2006 KY-AIPG/KSPG JOINT FALL FIELD TRIP, October 5-7

Geomorphology and Quaternary Geology of the Lower Ohio River Valley: Mapping and Applications

Unconsolidated sediments here in Kentucky have long been considered "dirt" compared to the spectacular preservation of depositional features within the Paleozoic sedimentary rocks that are usually studied by geologists in Kentucky. This field trip definitely changed the attitude of the participants that "It's not just Qal anymore" or "A silly little thing called loess" and that it can take its place of prominence in Owensboro, known as the Barbecue Capital of the World, and western Kentucky, home of the Little Sturgis Motorcycle Rally, music legends W.C. Handy, the Everly Brothers, and Bill Monroe, NASCAR drivers Darrell Waltrip, Michael Waltrip, Stuart Kirby, Jeremy Mayfield, David Green, Jeff Green, and Mark Green, championship motorcycle racer Nicky Hayden, naturalist and bird-lover John James Audubon, and actor Johnny Depp.

Western Kentucky's proximity to the Wabash Valley and New Madrid Seismic Zones and the significant thickness of glacial outwash sediment raise concerns about ground-motion amplification of seismic waves and potential liquefaction. Recent mapping of the Quaternary unconsolidated deposits as engineering soils gives a better understanding of the architecture of the valley-fill sediments; coupled with data on the geotechnical characteristics of the various types of sediments, the mapping can be used to better predict the local behavior during a major seismic event.

The field trip was coordinated by William M. Andrews Jr., Steven L. Martin, Ronald C. Counts, E. Glynn Beck, Carrie Pulliam, and Brandon C. Nuttall of the Kentucky Geological Survey, University of Kentucky; James M. Durbin and Scott E. Waninger of the Geology and Physics Department, University of Southern Indiana; John D. Lutz of the Department of Earth and Environmental Sciences, University of Kentucky; and Kenneth E. Henn of the Louisville District, U.S. Army Corps of Engineers.

On Thursday, October 5, a pre-trip soil characterization workshop was hosted by Ron Counts, Dave Williams, Carrie Pulliam, and Scott Waninger, and Steve Blanford of the Lexington, Ky., office of the U.S. Department of Agriculture. The workshop was held at the KGS Henderson field office. With plenty of coffee, doughnuts, and snacks to ward off the chill, the day was spent studying soil samples and learning about the USDA and Natural Resources Conservation Service's soil classification process. After a pizza lunch, a demonstration was given in a field behind the KGS office of the Giddings soil probe equipment borrowed from the Illinois State Geological Survey. That evening an ice breaker and registration were held at the Henderson Ramada Inn.

Pre-soil workshop.

Giddings soil probe, Ron Counts and Mike Murphy.

Steve Blanford (bottom left),USDA, with fresh soil samples.

On Friday, October 6, the bus picked up the field-trip attendees at the Ramada Inn for stops along the lower Ohio River Valley floodplain. Daviess and Henderson Counties is just south of the Pleistocene glacial limit, characterized by low-relief bedrock uplands separated by broad alluvial valleys. Current mapping has identified a series of Pleistocene high terraces, several intermediate terraces, and a Holocene floodplain. To assure that the attendees were kept in good, warm spirits, we had the services of Bagel Boy and the Cream Cheese Kid (Rick Sergeant of KGS) to provide coffee, orange juice, bagels and cream cheese, and other snacks at every stop. A special super-enriched everything bagel was given at the begining of each day to the lucky attendee who answered a question posed by a field-trip leader.

Johnny Depp from jacksparrow.moonfruit.com

Stop 1 showed how the terraces and other landforms of the Ohio River Valley have been identified. Also discussed was land use with respect to flooding, demonstrated by the location of the line of barns. A number of borrow pits used to construct the new stretch of U.S. 231 were left to fill with water and become constructed wetlands for migratory birds. A number of seismic-refraction surveys were conducted to reveal the different shear-wave velocities in the Ohio River Valley sediments, which provided a general understanding of the subsurface architecture of the Ohio River Valley fill sediments and allowed ground-motion amplification during a seismic event to be predicted.

Drew Andrews, Steve Martin, and Mike Murphy in front of borrow pit, demonstrating mapping techniques.

Roy Adams and Drew Andrews.

Waste pile of unwanted glacial outwash.

Stop 2 provided an opportunity to visit the Daviess County Sand and Gravel Company's operation. Besides learning of the daily dredging and separation operation from owner Roy Adams, the field-trip attendees had an opportunity to rummage through the waste piles of near- and far-traveled fragments of various types of rocks.

Stop 3, the Bon Harbor Hills in Daviess County, contains representative loess and associated paleosols for the Ohio River Valley, along with a late Pleistocene fluvial deposit and bedrock.

Bon Harbor Hills loess.

Lunch was at the Little Hurricane boat ramp on the Ohio River.

After lunch we viewed the various landscape features at the intersection of two of the oldest and highest paleochannels and associated landforms of lacustrine/slackwater terraces. Being in the Western Kentucky Coal Field, we also observed the stripping and reclamation conditions of an active surface-mining operation. The day concluded across from the Keach farm to view an upland area composed of 25 to 40 feet of loess overlying a relatively flat bedrock surface that forms the southern wall of the Ohio River Valley. Ongoing geotechnical work on this farm since 1966 has resulted in drillers' logs from groundwater monitoring wells, soil cores with detailed descriptions, electric-resistivity profiles, aquifer tests, a cone penetrometer sounding, gamma-ray logs, and seismic-refraction and -reflection profiles.

That evening we gathered in one of the meeting rooms of the Henderson Ramada Inn for dinner. Dr. Andrew Wulff, professor, Western Kentucky University and president-elect of KSPG, gave an after-dinner speech and intoduced the guest speaker, Dr. James. F. Howard, who gave a PowerPoint presentation on "Time: The Forgotten Element in Environmental Investigations and Remediations."

Dr. Andrew Wulff

Dr. James F. Howard

Loess-capped paleosand dunes.

Newburgh Lock and Dam on the Ohio River.

On Saturday the attendees loaded up in the bus and headed for Indiana to view a loess-capped paleosand dune in an active quarry. Next we went to the U.S. Army Corps of Engineers Newburgh Lock and Dam on the Ohio River. Here we got a complete overview of the various geologic conditions that needed to be addressed during the contruction of the project. The field trip ended at the Angel Mounds State Historic Site in Evansville, Ind. The attendees watched a movie in the visitors center and then strolled the grounds of the best-preserved prehistoric Native American site of the people of the Middle Mississippian culture.

The guidebook for this trip is posted as a pdf on the Kentucky Society of Professional Geologists website: www.kspg.org/pages/fieldtrips.html

Photographs were provided by Richard Smath, Gil Cumbee, and Greg Cornett.

WE NEED YOU! VOLUNTEER TODAY AND HELP SAVE THE PROFESSION!

Geology is facing an identity crisis in modern society. Although most of the major problems facing us today are related in one or more fashions with the geosciences, geologists are rarely involved in either problem-solving or in decision-making concerning the proper methods of evaluating or attacking them. The major reason for this lack of involvement is that most people know nothing about us or about our value in attacking the problems we face. Geologists on the whole have been very poor in public relations concerning what we do and what we are capable of doing. The only time the public is informed about geology is when oil companies or mining companies make “excessive profits” or are assigned blame for environmental problems.

AIPG and KSPG have jointly formed an Outreach Program whose purpose is to alleviate the situation by increasing the public visibility of our profession, enhancing the quality of the product we provide, and expanding the knowledge base of the public concerning the real science behind the problems we face. The Outreach Program is directed toward increasing involvement of geologists in all aspects of modern society, including the following:

1.) Public service lectures and forums;
2.) Training sessions to upgrade existing geologists;
3.) Cooperative programs with universities in lectures, mentorship, and departmental support;
4.) Involvement in pre-college teacher training programs;
5.) Public planning and zoning; and
6.) Public relations with media and with legislators.

To accomplish these goals, we need ***volunteers*** to serve as public lecturers, advisors in academic programs and training sessions, mentors and support systems. At present we have set up four subcommittees with joint membership between AIPG and KSPG. The subcommittees are Public Relations (media and public service groups), Academic Relations (University and pre-college interaction) , Database Development (canned lectures and background slides), and Professional Relations (internal professional enhancement). To volunteer, please contact committee members ***Tim Crumbie, Larry Rhodes, Andy Wolf, Ken Kuehn, Richard Smath, John Beam, Faith Fiene, Wes Turner, or Jim Howard***.

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organizations. We just need to organize the information and make it readily available to those who seek it.

Earlier in the year, Dr. Howard asked if the Kentucky Section would set up a pilot program to promote public awareness of the geologic sciences. In response to his request, the Kentucky Section, established an Outreach Committee. Participation on the committee is voluntary, and all are welcome to attend. Although the committee is still in its early stages, we can already see that the plan is moving forward. We've been in contact with Mike Lynch at the Kentucky Geological Survey, who has been very helpful in providing information on media contacts and educational material that can be distributed to the public. Andrew Wulff, the incoming president for the Kentucky Society of Professional Geologists (KSPG), and Dr. Ken Kuehn, Department of Geography and Geology, Western Kentucky University, attended our November meeting to discuss how the various organizations can work together on this front.

The formation of the Outreach Committee is very timely in that one of the goals mentioned by Daniel Phelps, our president for 2007, is to boost AIPG membership. Increasing membership (and participation) should reinforce the efforts of the Outreach Committee. As more professionals become familiar with AIPG, it is my hope that membership will continue to grow. Ideally, efforts of the Outreach Committee coupled with the membership drive will result in a synergistic effect. The activities of one will drive the other, and the result would be a more informed public and a cohesive geologic community.

I would like to mention that we still have the informational compact disk (PowerPoint) that contains information on how to establish student chapters of AIPG, and contains a presentation on what students and younger geologists can expect as they enter the work force. We can provide copies upon request. AIPG National is aspiring to establish 20 student chapters during the upcoming year, and we can help attain that goal. Also, please check our Section website to assure that your contact information is current. We are in the process of updating contact information as the first step of making a downloadable web-based membership directory.

Finally, I would like to thank all of the members for their patience and support over the past year. Special thanks to the Kentucky Geological Survey for allowing us to continue hosting our meetings there. Even though we may not have realized some of my ambitions that were stated earlier in the year, I take comfort in the fact that the plans have been set into motion. These are not short-term endeavors, however; they will require active management far into the future if we expect to continue to provide a service to the public and the geologic community.

Sincerely,

Tim Crumbie

Volunteers, continued from page 4

We feel that this is a vital area that will decide the future of our profession. Increasing public awareness of our role in society is vital to both growth and survival of Geosciences. This means VISIBILITY and that means involvement. The next meeting of the Geosciences Outreach Committee will be held in early December. Please contact one of the individuals above to join our efforts.
GEOLOGY NEEDS YOU!

Incoming President's Message:

Greetings! I thank those who have entrusted me to lead Kentucky AIPG in 2007. It will be extremely difficult to measure up to my predecessor, Tim Crumbie. I thank Tim for having the organization in such great shape as I take office. Tim and the entire Executive Committee have worked hard the last year to see that our section is the best in the nation.

Some of you may not know me. I have a diverse background in geology. I received my BS and MS degrees from the University of Kentucky, and my MS thesis is on the stratigraphy and paleoecology of the Silurian Louisville Limestone. After stints as a petroleum geologist and evaluating coal reserves for the Kentucky Revenue Cabinet, I became an environmental geologist for the Commonwealth of Kentucky. Presently I work in the Federal Section of the Superfund Branch. Additionally, I have taught geology in the evenings at Bluegrass Community College for more than seven years. I also am president of the Kentucky Paleontological Society and will be chair of the Geology Section of the Kentucky Academy of Sciences for 2007.

We are about to embark on a year that will prove pivotal for geologists in Kentucky. With our allies in other geological organizations such as KSPG, we must improve our lot on a number of fronts.

First, we must recruit more members for our organization. There are too many qualified geologists in this state who belong to neither AIPG nor KSPG. We cannot succeed in any of our endeavors if our organization has fewer than 100 members. We must

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immediately begin recruiting the people who are presently not involved with professional organizations. In return, AIPG has to step up to the plate to advance the needs of our membership. If we do not succeed, or at least make progress, many of these new members will not renew.

Second, AIPG is uniquely situated to improve the lot of geologists, both in and out of state government. The present career track, pay scale, and pay increments for geologists in state employment does not compare favorably with that of other professions such as engineering. The possession of a PG license in state employment is only of limited value. I am shocked by the number of geologists in state government who won't take the PG test because it will be of little or no benefit to their potential career track. Moreover, there are geologists in government employment who have let their PG licensure drop because it is perceived as unneeded. This is simply unacceptable. Geologists in this state worked and fought too long and hard to get professional licensure for it to be of no value. AIPG must lobby on behalf of state geologists to see that they get the career opportunities they deserve. Furthermore, we must protect all working geologists by seeing that the value of a PG is not weakened by letting unqualified people perform geological work.

Third, the public profile of geologists must be raised. Presently, most people only have a vague idea of what we do and how it differs from other professions. I wouldn't be surprised if many people don't know the difference between a geologist and a gynecologist.The public and politicians must know what we do or else others will be allowed to perform geological work (without necessary knowledge). Geologists need to be telling the public what we do and why it is important. AIPG must be assisting those who are doing this public service and recruit many more to do the same.

Fourth (but most important!), we need to be aiding science education in the Commonwealth. Geologists are uniquely qualified to help teachers since geology touches on so many branches of science. Geologists should be speaking to K–12 school groups as often as they can. Our section of AIPG already has a special group working on how we can assist and improve basic earth science education. Our success or failure on this front will greatly affect the opportunities of those just entering the profession.

AIPG has a number of other interesting projects in the works. I'm sure that we will soon have a great field trip set up for our spring meeting. Also, thanks to the work of Tom Spalding, Trent Garrison, and Wesley Turner, our web page will be much improved.

I have full confidence that we can work together to advance our profession. I predict 2007 will be an unforgettable year.

I can be reached at edrioasteroid@msn.com or (859) 296-4870.

Sincerely,

Dan Phelps

University professors, please submit the name of an outstanding student along with a letter of recommendation and achivement for nomination for the KY-AIPG student scholarship.

Members, submit a name for an AIPG member that you would like to nominate for the Lifetime Achivement Award, along with a letter of recommendation.

Members, also submit a name for the Geologist of the Year Award (does not have to be an AIPG member), along with a letter of recommendation.

Please submit your recommendations before MARCH 1, 2007, to:

KYAIPG
Attn: Larry Rhodes, Nominating Committee
P.O. Box 24690
Lexington, KY 40524-4690