

American Institute of Professional Geologists

KENTUCKY SECTION



<http://ky.aipg.org>

Mailing Address

Kentucky Section AIPG
P.O. Box 24690
Lexington, KY 40524-4690

2011 EXECUTIVE COMMITTEE

President: Frank Ettensohn
President-elect: Charlie Mason
Vice President: Trent Garrison
Secretary: Tim Crumie
Treasurer: Donnie Lumm
Editor: Richard Smath

Newsletter

Get Involved

PROFESSIONAL DEVELOPMENT CONFERENCE

Summary Report and Recommendations

Introduction

The first professional development conference of the Kentucky Section of the American Institute of Professional Geologists (KY-AIPG), "Site Assessment and Remediation," is now complete and all indications are that it was a success. Treasurer, Donnie Lumm's preliminary count for the event is 71 paid and registered attendees, including representatives from 10 different states. I presume a summary of the financial elements of the event will be submitted in the next financial report, but first estimates indicate it was reasonably successful in that category as well.

The eight speakers uniformly commented that the turnout was much better than they had expected and that the attendees were interested and attentive. Discussions with numerous attendees indicated that the event was useful and that the information presented met or exceeded their expectations as well. Several enquired when the next session would be scheduled and evidenced interest in attending. Three others professed interest in participating, two from Indiana in geophysics (an area of reasonably high interest) and one locally in remediation technology, as potential presenters.



Survey of Potential Future Program Topics

As a part of the initial offering, a survey of potential future event topics was included to assess the interests of future participants. A total of 62 surveys on potential future professional development programs were returned, including those I received online. I have summarized the totals and added a list of topics that were suggested in addition to those listed on the pages following this report.

Of the topics listed in our survey, the following led the list as preferred future programs:

1. Aquifer Analysis and Interpretation
2. Karst Hydrogeology,
3. Geologic Controls on Contaminant Migration
4. Stratigraphic Analysis for Small Contaminated Sites.

As would be expected from the topic of our first event, the majority of attendees were interested in topics that deal heavily in areas applicable to environmental assessment and problem-solving. Groundwater flow in various geologic settings, aquifer analysis, and contaminant transport controls/prediction appear to be hot areas of interest for future sessions that would both fulfill our intent of upgrading professional competence and generate an economically self-sustaining program. Other general areas of significant interest appear to be surface and borehole geophysics applications, expert witness testimony, alternative energy technologies and cost-effectiveness (especially groundwater heat pump systems), and horizontal drilling technology.

Discussion

In keeping with earlier discussions with the KY-AIPG Executive Committee, I have prepared a suggested list of follow-up offerings in the program. These events would establish an overall plan for the Professional Development Program as a long-term activity of the Kentucky Section.

It is obvious that some topics are easily capable of absorbing a full-day session or more, while others are of more limited scope and interest. For that reason, I have included a program of high-interest offerings, such as the "Site Assessment and Remediation Technology" event just completed, alternating with other events that would be of more limited interest but of real value to professional geologists. Events of wider interest should provide the financial security to offer less remunerative or even no-profit topics that are of interest to fewer individuals but still vital to the professional practice in Kentucky and the surrounding states.

Using that philosophy, I propose that the KY-AIPG establish a program to offer at least two events a year, one of which would be of wide interest, such as the one just completed, and one for a smaller, more specialized audience. Topics of even more specialized interest but requiring smaller amounts of time (e.g. expert witness testimony, mineral reserve evaluation, mass wasting, etc.) can be included as either smaller components of one of the sessions of greater interest, or alternatively, could be offered as a grouping of multiple thematic sessions presented at a single event.

Sessions that should be considered as single-subject, or at least as lead sessions, include:

1. *Contaminated Site Assessment and Remediation.* (Repeatable yearly with changes in speakers and specific technologies presented to provide a financial base for the program).
2. *Karst Hydrogeology.* (A higher cost, full day's session with probably fewer attendees that would be more expensive with a paid presenter. It should be exercise-oriented but designed to be a break-even offering or minimum loss event.)
3. *Aquifer Analysis Techniques and Interpretation.* (Again a subject of high interest but potentially more expensive for the same reasons in 2, above).
4. *Groundwater Resource Development and Management.* (This program should include resource evaluation, well design and installation, well development technologies, safe yield assessment, wellhead protection, mechanisms for protecting recharge areas, etc.)

Other topics can be combined to offer a variety that could increase the attendance level and enhance financing for the program. Some examples of this type of event are:

A combination topic offering incorporating surface and borehole geophysics techniques and interpretation with another subject(s), e.g., expert witness testimony or horizontal drilling technology—Applications in energy and environmental remediation.

A combination course of mineral reserve evaluation and core and sample set description and analysis combined with mass wasting and engineering controls.

A combination offering including alternative energy technologies and cost effectiveness with preparation for ASBOG examinations.

The general philosophy of the program should be to finance the total program with one to three profitable events. However, the organization should *not become dependent* on the revenue from the program to finance our other activities.

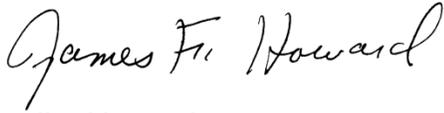
Objectives of the Program:

In line with the mission of AIPG to provide a platform for advocacy of the geosciences, promote ethical conduct of the practitioners of the geosciences and encourage professional competence in the application of our profession, the general purposes of the KY-AIPG Professional Development Program would be as follows:

1. Enhance the professional competence of the general geologic profession
2. Enhance the image of AIPG as an organization of competent professionals who wish to provide a needed service to the profession
3. Use the platform of the Professional Development Program to expand visibility of the geosciences and AIPG and ensure that the individuals practicing in the field are competent and ethical.

I am attaching a proposed three-year schedule of events and a specific proposal for karst hydrogeology as the second offering in the series. In the interest of time, I would like to open discussion using our Internet communication and place the overall program and the specific fall 2011 course offering on the agenda for discussion and approval at the next full meeting of the Executive Committee.

Respectfully submitted,



Jim Howard
Chairman, Outreach Committee

DARWIN LECTURE—DR. JACK HORNER



Nearly 1,000 people, many of them children, attended the Kentucky Section of the American Institute of Professional Geologists' third annual Darwin Lecture on February 10, 2011, to hear Dr. Jack Horner, curator of paleontology at the Museum of the Rockies, speak. The lecture, "How to Build a Dinosaur: Extinction Doesn't Have to Be Forever," was based upon Dr. Horner's book of the same name (Dutton Adult, 2009, \$12.99). Horner is somewhat of a celebrity-scientist, having been the real-life inspiration for the paleontologist in the Jurassic Park books and movies (he says he was the one who didn't get eaten!).

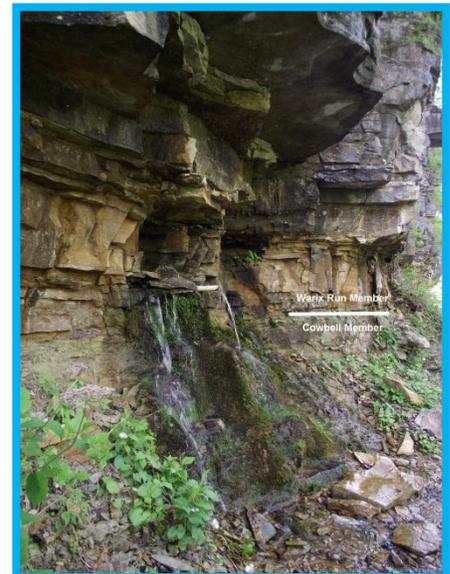


After the talk he fielded many questions from enthusiastic kids of all ages. After the question and answer sessions, Dr. Horner signed autographs and spoke at length to all who were interested.

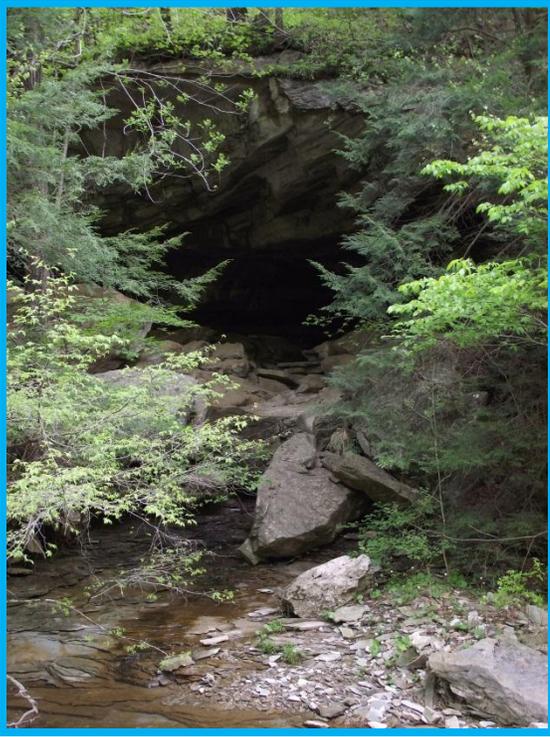
APRIL 30, 2011: KY-AIPG SPRING FIELD TRIP AND AWARDS BANQUET



Stop 1: Valley Stone Quarry.



Stop 2: Ky. 182, aquifer between the Warx Run and Cowbell Members.



Stop 3: Left—Laurel Cave on Cave Branch Creek is an example of a collapsed cave. Right—Bidirectional crossbedding in the Warix Run Member.



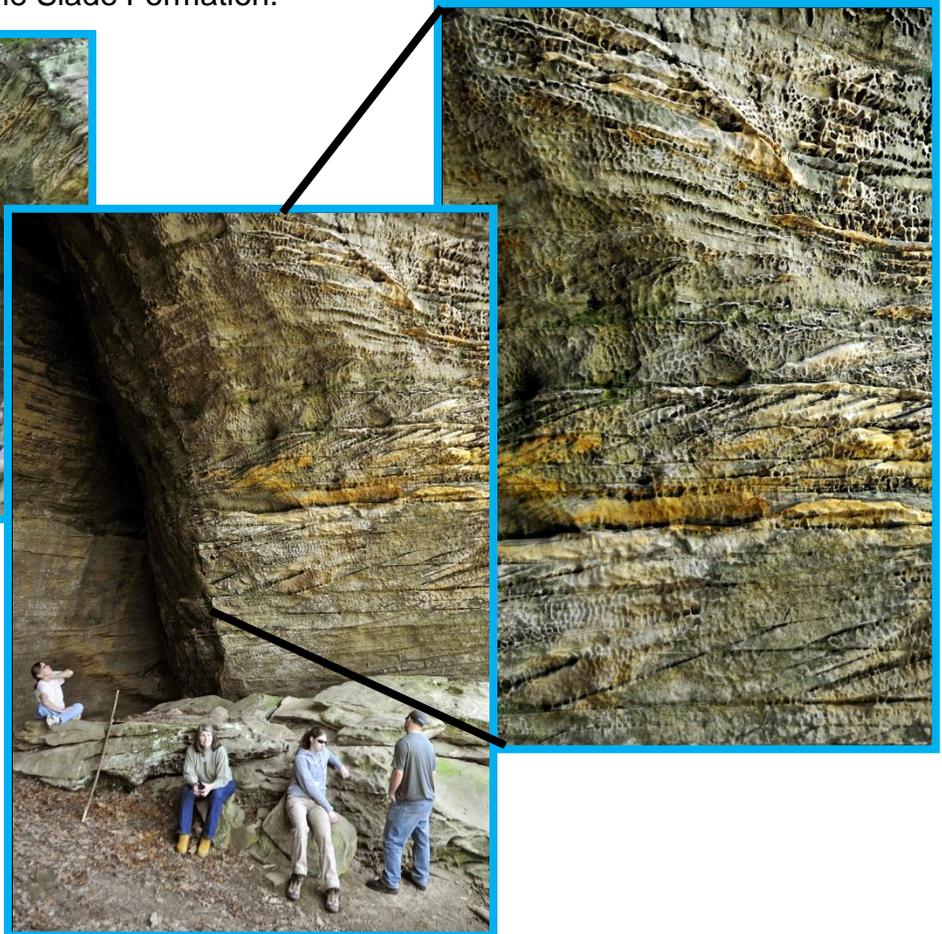
Stop 4: Carter Caves Natural Bridge (Warix Run Member) is a remnant of a former underground cave that followed Branch Creek. Photograph on left shows a vertical shaft where water once flowed from one level down to another.

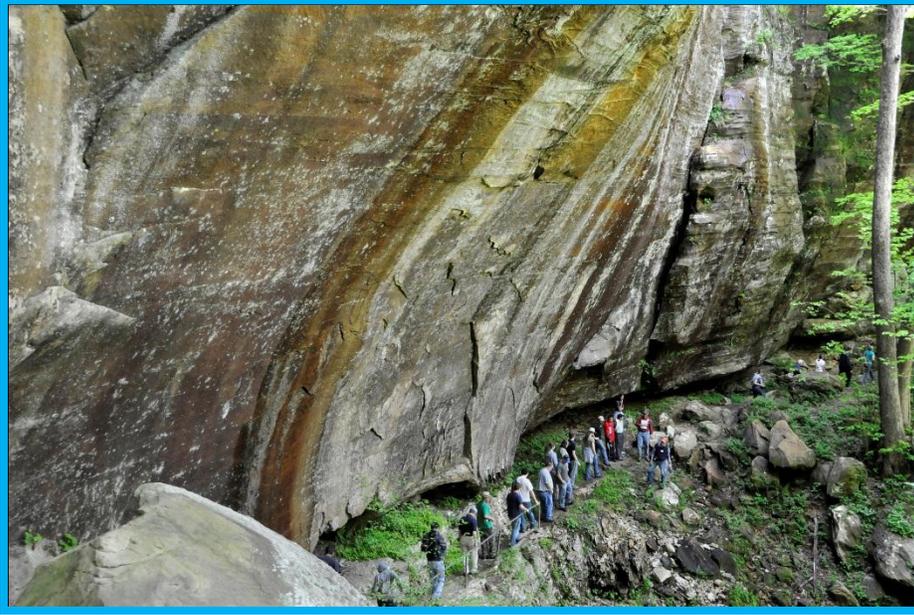


Stop 5: Smokey Bridge on Smokey Creek is the largest natural arch in Kentucky and wholly formed the Warix Run Member of the Slade Formation.

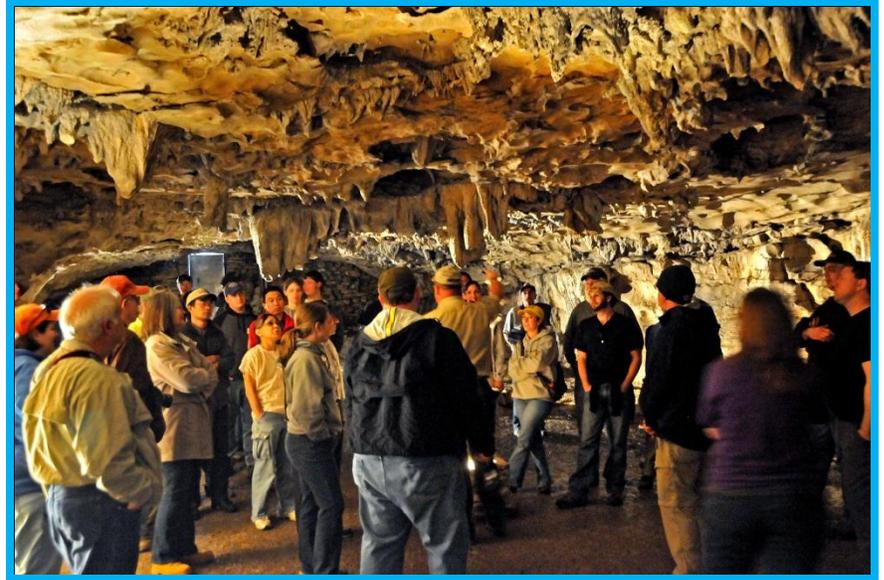
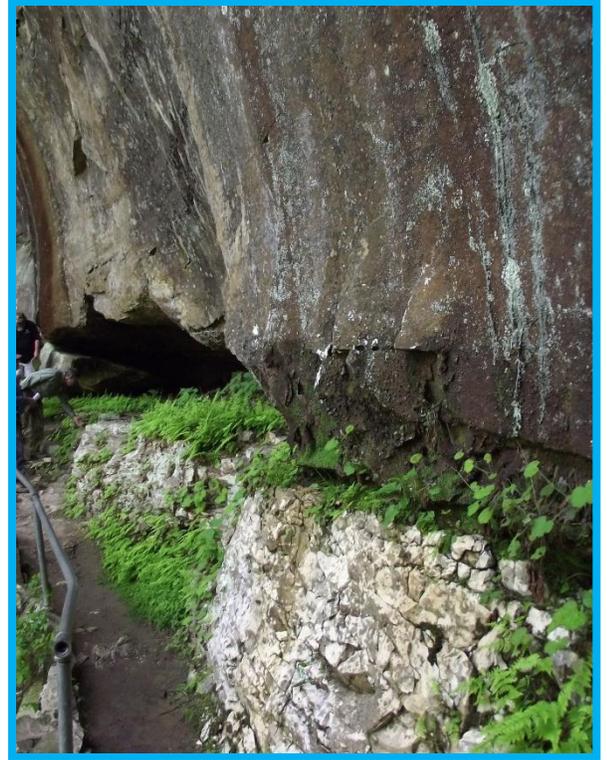


Stop 6: Cascade Bridge (collapsed cave) is formed within the Carter Caves Sandstone of the Paragon Formation. Note the crossbedding and boxwork weathering.





Stop 6: James Branch enters Box Canyon for a short distance, then sinks into the limestone cracks and fractures. Box Canyon is a karst solution valley and probably represents a large, collapsed trunk cave. Photograph on the right is the Carter Caves Sandstone sitting on top of the Tygarts Creek Limestone.



Stop 7: Left—The entrance to Cascade Cave. Right—Ranger Sam Plummer giving orientation on Cascade Cave (note the drapes and soda straws on the ceiling).



Stop 7: Left—Cascade Cave Lake and Hanging Gardens of King Solomon. Right—Cathedral Room.



Evening banquet and award presentations in the Cascade Cave State Resort Park, Lewis Caveland Lodge, Olive Hill Room. Left—Lifetime Achievement Award presented posthumously to Thomas Ryavek by Donnie Lumm. Center—Outstanding Geologist of the Year Award presented to Karen Thompson by Dr. James Cobb. Right—Past-president plaque presented to Dr. James Howard by Dr. Frank Ettensohn.



Presidential Certificate of Merit Awards presented by Dr. Frank Ettensohn. Left—Andy Mead, for his meritorious service and journalistic contributions to the natural sciences. Andy Mead was also our guest speaker, telling us about some of his experiences during his journalistic career at the *Lexington-Herald Leader*. Right—Richard Smath, for his meritorious service and outstanding contributions to the organization.



Left—Faith Fiene presented the Outstanding Science Fair award display to Kate Jones (not present). Right—Dr. Frank Etnsohn presented the Outstanding Geology Student award to Erika Neace, Morehead State University, in recognition of her scholastic achievement in the geologic science field. Trevor Strosnider, University of Kentucky, who could not attend, also received an Outstanding Student Achievement award.

(photographs taken by David Dockstader, Tim Crumbie, and Richard Smath)

OTHER ARTICLES OF INTEREST.....

Marsha L. Taylor Meyer, who is the Wellhead Protection Coordinator at the Louisville Water Company writes a lot of articles about the geology of Kentucky geared for those who are not geologists. Here are links for articles Marsha has written about the Ben E. Clements Mineral Museum in Marion, KY.

The first article: http://mtmeyer1.newsvine.com/_news/2010/12/03/5571680-foto-friday-ben-clements-trash

http://mtmeyer1.newsvine.com/_news/2011/07/23/7149259-weekend-exposure-ben-clements-mineral-museum-part-1

http://mtmeyer1.newsvine.com/_news/2011/07/24/7151621-weekend-exposure-more-pictures-from-the-ben-e-clements-museum-back-lighting-and-black-lighting

UPCOMING EVENTS.....

The second professional development conference, “Karst Hydrology,” will be held on October 19 and 20, 2011, at the Kentucky Geological Survey Well Sample and Core Library. More information, directions, and registration form can be found at <http://ky.aipg.org/Announcements.htm>.

The next Darwin Series lecture will be on February 16, 2012, at the University of Kentucky, Singletary Center for the Arts Recital Hall. Dr. Eugenie Scott, physical anthropologist, director for the National Center for Science Education, will be the guest speaker and her topic will be “Darwin: Demon or Revolutionary?”

Could the next KY-AIPG spring field trip be a Kentucky-Bahamas connection? Dr. Frank Etnensohn and Charlie Mason are considering a seven day field trip down to San Salvador Island to examine modern analogs to the 450-million year old rocks in central Kentucky. People interested in going will have to get themselves to Fort Lauderdale at their own cost, and then it will be an extra \$800–\$900.



In San Salvador, we will be based at Gerace Research Centre, for the study of archaeology, biology, geology, and marine science. It has separate barracks housing for students, faculty, and researchers. It has cafeterias that serve three fully prepared meals daily, and a snack bar for after hours. People interested in going should send Dr. Etnensohn an e-mail (fettens@uky.edu) so that he can get an idea if something like this could be possible.

END THOUGHTS.....

On the KY-AIPG website we have posted articles of geologic interest under Articles and Presentations by members and nonmembers. If you would like to write an article of geological interest to be posted on the KY-AIPG website, please observe the following:

1. These articles do not necessarily reflect the views of the members and this must be stated at the beginning of the article.
2. We encourage articles to be edited, but they do not have to be.
3. Any photographs or diagrams must be the personal property of the author or must have approval from the contributor.
4. If other people are identifiable in the photograph, you should have their permission for their image to be posted on the website.
5. Images or photographs used from another website must have the permission or approval from the owner before we can post the article.
6. Always properly cite the image or photograph.

You can submit your article, in Word, PDF, or PowerPoint format, to Richard Smath (rsmath@uky.edu). Any questions, please feel free to contact me.

Any errors found in this newsletter shud come as no surprise.