

K W I Conduit

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<http://www.uakron.edu/geology/karstwaters/conduits.html>

Printed copies of the KWI Conduit are available for exchange with other karst organizations. News contributions and articles of interest should be submitted to the Editor (see below)

Please access our current list of Officers and Board of Directors at

<http://www.uakron.edu/geology/karstwaters/board.html>

For information on ordering KWI publications, please visit our publications home page at

<http://www.uakron.edu/geology/karstwaters/publist.html>

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Article and Announcement Submission Guidelines:

Articles relevant to the mission of the Karst Waters Institute are encouraged to be submitted to the editor. The KWI strives to use the Conduit as medium to educate and inform professionals and the public about the efficient management of karst water systems. As such the content of Conduit is meant to be informational and educational rather than serve to advocate stances on a particular issue.

Submissions are preferred via e-mail as a MS Word or plain text file. Alternatively, submissions may be made via 3.5" diskette and hard copy at the address below. Photographs, figures, and diagrams are encouraged and welcomed (JPEG format preferred).

For more information feel free to contact the editor.

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Obtaining the KWI Conduit as an Application File

The KWI Conduit may be obtained as an application file by contacting the editor. Requests for specific formats (e.g., MS Word, WordPerfect, Word Star, etc.) will be accommodated when possible. Unless otherwise indicated the file will be delivered as plain ASCII text. All requests will be fulfilled via e-mail delivery.

Editor's Comments

First of all, I wish to thank all of those who sent me suggestions and comments after the publication of the last issue of the Spring 1998 Conduit. The Spring 1998 issue represented two firsts for the Conduit: 1) my first issue as editor and 2) the first time the Conduit was published exclusively in an electronic format. Your feedback has provided valuable insight into how these changes have been received, and how future issues could be improved. The response to the new format was quite positive, and with this issue I have attempted to build on that. Looking toward the future, I hope to include more graphics and photos related to the articles in each issue. However, I wish to maintain a format that is quickly and easily downloadable for all readers, especially those still relying on slow internet connections. I would welcome any suggestions on how these goals can be balanced in a way that would improve the quality of the Conduit for everyone.

In this issue of the Conduit you will find comments from KWI President Dave Culver. Dave provides an update on the internal

happenings of the KWI and formally announces a new KWI program: The Annual Karst Awards Dinner. In the Conference Notes section, a summary of the very successful Friends of Karst Meeting in September at Mammoth Cave National Park is provided by Alan Glennon. Also in the Conference Notes section you will find information on other upcoming karst-related conferences including the KWI Symposium of Karst Modelling in February 1999. The Karst Notes section contains an introduction to the web publication of Attila Kosa's Multilingual Caver's Dictionary and a proposed session on cave sediments at next year's Geological Society of America Annual Meeting.

As always, your suggestions and comments regarding any aspect of the KWI Conduit or the Karst Waters Institute are welcome. I also encourage you to pass word of the Conduit along to those who are still not on our distribution list.

Best Regards,
Toby Dogwiler

President's Comments

Dave Culver

It has been a busy time for KWI since its last Board meeting in March. (We in KWI seem to have fallen into the practice of not only using calendar years and academic years, which begin in September for most of us, but also KWI years, which begin in March). The biggest personnel change has been the addition of Dr. Horton H. Hobbs III as Vice President for Education. Horton got off to a good start with a karst site planning workshop in Lewisburg, West Virginia for employees of The Nature Conservancy. It was very much a KWI effort, as Hobbs was assisted by KWIers Culver, Herman, Jones, Kane, and White. Horton is exploring the possibilities of repeating the workshop in another region, possibly Indiana.

The Communications Department under the able leadership of Dr. Ira Sasowsky continued to oversee the production of high quality KWI publications--including the long awaited Karst Hydrology Atlas of West Virginia, written Bill Jones, the co-founder of KWI. The next big

event is the karst modeling conference in February, 1999. This is described in more detail elsewhere in The Conduit. I just briefly mention the extraordinary success of both Jack Hess and Art Palmer in obtaining three external grants for support of the conference.

The Research Committee under the direction of Dr. Will White oversaw the resubmission of a major grant proposal to the National Science Foundation for a interdisciplinary study of a karst basin. This also was very much a group effort, with co-PI's Culver, Herman, Hess, Kane, and White, KWIers one and all. We have not yet heard about the outcome. A small research grant from The Nature Conservancy was awarded to Culver and Hobbs. This was to aid in the completion of a county list of all cave-limited species in the U.S.

Finally, I am delighted to announce the First Annual Karst Awards Dinner. It will honor Dr. Derek Ford, world-renowned karst scientist and raconteur. Derek will give the banquet speech as well as receive the award. It will be on Saturday, March 13, 1999, at "Claymont", which is one of the old Washington homes near Charles Town,

West Virginia. The dinner will be \$50 per person. This is an excellent way to both honor Derek and to support KWI. More information will be forthcoming, but please e-mail me (dculver@american.edu) or write me at KWI if you have any questions.

Recent Karst Publications

Karst Water Resources

by *Neven Kresic*

July 1998, CRC Press
c. 384 pp. (1) CD ROM
\$89.95

Neven Kresic's new book, *Karst Water Resources* is divided into three parts: 1) Description, 2) Evaluation, and 3) Protection of karst water resources. The book is designed as a reference for scientists and professionals involved in the development and management of karst aquifers. *Karst Water Resources* is accompanied by a CD ROM Image Library containing original slides, maps, and satellite and aerial images of karst features. More information about the book can be found at the following location:

<http://www.crcpress.com/search> (search for 'Karst Water Resources')

Karst Hydrology Atlas of West Virginia

by *Bill Jones*

1997, KWI Special Publications 4
111 pp.
\$35.00

The *Karst Hydrology Atlas of West Virginia* compiles the known dye test and cave survey data from West Virginia so as to describe the current knowledge of the karst drainage basins of the state. A number of experienced cavers assisted in obtaining the most accurate and up-to-date data. This large format (11" x 14") book is soft cover and wire bound. The publication consists of two parts; the first deals with the basics of karst hydrology while the second provides detailed results from individual karst drainage basins. The book is illustrated with numerous photographs, charts, diagrams, tables, and maps presenting the karst data of West Virginia.

To see the table of contents follow this link:
<http://www.uakron.edu/geology/karstwaters/sp4toc.html>

Ordering information

\$35 (postage included) from:
KWI Publications Sales
Attn: E.L.White
RD. 1, Box 527
Miller Rd.
Petersburg, PA 16669-9211
USA

Karst Notes

Multilingual Cavers Dictionary

The UIS Informatics Commission has established a new Caver's Dictionary Working Group. The working group evolved in response to a desire among some members of the international karst community to expand upon a Multilingual Caver's Dictionary that has been compiled and maintained by Attila Kosa for the past 30 years. The working group will be chaired by Kosa and will be responsible for updating and expanding the dictionary. The latest version of the dictionary is maintained by the working group at the following URL:

<http://rubens.its.unimelb.edu.au/~pgm/uisic/lexintro.html>. All cavers and speleologists are encouraged to participate in the ongoing expansion of the dictionary.

Updates, additions, and suggestions may be directed toward:

Attila Kosa (kosaatti@mail.mata.vu.hu)
Please make prior arrangements before sending long e-mails.

Session on Karst Sediments Proposed for Fall 1999 GSA Annual Meeting

Ira D. Sasowsky and John E. Mylroie

A draft proposal for a topical session at the Fall 1999 Geological Society of America Annual Meeting in Denver, Colorado, has been submitted by Ira Sasowsky and John Mylroie. The session will be entitled 'Sediments in Karst Systems:

Processes, Mechanisms, Interpretation' and will encompass both chemical sediments (speleothems) and clastic sediments. The search for fruitful sources of information on past hydrologic, environmental, climatic, and geomorphic conditions has brought researchers with many different backgrounds and perspectives to work in a common environment: karst. Cave sediments, both clastic and chemical (speleothems), have become widely recognized as potentially useful recorders of such information. In addition, clastic sediments in karst aquifers may serve as repositories or transport media for environmental contamination. The goal of this Session is to bring together those interested in karst sediments who might not otherwise have a chance to interact, and to provide a forum for discussion of new research directions. Participants are expected from disciplines including: sedimentary processes, paleoclimatology, hydrogeology, surficial processes, paleomagnetism, chemistry, geochemistry, physics, desert hydrology, geomorphology, paleontology, and biology. A morning oral session (limited to about 15 papers), and an afternoon poster session will be proposed. Additionally, a pre-meeting one-day field trip may be organized.

Further info will be forthcoming as it becomes available. Please contact either of us with thoughts, questions, or suggestions.

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(mylroie@Geosci.msstate.edu)

Conference Notes

Summary of Friends of Karst Meeting: Karst Processes and the Global Carbon Cycle

23-25 September 1998
Mammoth Cave, Kentucky, USA

Alan Glennon

A joint meeting of the Friends of Karst and The International Geological Correlation Program Project 379: "Karst Processes and the Global Carbon Cycle" took place on September 23rd, 24th, and 25th, 1998, at Mammoth Cave, Kentucky. The conference included two days of presentations on all aspects of karst science with major sections discussing karst's role in the global carbon cycle. A third day consisted of field trips in and around the Mammoth Cave area. The conference attracted many of the world's leading karst scientists with one-hundred and thirty people in attendance and nineteen countries represented.

Over the years, the Mammoth Cave region has attracted many explorers and scientists, and a significant body of karst science has evolved from studies there. Understanding water-rock interactions provides a common theme of interest for scientists interested in global carbon cycling as well as those who study the development of caves and karst. Traditionally, however, there has been limited interaction between these groups. The purpose of this meeting was to bring together scientists from a variety of disciplines to share ideas and insights developed through a variety of experiences and research paths.

The meeting was kicked off with Art Palmer, Will White, Bet White, Ralph Ewers, Daryl Granger, Nick Crawford, and Chris Groves each discussing the latest developments of karst science in the Mammoth Cave area. For the rest of the presentations, concurrent sessions were held emphasizing the global carbon cycle, resource management, and other aspects of world karst science. Speakers ranged from environmental consultants and cavers to geochemists. During two days of talks, sixty-one presentations were given. American graduate students took advantage

of the chance to present their research to an international audience. Graduate students presented from Western Kentucky University, Penn State University, Eastern Kentucky University, Buffalo State University, the University of Georgia, and the State University of New York at Oneonta.

Following the first day's talks and a dinner at Park Mammoth Resort, over a hundred karst scientists entered Mammoth Cave to follow the Half-Day/Grand Avenue Tour Route. The group talked and argued cave geology with occasional stops by leaders Art Palmer, Will White, Derek Ford, and Ralph Ewers. One participant predicted that if the cave ceiling collapsed, karst science would be set back decades.

The second day was followed with an evening at Lost River Cave in Bowling Green. During the 1920's, a dance floor was constructed in the cave's large mouth. For this event, the dance floor was converted to a dining room. Tables and catering allowed for subterranean dining which was followed by underground boat rides down the Lost River.

The last day of the conference was devoted to field trips around Mammoth Cave and Bowling Green. Several groups headed underground inside Mammoth Cave, while two groups stayed above ground. Below ground, Derek Ford and Roger McClure led a 'Geology and Speleogenesis of Flint Ridge' trip through the Crystal Cave tourist route and later to the area near the Austin entrance. Steve Worthington, Roger Brucker, and John Mylroie led a similar geology trip to Echo River from the elevator and later to the Crystal Cave tour route. From the Austin Entrance, Art Palmer, Peg Palmer, Richard Zopf, and Tom Brucker led the 'Geology of the Mammoth-Flint Ridge Connection' trip. Above ground, Nick Crawford and Al Ogden spent the day focusing on karst problems in the urban setting. The other group, led by Ralph Ewers, the Whites, and Joe Ray, discussed the regional hydrogeology of the Mammoth Cave system. The conference allowed scientists studying all aspects of karst and carbonate geochemistry to meet, interact, and share ideas, all with the backdrop of the world's longest cave.

To document the conference, the meeting's web site contains a listing of presentation abstracts, participants, and descriptions of the field trips, as well as links for those interested in international karst research. The web site can be found at:

<http://www2.wku.edu/www/~grovecg/>.

The Center for Cave and Karst Studies would like to thank the participants and sponsors for making the meeting such a success. The conference was hosted by the Center for Cave and Karst Studies and Mammoth Cave National Park with assistance from the Karst Waters Institute, Western Kentucky University, Mammoth Cave National Park, the National Park Service Office of International Affairs, and the Cave Research Foundation.

KWI Symposium on Karst Modeling

24-27 February 1999

Charlottesville, Virginia, USA

Arthur N. Palmer

Hydrologic and land-use problems in karst are difficult to solve even by those with considerable understanding of karst processes. And yet, professionals are frequently asked to solve these problems regardless of their background in the subject. Traditional geologic and hydrologic procedures developed for non-karst regions usually produce bogus results, and no approach is more susceptible to flawed interpretations than computer modeling.

Do computer groundwater models work in karst? Most karst specialists would answer with an emphatic "no." But karst modeling extends far beyond computer analysis, and computer models themselves have many more applications than predicting the future. Karst modeling must begin with a conceptual view of the origin, nature, and distribution of karst porosity. Such conceptual models provide the greatest step toward attacking karst problems. Digital models have little value as predictive tools in karst, because too little is known about local porosity to make them work properly. But even these models can clarify the behavior of idealized karst phenomena. Specialized models can examine the evolution of karst aquifers and the hydrochemical processes that

control their development. Finally, digital models can be used to test the feasibility of assumptions made about the distribution of karst porosity.

To explore these topics, the Karst Waters Institute will host a symposium entitled "Karst Modeling," which will bring together specialists in several complementary fields: traditional groundwater modelers from government agencies, private consulting firms, and universities; karst specialists concerned with dissolution processes, field applications, and statistical quantification of karst features; and professionals who are faced with the task of solving karst problems. The goal of the symposium is to provide a framework within which the many confusing and sometimes conflicting bits of field data can be organized. Presentations will not attempt to focus on the cutting edge of esoteric techniques, but instead to draw together what we know about karst modeling in a coherent and easily accessible form. The proceedings volume will consist of extended abstracts or short papers arranged in a logical progression so that professionals can use it as a guide to future field problems. Keynote presentations will be given by invited specialists on the following subjects:

- Digital modeling and its application to karst.
- Conceptual karst models based upon geochemical principles and geologic setting.
- Karst field methods: pumping tests, tracer tests, etc.
- Statistical analysis of karst features.

Hardware models and their limitations. Shorter presentations and a poster session will be devoted to case histories, which will serve as the foundation for panel discussions to determine the most feasible approaches to real problems. To date, approximately 50 talks and posters have been contributed, and a substantial symposium volume is taking shape.

A field trip to the Appalachian Mountains of Virginia and West Virginia will provide an opportunity to examine and discuss the complexities of karst modeling. In case of inhospitable weather, most of the field trip will be underground.

The symposium will be held at the Omni Charlottesville Hotel, in Charlottesville, Virginia, February 24-27, 1999. Estimated cost will be \$200 (including registration, field trip, symposium volume, and banquet). A lower student rate will be available. For further information, contact either of the co-chairs: Arthur N. Palmer (palmeran@oneonta.edu) or William K. Jones (wjones@intrepid.net), or write:

Karst Waters Institute
P.O. Box 490
Charles Town, WV 25414-0490.

We wish to thank the National Science Foundation, U.S. Army Research Office (Corps of Engineers Waterways Experiment Station), and the American Chemical Society (Petroleum Research Fund) for their financial support.

7th Multidisciplinary Conference on Sinkholes

10-14 April 1999

Harrisburg, Pennsylvania, USA

The Seventh Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst™ will be held 10-14 April 1999, in Harrisburg, Pennsylvania. An introductory course on the practical aspects of karst hydrogeology will be offered during the first day of the conference followed by a field trip the next day. Three days of technical sessions will follow the short course and field trip. Papers on all practical aspects of karst geology, hydrogeology, and engineering geology are welcome. For further information visit the conference web site:

<http://www.uakron.edu/geology/karstwaters/7th.html>

or contact:

Ms. Gayle Herring
P.E. LaMoreaux and Associates, Inc.

106 Administration Rd., Oak Ridge, Tennessee
T: 423-483-7483 F: 423-483-7639
E-mail: pelaor@usit.net

Conference Schedule and Paper Deadlines:

- Manuscript deadline - 11 December 1998
- Abstract deadline - 21 August 1998
- Short Course on Saturday - 10 April 1999
- Field Trip on Sunday - 11 April 1999
- Technical Sessions on Monday through Wednesday - 12-14 April 1999

1st International Conference on Sustainable Development in Karst Regions

24-27 August 2001
Beijing, China

The Geological Society of China and other scientific communities are planning the 'First International Conference on Sustainable Development in Karst Regions' in August 24-27, 2001, in Beijing, China. The conference is being hosted by over twenty Chinese scientific organizations concerned with geology, geography, agriculture, environmental issues, etc. Primary among these organizations are the Chinese Geological Society, the Chinese Geographical Society, the Chinese Geological Hazard Society, and the China International Conference Center for Science and Technology.

Discussions and presentations at the conference will deal with issues germane to the sustainable development of karst regions. The topics will include:

- Evaluation, protection and reasonable exploitation of the water resources in karst regions
- Ecological system, soil erosion and related protection measures in karst regions
- Comprehensive development and protection of main resources in karst regions
- Geo-ecological environmental impacts from water conservancy and water power projects with large scale in karst regions
- Geo-ecological environmental impacts caused by communication, urban and other constructions in karst regions
- Means of agriculture Development in karst regions;

- Exploitation and protection of cave systems.

Before and after the conference, a total of four field trips will be organized to investigate typical karst regions in the Guangxi Zhuang Autonomous Region, the Guizhou Province, the Sichuan Province, and the Three Gorges of the Yangtze River. Also included will be visits to related water power stations, thermal springs, some tourist caves, and examples of treatment strategies for some karst geological hazards.

For More information contact:

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Upcoming Events of Interest for the Karst Community

KWI Symposium on Karst Modeling

24-27 February 1999

Charlottesville, Virginia, USA

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25414-0490

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See more Information in this edition of the
Conduit

7th Multidisciplinary Conference on Sinkholes

10-14 April 1999

Harrisburg, Pennsylvania, USA

Contact: Ms. Gayle Herring, P.E. LaMoreaux and
Associates, Inc., 106 Administration Rd., Oak
Ridge, Tennessee

Phone: (423) 483-7483, Fax: 483-7639

pelaor@usit.net

<http://www.uakron.edu/geology/karstwaters/7th.html>

First Meeting of Geology in the Nerja Cave

17-20 June 1999

Malaga, southern Spain

Contact: Bartolome Andreo-Navarro,
Departamento de Geologia, Facultad de
Ciencias, Universidad de Malaga, 29071
Malaga, Spain

Phone: 34-5-2132004, Fax: 34-5-2132000

Andreo@uma.es

National Speleological Society Convention

July 12-16, 1999

Filer, Idaho, USA

Contact: David W. Kesner, PO Box 1334, Boise,
ID 83701

Phone: (208) 939-0979

drdave@micron.net

9th International Symposium on Vulcano-speleology of the IUS

Sept. 12-18, 1999

Catania, Italy

Contact: Giuseppe M. LICITRA - Centrol
Speleologico Etneo Via Cagliari, 15, 95127
CATANIA

licitra@mail.asianet.it

KARST'2000 International Symposium and Field Seminar on Present State and Future Trends of Karst Studies

17-26 September 2000

Marmaris, Turkey

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Center for Karst Water Resources (UKAM),
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First International Conference on Sustainable Development in Karst Regions

24-27 August 2001

Beijing, China

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Conduit