Table of Contents

Current Officers of the Karst Waters Institute ................................. 2
Current Board Members of the Karst Waters Institute .................... 2
Welcome Back to the Conduit ..................................................... 3
Recent Meetings of the Karst Waters Institute and the Board ............ 3
2009 Annual Awards Banquet .................................................... 4
New Happenings in KWI and the Karst Community ......................... 4
Karst Waters Institute Publications Now Available ....................... 5
Recent KWI Conference ............................................................ 7
Upcoming Meetings .................................................................... 8
Educational Opportunities ........................................................... 8
The Karst Waters Institute Mission .............................................. 9

Current Officers of the Karst Waters Institute

President
Dr. Daniel W. Fong
Department of Biology
American University
Washington, DC

Executive Vice President
Dr. William B. White
210 Materials Research Lab
Penn State University
University Park, PA

Vice President for Education
Dr. Horton H. Hobbs, III
Dept. of Biology
Wittenberg University
Springfield, OH

Vice President for Research
Dr. Carol Wicks
Department of Geology & Geophysics
Louisiana State University
Baton Rouge, LA

Vice President for Communications
Dr. Annette Summers Engel
Department of Geology & Geophysics
Louisiana State University
Baton Rouge, LA

Vice President for Development
Mr. Robert Cronk
c/o Karst Waters Institute
PO Box 4142
Leesburg, VA

Comptroller
Dr. David C. Culver
Dept. of Biology
The American University
Washington, DC

Secretary
Dr. Carol Wicks
Department of Geology & Geophysics
Louisiana State University
Baton Rouge, LA

Current Board Members

Chairman of the Board
Mr. William K. Jones
P. O. Box 4142
Leesburg, VA

Dr. John W. Hess
Geological Society of America
Boulder, CO

Ms. Emily Davis
Speleobooks
Schoharie, NY

Dr. Horton H. Hobbs, III
Dept. of Biology
Wittenberg University
Springfield, OH

Mr. Robert N. Cronk
c/o Karst Waters Institute
Leesburg, VA

Dr. Jonathan B. Martin
Dept. of Geology
University of Florida
Gainesville, FL

Ms. Annette Davis
Speleobooks
Schoharie, NY

Dr. Paul J. Moore
ExxonMobil
Houston, Texas

Mr. Harvey Duchene
HNK Energy LLC
Boulder, Colorado

Dr. John Mylroie
Dept. of Geosciences
Mississippi State University
 Starkville, MS

Dr. Dr. Annette Summers Engel
Dept. of Geology and Geophysics
Louisiana State University
Baton Rouge, LA

Dr. Dorothy Vesper
Dept. of Geology
West Virginia State University

Dr. Dr. Annette Summers Engel
Dept. of Geology and Geophysics
Louisiana State University
Baton Rouge, LA

Dr. William B. White
Penn State University
University Park, PA

Dr. Carol M. Wicks
Dept. of Geology and Geophysics
Louisiana State University
Baton Rouge, LA

Dr. John Mylroie
Dept. of Geosciences
Mississippi State University
Starkville, MS

Dr. Dr. Annette Summers Engel
Dept. of Geology and Geophysics
Louisiana State University
Baton Rouge, LA

Dr. William B. White
Penn State University
University Park, PA

Dr. Carol M. Wicks
Dept. of Geology and Geophysics
Louisiana State University
Baton Rouge, LA

Front cover: Looking out a window in Dimnice cave, Slovenia. Photo by Annette Summers Engel.

Photographs throughout newsletter are by A.S. Engel.
Welcome back to The Conduit

There’s no denying that we live in a news-bombarded society, and there’s little ‘new’ in the news. So, serious thought went into whether or not Karst Waters Institute enthusiasts needed a resurrected Conduit. But, communication is important. For a virtual organization like the Karst Waters Institute, communication between the organization’s leadership, members, and potential devotees becomes even more vital. This new issue of The Conduit is a hybrid between the former Conduit and recent quarterly electronic announcements sent to KWI Mailing List subscribers. Welcome to the first Conduit in nine years!

The purpose of The Conduit was always to provide information about latest Institute events. The Conduit began as a simple photocopied publication, the Karst Waters Institute Newsletter, in March, 1992. In 1993, the newsletter became a more substantial publication, The Conduit, through the support provided by P. E. LaMoreaux and Associates. The Conduit was freely distributed, and although some funds were raised, it began to cost the KWI money. In 1996, the Board decided that continuing to produce The Conduit in print was cost-prohibitive, and that was when it went to a predominately web-circulated and web-interfaced newsletter. The Conduit ran until spring 2000 (volume 8, number 1).

Subscriptions to the KWI Mailing List have steadily grown in recent year. As of July 1, 2009, there were 701 people on the list, representing cavers, karst scientists, and other folks interested in the mission of KWI. For those of you who don’t know the KWI mission, it is reprinted on page 9, or visit http://www.karstwaters.org. As with this issue, future distribution of The Conduit will be done through a quarterly announcement to the mailing list subscribers and The Conduit will be posted on the KWI website as a pdf file. The Conduit can be viewed or printed using free Adobe Acrobat software.

Please continue to spread news about the Karst Waters Institute to your friends. KWI is an active organization. There are new publications to buy, conferences to attend, and upcoming events for which you can volunteer your time and expertise. Send ideas and comments to me, the Vice President for Communications (vp_communications@karstwaters.org), or any officer of the Institute. Future articles, reports, and news of interest that relates to the mission and development of KWI are encouraged.

-- Annette Summers Engel

Recent Meetings of the Karst Waters Institute and Board

The Karst Waters Institute continues to make great strides in promoting its mission of improving the fundamental understanding of karst water systems through sound scientific research and the education of professionals and the public. KWI met in Warm Springs, Virginia, during March 21-22, 2009. There were two separate meetings, one for the Institute and one for the Board of Directors. The Institute meeting discussed past, current, and future KWI operations and activities, and the Departments (Communications, Development, and Education) delivered reports and proposed items requiring Board action.

The KWI continues to separate Institute activities from the role of the KWI Board, which is an oversight body. Currently, there are still a number of Board members that have a significant role in Institute operations. But, KWI is not a membership organization. So, to begin to attract additional people to the organization and to continue with Institute/Board separation efforts, the Board approved new bylaws to include an Associate category within the Institute. An Associate of KWI would be appointed to the various Departments and play key roles in the operation of certain Institute tasks, such as conference committees, education and outreach opportunities, or communication activities. Two new Associates were approved: Mr. Scott Engel, Production Editor, and Dr. Katharina Dittmar de la Cruz, Webmaster, both to the Communications Department.

Another structural change to the organization was the creation of a Comptroller position as an executive position in the Institute to continue to separate the finances of the Institute and Board. Dr. Daniel Fong was reelected as Institute President, and Dr. William White was reelected as new Executive Vice President. Dr. Dave Culver was elected to position of Institute Comptroller, and Dr. Carol Wicks was elected as the Vice President for Research, Dr. Horton H. Hobbs III as the Vice President for Education, Mr. Robert Cronk as the Vice President for Development, and Dr. Annette Summers Engel as the Vice President for Communications. Dr. John Mylroie was elected as the Board Treasurer, and Dr. Carol Wicks was elected as Secretary, and Mr. William (Bill) Jones continues as the Chairman of the Board.

Three new Directors of the Board were elected. Dr. Dorothy Vesper is an assistant professor in the Department of Geology & Geography at West Virginia University. Her main research interests include all-scales of water research, including how small-scale geochemical processes control large-scale water quality issues. Mr. Harvey Duchene is the owner of HNK Energy LLC, and is a specialist in cave inventory, hypogenic caves, paleokarst, the relationship between karst development and tectonism, and the mineralogy of caves. Dr. Paul J. (PJ) Moore is a geologist with ExxonMobil, where he studies how karst processes affect carbonate reservoir quality and predictability, and specifically the distribution and magnitudes of porosity and permeability in carbonate rocks.
Sixty-six people, including board members and guests, attended the 2009 Karst Waters Institute Award dinner in Warm Springs, Virginia, held at the Homestead Preserve “Old Dairy Barn.” The guest of honor was Professor Janet Herman, who received the Karst Award. Dr. Herman is a Professor and Director of the Program of Interdisciplinary Research in Contaminant Hydrogeology, Department of Environmental Science at the University of Virginia.

Other award recipients included Miss Cassie Gray, Louisiana State University, Department of Geology and Geophysics, who received the William L. Wilson Scholarship for Karst Science, Dr. Ira Sasowsky for 16 years of dedicated service to the Karst Waters Institute with a “Droplet” from the KWI President, and Dr. Lee Elliott for the KWI Distinguished Service Award.

## New Happenings in KWI and the Karst Community

### KWI Reception at the International Congress of Speleology (ICS), Kerrville, Texas

During the ICS meeting, everyone is invited to a casual meet-and-greet Reception, July 21, starting at 7 pm, in the CAC Ballroom on the Schreiner University campus. You will be able to meet with KWI board members and officers, and to learn about the past accomplishments and current and future projects of KWI. Light refreshments will be served.

This reception is co-hosted by the Cave Research Foundation and the National Cave and Karst Research Institute.

### KWI on Facebook

A new group was created on Facebook for the Karst Waters Institute. Anyone with a Facebook account is welcome to join and to contribute to the Discussion Board and post pictures. KWI events will be announced periodically to members of the group.

---

**Dianne Gillespie, 1st Education Director for the National Cave and Karst Research Institute (NCKRI)**

-- Submitted by Dr. George Veni, Executive Director, National Cave and Karst Research Institute

NCKRI has taken it first major step in developing it Education Program. Dianne Gillespie was hired as NCKRI’s first Education Director. She began work on June 22nd and brings with her a wealth of teaching experience from Kentucky and Tennessee, where she conducted and assisted with cave and karst education programs with the National Park Service, American Cave Conservation Association, and Western Kentucky University, among others. Ms. Gillespie holds a Masters degree in education, with a focus on science and history, and is the Education Division Chief of the National Speleological Society. She is an active and experienced cave explorer and surveyor, and also brings a diverse and creative set of talents to NCKRI through her decade of theatrical and television production experience.

Less than one month after getting settled into her new duty station at NCKRI, located in Carlsbad, New Mexico, Ms. Gillespie will begin a nationwide tour of cave, karst, science, and environmental science museums, research institutes, and university programs. Her first stop will be in Texas at the 15th International Congress of Speleology. The purpose of this tour will be to develop ideas from which to build NCKRI’s Education Program and Museum while establishing partnerships to enhance cave and karst education in the U.S. and internationally.

KWI does not share its email list with any individuals or organizations..., ever.
Karst Waters Institute Publications Now Available

Digital Reprint Series (on CD): These reprints range from scanned, complete publication runs to out-of-print hardcopy books. Files are in PDF format on the CD-ROMs. The publications may be viewed on a computer using (free) Adobe Acrobat software, and printed in part or in whole. $15 + shipping & handling.

DR 1 (2007) Speleochronos, Volumes 1 to 10 (364 pages) ISSN 1372-6919
Reproductions of the journal published by the Centre d’etudes et Recherches Appliques au karst, 1989-1999 Articles are primarily in French, and focus on the use of cave deposits for climate studies, hydrology, and neotectonics.

Reproduction of the book edited by Pavel Bosak et al., and published by Elsevier/Academia in 1989. This is a seminal text covering paleokarst of many regions, as well as fundamental problems and ore deposits.


DR 4 (2009) Palaeokarsts and palaeokarstic reservoirs (158 pages)


Special Publication 13, Frontiers of Karst Research
( Jon Martin & William B. White, editors)
This 2008 publication is the result of a KWI workshop held in May, 2008, in San Antonio, Texas. The report contains three parts: Part I is the overview of “Opportunities & Recommendations, The Future Frontier;” Part II contains seven state-of-the-art, “Today’s Frontier,” papers presented at the workshop; and Part III consists of the seven reports, “Findings and Recommendations,” from the workshop.
$38 + shipping & handling Thanks to the generosity of numerous funding agencies, this publication can also be downloaded for free from http://www.karstwaters.org

Special Publication 14, Karst from Recent to Reservoirs
( Ira D. Sasowsky, Charles T. Fenzel, John E. Mylroie, Arthur N. Palmer, Margaret V. Palmer, editors)
This 2008 publication provides a compilation of extended abstracts for invited talks and contributed posters from this conference, which is described on page 7 of this newsletter. Topics span classification and types of paleokarst, the architecture and recovery behavior of paleokarst reservoirs, case studies of paleokarst around the world, and hypogenic processes.
$60 + shipping & handling

Visit http://www.karstwaters.org for more information and ordering through Paypal.
Upcoming Publication

Special Publication 15, Select Field Guides to Cave and Karst Lands of the United States (Annette Summers Engel & Scott A. Engel, editors)

This title will be released in July, 2009.

This book is a new project for the Karst Waters Institute. The main goal of the book is to provide an educational ensemble of detailed, authoritative field guides for cave and karst areas of the United States. The book includes seven previously published field guides that were included in Special Publications originally associated with conferences sponsored by the Karst Waters Institute. To broaden the scope, five new and two previously unpublished guides were written by members of the Karst Waters Institute. The guides focus on predominately the geology and hydrology of a specific region, but cultural history, biological diversity, and anthropogenic issues are also highlighted by most guides. Formal road and cave trip logs are included for some. The diverse assortment of guides should provide an entertaining mix of information for the reader, the traveler, and the explorer.

Chapters include:

- Field trip to Endless Caverns, New Market Virginia (by William K. Jones)
- Field trip Guide to the Antietam Battlefield National Park (by William K Jones)
- Karst Field Trips: The Appalachian Valley of Central Pennsylvania (by William B. White & Elizabeth L. White)
- Field Trip Guide: A Brief Introduction to the Geology, Hydrogeology, and Natural History of North Central Florida (by Jon Martin & Roger Portell)
- Field Trips to Mammoth Cave and its Drainage Basins, the South Central Kentucky Karst (by William B. White)
- The Mammoth Cave Area Tour (by Thomas Poulson)
- The Karst of Carter Caves State Resort Park and Surrounding Area, Northeastern Kentucky (by Annette Summers Engel & Scott A. Engel)
- Field Guide to Shallow Karst in Southwestern Illinois (by Carol Wicks & Samuel Panno)
- Field Trip Guide to Devil’s Icebox Basin, Missouri (by Carol Wicks)
- A Day at Maramec Spring Park, Missouri (by Carol Wicks)
- A Brief Review of the Geologic Setting of the Pikes Peak Region, Colorado (by Louise Hose)
- Speleogenesis of Cave of the Winds, Manitou Springs, Colorado (by Fred Luiszer)
- Field Guide to the Paleokarst of the southern Black Hills (by Arthur N. Palmer & Margaret V. Palmer)

$48 + shipping & handling

Visit http://www.karstwaters.org for more information and ordering through Paypal.
Recent KWI Conference

Karst from recent to reservoirs: *International conference on paleokarst & multi-permeability flow systems*
Rapid City, South Dakota, June 7-11, 2008

-- Submitted by Dr. Ira Sasowsky, University of Akron

This KWI-sponsored conference took place at the Rushmore Plaza Civic Center, Rapid City, South Dakota, USA. The technical sessions included two and one-half days of talks and a poster/core session. A full-day field trip led by Art Palmer (State University of New York-Oneonta) examined the present day and paleokarst of the Black Hills region. Participants had ample opportunity for personal interaction at several receptions, as well as a banquet where Bill Stone (Stone Aerospace) presented the lecture "Autonomous Exploration, Mapping, and Characterization of Channelized Karst Aquifers". The meeting concluded with a committee-of-the-whole discussing the outcomes of the event, as well as future directions.

A main goal of the meeting was to promote exchange between researchers working in modern karst systems and those who explore paleokarst reservoirs for petroleum production. This aspiration was amply met with strong participation from both constituencies, and great interest in the varied types of data presented.

Many of the presentations emphasized the common theme of structure-process-time, reminding us that there is great value in understanding these challenging systems using traditional geological concepts. However, this does not (necessarily) mean using low-tech approaches, and there were many presentations using advanced technologies, computed tomography, digital simulations, etc. Conceptual models have been much refined since earlier meetings on this topic. In particular, it is now recognized that hypogenic karst, formed through deep-seated dissolution processes, may be much more widespread than previously considered. This brings in to light some problems with terminology, because the word "karst" as originally defined was based upon near surface geologic processes. In addition, it is quite likely that many reservoirs, which might at first pass be considered "buried karst", might actually never have been subjected to surficial processes. Where would such reservoirs fit in a sequence-stratigraphic framework? This emphasizes the importance of employing modern field studies for the recognition of correct reservoir analogs. Investigations of both active and inactive systems at scales ranging from sub-millimeter (thin sections, SEM) to multi-kilometer (wellfield, cave surveying, geophysics) all provide important insights that will benefit exploration and development. The benefit of using core and imaging logs was recognized, though caution must be exercised because a single well samples only a limited portion of the reservoir. The assembled scientists were reticent to suggest any changes to definitions or classification schemes, but instead emphasized the value of detailed characterization of each field/setting.

Areas that were identified as valuable for future research included: the role of microorganisms in porosity development; consequences of global icehouse/greenhouse settings; consequences of global calcite/aragonite seawater chemistry; “dekarstification” by sediment infill-mechanical collapse-precipitation; mechanisms for deep sediment infilling; synchronous carbonate deposition and karst development; the role of ore-generating MVT processes; going beyond modern systems by modeling; applying results of aquifer studies to petroleum reservoirs.

Conference co-chairmen were Chip Feazel (ConocoPhillips, Houston), John Mylroie (Mississippi State University) and Ira D. Sasowsky (University of Akron, Ohio). Cooperating organizations for the meeting were: ConocoPhillips, Chevron, Edwards Aquifer Authority, National Cave and Karst Research Institute (USA), National Park Service (USA), U.S. Geological Survey, American Association of Petroleum Geologists, and the American Chemical Society Petroleum Research Fund. There were 85 participants representing Australia, Belgium, Canada, China, Czech Republic, France, Hungary, Italy, Mexico, Slovenia, Spain, Ukraine, United Kingdom, and the United States.

The proceedings were issued as the Karst Waters Institute Special Publication 14, which are available for purchase from http://www.karstwaters.org
**Upcoming Meetings**

**CALL FOR ABSTRACTS: Anchialine Ecosystems: Reflection and Prospects**
17-20 November, 2009; Mallorca, Balearic Islands, Spain

The symposium will examine what we know and what we can infer about the environment, ecology, biodiversity and evolutionary history of anchialine ecosystems in order to provide a focus for the development of interdisciplinary research. Because this work is scattered through the literature of different disciplines, there is much to be gained by bringing together leading researchers that work on various aspects of anchialine ecosystems. Presentations will be grouped around six interdisciplinary themes, including Geology, Hydrology and Hydrogeochemistry, Habitats and Water Quality, Microbiology and Ecosystem Processes, Physiology and Ecology, Evolutionary History, Historical Biogeography and Molecular phylogenetics, and Biodiversity and Conservation. The sponsoring organizations, the *Karst Waters Institute* (USA) and the *Mediterranean Institute for Advanced Studies* (Spain), are excited to join forces in this endeavor.

Abstracts are due Sept. 1, 2009. Registration and venue information can be found at the website: http://imedea.uib-csic.es/anchialine-symp/.

---

**International Congress of Speleology**
July 19-26, 2009; Kerrville, Texas, USA

The Congress will be hosted by the National Speleological Society. It is a great opportunity for all to meet and exchange ideas on our common interest, the caves and karst of the world. There will be many excursions to caves and karst areas in the USA, including pre- and post-Congress field camps as well as the day trips during the Congress. The Karst Waters Institute is one of the sponsoring organizations. For more information, see: http://www.ics2009.us/

---

**IV-th International Symposium on Karst, Malaga-2010.**

This meeting will be held in Malaga, Spain, April 27-30, 2010. The first circular is out with registration forms, registration fees, and information on abstracts. http://www.cehiuma.uma.es

---

**The 13-th Water-Rock Interaction Conference - WRI-13**

This conference will be held in Guanajuato, Mexico, from August 16-20, 2010. Although this conference covers all aspects of water-rock interaction chemistry, there will be a special session on water-rock interactions in karst. The details are on the website http://wri13.cicese.mx/

---

**Educational Opportunities**

**PhD Student/Post-doctoral Researcher, Geological Sciences, University of Florida**

Funding is available for a PhD student and/or Post-doctoral Researcher to conduct research into water-rock reactions and flow in eogenetic karst aquifers of northern Florida and the Bahamas. For the PhD position, preference will be given to students with MS degrees, but outstanding students with a BS degree will be considered. For the Post-doctoral position, the successful candidate should have completed all requirements for the PhD. Positions are available starting January 2010. For information, send an email to Jon Martin, jbmartin@ufl.edu

---

**PhD Student/Post-doctoral Researcher, Geological Sciences, Louisiana State University**

Funding is available for a Post-doctoral Researcher and PhD students to conduct research into the linkages between hydrology and biology of karst systems, from microbes to animals adapted to the subsurface habitat. Applicants should have strong academic backgrounds in geology, hydrogeology, and/or aqueous geochemistry. Excellent oral/written communication skills and teamwork spirit are essential. Positions are available starting January 2010. For information, send an email to Carol Wicks, cwicks@lsu.edu
The Karst Waters Institute (KWI) is a 501 (c)(3) non-profit institution whose mission is to improve the fundamental understanding of karst water systems through sound scientific research and the education of professionals and the public. The institute is governed by a Board of Directors and does not have or issue memberships. Institute activities include the initiation, coordination, and conduct of research, the sponsorship of conferences and workshops, and occasional publication of scientific works. KWI supports these activities by acting as a coordinating agency for funding and personnel, but does not supply direct funding or grants to individual researchers.

The Mission can best be summarized by the following goals:

- **Advance scientific knowledge by fostering interdisciplinary state-of-the-art karst research to ensure a valid and reliable basis for information provided to both the public and private sectors and the scientific community.** Objectives under this goal are:
  - Sponsor interdisciplinary national and international conferences and symposia;
  - Provide karst scientists an outlet for the current work by publishing proceedings volumes from conferences and symposia;
  - Encourage karst scientists to publish their completed research in respected journals;
  - Contribute to enhancing the stature of karst-based journals;
  - Promote the dissemination and accessibility of karst literature and karst-specific databases;
  - Establish a program to stimulate and coordinate collaborative research;
  - Develop or identify appropriate techniques and methods for karst research, based on studies of sufficient scale and duration, to advance our understanding of this vital resource.

- **Stimulate cooperative graduate student education with degree-granting institutions to ensure an adequate supply of karst scientists in the future.** Objectives under this goal include:
  - Offer interdisciplinary short courses designed to draw together graduate students from diverse backgrounds;
  - Provide support for graduate students through the William L. Wilson Scholarship for Karst Science.

- **Increase awareness and appreciation of karst water resources and their vulnerability through the education of both scientific professionals and the public.** Objectives under this goal include:
  - Present research findings and the need for protection of karst resources through appropriate channels for the public;
  - Present the Karst Award and the William Wilson Scholarship Award annually with appropriate news outlets invited;
  - Sponsor short courses with emphases on increasing the awareness of karst resources managers.

- **Provide expertise to identify and contribute to the solution of environmental and land-use risks to karst regions, including pollution of karst aquifers, flooding problems, and land-collapse and subsidence.** The objective under this goal is:
  - Cooperate with the public and private sectors on the prevention and solution of karst problems.