

July 2007

The Karst Information Portal (KIP): Developing a Network of Geographic and Geologic Karst Information

Robert Brinkmann
University of South Florida

Todd A. Chavez
University of South Florida, tchavez@usf.edu

Alexander Klimchouk
Ukrainian Institute of Speleology and Karstology

Diana Northup
University of New Mexico - Main Campus

H. Len Vacher
University of South Florida

See next page for additional authors

Follow this and additional works at: https://digitalcommons.usf.edu/tlar_pub



Part of the [American Studies Commons](#), and the [Library and Information Science Commons](#)

Scholar Commons Citation

Brinkmann, Robert; Chavez, Todd A.; Klimchouk, Alexander; Northup, Diana; Vacher, H. Len; Boston, Penelope; Veni, George; and Fleury, Spencer, "The Karst Information Portal (KIP): Developing a Network of Geographic and Geologic Karst Information" (2007). *Academic Resources Faculty and Staff Publications*. 6.
https://digitalcommons.usf.edu/tlar_pub/6

This Presentation is brought to you for free and open access by the Tampa Library at Digital Commons @ University of South Florida. It has been accepted for inclusion in Academic Resources Faculty and Staff Publications by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact digitalcommons@usf.edu.

Authors

Robert Brinkmann, Todd A. Chavez, Alexander Klimchouk, Diana Northup, H. Len Vacher, Penelope Boston, George Veni, and Spencer Fleury

Evolution of the Karst Aquifers of the Shenandoah Valley, Virginia and West Virginia

2:40 P.M. – 3:00 P.M.

Wil Orndorff, Virginia Division of Natural Heritage, Wil.Orndorff@dcr.virginia.gov
Ben Hutchins, American University, butchbt2@yahoo.com

The Shenandoah Valley is underlain by several thousand feet of Cambro-Ordovician aged carbonate bedrock. The karst topography is complex, with sinkholes, caves, and springs more common near base level streams. Larger, calcium saturated springs commonly occur at elevations up to 50 meters above these streams, with spring runs commonly captured by vadose cave passages before emerging near modern base level. Transitional zones separate the perennial springs from current base level drainage network that divided the valley into smaller, hydrologically distinct blocks. Dye traces within block interiors yield long travel times, high dilutions, and divergent flow. Dye traces in transition zones show short travel times, little dilution, and convergent flow.

Patterns of genetic divergence between populations of the Madison Cave Isopod, *Antrolana lira*, suggest that populations, once in genetic contact via migration through a more extensive karst aquifer could have become isolated via stream incision. High levels of genetic divergence for mtDNA (COI) (9.5 – 11.2%) indicate that isolation occurred roughly 7 ± 3 ma, based on a mutation rate of 1.25% per my (Ketmaier, 2003). *Antrolana lira* shared a common ancestor with *Cirolanides texensis* approximately 20 ± 7 ma, suggesting colonization by *A. lira* occurred during the Miocene sea-level high stand.

These two lines of evidence are consistent with a history in which the Shenandoah Karst is the eroded remnant of a regionally extensive aquifer much like today's Edwards Aquifer or the Yucatan. *Antrolana's* marine lineage suggests that a saltwater-freshwater interface may have influenced aquifer development.

Ketmaier, V., R. Argano., A. Caccone (2003). "Phylogeography and molecular rates of subterranean aquatic Stenasellid Isopods with a peri-Tyrrhenian distribution." *Molecular Ecology* 12: 547-555.

The Karst Information Portal (KIP): Developing a Network of Geographic and Geologic Karst Information.

3:20 P.M. -3:40 P.M.

Robert Brinkmann, University of South Florida
Todd A. Chavez, University of South Florida
Alexander Klimchouk, Ukrainian Institute of Speleology and Karstology
Diana E. Northup, University of New Mexico
Len Vacher, University of South Florida
Penelope J. Boston, New Mexico Tech and National Cave and Karst Research Institute
George Veni, National Cave and Karst Research
Spencer Fleury, University of South Florida

The difficulty of sharing geologic and geographic karst information is well documented. While there is a significant body of internationally accessible literature, important works are largely unknown or inaccessible. Some of the more difficult documents to access include maps, databases, technical reports, graduate theses or dissertations, images, video, and government publications. Also, karst related documents published in less-accessible languages are hard to access or find—especially those published prior to the information age. In order to address this issue, the Karst Information Portal (KIP) was formed in 2005 and launched in 2007.

KIP is an evolving international community of scientists, information specialists, and other researchers seeking to promote information sharing and access to published and unpublished research in order to advance karst, cave, and aquifer research and stewardship. The portal is a searchable database of a variety of karst information that is accessible anywhere in the world. Like other well-known portals, such as Chronos, the KIP will continue to grow as users and developers bring more information within the network. We seek to expand KIP by developing partners in to populate the portal with pertinent databases, maps, gray literature, and other information of interest to the geoscience community. The KIP has the potential to transform geologic and geographic research in karst by creating new knowledge through the integration of international information in the discipline.

Late Holocene Paleoenvironmental Changes: Evidence from Cave Sediments in Florida

3:40 P.M. – 4:00 P.M.

*Jason Polk, Philip van Beynen, and Grant Harley
Dept. of Geography
University of South Florida, NES 319
4202 E. Fowler Ave.
Tampa, FL 33637
jspolk@mail.usf.edu*

Cave sediments collected from Jennings Cave in Marion County, Florida show $\delta^{13}\text{C}$ variations in their organic acids, which indicate periods of vegetation change caused by climatic influences during the Late Holocene. The carbon isotope record ranges from -35‰ to -21‰, exhibiting variability of ~14‰, which is within the range of C_3 vegetation. This is to be expected in a humid, subtropical forested environment and likely indicates changes in C_3 plant abundance. The most negative $\delta^{13}\text{C}$ value of ~ -35 percent occurred around 1,870 cal yr BP, sharply becoming less negative to -21‰ around 1,800 cal yr BP. These changes in plant assemblages were in response to changes in available water resources, with increased temperatures and evapotranspiration leading to arid conditions and a shift toward less C_3 vegetation (increased C_4 vegetation) during the Medieval Warm Period. The cave sediment $\delta^{13}\text{C}$ record agrees well with $\delta^{13}\text{C}$ values from a speleothem collected nearby that covers the same time period. Prolonged migration of the Intertropical Convergence Zone and North Atlantic High affects precipitation in Florida and likely caused vegetation changes during these climatic shifts.



KARST

INFORMATION
PORTAL

**THE KARST INFORMATION PORTAL (KIP):
DEVELOPING A NETWORK OF GEOGRAPHIC AND
GEOLOGIC KARST INFORMATION**

ROBERT BRINKMANN

TODD A. CHAVEZ

ALEXANDER KLIMCHOUK

DIANA E. NORTHUP

H. LEN VACHER

PENELOPE J. BOSTON

GEORGE VENI

SPENCER FLEURY

UNIVERSITY OF SOUTH FLORIDA

UNIVERSITY OF SOUTH FLORIDA

UKRAINIAN NATIONAL ACADEMY OF SCIENCE

UNIVERSITY OF NEW MEXICO

UNIVERSITY OF SOUTH FLORIDA

NEW MEXICO TECH AND NCKRI

NATIONAL CAVE AND KARST RESEARCH INSTITUTE

UNIVERSITY OF SOUTH FLORIDA



KARST

INFORMATION
PORTAL

www.karstportal.org

The growing footprint of humans worldwide has serious adverse effects on karst, an understudied natural environment that is crucial to the health and well-being of one out of every four people on Earth.

We simply do not know the full potential of karst for benefit or hazard to humanity and the global ecosystem.



The Challenge

The karst research community and its knowledge base are fragmented, globally distributed, and highly interdisciplinary.

As karst issues move to the forefront of attempts to develop solutions to significant environmental degradation, information integration and linkages promoting collaboration is essential.

The Solution

The Karst Information Portal (KIP) is a growing international community seeking to create an open system for karst-related information..

The goal is a freely accessible web-based information network to inform research, to enhance collaboration, and to address policy decisions in karst environments.



KARST INFORMATION PORTAL



SEARCH

SIGN IN / REGISTER

Type

Karst Information Portal

Keywords

Search

HOME

RESOURCES

COMMUNITY

ABOUT

NEWS

CONTRIBUTE TO THE COLLECTION

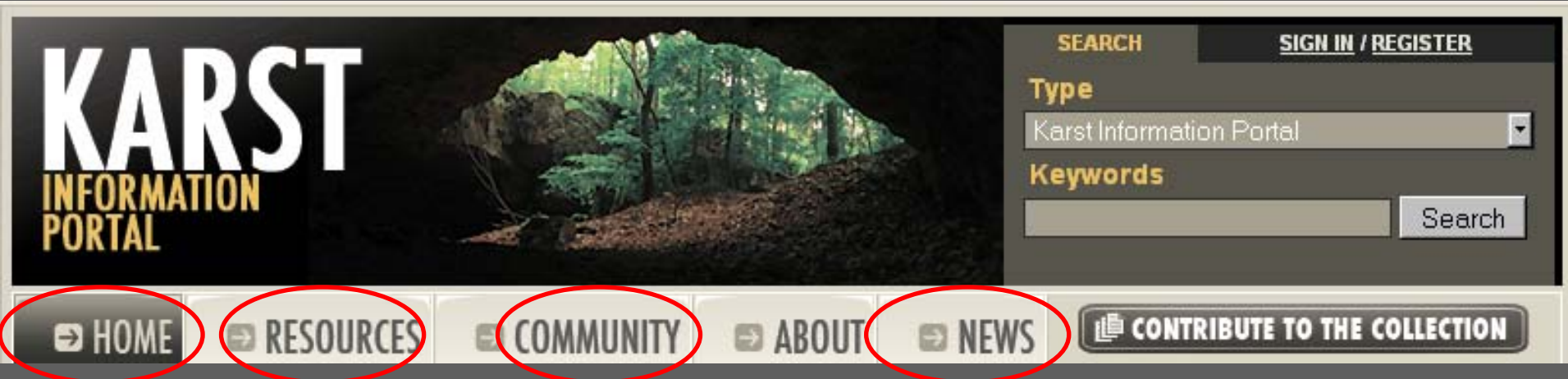
Register

Anyone may visit KIP but registered users ...

- **Contribute data and information**
- Communicate about important karst issues
- Stay current on events, new research and publications and more
- Join the community meeting this information challenge

KIP's success depends on contributions of data and information from the karst community from recreational cavers to professional scientists.

Contributors can upload content that will be shared globally and archived for the future. Contributors have input regarding access to their content.



Site Overview

The Karst Information Portal (KIP) includes four main content areas ...

Home

Quick access to ...

- Current news & events
- Research updates
- Important announcements

Resources

The “information core”

- Topics
- Research tools
 - Publications
 - Reports
 - More ...
- Links

Community

Connect with issues & people ...

- Organizations
- Contacts (directory)
- Discussion forums

News

Stay current on karst developments ...

- Announcements
- Events
- New publications
- Research updates

Content expands with contributions by registered users



KARST INFORMATION PORTAL



SEARCH

SIGN IN / REGISTER

Type

Karst Information Portal

Keywords

Search

HOME

RESOURCES

COMMUNITY

ABOUT

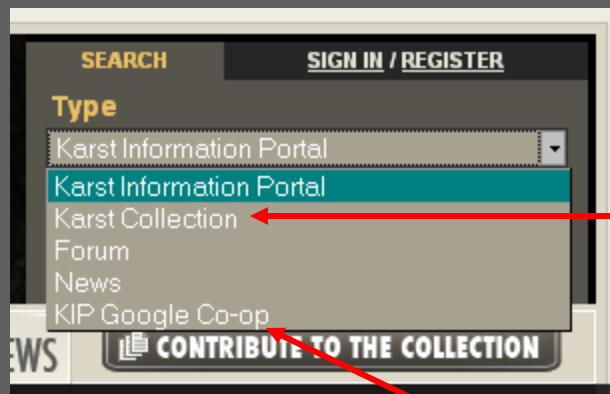
NEWS

CONTRIBUTE TO THE COLLECTION

Search

Five options tailor search targets ...

- Karst Information Portal (comprehensive)
- Karst Collection
- Forums
 - Posts/comments
- News
 - Announcements
 - Events
 - New publications
 - Research updates
- KIP Google Co-op



Nearly 4,000 bibliographic references for karst-related data and information sources forms the core of the collection.

Queries a Google-powered customized search engine leveraging participant expertise with Google's search technologies.

KARST

INFORMATION
PORTAL



How can KIP be useful to geographers and geologists?

GIS Databases, Shape
Files

Collections

Search Engines

Research Reports

Grey Literature

The screenshot shows the Karst Information Portal website. The browser title is "Karst Information Portal - Microsoft Internet Explorer provided by USF College of Arts and Sciences". The website has a navigation menu with links for HOME, RESOURCES, COMMUNITY, ABOUT, NEWS, and CONTRIBUTE TO THE COLLECTION. A search box is located in the top right corner. The main content area features a "RESOURCES" section with a list of resources and a "KARST COLLECTION" section with a list of collection items. A "RESOURCES MENU" is also visible on the right side of the page.

KARST INFORMATION PORTAL

SEARCH SIGN IN / REGISTER

Type
Karst Information Portal

Keywords

Search

HOME RESOURCES COMMUNITY ABOUT NEWS CONTRIBUTE TO THE COLLECTION

Research Overview | Online Publications | Research Reports | Scanning Electron Photomicrographs | Topics | Links

RESOURCES

As the KIP "soft-launches" in mid-June 2007, the resource base for the project includes:

- bibliographical references for over 3,000 print resources drawn from Diana Northrup's *A Guide to Speleological Literature of the English Language: 1794-1996* (Cave Books, 1996);
- linkage to a customized Google-powered Co-Op search utility;
- an initial collection of links to worldwide WWW karst resources;
- a series of topical pages addressing specific karst issues; and
- the introductory stages in the Karst Oral History Project.

With user support and contributions, this collection will quickly expand in extent and value to the community it serves.

KARST COLLECTION

The Karst Collection consists of karst-related data and information, some of which are locally-stored computer files (images, PDFs, etc); others are links to karst-related websites or simply descriptions of physical resources.

Search the collection via the link on the right side of this page. Examples of the types of material you will find include:

- * technical reports;
- * dissertations and theses;
- * open-access journal articles;
- * images of karst and karst biota;
- * GIS msp files and databases;
- * bibliographies and indexes.

Any karst-related data/information resource is eligible to be considered for inclusion in the collection. The Karst Collection is constantly growing, thanks to the collaborative efforts of the entire karst community. Please consider contributing your own material via the [Contribute link](#) on the right side of this page.

RESOURCES MENU

- Research Overview
- Online Publications
- Research Reports
- Scanning Electron Photomicrographs
- Topics
- Links

Start Microsoft Office Outlook... aaq2005ab.doc - Micro... 13 Internet Explorer - KIP_Core.ppt KIP-Paleo-REG2007.ppt

Offline Files - Computer(s) available for reconstruction

2:49 PM

KARST

INFORMATION
PORTAL





Contributing to
the collection:

Adding your
data, reports,
maps, etc.

Karst Information Portal - Microsoft Internet Explorer provided by USF College of Arts and Sciences

File Edit View Favorites Tools Help

Address




SEARCH SIGN IN / REGISTER

Type
Karst Information Portal

Keywords

Search

HOME RESOURCES COMMUNITY ABOUT NEWS **CONTRIBUTE TO THE COLLECTION**



WHY CONTRIBUTE?

The success of the Karst Information Portal depends in a large part on the participation of active members of the karst community, from professional scientists to recreational cavers. KIP's growth and long-term utility is driven by contributions of data and information from the community as well as dialog on pressing issues underlying the preservation and understanding of cave and karst environments.

Registered KIP users who wish to participate are invited to upload karst data via the portal or to input key metadata to facilitate discovery of externally-hosted resources. These resources will be vetted for relevance to the KIP mission, ingested into the database, organized for ease of access/discovery, and stored in a digital repository for the future.


Contributors have input regarding access rights to the data they contribute. View the [KIP Workflow Summary](#) document.


CONTRIBUTE

Registered users, please [sign in](#) to contribute to the website collection or community.

If you are not a registered users, please take a moment to [register](#).

Home | Privacy Statement | Terms of Use | Site Map | Contact | RSS | Sign In

powered by  ArcGIS

powered by  OpenLayers

peccaries + caves + indiana - Google Search - Microsoft Internet Explorer provided by Roadrunner

http://www.google.com/search?hl=en&q=peccaries+%2B+caves+%2B+indiana

File Edit View Favorites Tools Help

Karst Information Portal peccaries + caves + india...

Home Feeds (0) Print Page Tools

Web Images Video News Maps Gmail more Sign in

Google peccaries + caves + indiana Search Advanced Search Preferences

Web Results 1 - 10 of about 689 for **peccaries + caves + indiana**. (0.27 seconds)

JSTOR: An Extension in the Range of Fossil Peccaries
The type specimen of the form just mentioned was described from **Indiana** by ... GIDLEY, JAMES W. 1921-Pleistocene **Peccaries** from the Cumberland Cave Deposit. ...
[links.jstor.org/sici?sici=0003-0031\(193501\)16%3A1%3C117%3AAEITRO%3E2.0.CO%3B2-H](http://links.jstor.org/sici?sici=0003-0031(193501)16%3A1%3C117%3AAEITRO%3E2.0.CO%3B2-H)
- [Similar pages](#)

JSTOR: Bones of Mammals From West Virginia Caves
Myotis grisescens is known to be a Recent inhabitant of limestone **caves** from southern Illinois and **Indiana** to Georgia and northern Florida, and from eastern ...
[links.jstor.org/sici?sici=0003-0031\(195607\)56%3A1%3C250%3ABOMFWV%3E2.0.CO%3B2-V](http://links.jstor.org/sici?sici=0003-0031(195607)56%3A1%3C250%3ABOMFWV%3E2.0.CO%3B2-V)
- [Similar pages](#)
[[More results from links.jstor.org](#)]

Indiana State Museum
INDIANA STORY GALLERIES ... protect vital areas against the canines of other **peccaries**. ... Of the numerous individuals recovered from the **Indiana cave**, ...
www.in.gov/ism/Exhibits_Collections/Collection/pb_peccary.aspx - 85k - [Cached](#) - [Similar pages](#)

Search Results
The Welsh **Cave Peccaries** (Platygonus) and Associated Fauna, Greyhound Press, Cloverdale, **Indiana**, 2005, . 188 pages with more than 70 illustrations. ...
paleopubs.com/linksPublications.cfm?criteria=Cave&searchBy=catalogue&searchType=All - [Similar pages](#)

Pipe Creek Sinkhole
Over time, water percolated through the limestone, forming numerous **caves** and caverns, as evidenced in the karst area of southern **Indiana** and central ...
www.angelfire.com/in4/earthpages/pipe_creek.html - 26k - [Cached](#) - [Similar pages](#)

Peccary
Long-nosed Peccary skeleton from Friesenhahn **Cave**, Texas. Flat-headed Peccary skeleton from Welsh **Cave**, Kentucky. **Peccaries** are members of the artiodactyl ...
teachers.cpsc.k12.in.us/mkirkman/peccary.htm - 4k - [Cached](#) - [Similar pages](#)

Indiana State Museum Digs
So, on to **peccaries**. Although Ron's not yet analyzed the bones that have been washed ...
Indiana State Museum. posted by ISM | 6:15 PM. MEGENITY CAVE DIG ...
indianamuseumdigs.blogspot.com/ - 102k - [Cached](#) - [Similar pages](#)


CONTINUED FROM PAGE 1 SHERIDEN CAVE
... Age people who were using Sheriden **Cave** were hunting **peccaries** for food. ... This example is made of southern **Indiana** chert and measures 3 1/4 inches ...
lithiccastinglab.com/gallery-pages/2001octobersheridencavepage2.htm - 16k -

Typical Google search results. Even with restrictive parameters, important sources may be buried in the large number of hits, which often include non-relevant information.

- KIP Google Co-op results:
- Fewer but more relevant hits
- from search of (currently) 45
- karst research websites

KARST

INFORMATION
PORTAL



SEARCH SIGN IN / REGISTER

Type

Karst Information Portal

Keywords

→ HOME
→ RESOURCES
→ COMMUNITY
→ ABOUT
→ NEWS
CONTRIBUTE TO THE COLLECTION

[Home](#) / [Search](#) / Google Co-op

GOOGLE CO-OP

Results 1 - 5 for peccaries + cave + indiana. (0.29 second)

Date: Mar 17, 2004 -- **Indexed by:** Barcode

Barcode ...
 Narberth PA, 66p, 24cm, 1953, SP6A, **Indiana, caves** 50301, Wyandotte Cave, Jackson) adventure 51564, **Welsh Cave Peccaries** (Platygonus) and Associated Fauna} KY ...
www.caves.org/committee/library/catalog-fullfields2.csv

[PDF] Assessment of Native Species and Ungulate Grazing in the Southwest ...
 File Format: PDF/Adobe Acrobat
 areas (**Cave** and Patten 1984; Wilson and others 1996); postfire Large mammals such as **peccaries** and the desert subspecies of ...
www.fs.fed.us/rm/pubs/mrs_gtr142.pdf

[XLS] catalog-fullfields2.xls
 File Format: Microsoft Excel
 399, 41704, **Indiana Caves** and Unique Geological Features, Allison} Harold ... 1976, 51564, **Welsh Cave Peccaries** (Platygonus) and Associated Fauna} KY
www.caves.org/committee/library/catalog-fullfields2.xls

[PDF] Multiple Species Inventory and Monitoring Technical Guide
 File Format: PDF/Adobe Acrobat
 (1997) indicated that when collared **peccaries** (Tayassu tajacu) frequented camera tracking studies of **Indiana** bats (Murray and Kurta 2004). ...
www.fs.fed.us/psw/programs/snrc/featured_topics/msim/documents/msim_gtr.p

[PDF] MULTIPLE SPECIES INVENTORY AND MONITORING TECHNICAL GUIDE
 File Format: PDF/Adobe Acrobat
 collared **peccaries** (Tayassu tajacu) frequented camera stations, **Indiana** bats (Murray and Kurta 2004). Therefore, netting may be conducted at ...
www.fs.fed.us/r1/projects/wildlife-ecology/msim_preprint.pdf

SEARCH MENU

- Search Karst Information Portal
- Karst Collection
- Forums Search
- News Search
- Google Co-op



- Tools already in place (collaborative workspaces).
- Possible new tools: Dye Tracing Database, GIS Database, Cave Map Database and Tools, etc.



- An example of a tool that is in process of development:
 - The Great Karst Trail

KARST

INFORMATION
PORTAL



- Great Karst Trail
- Modeled after The Appalachian Trail and the Ice Age Trail.
- Difference: global reach.
- Technical capability to make the trail virtual and connected to research, images, etc.



Great Karst Trail—A Model Trail for the Future

- Internationally Collaborative
- Utilizing Technology of Wiki space, the KIP, and GPS.
- Building Linkages of Existing Trails with Interpretation

Great Karst Trail Project



Potential for engaged scholarship.

Potential for engaging cave clubs and forest/park personnel.

Potential for developing on-line trail maps and interpretation in blog/wiki formats.

In early stages of developing this initiative.

Demonstrates the types of connections that can be made using on-line portals.



- Summary
 - Available now at www.karstportal.org
 - Many resources on line including a specialized karst search engine
 - Seeking contributions of information by members
 - Many possibilities for enhancing information that exists by developing new tools, databases, or other sources of information.



The KIP Project Partners Thank You

NATIONAL CAVE & KARST RESEARCH INSTITUTE

<http://www2.nature.nps.gov/nckri/>

UNIVERSITY OF SOUTH FLORIDA LIBRARIES

<http://www.lib.usf.edu/>

UNIVERSITY LIBRARIES, UNIVERSITY OF NEW MEXICO

<http://elibrary.unm.edu/>

UNION INTERNATIONALE de SPÉLÉOLOGIE (UIS)
Commission on Karst Hydrogeology and Speleogenesis

http://uis-karst.kiev.ua/uis_karst/index.html/