

# Limnogeology Division Newsletter

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**Editor: Peter A. Drzewiecki**

Eastern Connecticut State University, 83 Windham Street, Willimantic, CT 06226

E-mail: [drzewiecki@easternct.edu](mailto:drzewiecki@easternct.edu)

Telephone: 860-465-4322

## Limnogeology Division Officers and Management Board

<b>Chair</b>	<b>Kevin M. Bohacs</b> ExxonMobil Upstream Research Co. PO Box 2189 Houston, TX 77252-2189	(713) 431-7799 (direct) (713) 431-6310 (fax) <a href="mailto:Kevin.M.Bohacs@exxonmobil.com">Kevin.M.Bohacs@exxonmobil.com</a>
<b>Vice-Chair</b>	<b>Michael R Rosen</b> US Geological Survey 2730 Deer Run Road Carson City, NV 89701	(775) 887-7683 (direct) (775) 887-7629 (fax) <a href="mailto:mrosen@usgs.gov">mrosen@usgs.gov</a>
<b>Secretary</b>	<b>Peter A. Drzewiecki</b> Environmental Earth Sciences Eastern Connecticut State University 83 Windham Street Willimantic, CT 06226	(860) 465-4322 (direct) (860) 465-5213 (fax) <a href="mailto:drzewiecki@easternct.edu">drzewiecki@easternct.edu</a>
<b>Treasurer</b>	<b>David B. Finkelstein</b> Dept. of Earth and Planetary Sciences University of Tennessee 306 Earth and Planetary Sci. Building, 1412 Circle Drive, Knoxville, TN 37996-1410	(865) 974-0402 (direct) (865) 974-2368 (fax) <a href="mailto:dfinkels@utk.edu">dfinkels@utk.edu</a>
<b>Past-Chair</b>	<b>Thomas C. Johnson</b> Large Lakes Observatory and Department of Geological Sciences Univ. Minnesota Duluth 10 University Dr Duluth, MN 55812-2403	(218) 726-8128 (direct) (218) 726-6979 (fax) <a href="mailto:tcj@d.umn.edu">tcj@d.umn.edu</a>

## Welcome...

Welcome to the Newsletter of the Limnogeology Division of the Geological Society of America (Vol. 4, Number 2). This issue is a little shorter and a little later than usual as a result of a change in editors. I hope to return to the editorial standard of previous Newsletters by next fall.



This core sample is composed of mudstone from the Jurassic Portland Formation (Hartford basin, CT) exhibiting crinkly laminations and sand-filled mudcracks. It is interpreted to represent deposition in a playa environment.

## ***From the Editor***

**Peter Drzewiecki**  
Storrs, CT

### **Changing of the guard...**

Welcome to the second issue of the fourth volume of the Newsletter of the Limnogeology Division of the Geological Society of America (GSA). The division is being led by new officers, and as secretary this year, I am taking over as editor of the Newsletter from Michael Rosen. As a result of the transition, this issue is coming to you a bit later than usual.

I would like to thank Michael for his support while writing this Newsletter, or else it would likely have been even later!

Michael was very good at getting brief technical articles for previous newsletters. I did not have the opportunity to provide any in this edition, but I would like to invite you to consider providing something for future newsletters. This is a great opportunity to advertise your research to your colleagues in the field of limnogeology.

This newsletter contains a message from the new Chair, reports on the 2006 Annual GSA Meeting, a call for Kerry Kelts Award nominees, and news items of interest.

### **Contents**

Message from the Chair.....	page 3
Report on the 2006 GSA Annual Meeting.....	page 5
Report on the 2006 GSA Core Workshop.....	page 6
Call for Kerry Kelts Award Nominations.....	page 7
Upcoming Meetings.....	page 7
News Ripples.....	page 10

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## Message from the Chair

**Kevin Bohacs**

*Houston, TX*



[http://www.aapg.org/eseries/StaticContent/AAPG\\_files/graphics/Bohacs.jpg](http://www.aapg.org/eseries/StaticContent/AAPG_files/graphics/Bohacs.jpg)

These are exciting times for limnogeologists—lots of interest in lakes and their deposits from a broad spectrum of society, from those interested in freshwater and health, climate change, and resource and energy extraction. Lots of interesting activities and conferences also, to bring us together. Your Limnogeology Division is here to help bring together all of us who work on all aspects of lakes, from the oozes to the rocks. More on that in a moment, but first:

A big thanks and Limnogeology cheer to Professor Tom Johnson for his inspired leadership and many contributions to the division since its founding, and most recently for his tenure as division Chair. As Peter reports elsewhere, we had a very active role in the 2006 GSA national meeting, sponsoring six sessions, along with a field trip and core workshop. Tom's leadership in providing these opportunities for exchange and interaction were indispensable. I have big shoes to fill as I start my time as your Chair.

The Limnogeology Division exists to help all of us who study lakes and to increase the community's focus on these most important systems—source of most of the world's freshwater, incubators and nurseries of biodiversity, test bed for advanced understanding and modeling of complex sedimentary systems, and key archive of the wide range of paleoclimate records, decadal to deep time, that enable the challenging transition from weather to climate. We aim to bring together (literally) this wide-ranging community through sponsoring sessions, field trips, and workshops focused on lakes at GSA meetings as well as providing input on the overall technical program and schedule—actually, that was one of our original motivating factors: we were tired of running around between sessions to catch widely scattered presentations on limnogeological topics. We also have our newsletters, emails, and website available to alert you to items of interest to our community. We meet annually at the national GSA Annual Meeting and provide your voice to the greater GSA organization. Perhaps most importantly, we sponsor the Kerry Kelts Award to inspire and support young researchers in their work in limnogeology. In all of this, our approach is to keep our division structure as simple as possible and to keep our overhead to a minimum.

As part of our goal of bringing like-minded researchers together, we have arranged to hold our annual meeting jointly with the Sedimentary Geology Division at this year's meeting in Denver. This was an idea brought forward by several of our members and enthusiastically embraced by your officers. We hope it will reduce one source of scheduling conflict as well as providing better snacks ... We are interested in your input on this approach: perhaps we alternate between having a joint meeting with a closely aligned division with holding our own meeting from year to year. Other divisions that

might be appropriate for joint meetings include Hydrogeology, Quaternary and Geomorphology, and Archaeology. Please let us know what you think of this. For the present, there is a high level of attention to lakes and lake deposits, especially in the energy sector. Exploration for hydrocarbons associated with lacustrine systems is very active in the south Atlantic region, central Africa (including Darfur), and China. There is a renaissance of activity in oil shale, especially in the Green River Formation in the western USA, where many major companies are in the field testing new extraction techniques that are potentially much more efficient and environmentally friendly.

A number of conferences addressing lake deposits are occurring or planned: the Oil Shale Symposium at Colorado School of Mines started again on its annual schedule last October, an International Conference on Non Marine Basins in Beijing this May co-sponsored by PetroChina and Stanford University, and in July, the Olympics of limnogeology, the ILIC 4, International Limnogeological Congress in Barcelona.

I attended the International Conference on Non Marine Basins in Beijing in May, along with hundreds of Chinese scientists working on lakes and dozens of international researchers. The meeting was quite well run and the presentations showed an impressive amount of detailed work that has been conducted and lots of innovative approaches to the challenges of understanding lacustrine systems. It was very heartening to see many younger researchers actively engaged and their careful testing and refining of sequence-stratigraphic and other models. As ever, the field trips and banquets were quite interesting and entertaining, as was the night at the Chinese Opera.

Coming up, there are also the ICDP workshop on Deep Terrestrial Scientific Drilling Project of the Cretaceous Songliao Basin planned for August in China, the International Symposium of the North American Lake Management Society in late October, Central Atlantic Conjugate Margins Conference scheduled for August 2008 in Nova Scotia, and, of course, our own program for GSA 2007 in Denver, with includes six sessions sponsored by your Limnogeology division.

We hope our activities and initiatives are valuable to you in your research and teaching. Please contact me or any of your officers with your ideas, suggestions, and concerns. Thanks for your support and interest!

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## ***Report on 2006 GSA Annual Meeting***

**Peter Drzewiecki**

*Storrs, CT*

The Limnogeology Division was active at the 2006 GSA Annual Meeting, sponsoring and co-sponsoring 6 sessions, a field trip, and a core workshop. These activities included:

- *T3. Reconstructing Landscape Contexts of Human Occupation Surrounding Wetlands – Catherine Yansa and Andrea Freeman, co-convenors.*
- *T68. Gradients at Hydrologic Interfaces as Indicators of Key Earth-Surface ("Critical-Zone") Processes – David Stonestrom and Michelle Walboord, co-convenors.*
- *T76. Detecting and Characterizing Fluxes of Water and Dissolved Constituents across the Groundwater–Surface Water Interface – Brewster Conant and Donald Rosenberry, co-convenors.*
- *T95. Dating and Environmental Interpretation of Lake, Loess, and Marine Sediment Sequences using Paleomagnetism and Rock Magnetism – John Peck and John King, co-convenors.*
- *T96. Neogene and Quaternary Biological Paleolimnology: In Memory of J. Platt Bradbury – Scott Starratt, convenor*
- *T97. Core Analysis of Lake Sediments (Posters) – Elizabeth Gierlowski-Kordesch, Peter Drzewiecki, and Kevin Bohacs, co-convenors.*
- *Field trip. Lacustrine Cyclicity and the Triassic-Jurassic Transition – Paul Olsen, leader.*
- *Core Workshop. Core Analysis of Lake Sediments – convened by Elizabeth Gierlowski-Kordesch, Peter Drzewiecki, and Kevin Bohacs; sponsored by Exxon-Mobil*

About 20 members attended the Limnogeology Division Business Meeting on October 23<sup>rd</sup> at the Philadelphia Convention Center. At this meeting, the Kerry Kelts Research Award (certificate and check for \$500) was presented to Caleb Schiff from Northern Arizona University for his project, "Late Holocene temperature of Prince William Sound, southern Alaska." Dr. Paul Filmer, Director of the Earth Sciences Sedimentary Geology and Paleobiology Program at NSF, spoke about current initiatives and future outlook for NSF-EAR. Division members discussed possible sessions and field trips for the 2007 GSA Annual Meeting to be held in Denver.



## **Report on 2006 GSA Core Workshop**

**Peter Drzewiecki**  
Storrs, CT

The Limnogeology Division organized a “Core Analysis of Lake Sediments” core workshop at the 2006 Annual GSA Meeting on Oct. 21. The workshop was organized by Elizabeth Gierlowski-Kordesch, Kevin Bohacs, and Peter Drzewiecki, and sponsored by ExxonMobil Upstream Research Company.

The cores came from the Eocene Rundle and Curlew Formations of Australia, the Jurassic Portland Formation of Connecticut, the Triassic lakes of New Jersey, and modern acid salt lakes in Australia. In addition, there were numerous posters containing pictures and data from other lake cores. The following day, there was an associated Core Analysis of Lake Sediments Poster session, with 31 posters, including many of the posters that were on display at the core workshop.

The session was well attended, with over 70 participants. Many of the “big names” in the field of limnogeology were present. The core workshop, although logistically challenging, provided a unique format for interaction and information sharing.



Unpacking a core at the workshop

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## ***Call for 2007 Kerry Kelts Award Nominations***

A call for Kerry Kelts Award nominations was published in the April/May, 2007 edition of GSA Today (page 55). This award provides \$350 dollars for up to three research projects related to the fields of limnology, limnogeology, and paleolimnology. Submit a proposal (five page limit) describing the proposed research, its significance, and how the award will be used in PDF format to the Limnogeology Division Chair, Kevin Bohacs, at [kevin.m.bohacs@exxonmbil.com](mailto:kevin.m.bohacs@exxonmbil.com) by August 10, 2007.

Awards will be announced during the Limnogeology Business Meeting at the 2007 GSA Annual Meeting in Denver.

As always, donations to allow this award to grow can be sent to the Kerry Kelts Research Awards of the Limnogeology Division at GSA, P. O. Box 9140, Boulder, CO, 80301-9140, USA.

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## ***Upcoming Meetings***

### **4<sup>th</sup> International Limnogeology Congress 2007**

*July 28-31, 2007*

The International Association of Limnogeology (IAL) will be holding its 4th International Limnogeology Congress (ILIC2007) in Barcelona, Spain from July 11 -14, 2007. Get your plane tickets fast!

The Scientific Program can be viewed at: <http://www.ilic2007.com/sciprogram.htm>

### **International Association of Theoretical and Applied Limnology (SIL) 30th Congress**

*August 12-18, 2007*

The 30<sup>th</sup> Congress of the International Society of Limnology will take place from August 12 to 18, 2007, in Montréal, Quebec, Canada, eh.

The conference website is: <http://www.sil2007.org>

## **Inaugural Meeting of IGCP Project 555**

*August 28-30, 2007*

The Inaugural Meeting of IGCP Project 555 (co-sponsored by the ICDP workshop on Deep Terrestrial Scientific Drilling Project of the Cretaceous Songliao Basin) is scheduled for August 28-30, 2007 in Daqing, China. The meeting theme is "Rapid Environmental/Climate Change in the Cretaceous Greenhouse World: Ocean-Land Interactions." The registration deadline is July 1, 2007.

For more information, please see: [www.who.edu/ccod/IGCP\\_555\\_first.pdf](http://www.who.edu/ccod/IGCP_555_first.pdf)

## **2007 GSA Annual Meeting**

*October 28-31, 2007*

The 2007 GSA Annual Meeting takes place in Denver, Colorado on October 28-31. Below is a description of the topical sessions sponsored by the Limnogeology Division from the GSA Meeting website. Please consider submitting an abstract to one of them. If none quite fit your research, there is always the Limnogeology discipline session. Abstracts are due on July 10, 2007 (at 11:59 Pacific Time for the last minute types!) The following is a link to submit an abstract online:

<http://gsa.confex.com/gsa/2007AM/top/papers/index.cgi?sessionid=19707>

### **T4. From Geoarchaeology and Paleoanthropology to Sedimentary Geology and Geochemistry: A Memorial to Richard L. Hay**

*GSA Archaeological Geology Division; GSA Limnogeology Division; GSA Sedimentary Geology Division; Mineralogical Society of America*

Gail M. Ashley, Marie Jackson, Enrique Merino, Thure E. Cerling

This interdisciplinary session in memory of Richard L. Hay encourages papers in geoarchaeology, limnogeology, tephra and sedimentary geochemistry, and zeolite minerals, to provide an opportunity for presentation of new research inspired by Hay's multifaceted career. Oral.

Archaeological Geology; Limnogeology; Geochemistry

### **T45. Advances in Understanding and Detection of Groundwater–Stream Water Interactions across Temporal and Spatial Scales**

Michael N. Gooseff, Brian L. McGlynn

This session seeks to bring together scientists working to understand spatial and temporal scaling of controls on groundwater-surface water interactions to discuss advances in field and modeling techniques, and implications of new findings. Oral.

Hydrogeology; Limnogeology; Environmental Geoscience



**T46. Climate Change Hydrology**

*GSA Hydrogeology Division; GSA Limnogeology Division*

Mark Person, Emi Ito

This session seeks to bring together hydrologists and limnologists to shed new light on the hydrologic response of streams, lakes, and aquifer systems in response to past/future climate change using field and modeling based studies. Oral.

Hydrogeology; Limnogeology; Geomorphology

**T52. Inland Waters, Playas and Saline Lakes: More than Mini-Oceans**

*GSA Limnogeology Division*

Kathleen Nicoll, Michael Rosen

What are the frontiers in assessing lacustrine archives of terrestrial environmental and hydroclimatological change? This session welcomes papers addressing diverse aspects of ancient-modern deposits, including mineralogy, stratigraphical architectural elements, geochronology, and preservation of fossil records. Oral.

Limnogeology

**T53. Evidence for Paleoenvironmental Change during the Paleogene from the Interior Basins of Western North America**

Cynthia A. Stiles, Alan R. Carroll, Michael E. Smith

A multidisciplinary forum for presenting evidence of paleoclimatic and/or depositional environment changes in the North American continental interior from geochronologically correlated early Cenozoic records, including paleolakes, paleobotanic and paleontologic evidence, paleosols, and basin stratigraphy. Oral.

Paleoclimatology/Paleoceanography; Limnogeology; Sediments, Clastic

**T58. Long Records of Paleoclimate in the Southern Deserts of North America**

*GSA Quaternary Geology and Geomorphology Division; GSA Limnogeology Division*

Marith Reheis, D.M. Miller, Charles G. Oviatt

Interdisciplinary approaches to long glacial-interglacial records of climate change in the southern deserts of the U.S. and Mexico, including lacustrine, eolian, cave, wetland and marine systems, and middens. Oral.

Quaternary Geology; Paleoclimatology/Paleoceanography; Limnogeology

**International Lake Environment Committee (ILEC)**

*October 28 to November 2, 2007*

The 12<sup>th</sup> World Lakes Conference (Tall 2007) of the International Lake Environments Committee will take place from October 28 to November 2, 2007, in Jaipur, India. The abstract deadline is July 15, 2007.

The conference website is: <http://www.taal2007.org>

## **North American Lake Management Society (NALMS)**

*October 31 to November 2, 2007*

The 27<sup>th</sup> International Symposium of the North American Lake Management Society (NALMS) will take place from October 31 to November 2, 2007, in Orlando, Florida. The abstract deadline is June 8, 2007.

The conference website is: <http://www.nalms.org/Conferences/Orlando/>

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### ***News Ripples...***



#### **The International Year of Planet Earth in 2008**

Submitted by Jim Teller (Winnipeg, Manitoba)

The United Nations proclaimed 2008 as the International Year of Planet Earth. It is the central year in a Planet Earth triennium that will begin in January 2007 and end in December 2009. All 191 UN nations have adopted the aims and ambitions of The Year and are willing to contribute to their implementation. Hence, this proclamation is the most ambitious scientific and outreach program ever designed in the geosciences, and provides an unprecedented opportunity to showcase to the world the relevance and socioeconomic importance of the Earth sciences.

A primary aim of the International Year of Planet Earth (IYPE) is to increase public awareness and understanding of the ways in which our science can make planet Earth a safer, healthier, and wealthier place, and to demonstrate that earth scientists are key players in creating a balanced and sustainable future for all.

Efforts will include persuading decision makers, politicians, and other community leaders to apply effectively the great store of knowledge accumulated by the world's half million earth scientists, and to encourage those leaders to consult us on matters related to the Earth. During the 2007-2009 time frame of IYPE activities, earth scientists around the world also will be trying to explain to the general public how the Earth works, how its history provides important insight into our future, and what earth scientists do to make the world a better place in which to live.

Ten broad and socially-relevant themes have been developed for the International Year of Planet Earth. These are listed below, and can be viewed on the web site [www.yearofplanetearth.org](http://www.yearofplanetearth.org).

- Groundwater - toward sustainable use.
- Hazards - minimizing risk, maximizing awareness.
- Earth & Health - building a safer environment.
- Climate - the 'stone tape'.
- Resources – new discovery and sustainable development.
- Megacities - going deeper, building safer.
- Deep Earth - from crust to core.
- Ocean - abyss of time.
- Soils - the mantle for life.
- Earth and life – origins of diversity.

The Limnogeology Division is encouraged to think of ways that we can contribute to this international event.

### **Geology of Coal Fires**

Our colleagues from GSA asked that we help announce a new book entitled “Geology of Coal Fires: Case Studies from around the World,” edited by CGD First Vice-Chair Glenn B. Stracher, and published by the GSA Engineering Geology Division (Reviews in Engineering Geology, V. 18).

This book includes chapters devoted to spontaneous combustion, greenhouse gases, mineralogy and petrology of coal fires, geophysics of coal fires, and public policy. It will be available in November or December, 2007. Order forms for the book will be available at the 2007 GSA Annual Meeting in Denver.

### **Jurassic Lake Cores Available for Study**

Over thirty cores from the base of the Jurassic Portland Formation (most taken near Hartford, Connecticut) are now in a core repository in Connecticut and available for study. These cores were taken primarily in the 1970's and range from 1 to 6 inches in diameter (see the photographs below). They represent about 500 feet of continuous section in the lower Portland Formation.

If you are interested in examining the cores, please contact Margaret Thomas of the Connecticut Geological Survey, Department of Environmental Protection. Her number is 860-424-3583 and her e-mail is [margaret.thomas@po.state.ct.us](mailto:margaret.thomas@po.state.ct.us).



A row of core boxes (left) and an example of 4-inch diameter cores (right) from the new repository in Connecticut.

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***Go to the **Limnogeology Division** website at:***

<http://rock.geosociety.org/limno/index.html>

To get the latest information on other Limnogeology meetings and workshops...

*If you don't have access to our website, please contact a Division officer for a list of meetings (officer contact information is on page 1 of this newsletter)*

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