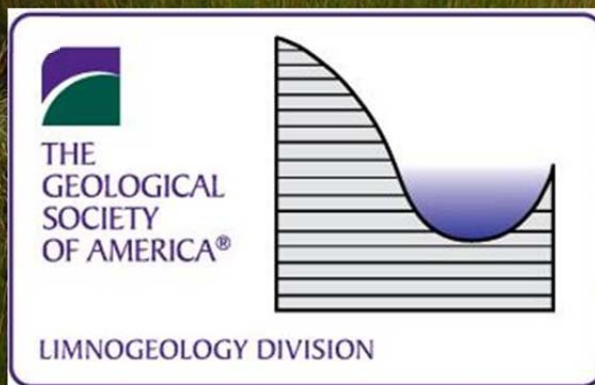
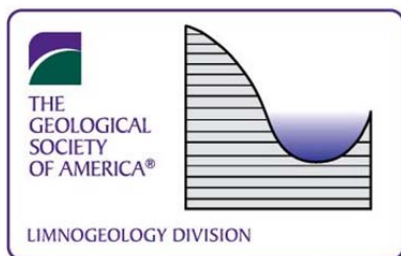


# Geological Society of America Limnogeology Division Newsletter

Volume 9, Number 1  
September 2011





## ***Limnogeology Division Newsletter***

**Volume 9. Number 1  
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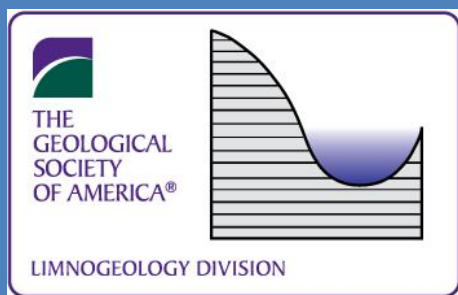
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## From the Editor

**Peter Drzewiecki**  
Storrs, CT

Greetings!

Welcome to the fall 2011 edition of the Limnogeology Newsletter!

This edition of the Newsletter contains articles by Martaan Van Daele (2010 Kerry Kelts Award winner) on the effects of an earthquake on lake sedimentation in Chile, and by Amy Myrbo on a project pertaining to the wild rice lakes of Minnesota.

This edition of the Newsletter also contains an update on the Annual GSA Meeting in Minneapolis, and other informational items including:

- A message from your new division chair,
- A report on the 19<sup>th</sup> International Sedimentological Congress,
- A list of the many division members who earned prestigious awards this year, including the Kerry Kelts Student Research Award and Israel C. Russell Award winners,
- Limnogeology related sessions at the 2011 Annual GSA Meeting,
- An announcement about an upcoming series of books on lake research, and
- A list of upcoming limnogeology-related meetings

I hope you find this information useful. As always, please send me any announcements, etc. you want distributed to other members of the division. I would also love to receive more technical articles for the Newsletter.

Cover Photo: Small coastal lake, Cape Cod, MA  
(photograph by Peter Drzewiecki)

## Message from the Chair

Daniel Deocampo  
Atlanta, GA



***Dan taking notes in an oil-covered marsh in Barataria Bay, Louisiana, where he is leading an NSF project testing whether high layer charge montmorillonite can help the microbes degrade the Deepwater Horizon oil.***

Dear Friends and Colleagues,

What an exciting year for GSA's Limnogeology Division! First I want to thank Michael Rosen (USGS) for his service as Chair for the previous two years. In the tradition of our other Past Chairs, he skillfully guided our Division to continued growth, support of student research, and promotion and publication of research in our field. Thanks for your hard work, Michael! Our Past Chairs have created a Division that is no longer the “new kid on the block” – as we all know from the wonderful things that are happening.

At last year's national meeting in Denver, the Division honored Bill Last (University of Manitoba) as the inaugural recipient of the Israel Cook Russell award, recognizing major achievements in research, teaching, and service. It was exciting to see Bill as the first in

a chain of renowned limnogeologists to accept this honor - if you missed it, you can read the Citation and Response in this newsletter.

We also presented the 2010 Kerry Kelts student research award to Maarten Van Daele (Ghent University). In this newsletter he provides an update on his exciting research on paleoseismicity in lakes. The students competing for this award routinely submit excellent proposals, and it is unfortunate we only have enough funds to support one student project. However, we believe that the process of proposal development is critical to these students, whether their proposals are funded or not. So we rely on you for your continued contributions to the Kerry Kelts fund to make this happen!

Incredibly, it has been ten years since Kerry's death. It is fitting that he is memorialized in this wonderful program that has supported 17 student research projects since its start in 2004. I am happy to report that through your generosity, the Kelts Fund has grown to over \$20,000! We are almost to the point where we can start considering letting the Kelts Fund become self-sustaining. For now, though, and until we have that conversation, we continue paying for the student awards out of operating funds to allow the Kelts Fund to grow. That means paying dues – so get your colleagues who are not yet members to join up!



The Division remains committed to facilitating presentation of the Limnogeological community's high quality research at GSA meetings. This year's annual meeting in Minneapolis will be a banner year for lakes and paleolakes! We will kick off the week with our 4<sup>th</sup> free Core Workshop, to be held on Saturday Oct 8 at LacCore - the National Lacustrine Core Repository at the University of Minnesota! Come out to see this unique national facility, and put your eyes on some spectacular core!

Lakes and paleolakes will be presented every day at GSA this year - Limnogeology is sponsoring or co-sponsoring a total of 13 topical sessions, many with corresponding poster sessions, comprising 149 talks and 107 posters. From extreme lakes to urban lakes to terrestrial analogs for other planets, the impact and interdisciplinary vigor of our community are clear and will be highlighted in Minneapolis!

I also want to invite everyone to join us for our Division Reception (I dare not call it a "business meeting") on Tuesday Oct 11 at 5:30PM, as we once again join with the Sedimentary Geology Division to meet up with old friends and make some new ones. Most importantly, we will honor this year's awardees. This year's Kelts Award winner is an excellent graduate student conducting exciting interdisciplinary limnogeological research, and our Russell Award winner is a limnogeologist everyone knows and will be thrilled to congratulate. Come meet the winners and help them celebrate! And don't worry, we'll be positioned close to the Quaternary Geology party!

See you in the Land of 10,000 Lakes!

Dan Deocampo  
Limnogeology Division Chair



## Contribution from 2010 Kerry Kelts Award Winner

### Imprint of the $M_w$ 8.8 Maule earthquake (27 February 2010) on lake sediments in South-Central Chile

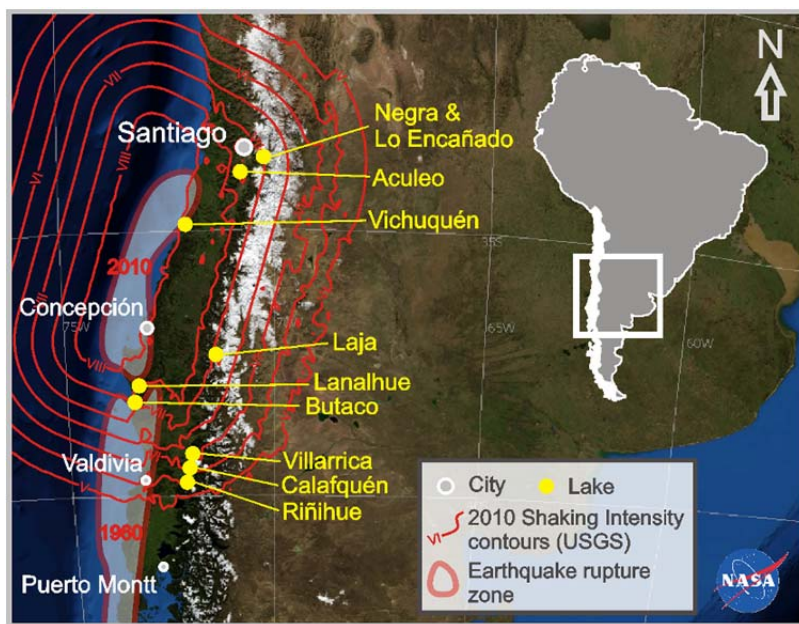
Martaan Van Daele

Renard Centre of Marine Geology – Ghent University

#### Introduction

On 27 February 2010, at 3:34 am local time, a  $M_w$  8.8 earthquake struck a 500 km long region in South-Central Chile, extending from Concepción in the South to Santiago in the North (Figure 1). This area houses approximately 80 % of the Chilean population, and Chile's second largest city Concepción was one of the most severely affected cities. The last megathrust earthquake to affect the 2010 rupture zone occurred in 1835 and its effects were thoroughly described by Charles Darwin when he arrived with the Beagle in Concepción. Witnessing the devastation caused by this earthquake was key in the development of his evolutionary theory. And, in fact, several other mega-earthquakes have hit Chile in its recent history. With a moment magnitude ( $M_w$ ) of 9.5, the 1960 Valdivia earthquake is still the strongest earthquake ever recorded, worldwide. This event ruptured the inter-plate boundary over ~1000 km just south of the 2010 Maule rupture zone (Figure 1).

Characterizing the sedimentary imprint of this well-recorded event in different types of



**Figure 1:** Overview map of the study area. The studied lakes are indicated in yellow, rupture zones of the 1960 and 2010 earthquakes (after Moreno et al. (2009) and Moreno et al. (2010)) and calculated Shaking Intensities are indicated in red (USGS). Satellite image from NASA World Wind.

lakes located in a range of different environments, is crucial for developing a reliable lacustrine paleoseismological approach. Comparing these records to eye-witness reports and Shaking Intensities will help to determine the minimum intensity threshold for creating such sedimentary imprints, and to gain insights in the earthquake-recording capability of each lake system. This

information is essential to estimate the strength of older, paleo-earthquakes, the imprints of which are also present at deeper levels in our sedimentary records.



**Figure 2 (left): the camp site next to Laguna Negra (+2700 m).**

**Figure 3 (right): lunch break at the zodiac at Laguna Negra. Left to right: Maarten Van Daele, Willem Vandoorne and Alejandro Peña.**

## Methods

In January 2011 fieldwork was carried out in the area affected by the 2010 Maule earthquake. We collected 54 sediment cores from 10 lakes in between Santiago in the North and Valdivia in the South: Laguna Negra (Figures 2 and 3), Laguna Lo Encañado, Laguna Aculeo, Lago Vichuquén, Laguna de le Laja, Lago Lanalhue (Figure 4), Laguna Butaco, Lago Villarrica, Lago Calafquén and Lago Riñihue. When possible, local inhabitants were interviewed about the events of the 27<sup>th</sup> of February 2010.

The gravity cores were taken with a Swiss corer (Mario Pino, Universidad Austral de Chile, Valdivia) from a zodiac (Roberto Urrutia, EULA, Universidad de Concepción). The corer was made heavier by adding 1 to 2 extra weights, depending on the type of sediment. The zodiac was equipped with a small hand winch to lower and lift the corer.



**Figure 4 (left): Jasper Moernaut is very happy with the catch on Lago Vichuquén.**

**Figure 5 (right): Maarten Van Daele cleaning a core from Lago Riñihue in the lab.**

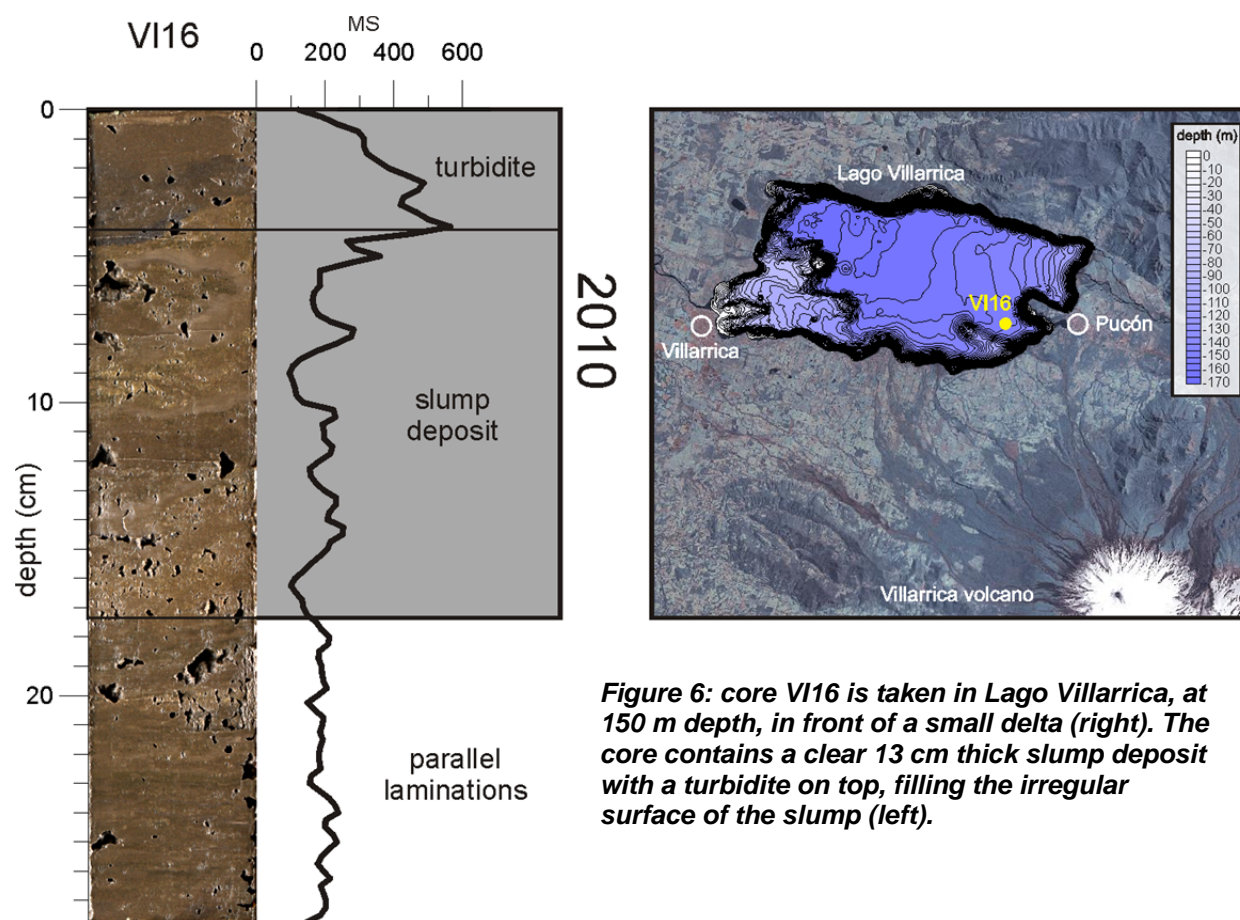
After the cores arrived in Belgium in June, they were logged with a Geotek multi-sensor core logger at ETH (Zürich, Switzerland). Since then, the cores of eight lakes were opened, described and photographed (Figure 5). Magnetic susceptibility was measured with a Bartington MSE2 point sensor on all of the opened cores and some grain-size analyses were performed with a Malvern Mastersizer 2000.



## Preliminary results

### *Imprint of the 2010 Maule earthquake*

Nine out of ten lakes contain an event deposit related to the 2010 earthquake. For two of the lakes no cores have been opened yet, but the data from the Geotek core logger clearly indicate the presence of an event deposit at the top of these cores as well.

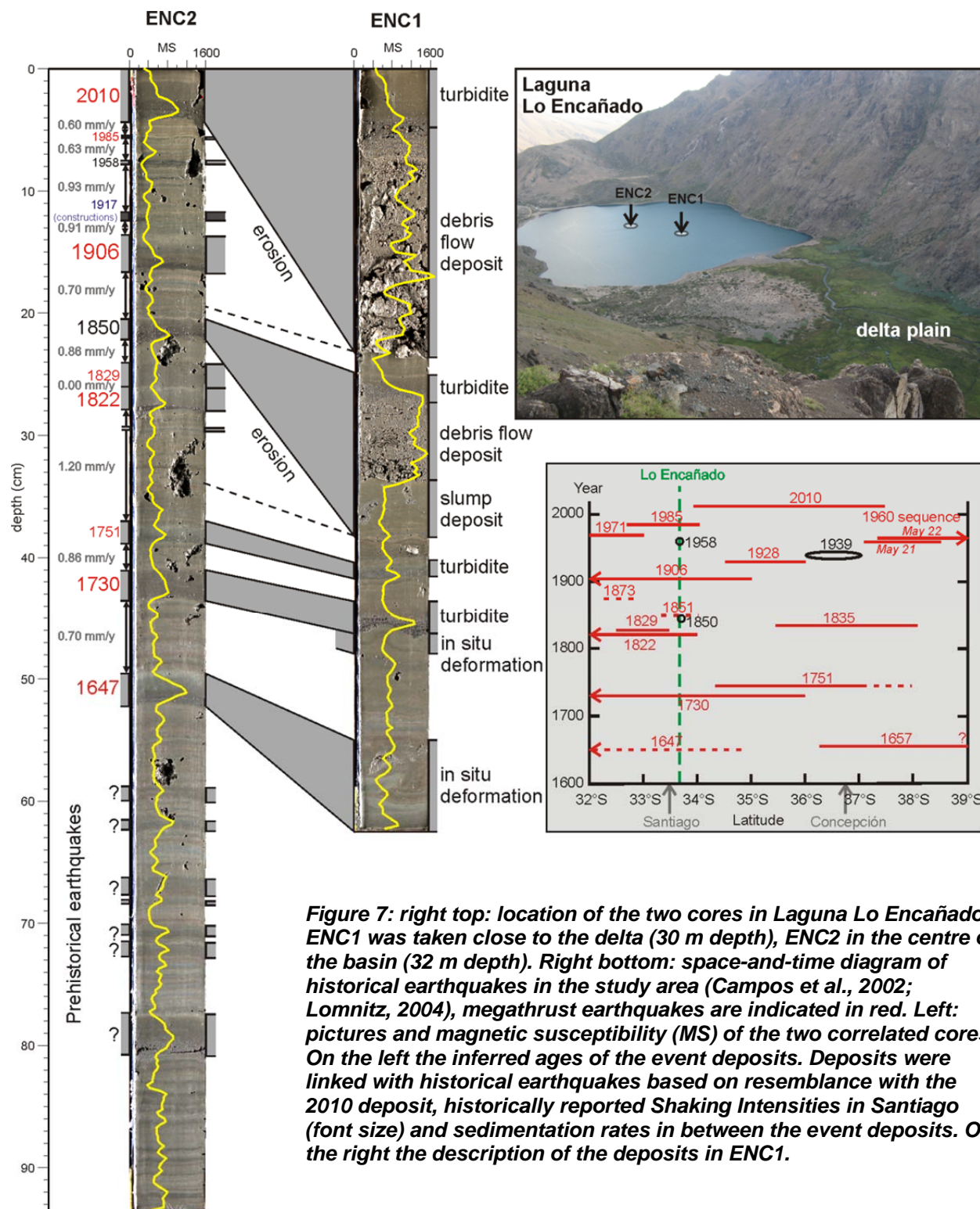


**Figure 6: core VI16 is taken in Lago Villarrica, at 150 m depth, in front of a small delta (right). The core contains a clear 13 cm thick slump deposit with a turbidite on top, filling the irregular surface of the slump (left).**

The observed event deposits always comprise a turbidite. These turbidites may have been triggered by a range of different –earthquake-induced– processes: i) onshore rock slides, ii) offshore mass-wasting, originating from delta collapses (Figure 6), iii) tsunamis, and iv) a lake-level rise. In some lakes, the event deposit

consists only of the turbidite deposit, while in other lakes, it is represented by a combination of e.g. a slump or a debris-flow deposit and its associated turbidite deposit. Slump and/or debris-flow deposits are present in Laguna Lo Encañado (Figure 7), Lago Villarrica (Figure 6), Lago Calafquén and Lago Riñihue. In all of these lakes, the mass wasting is most probably the result of delta failure or collapse. The slump or debris-flow deposits are only present close to deltas, while the associated turbidites usually cover





**Figure 7: right top: location of the two cores in Laguna Lo Encañado: ENC1 was taken close to the delta (30 m depth), ENC2 in the centre of the basin (32 m depth). Right bottom: space-and-time diagram of historical earthquakes in the study area (Campos et al., 2002; Lomnitz, 2004), megathrust earthquakes are indicated in red. Left: pictures and magnetic susceptibility (MS) of the two correlated cores. On the left the inferred ages of the event deposits. Deposits were linked with historical earthquakes based on resemblance with the 2010 deposit, historically reported Shaking Intensities in Santiago (font size) and sedimentation rates in between the event deposits. On the right the description of the deposits in ENC1.**

the entire deep basin floor. Although mass-wasting events occurred in all of these lakes, only in Lago Villarrica a tsunami was reported (Figure 6). However, we suspect that small tsunamis also occurred in at least some of the other lakes, but that they were not noticed. The lack of eye-witness accounts from these lakes can probably be explained

by a combination of the remoteness of these regions (Laguna Lo Encañado and Lago Riñihue) and the time of the earthquake (i.e. 3:34 am, thus in the middle of the night).

In Laguna Negra, we found several rock-slide deposits and distal turbidites. This was to be expected, since rock falls were reported over the whole region.

Due to coseismic coastal uplift and the resulting back-tilting of Lago Lanalhue, the outlet of this lake became an inlet after the earthquake. This lasted for a couple of days and meanwhile the lake level rose, causing beaches and quays to disappear. These processes resulted in the reworking of soils and other terrestrial material along the shores. We found a 2 cm thick organic-rich turbidite in the deepest part of the lake, close to the outlet. We thus hypothesize that this turbidite is an indirect effect of the coseismic tilting of the lake, rather than of the shaking itself.

Both Lago Vichuquén (+4 m) and Laguna Butaco (+11 m) contain a tsunami deposit. The cores that were collected close to the outlet (or according to eye-witness reports the tsunami inlet), contain a deposit at their top. This deposit is characterized by a high density and high magnetic susceptibility (Geotek), probably due to the presence of sand brought in by the tsunami wave.

### *Imprint of historical earthquakes*

The cores from Laguna Lo Encañado hold a very promising paleoseismological record. By correlating the two cores from this lake it can be inferred that in the core closest to the delta (ENC1) some of the event deposits are erosional, while this is not the case for the core further away from the delta (ENC2) (Figure 7). Core ENC2 contains several cm-thick turbidites, which were tentatively linked to known historical earthquakes (Campos et al., 2002; Lomnitz, 2004). According to this tentative correlation, the core seems to predate the Spanish colonization and thus contain prehistorical event deposits (Figure 7).

### **Future work**

In the coming months, all cores will be opened, described and photographed and magnetic susceptibility will be measured at high resolution. The most promising cores will be subjected to detailed grain-size and XRD analyses and XRF,  $\mu$ -XRF or CT scans. Cores with the potential to contain valuable paleoseimological records (such as ENC2), will be accurately dated using a combination of  $^{210}\text{Pb}$  and  $^{137}\text{Cs}$  and radiocarbon dating.

After complete analysis of all cores, we plan to return to Chile to collect one or more long cores from the most suitable locations in the most promising lakes. These cores

will likely contain a paleoseismological record that extends beyond the historical records.

### **Collaborators**

I am currently doing my PhD at the Renard Centre of Marine Geology (RCMG, Ghent University), under supervision of Prof. Dr. Marc De Batist. Dr. Jasper Moernaut and Willem Vandoorne of RCMG helped in the field and with interpreting the first results. The fieldwork was performed in close collaboration with our Chilean colleagues Prof. Dr. Roberto Urrutia (EULA, Universidad de Concepción) and Prof. Dr. Mario Pino (Instituto de Geociencias, Universidad Austral de Chile, Valdivia).

### **Acknowledgements**

I especially want to thank the GSA Limnogeology Division for honoring me with the 'Kerry Kelts Research Award 2010'. This award enabled me to cover part of the costs of the fieldwork. Also the 'IAS postgraduate student grant' contributed to financing the fieldwork. This research is executed in the framework of a BOF-project (Research Fund UGent). We thank Aguas Andinas for permission to work on Laguna Negra and Laguna Lo Encañado, and CONAF for letting us work in Parque Nacional del Laja. Further, we thank Alejandro Peña for invaluable help during the fieldwork and Prof. G. Haug and Dr. Adrian Gilli for letting us use the Geotek core logger at ETH, Zürich. Maarten Van Daele is currently funded by FWO Flanders.

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## Wild Rice Lakes in Minnesota

### The *Manoomin* Project: Multidisciplinary Lake Sediment Core Based Research by Native American Students on Wild Rice Lakes in Northern Minnesota

Amy Myrbo

Research Associate and Lab Manager, LacCore/Limnological Research Center,  
Department of Earth Sciences, University of Minnesota – Minneapolis

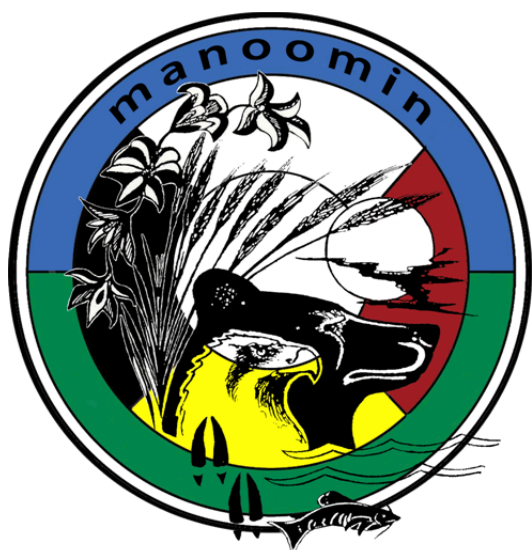


Figure 1. *Manoomin* Logo

We would all like to inspire young people to get excited about science, and connect with the communities around our institutions and the places we study. While many geoscience topics may seem esoteric to the public, lake sediment research is an excellent bridge to non-scientists and an ideal vehicle for “place-based education” in both formal and informal settings. The great diversity of subdisciplines involved in limnogeology and paleolimnology means that there is something for everyone with an interest in water, ecology, biology, geography, environment, and climate change, as well as geology. The esthetic appeal of laminated and colorful lake sediments and of many sedimentary

components (diatoms, minerals, plant remains, etc.) also welcomes the involvement of artists of all ages. When we focus on the period of human history, the stories that lake sediments tell become much more compelling to nonscientists, and elements of local history and culture are brought into the mix. Many educators already use lake sediments in their own classrooms, and good ideas abound. This article highlights a student-oriented LacCore project that provides examples of approaches that can be used to present the relevance of science to local communities.

The *manoomin* project, or *Nanda-gikendaasowin Naawij Gaa-izhiwebakin Manoomini-zaaga'iganiing* (“studying what happened out in the rice lakes” in Ojibwe) is a five-year collaboration between the Fond du Lac Band of Lake Superior Chippewa and the University of Minnesota, and is funded by NSF’s Opportunities for Enhancing Diversity in the Geosciences (OEDG) and Research Experience for Undergraduates (REU) programs. Our project is focused on involving Native youth in research and getting

students of all ages excited about science. In close cooperation with the Band's Resource Management Division (FDLRM), we collect cores from the Fond du Lac Reservation's wild rice lakes, and work with grades 5-12 and college students to analyze them. We've just finished the second year of the project.



**Figure 2. Rice Portage Lake, showing scale of judicial ditches.**

Wild rice (*manoomin*, *Zizania palustris*, Figure 3) is an aquatic grass that has tremendous cultural significance, as well as importance for subsistence, to Ojibwe people. Indeed, the Fond du Lac Reservation is located where it is because of the presence of these lakes. Wild rice habitat has been altered in many places by hydrological manipulation, nutrient and chemical inputs, and shoreline development. On the Fond du Lac Reservation the lakes appear relatively unimpacted – until one realizes that they are connected by a major system of judicial ditches (more correctly called canals, ~6m wide; Figure 2) constructed by Europeans in the early 20<sup>th</sup> century in an attempt to convert these lakes and wetlands into farm fields. The massive project did not succeed in drying out the land, but it did severely disrupt its hydrology, reducing



the surface area of some lakes by over half and decreasing the residence time of surface water in the lake chain. The shift from meandering streams on floodplains to straight-line canals means that in rainfall events, water runs through the system quickly, and can cause abrupt lake-level rises of several decimeters. Such jumps in water depth can easily uproot wild rice plants, especially in the floating-leaf stage of growth (the plant spends part of its life as a submerged and emergent plant as well), shown in Fig. 3. FDLRM personnel work constantly to manage lake levels throughout the ice-free season using a system of stream control structures, but other factors such as encroachment of competing vegetation, nutrient increases, and the natural “boom-bust” cycle of wild rice populations make their task challenging. We hope that the long-term records worked out through core analysis will provide some information on past variability and ecological associations that FDLRM can use to inform their lake management.



**Figure 3. Wild rice at the midsummer stage when it stands up from the floating leaf to emergent stage**

Monthly weekend science camps geared toward Native middle- and high-school students (and including kids as young as second grade) have been running at Fond du Lac for a number of years, with partial support from the National Center for Earth-Surface Dynamics at Minnesota. Since our project has become involved, the winter camps each year revolve around lakes and coring. LacCore and FDLRM staff take “lake teams” of about eight students and two teachers out on the frozen wild rice lakes

in January, February, and March to collect cores together. We conduct some basic analyses in the lab and classroom in the afternoon, to connect the field work (where on the lakes we were, and what we saw) with the biological remains and sedimentology of the cores. The lake team then visits LacCore on a Saturday two weeks later to do what any visiting scientist does in our facility: run cores through multisensor core loggers, split and digitally image the cores, and conduct visual core description using both the naked eye and smear slides (Rothwell, 1989; Kelts, 2003). Additional work such as sieving to find plant macrofossils (especially wild rice), learning pollen types, and constructing cross-sections based on transects of cores, are conducted with project mentors and other LacCore personnel. Encouraging students to draw what they see as





**Figure 4. Interns Lynda Morrison (left) and Riley Howes (right) with plant macrofossil mentor Christa Drake (center)**

a means to learn to identify components is part of expanding “STEM” (science, technology, engineering, and math) to “STEAM” (adding arts to the above).

Native college students from local schools (including Fond du Lac Tribal and Community College) are involved in the camps as both learners and mentors. One of the most exciting aspects of the project is that as soon

as someone learns something, they begin teaching it to others. We feel that this approach demystifies the scientific process by demonstrating that expertise is not only the purview of experts. During the summer, we offer two- and ten-week research internships for college students to focus on one proxy record from the wild rice lakes. Biological proxies (so far, diatoms, phytoliths, pollen, and plant macrofossils; charcoal analysis will be added in 2012) prove to be very popular with students, and successful in terms of what the students achieve. Our proxy specialist mentors (a mix of graduate students and research scientists) begin by preparing reference collections for the interns, based upon prior data from these lakes, and keeping the list of taxa relatively constrained, rather than setting the students adrift with standard reference texts or websites. While we are conducting sedimentological and geochemical (including isotopic) research in parallel with the students’ work on paleoecology of the wild rice lakes, we are not certain how these proxies will be interpreted in relation to the project’s major environmental questions, and thus are not ideal for intern projects. In addition, it is our experience that undergraduates’ heads tend to explode a little when interpreting isotopic records for the first time, and that such potentially ambiguous records may be best left for later synthetic work where other proxies are available to aid in interpretation. Dating is crucial in any lake sediment research project, and it is no less so in a project focused on training and education: without a chronology, data that students collect are meaningless at worst and speculative at best. Each lake in this project is dated by lead-210 (for the past ~150 years) and has numerous Holocene radiocarbon dates focused on the past ~5000 years.

One more lesson that we have learned through this project and others on urban, suburban, and other residential lakes is that when working with any new group of non-scientists, whether a lake association, Native community, or other group of locals, you must make a priority of studying what they want to know about. Let them help drive the project, fit your analytical approach to their questions (and explain your own research questions to them), involve them in the field and laboratory activities where possible (Figure 4), and present results to them as you go – not just at the end of the project. This approach will help to foster the critical relationship between researchers and the communities in which they work.

The 2011 manoomin interns are presenting several posters in an Undergraduate Education session (T179) at GSA in Minneapolis; please also look for our posters in the Limnogeology poster session (T109) and the Urban and Suburban Lakes sessions (T104). Fond du Lac Resource Manager Tom Howes will be giving a talk on the project in the T104 oral session on Wednesday morning. For additional information about the project please visit <http://lrc.geo.umn.edu/manoomin/>.

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**Figure 5. Wild rice flower and visiting pollinating flies, with intern Shelden Misquadace in background.**

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## ***Report on the 5<sup>th</sup> ILIC***

### **The 5<sup>th</sup> International Limnogeological Congress, ILIC V 2011, in Konstanz**

**Michael R. Rosen and Antje Schwalb**  
Reno, Nevada and Braunschweig, Germany

The 5<sup>th</sup> International Limnogeological Congress was held in Konstanz in early September, 2011. This event is held once every 4 years and Antje and I have had the privilege of attending all five Congresses. After venues in Copenhagen, Denmark; Brest, France; Tucson, USA; and Barcelona, Spain; the 5<sup>th</sup> International Limnogeological Congress was held at the University of Konstanz, Germany, from August 31st through September 3rd, 2011, on the banks of Lake Constance. The lake is the 2nd largest lake in Central Europe, shared among Austria, Switzerland and Germany, and thus is the center of intense international cooperation.



***Lake Lucerne***

All the Congresses have had unique features and have been well organized. This one was no exception and Dr. Antje Schwalb (Conference Chair) from Technische



***Johanna Kelts (wife of Kerry Kelts),  
Philipp Hoelzmann, and Antje Schwalb  
(conference organizer) enjoying the  
preconference field trip on Lake  
Lucerne***

Universität Braunschweig along with the organizing and technical committees put together interesting themes for the meeting. The Conference dinner on Lake Constance was a highlight of the event. Many old friends and colleagues were there, which allowed a renewal of past experiences, and many new friends were made to carry on to the next conference. The pre-fieldtrip excursion to Lake Lucerne was wonderful and the conference days were packed with excellent talks, posters, and discussions.



Another highlight of the conference was the awarding of the Bradley Medal to Dr. Elizabeth Gierlowski-Kordesch. Beth has done wonders to elevate Limnogeology internationally to a well-respected field and she is also the founding president of our GSA Limnogeology Division. Well done Beth! See more on page 24.

Lake basins are dynamic systems with both response and records of environmental interactions; this is the guiding theme of the International Association of Limnogeology (IAL). IAL links scientist together who realize that the study of lake basins, both modern and ancient, is important and topical, not just for deciphering global and regional paleoclimates, but also for understanding basin tectonics and human impacts on lake systems. Limnogeology is a young geoscience with a unique and valuable place among frontier research topics.



***Beth Gierlowski-Kordesch receiving the Bradley Medal from Tom Johnson (previous Bradley medal winner).***



***Flavio Anselmetti talking to the fieldtrip participants about Lake Lucerne***

The congress attracted 184 limnogeologists from 26 countries, out of which one third were young scientists without a completed Ph.D. While Europeans represented the majority of participants (80%), 21 participants came from North America, seven from Asia, six from Central and South America, and two from Africa. Thanks to our sponsors we were able to provide travel grants to nine young and early career scientists from mostly outside of Europe. The sponsors also provided recent books that were awarded for poster presentations by students. The winners selected by a panel of senior scientists were:

- **S.B. Wirth**, (Geological Institute, ETH Zürich, Switzerland), and others, XRF core scanning and CAT scans as tools for tracking the Holocene flood frequency in Lake Ghirla (Southern Alps, N-Italy)
- **S. Oexle**, (University of Konstanz, Germany), and others, Reconstruction of evolutionary processes from resting egg banks of *D. pulicaria* in Lower Lake Constance
- **O. Margalef**, (Institute of Earth Sciences Jaume Almera (CSIC), Barcelona, Spain), and others, Lithostratigraphy and geochemistry of Rano Aroi (Easter Island, Chile) peatland infill as indicators of long-term a wetland dynamics evolution
- **C.A. Benavente**, (IANIGLA-CONICET, Mendoza, Argentina), and others, Freshwater sponges from Triassic carbonates of Argentina (Cuyana Basin)
- **J. Lenz**, (Alfred Wegener Institute for Polar and Marine Research, Potsdam, Germany), and others, 11 ka of lake dynamics at high latitudes: Evidence for Early Holocene warming in the western Canadian Arctic (Herschel Island)
- **F. Jacob**, (Dresden University of Technology, Institute of Soil Science and Site Ecology, Tharandt, Germany), and others, The geochemical fingerprint of runoff events during the last 70 years in sediments of Lehmühle reservoir (Ore Mountains/ NE Germany).

Over 200 oral and poster presentations were presented and organized in 13 diverse scientific sessions dealing with lake systems from geographical key areas ranging from the poles to the tropics and from low to high altitudes. Other sessions had a methodological focus on innovative stable isotope methods and progress in the quantification of environmental information from biological proxies. In addition, sessions on Phanerozoic lake systems served as archives for pre-Quaternary climates and environments. Another series of presentations dealt with hazardous processes such as in volcanic lakes, others focused on lakes of tectonic origin, and also on human impact on lakes and the environment. Discussions were fueled by seven stimulating plenary talks dealing with microbes in lake sediments, and addressing the role of lake sediments as source rocks and the role of lake systems for the global carbon cycle and how humans have affected lake biology, geology and hydrology. Two mid-conference field trips to the isles and peninsulas of Lake Constance



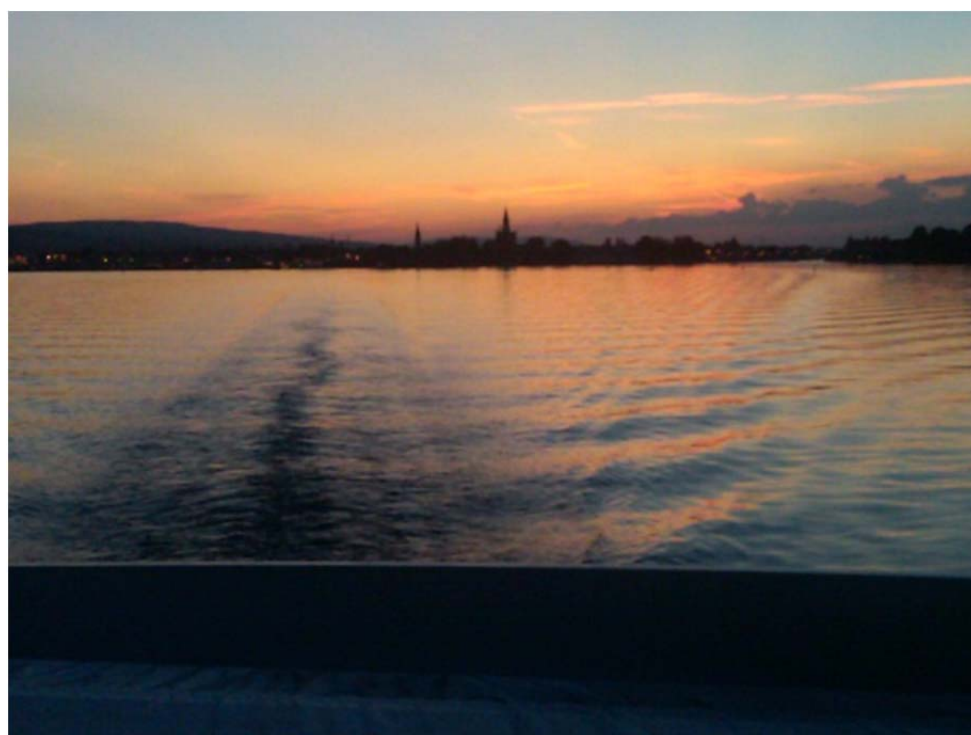
*One of the many excellent talks during the meeting.*



***Blas Valero Garcés relaxing in Lake Constance after the meeting***

and presenting the Geology of the surrounding area of Konstanz were led by M. Rösch (Landesamt für Denkmalpflege, Hemmenhofen), and O. Kempf (Swiss Geological Survey, Wabern), respectively. One pre- and one post-congress excursion took place to and on Lake Lucerne led by F. Anselmetti, EAWAG, Dübendorf, and to the Lake Constance Lower Lake Area (M. Rösch).

The organizers acknowledge the generous support of our sponsors: Deutsche Forschungsgemeinschaft, ExxonMobil, Universität Konstanz, Technische Universität Braunschweig, International Association of Sedimentologists, Sea & Sun Technology, Hydro-Bios, Fritsch, COX Analytical Systems, BETA Radiocarbon Dating, UWITECH, Springer, Cambridge University Press, Wiley-Blackwell, Schweizerbart-Bornträger.



***Lake Constance during the Congress dinner.***



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## ***2011 Kerry Kelts Award***

The 2011 Kerry Kelts Student Research Awardee is Laurel Stratton, in the Graduate Program of Hydrologic Sciences at University of Nevada, Reno, for the project titled **"Diatoms as Proxies for Hydrographic Variability in a Small, Subalpine Lake, Sierra Nevada Mountains, Northern California"**.

Laurel will be presented with this award at the annual Division Business Meeting on Oct. 11 (see announcement below). Congratulations, Laurel!

Thanks to all the students who submitted proposals, and good luck as you continue your research in Limnology, Paleolimnology, and Limnogeology.

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## ***2011 Israel C. Russell Award***

The Limnogeology Division has selected a recipient for the 2011 Israel C. Russell Award! This award was established to honor those who have made significant career contributions to lake research and education. The winner will be announced at the annual Division Business Meeting on Oct. 11 (see announcement below). We hope you are able to come and support your colleagues!

Last year's recipient of the Russell Award was Bill Last. Below is the citation and response for the award.

### **Citation by Fawn Ginn:**

It is an honor and a great pleasure for me to deliver the citation for the inaugural Israel Cook Russell award for major contributions to the field of limnogeology to Bill Last.



**Bill Last (from the GSA website)**

Bill has made major contributions to the field through three decades of research, teaching and editorial activities. He is recognized internationally as a leading authority on limnogeology and lacustrine evaporites and as a world leader on research related to saline lake basins. He has authored over 130 research papers dealing with lakes and lake sediments and has authored or edited a total 21 monographs and books, many of which are key references in paleolimnology and limnogeology.

Like Israel Russell, Bill is an avid field researcher who loves to experience nature first hand. The salt lakes of North America and Australia are his primary laboratories, and for many years these continental evaporitic settings were not well studied. Anyone who has been on a field trip with Bill can't help but feel his excitement for his research as he wades in to the muddiest and saltiest lakes without hesitation. He pioneered work in the fundamentals of saline lake geology, where he has shown that the mineral record in saline lakes can provide precise and accurate information on past lake conditions. This research paved the way to quantitative interpretation of lake histories, with applications to Quaternary and pre- Quaternary environmental change. Bill's Lake Sedimentology Lab at University of Manitoba is one of the world's most active and productive labs dedicated to limnogeology. The lab has attracted limnogeologists world-wide, and has been host to many scholars. This stream of colleagues has helped him develop collaborative lake sediment research on a global basis.

In addition to research, Bill has made major contributions to the field of limnogeology with his editorial work. During his tenure as co-editor-in-chief of *Journal of Paleolimnology*, he has been universally acknowledged as greatly expanding the coverage and influence of this journal. He initiated and co-edited several research volumes of the book series *Developments in Paleoenvironmental Research*, which have become essential references in the field. He has served on editorial boards and as associate editor on eight other journals.

Bill is an excellent and dedicated teacher and mentor. His enthusiasm in the lecture theater is second to none. Anyone who has listened to a lecture or seminar by Bill will catch his unbridled enthusiasm for whatever the topic is he is presenting. His commitment and passion for his work has inspired many students and colleagues to pursue new avenues of scientific research.

Bill has been an active member of GSA for over 30 years and a Fellow since 1999. As the representative for GSA at University of Manitoba since 1982, he strongly encourages membership and participation in GSA meetings.

Bill's contributions to the field of limnogeology have and continue to be essential to its forward momentum. Bill is bringing distinction to this award by being the first recipient. His humility makes it even more meaningful.

### **Response by Bill Last:**

I would like to thank Fawn for her kind words and generous comments about my career, and the Limnogeology Division for presenting me with the Israel Cook Russell award. Being appreciated by ones colleagues and professional peers is very gratifying. I am delighted and humbled by this expression of appreciation. I am also deeply honored to have my name associated in any way with I. C. Russell, one of the pre-eminent explorers in the early days of our profession and certainly a giant in the ranks of geolimnologists.

When Fawn first approached me about the Russell award nomination, I must admit I was a bit hesitant. "Achievements in limnogeology through contributions in research, teaching and service" sounded suspiciously like "good job over the past 40 years; goodbye and be sure to send us a postcard from the cottage". Although I have been working with lakes and lake sediments for my entire career, I really feel like I am just starting in the field. While it is true that I am getting to an age at which my employer is regularly sending me reminders about retirement planning, it is my intention to keep doing limnogeology for a few more decades. There are there simply too many uncored lakes and countless fascinating geochemical systems to slow down now; and with lacustrine carbonates and evaporites on Mars, we have a whole new planet to explore from a geolimnological perspective.

A few years ago in accepting the Sedimentary Geology Division's Sloss Award, Mike Arthur professed "the field of sedimentary geology is quite robust today". I would certainly echo this sentiment about our interdisciplinary field of limnogeology; explosive might be a better word to describe the past few decades of growth in this field. I am quite sure most of us old-timers can remember the days, not too distant, in which organizing a full session of papers on lakes at a GSA meeting would be almost impossible. Today we have an abundance of sessions like the ones organized here in Denver by Dan Deocampo, Mike Rosen, David Finkelstein and Tom Johnson. In the past few years, we have seen this surge of interest in lacustrine systems translate into the creation of the Limnogeology Division of GSA and sister organizations like the International Paleolimnology Association, International Association of Limnogeology, and International Society for Salt Lake Research, to name just a few. During my years of co-editing *Journal of Paleolimnology*, John Smol and I were constantly amazed by the exponential growth of contributions dealing with the physical and geochemical aspects of lake records. I may be considered a Pollyanna, but I really do not have any



profound concerns about the state of our field nor of the level of funding of limnogeology projects in academia.

I cannot remember a time in my life that I was not fascinated with lakes. Growing up literally meters away from Lake Michigan meant my every waking hour as a youngster was spent on or in this large freshwater basin. Although I entered university intent only on doing “science” (earth science was not a teachable subject in my high school), I was quickly attracted to geology, admittedly due mainly to the fact that I could spend time outdoors while my friends were cooped up in labs replicating experiments or dissecting frogs. In my formal education at Wisconsin and Manitoba, I was truly blessed to have teachers, supervisors and colleagues who were willing to share their knowledge and expertise, and were patient enough to provide opportunities to work in the field. Manitoba during the early 1970’s was somewhat of a hotbed of lake investigations, from which the relatively large scientific community providing me with more than ample exposure to a great variety of limnogeology projects. Probably one of the best undergraduate courses I ever took was Jim Teller’s geolimnology course (to my knowledge the only formal course in North America at that time dealing exclusively with the geology of lakes). At this time, Jim was laying the foundations for his career work on Lake Agassiz and I eagerly took part in this project. From Agassiz, to my thinking at least, it was a short jump into Lake Manitoba and then farther westward into the salty puddles of the Canadian Prairies, southern Australia, and South America.

I am delighted to receive this inaugural I. C. Russell award. I regard my many colleagues and students in Canada, United States, Australia, and China as sharing this award because they have all greatly helped me along the way.

## ***Award-Winning Limnogeology Division Members***

**Peter Drzewiecki**  
*Storrs, CT*

A number of members of the Limnogeology Division have won prestigious awards from various geoscience organizations over the past year. They include:

**Walt Dean – Winner of the 2011 Twenhofel Medal (SEPM's highest honor) recognizing a Career of Outstanding Contributions in Sedimentary Geology.**



Walt Dean accepts the William F. Twenhofel Medal from SEPM President Mitch Harris

Citation: For his invaluable practical and conceptual contributions to sedimentary geochemistry applied to paleolimnology and paleoceanography in a wide range of environments. These include marine and lacustrine settings, Permian to modern ages, and in milieu ranging from anoxic marine to oxic fresh water, and topics ranging from hydrocarbon genesis and preservation, to climate change on a variety of time scales, and to global biogeochemical cycles, especially that of carbon. (Photo from SEPM)

**James Teller – Winner of the 2011 W. A. Johnston Medal (the Canadian Quaternary Association's highest honor) for excellence in Quaternary Science.**

Jim will be further recognized at the upcoming GSA meeting, with the following sessions in his honor:

T140. Glacial Lake Agassiz—Its History and Influence on North America and on Global Systems: In Honor of James T. Teller

Time: Monday, October 10, 1:30 PM-5:30 PM (Oral)

Location: Minneapolis Convention Center: Room L100FG

Time: Monday, October 10, 9:00 AM to 6:00 pm (Posters)

Location: Minneapolis Convention Center: Hall C

And finally, founding member of the Limnogeology Division...

**Beth Gierlowski-Kordesch – Winner of the 2011 Bradley Medal (the International Association of Limnogeology’s highest honor).**

Beth recently received her award at the 5<sup>th</sup> International Limnogeology Congress (ILIC5) held in Konstanz, Germany this past month.



A meeting of past Limnogeology Division Chairs... Elizabeth Gierlowski-Kordesch (center) receives the Bradley Medal (inset) from Kevin Bohacs (left). The award was introduced by Tom Johnson (right).



An article describing Elizabeth’s Award and accomplishments can be found at:  
<http://www.ohio.edu/compass/stories/11-12/9/kordesch-award-2011.cfm>



## ***Announcement for the 2011 GSA Annual Meeting***

**Peter Drzewiecki**  
*Storrs, CT*

### ***Archean to Anthropocene: The Present is the Key to the Future***



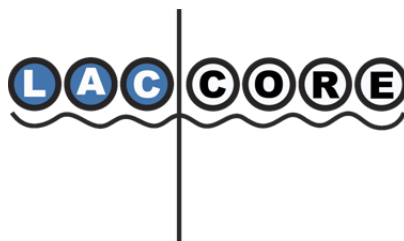
(<http://www.geosociety.org/meetings/>)

The 2011 annual meeting of the Geological Society of America will take place from October 9 – 12, 2011, in Minneapolis, MN. The theme for the conference is *Archean to Anthropocene: The Past is the Key to the Future*. The meeting website is:

<http://www.geosociety.org/meetings/2011/>

The Limnogeology Division is sponsoring or co-sponsoring a core workshop, and a number of technical sessions and field trips at this meeting. Be sure to take advantage of all the posters and presentations being offered!

#### **Core Workshop – Saturday, October 8, 2011**



Make time in your GSA 2011 schedule to attend the LacCore/Limnogeology Division Core Workshop on Saturday, October 8. We'll pull out some fascinating lake cores from the >18 km in our Repository collection, have lively discussion about lithological features and

environmental interpretations, look at smear slides, and give tours of the Facility for those of you who have not visited before.

This free workshop will be held at LacCore, the National Lacustrine Core Facility, on the Minneapolis campus of the University of Minnesota. The location is *not* within easy walking distance of the Convention Center, but the city bus is straightforward. The street address is 500 Pillsbury Dr. SE (room 672), Minneapolis, 55455.

The workshop will take place from 9 AM to 4 PM; please join us for all or part of the day. Breakfast snacks and coffee will be provided in the morning, and we have a variety of places to choose from within walking distance for lunch.

Please email Amy Myrbo (amyrb@umn.edu) to sign up for the workshop, or for more information. I hope to see many of you here!

There will also be LacCore tours during the meeting for those of you who cannot attend the workshop. Stop by the LacCore/Limnogeology Division booth in the exhibit hall, or contact Amy for details and times.

### **Limnogeology Booth**

Come visit us at Exhibitor Booth 116 in the exhibition hall. Stop by to let the division know what you are up to, and see how we can help you with your research.

Finally, do not forget the...

**GSA Sedimentary Geology Division, GSA  
Limnogeology Division and Society for Sedimentary  
Geology (SEPM) Awards Reception and Party  
Cosponsored by Society for Sedimentary Geology (SEPM)**

Tuesday, October 11, beginning at 5:30 PM,

Minneapolis Convention Center Room 200FG

Conference Events related to Limnogeology include:

**Saturday, October 8, 2011**

9AM-4PM Lake Sediment Core Workshop  
LacCore (National Lacustrine Core Repository)  
Univ. of Minnesota -- Civil Engineering Bldg, Rm 672

**Sunday, October 9, 2011**

Oral:		Room:
8:00AM-12:00PM	T107. Lacustrine Carbonates (12 talks)	M100DE
1:30PM-5:30PM	T86. Groundwater-Surface Water Interaction: Relating Understanding That Spans the Water- Midwest to the Scarcity of the Outback Rich (14 talks)	M100HI
1:30PM-5:30PM (12)	T103. Processes within Extreme Lake Systems talks)	M100DE
Posters:		
9:00AM-6:00PM	T28. Basic and Applied Aspects of Clays and Clay Minerals in Continental Settings (11 posters)	C.C. Hall C

**Monday, October 10, 2011**

Oral:		
8:00AM-12:00PM	T102. Shallow Lakes and Wetlands: Sedimentary Records and Modern Dynamics of Small Systems that pack a Big Punch in the Carbon Cycle (13 talks)	M100DE
8:00AM-12:00PM	T130. Topics in Geoarchaeology: Reconstructions of Ancient Landscapes and Paleoenvir onments (12 talks)	101FG
1:30PM-5:30PM human	T65. Paleoclimate, terrestrial ecosystems, and evolution in Africa from the Pleistocene to the Present (13 talks)	200FG
1:30PM-5:30PM Systems	T140. Glacial Lake Agassiz – Its History and Influence on North America and on Global (14 talks)	L100FG



Posters:

9:00AM-6:00PM	T130. Topics in Geoarchaeology: Reconstructions of Ancient Landscapes and Paleoenvir onments (14 posters)	C.C. Hall C
	T140. Glacial Lake Agassiz – Its History and Influence on North America and on Global Systems (4 posters)	C.C. Hall C

**Tuesday, October 11, 2011**

Oral:

8:00AM-12:00PM	T97. Advances in understanding at the ground- water-surface water interface and challenges for the future: A reflection on Tom Winter's Legacy (13 talks)	M101AB
1:30PM-5:30PM of	T106. The Mono Lake Basin: A Gathering Disciplines (13 talks)	M100DE

Posters:

9:00AM-6:00PM	T97. Advances in understanding at the ground- water-surface water interface and challenges for the future: A reflection on Tom Winter's Legacy (18 posters)	C.C. Hall C
9:00AM-6:00PM	T104. Urban and Suburban Lakes: Paleorecords of Human Impacts and Opportunities for Geo- Science Education (12 posters)	C.C. Hall C
9:00AM-6:00PM	T109. Limnogeology: Interdisciplinary Studies of Lakes and Paleolakes (42 posters)	C.C. Hall C

**\*\*5:30 – 8:30 PM**      **\*\*Joint Awards Reception/Party with Sed Geo and SEPM**  
MCC,                      Room 200FG

**Wednesday, October 12, 2011**

Oral:

8:00AM-12:00PM	T104. Urban and Suburban Lakes: Paleorecords of Human Impacts and Opportunities for Geo- Science Education (11 talks)	M100DE
1:30PM-5:30PM	T41. Paying Attention to Mudstones: Priceless	211CD

(10	talks)	
1:30PM-5:30PM studies	T215. Terrestrial analogs in solar system (12 talks)	L100HJ
Posters:		
9:00AM-6:00PM (6	T41. Paying Attention to Mudstones: Priceless posters)	C.C. Hall C

In addition, the following field trips are sponsored by the Limnogeology Division, or may be of interest to division members:

**408. Southern Outlet and Basin of Glacial Lake Agassiz.**

Fri.–Sat., 7–8 Oct. US\$181

Cosponsors: *GSA Divisions: Limnogeology; Quaternary Geology and Geomorphology.*

Leaders: Timothy G. Fisher, Univ. of Toledo; Allan C. Ashworth; Ken Lepper; Howard Cory Hobbs.

**411. The History of Glacial Lake Benson.**

Fri.–Sat., 7–8 Oct. US\$232

Cosponsor: *GSA Limnogeology Division.*

Leaders: James F.P. Cotter, Univ. of Minnesota–Morris; Heather E. Arends; Tammy M. Rittenour.

**414. Geology under the Surface: Lake Superior and the Research Vessel *Blue Heron*.**

Sat., 8 Oct. US\$105

Leaders: Richard D. Ricketts, Univ. of Minnesota–Duluth; Steven Colman; Thomas C. Johnson.

**425. The Minneapolis Chain of Lakes by Bicycle: Glacial History, Human Modifications, and Paleolimnology of an Urban Natural Environment.**

Tues., 11 Oct. US\$67

Cosponsor: *GSA Limnogeology Division.*

Leaders: Marylee Murphy, Water Resources, Three Rivers Park District; Amy Myrbo; Valerie L. Stanley.

**434. Late Glacial History of the Western Lake Superior Region.**

Wed.–Sat., 12–15 Oct. US\$373

Cosponsor: *GSA Limnogeology Division.*

Leaders: Howard Cory Hobbs, Univ. of Minnesota; Andy J. Breckenridge; Brian A.M. Phillips; Fred J. Dean.

**438. Groundwater–Surface-Water Exchange and Geologic Setting of Northern Minnesota’s Lakes, Wetlands, and Streams: Modern-Day Relevance of Tom Winter’s Legacy.**

Thurs.–Fri., 13–14 Oct. US\$188

Cosponsors: *GSA Divisions: Hydrogeology; Limnogeology; Quaternary Geology and Geomorphology.*

Leaders: Donald Rosenberry, U.S. Geological Survey; David R. Lee; Perry M. Jones; Kelton D. Barr; Robert Melchior.

**Finally, at the GSA meeting, Lisa Parks-Boush (a Limnogeology Division member), will be introducing an NSF workshop on granting writing for NSF. Details follow:**

**“Navigating National Science Foundation (NSF)”**

Date/Time: Sunday, 9 October 2011; 1:00 PM-4:00 PM,

Location: Hilton Minneapolis: Minneapolis Grand Ballroom A-B

Welcome by Rose Kontak, ESWN.

Introduction and overview by Lisa Park-Boush, NSF, Surface Earth Processes (EAR).

**1:00, How to make your proposal be as NSF-savvy as possible**

What makes a proposal NSF savvy? How do you best describe your broader impacts? What is cutting edge in data management? Thinking outside the box: how do you identify the best program for application? How do you access available education and outreach funds?

*Short presentation with Q&A to follow.*

*Panelists: TBD*

**2:00, Get to know new NSF initiatives**

There are always new initiatives starting at NSF, beyond core programs. How do you identify and apply for these opportunities? How are initiatives different than core programs? How can you design effective integrated research? New initiatives such as SEES, CAMRa, and EarthCube will be discussed.

*Short presentation with Q&A to follow.*

*Panelists: TBD*

**3:00, Connecting with NSF**

Meet in small groups with new and old GEO Program Officers, get to know what they might be looking for and learn how to ask the right questions.

*Panelists: TBD*

*Program Officers anticipated to participate: Rich Lane (SGP), Paul Cutler (GLD), Jennifer Wade (DEP), Lina Patino (EHR/EAR), Marilyn Suiter (EHR), Laura Toran (HS), Peter Lea (DUE) and Jun Abrajano (Section Head, SEP)*

**Sponsored  
by...**



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## ***Book on Volcanic Lakes***

### **VOLCANIC LAKES**

**(Editor: Springer-Heidelberg)**

Guest-editors: D. Rouwet, B. Christenson, F. Tassi, J. Vandemeulebrouck

(For further information, feel free to contact Dmitri Rouwet: [cvl.dmitri@gmail.com](mailto:cvl.dmitri@gmail.com))

The Guest-editors are delighted to announce a work-in-progress, the first book on: "Volcanic Lakes". The book is planned to be promoted during the next IAVCEI General Assembly, and following Workshop of the Commission on Volcanic Lakes (IAVCEI-CVL8), Kagoshima, Japan, July 2013.

This book aims to give an overview on the present state of volcanic lake research, covering topics such as volcano monitoring, the chemistry, dynamics and degassing of acidic crater lakes, mass-energy-chemical-isotopic balance approaches, limnology and degassing of Nyos-type lakes, the impact on the human and natural environment, the eruption products and the impact of crater lake breaching eruptions, numerical modeling of gas clouds and lake eruptions, thermo-hydro-mechanical and deformation modeling, CO<sub>2</sub> fluxes from lakes, volcanic lakes observed from space, biological activity, continuous monitoring techniques, and some aspects more. We hope to offer an updated manual on volcanic lake research, providing classic research methods, and point towards a more high-tech approach of future volcanic lake research and continuous monitoring. The book will contain 30-35 chapters, authored by the experts in the various fields of interest.

The target audience of the book is strictly scientific, composed of volcanologists, limnologists, geochemists, geophysicists, and biologists, among other volcano-phytes. Despite this scientific focus, we would like to leave a visually attractive, illustrated handbook to all people interested in one of the most extreme and spectacular features on the Earth's surface: volcanic lakes.



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## ***Upcoming Meetings***

### **Geological Society of America (GSA) Annual Convention**

*October 9-12, 2011*

The **Geological Society of America** will hold its Annual Meeting in Minneapolis, Minnesota, USA. The conference theme is Archean to Anthropocene: The past is the Key to the Future. Abstract Deadline was August 10, 2011.

The meeting website is: <http://www.geosociety.org/meetings/2011/>

Future Meetings are scheduled for:

2012 - Charlotte, North Carolina: 4-7 November

2013 - Denver, Colorado, USA: 27–30 October

2014 - Vancouver, British Columbia, Canada: 19–22 October

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

*SIL 2013 Congress*

The **32<sup>nd</sup> Congress of the International Society of Limnology** will take place in Debrecen, Hungary in 2013. The 33<sup>rd</sup> congress will be held in Turin, Italy, in 2016. For more information about these meetings, see the SIL website:

<http://www.limnology.org/>

SIL announced the **13<sup>th</sup> EWRS International Symposium on Aquatic Plants & the 2<sup>nd</sup> International SIL Workshop of Working Group on Macrophytes** (27-31 August 2012) in Poznan, Poland. For information, please contact Dr. Krzysztof Szoszkiewicz ([kszoszk@au.poznan.pl](mailto:kszoszk@au.poznan.pl))

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

*October 26-28, 2011*

The **31<sup>st</sup> International Symposium of the North American Lake Management Society** will take place in Spokane, Washington, USA. The Abstract Deadline has passed, and registration is currently open.

The website is: <http://www.cvent.com/events/nalms-2011-spokane-washington/event-summary-0819feed2a9549578c4910e8eb46bf0d.aspx>

## **International Lake Environment Committee (ILEC)**

*U&f à^!ÁF ÉZ[ ç^ { à^!Á, 2011*

The **14<sup>th</sup> World Lakes Conference (WLC)** will take place in Austin, Texas (USA) from October 31 - November 4, 2011. Full paper submission deadline is October 15.

The WLC website is: <http://www.rivers.txstate.edu/wlc14>

## **International Paleolimnology Association (IPA)**

*August 20 – 24, 2012*

The **12<sup>th</sup> International Paleolimnology Symposium** of the International Paleolimnology Association will take place in Glasgow, UK. An abstract deadline has not yet been posted. The IPA is currently soliciting ideas for themes.

The IPA Symposium website is: <http://www.paleolim.org/index.php/symposia/>

## **American Society of Limnology and Oceanography (ASLO)**

### **2012 ASLO Ocean Science Meeting (February 19-24, 2012)**

The ocean science meeting of the American Society of Limnology and Oceanography will be held in Salt Lake city, Utah, USA. Abstract deadline: Not published yet.

### **2012 ASLO Summer Conference (June 6-13, 2012)**

The summer conference of the American Society of Limnology and Oceanography will be held in Lake Biwa, Otsu, Japan. Abstract deadline: Not published yet.

### **2013 ASLO Aquatic Science Meeting (February 17-22, 2013)**

The aquatic science meeting of the American Society of Limnology and Oceanography will be held in New Orleans, Louisiana, USA. Abstract deadline: Not published yet.

The website listing all these conferences is:  
<http://www.aslo.org/meetings/aslomeetings.html>

## **American Association of Petroleum Geologists Annual Conference and Exhibition**

*April 22-25, 2012*

The **2012 Annual Conference and Exhibition of the American Association of Petroleum Geologists** will take place in Long Beach, California. Abstract deadline is Sept. 22, 2011.

The conference website is: <http://www.aapg.org/longbeach2012/>

The **2013 Annual Conference and Exhibition of the American Association of Petroleum Geologists** will take place in Pittsburgh, Pennsylvania from May 19-22, 2013.

## **Desert Symposium 2012**

*April 20-23, 2012*

The **26<sup>th</sup> Annual Desert Symposium** will take place in the Desert Studies Center, Zzyzx, California. The theme for the 2012 meeting is "Life in the Desert: Adaptations to Environmental Extremes". Abstract deadline does not seem to be available, but last year it was January 23, 2011.

The conference website is: <http://biology.fullerton.edu/dsc/school/symposium.html>

## **5<sup>th</sup> International Limnogeology Congress**

*Was Aug. 31-Sept. 3, 2011*

The **5<sup>th</sup> International Limnogeology Congress (ILIC5)** was held in Konstanz, Germany in from Aug. 31-Sept. 3, 2011. Stay tuned for details. Information about a future meeting is not yet available.

The conference website is: <http://www.iug.tu-bs.de/limnokongress/general.html>

## **International Association for Great Lakes Research (IAGLR)**

*May 14-18, 2012*

The **55<sup>rd</sup> Annual Conference of the International Association for Great Lakes Research (IAGLR)** will take place in Cornwall, Ontario, Canada. Abstract deadlines are not available, but will likely be in January based on previous conferences.

The IAGLA website is: <http://iaglr.org/>

## **International Society for Salt Lake Research (ISSLR)**

*Was May 8-16, 2011*

The 11<sup>th</sup> International Conference on Salt Lake Research (ISSLR) took place in Miramar, Cordoba, Argentina, on May 8-16, 2011. No information about a future meeting is available.

ISSLR's website is: <http://www.isslr.org/index.asp>

## **Great Plains Limnology Conference / Oklahoma-Texas Aquatic Research Group (GPLC/OTARGISSLR)**

*October 28-29, 2011*

The third joint meeting of GPLC and OTARG will take place on at the University of Oklahoma Biological Station on October 28-29.

The conference website is: <http://www.ou.edu/uobs/OTARGregistration.htm>

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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...

David Warburton, Webmaster

*If you don't have access to our website, please contact a Division officer for a list of meetings.*

**If you have any news you would like to be sent out to the division, please submit it to Peter Drzewiecki at [drzewiecki@easternct.edu](mailto:drzewiecki@easternct.edu)**

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