

*Geological Society of America*  
***Limnogeology Division Newsletter***

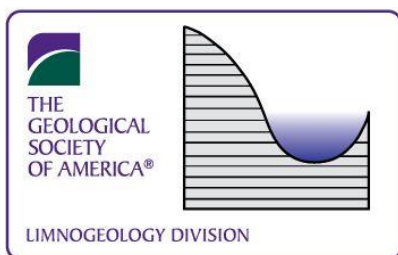
Volume 15 Number 2  
May 2018



**LAKE TIPPECANOE, INDIANA**

This large glacial lake is located in north-central Indiana. It is the deepest natural lake in the state (37 m)





## ***Limnogeology Division Newsletter***

**Volume 15 Number 2**

**May 2018**

### **Limnogeology Division Officers and Management Board**

**Scott Starratt - Chair**

Geology, Minerals, Energy and Geophysics  
Science Center  
U.S. Geological Survey  
345 Middlefield Road  
Menlo Park, CA 94025  
650-329-4990 (voice)  
650-329-5203 (fax)  
[sstarrat@usgs.gov](mailto:sstarrat@usgs.gov)

**Lisa Park-Boush - Vice-Chair**

Center for Integrative Geosciences  
University of Connecticut  
Storrs, CT 06269  
860-486-4434 (voice)  
[lisa.park\\_boush@uconn.edu](mailto:lisa.park_boush@uconn.edu)

**Michelle Goman - Secretary and Newsletter  
Editor**

Dept. of Geography and Global Studies  
Sonoma State University  
Rohnert Park, CA 94928  
(707) 664-2314 (direct)  
(707) 664-3332 (fax)  
[goman@sonoma.edu](mailto:goman@sonoma.edu)

**David B. Finkelstein - Treasurer**

Dept. of Geoscience  
300 Pulteney Street  
Hobart and William Smith Colleges  
Geneva, NY 14456  
(315) 781-4443 (voice)  
[finkelstein@hws.edu](mailto:finkelstein@hws.edu)

**Johan C. Varekamp - Past Chair**

Dept. of Earth & Environmental Sciences,  
265 Church Street  
Wesleyan University  
Middletown, CT 06459  
(860) 685-2248 (voice)  
(860) 685-3651 (fax)  
[jvarekamp@wesleyan.edu](mailto:jvarekamp@wesleyan.edu)

**Anne L. Billingsley - Student  
Representative**

Dept. of Geosciences  
1040 E. 4th Street  
University of Arizona  
Tucson, AZ 85721  
[abillingsley@email.arizona.edu](mailto:abillingsley@email.arizona.edu)

**David Warburton - Webmaster**

Department of Geosciences  
Charles E. Schmidt College of Science  
777 Glades Road  
Florida Atlantic University  
Boca Raton, FL 33431  
(561) 297-3312 (direct)  
[warburto@fau.edu](mailto:warburto@fau.edu)

## ***CONTENTS***

Page 3	From the Editor	Page 10	Volunteer Information
Page 4-5	Message from the Chair	Page 10-12	Election Information
Page 5-6	Message from the Vice-Chair	Page 12-13	Limnogeology Short Course at Indianapolis Information
Page 6-7	Student Photic Zone	Page 13-17	Topical sessions sponsored by Limnogeology Division for the GSA Indianapolis
Page 7- 8	Surveys		
Page 8-9	Kerry Kelts Student Research Award Information	Page 18	Upcoming Meetings

### ***From the Editor***

**Michelle Goman**

*Sonoma State University, Rohnert Park, CA*



This edition of the Newsletter contains many items of interest for members. In particular, Limnogeology students please be aware of the upcoming Kelts submission deadline as well as submission advice from Chair Starratt.

This issue includes biographies and statements of interest for the upcoming Division Officer Ballot.

Other items of significance:

- A list of sessions sponsored by Limnogeology for the upcoming Annual GSA Meeting in Indianapolis.
- Volunteer and service opportunities within the division
- Short surveys on participation at Indianapolis and the proposed merger of LacCore and CSDCO.

### ***REMEMBER!!***

***The newsletter is your forum to share news, events, and accomplishments.***

If you would like to share your research, recent publications or images from the field and lab please contact me. Please do send me your news items!

Best

Michelle ([goman@sonoma.edu](mailto:goman@sonoma.edu))



## *Message from the Chair*

**Scott Starratt**

*U.S. Geological Survey, Menlo Park, CA*

As I may have mentioned in the past, I grew up lake deprived. I grew up in the state with the fewest lakes (someone suggested Texas, because almost all the “lakes” are man-made reservoirs) – Hawai’i. Although there are only six, they are spread over the widest elevation range for lakes in any state – sea level to 3,981 m. Anyway, I never saw any of them. At the tender age of 18, I saw Lake Michigan, which when viewed from the Northwestern University campus might just as well have been the ocean. At the age of 22 when I left the flatlands of the Midwest I had still only seen one lake.

That changed when I moved to Washington. I began to see lakes all over the place – mostly sapphire jewels in the Cascades, Wallowas, and Rockies.

My academic training was likewise lacustrine-free. Not much need for a working knowledge of the epilimnion in a program filled with courses on neuroscience, vertebrate anatomy, and physiology, and when that did not work out, igneous geochemistry and plant systematics. It was micropaleontology in graduate school that finally introduced me to lakes, or at least to lake sediments. Sediments that most geologists thought were only good for making toothpaste, filtering beer, and producing Kitty Litter. Little did they know how really interesting those sediments are.

The point of my rambling introduction is that few of us (except for maybe Amy Myrbo) are born to be limnogeologists. Many of you were drawn to limnogeology indirectly, through some other aspect of geology or biology, and as a result you may not know as much about lakes as you would like. This is where the Limnogeology Division shortcourse “The Changing Face of Limnogeology - Tools and Methods for Analyzing Lacustrine Systems” which will be offered on Saturday, November 3. The purpose of the course is to provide a broad background to limnogeology research and an introduction to the tools used to conduct the research. We will also spend some time discussing ways to get as much information out of a limited amount of sediment, and maybe more importantly, an inadequate budget through integrative studies. Because of the generous support from RCN EarthRates, the cost will be \$25 for professionals and \$10 for students.

And speaking of the GSA Annual Meeting in Indianapolis, members of the division are organizing two topical sessions (T110 Lakes through Space and Time and T111 Human Evolution and Environment History in Africa: 25 Years of Transformative Research [posters]) and a Pardee session (P4 Human Evolution and Environment History in Africa: 25 Years of Transformative Research). The division is also sponsoring another 19 sessions, ranging from “Climate Variability, Change, and Water Resources” to “Urban Geochemistry”.

Two special issues of the *Journal of Paleolimnology* contain the proceedings of the 6<sup>th</sup> International Limnogeology Congress which was held in Reno, Nevada in 2015. The January 2018 issue is entitled “New Limnogeological Research Focused on Pre-Holocene Lake Systems” and the February 2018 issue contains a collection of papers entitled “New

Limnogeological Research Focused on Holocene Lake Systems”. The first five papers of GSA Special Paper 536 “From Saline to Freshwater: The Diversity of Western Lakes in Space and Time” are available. These are the first of the 25 papers that will comprise the volume, probably due out in 2019.

Looking for a fun and interesting way to spend the Solstice? There is still time to register (closes May 16) for the IPA-IAL Joint Meeting, organized by the International Association of Limnogeology will take place from 18th June to 21st June 2018 at the Stockholms Universitet in Stockholm, Sweden (Paleolim.org). Plenary topics include DNA applications to paleolimnology, paleoecology, trace fossils, and the importance of chronology. Andy Cohen (previous Russell Award winner) will receive the Bradley Medal.

Lastly, students, don’t forget about the Kerry Kelts Student Research Award. Earn a little money for your research. See the division website for further information. The application should be sent to me ([ssarrat@usgs.gov](mailto:ssarrat@usgs.gov)) and the deadline is June 30<sup>th</sup>, 2018 (but earlier would be better).

Scott

~\*~

## *Message from the Vice-Chair*

**Lisa Park-Boush**

*University of Connecticut*



### **EarthRates Research Coordination Network**

EarthRates is a NSF funded research coordination network (RCN) that connects the broad and diverse sedimentary crust community that includes geochemists, geochronologists, modelers, paleontologists, sedimentologists, and stratigraphers, to create transdisciplinary efforts in order to address big science questions through workshops, working groups, demo camps, and data mobilization campaigns. By doing this, we are addressing the critical need to increase our understanding of surface Earth processes and rates of environmental change. Our aim is to build capacity by facilitating greater interaction between sedimentary crust scientists and coordinating new partnerships with other Earth as well as biological scientists to generate new tools and a community that is able to respond to the pressing research challenges of today and into the future. Our goal is to serve as a convening and coordinating effort among the many different ongoing activities having to do with rates of change on Earth’s sedimentary crust.



For the Limnogeology community, EarthRates has been actively promoting community development by funding a number of workshops in 2018 including:

- “What forcing mechanisms sustained the large perennial North American Pliocene West,” in February in Minneapolis, MN



- “Drilling Deeper for Connections Between Environmental Change and Evolution,” in April in Clinton, NY
- “Developing a multi-proxy approach to reconstructing the climatic and environmental history of lakes in semi-arid India over the Common era,” in May in Minneapolis, MN
- “Open and interoperable data standards in the Paleogeosciences,” in May in Madison, WI

We continue to support limnogeologically-related activities and projects with the specific aims to:

- Connect established and emerging research communities
- Leverage existing efforts in cyberinfrastructure to develop new capabilities
- Engage new community members in collaboration and participation
- Build overall capacity in sedimentary crust research
- Train community members in using existing databases, their associated tools and services, and conduct data mobilization campaigns
- Create a roadmap towards building a 4D Digital Earth

If you would like to be involved with EarthRates, please check out our website: [www.earthrates.org](http://www.earthrates.org) and follow us on Twitter @earthrates.

~\*~



## ***The Student Photic Zone***

**Anne L. Billingsley – Student Representative**  
University of Arizona, Dept. of Geosciences  
*Student Representative – Limnogeology Division*

Hello Fellow Limnogeology Student Members,

I hope all of you are well and completing some great research this year. It has been a joy serving as your student representative to the division and on the Student Advisory Council (SAC) for the past two years. My term is coming to an end and I look forward to the election of the new student representative.

The application period for the Kerry Kelts Student Research Award is now open. This award of \$1,000 is granted to one graduate or undergraduate in support of research related to limnogeology, limnology or paleolimnology. The deadline for the application is June 30, 2018. The award will be presented at the Limnogeology Division Business Meeting and Reception at the GSA Annual Meeting. For more information on the award and how to submit your application, visit the website: [community.geosociety.org/limnogeologydivision/awards/kerrykelts](http://community.geosociety.org/limnogeologydivision/awards/kerrykelts)

The GSA is accepting applications for the On to the Future Program. This program offers partial funding to attend the GSA Annual Meeting in Indianapolis, November 4-7, 2018. It is open to students and recent graduates from diverse backgrounds who have never attended a

GSA Annual Meeting. The deadline to apply is May 25, 2018. For more information and to submit an application, visit the website: [www.geosociety.org/otf](http://www.geosociety.org/otf)

I look forward to catching up with you at the GSA Annual Meeting in November. There will be many opportunities for networking, mentorship and education for students. This is also a great venue to share your research and get feedback from experts in your field. There are four topical sessions for the Limnogeology discipline: Lakes through Space and Time; Human Evolution and Environmental History in Africa: 25 Years of Transformative Research; Shoreline Behavior, Paralic Architecture, and Lake – Level Change in the Great Lakes, and The Happy Convergence of Chronologic Applications to Archaeologic, Geologic, and Pedologic Questions within the Interior Plains: From Texas to the Arctic. I highly encourage you to participate with an oral or poster presentation. The deadline for abstract submittal is August 14, 2018.

The annual meeting for the SAC will be held during the GSA Annual Meeting. We will be discussing how the GSA can better serve the student members. Some of the topics for discussion are mentorship programs, workshops, field trips, and outreach opportunities. If you have any questions, concerns or suggestions, please feel free to contact me.

Sincerely,

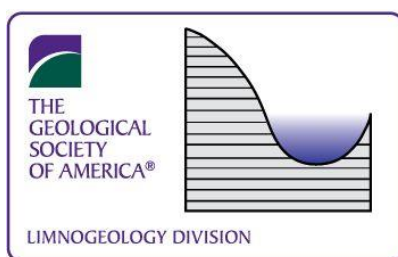
Anne

~\*~

## ***ARE YOU PLANNING ON ATTENDING THE INDIANAPOLIS MEETING?***

***Please fill out a short survey at***

***<https://goo.gl/forms/f4Nwr3uJK2ePOvHK2>***



***For details on sessions of interest please see pages 13-17***



## *INPUT SOUGHT ON POTENTIAL MERGER OF LACCORE AND CSDCO*

LacCore, the National Lacustrine Core Facility, and CSDCO, the Continental Scientific Drilling Coordination Office, are partner National Science Foundation-funded facilities at the University of Minnesota.

Under guidance from NSF, the facilities are now gauging community support for merging in 2019, under a single NSF Cooperative Agreement.

To this end, we welcome your responses to a 5-10 minute survey.

<https://z.umn.edu/mergersurvey>

~\*~

## **KELTS AWARD INFORMATION**

### *So you want to write a Kelts Student Research Award proposal*

Writing a research grant proposal can be a frustrating, difficult, and rewarding experience. How do you communicate the interesting facets of your research and your excitement about your project to the review committee? Here are a few thoughts based on several years of reviewing proposals for the Kelts award.

- 1) Don't overstate the goals of your project – It is better to clearly state a research question or two, explain how you are going to approach the research, and what you expect learn. The proposal to use multiple proxies on several cores from one lake to solve the problem of late Quaternary precipitation in the Midwestern US is unlikely to be funded. The point is to focus.
- 2) A small fish in a big lake – If your proposed research is part of a larger group project, be clear as to what part your work plays in the larger project and how the results of your research will be integrated into the larger venture.
- 3) Follow the money – Clearly explain how the money from the Kelts Award is going to be used: radiometric dating, geochemistry, “research” stand-up paddleboard . . . .
- 4) Say you have a degree in quantum chromodynamics and you want to study lacustrine



diatoms in the Sierra Nevada – If you are not coming from a “traditional” limnogeology or paleolimnology background, be sure that your résumé shows that you can do what you propose to do (remember, your résumé is the only information the reviewers have with which to evaluate you and your proposal).

While all of these issues look like obvious mistakes, they have all been made in proposals over the past few years, sometimes more than one appearing in a single proposal. While avoiding these mistakes won’t guarantee getting a Kelts Award, they may reduce the chance on not getting an award.

GOOD LUCK!

~\*~

### ***2018 Kerry Kelts Submission Information***

Applications are invited for the Kerry Kelts Research Awards. This year, one award of \$1,000 for undergraduate or graduate student research related to limnogeology, limnology, or paleolimnology is available. Deadline; 11:59 pm EDT 6/30/18

Prepare your application as a PDF (or PDFs) with your last name in all file names. The application files should contain a research summary and a short CV (two pages max.). The research summary must include a description of the proposed research its limnogeological significance, why the award funds are needed for the project, and a brief description of the student’s other funding sources. Be sure to include a title. The maximum length for the summary is five pages, including figures and captions; the list of references cited is not included in this limit. Send your application to Division Chair Scott Starratt, [sstarrat@usgs.gov](mailto:sstarrat@usgs.gov). Please include “Kelts Award application” in the subject line.

~\*~

### ***Donate to the Kerry Kelts Award***

GSA and the limnogeology Division hope to increase the number of Kelts awards, named for the visionary limnogeologist and inspiring teacher Kerry Kelts, in the future. If you can help support this award, please send your donation, labeled “Kerry Kelts Research Awards of the Limnogeology Division,” to GSA at P.O. Box 9140, Boulder, CO 80301-9140, USA.



Kerry Kelts just before receiving the first Bradley Medal at the ILIC meeting in Brest, France. (Photo credit: Michael Rosen).

## ***VOLUNTEERS NEEDED***

Would you be interested in guiding the direction of the division and putting your stamp on the Geological Society of America? Then consider joining one (or more) of the Limnogeology Division committees.

**Program Committee** - The committee is responsible for soliciting and organizing topical, discipline, and Pardee sessions for the annual and section meetings. They may also organize field trips, short courses, and activities in conjunction with the annual meeting including staffing the division booth in the exhibit hall and Saturday night icebreaker. Members of the committee include Division representatives to the Joint Technical Program Committee.

**Nominating Committee** – The committee is responsible for soliciting nominations for the Israel C. Russell Award and organizing the selection committee for the award. The committee is also responsible for nominating Division members as GSA Fellows. Every two years, the committee will assemble a slate of nominees for election for the Division Management Board.

**Communications Committee** – Become involved in raising the profile of the Division in the larger community. This committee is responsible for developing content for the Division website and working with the GSA Communications staff to incorporate the content into the Division website and Connected Community. The members will also be responsible for developing and maintaining the Division social media presence.

To make the newsletter and website more interesting and useful we need contributions from Division members. The last Kerry Kelts research update we got was in 2015. We would like to hear from student researchers. And what is going on in members labs around the country? What lakes are you working on? What techniques are you using? Are you looking for students? For newsletter submissions please contact Michelle ([goman@sonoma.edu](mailto:goman@sonoma.edu)).

## ***LIMNOGEOLOGY DIVISION BOARD ELECTIONS***

Every two years the Limnogeology Division holds elections for the following offices:

**Vice-Chair** – The Vice-Chair assists the Chair with the planning and execution of various Division activities, and automatically assumes the position of Chair following the two-year term as Vice-Chair.

**Secretary** – The Secretary maintains the records of the proceedings of the Division and acts as secretary of the Management Board. The secretary also acts as the liaison with GSA headquarters, providing the required reports (annual) to the GSA Council, and shall serving (*ex officio*) as a member of all Division committees. The secretary is also the editor of the Division newsletter.

**Treasurer** – The Treasurer shall keep records of the financial proceedings of the Division and serve as the interface with the GSA Council and GSA Foundation for Division financial matters.

**Student Member** - The Student Member of the Management Board shall represent the concerns of student members of the Division and participate in the meetings of the Management Board. The Student Member will also participate in the GSA Student Advisory Council.

Nominations should be submitted to the Secretary by **May 25th** ([goman@sonoma.edu](mailto:goman@sonoma.edu)) and should include a brief biography and statement of interest in the position.

A nomination for any of these positions also may be made by any four voting affiliates of the Division in good standing who shall verify that the candidate is qualified and willing to serve in that office. The nominations shall be accepted if signed by the nominating affiliates and received by the Secretary no later than June 1.

*If other candidates are nominated and approved by the Management Board, they will be added to the regular ticket and shall be submitted by the Secretary of the Division to the Executive Director of the Society who shall have a ballot prepared and distributed to the voting affiliates during the summer.*

The Limnogeology division will hold elections for the following positions: Vice-Chair and Student Representative. Please look for in your inbox for your electronic ballot soon. Thanks to all who nominated these excellent candidates and also to the candidates for their willingness to serve.

### ***Meet the candidates***

#### **Kathy Benison**

*West Virginia University*



Kathleen Benison is a professor of geology at West Virginia University. She earned her M.A. in Geology at Binghamton University in 1992 and her Ph.D. in Geology from the University of Kansas in 1997. Kathy studies the sedimentology, geochemistry, climatology, and biology of modern and ancient saline lakes. Fluid inclusions in lake halite and gypsum are two areas of special focus. Her active research field areas include lakes in Australia and Chile, and Permo-Triassic lake deposits in North America and Northern Ireland. She is also interested in

chemical sediments on Mars. Kathy has been an associate editor for the Journal of Sedimentary Research, a member of a National Research Council for Mars Sample Return, a panelist for NASA and NSF, and a facilitator for pedagogical workshops.

**Statement of Interest:** (1) promote limnogeological and paleolimnogeological research within our community, throughout the wider scientific community, and to the general public; (2) advocate for continental scientific drilling; (3) encourage multidisciplinary scientific collaborations; and (4) provide opportunities for students in geological education, research, and field and lab experiences.

## *Student Representative*

### **Sabrina Brown**

*University of Nebraska, Lincoln*



Sabrina Brown is a Research Assistant at University of Nebraska-Lincoln, where she is studying under the direction of Dr. Sheri Fritz. She has been a member of the Limnogeology Division since 2008 when she first joined the Geological Society of America as an undergraduate student.

She is committed to actively representing the concerns of graduate students in various forums. At the University of Nebraska-Lincoln, she serves as the departmental graduate student representative, with the responsibility of voicing student concerns to faculty and reporting relevant matters back to departmental graduate students. She has also served as a representative to the university-wide Graduate Student Assembly and acted as co-chair to the Graduate Travel Awards Program committee.

**Statement of Interest:** The Limnogeology Division Student Representative position would provide a platform for me to serve as a student liaison on a broader scale and become involved in serving an organization that has provided myriad opportunities during my geology student career. In this position, I would bring novel ideas for increasing student membership and improving involvement in Limnogeology Division activities – particularly through the communication networks students use most often. As a self-motivated and hard-working student, I believe I would be a fantastic addition to the Limnogeology Division Management Board.

~\*~

## ***LIMNOGEOLOGY DIVISION SHORT COURSE***

*Are you new to limnogeology?*

*Are you bored after studying the San Andreas for 20 years and looking for something new?*

*Do you need a reason to sand the rust off your Livingstone corer?*

*Did you find *Microchironomus nigrovittatus* in your core and want to know what it means?*

Then you may be interested in the exciting Limnogeology Division short course on **Saturday, November 3, 2018**. Limnogeology is a diverse field of study, using a wide range of tools to evaluate the physics, chemistry, biology, and geology of lacustrine systems, and the interactions of these systems with regional and global processes. Most university programs train students in only one or two aspects of limnogeology, leaving students and new faculty with limited knowledge of potential research opportunities. As funding sources dwindle, it becomes increasingly important to form multi-disciplinary teams to study even relatively small systems. The session will demonstrate the value of understanding and integrating modern lacustrine processes into the development of studies of past systems. Through PowerPoint presentations and internet-based analytical tools this short course is designed to present information on the range of tools available for limnogeology research, the limits of those tools, and introduce ways to integrate these tools with limited funding and

in many cases, a limited amount of sediment to analyze. The session will also facilitate interaction between participants with the hope of developing multidisciplinary research projects and to establish the Limnogeology Division as a resource from which division members can interact with the larger community.

**Because of the generous support from RCN EarthRates, the cost will be \$25 for professionals and \$10 for students.**

If you want to help or have ideas as to course content, please contact Scott Starratt (sstarrat@usgs.gov)

~\*~



**4-7 November**

Indianapolis, Indiana, USA

## Sessions Sponsored by Limnogeology Division at 130<sup>th</sup> GSA at Indianapolis

Abstracts deadline: **14 August, 11:59 p.m. PDT**

<http://community.geosociety.org/gsa2018/home>

Sessions that might be of interest to Limnogeology Division members. Bolded sessions are specifically organized by Limnogeology.

### Pardee Keynote Symposia

#### ***P4. Human Evolution and Environmental History in Africa: 25 Years of Transformative Research***

*GSA Limnogeology Division; GSA Archaeological Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Continental Scientific Drilling Interdisciplinary Interest Group; EarthRates*

Andrew S. Cohen, Gail M. Ashley

This session will highlight exciting new advances in our understanding of the connection between human evolution and environmental change, drawing from studies of key paleoanthropological sites, drill core investigations, and associated modeling experiments.

### Topical Sessions

#### *T14. Mining Wastes in the Tri-State Mining District of Kansas, Missouri, and Oklahoma: Advances in Characterization and Remediation*

Melida Gutierrez

*GSA Environmental & Engineering Geology Division; GSA Karst Division; GSA Hydrogeology Division; GSA Limnogeology Division*

We are looking for papers about contamination characterization (e.g., volume of contaminated soils, toxicity), soil chemistry, remediation options, measuring effectiveness of



remediation, contaminant (metal) transport in fractured media, etc., which applies to the Tri-State Mining District.

*T15. Urban Geochemistry*

W. Berry Lyons, David T. Long

*International Association of GeoChemistry; GSA Environmental & Engineering Geology Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

This session encourages presentations that qualify and quantify the geochemical and biogeochemical impacts (temporal and spatial) of urbanization and urban activities on soil, water, and air resources as well as on human and ecosystem health

*T16. Advances in Agrohydrology: A Multidisciplinary Approach to Water Resources, Land Management, and Food Systems*

Samuel J. Smidt, E.K. Haacker, Jillian M. Deines

*GSA Geology and Society Division; GSA Hydrogeology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Limnogeology Division; GSA Environmental & Engineering Geology Division*

Agriculture dominates global consumptive water use. Interactions between water resources and production of food, fuel, and fiber impact hydrology and food security. This session highlights research in water and food systems from multiple disciplines.

*T17. Sigma Gamma Epsilon Undergraduate Research (Posters)*

Diane M. Burns, James C. Walters

*Sigma Gamma Epsilon; GSA Environmental & Engineering Geology Division; GSA Limnogeology Division*

All Sigma Gamma Epsilon student members are encouraged to submit their research to this poster session to compete for awards. All geological investigations, from archaeological geology to volcanology, are encouraged to be entered.

*T28. Geoarchaeological Approaches to the Study of Human Dispersal in the Pleistocene*

Justin A. Holcomb, Angela K. Gore

*GSA Archaeological Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Quaternary Geology and Geomorphology Division; GSA Geophysics and Geodynamics Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

Geoarchaeological research is uniquely poised to contribute to archaeological narratives, such as the dispersal of *H. sapiens*. This session highlights methodological and theoretical papers seeking to contextualize human movement, migration, and mobility in the Pleistocene.

*T47. Global Drinking Water and Public Health: Conditions, Contaminants, Concerns, and Strategies*

Jonathan W. Peterson, Aaron A. Best

*GSA Hydrogeology Division; GSA Karst Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

This session will focus on the conditions and contaminants in drinking water sources from many global locations. A theme will be identifying commonalities and strategies, including relatively short-term actions, to protect or improve human health.

*T57. Undergraduate Research Talks: The Next Step in Student Research Projects*

Jacqueline A. Smith, Bradley G. Johnson

*GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Quaternary Geology and Geomorphology Division; GSA Geoinformatics Division; GSA Limnogeology Division; GSA Structural Geology and Tectonics Division; GSA Geology and Health Division; GSA Hydrogeology Division; GSA Sedimentary Geology Division; GSA Karst Division; GSA Geobiology & Geomicrobiology Division; GSA Environmental & Engineering Geology Division; GSA Energy Geology Division; GSA Geophysics and Geodynamics Division; GSA Planetary Geology Division; GSA Archaeological Geology Division; GSA Geoscience Education Division; GSA History and Philosophy of Geology Division*

This oral session provides a venue for undergraduate students and recent graduates to present talks on completed research projects. Students may submit abstracts for research in any sub-discipline of geology, earth science, or environmental science.

*T62. Landscapes in the Anthropocene*

José Antonio Constantine, Rónadh Cox

*GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; GSA International Interdisciplinary Interest Group; GSA Limnogeology Division*

This session will bring together a trans-disciplinary group of innovative thinkers who are grappling with landscape disturbances that typify the Anthropocene, with the aim of facilitating societally relevant predictions of environmental change.

*T95. Climate Variability, Change, and Water Resources*

Randy L. Stotler, David L. Rudolph

*GSA Hydrogeology Division; GSA Karst Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

Changes to the hydrologic cycle due to increasing climate variability are affecting water quantity and quality. Submissions describing and predicting the effects of climate change on water resources, and/or mitigation strategies, are encouraged.

*T98. Satellite Remote Sensing Applications in Hydrology and Geology*

Richard H. Becker, Wondwosen Mekonnen Seyoum

*GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Geophysics and Geodynamics Division; GSA Environmental & Engineering Geology Division; GSA Geology and Society Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

Understanding hydrology and geology at varying scales depends upon consistent spatial observations. We seek presentations on applications integrating remote sensing observations from UAV- to satellite-scale with traditional methods in hydrology and geology.

*T103. Springs: Groundwater-Influenced Ecosystems, Gaining Streams, and Wetlands*

Abraham E. Springer, Sue Swanson, Brad David Wolaver

*GSA Hydrogeology Division; GSA Karst Division; GSA Geobiology & Geomicrobiology Division; GSA Limnogeology Division*

Springs maintain aquatic and terrestrial ecosystems, streams, wetlands, and water sources globally. Presentations are encouraged from multidisciplinary, collaborative studies of the characterization, monitoring, modeling, and education of stakeholders to improve the understanding of springs, associated ecosystems, and anthropogenic users.

*T108. Polar and Alpine Change*

W. Berry Lyons

*GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division; GSA Limnogeology Division; GSA International Interdisciplinary Interest Group*

Polar and alpine areas are undergoing some of the most rapid change on our planet. This session encourages presentations on geomorphological, hydrological, biogeochemical, and ecological changes occurring in these environments. Presentations related to cryospheric loss and its consequences are encouraged.

***T110. Lakes through Space and Time***

Scott W. Starratt, Michelle F. Goman

*GSA Limnogeology Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; AASP - The Palynological Society; American Quaternary Association; Association for the Sciences of Limnology and Oceanography; International Association of Limnogeology; SEPM (Society for Sedimentary Geology); GSA Continental Scientific Drilling Interdisciplinary Interest Group*

This session celebrates lacustrine research around the world. Lakes are important fresh water reservoirs, and their sediments serve as archives of global change, local human impact, and ecological succession.

***T111. Human Evolution and Environmental History in Africa: 25 Years of Transformative Research (Posters)***

Gail M. Ashley, Andrew S. Cohen

*GSA Limnogeology Division; GSA Archaeological Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Continental Scientific Drilling Interdisciplinary Interest Group; EarthRates*

This session will highlight exciting new advances in our understanding of the connection between human evolution and environmental change, drawing from studies of key paleoanthropological sites, drill core investigations, and associated modeling experiments.

*T121. Insights from Microfossils, Palynology, and Their Modern Analogs: From Traditional to Emerging Techniques*

Miriam E. Katz, Peter P. McLaughlin Jr., Caitlin Keating-Bitonti, Ingrid Romero, David K. Watkins

*Cushman Foundation; AASP - The Palynological Society; Geochemical Society; Paleontological Society; Paleontological Research Institution; GSA Limnogeology Division; GSA Sedimentary Geology Division*

Traditional applications of microfossils/palynology are central to many studies, while novel approaches (especially geochemistry) utilizing microfossils have expanded recently. This session highlights traditional and innovative microfossil/palynology applications in terrestrial and marine environments, including modern analogs.

*T122. Oceans and Climates through Earth History: From Proxy Reconstructions to Model Assessments (Posters)*

Miriam E. Katz, Dorothy K. Pak

*Cushman Foundation; Paleontological Research Institution; Geochemical Society; Paleontological Society; GSA Limnogeology Division; GSA Sedimentary Geology Division;*

*GSA International Interdisciplinary Interest Group*

This session brings together proxy and modeling studies to improve our understanding of rapid ocean and climate events, and shifts between long-term climate states, within the context of normal climate variability throughout Earth's history.

*T127. Earth-Life Transitions: Critical Information from Deep Time to Manage Future Environmental Change*

David J. Bottjer, Lisa E. Park Boush

*Paleontological Society; SEPM (Society for Sedimentary Geology); GSA Limnogeology Division; EarthRates; GSA Sedimentary Geology Division*

This session will provide a platform for the latest results from Earth-Life Transitions and related investigations that highlight the many advances made under this novel National Science Foundation program.

*T128. Recent Advances in Ichnology: Traces of Modern and Ancient Behavior*

Daniel I. Hembree, Jon J. Smith, Brian F. Platt

*Paleontological Society; GSA Limnogeology Division; GSA Sedimentary Geology Division*

Trace fossils provide critical paleoecological and paleoenvironmental information. We encourage research on new ichnological discoveries at all scales in marine and continental settings, novel techniques of trace fossil analysis, and neoichnological experiments.

*T162. Shoreline Behavior, Paralic Architecture, and Lake-Level Change in the Great Lakes*

John W. Johnston, Erin P. Argyilan, Steve J. Baedke, Kenneth Lepper, Todd A. Thompson

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

All aspects of modern and ancient Great Lakes coastlines are encouraged that examine the composition, stratigraphy, architecture, and age of nearshore and onshore systems to improve interpretations of processes, shoreline behavior, and lake-level change.

*T166. The Happy Convergence of Chronologic Applications to Archaeologic, Geologic, and Pedologic Questions within the Interior Plains: From Texas to the Arctic*

Shannon A. Mahan, Tammy M. Rittenour, Sebastien Huot, Joel Q.G. Spencer, Carlie J. Ideker, Michelle S. Nelson, Christina M. Neudorf, Kathleen Rodrigues

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

This session aims to explore the intersection of geochronologic methods with archaeologic, geologic, large lakes, and soils research to understand landscape response to climate, tectonics, and human modification.

*T170. Floodplains as Repositories of Information on Climate, Hydrology, Ecology, and Human Activities*

Larry D. McKay, Steven L. Forman, Gary E. Stinchcomb

*GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Limnogeology Division*

This session examines the utility of floodplains as repositories of diverse types of information that can be applied to answering important questions concerning our environment and society.

## ***Upcoming Meetings***

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

2018 Indianapolis, Indiana, USA 4–7 November  
2019 Phoenix, Arizona, USA 22–25 September (Note new location and date)  
2020 Montréal, Québec, Canada 25–28 October

### **Association of American Geographers (AAG) Annual Meeting**

Washington, DC, USA April 3-7, 2019

<http://annualmeeting.aag.org/>

Numerous sessions organized by the Paleoenvironmental Change Specialty Group.  
Limnogeologists encouraged to participate! For more information please contact  
Limnogeology division secretary Michelle Goman.

### **International Association of Limnogeology (IAL) and**

**International Paleolimnology Association (IPA) Joint Conference**  
**Stockholm, Sweden, June 18<sup>th</sup>-21<sup>st</sup>, 2018.**

<http://ipa-ial.geo.su.se>

### **World Lakes Conference (WLC17)**

The 17<sup>th</sup> World Lakes Conference (WLC17) The Seventeenth World Lake Conference

**Ibaraki, Japan October 15-19<sup>th</sup>, 2018**

<http://www.pref.ibaraki.jp/seikatsukankyo/kantai/kosyou/wlcn.html>

### **PACLIM 2019: Extreme Events**

PACLIM is a multidisciplinary workshop that broadly addresses the climatic phenomena occurring in the eastern Pacific Ocean and western North America. The purpose of the workshop is to understand climate effects in this region by bringing together specialists from diverse fields including physical, social, and biological sciences. Time scales from weather to the Quaternary are addressed in oral and poster presentations.

Asilomar, California

February 17 -20<sup>th</sup>, 2019

For more information please contact Limnogeology division secretary Michelle Goman.

[Paclim.org](http://Paclim.org)

---

***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





**Need a  
Date?**

**We are giving away  
5 AMS dates**

Open to all undergrad and  
postgrad researchers

For details, visit  
[www.radiocarbon.com/raffle](http://www.radiocarbon.com/raffle)

