**Sessions sponsored by Limnogeology Division**

**T93. Lacustrine Systems Across Space and Time**

**Advocates:** Scott W. Starratt; Michelle F. Goman

Lakes come in all shapes, depths, and salinities. Our understanding of these systems has developed through the use of a range of physical, chemical, and biological proxies which have been used in the study of modern lakes, Quaternary sediments, and lithified sequences. This session celebrates all aspects of lacustrine research from around the world and across time.

**T94. Limnogeology—Progress, Challenges and Opportunities on Earth and Beyond: A Tribute to Beth Gierlowski-Kordesch**

**Advocates:** David B. Finkelstein; Lisa E. Park Boush

This session explores new insights, critical thinking and integrated analytical approaches including sedimentology and stratigraphy, remote sensing, geophysical techniques, geomicrobiology and geochemical studies applied to the interpretation of modern and ancient lake environments and sediments.

**T95. Monsoons and Westerlies in Asia: Quantifying Trans-Asia Hydroclimates Since the LGM**

**Advocates:** Yonaton Goldsmith; Jay Quade; Yehouda Enzel

Reconstructing trans Asia, centennial to millennial, late Pleistocene and Holocene  hydroclimates using limnology, geochemistry, paleoenvironments, paleohydrology, and modeling from lacustrine settings; all are related to Asian and Indian monsoon and westerlies.

**T96. Understanding African Environmental History Through Continental Scientific Drilling: Past Successes and Future Opportunities**

**Advocates:** James M. Russell; Michael McGlue; Sarah Ivory

Continental scientific drilling and coring projects have recovered dozens of long cores from African lakes and paleolakes which have greatly expanded our understanding of African environmental history over the Neogene.  There are many additional lake drilling projects currently in development to study the climatic, environmental, and biological evolution of Africa as well as the geological evolution of African lake basins.  This session will review and synthesize results from past projects, and discuss how future drilling and coring can improve our understanding of Africa's environmental history and its diverse lacustrine basins.

**T97. Will My Boat Float? – Physical and Biological Proxies for Lake Level Variability**

**Advocates:** Scott W. Starratt; Bryan N. Shuman; Julie Loisel

Changes in lake level are a useful measure of changes in precipitation and evaporation rates. Beyond the impact of regional climate variability, local factors such as bathymetry, watershed characteristics, and groundwater influence affect the magnitude and timing of lake level response to climate. This session seeks presentations using a variety of physical and biological proxies available to identify changes in lake level and clarify their limitations.

Invited Speakers (Confirmed):

Benjamin Hatchett (University of Nevada-Reno) – The sensitivity of a western Great Basin terminal lake to winter Northeast Pacific storm track activity and moisture transport

**T98. Windows into the Crust: Paleo-Earthquake Records from Lacustrine Sediments**

**Advocates:** Elana L. Leithold; Karl W. Wegmann; Darren Larsen

Lakes positioned in seismically sensitive locations may record past earthquakes through the accumulation and preservation of distinct sedimentary deposits, including those from subaqueous and subaerial mass wasting, displacement waves (e.g. lake tsunamis), seiches, and the failures of natural and manmade dams. These and other impacts leave behind distinctive deposits in lake sediments, which have been used as archives of past earthquakes around the world. Such records are important for developing accurate seismic hazard assessments and for understanding changes in fault dynamics through time and space. We encourage research highlighting the latest techniques, common challenges, and success stories as applied to lacustrine paleo-seismology and related hazards.

Invited Speakers (Confirmed):

Ann Morey Ross (Oregon State University) – Paleoseismology above the Cascadia Subduction Zone from small forearc lakes in Oregon, U.S.A.

Maarten Van Daele (Renard Centre of Marine Geology, Department of Geology, Ghent University, Belgium) – Paleoseismology from Chilean lakes: A South American Perspective.

**Sessions that might be of interest to Limnogeology Division members**

**T17 Polar and Alpine Changes**

**Advocates:** W. Berry Lyons

Polar and high alpine environments are undergoing rapid changes including cryosphere loss, with important geomorphological, hydrological, biogeochemical, and ecological consequences. This interdisciplinary session will explore these changes in both the Arctic and Antarctic.

**T32. Geoscience on National Forests and Grasslands—Stewardship, Education, and Research**

**Advocates:** Christopher P. Carlson; Johanna L. Kovarik; Joseph T. Gurrieri; Ryan P. Mikulovsky

This session will feature geologic resources and geoscience research conducted on the National Forests and Grasslands. Topics include paleontology, geomorphology, hydrogeology, geo-ecology, geologic hazards, cave and karst resources, geologic engineering, interpretive and recreational geology, and more.

**T38 Cenozoic Paleoclimates and Ecosystems**

**Advocates:** Alexis Licht; Caroline Stromberg; Gerard H. Roe; Guillaume Dupont-Nivet; Yannick Donnadieu; K. Christopher Beard

The session encourages contributions that address Cenozoic paleoclimate from a variety of approaches, including climate simulations, paleontological, paleobotanical, and geological studies of the marine and terrestrial records. Comparisons between data and models are particularly welcomed.

**T39. Cushman Foundation Symposium: Microfossil Mayhem—Murder, Misfortune, and More**

**Advocates:** Miriam E. Katz; Francine M.G. McCarthy; Michelle F. Goman

Microfossils (assemblages, geochemistry) are integral to a wide range of human-related studies, from hominin evolution to murder investigation. This session highlights innovative microfossil applications to areas such as forensics, pollution, sea level, climate, anthropology, and archeology.

**T44. Insights from Microfossils, from Traditional to Novel Approaches**

**Advocates:** Miriam E. Katz; Robert K. Poirier; Krystyna Kornecki; Megan K. Fung

Traditional uses of microfossils are central to many research applications, while novel geochemical approaches utilizing microfossils have expanded recently. This session highlights traditional and innovative microfossil applications in terrestrial and marine environments, including modern analogs.

**T45 Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System**

**Advocates:** Kevin Uno; Tammo Reichgelt

Miocene–Pliocene climatic change shaped modern terrestrial environments and holds clues for the planet’s future. We encourage research on climate – biota interaction that elucidates mechanisms of ecosystem change during this period.

**T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present**

**Advocates:** Lesleigh Anderson; Miriam C. Jones

Marine and terrestrial reconstructions of environment and climate from the North Pacific region, including eastern Asia, Alaska and western North America, are encouraged to explore patterns and linkages during the deglacial, Holocene, and historic periods.

**T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles**

**Advocates:** Jonathan P. Wilson; Caroline A.E. Strömberg; Patrick J. Frings

This session seeks to bring together geochemists, modelers, soil scientists, physiologists, and paleontologists to discuss state-of-the-art knowledge of the terrestrial and oceanic silica cycles, links between them, and connections with other biogeochemical cycles through time.

**T85. Clear as Mud: Stratigraphic, Diagenetic, Sedimentologic, Geomechanical Analyses, and Modern Analogs of Ancient Mudrock Systems**

**Advocates:** Bryan W. Turner; Shannon A. Dulin

New techniques enable efficient and accurate analyses of mudrock properties at fine-scales, allowing precise descriptions and interpretations of this subtle lithology. This session highlights new studies of sedimentology, stratigraphy, and diagenesis of mudrock dominated systems.

**T88. Mudstone Facts: Deposition, Diagenesis and Source of Basin Fluids**

**Advocates:** Neil Fishman; Sven Egenhoff; Dario Harazim

This session features the sedimentology and petrology of mudstones, and their role as sources of fluids in basins.  Although organic-rich mudstones (marine or lacustrine) are a focal point, studies on other mudrocks are welcome.

**T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management**

**Advocates:** Jason P. Kenworthy; F. Edwin Harvey

This session addresses the roles of geology and hydrology in national parks. We encourage presentations on geologic and hydrologic research, paleontology, past research experience, and geologic and water resource management in units of the U.S. National Park System.

**T182. Through the Lens of the Dating Specialist: Advice on Applications, Sampling Methods, Data Interpretations and Information on Recent Innovations (Posters)**

**Advocates:** Tammy Rittenour; Shannon A. Mahan; Michelle Summa Nelson

This poster session provides a venue for geochronology specialists to answer questions and discuss sampling methods, technique principles, and new and innovative applications of dating techniques with interested researchers and potential users.

**T189. Landscapes in the Anthropocene**

**Advocates:** Rónadh Cox; José Antonio Constantine; J. Wesley Lauer

Advances in understanding landscape evolution are paving the way to successfully coupling hydrological and climate-change models with predictions of landscape adjustment. We seek abstracts investigating the relationships between various earth systems and landscape response.

**T190. Linking Physical and Ecological Processes from Source-to-Sink to Investigate Multi-Scale Response to Restoration**

**Advocates:** Andrew C. Wilcox; Amy East; Jon Major

This session will provide a forum for sharing emerging research on ecogeomorphic processes and watershed-scale response to restoration from source-to-sink, and to look ahead at future directions in this field.

**T248. Microbialite Textures and Chemical Signatures in Continental Settings: Forging the Link Between the Modern and Ancient**

**Advocates:** Thomas A. Hickson; Julie K. Bartley

We seek abstracts that focus on the textures (macro- and microscopic) and geochemical signatures of microbial activity in continental settings. These abstracts should clearly forge a strong link between ancient rock sequences and modern biogeochemical processes.

Add to sponsorship list

**T17 Polar and Alpine Changes**

**Advocates:** W. Berry Lyons

Polar and high alpine environments are undergoing rapid changes including cryosphere loss, with important geomorphological, hydrological, biogeochemical, and ecological consequences. This interdisciplinary session will explore these changes in both the Arctic and Antarctic.

**T32. Geoscience on National Forests and Grasslands—Stewardship, Education, and Research**

**Advocates:** Christopher P. Carlson; Johanna L. Kovarik; Joseph T. Gurrieri; Ryan P. Mikulovsky

This session will feature geologic resources and geoscience research conducted on the National Forests and Grasslands. Topics include paleontology, geomorphology, hydrogeology, geo-ecology, geologic hazards, cave and karst resources, geologic engineering, interpretive and recreational geology, and more.

**T38 Cenozoic Paleoclimates and Ecosystems**

**Advocates:** Alexis Licht; Caroline Stromberg; Gerard H. Roe; Guillaume Dupont-Nivet; Yannick Donnadieu; K. Christopher Beard

The session encourages contributions that address Cenozoic paleoclimate from a variety of approaches, including climate simulations, paleontological, paleobotanical, and geological studies of the marine and terrestrial records. Comparisons between data and models are particularly welcomed.

**T45 Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System**

**Advocates:** Kevin Uno; Tammo Reichgelt

Miocene–Pliocene climatic change shaped modern terrestrial environments and holds clues for the planet’s future. We encourage research on climate – biota interaction that elucidates mechanisms of ecosystem change during this period.

**T46 North Pacific Environment and Paleoclimate from the Late Pleistocene to Present**

**Advocates:** Lesleigh Anderson; Miriam C. Jones

Marine and terrestrial reconstructions of environment and climate from the North Pacific region, including eastern Asia, Alaska and western North America, are encouraged to explore patterns and linkages during the deglacial, Holocene, and historic periods.

**T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles**

**Advocates:** Jonathan P. Wilson; Caroline A.E. Strömberg; Patrick J. Frings

This session seeks to bring together geochemists, modelers, soil scientists, physiologists, and paleontologists to discuss state-of-the-art knowledge of the terrestrial and oceanic silica cycles, links between them, and connections with other biogeochemical cycles through time.

**T85. Clear as Mud: Stratigraphic, Diagenetic, Sedimentologic, Geomechanical Analyses, and Modern Analogs of Ancient Mudrock Systems**

**Advocates:** Bryan W. Turner; Shannon A. Dulin

New techniques enable efficient and accurate analyses of mudrock properties at fine-scales, allowing precise descriptions and interpretations of this subtle lithology. This session highlights new studies of sedimentology, stratigraphy, and diagenesis of mudrock dominated systems.

**T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management**

**Advocates:** Jason P. Kenworthy; F. Edwin Harvey

This session addresses the roles of geology and hydrology in national parks. We encourage presentations on geologic and hydrologic research, paleontology, past research experience, and geologic and water resource management in units of the U.S. National Park System.

**T189. Landscapes in the Anthropocene**

**Advocates:** Rónadh Cox; José Antonio Constantine; J. Wesley Lauer

Advances in understanding landscape evolution are paving the way to successfully coupling hydrological and climate-change models with predictions of landscape adjustment. We seek abstracts investigating the relationships between various earth systems and landscape response.

**T190. Linking Physical and Ecological Processes from Source-to-Sink to Investigate Multi-Scale Response to Restoration**

**Advocates:** Andrew C. Wilcox; Amy East; Jon Major

This session will provide a forum for sharing emerging research on ecogeomorphic processes and watershed-scale response to restoration from source-to-sink, and to look ahead at future directions in this field.