

# Quaternary Geologist & Geomorphologist

Newsletter of the Quaternary Geology and Geomorphology Division  
<http://community.geosociety.org/qggdivision/home>

May 2020

Volume 61, No 1

## 2020 Kirk Bryan Field Trip

**Pre-LGM stratigraphic record in the Central St. Lawrence Lowlands: How much ice in southern Québec and adjacent New England during MIS-3?**

**Michel Parent and Michel Lamothe**



Photos (courtesy of Michel Parent) show Cretaceous intrusives marking the southern limit of the region in which pre-LGM marine, lacustrine and alluvial sediments can be observed in riverbank exposures (main) and twig fragments redeposited very early during the marine flooding (inset)

*\*\*More info about the 2020 Kirk Bryan Field Trip on page 12 of the newsletter!\*\**

## GSA Quaternary Geology and Geomorphology Division Newsletter

Volume 61 No. 1

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# Quaternary Geology & Geomorphology Division

## --- Officers and Panel Members – 2019/2020---

**Officers** – 6 Members, three of whom serve one-year terms: Chair, First Vice-Chair, and Second Vice-Chair; and three of whom serve two-year terms: Secretary, Treasurer, and Communications Coordinator.

**Management Board** – 9 Members: Division officers and the Chair of the preceding year; also includes the Historian and the Student Representative.

<p><b>Chair:</b>  <b>M.C. (Missy) Eppes</b>            Department of Geography and Earth Sciences            University of North Carolina at Charlotte            9201 University City Blvd.            Charlotte, NC 28223            meppes@unc.edu</p>		<p><b>Communications Coordinator:</b>  <b>Nicholas Sutfin</b>            Dept. of Earth, Environmental, &amp; Planetary Science            Case Western Reserve University            Cleveland, OH 44106            Nicholas.sutfin@case.edu</p>									
<p><b>1st Vice-Chair:</b>  <b>Julie Brigham-Grette</b>            Department of Geosciences            University of Massachusetts at Amherst            233 Morrill Science Center            Amherst, MA 01003            juliebg@geo.umass.edu</p>		<p><b>Historian:</b>  <b>P. Thompson Davis</b>            Department of Natural Sciences            Bentley University            Waltham, MA 02452            pdavis@bentley.edu</p>									
<p><b>2nd Vice-Chair:</b>  <b>Karl Wegmann</b>            Dept. of Marine, Earth, &amp; Atmospheric Sciences            North Carolina State University            Raleigh, NC            kwegman@ncsu.edu</p>		<p><b>Student Representative:</b>  <b>John Kemper</b>            Department of Geosciences            Colorado State University            Fort Collins, CO            john.kemper@colostate.edu</p>									
<p><b>Secretary:</b>  <b>Sarah Lewis</b>            College of Earth, Ocean &amp; Atmospheric Sciences            Oregon State University            3200 SW Jefferson Way            Corvallis, OR 97331            sarah.lewis@oregonstate.edu</p>		<p><b>Past Chair:</b>  <b>Grant Meyer</b>            Department of Earth and Planetary Science            University of New Mexico            MSCO3-2040            Albuquerque, New Mexico, 87131            gmeyer@unm.edu</p>									
<p><b>Treasurer:</b>  <b>Scott F. Burns</b>            Department of Geology            Portland State University            PO Box 751            Portland, OR 97207-0751            burnss@pdx.edu</p>		<p><b>PANEL MEMBERS</b></p> <table border="0"> <tbody> <tr> <td><b>2018-2020 Panel</b></td> <td><b>2019-2021 Panel</b></td> </tr> <tr> <td>Kristin Jaeger</td> <td>Andrew Cyr</td> </tr> <tr> <td>Shannon Mahan.</td> <td>Brad Johnson</td> </tr> <tr> <td>Eric McDonald</td> <td>Sarah Schanz</td> </tr> </tbody> </table>		<b>2018-2020 Panel</b>	<b>2019-2021 Panel</b>	Kristin Jaeger	Andrew Cyr	Shannon Mahan.	Brad Johnson	Eric McDonald	Sarah Schanz
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Eric McDonald	Sarah Schanz										
<p><b>2019 JTPC Representatives:</b>            M.C. (Missy) Eppes, Julie Brigham-Grette</p>		<p><b>GSA Councilor Liaison – Frank Pazzaglia</b>  <b>QG&amp;G Division Liaison – Dominique Olvera</b>            (Both appointed by the GSA President)</p>									

# Springing Forward in 2020

## --- Message from the Chair ---

Dear QG&G colleagues, students and friends,

As I put pen to paper for this newsletter, we are about six weeks into Covid 19. Thus, we are about six weeks into isolation; into working, studying, living and parenting under a single roof; six weeks into endless zooming and webexing and teaming; and ultimately six weeks into wondering and worrying about what will become of our jobs, our clients, our field seasons, our lab work, the people we mentor and teach or that mentor and teach us, not to mention the professional conferences like GSA that we all treasure.

Like everyone, I have been stunned by these weeks and by what they have wrought in our lives. And also like everyone, though, I have come to appreciate how these extraordinary times have re-focused our collective attention on the importance and comfort of the ordinary. So, it is with that consideration that I bring to you some otherwise relatively normal goings-on of the Quaternary Geology and Geomorphology division of the Geological Society of America.

I will start with the Montreal meeting, in the forefront of our GSA-minds. We don't yet know what form it will take, but GSA is committed to the meeting. No matter what, we can look forward to a rich scientific program, as there were a record number of proposed sessions (250+), at least 35 of which focus on Quaternary geology and geomorphology! Please don't be shy about submitting abstracts. A successful scientific program in whatever form will be so important for all of us come October. I look forward to reading and hearing about your work!

Abstract submissions open July 1 – Deadline in August: (<https://community.geosociety.org/gsa2020/home>)

On the subject of QGG Awards (Congratulations to our 2019 awardees listed on pg. 4!), I want to discuss a point made as I started this 4-year position on the QGG Board in late 2017. At that time in its 59 year history, only two women had received – as first author - our primary award, the Kirk Bryan. Only one woman had received our Distinguished Career Award in its 31 year record. At the time I was so shocked by these numbers that I requested the data for QGG membership. I found that 32% of our members who report their gender were female, with 46% of members <45 years in age being female (in 2020, those numbers are 29% and 47% respectively). While encouraging for the future health of the gender diversity of the membership, these data made the percentage of women awardees even more discouraging (an order of magnitude discrepancy between % female members vs % female awardees), not to mention the discouraging lack of other forms of diversity. Starting around that time, however, QGG began a concerted effort to encourage from all of us intentionality in considering potential nominations from its entire membership. Thanks to those efforts, with the 2019 awards presented in this newsletter, the number of women awardees for the Kirk Bryan and Career, while still small, have both doubled. Thank you to all of you who continue to nominate all deserving scientists for these awards and for GSA Fellowship. (<https://community.geosociety.org/qggdivision/awards/awardsoverview>) ([https://www.geosociety.org/GSA/About/awards/GSA\\_Fellows/GSA/Awards/Fellowship.aspx](https://www.geosociety.org/GSA/About/awards/GSA_Fellows/GSA/Awards/Fellowship.aspx))

Here are a few other items to look for in this newsletter or at [www.geosociety.org](http://www.geosociety.org): 1) GSA has a page on their website dedicated to curating a list of internal and external resources for Virtual education in various forms, including some amazing field trips. Take advantage! 2) As you plan for 2021 Section meeting sessions, a QGG endorsement can improve your success – just email your QGG liaison for endorsement (pg. 17). 3) QGG is going to try out hosting a mentoring and information booth at the next in-person meeting (hopefully Montreal) – we are seeking volunteers to sign up for a 2-3 hour spot (pg. 12). Sign up today!

Until Montreal (knock on wood), all the best to you my dear GSA QGG family. I am happy to work for you as your Chair after so many years on the receiving end of support in the form of encouraging and honest reviews, introductions to new collaborators and students, and most importantly great friendship and fun. Please reach out to me directly if there is anything QGG can do to better serve you.

Martha Cary (Missy) Eppes  
Chair, Quaternary Geology & Geomorphology Division of GSA  
[meppes@uncc.edu](mailto:meppes@uncc.edu) 704 687-5993

# Division Awards - 2019

The following awards were given by the Division at our annual awards ceremony Tuesday, September, 2019 in Phoenix, Arizona.

## --- The Kirk Bryan Award ---

The Kirk Bryan Award for Research Excellence was established in 1951 and given for a publication of distinction (within the past 5 years) advancing the science of geomorphology or Quaternary geology or a related field. Our 2019 award was presented to Kristen L. Cook with Jens M. Turowski, and Niels Hovius for: 2014, *River gorge eradication by downstream sweep erosion*. Nature Geosciences 7, 682-686, doi:10.1038/NCEO224

### Citation by Alison Duvall

It is my honor to be the citationist for this year's Kirk Bryan award-winning paper by Kristen Cook, Jens Turowski, and Niels Hovius entitled "River gorge eradication by downstream sweep erosion". All three of these authors are well known for outstanding science on the topic of landscapes and the processes that shape them and their award-winning 2014 Nature Geoscience paper is no exception.



2019 Kirk Bryan award winner Kristen L. Cook (left) and citationist Alison Duvall (right).

I hope you had the chance to catch Kristen's excellent presentation on the evolution of the Daan River gorge, which carved into an anticline in the tectonically active western foothills of Taiwan. The anticline grows from successive uplift events along the Chelungpu fault, most recently during the Chi-Chi earthquake in 1999. The authors capitalized on this brilliant natural experiment in order to investigate the effects of earthquakes and fault motion on rivers. I learned today that Kristen has visited the site an astonishing 58 times, including, it appeared during Typhoon Morakot. Now that is dedication.

What is so special about their study is that rather than focusing only on the coseismic formation of the anticline and gorge, the authors investigated the gorge evolution during the many years following the initial uplift and incision. In doing so, they get to the heart of the fluvial processes acting on the channel over time— a rare opportunity.

The 2014 study involved the meticulous and onerous work of mapping channel width and documenting lateral erosion processes in the

gorge and upstream. Their results revealed a mechanism of gorge eradication, which they coined "downstream sweep erosion", that rapidly transforms a steep sided canyon into a beveled floodplain. In the paper, they argued that this process could erase the uplifted Dongshi anticline topography in as little as 50 years!

The paper makes for an enjoyable read not just because the topic is fascinating, but also because the writing is clear and compelling, the illustrations masterful, and for the thorough nature of such a short piece. In its rather

brief life, Cook et al. (2014) has generated wide interest and citations. I anticipate the paper will continue to spark discussion and inspire future research for generations to come. If you haven't already, please put this on your must-read list and join me now in congratulating Kristen and coauthors tonight.

### **Response by Kristen L. Cook**

We'd like to thank Alison Duvall for her very kind words and for both thinking of our paper and putting in the work to nominate it. We'd also like to thank those that wrote letters in support of the nomination and the QG&G division for selecting our paper for this award. It's a great honor and one that came as a huge surprise! Since I'm representing the team, I'd like to highlight my co-authors: Jens Turowksi and Niels Hovius. Collecting nice data is one thing, but figuring out what you can learn from it is not always so straightforward, and this paper arose from extended discussions among Jens, Niels and I. It was a great collaborative effort, which made it quite a fun paper to write. I also want to thank a number of people who are not co-authors. First, and most important, is John Suppe. John was my postdoc supervisor during my years at National Taiwan University, when most of the data collection for this paper was done. John was an extremely generous supervisor, providing me with support and mentoring while giving me the freedom to pursue my own projects. I couldn't have done the Daan River work without his support, and I am very grateful for it. This paper is one of the results of a long-term monitoring campaign in the Daan River, and over the years I have had a huge amount of field assistance from a wide range of people. I can't name everyone, but Mong-Han Huang, Po-Nong Lee, Chia-Yu Chen, and Wan-Yun Ho each spent a considerable amount of time out on the river with me, patiently putting up with survey after survey after survey.

In general, I hope that this paper highlights some of the benefits of long-term monitoring campaigns. When I started working on the Daan River, I didn't really know what would come out of it, but I figured that something interesting would probably happen, so I'd better stick around to watch it. I was lucky to be able to continue watching for more than ten years, and to record a whole range of interesting and sometimes unexpected things, such as the role of bedload in driving erosion and the impact of channel width differences on bedload flux variability. This was possible because of the very flexible funding that John and Niels received from Taiwan's Ministry of Science and Technology and from Germany's Helmholtz Association, and their willingness to direct some of it my way year after year. This sort of monitoring can yield tremendous insights into geomorphic processes, but requires patience and investments of time and money beyond a typical project length. I hope that, as a community, we can continue to find time and resources for this.

Niels, Jens and I thank you all again.

### **--- The Distinguished Career Award ---**

The Distinguished Career Award was established in 1985. It is presented to Quaternary Geologists and Geomorphologists who have demonstrated excellence in their contributions to science. We presented the 2019 award to Allan Ashworth, North Dakota State University.

### **Citation by Jane K. Willenbring**

For nearly 50 years, Allan has applied his knowledge of fossil beetles to understanding past climate and environmental change on seven continents. As the first to bring fossil beetle analysis to North America, Allan has advanced the field of Quaternary geology through this use of unique paleoenvironmental proxies that are sensitive paleotemperature recorders. One of his many projects eventually led to a paleoenvironmental reconstruction in the Antarctic Dry Valleys and a featured documentary. As part of this work, he discovered the first ground beetle in Antarctica. Allan helped found and populate the Neotoma Paleocology Database—a fully-searchable multiproxy database to bring his years of experience and fossil insect collections, and their environmental significance, freely to others, even past his own ability to train the next generation of scientists as he has done selflessly, and successfully throughout his career. Through his years of undergraduate teaching, he has instructed almost 10,000 students and has done so with excellence, as noted by teaching awards at North Dakota State

University. He just finished serving as President of INQUA after a full career dedicated to Quaternary science including research, service and teaching that leaves a long-lasting influence on our science and society. Finally, Allan is, simply, a very decent human being. He views people from all walks of life as equally deserving of opportunity, energy, and consideration. Personally, he provided me with an excellent example of how to do science and be a scientist that I carry with me and pass on to my own students. His is an excellent example of a career well lived.

## Response by Allan Ashworth



2019 QG&G Distinguished Career Award recipient, Allan Ashworth (right), and citationist Jane K. Willenbring (left).

I've been a GSA member for more than 40 years and during that time have attended many QG&G evenings. Never in my wildest dreams did I think that I would be nominated for a Distinguished Career Award let alone be a recipient. Thank you GSA, thank you QG&G members and a big thank you to all my nominators, especially Jane Willenbring, Scripps Institution of Oceanography, and Ben Laabs, a colleague at North Dakota State University (NDSU). As Jane noted in her introduction, most of my career has involved teaching in a small undergraduate program. Now, in my retirement, it is wonderful for me to see how the careers of students I taught, like Jane, have blossomed and how much they are contributing to the future of our profession.

In my own education I was fortunate to meet many individuals who helped me to achieve my aspirations. I will mention a few even though the real number is much greater. I grew up in southern England in a working class family immediately following WWII. Life was difficult for my parents but they wanted to see their children educated. Even though they didn't understand math problems, or the subtleties of English grammar, they coached me using books of answers. Their diligence helped me gain admittance to Worthing High School for

Boys (WHSB). The education I received at WHSB was second to none. While in the 6<sup>th</sup> form I took a class in geology from Mr. Allchin. From that time onward, I was hooked. In Mr. Allchin's class we made thin sections, used polarizing microscopes and, most importantly, went on field trips on our bikes to local chalk and sandstone quarries on the South Downs and in the Weald. At school, I was occasionally a rebellious student which resulted in several trips to Mr. Evans, the headmaster. Mr. Evans was charged with disciplining me but more often than not he engaged me in conversation on a whole range of topics, including my future. It is safe to say that without Mr. Evans' encouragement I would not have gone to university. Mr. Evans gave me confidence and a sense that I could succeed in whatever I tried.

At the University of Birmingham, I was mentored by two very well-known Quaternary scientists. Russell Coope took me on as a graduate student and from him I learned that fossils were more than interesting objects and could be used to answer scientific questions. I was lucky enough to work for my Ph.D. on a Younger Dryas problem at the very beginning of the modern interest in climate change. Fred Shotton was the head of the Geology department but wore many hats. During WWII, amongst his many achievements, he was the lead scientist on providing geological knowledge about the Normandy beaches in preparation for the D-Day landings.

As Pro-Vice Chancellor of the University, Fred did not have to teach undergraduates. However, he taught the introductory geology class at Birmingham telling me on one occasion that he wouldn't trust it to anyone else on the faculty. His words and actions stuck with me for my entire career at NDSU, where I taught an introductory historical geology course for more than 40 years.

As my career developed I was able to collaborate with several scientists in great Quaternary hot spots in the United States including, The Byrd Polar and Climate Research Center (BPCRC) at The Ohio State University, the Quaternary Research Center (QRC) at the University of Washington, the Institute of Arctic and Alpine Research (INSTAAR) at the University of Colorado, and the Limnological Research Center (LRC) at the University of Minnesota. Out of a long list of colleagues I worked with, I will single out two in particular. John Mercer, BPCRC, introduced me to studies in Chile and Argentina which involved late-glacial climate change. John also provided me with the first sample of a Sirius Group deposit I examined from the Beardmore Glacier in Antarctica. He was a very thoughtful person who contributed many original ideas to geology. He taught me that field work was more to do with generating ideas than measuring and accurately logging sections. Steve Porter, in addition to being a great Quaternary glacial geologist, truly believed in multidisciplinary research. Like many others I was a beneficiary of visits to the QRC and to meals at his home hosted with his wife Anne. It was through Steve that I became involved in INQUA, initially through the USNC INQUA and later serving as vice-president and more recently as president.

In summary, I have been lucky in my life. I found geology early. I was lucky to work in a small department at NDSU with colleagues and students who supported my teaching, research and leadership. Finally and most importantly, I was supported by my wife Hazel who rarely objected to my long absences from home in pursuit of geology.

### --- The Farouk El-Baz Award for Desert Research ---

The Farouk El-Baz Research Award was established in 1999 and given for outstanding work in the field of warm desert research. The award is intended to encourage and reward arid-land studies. The 2019 award was presented to **Steven Forman** of Baylor University.

#### **Nomination by Dr. Steven G. Driese**

I am very pleased to have the privilege of nominating my Baylor Geosciences colleague Dr. Steven L. (Steve) Forman for the *Farouk el-Baz Award for desert research* that is awarded by the GSA Quaternary Geology and Geomorphology Division. I first met Steve in the field in 2008 in central Texas working together on a project involving high-resolution dating of the alluvial sediments at the Debra Friedkin Site near Salado, TX, which documents the oldest evidence for humans in North America, and later we collaborated on a study of additional sites with fluvial deposits that required dating on the Fort Hood Military Base in Texas. In 2013 Steve joined the Faculty of the Baylor University Geosciences Department in which he is an important contributor to our Terrestrial Paleoclimatology Research Group.

From his graduate program at the University of Colorado, continuing through his various academic appointments, such as at the University of Illinois at Chicago, and at Baylor University, Dr. Steve Forman has made significant contributions in the following areas that impact desert research:

1.) Understanding the geologic record of droughts on the Great Plains to better assess the linkages between drought variability and reawakening of eolian systems. These studies gave birth to new inquiry on the sources of particulates during the 1930s Dust Bowl Drought, with Mark Sweeney. Most recently this research focus has led to a deeper-time perspective for the Monahans Dune Field in west Texas, (which was his Farouk el-Baz Award for Desert Research Lecture given on Monday, September 23 at 9:10AM), and for the Dust Bowl region of the US Great Plains,

2.) For persistent international collaborations to decipher the time and controls of sand seas in western Argentina, the southern Peru Atacama Desert, the Sandy Lands of northern China and water-level changes around Lake Turkana, Kenya, and lastly

3.) For contributions to the accurate measuring of geologic time in eolian deposits, which is a critical component in the earth sciences.

Steve has been a prodigious publisher of peer-reviewed journal articles, now numbering 187, as well having 19 monographs and books. His research has been funded primarily by the USGS, the NSF, the National

Geographic Society, NASA and DOD. He has trained over 40 students and post-doctoral scholars, with many active contributors in the academics, government and the private sector. He is considered one of the world's experts on optically-stimulated luminescence (also called OSL) dating of eolian and fluvial sediments and runs a Geochronology Laboratory at Baylor that provides age dates for Quaternary researchers around the world. Dr. Forman's research interests are more broadly centered on gaining new understanding of the progression and mechanisms of environmental and climate change in the past 250,000 years of Earth's history. His investigations are primarily collaborative, in which he bridges multiple disciplines, and combine field interpretations and analytical measurements, with geophysical modeling. His approach underscores the importance of translating site-specific geomorphic or stratigraphic observations or measurements to regional and global contexts on various time scales, and thus he is highly deserving of the Farouk el-Baz Award for desert research.



2019 Farouk El-Baz Award winner, **Steven Forman** of Baylor University

### Response by Steven Forman

Many thanks to Steve Driese for this nomination for the Farouk el Baz Award. I thank also, Mike Waters at Texas A & M, Alfonsina Tripaldi University of Buenos Aires, Argentina, Xiaoping Yang, Chinese Academy of Sciences and Mark Sweeney from Univ. of South Dakota for their supporting voices. I appreciate the deliberations of the QG&G board and their stewardship of the division. I extend gratitude to Dr. Farouk el Baz for establishing this award to highlight the importance of desert research within the Geoscience community.

However, my greatest appreciation is to my wife Lily and our children who put up with me, a person with his head literally stuck in sand and too often in the dark. Thank you for patience and understanding for someone thinking about the past at all hours of the day, rather than being present in the now. I also extend my deepest gratitude to students, post docs, and many colleagues I have worked with and put to prose our research. I have perhaps learned the most by interacting with international visitors. The new research roads I have traveled with these colleagues and friends in their native lands have been enriching.

I have spent years in the field chasing down eolian and other depositional sequences, in remote places in North and South America, Kenya, Russia and China with colleagues and students to understand how and when arid lands respond to climate variability, including historic droughts. A clear focus of this research is the judicious use of OSL dating, which renders a seemingly monotonous pile of sand, into a timeline of eolian activity and insights into environmental and climate causations. My crusade is to ferret-out the better ways of uniting the world of solid-state-physics of OSL dating with Quaternary Geology and Geomorphology; and then relate to driving forces in the climate system. I often miss the mark, but I keep on trying.

I owe my introduction into the world of luminescence dating to the generosity of spirit and mind to Anne Wintle, then at Cambridge University in the UK. Anne allowed me to work in her fledgling lab as a PhD student

and put up with my millions of questions. It was my PhD advisor, Gifford Miller, at the Univ. of Colorado, who staked my first lab within the Geochronology Center at INSTAAR. And with each reincarnation and now at Baylor University, the lab improved with new ideas, advances in computation and better technology. The hard work of lab technicians, such as Jim Pierson, Jeaneth Mazzaco and Lilliana Marin and graduate students like David Wright, Nathan Brown, Kasey Bolles and Liang Peng significantly advanced our research.

My love of all things Quaternary and past landscapes started as an undergraduate at the Univ. of Illinois, under the tutelage of Leon Follmer, a soil scientist. Leon required that I learn by sight the Munsel soil colors and by taste soil textures prior to high velocity field outings. I was hooked. I am fortunate to have three remarkable mentors at the Univ. of Colorado, Giff Miller, John Andrews and Pete Birkeland who provided a view of past landscapes and climates from the molecular level to the global-scale that presaged decades of future research. I see a broad and fascinating landscape for future desert research; as our planet warms, seas rise, as the frequency of extreme climate events increase and the boundaries between ecosystems shift, more well-educated, tested, and unwavering geomorphic eyes are in critical need. Thanks much for your time and this honor.



### --- The Gladys M. Cole Memorial Research Award ---

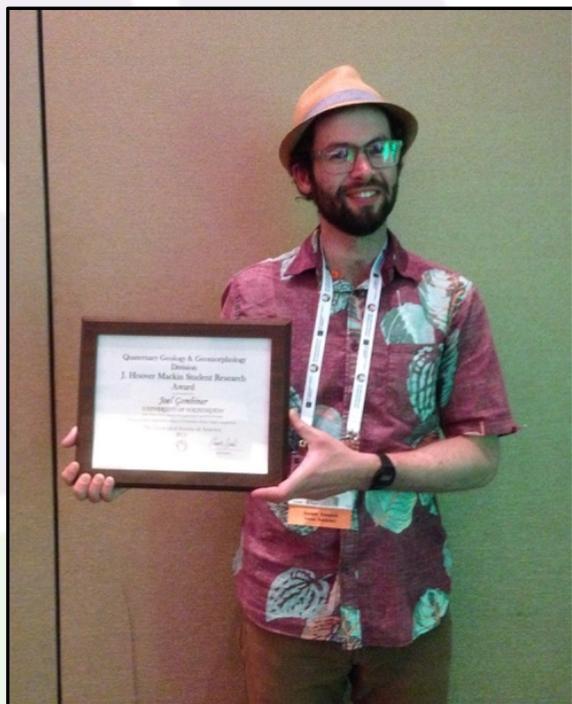
The Gladys M. Cole Memorial Research Award is restricted to investigation of the geomorphology of semi-arid and arid terrains in the United States and Mexico. It is given each year to a GSA Member or Fellow between 30 and 65 years of age who has published one or more significant papers in geomorphology. The fund was established in 1980 by Dr. W. Storrs Cole in memory of his wife. The first award was presented in 1982. The 2019 award was given to Glenn Thackray, Idaho State University, for research grant to support investigation of the geomorphology of semiarid and arid terrains, with proposal titled "Stream capture, glacier capture, and the Big Lost River Flood(s), east-central Idaho."

Thank You

The Quaternary Geology and Geomorphology Division management board thanks the following people for their help in evaluating this year's award applications for the Farouk El Baz and division student awards: Dennis Dahms, David Dethier, Yehouda Enzel, Andrew Goudie, Karen Gran, Judy Haschenburger, Crystal Huscroft, Brad Johnson, Harry Jol, , Matt Jungers, Nick Lancaster, Jeff Monroe, Will Ouimet, Lyman Persico, Drew Phillips, Eric Portenga, Dorothy Sack, Noah Snyder, Amanda Schmidt, Nicholas Sutfin, Amaud Temme, Lisa Tranel, and Brent Ward.

# Student Research Awards

## --- J. Hoover Mackin Award ---



The **J. Hoover Mackin Research Award** was created in 1974 to support graduate student research in Quaternary geology/geomorphology. The 2019 Mackin Award for PhD research was given to **Joel Gombiner**, University of Washington, for the proposal titled "Tephrochronology of enigmatic Moses Coulee megafloods". Advisor: John Stone

## --- Peter Birkeland Award ---

The **Peter Birkeland Soil Geomorphology Award** was established in 2016 to contribute to the advancement of soil geomorphology. The 2019 Birkeland Award was given to **Evan Thaler**, University of Massachusetts, Amherst, for proposal titled: A scalable remote sensing method for estimating topsoil loss in the Piedmont region of the eastern U.S. Advisor: Isaac Larsen

## --- Robert K. Fahnstock Memorial Award ---

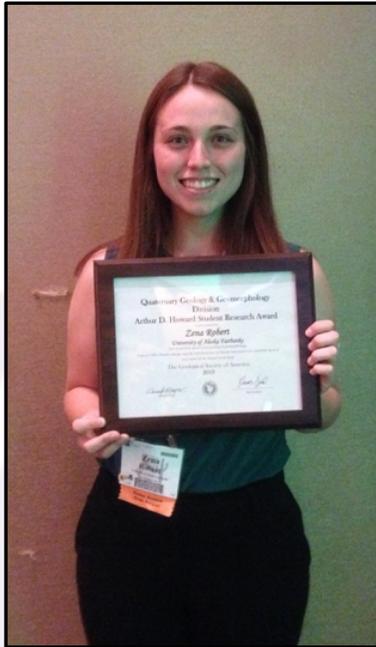
The Fahnstock Memorial Award from GSA honors the memory of the former member of the Research Grants Committee, who died indirectly as a result his service on the committee. The award is given for the best proposal in sediment transport or related aspect of fluvial geomorphology. The 2019 recipient was **Ian Armstrong**, Indiana University, Bloomington, for proposal titled "Rock strength controls on knickpoint migration rates". Advisor: Bruce Douglas.

## ---Stanley A. Schumm Award---



This award was established in honor of Stanley Schumm and recognizes the contributions of graduate students in the field of fluvial geomorphology. Established in 2012, the inaugural award was given in 2018. The 2019 recipient was **John Kemper**, Colorado State University, for proposal titled "Floodplain forest establishment and legacy sediment within the Yampa River Basin, northern Colorado". Advisor: Sara Rathburn.

### --- Arthur D. Howard Award ---



The **Arthur D. Howard Research Award** was established in 1992 to support graduate student research in Quaternary geography or geomorphology. The 2019 Howard Award for MS research was given to **Zena Robert**, University of Alaska, Fairbanks, for the proposal titled “Climate change and the infrastructure of Denali National Park: Landslide hazard assessment of the Denali Park Road”. Advisor: Daniel Mann

### --- Marie Morisawa Award ---

The **Marie Morisawa Award** was established in 2006 to support promising female graduate students in geomorphology. The 2019 Morisawa Award was given to **Tess Walther**, University of Maine, for proposal titled "Reconstruction of Koettlitz Glacier in the McMurdo Sound region, Antarctica, during the Last Glacial Maximum and Termination". Advisor: Brenda Hall



### --- John A. Black Award ---

The John A. Black Award supports graduate student field-based research on coastal processes for geomorphology research located in the USA, Puerto Rico or Canada. The 2019 award was given to **Katya Jay**, Oregon State University, for proposal titled “Coastal dunes as carbon sinks: Assessing carbon sequestration and carbon stocks in U.S. East Coast dunes (advisor: Sally Hacker

Awardees of 2020 Student Research Grants notified in late spring. Get info and apply for future student research grants and awards at

<https://www.geosociety.org/GSA/grants/gradgrants.aspx>



## -- Sneak Peek: The 2020 Kirk Bryan Field Trip --

### Pre-LGM stratigraphic record in the Central St. Lawrence Lowlands: How much ice in southern Québec and adjacent New England during MIS-3?

Michel Parent and Michel Lamothe

The inferred extent and volume of the Laurentide Ice Sheet during MIS3 has been recently proposed to be much reduced during MIS3 as a consequence of new (Dalton et al., 2016; Pico et al., 2018) but disputed (Miller and Andrews, 2019) chronostratigraphic interpretations over the Hudson Bay Lowland. The concept of a much reduced LIS between 50-30 ka has major implications for the evolution of drainage conditions in the St. Lawrence River valley (SLRV), a river system particularly sensitive to LIS dimensions. The recognition of glacial lake sediments in the SLRV implies the damming and rerouting of drainage and therefore a substantial LIS volume. In contrast, the presence of sediments indicating normal drainage, whether fluvial, lacustrine or marine, implies mostly ice-free conditions in the valley and thus a reduced ice volume. A 2020 Kirk Bryan fieldtrip is thus proposed to visit three sites providing conflicting field and geochronologic data, located at less than 50 km of each other where both types of sediments have been recognized and dated at ca 30 to 50 ka.

The first site will be located at Ulverton where late-glacial subaqueous outwash sediments allow the excursionists to discuss the impact of the presence of continental ice in the SLRV on the depositional systems in the Appalachians. The continuity of glacial cover in the Central St. Lawrence Lowlands through MIS 2-3-4 has been one of the cornerstones of the Late Quaternary stratigraphic record of southern Québec (Gadd et al., 1972; Lamothe, 1989; Lamothe et al., 1992; Occhietti et al., 1996). The second site is located near Pierreville, a classical occurrence for the St. Pierre organic (peat) sediments. At a nearby section, sub-LGM till fluvial sediments exhibiting upriver sedimentary structures are interpreted as distal glacial outwash and correlated to the mid-Wisconsinan Sables des Vieilles Forges (SVF). There, as in several other locations in the central part of the SLRV, IRSL dating of the SVF suggest fluvio-glacial sediment aggradation was initiated at ca 40-50 ka (Lamothe, in preparation). The third site will allow discussing the recent discovery, below the LGM till unit and Champlain Sea clay, of a succession of marine sediments overlying plant-bearing alluvial sediments (Parent et al., 2015, 2017) AMS-radiocarbon-dated at  $31\,270 \pm 200$  years BP (36400 – 35150 cal BP) and  $33\,250 \pm 240$  years BP (38680 - 37130 cal BP). These sediments are from a borehole in which the mid-Wisconsinan marine-alluvial succession overlies an older till unit and laminated lacustrine sediments lying directly on bedrock. The stratigraphic position of the marine unit between the 35 to 39 ka-old alluvial sediments and the LGM till records an hitherto unrecognized glaciomarine event in the central St. Lawrence lowlands prior the last glacial maximum.

This Kirk Bryan fieldtrip will bring participants to classical as well as new sites exhibiting parts of the St. Lawrence valley Quaternary record and should provide them with ample opportunity to discuss the ins and outs of the revised stratigraphic record.

**Cover photos: (Main)** A view of two of the Monteregian Hills, Mount Rougemont in the foreground and Mount Yamaska in the background. In addition to these unique features in the St. Lawrence Lowlands, these Cretaceous intrusives mark the southern limit of the region in which pre-LGM marine, lacustrine and alluvial sediments can be observed in riverbank exposures and in boreholes. **(Inset)** View of the underside of a rotonsonic core section showing the contact (18.82 m depth) between marine silts (undated) and the underlying alluvial sediments radiocarbon-dated at  $31\,270 \pm 200$  years BP and  $33\,250 \pm 240$  years BP. The twig fragments, recovered in the first 2 cm of the silt unit, were redeposited very early during the marine flooding.

## -- QG&G Endorsed Sessions at 2020 Fall Meeting in Montreal --

The current issue of GSA Today outlines the 2020 Fall Meeting in Montreal including approved technical sessions [https://www.geosociety.org/gsatoday/archive/30/5/flip/mobile/index.html?\\_zs=Rc5Ob1&\\_zl=BvPj6#p=11](https://www.geosociety.org/gsatoday/archive/30/5/flip/mobile/index.html?_zs=Rc5Ob1&_zl=BvPj6#p=11)

*Applying Near Surface Geophysics to Solve Geological Problems* (49260) GSA Geophysics and Geodynamics Division; GSA Geoarchaeology Division; GSA Environmental and Engineering Division; GSA Geohydrology Division; GSA Karst Division; GSA Quaternary Geology and Geomorphology Division

*Dynamics of the Laurentide Ice Sheet* (49290) GSA Quaternary Geology and Geomorphology Division

*Mineralogy, Petrology, and Geochemistry: New Approaches to Harnessing the Multidimensionality of Complex Systems* (49424)

*Evolution, Structure and Landscapes of the North Atlantic-Arctic Realm* (49587) GSA Geophysics and Geodynamics Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology & Geomorphology Division

*Natural and Human Influences on Great Lakes Coasts* (49606) GSA Marine and Coastal Geoscience Division; GSA Quaternary Geology and Geomorphology Division

*The Ring of Melting Ice: North Atlantic deglacial chronologies following the Last Glacial Maximum* (49614) GSA Quaternary Geology and Geomorphology Division; GSA Geochronology Division; GSA Sedimentology Division; GSA Limnogeology Division

*Icesheet and sea-ice paleo-reconstructions from the Arctic, Antarctica and the Southern Ocean* (49622) GSA Marine and Coastal Geoscience Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division

*Our Coastal Futures: Working Together to Understand Hazards and Mitigate Disasters* (49626) GSA Marine and Coastal Geoscience Division; Geology and Society; Quaternary Geology and Geomorphology

*On the Edge—New Insights into Ice-Marginal Conditions* (49638) GSA Quaternary Geology and Geomorphology Division; American Quaternary Association (AMQUA); Canadian Quaternary Association (CANQUA)

*Three-Dimensional Geological Mapping to Support Societal Development* (49661) GSA Quaternary Geology and Geomorphology Division; Marine and Coastal Geoscience, Energy Geology, Geophysics & Geodynamics, Environmental and Engineering Geology

*Oceans and Climates through Earth History: From Proxy Reconstructions to Model Assessments* (Posters) (49677) Cushman Foundation; Geochemical Society; Paleontological Society; Marine and Coastal Geoscience Division Julie contacted

*The Status of the Laurentide Ice Sheet during MIS-3* (49685) GSA Quaternary Geology and Geomorphology Division

*Techniques and Results of Paleoseismological and Seismic Hazard Studies of the Stable Craton of Eastern North America* (49690) GSA Quaternary Geology and Geomorphology Division; Geophysics and Geodynamics Division; Environmental and Engineering Geology Division

*Advances in Digital Field Methods for Geologic Research, Mapping, and Education* (49757) GSA Structural Geology and Tectonics Division; Geoinformatics and Data Science; Quaternary Geology and Geomorphology; Marine and Coastal Geoscience Division

## **QG&G Endorsed Sessions at 2020 Fall Meeting in Montreal (cont.)**

*Sedimentary Records of Neogene and Quaternary Environmental Change from Eastern Africa* (49782) GSA Continental Scientific Drilling Division; GSA Limnogeology Division; GSA Quaternary Geology and Geomorphology Division

*Cold Regions Weathering and Biogeochemical Cycling: Bridging Environments and Approaches* (49796) GSA Quaternary Geology and Geomorphology Division

*Geomorphology and Landscape Evolution of Mars* (49834) GSA Planetary Geology Division; Quaternary Geology and Geomorphology; Sedimentary Geology; Soil and Soil Processes

*Advances in Beringian Environments and Paleoclimate during the Late Glacial and Early Holocene* (49845) GSA Quaternary Geology and Geomorphology Division; GSA Limnogeology Division; GSA Geoarchaeology Division

*Bedrock Landslide and Rock Fall Deposits and Processes: Insights from the Geologic Record to Today* (49940) GSA Quaternary Geology and Geomorphology Division; GSA Environmental & Engineering Geology Division

*Offshore wind energy development in North America – Geological perspectives on challenges and opportunities presented in our coastal and inner shelf regions* (49995) GSA Marine and Coastal Geoscience Division; GSA Geology and Society Division; GSA Quaternary Geology and Geomorphology Division; GSA Energy Geoscience Division; GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division

*Physical Experimentation and Modeling in Surface Processes* (50020) GSA Quaternary Geology and Geomorphology Division; GSA Environmental & Engineering Geology Division; GSA Soils and Soil Processes Division

*Soil Processes and Landscape Evolution* (50027) GSA Quaternary Geology and Geomorphology Division; GSA Soils and Soil Processes Division

*Wildfire as an Earth System Process – ancient and modern.* (50098) GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Geology & Society Division; GSA Environmental and Engineering Geology Division

*Advances in Tectonic Geomorphology: Building it up and Tearing it down* (50120) GSA Quaternary Geology and Geomorphology Division; GSA Structural Geology & Tectonics Division

*Geomorphic processes and change at high latitudes* (50118) GSA Quaternary Geology and Geomorphology Division; Canadian Permafrost Association; Canadian Geomorphology Research Group

*Walden Pond: From Glaciation to Thoreau and Beyond* (50167) GSA Limnogeology Division; History and Philosophy of Geology Division; Quaternary Geology and Geomorphology Division

*From Hudson Bay to the Coastal Plain: Comparisons of Pre-LGM (Last Glacial Maximum) Quaternary Records in Glaciated and Unglaciated North America* (50183) GSA Quaternary Geology and Geomorphology Division

*Pseudo-karst Processes and Features* (50202) GSA Karst Division; GSA Quaternary Geology and Geomorphology Division; National Cave and Karst Research Institute

*Fluvial Geomorphic Interactions between Water, Sediment, and Biota* (50273). GSA Quaternary Geology and Geomorphology Division, GSA Sedimentary Geology Division. T134.

## --2020 QGG Candidate Bios--

The following candidates have been nominated for the following Division Officer and Panel positions.

### Chair

**Julie Brigham-Grette.** *Education:* B.A. Geology, Albion College; M.Sc. and Ph.D., Univ of Colorado-Boulder. Post-doctoral Fellow, Univ of Bergen, Norway, 1984-1985; Univ of Alberta, Edmonton, 1985-1987; At UMass-Amherst since 1987. *Professional Affiliations:* Member, Arctic Logistics Task Force for NSF Polar Programs 1996-1999; 2000-2003, Member of NSF -OPP Office Advisory Council 2002-2004; 2-term Chair, International Geosphere/Biosphere Program's Science Steering Committee on Past Global Change (PAGES) 2004-2008; President of the American Quaternary Assoc, 2004-2006, Secretary 1990-1998; US representative to Intern. Continental Drilling Program, 2003-2008; Member, US co-chief scientist of the Lake El'gygytgyn Drilling Project 2000-present; Polar Research Board, National Academy of Sciences 2008-present, Chair 2014 to present; External Advisory Committee to LacCore, University of Minnesota, 2007-present; Chair, AGU Paleoclimatology & Paleoclimatology Focus Group 2010-2012; *Awards:* Geological Society of America Fellow, 2002; American Geophysical Union Fellow, 2016. *Research Interests:* Arctic marine & terrestrial paleoclimate records of the Late Cenozoic to recent, the evolution of the Arctic climate, especially in the Beringia/Bering Strait region.

### First Vice Chair

**Karl W. Wegmann.** *Education:* BA, Whitman College, 1996; MS, University of New Mexico, 1999; PhD, Lehigh University, 2008; *Professional Experience:* Geologist-Natural Resource Scientist, Washington Geological Survey, 1999-2004; Assistant/Associate Professor, NC State University, 2008-present; Faculty Fellow, Center for Geospatial Analytics at NC State University, 2017-present; *Professional Licenses:* Geologist / Engineering Geologist (WA State #733); *Professional Affiliations:* GSA, AGU, AMQUA. *GSA Service:* Geological Society of America Bulletin Associate Editor, 2015-present, GSA QG&G Panelist 2016-18, GSA Graduate Student Grant Review Panel, 2016-17; *Other Service:* Grant Review Panels for USGS EDMAP and NEHRP, NSF Integrated Earth Systems. *Awards:* Whitman College Leeds Prize in Geology 1995; *Research Interests:* Geomorphology, Active Tectonics, Geoarchaeology – Hellenic (Crete) and Cascadia (Olympic Mountains) subduction zones, southern Appalachians and Piedmont, and Hangay Mountains, Mongolia.

### Secretary

**Lisa Ely.** *Education:* B.S. Geology and Biology, Principia College; M.S. and Ph.D. Geosciences, University of Arizona. *Experience:* NSF Post-Doctoral Fellow 1992-1994, Earth Systems Science Center, Pennsylvania State University; Asst./Assoc./Full Professor, Dept. Geological Sciences, Central Washington University; Department Chair, 2003-2007, 2011-2012. *Professional Affiliations:* GSA, AGU, AMQUA, AWG, NAGT; *GSA Service:* QG&G Panel 1995-98; QG&G Vice Chair & Chair, 2006-2008; GSA Technical Program Committee for Paleoclimatology, 1998-2002 and for QG&G 2006-2008; Technical Program co-Chair Rocky Mtn/Cordilleran Meeting, 2010; *Geology* Editorial Board, 2017-2019; Reviewer for QG&G Professional and Student Awards numerous years. *Awards:* GSA Fellow, 2009; GSA Thompson International Distinguished Lecturer, 2015-2016. *Research Interests:* Fluvial geomorphology, paleoflood hydrology, depositional records of tsunamis, geologic hazards.

### Candidates for 2<sup>nd</sup> Vice Chair

**Mark Sweeney.** *Education:* B.S. and M.S. University of Nebraska-Lincoln; Ph.D. Washington State University. *Experience:* Postdoctoral Research, Desert Research Institute 2004-2006; Assistant/Associate/Full Professor, University of South Dakota Dept. of Earth Sciences 2006-2018; Dept. of Sustainability & Environment 2018-present. *Professional Affiliations:* GSA, AGU, NAGT, SEPM, IAS, Sigma-Xi. *GSA Service:* QG&G Howard and Morisawa awards review panel 2012, QG&G Panelist 2016-2018. *Awards:* GSA Gladys W. Cole Research Award 2009; University of South Dakota Arts & Sciences Cutler Award for excellence in teaching and research 2017. *Research Interests:* Eolian geomorphology and sedimentology, formation of dust and loess, fluvial-eolian interactions.

## 2020 QGG Candidate Bios: Candidates for 2<sup>nd</sup> Vice Chair (cont.)

**Arjun Heimsath.** Education: BS, Yale College (Honors, Mechanical Engineering); MS, Yale University School of Forestry and Environmental Studies (Hydrology); PhD, University of California, Berkeley (Geology); NSF Post-Doctoral Fellow at Australian National University, Canberra. Experience: US Peace Corps as a water development engineer, Kenya, 1989-1991. Dartmouth College, Assistant Professor, 2000-2007. Arizona State University, Associate and then Full Professor, 2007-present. Professional Affiliations: GSA, AGU, Soil Science Society of America, Geochemical Society. Select Awards: GSA Fellow, 2016; Blaustein Fellows, Stanford, 2013; Guggenheim Fellowship, 2007-2008; Crosby Fellow, MIT, 2006; Presidential Early Career Award for Scientists and Engineers, 2004. Research Interests: Soil production and erosion, Quaternary climate changes, Carbon sequestration, exposure age dating, glacial and tectonic geomorphology, human impacts on the landscape.

### Candidates for QG&G Panel

**Alison Anders.** Education: BA, Carleton College; MS, University of Washington; PhD, University of Washington. Experience: Post-Doctoral Fellow, Yale University, 2005-2006, Asst./Assoc. Professor, University of Illinois, 2007-present. Professional Affiliations: GSA, AGU, NAGT. GSA Service: Field-trip co-leader NC-GSA Champaign-Urbana, Q G&G student presentations judge, Q G&G Mackin student award judge, Women in Geology Career Pathways mentor, session chair. Other Service: Associate Editor, Earth Surface Processes and Landforms, Reviewer for Geology, GSA Bulletin, JGR, Nature, Nature Geoscience, EPSL, QR, others. Research Interests: landscape evolution, climatic controls on geomorphic processes, orographic precipitation, glacial erosion, critical zone science, anthropogenic geomorphology, Midwestern landscapes

**Kristen Cook.** Education: BS, Caltech; PhD, MIT. Experience: Postdoc, National Taiwan University, 2008-2013; Postdoc, German Research Center for Geosciences (GFZ Potsdam), 2013-2018; Research Scientist, GFZ Potsdam, 2018-present. Professional Affiliations: GSA, EGU, AGU. GSA service: reviewer for Geology, GSA Bulletin, Lithosphere. Other service: EGU Geomorphology science officer, EGU session convener, 2015-present; Associate Editor, JGR Earth Surface, 2019-present; reviewer for many other journals and NSF; co-organizer and field trip leader 2019 EGU Galileo conference. Awards: 2019 Kirk Bryan Award; Outstanding Mention GSA Student Research Grant, 2007. Research interests: fluvial erosion, mass wasting, geomorphic impacts of extreme events, change detection using terrestrial lidar and UAVs, environmental seismology.

**Isaac J. Larsen.** Education: BA, Carleton College; MS, Utah State University; PhD University of Washington. Experience: Research Specialist III, Watershed Science Program, Colorado State University, 2004-2007; Visiting Instructor, Carleton College, 2010-2011; Texaco Prize Postdoctoral Fellow in Geology, Caltech, 2013-2015; Assistant professor, University of Massachusetts-Amherst, 2015-present; Fulbright Visiting Professor, University of Salzburg, 2020. Professional Affiliations: GSA, AGU, EGU; GSA service: reviewer for QG&G graduate student awards, 2017. Other service: AGU EPSP section executive committee member, 2019-present. Awards: GSA QG&G J. Hoover Mackin Award, 2009; David A. Johnston Award for Research Excellence, University of Washington, 2012; Michael J. Kirkby Award for excellence in reviewing at ESPL, British Society for Geomorphology, 2012; AGU EPSP Luna B. Leopold Young Scientist Award, 2017. Research interests: hillslope, fluvial, and tectonic geomorphology, cosmogenic nuclide geochemistry, megafloods, soil erosion, critical zone processes.

**Eric Leonard.** Education: BA, University of California, Berkeley (History); MA, Simon Fraser University (Geography); PhD, University of Colorado, Boulder (Geological Sciences). Experience: 1981-present Inst./Asst./Assoc./Full Professor/Professor Emeritus, Dept. of Geology, Colorado College; Chair of Geology Department 1996-2001, 2005-2006; Director of Southwest Studies Program 2012-2015. Professional Affiliations: GSA, AGU, AMQUA. Awards: Colorado College Thomas M. McKee Professor of Natural Sciences; GSA Fellow. Research Interests: Glacier chronology, paleoglaciology and paleoclimate in the Rocky Mountains; glacial lake sedimentation; alpine glacial and periglacial processes; active tectonics and landscape evolution in the Rocky Mountains and Chile.

## 2020 QGG Candidate Bios: Candidates for QG&G Panel (cont.)

**Eric W. Portenga.** *Education:* BS, University of Michigan; MS, University of Vermont; PhD (jointly-awarded), University of Glasgow & Macquarie University. *Experience:* Assistant Professor, Eastern Michigan University, 2017–Present; Post-doctoral researcher, University of Michigan, 2016–2017. *Professional Affiliations:* Current: GSA (QG&G), British Society for Geomorphology; Intermittent: AGU, QRA, Australia & New Zealand Geomorphology Group. *GSA Service:* QG&G Graduate Student Awards reviewer (2017–2019), 2014 GSA Annual Meeting session organizer. *Other Service:* Reviewer for ESurfD, ESPL, EPSL, Geology, Geosphere, JGR-ES, Quaternary Geochronology, Science Advances. *Research Interests:* Quantifying landscape evolution and glacial chronologies using cosmogenic nuclides; understanding landscape response to natural hazards and human-landscape interactions.

**Francis K. Rengers.** *Education:* BS, West Virginia University; MS, Colorado State University; PhD, University of Colorado. *Experience:* 2005-2009, Colorado Water Conservation Board, Engineering and Hydrosystems, Inc. (consulting), and Golder Associates (consulting). 2014-2016, Mendenhall Postdoctoral Fellow, USGS; 2016-present, Research Geologist, Geologic Hazards Science Center (Golden, CO). *Professional Affiliations:* GSA, AGU, EGU, CSDMS. *Service:* Field-trip co-leader GSA Denver 2013; 2015 and 2016 GSA Annual Meeting session organizer; Reviewer for Geology, GSA Bulletin, JGR, ESPL, Geomorphology, others; OSPA judge; Mendenhall Review panel; NSF proposal reviewer; Mentor for students at Colorado School of Mines. *Research Interests:* geomorphology, post-wildfire erosion/sedimentation, debris flows, landslides, lidar and SfM applications to monitoring landscape change, numerical modeling.

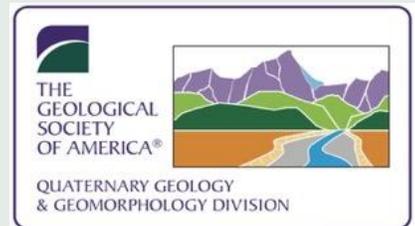
### --- Mentoring and Information Booth at GSA ---

QGG is *SEEKING VOLUNTEERS* for members to serve as representatives and mentors at a QGG Division booth at the next in-person annual fall meeting. While we hope this will be Montreal, we seek to gather a list of potentially interested members who would be willing to volunteer 2-3 hours during the next in-person meeting to promote the Division and hopefully help increase membership, recruit, and mentor student and early-career geomorphologists and Quaternary geologists! Contact Julie Brigham-Grette [juliebg@geo.umass.edu](mailto:juliebg@geo.umass.edu) if you are interested in volunteering to help with this effort.

### --- QGG branding and endorsement at 2021 Section Meetings ---

GSA has recognized that having division endorsement for sessions and events within section meetings greatly increases participation and also helps attendees find sessions and abstracts of potential interest.

QGG has thus established Section Meeting Liaisons that will serve for each section meeting. You can contact these liaisons directly to get 'endorsement' from QGG for your session at sectional meetings. Simply email them the session title and overview.



Below are the 2021 Liaisons. If you would like to volunteer to be the liaison for future meetings, email anyone on the QGG management board.

#### **Contact a 2021 Section Meetings QGG Liaisons**

Northeast - Julie Brigham-Grette, [juliebg@geo.umass.edu](mailto:juliebg@geo.umass.edu)

Southeast - Karl Wegman [karl\\_wegmann@ncsu.edu](mailto:karl_wegmann@ncsu.edu)

North Central/South Central - Nick Sutfin, [nicholas.sutfin@case.edu](mailto:nicholas.sutfin@case.edu)

Rocky Mountain - John Kemper, [john.kemper@colostate.edu](mailto:john.kemper@colostate.edu)

Cordilleran - Andy Cyre, [acyr@usgs.gov](mailto:acyr@usgs.gov)

# Geological Society of America Quaternary Geology and Geomorphology Division Management Board Meeting

Sunday, September 22, 7:00-9:00pm  
Sheraton Phoenix Downtown – North Mountain Room

Attending (*\*Sent regrets for not attending*):

## **Management Board:**

Grant Meyer, Chair  
Missy Eppes, 1st Vice Chair (Chair elect)  
Julie Brigham-Grette, 2nd Vice Chair (1st Vice  
Chair elect)  
Karl Wegmann, 2nd Vice Chair elect  
Tammy Rittenour, Past Chair  
Sarah Lewis, Secretary  
Scott Burns\*, Treasurer  
Anne Jefferson\*, Communications Coordinator  
(outgoing)  
Nicholas Sutfin\*, Communications Coordinator  
(incoming)  
Thom Davis, Historian  
Sarah Crump, Student Representative (outgoing)  
John Kemper, Student Representative (incoming)

## **Panel:**

Greg Balco\*, Karen Gran, Joanna Redwine\* (2017-  
2019, *outgoing*)  
Kristin Jaeger\*, Shannon Mahan and Eric  
McDonald\* (2018-2020, *midterm*)  
Andrew Cyr, Brad Johnson\*, Sarah Schanz (2019-  
2021, *incoming*)

## **Others Present:**

Kate Huntington, QG&G Council Liaison  
Dominique Olvera, GSA Liaison to Divisions  
Allan James, University of South Carolina  
David Marchetti, Western Colorado University

Meeting was called to order at 7:10pm and began with introductions.

**Allan James** (QG&G member) presented a proposal to the board to formalize QG&G's long-standing relationship with International Association of Geographers (IAG).

QG&G has traditionally partnered with the American Association of Geographers (AAG) to split the annual dues and represent the United States in IAG. With changes at IAG in the last few years, Allan James proposed that QG&G and IAG enter into a formal agreement to recognize this important connection amongst the communities. Allan provided a draft Memorandum of Understanding for board consideration. There was broad support for formalizing the arrangement with IAG, but questions about the financial obligations, member participation, and partitioning of dues with other geomorphology organizations (e.g. AGU's Earth and Planetary Surface Processes Focus Group). Additionally, it was unclear if QG&G had the authority to enter into this type of agreement on its own, or if IAG needed to work with GSA as the parent organization. Dominique, Julie & Karl will follow up with GSA and IAG on the appropriate next steps and report back to the board.

## **Treasurer's report:**

Scott Burns (Treasurer) was not able to attend the meeting and requested that **Sarah Lewis** (Secretary) and **Grant Meyer** (Chair) provide a general financial update. Preliminary annual budget numbers were presented, with QG&G having a slightly negative balance for fiscal year 2019 (July 2018 – June 2019). Donations in Fall of 2019 have brought that to the positive for FY20. The board discussed the significant percent of income from donations in FY19 (42%) with the proposed budget for FY2020 including 55% donations, exceeding income from dues. The board was interested in more information about those donations as a stable source of division funding and discussed adding a "donate" button to the home page to facilitate more donations if needed. In addition to the final numbers, the board also requested that Scott provide the IAG dues payment history to support the discussion of the MOU (see previous section).

All the QG&G accounts with GSA Foundation have grown in the last fiscal year, with the exception of the Farouk El-Baz Fund. Scott will double check that number. Providing standard amounts to award recipients required only minor supplement (~\$50) from the QG&G budget in 2019. For those considering donations (tax-deductible), the Howard Award is the fund of highest need, followed by the Birkeland & Schumm Awards.

### **GSA Division Chair's Meeting Reports:**

**Grant Meyer** (Chair) gave a brief overview of the Spring Division Chair's Meeting:

- (1) GSA continues to see a decline in membership across all Divisions, and is open to ideas and feedback around retaining and growing the member base, specifically for students and early career professionals.
  - a. 80% of GSA journal authors are not GSA members.
  - b. Need to increase meeting participation.
    - i. Briefly discussed requiring student awardees to attend, but consensus was that this was punitive unless the costs of student attendance were subsidized.
    - ii. One of the unique offerings of GSA continues to be the field trips.
  - c. Could GSA (or divisions) cover publication fees in GSA journals for student members?

**Missy Eppes** (1<sup>st</sup> Vice Chair) attended the Division Chair's meeting on Saturday September 21<sup>st</sup>. and shared the following items:

- (1) The 2020 Annual Meeting will be held in Montreal, Quebec October 25<sup>th</sup> – 28<sup>th</sup>; Field Trip Proposal Deadline is December 2, Session Proposals, Student Award Applications & GSA Fellow nominations due February 1, Abstract Deadline is still unannounced.
- (2) (<https://www.geosociety.org/documents/gsa/about/2019-strategic-plan.pdf>) GSA provided an update on the 2019 – 2029 Strategic Plan, including the following requests to Divisions:
  - a. Please respond to the meeting survey, the society has engaged an outside firm to evaluate the meeting model.
  - b. Please encourage colleagues and members who do not attend meetings to contact GSA and provide feedback or volunteer for focus group. Email [meetings@geosociety.org](mailto:meetings@geosociety.org).
  - c. Implementation of the 10-yr plan may provide new opportunities to engage (applied geosciences, climate change, ethics, etc..)
- (3) QG&G was mentioned at the Chair's meeting as a strong division, specifically for governance structure, organizational documents and robust award program.
- (4) GSA's Ethics & Compliance Officer Nan Stout has led the effort to develop a unified code of Ethics that will be applied across all society activities. There will be a Town Hall meeting this week to provide an overview. Most notably, as a member of GSA, the code will also apply to conduct outside of GSA, and investigation of questionable conduct will not be limited to GSA sponsored activities and events. How the divisions can support this effort is being developed.
- (5) GSA encourages the Divisions to improve communication pathways with Sections and explore how to support each other.
  - a. This resulted in an extensive discussion of ways for QG&G could support and benefit from closer connections to each geographic Section. Julie, Shannon and Karen will explore how to initiate division sponsorship of technical sessions at Section Meetings and come back to the board with a proposal.

### **General Review of Groundhog Day Document (GDD):**

Edits and contributions should be directed to **Sarah Lewis** (Secretary), who will compile and report any significant changes or concerns to the board. Specific requests and assignments included:

- All board and panel members will review sections of GDD relevant to their positions and responsibilities, especially outgoing members.
- Special attention should be paid to archiving important emails of files as people leave their positions. Emails have become so numerous that saving them is not practical. The board discussed adding the following recommendations to the GDD:
  - Transitioning as much as possible to using the QG&G Division Officers Discussion Boards to capture important conversations such as meeting minute approval or award selection. *Caveat: panel members do not have access to this feature.*
  - Uploading key documents, conversations or decisions to the QG&G Division Officers Library.

## JTPC and Annual Meeting Procedures

Grant reviewed with the board general several opportunities and notable or complicated procedures for QG&G concerning the Joint Technical Program Committee (JTPC) and annual meeting responsibilities including procedures for session sponsorship, need to merge overlapping sessions before proposal deadline, need to help undersubscribed sessions after the abstract deadline, checking the session schedule for conflicts (including award lectures), and asking student awardees to add the award name at the beginning of their abstract title. Additionally, the board discussed:

- GDD encourages Chair, First Vice Chair to compile list of Division Activities, previously printed & distributed by GSA during the meeting. GSA is no longer requiring this, as they have switch to the Meeting app. Board consensus is it is good to provide the information in the Fall Newsletter and QG&G should continue the practice.
- QG&G has not had a Division exhibitor booth for many years, is this of interest? Because of cost, staffing requirements, and the focus for QG&G on the award ceremony as the main networking event, not at this time.

## Farouk EI-Baz Award

Grant has reviewed the FEB Award procedures in the GDD and recommended increasing the number of reviewers on the panel. There is a growing pool of past recipients to ask to serve on this panel, and increasing the number of reviews from 3 to 5 will strengthen the selection process. Grant will reach out to Jack Hess (GSA Foundation) and/or Farouk EI-Baz (donor) to make sure that the award establishment documents allow this type of change. Other suggested edits to FEB procedures do not require board action.

## Student Award Procedures/Funding

**Julie Brigham-Grette** (2nd Vice Chair) provided a review of last year's award process. In 2019, QG&G reviewed 38 Masters and 32 PhD student proposals. Of the 40 QG&G members initially contacted to provide reviews, 21 volunteers agreed to review 10 proposals each, resulting in 3 reviews for each proposal.

- In 2018, Grant requested review of student award procedures re: honorary mention. Grant has rescinded this request, citing increasing complex logistics with the growing number of awards. No change to GDD.
- In 2018, GSA initiated a discussion regarding overlap and coordination between the student QG&G awards and students selected for awards by the GSA Research Grant Committee (RGC), suggesting that the QG&G grants become "primary awards. After the discussion, no action was taken, and QG&G grants remain "add-on" grants, being awarded in addition to the RGC. See 2018 board meeting minutes for details if there is interest in re-visiting the discussion.
- The board discussed the desire to have clear sequencing for award selection as new awards added, including consistency around whether it should be considered in the decision making if QG&G award candidates have been given GSA awards (Fahnestock, Black, RGC). Karl Wegmann (incoming 2<sup>nd</sup> Vice Chair) will work with Julie to develop recommendations for the 2020 awards.
- Sarah requested volunteer to write brief summaries/tribute on the establishment of QG&G awards.

## New Award Announcements:

**Thom Davis** (Historian) has signed an award establishment agreement with the GSA Foundation to be managed by QG&G beginning in 2020. The award is named the "Denton, Andrews, Porter Glacial Geology Award" in honor Thom's primary academic advisors George H. Denton, John T. Andrews, and Stephen C. Porter. This award may be given to undergraduate or graduate students doing research in glacial geology, or a related field.

**Grant Meyer** (Chair) was notified by Ellen Wohl of her intention to establish an award fund honoring Troy Pewe. The award will fund graduate student research in the broadly defined field of periglacial geosciences. The fund will be open soon for donations through the GSA Foundation.

The board is also aware of the Coates Geomorphology and Shroder Mass Movement Award Funds but has not been notified that they are available for awarding at this time. The board if we should be taking a more active role in managing the scope and discipline selection for new awards. This was deferred to a future meeting.

### **Kirk Bryan Field Trip for Montreal 2020 meeting:**

Ideas for one-day field trips before or after the meeting were discussed. Sarah had received a question as to whether a cross border field trip would be appropriate. The board strongly recommends keeping the trip in Canada if at all possible. Thom Davis reminded the group that the KB, as originally conceived, was meant to be a minimalist trip to a couple interesting sites to foster exchange of ideas (see <https://community.geosociety.org/qggdivision/events/kirk-bryan-field-trip>). Missy and Julie as JTPC reps will coordinate with those interested the Field Trip Chair for the Phoenix meeting to designate an appropriate trip as the Kirk Bryan for 2020.

### **Recognition of Service:**

We thank outgoing Past Chair Tammy Rittenour, Communications Coordinator Anne Jefferson, Student Representative Sarah Crump, and 2017-2019 Panel Members Greg Balco, Karen Gran and Joanna Redwine for their service to QG&G.

### **Student Advisory Council (SAC) Meeting Notes**

**John Kemper** (Incoming Student Rep) represented QG&G at the SAC meeting on September 23, 2019. Topics discussed at the meeting included:

- Whether we want to keep trying to promote the Student Forum on the GSA Member Community or pursue other avenues of discussion (Instagram, Twitter, etc.)
- The creation of a “transition document” by each student rep so that there is a record and/or of duties and responsibilities of each student rep.
- Elected a new chair-elect of SAC.
- Discussion about whether we want to indicate to the GSA Board that students care about “socially conscious investing.” No vote was made on whether or not to do so.

### **Business Meeting and Awards Ceremony Summary:**

The annual awards ceremony and reception was held Tuesday, September 24<sup>th</sup>, 7-11 PM at the Phoenix Convention Center. In addition to presenting the Division’s student and professional awards, the management board provided an update to the membership on the financial status of the division and solicited nominations and proposals for the coming year and the Montreal 2020 meeting.

### **Quaternary Geology and Geomorphology Fellows elected in 2019:**

Robert S. Anderson (University of Colorado)	Eric McDonald (Desert Research Institute)
Suzanne P. Anderson (University of Colorado)	Jeffrey S. Munroe (Middlebury College)
Margaret E. Berry (U.S. Geological Survey)	Gerald Osborn (University of Calgary)
Karen B. Gran (University of Minnesota Duluth)	Sara L. Rathburn (Colorado State University)
Robert B. Jacobson (U.S. Geological Survey)	Maureen E. Raymo (Columbia University)
Allan James (University of South Carolina)	Brad S. Singer (University of Wisconsin Madison)
Michael R. Kaplan (Columbia University)	George Thomas Stone
J. Steven Kite (West Virginia University)	Glenn David Thackray (Idaho State University)
Sarah L. Lewis (Oregon Department of Geology & Mineral Industries)	Woody B. Thompson (Maine Geological Survey)
Joseph Licciardi (University of New Hampshire)	Jeffrey M. Trop (Bucknell University)
Shannon Mahan (U.S. Geological Survey)	Alan D. Wanamaker Jr. (Iowa State University)
	Rich Wittecar (Old Dominion University)

Meeting adjourned at 9:01 pm

*Notes: Minutes may include relevant information from other Division activities during the meeting.  
Minutes approved via email vote January 6, 2020*

## Necrology

In the last year, we have received notice of the passing of the following of our colleagues:

Howard Dixon



Kirk Bryan Field trip, September 2019.  
(photo courtesy of Julie Brigham-Grette)

## Things to do looking ahead...

Vote in the QG&G elections

Take part in and obtain QGG endorsement in regional meetings

Submit abstracts to the Fall Meeting

Maintain physical distance, but continue to connect socially with your QGG community!

## ---International Association of Geomorphologists and GSA---

QGG is pleased to welcome the **International Association of Geomorphologists** as a newly recognized **Associated Society of GSA!** QGG will host a liaison to IAG and keep you up to date with its activities and opportunities. **Welcome to GSA, IAG!** ([www.geomorph.org](http://www.geomorph.org))

**\*\*QGG is seeking students to help maintain QGG social media.** If you are interested in serving your QGG community by helping with Facebook, Twitter, or Instagram feeds, contact Nick Sutfin at [Nicholas.sutfin@case.edu](mailto:Nicholas.sutfin@case.edu)\*\*

**Keep Up to Date with Your Division and Community:**

<http://community.geosociety.org/qggdivision/>