

# Quaternary Times



Newsletter

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The American Quaternary Association Newsletter

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...devoted to studying all aspects of the Quaternary Period since 1970

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**Cover:** Glacier in Gurreholm Dal in the Stauning Alper on the north side of Scoresby Sund in East Greenland, showing its Little Ice Age extent. Photo taken by Tom Lowell.

## The View from the Moraine: the President's Message

By Tom Lowell, University of Cincinnati  
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Thanks to all who worked to organize and contribute to the successful Ottawa CANQUA-AMQUA meeting at Carleton University in Ottawa in August. Jesse Vermaire, Isabelle McMartin, Janet Campbell, Nicolas Pelletier, Tim Patterson, and Kendra McLauchlan lined the ducks up. Plenary speakers brought us up to date on the full range of Quaternary topics and the session speakers and poster presenters gave us the opportunity to dig deeper. It was great to catch up with our Canadian counterparts. Thank you all.

A cross-society meeting requires more than the usual amount of planning. First, our two groups historically have had a different meeting format. CANQUA meetings divide into multiple topical sessions so speakers and the audience can delve into emerging details and developments within selected topics. AMQUA historically runs one session so all can learn from a wide range of latest findings and thinking. These often provide lessons and context for our own work. Both approaches serve well and in my view the organizing committee stuck a good balance.

It might be argued that these different meeting approaches parallel the long-standing debate which strategy is more effective - a specialist or a generalist?

Over the years that I've been involved in the Quaternary Sciences, there is increased specialization. Glacial Geology, for example, once was one of many disciplines within the Quaternary Sciences. Now we have entire journals on what was considered a speciality in Glacial Geology a few decades ago. This of course is not restricted to the Glacial Geology or the Quaternary sciences but is an overall trend resulting from the explosion of new data gathering and analysis techniques. Still these days the definitions of a discipline, sub-disciplines, inter-disciplinary, and



now trans-disciplinary are in flux.

Richard Foster's Flint's classic book *Glacial and Quaternary Geology* at some level implies those two topics once had nearly parallel footing. One rumor from Yale is that Professor Flint had a special copy of his masterpiece with a blank page alternating between each printed page. This was so he could record new findings and developments for his next edition.

Although *Glacial and Quaternary Geology* was a large book, can you envision that today we could record all developments within any of the multiple sub-disciplines of Quaternary Science on several hundred pages. Even one years new findings?

Where does that leave our organization? Can we still find common ground that transcends the members interests, or should we look to accommodate increased specialization?

As we start planning for AMQUA 2020 - 50 years since 1970 and the first meeting in Bozeman, MT - some of you will be involved in the organization of that meeting. Rumor has it that some of our newly elected councilors became motivated and started discussions along these lines during the relaxed atmosphere of last summers banquet. Excellent.

In a broader view, what is the way forward? Can the generalist survive or thrive in an era of exploding information? Will the specialist become too focused to see outside their own interests and perhaps miss the larger picture? What even does "interdisciplinary" mean?

Most important what advise do we pass to the next generation of Quaternary Scientists? Perhaps we could seek wisdom from our Distinguished Career Award winners who have collectively guided dozens of graduate students over the years - Cathy Whitlock and Gifford Miller. Or we could turn to the Denise Gaudreau Award winner who has already demonstrated a successful interdisciplinary approach - Michelle Chaput. See their stories below.



## CANQUA-AMQUA Joint Meeting in Ottawa, Canada 2018

### - News and Reports -

The joint CANQUA-AMQUA meeting in Ottawa was a great success with over 200 Quaternary scientists in attendance from the US, Canada, and other countries. This meeting also represented the 25<sup>th</sup> Biennial AMQUA Meeting. This meeting was made possible by the organizing committee made up of AMQUA and CANQUA members and by Carleton University and University of Ottawa students who all put together a wonderful and perfectly organized event.



### Thank you

Patrick Beaupre, Alexa D'Addario, Braden Gregory, Sofia Herczegh, Jordan Jason-Byerley, Amanda Little, Michael Murphy, Nawaf Nasser, Nicolas Pelletier, Mubashshera Rhaman, and Colin Robertson

and

Jules Blais, Janet Campbell, Kathryn Hargan, Tom Lowell, Kendra McLaughlan, Isabelle McMartin, Michael Parkhill, Tim Patterson, and Jesse Vermaire

and to all of those who have not been mentioned here.

## Report from the Council Meeting

By Colin Long, University Wisconsin Oshkosh  
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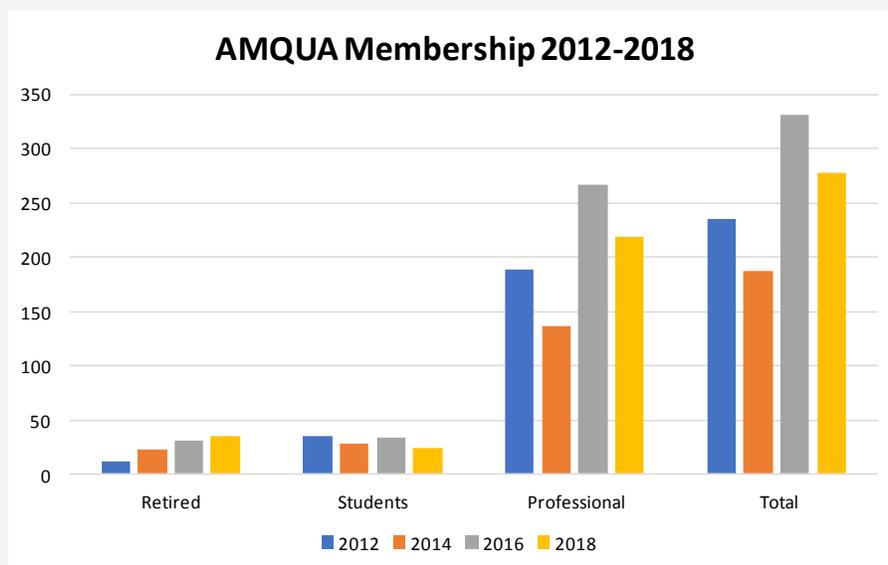
The AMQUA council meeting, which occurred during the joint CANQUA-AMQUA Biennial meeting this August, was well attended with thirteen of the seventeen Councilors and Executive Committee members and other ex-officio members present. AMQUA election results and awards were announced and have since been placed on the AMQUA website. The Treasurer's report noted that AMQUA is on firm financial footing based on our status as a 501 (c) (3) nonprofit entity. Noteworthy discussions revolved around several topics. The first was the establishment of an editorial policy for the Quaternary Times (QT) newsletter. This was deemed necessary to provide some assistance to the QT editor and to share the editorial work necessary for the newsletter. A policy was adopted and has since been placed on the AMQUA website.

A second topic was AMQUA website management. While the consensus was that the current website may need a makeover, the usefulness of having membership payment on the site (via a PayPal portal) is of primary importance. Several councilors volunteered to explore other web platforms that can include the PayPal interface. Finally, incoming President Tom Lowell pitched an idea to create an interdisciplinary workshop for students that would focus on cross-disciplinary interactions. There was considerable support for this idea and Tom Lowell will work to set it up for Summer 2019. Any Council or Executive Committee information relating to these topics or others will be posted in the 'News' area of the AMQUA website and shared over the AMQUA listserv.

## AMQUA 2018 Membership Report

By Christopher Hill, Boise State University  
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AMQUA membership in 2018 is lower than in 2016 but higher than in 2012 and 2014. This reflects lower active memberships for professionals and students. The number of active retired members in 2018 is higher than any of the other years.



## 2018 AMQUA Treasurer's Report

By Christopher Hill, Boise State University  
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AMQUA has two funds: a general operating fund and a fund for the Denise Gaudreau Award. Revenues are usually mostly from membership payments. During years when the Biennial Meeting is held, membership is typically higher. The current balance in the general fund reflects repayment and additional funds submitted after the 2016 meeting. Expected expenses for AMQUA not included in the current balances are expenditures for student travel grants to the CANQUA-AMQUA meeting in Ottawa, support for student mentoring event, and charges connected

with the two Distinguished Career Awards and the Gaudreau Award.

The AMQUA Treasurer is also responsible for submitting federal and state reports to maintain the association's non-profit status. The Federal IRS Form 990-N for 2017 was submitted on 7 February 2018 (for the 15 April 2018 due date) and the Annual Report to the Idaho Secretary of State was submitted on 11 July 2018 (for a 31 August 2018 due date).

### AMQUA Balances (22 July 2018)

General Fund	\$ 49,021.46
Gaudreau Award Fund	\$ 14,926.44
Total Balance of AMQUA Accounts	<b>\$ 63,947.00</b>

### Anticipated Expenses (General Fund)

5 Student Travel Grants	\$ 1,750.00
Student mentoring Event	\$ 150.00
DCA Awards (6 awards)	\$ 750.00
2 DCA Travel and Registration	\$ 2,096.00
Survey Monkey for elections	\$ 50.00
<u>General Fund Total</u>	<u>\$ 4,796.00</u>

### Anticipated Expenses (Gaudreau Fund)

<u>Gaudreau Expenses</u>	<u>\$ 850.00</u>
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Total General Fund – Anticipated Expenses = \$49,021.46 – \$4,796.00 = \$ 44,225.46

Total Gaudreau Fund – Anticipated Expenses = \$14,926.44 – \$850.00 = \$ 14,076.44

**Total Anticipated Funds in AMQUA Accounts = \$ 58,301.90.**

## AMQUA Distinguished Career Award Winners 2017 and 2018



### **Dr. Cathy Whitlock, Montana**

**State University (2017)** is a recognized leader in reconstructing past plant communities, including understanding the role of fire in affecting forest ecosystems. She also has been an advocate for Quaternary sciences via teaching, outreach, service, and leadership.

Dr. Whitlock first worked on Tertiary palynology, but during her graduate research at University of Washington began to work on Quaternary vegetation history of the Pacific Northwest, generating multiple

records, including one that extends back some 125,000 years. She also began projects in Yellowstone National Park, and, after the massive local wild fires in the late 1980s, began to develop tools and approaches to reconstruct fire histories, which are now adopted globally. Over the years, she has continued work in Yellowstone and the Pacific Northwest but also has expanded her focus to include the temperate forests of South America, New Zealand, and Australia. This led to establishing the WildFIRE PIRE (Partnership in International Research and Education), an international network that has investigated the causes and consequences of fire in the past, present, and future.

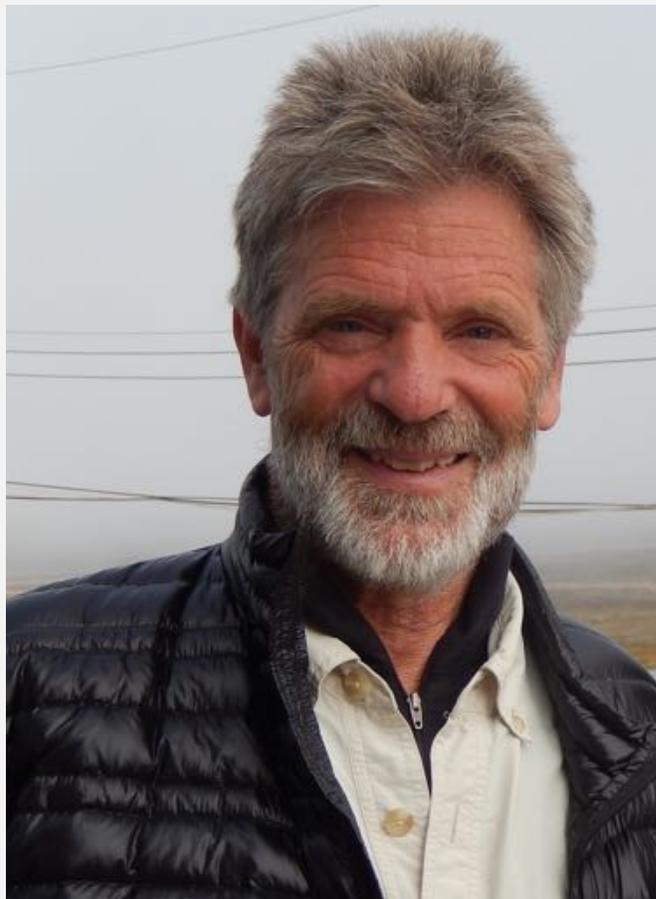
Dr. Whitlock has worked in academia and collaborated with the private sector and various government and non-profit agencies. In all of these settings, she brought her insights to regional problems to help formulate management plans and guide new research questions. Dr. Whitlock has trained many graduate students who have gone on to academic careers of their own, as well as underrepresented and first-generation undergraduate students. All her students learn the value of respectful skepticism and team collaboration. Her service to the Quaternary community includes numerous editorial efforts, leadership in various national and international organizations, including serving as past President of AMQUA. For her efforts to understand vegetation systems and fire history across multiple scales and her effectiveness in translating her insights to others, Dr. Whitlock is the recipient of the AMQUA Distinguished Career Award for 2017.

## Dr. Gifford Miller, University of Colorado Boulder (2018)

is a recognized world leader in geochronology and in the Quaternary history of the Arctic. He was an early worker in amino acid dating and applied this tool to raised beaches in the Arctic, which helped to establish the rhythm of glacial-interglacial cycles there. In the 1990's, he took the amino acid dating tool to Australia to unravel changes, such as the interactions of flightless birds, humans, fire, and vegetation. From these findings, he proposed new relationships about man's arrival on the continent and associated hydrological feedbacks that affected the monsoon, which led to a re-evaluation of then established thinking about human-landscape connections.

Dr. Miller's yearly field campaigns to the Arctic since the early 1970's have investigated multiple types of geological archives to reconstruct patterns of environmental change in the northern high latitudes. These studies have long included interactions with the modeling community to better understand climate feedbacks and processes.

Dr. Miller's service to the scientific community includes guiding several NSF initiatives to improve understanding of the Arctic, as well as editorial boards of leading Quaternary journals. Dr. Miller has trained many graduate students who have gone on to successful careers in science and promoted the annu-



al Arctic Workshop, which has been held for over 45 years. For his efforts to recover fundamental Quaternary records in the Arctic and Australia and his efforts to facilitate programs with an Arctic focus, Dr. Miller is the recipient of the AMQUA Distinguished Career Award for 2018.

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When Sheri notified me of the award and meeting dates, I realized that they coincided with field plans on a pending NSF proposal, and I mused that this would be the first time I might wish for an NSF proposal to be declined. But, no such luck, the proposal was funded and the only possible dates we could do the fieldwork were about this time, ....

.... And, of course, a special thanks to you all, AMQUA members, for this very special recognition.

**Gifford Miller**

AMQUA Distinguished Career Award response, 10 August 2018

**AMQUA Denise Gaudreau Award Winner 2018**

**Ms. Michelle A. Chaput** is a PhD student at the University of Ottawa and investigates the interaction of environmental change and population history in North America. Her research asks how past societies influenced the evolution of the North American landscape. To address this problem, she employs radiocarbon databases to extract population density estimates and compares population history with vegetation changes over the same times slices to uncover interactions.

Ms. Chaput has gathered primary data from DNA, lake records, and integrated these records with GIS systems and transfer functions to quantify aspects of her interpretation. She has established collaborations with statisticians from Germany, archaeologist from Kazan, ecologists from Mexico, and botanists from Sweden. For these accomplishments, Ms. Chaput has been selected for the AMQUA Denise Gaudreau Award for 2018.

“Being a graduate student is like becoming all of the Seven Dwarves. In the beginning, you’re Dopey and Bashful. In the middle, you are usually sick (Sneezy), tired (Sleepy), and irritable (Grumpy). But at the end, they call you Doc, and then you’re Happy.” – Ronald T. Azuma

**One of Michelle’s favorite quotes about doing a PhD**