



The Dean's Message

Dr. Norman Halden

This year marks the 10th anniversary of the founding of the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Our faculty, staff, and students have accomplished a great deal and have built a strong foundation for our future initiatives. The legacies of our constituent units, Geological Sciences, Environment and Geography, and the Natural Resources Institute, represent histories of over 100, 60, and 40 years respectively while many initiatives have developed just this year. The opening of the *Nellie Cournoyea Arctic Research Facility* at the newly finished 5th floor of the Wallace Building took place in March and numerous new lab facilities such as a class 100 clean lab and a thermochronology lab have also been created. Important networks involving other institutions promise to provide faculty and students with opportunities to travel and interact with our diverse partners. For example, a memorandum of understanding between the University of Manitoba, Aarhus University, Denmark, and the Greenland Institute for Natural Resources was signed late last year.

This year, the Riddell Faculty will offer direct entry for first year undergraduate students who have achieved a minimum average of 85% in three specified Manitoba Grade 12 S or U courses. While we will also continue to admit students from University 1, this provides an important opportunity for students who have a strong interest in our disciplines and see their future in careers related to the Earth, its environment, and our resources. Since 2004 our Faculty has graduated over 800 undergraduate and over 200 graduate students. Currently, our enrollment stands at over 480 undergraduate and over 160 graduate students. As we celebrate our 10 year anniversary we look forward to seeing you, our alumni, and showing these and other achievements in building the future of the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

Photo credit: Peter Bondo Christensen. Pictured right to left are Dr. David T. Barnard (President and Vice-Chancellor, University of Manitoba), Dr. Klaus Nygaard (Director, Greenland Institute of Natural Resources) and Dr. Lauritz B. Holm Nielsen (Rector, Aarhus University, Denmark).

ONE planet
MANY perspectives



2013 in the Riddell Faculty.

Awards & Distinctions.

Upcoming Events

To celebrate the 10th anniversary of the founding of the Clayton H. Riddell Faculty of Environment, Earth, and Resources we will be hosting numerous events over the year, including the following major events.

Grand Opening of the Nellie Cournoyea Arctic Research Facility 5th Floor Wallace Building

On March 18th we invited members of the University of Manitoba community to the grand opening of the Nellie Cournoyea Arctic Research Facility. Visitors heard from a panel discussion with David Barber, Søren Rysgaard, Clayton H. Riddell and Nellie Cournoyea on the Arctic and its future challenges. Guests then had guided tours of the science being conducted in this world class facility.



GAC-MAC

The Geological Association of Canada – Mineralogical Association of Canada (GAC-MAC) Joint Annual Meeting is the premier national geoscience conference. The 2013 meeting will take place May 22nd to 24th, at the Convention Centre in downtown Winnipeg.

Faculty and staff of the Department of Geological Sciences are actively involved in the planning for this conference. A diverse technical program of symposia, special sessions, general sessions, and short courses is being planned for Winnipeg 2013. Field trips will explore a cross section of Manitoba geology, social events will reflect the life and hospitality of the Prairies, and there will be a program of outreach to teachers and the public. Conference details can be found at: www.gacmacwinnipeg2013.ca

"*Manitoba Night*", a reunion of the Department of Geological Sciences, will take place Wednesday, May 22nd, 2013 from 8:00 to 11:00 PM, at the Winnipeg Convention Centre. Reunion details are available at: www.umanitoba.ca/geoscience

Homecoming

To celebrate the 10th anniversary of the founding of the Clayton H. Riddell Faculty of Environment, Earth, and Resources we will be hosting numerous events over the U of M Homecoming weekend September 27th-29th. Reconnect with friends, classmates, and faculty from Environment and Geography, Geological Sciences, and the Natural Resources Institute. Expect guest speakers and a reception and tours in the Wallace Building including the newly finished 5th floor named the *Nellie Cournoyea Arctic Research Facility*. For further details check out our web page at: umanitoba.ca/environment/alumni and don't forget to follow us on Facebook and Twitter.

2012 Convocation Ceremonies

Each year the University of Manitoba and the Riddell Faculty recognize student excellence through medals. For the second time, in addition to the May reception, the Riddell Faculty also hosted a reception in October to celebrate the accomplishments of our Fall graduands. In this way we celebrate not only the students' accomplishments, but also the valuable role of friends and family in supporting students to achieve and excel. The following students and staff received such recognition over the past year:

Gold Medal:

Meredith Pind (B.Sc. Physical Geography (Honours) (Coop))

Program Medals:

Honours Program - **Cheryl Sobie** (B. Env. St. (Honours))

Major or Advanced Program - **Andrew Osipa** (B.Sc. Physical Geography (Major))

3 Year General program - **Marvic Abarra** (B.A. Geography)

Riddell Teaching Awards

Award of Excellence for First Year Undergraduate Teaching - **Dr. Robert Elias**

Award of Excellence for Undergraduate Teaching - **Lisa Christmas**

Thesis Prizes

Michelle Curry - Undergraduate

Lauren Eggie - Undergraduate

Ryan Kressall - Masters

Aaron Lussier - Masters

Initiative Prizes

Michelle Curry - Undergraduate

Olivier Gagne - Graduate

Entrance Scholarships & Admissions Scholarships

Six Riddell Faculty undergraduate admission scholarships were awarded in 2012.

The recipients were:

Larissa Gospodyn (Bachelor of Arts in Geography)

Scott Kehler (Bachelor of Science in Physical Geography (Major))

Teagan Markin (Bachelor of Environmental Studies (Major))

Graham McInnis (Bachelor of Science in Geological Sciences (Honours))

Lauren Timlick (Bachelor of Environmental Science (Major))

Yana Tyomkin (Bachelor of Science in Geological Sciences (Honours))

Twelve Riddell Faculty graduate entrance scholarships were awarded in 2012.

The recipients were:

Bridget Antze (M.N.R.M.)

Anderson Assuah (M.N.R.M.)

Karley Campbell (Ph.D. in Geography)

Jenna Drabble (M.A. in Geography)

Laura Hebert (M.N.R.M.)

Julia Laforge (Ph.D. in Geography)

Mallory Light (M.N.R.M.)

Robert Moquin (M.N.R.M.)

Rebecca Pikor (M.Sc. in Geological Sciences)

Jeff Salow (M.Sc. in Geological Sciences)

Caitlin Sheahan (M.Sc. in Geological Sciences)

Heather Stark (M.Sc. in Environment & Geography)

(Photo Credit: Jason Jorgenson.)



Frost Flowers Blooming Again at SERF.

For the second time in a year, a major frost flower event occurred at the Sea-ice Environmental Research Facility (SERF). Dubbed "*the earliest blossom in the Peg*" by **Dr. Feiyue Wang**, lead scientist of SERF, the flowering event started on December 24th and lasted until the 29th. Watching the ice crystals grow and taking daily measurements became part of Wang's routines during the holiday break.

Officially opened in February 2012, SERF is the first and only outdoor experimental sea ice facility in the country.

It allows Wang and his co-investigators **Dr. David Barber**, **Dr. Tim Papakyriakou**, **Dr. Søren Rysgaard**, all from the Centre for Earth Observation Science (CEOS), to study geophysical and biogeochemical processes and properties of various forms of sea ice including frost flowers under controlled conditions. Major discoveries from the 2012 experiments included microwave scattering patterns of frost flowers, the evolution of pH in frost flowers and with ice growth, and the presence of ikaite ($\text{CaCO}_3 \cdot 6\text{H}_2\text{O}$) minerals in the sea ice environment, among many others.

A new international experiment took place at SERF from January 10th to 31st, 2013, involving scientists from Canada, USA, Denmark, Greenland, and Germany. For more information, please contact Dr. Feiyue Wang.

Pictured below: Dr. Feiyue Wang collecting frost flower samples for study; Photo credit: Beibei Lu. Photo inset: Frost flowers grown at SERF; Photo credit: Juliana Kusyk.



UArctic Student Forum.

In November 2012, the Clayton H. Riddell Faculty of Environment, Earth, and Resources and the University of Manitoba hosted the annual UArctic Student Forum. The student forum gives students from UArctic member institutions a chance to meet other students with Arctic research interests and build Pan-Arctic partnerships. The purpose of the student forum is to draft a declaration document with recommendations for the UArctic Rectors to take into account when they are compiling their annual recommendations for the organization as a whole.

The student forum focused on developing international partnerships throughout the Arctic. The forum also provides students an opportunity to strengthen overall student participation and involvement in UArctic.

Dr. Jill Oakes (Department of Environment and Geography) facilitated discussion during the drafting of the declaration and **Colton Inkster** (MA student, Department of Environment and Geography) and

Ameena Bajer-Koulack (B. Env. Sc. student) worked hard in organizing the week's events. Students travelled to Riding Mountain National Park and were able to have a tour of the park provided by Paul Tarleton. Students stayed at Elkhorn Resort where they attended presentations given by Dr. Frank Deer (Faculty of Education) and **Dr. Mary Benbow** (Associate Dean (Academic) Riddell Faculty). After returning to Winnipeg the group went on a tour of the Manitoba Museum led by Kevin Brownlee and experienced a traditional First Nations sweat lodge made possible by Shannon Buck and Cheryl James of Thunderbird House.

This year the students created a Facebook page that can be used for online communication of UArctic news and research opportunities. The students identified the need for continuity between these forums and they are working to achieve this goal.

Pictured: The 21 UArctic student delegates at Riding Mountain National Park came from seven countries. Photo Credit: Jill Oakes.



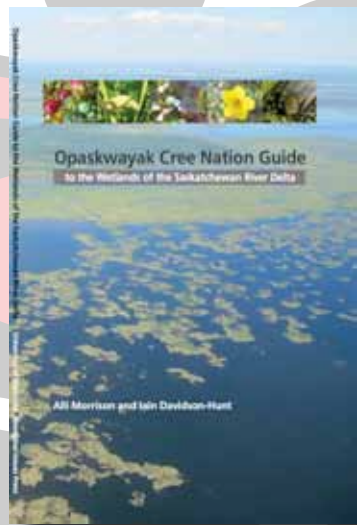
Aboriginal Issues Press.

Colonial Encounters in the Fur Trade provides insights useful to understanding the background to the crisis facing many First Nations communities today. Author Robert 'Wes' Heber outlines changing relationships between First Nations peoples, trading companies, churches, and the state during his



time as a fur trader (1959-1961). The book depicts the declining influence of the churches and the fur trade, and the impact of policies for governance of Aboriginal communities – a time

of increasing colonial control and imposed change, which continue to plague First Nations of northern Canada.



Opaskwayak Cree Nation Guide to the wetlands of the Saskatchewan River Delta by **Alli Morrison** and **Dr. Iain Davidson-Hunt** (Natural Resources Institute) acts as an educational tool for the Opaskwayak Cree Nation to

enhance their understanding of the ecologically diverse wetlands found within the Saskatchewan River Delta. *"All water bodies have food for different species of animals – beavers, muskrats, moose, deer, rabbits, and also human life. The rivers are also important; they feed the bodies of water to keep them alive. Without water, nothing lives."*

Annually, the Aboriginal Issues Press (AIP) publishes peer reviewed sole-authored or multi-authored manuscripts from all disciplinary and multi-disciplinary perspectives. Completed manuscripts and ideas for theme publications for possible publication are welcome. Publications are available at wholesale prices from the Clayton H. Riddell Faculty of Environment, Earth, and Resources. All sales profits are contributed to the Aboriginal Issues Press Scholarship, which offers up to five scholarships annually.

THE ABORIGINAL ISSUES PRESS SCHOLARSHIP

The Scholarship received 12 applications in 2012 and the selection committee awarded five awards of \$1000.00 each. The winners for the 2012-13 academic year are:

Carlos Idrobo, **Alli Morrison**, and **Natasha Penneys-Szach** (Natural Resources Institute), **Agnes Pawlowska** (Department of Native Studies), and **Breanne Reinfort** (Department of Environment and Geography).

The AIP Scholarship is made possible by profits from the sales of its publications as well as a yearly contribution from the Clayton H. Riddell Endowment Fund.

'Land that Gives Life' Pimachiowin Aki Cultural Landscape Atlas.

Dr. Iain Davidson-Hunt (Natural Resources Institute) attended the Pimachiowin Aki UNESCO World Heritage Site nomination event held at the Provincial Legislative Building in Winnipeg on January 18th, 2012. Dr. Davidson-Hunt, graduate students **Kristin Didora**, **Catie Burlando**, and **Julián Idrobo** and NRI Adjunct Professor **Michael O'Flaherty** have worked with the Pimachiowin Aki Corporation supporting the preparation of the nomination. Dr. Davidson-Hunt's latest project was the writing of the *"Pimachiowin Aki Cultural Landscape Atlas, Land That Gives Life"*, co-authored with **Nathan Deutsch** (NRI Ph.D. candidate) and **Andrew Miller** (NRI Ph.D. graduate). The review copy of the atlas was released at the nomination event and is included in the supporting documentation for the nomination. The atlas therefore is part of the materials that will be reviewed by the UNESCO World Heritage Centre in Paris, France in the selection of new World Heritage sites.

The cultural landscape atlas provides the opportunity to experience Pimachiowin Aki through maps, images and stories. The atlas begins by situating Pimachiowin Aki within the current process of nominating this area as a UNESCO World Heritage site.

Cultural landscapes are not static but emerge over time out of the relationship between a people and a place. A world heritage site is being woven into the relationship between the Anishinaabe people of this place and the landscape. This cultural landscape atlas is a starting point for a journey into Pimachiowin Aki.

A short video on the completion of the Nomination Bid can be found online at:
<http://www.youtube.com/watch?v=nhaJKrjzob4>

More Information on the Pimachiowin World Heritage Site Nomination is available online at:
<http://www.pimachiowinaki.org/our-news>

(Photo Credit: Andrew Miller. Pictured, Dr. Iain Davidson-Hunt shows the atlas to Premier Selinger.)



A snap shot of the last 10 years.

As we celebrate our 10 years as a Faculty in July, 2013, we reflect on our accomplishments that were achieved in that time:

- Over 800 undergraduate and over 200 graduate students earned their degrees from the Riddell Faculty since 2004.
- Two graduates were the recipients of Governor Generals' Medals:
 - **Prateep Kumar Nayak** - Governor General's Gold Medal - 2012 Ph.D. in Natural Resources and Environmental Management
 - **Alison Murata** - Governor General's Silver Medal - 2010 B. Env. Sc. (Hons.) Co-op
- There has been a 29% increase in enrolment in 1st year courses offered by the Riddell Faculty since its creation.
- The Faculty has introduced **Earth: A User's Guide**, a first-year course that gives students the information that they need to make balanced decisions when contemplating the split between wanting resources or caring about the environment. We have to understand where our resources come from, and the consequences of getting them. To date, more than 680 students have enrolled in the course.
- Two Riddell co-operative education students were recipients of the University of Manitoba Cooperative Education Student Champion Award:
 - 2012 - **Michelle Curry**
 - 2013 - **Marissa Borgford**
- In this past year, the cooperative education program in the Riddell Faculty has grown to provide over 75 work placements with more than 50 employers.
- In 2008 **Dr. Clayton H. Riddell** was made an Officer of the Order of Canada
- **Dr. Frank Hawthorne** was awarded the 2008 Killam Prize in Natural Sciences, 2009 Carnegie Mineralogical Award & the IMA Medal of the International Mineralogical Association, 2010 the Bancroft Medal of the Royal Society of Canada, 2012 the Queen's Diamond Jubilee Medal and in 2013 the Roebling Medal of the Mineralogical Society of America.
- In 2010 **Dr. Søren Rysgaard** was announced as the University of Manitoba's Canada Excellence Research Chair in Arctic Geomicrobiology and Climate Change .
- The Riddell Endowment fund has awarded \$27,000.00 in undergraduate admission scholarships and over \$165,000.00 in graduate entrance scholarships to date.



Keep in touch.

There are many ways you can keep in touch with us throughout the year. You can follow us on **Facebook** (facebook.com/UManitobaRiddellFaculty) or **Twitter** (twitter.com/riddellfaculty). You can also find out more information about our Faculty at our webpage where you can also read our regular newsletter. If you would like to subscribe to our newsletter send an email to jason.jorgenson@ad.umanitoba.ca with '**Newsletter**' in the subject line and we will email you when each issue is available.



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Clayton H. Riddell Faculty of
Environment, Earth, and Resources

Phone: (204) 474-7252
Fax: (204) 275-3147
www.umanitoba.ca/environment