



NRI 50th Anniversary.

In 2018, the Natural Resources Institute (NRI) celebrated fifty years of success in advanced interdisciplinary education, research, and community service on resource and environmental management benefitting people and communities in Manitoba, Canada and around the world. Half a century ago, in 1968, the NRI began its journey with its Masters degree program, which was designed to address the problems arising from traditional approaches to natural resources development. Adverse consequences on the environment and the loss of renewable and non-renewable resources had developed, leading to public policy concerns. Today, with a focus on pragmatic problem solving, the NRI offers two interdisciplinary graduate degree programs - the Master of Natural Resources Management and Ph.D. in Natural Resources and Environmental Management.

NRI was front and centre at Homecoming which saw four graduates share their thoughts on their experiences at the NRI and the relevance of these programs. Current students also displayed and discussed posters outlining their ongoing research. One of the key messages offered at the forum conveyed the special nature of the NRI and its programs.

Pepper Pritty (M.N.R.M. 2018) remarked that the staff and the overall atmosphere of the NRI was so inclusive and welcoming that she quickly planted roots, and has been

growing and thriving in the NRI ever since. **Dr. Gerald Farthing** (M.N.R.M. 1984) reflected that the learning and ideas he gained became even more relevant and valuable over time in his work and daily life and has contributed to

his understanding of the relationships between the natural environment, economic activity, and sustainable living.

The Gala Dinner, held at the Canadian Museum for Human Rights on October 27th, revealed just how close many in the NRI family remain. Alumni from all the decades were present and many took advantage of the open microphone to recall the sharing and learning environment inherent at the NRI, and the relationships that have been built as a result – with some even ending in business partnerships and marriage. **Gord Jones** (M.N.R.M. 1986) commented that his experience with the NRI extended beyond his degree by serving on student committees and that he has even hired three NRI graduates over the years.

NRI students, staff, and faculty want to again thank our many outstanding alumni and friends for connecting and celebrating our 50th anniversary and for providing us with an even stronger sense of the place of the NRI in the education, research, and broader community into the future. We will continue to strive to deliver degree programs to ensure that graduates are equipped with cutting-edge research opportunities and, as in the words of one grad, many transferable skills that advance graduates towards leadership roles in our field and provide the scope that allows careers to evolve over the years.

NRI alumni are invited to share additional ideas about how the NRI can continue to make the right kind of difference 10, 20, or 50 years from now. Please contact Dr. John Sinclair (**John.Sinclair@umanitoba.ca**) and/or Ms. Shannon Wiebe (**Shannon.Wiebe@umanitoba.ca**).





50th Anniversary Legacy Award.

To recognize the impact of the NRI during its 50-year history, the NRI 50th Anniversary Legacy Award has been established. The 50th Anniversary Legacy Award provides an opportunity for NRI alumni and friends to support student scholarships and will enable the NRI to continue to attract the best and brightest students. The initial goal is to raise \$30,000 to establish an endowed scholarship that will continue to support NRI students in perpetuity. The NRI 50th Anniversary Legacy Award will be awarded annually to a student who is enrolled full-time in a Master's or Ph.D. program in the Natural Resources Institute, and has a GPA of 3.50 or higher.

Two NRI supporters have also offered to match gifts to make this award a reality (up to \$9,000).

To make a gift to the NRI 50th Anniversary Legacy Award please visit: http://www.umanitoba.ca/institutes/natural_resources/nrialum/nri_50t.html or contact Lesley Lewis (Donor Relations, University of Manitoba) by phone at 204-474-6119 or 1-800-330-8066 or by email at lesley.lewis@umanitoba.ca.



Pictured top left, left to right: Current M.N.R.M. candidates Michael Bagamery, Kim Wetten, Ariana Dilay, Lee Sutcliffe, Ajarat Adegun, and Rojin Amani. Photo credit: Lee Sutcliffe.

Pictured middle left, left to right: Sheldon McLeod, Leanne Dunne (M.N.R.M., 2014), Dr. John Sinclair, Morgan Vespa (M.N.R.M., 2014). Photo credit: Leanne Dunne.



Pictured bottom left, left to right: Donald Leitch (M.N.R.M., 1975), Doug Wanamaker (M.N.R.M., 1984), and Thomas Henley (M.N.R.M., 1975). Photo credit: Shannon Wiebe.



Canada 150 Chair – Dr. Julianne Stroeve.

The University of Manitoba welcomes **Dr. Julianne Stroeve** as our Canada 150 Chair. Her research expertise focuses on complex Arctic systems especially sea ice-climate coupling.

Dr. Stroeve comes from University College London and will serve as the Canada 150 Research Chair in Sea Ice-Climate Coupling for seven years, receiving \$7 million in federal funding. Her new research program will advance the U of M's, and Canada's, reputation as a global centre of excellence in Arctic system science. To quote Dr. Stroeve: ***"I am excited for this opportunity to advance the study of the Arctic climate system during this time of profound change."***

The world has turned its attention to the Arctic, largely because of rapidly shrinking sea ice cover. The increase in open water area is already having profound impacts on the energy and freshwater balance of the Arctic. Dr. Stroeve will use satellite and ground-based data, Inuit Traditional Knowledge, community monitoring, and climate models to improve our understanding of the linkages between sea ice changes and climate. Her research will provide a key bridge to understanding how the Arctic affects the climate and hydrology of southern Canada. Manitoba has a keen interest in this research due to the emerging research that shows how changes in Arctic sea ice affect precipitation and temperature patterns in southern Canada. Dr. Stroeve will work with numerous regional and national Inuit and Cree organizations, and benefit from the expertise of Indigenous field investigators. With her extensive international network, together with that of the multidisciplinary research programs within the U of M's Arctic research group, this will provide excellent opportunities for Manitoba to recruit top graduate students from around the world.



Faculty Awards.

Dr. Frank Hawthorne (Distinguished Professor, Department of Geological Sciences) was awarded the 2018 Martin J. Buerger Award from the American Crystallographic Association (ACA). The award recognizes mature scientists who have made contributions of exceptional distinction in areas of interest to the ACA. To quote the ACA: *"Frank has revolutionized our fundamental understanding of minerals and their behavior in Earth's processes and is seen by many as the world's foremost mineralogist"*.

Dr. Hawthorne, who retired in 2018, has received numerous honours and awards to celebrate the breadth and depth of his work. These include the principal medals from the Royal Society of Canada (1993), the Mineralogical Society of Great Britain (1995), the Geological Association of Canada (1996), the Mineralogical Association of Canada (1999), the International Mineralogical Association (2010) and the Mineralogical Society of America (2013); he is one of few Foreign Members of the Russian Academy of Science (2012). In 2001, he was appointed a Canada Research Chair in Crystallography and Mineralogy, was made an Officer of the Order of Canada in 2005, was promoted to Companion to the Order of Canada in 2005, was awarded the Killam Prize in Natural Sciences in 2008.

Dr. Hawthorne is well-known for his systematic studies of the crystal chemistry of major mineral groups, including amphiboles, tourmalines, staurolites, borosilicates, sulfates, and diverse transition element oxysalts. It has been said that: *"He has left few stones unturned in the mineralogical world"*.

Pictured right: Dr. Frank Hawthorne, being inducted as a Companion of the Order of Canada by Governor General Julie Payette at Rideau Hall in Ottawa, November 2018. Photo credit: Sgt Johanie Maheu, Rideau Hall © OSGG, 2018.

Dr. Nicola Koper received the Jamie Smith Award for Mentorship, a national mentorship award from the Society of Canadian Ornithologists. The award honours established ornithologists (professional or amateur) from academia, industry, non-government or government agencies who have been nominated by students, colleagues and/or peers in recognition of displayed excellence in mentoring a new generation of professional or amateur biologists. The recipient is recognized as a consistent motivator, diligent in pushing students to excel, demonstrates a passion for the discipline, and instills a sense of integrity in mentees.

Dr. Koper also received the Partners in Flight Public Awareness Award, an international award that honours an individual or group that contributes significantly to increasing the public's awareness and appreciation for birds, their habitats, or the need for conservation. She received the award in August 2018 at the International Ornithological Congress in Vancouver.

Pictured left: Dr. Nicola Koper. Photo credit: Dwain Thomas.



Alumni Awards.

Gordon Maxwell of Sachigo Lake First Nation (B.Sc. (Hons) Geology, 1982) was recognized by the Prospectors and Developers Association of Canada (PDAC). Mr. Maxwell, a well-known and respected geologist with more than 35 years in the mining industry, received the Skookum Jim Award during PDAC's annual convention held in March, 2019, in Toronto. Recipients of the Skookum Jim Award have demonstrated exceptional achievement and/or service in a Canadian Aboriginal-run service business for the Canadian mining industry or a Canadian Aboriginal exploration or mining company, or have made a significant individual contribution to the mineral industry.

Mr. Maxwell has worked around the world evaluating projects and potential acquisitions. He is a long-time workplace health and safety advocate, and has spent many years championing the Canadian Diamond Drilling Association's Drilling Excellence Certification Program to establish a new, higher standard of quality in the diamond drilling industry. He is well-known and respected in the Canadian minerals industry and is an exceptional role model to all youth, particularly young Indigenous people. Sachigo Lake First Nation is a community of 814 people in Treaty 9 territory, located close to the Manitoba border and about 643 kilometres northwest of Thunder Bay.



Pictured above, left to right: Gordon Maxwell and Paul Brink, President & COO, Franco-Nevada Corporation. Photo credit: PDAC.

Pictured right, left to right: **James Maxwell** (B.Sc. (Maj.) Geology, 2004) son of Gordon Maxwell, and Gordon Maxwell. Photo credit: Jean Maxwell.



2019 Coop Student of the Year.

Justin Budyk (B.Sc. Environmental Science (Hons, Co-op) candidate) is the University of Manitoba's 2019 Co-op Student of the Year. Co-op provides both students and employers with an opportunity to work together in a meaningful partnership. Students have the ability to combine practical paid work experiences with their classroom-based education to further enhance their skill set and work experiences. Justin, who will graduate this year, undertook fieldwork with Fisheries and Oceans Canada (DFO) and the International Institute for Sustainable Development (IISD). These positions revolved around the field of limnology and fisheries research.

Justin will be continuing to expand his skillset this summer, when he will be working on Brook Trout, an invasive species of trout, in a series of alpine lakes in British Columbia and Alberta. He will also be finishing the final semester of his degree at Deakin University in Melbourne, Australia, learning about marine systems.

To quote Justin: *"The opportunity to network with a vast array of different people is undoubtedly one of the biggest advantages to being in a co-op program as it forces you to get out of your comfort zone and make contacts that further your career ambitions."*

He also received ample help from colleagues at the university during his time as a co-op student, and identifies his most significant support came from faculty member Leslie Goodman (Environment and Geography and Co-op Coordinator).



To again quote Justin: *"Leslie has consistently pushed me to get the most out of my placements and pursue jobs that have required me to take larger leadership roles. She was always willing to edit my application materials to give me the best chance of being chosen for a job and was a valuable reference that fought on my behalf."*

Pictured top: Justin measuring a White Sucker (*Catostomus commersonii*) at the International Institute for Sustainable Development-Experimental Lakes Area in the summer of 2017. Photo credit: Joey Tonin.

Pictured below: Justin driving a boat on Great Slave Lake, NT while working for Fisheries and Oceans Canada in the summer of 2018. Photo credit: Andrew Chapelsky.



Inuit Carvings Exhibit.

An exhibition of Inuit carvings and their source rocks has been installed in the Cretaceous Menagerie in the Wallace Building by **Dr. Alfredo Camacho** (Geological Sciences).

Dr. Camacho undertook research to identify, locate, and estimate carving stone resources within Nunavut with the Nunavut Department of Economic Development and Transportation in conjunction with the Canada-Nunavut Geoscience Office, Natural Resources Canada (NRCan) Polar Continental Shelf Program, and the University of Manitoba. The Nunavut Carving Stone Deposit Evaluation Project visited 104 potential sites, in proximity to 23 communities, across the territory between 2010 and 2015.

Carving stone is an Arctic commodity that has transitioned from simply being a cultural artifact to being the backbone of a community's economy. Carving is a source of income for many. In general, there is a lack of accurate information about carving stone sites and therefore traditional and known sites are becoming overworked resulting in local supplies of carving stone diminishing or a community becoming impoverished for stone. Carving is an important component of the Inuit economy and the value of the carving industry is likely to increase.

The exhibition, which will continue to develop, shows carvings alongside their source rocks. For example, the carving Beluga Whales by Eegeesiak Shoo (a resident of Kimirut) is carved from Serpentinite from Tatsituya, Baffin Island. The Tatsituya deposit (Aberdeen Bay), located 150 km west of Kimmirut is Nunavut's third largest quarry and this stone is unique as it is a bright apple green colour and just so happens to be the most famous and recognizable stone in Nunavut.



Pictured top: Beluga Whales by Eegeesiak Shoo (resident of Kimirut) is carved from Serpentinite from Tatsituya, Baffin Island.

Pictured middle: Polar bear head by Paul Malliki (Resident of Repulse Bay) is carved from lepidolite-albite, Tanco Mine.

Walrus by Jimmy Iqaluk (resident of Sanikiluaq) is carved from dolomitic talc carbonate from Qullisajaniavvik, Belcher Islands.



Picturing the Planet.

As a regular feature "*Picturing the Planet*" brings inspiring and informative images taken by our students, staff, and faculty.

Justin Budyk (B.Sc. Environmental Science (Hons, Co-op) candidate) is shown here collecting benthic invertebrate samples at the International Institute for Sustainable Development-Experimental Lakes Area in the summer of 2017. Photo credit: Joey Tonin.

