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THE NORTHERN VOICE

Newsletter of the Northern Studies Program at UNBC

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Editor's Note

Northern Studies is one of UNBC's founding programs. It exposes students to a myriad of issues facing Northern BC, Northern Canada, and northern regions around the World. It draws upon the expertise of faculty from a wide range of disciplines and research areas, encompassing the biophysical and human dimensions of northern regions.

I am delighted to welcome the new year by hosting the annual UNBC Northern Days, featuring two presentations on arctic and mountain research on Friday, January 24th, 2025. In the Global Friday Speaker Series (12:00-1:30pm), Dr. Gail Fondahl, Professor Emerita, Geography, UNBC will give a talk titled, "A Fractured North: Musings on Coping with the Closure of the Russian North to Scholars." In the Natural Resources and Environmental Studies Institute (NRESi) Colloquium (3:30-4:30pm), Dr. Graham McDowell, Director of Science and Knowledge, Yellowstone to Yukon Conservation Initiative will give a talk titled, "The Journey to the First Formal Assessment of Mountain Systems in Canada: The Canadian Mountain Assessment."

Please join us to celebrate Northern Studies at UNBC.



DR. TRISTAN PEARCE
ASSOCIATE PROFESSOR, GEOGRAPHY
CANADA RESEARCH CHAIR IN CUMULATIVE
IMPACTS OF ENVIRONMENTAL CHANGE
PROGRAM COORDINATOR, NORTHERN STUDIES

Program Committee

The Northern Studies program is guided by a committee composed of a coordinator and faculty members who serve three-year renewable terms. We would like to recognize some members for their exceptional contributions to Northern Studies over the years. Dr. Gary Wilson acted as the Northern Studies Coordinator for over 17 years. Gary has ensured that UNBC is prominent in national and international northern research and policy, positioning UNBC as key member of several key northern institutions like the University of the Arctic and Association of Canadian Universities for Northern Studies. Gary continues to play a major role in leading Northern Studies as a faculty committee member. Thank you, Dr. Michel Bouchard, for your sustained contributions to the Northern Studies program committee over multiple terms.



Dr. Tristan Pearce,
Geography
NORS Coordinator



Dr. Gary Wilson,
Political Science



Dr. Sinead Earley,
Environmental
Studies



Dr. Gail Fondahl,
Geography



Dr. Tara Joly,
First Nations Studies



Dr. Stephen Déry,
Environmental
Science

UNBC Faculty Profile

DR. GAIL FONDAHL
ADJUNCT PROFESSOR OF GEOGRAPHY

Dr. Gail Fondahl is a Professor Emerita in Geography and a member of the Northern Studies Program at UNBC. While retired, she continues research and related work on Indigenous rights in the Russian North. She is currently co-editing a three-volume series on the impact of Russia’s invasion of Ukraine on (non-Russian resident) research in the Russian Arctic, and is a member of a SSHRC Partnership Grant, “Arctic Economy and Social Transitions – The WAGE (Wealth of the Arctic Group) Circumpolar Partnership”, out of Laval University.

In May 2024, Dr. Fondahl received an honorary doctorate (D.h.c.) from the University of Lapland for her research on the Arctic region (especially Russian North), and her service to Arctic-focused organizations.



Dr. Fondahl (right) with colleagues Dr. Aytalina Ivanova (centre) and Dr. Florian Stammer (left) at the University of Lapland 2024 Promootio (Convocation).



NORS Member Profile

DR. GRAHAM MCDOWELL

DIRECTOR OF SCIENCE AND KNOWLEDGE, YELLOWSTONE TO YUKON CONSERVATION INITIATIVE

Who are you and what do you do?

I am an environmental social scientist specializing in human vulnerability and adaptation to climate change in mountain regions, as well as knowledge assessment and co-creation activities. I have led community-engaged projects in the Nepal Himalaya, Peruvian Andes, Rocky Mountains, Greenland, and Baffin Island, and was the founder and leader of the Canadian Mountain Assessment. In addition, I am a two-time Contributing Author with the Intergovernmental Panel on Climate Change (IPCC), a member of the Advisory Committee for the Canada in a Changing Climate national assessment process, and a Canadian Steering Committee member for the UN International Year of Glacier Preservation. I completed a Banting Postdoctoral Fellowship at the University of Zurich and hold degrees from UBC (as Vanier Scholar), Oxford, and McGill. I am currently the Director of Science and Knowledge at the Yellowstone to Yukon Conservation Initiative (Y2Y).

What do you love about northern research?

I was initially drawn to northern and mountain research because of my involvement in mountaineering and ice climbing, and awareness that the cold places I was so fascinated by were being rapidly altered by climate change. This personal connection to cold places and interest in climate change inspired me to pursue education and research related to the human dimensions of climate change across the cryosphere. As I followed this path, I was privileged to meet and learn from many people living at the frontlines of climate change, and to experience environments that left me utterly awe-struck. I love northern and mountain research because it has enabled me to work in amazing places, to meet incredible people, and to address research questions that feel timely and relevant.

For more information, see Dr. McDowell's [website](#) and [Google Scholar profile](#).

“I was privileged to meet and learn from many people living at the frontlines of climate change, and to experience environments that left me utterly awe-struck.”



New Northern Studies Members



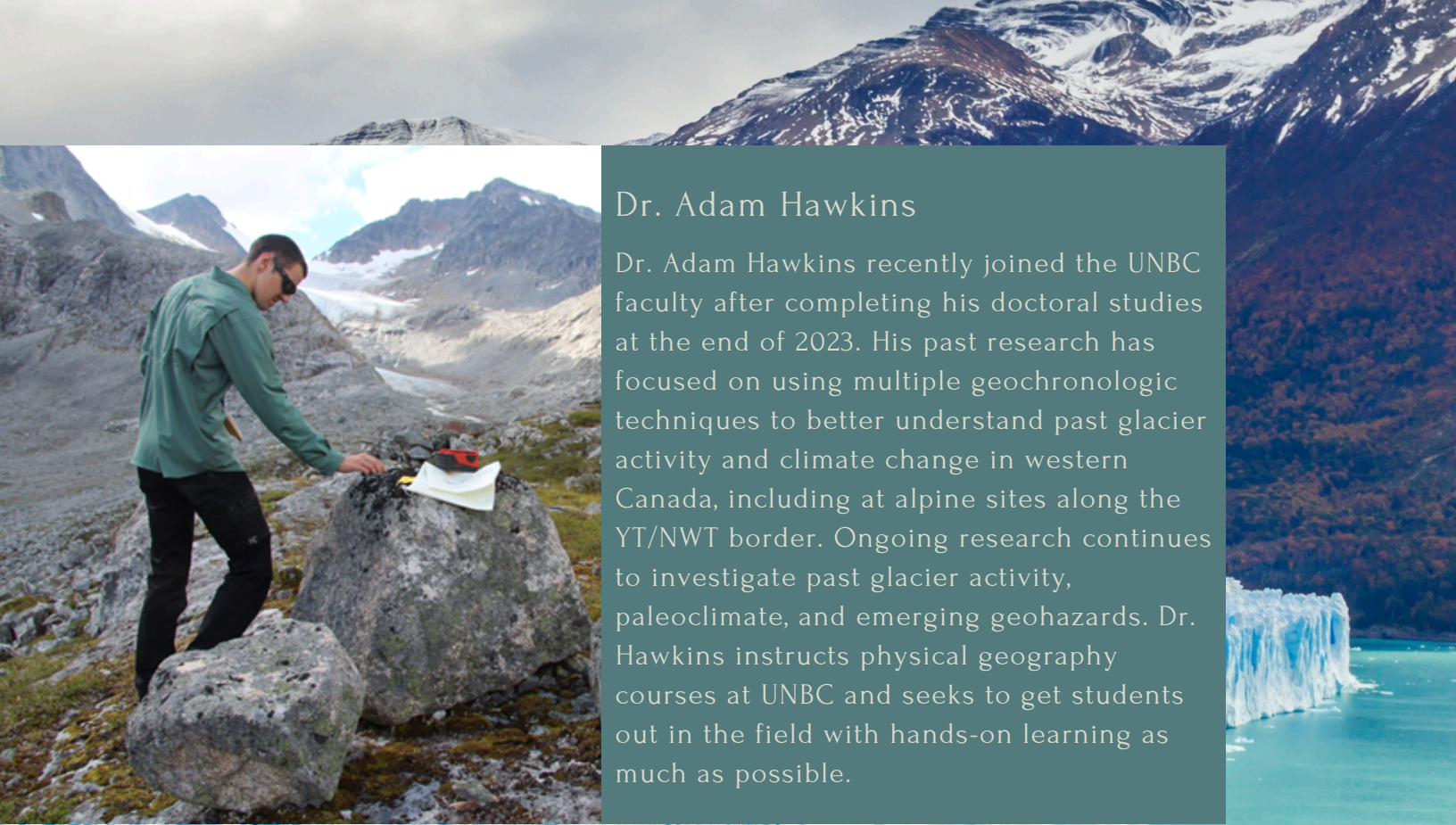
Dr. Erica Kilius

Dr. Erica Kilius is an Assistant Professor in the Department of Anthropology at UNBC. In her research program, she brings a biocultural lens to examine human sleep as a mechanism that both influences and is influenced by health risks. Her particular research interest is investigating how sleep health is affected by seasonality and globalization, where she brings together quantitative sleep measures, local knowledge, and environmental data. She has worked with deep-sea fishermen in the North Atlantic, and as well as on community-based projects in Alaska and the Yukon.

Dr. Diogo Spinola

Dr. Diogo Spinola joined UNBC in January 2024 as an Assistant Professor in Forest Soils. Earlier in his career, he focused on studying the soils of Antarctica before redirecting his work toward forest soils in the North after moving to Alaska in 2019. Since then, he has collaborated with the US Forest Service on research in the coastal temperate rainforest of southeast Alaska. His work focuses on forest soil carbon cycling and its interplay with soil minerals and geochemistry. Additionally, he studied initial stages of soil formation and carbon sequestration rates following glacier retreat in the region.





Dr. Adam Hawkins

Dr. Adam Hawkins recently joined the UNBC faculty after completing his doctoral studies at the end of 2023. His past research has focused on using multiple geochronologic techniques to better understand past glacier activity and climate change in western Canada, including at alpine sites along the YT/NWT border. Ongoing research continues to investigate past glacier activity, paleoclimate, and emerging geohazards. Dr. Hawkins instructs physical geography courses at UNBC and seeks to get students out in the field with hands-on learning as much as possible.



Dr. Brian Menounos

Dr. Brian Menounos is a professor in the Geography, Earth and Environmental Sciences Department and has been at UNBC since 2002. He is particularly interested in how Earth's glaciers respond to climate change (past, present and future). Brian is currently on a secondment with National Resources Canada's Geological Survey of Canada. He is also the Chief Scientist of the Hakai-UNBC Airborne Coastal Observatory, a dedicated aircraft used to quantify changes in snow and ice cover within mountainous terrain of western Canada.





Faculty Research

Inuit Traditional Ecological Knowledge of Ringed Seal (*Pusa hispida*) and Bearded Seal (*Erignathus barbatus*)

TRISTAN PEARCE

FUNDER: CIRNAC

Arctic pinniped, including ringed and bearded seals, have adapted through evolution to spatial and temporal domains influenced by the seasonal extremes and variability of sea ice, temperature, and day length that define the Arctic. Recent changes in Arctic climate may challenge the adaptive capability of these species. In this project, we are working with Inuit in Ulukhaktok in the western Canadian Arctic to record their knowledge and understanding of ringed and bearded seals under changing climate conditions and pair it with scientific data on seal ecology collected over the past forty years in the study area. The expected findings are intended to contribute to co-management decision-making.



David Kuptana fleshes a ringed seal pelt,
Ulukhaktok, NT



Northern Climate Action Network

SINEAD EARLEY

Dr. Sinead Earley has been a key member in the inception of the [Northern BC Climate Action Network](#) (NorthCAN), a multi-sector, regional network established in 2022 to advance climate action and low-carbon transitions in Northern BC. Last year, Sinead and Sarah Korn (UNBC ESS Alumni '23) co-authored [Northern BC Climate Action Network: A Source for Hope](#), a report highlighting the formation, purpose, and function of the NorthCAN network. Keep an eye out for the publication in the Northern Review (Fall 2024) "Emergent and regional: networked climate governance across northern British Columbia." This work also led Sinead's participation in the [Empowered Energy Solutions Forum](#) in the Upper Skeena in April 2024, co-hosted by the Sik-E-Dakh (Gitxsan) community and the Skeena Watershed Conservation Coalition.

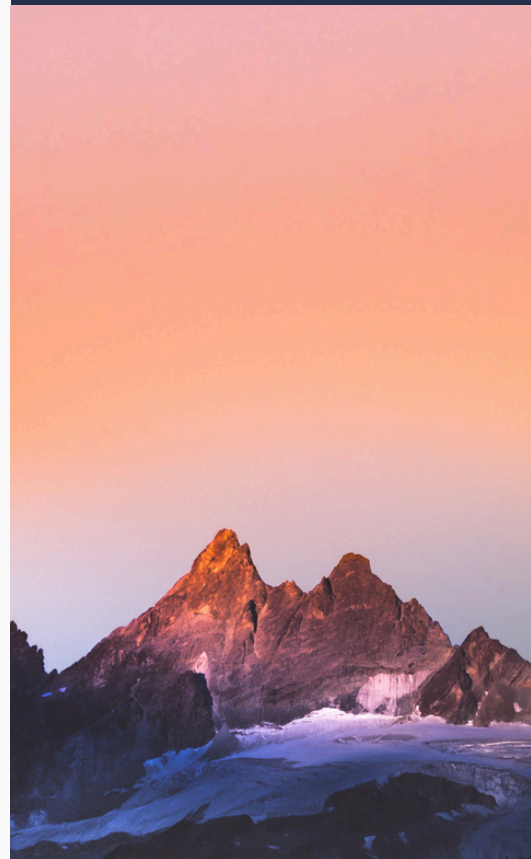
Northern Energy Dialogues

SINEAD EARLEY

Northern Energy Dialogues is a research collaboration between UNBC and UVic funded under the [Accelerating Community Energy Transformation](#) (ACET) initiative. This multi-phase project is centred around place-based, community-led energy transitions in Northern BC. Currently in phase one, the research team is supporting community-level conversations in northern, rural, and remote communities and Nations to identify energy priorities, barriers, and potential pathways for community energy transformation. These conversations will feed into regional energy workshops (Winter and Spring 2025) designed to facilitate peer learning between project partners, build collective regional action, and strengthen community capacity. For more information, visit the [Northern regional Energy Dialogues](#) website.



Faculty Research





Faculty Research

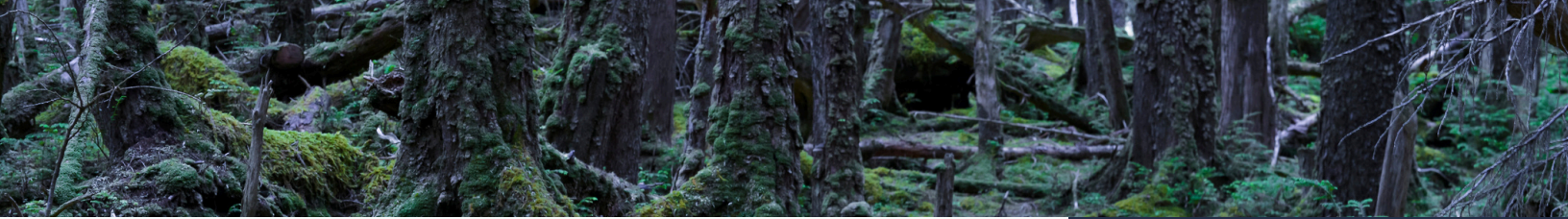
Late Holocene glacier and climate change in eastern Yukon

ADAM HAWKINS AND BRIAN MENOUNOS

Work by Hawkins, Menounos, collaborators and students sought to investigate how alpine glaciers along the Yukon and Northwest Territories border have responded to climate change over the past millennium. Using a technique called cosmogenic nuclide surface exposure dating, they determined when glaciers reached their largest extents since the end of the last Ice Age (locally around 12,000 years ago). This information was then used to help constrain models of both past and future glacier change. Similar to results from other modeling studies, they showed that glaciers in this region are set to lose 85-97% of their ice volume by the end of this century.



Itzi Mountain and moraines (linear features down valley from ice). These moraines demarcate positions that the glacier reached several hundred years ago. Photo credit: Brian Menounos.



Rapid soil formation and carbon accumulation along a Little Ice Age soil chronosequence in southeast Alaska

DIOGO SPINOLA, ALANA MARGERUM, YAKUN ZHANG, RANDY HESSER, DAVID D'AMORE, RAQUEL PORTES

Our research explores the co-evolution of soils and carbon dynamics after glacier retreat in the coastal temperate rainforests of southeast Alaska. From fresh sediments to developed soils, we found that organic carbon initially accumulates as organic debris near the surface but gradually shifts to deeper mineral horizons as soils mature. This shift slows soil organic matter decomposition and CO₂ release, contributing to long-term carbon storage. Over centuries to millennia, coastal rainforest soils develop into carbon-rich soils that support the largest temperate rainforest in the world. These findings emphasize the responses of terrestrial ecosystems to rapid glacier melting.



Left: Freshly deposited sediment by a glacier – Juneau, AK.

Right: 250 years later, formation of organic-rich forest soils.



Faculty Research



Community Vulnerability to Coastal Erosion and Flooding in the Canadian Arctic

MADELEINE FISHER

MA, NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

Committee: Dr. Tristan Pearce, Dr. Catherine Nolin & Dr. Stephanie Coulombe

Madeleine Fisher's research will examine community vulnerability and adaptation to coastal erosion and flooding in the Arctic through a case study of the Inuit community of Kugluktuk, located in the Kitikmeot Region of Nunavut, Canada. Through semi-structured interviews, participatory mapping, and World Café workshops, this research aims to provide culturally relevant insights into local adaptation needs, supporting community-based resilience and informing long-term adaptation strategies that reflect Inuit perspectives.

Community Vulnerability to Changing Snowpacks and Water Systems in the Robson Valley, British Columbia, Canada

MACKENZIE OSTBERG

MA, NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

Committee: Dr Tristan Pearce, Dr. Joe Shea & Dr. Jennifer Wigglesworth

Mackenzie Ostberg's research focuses on identifying how the communities of Dunster and McBride, located in the Robson Valley, are exposed and sensitive to changes in the mountain snowpack and water systems and their capacity to adapt. With a focus on qualitative research, this project links climate data with the lived experiences of local community members in the recent BC-wide drought. Her research is supported by the Pacific Institute for Climate Solutions (PICS).

Student and Alumni Research





Knowledge Co-Production of Marine Species Movements in the Canadian Arctic

HALENA SCANLON & STEPHANIE CHAN
NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

Scanlon Committee: Dr. Tristan Pearce, Dr. Lisa Loseto, Colin Gallagher, Dr. Neil Hanlon

Chan Committee: Dr. Tristan Pearce, Dr. Lisa Loseto, Dr. Nigel Hussey, Dr. Harri Pettitt-Wade

Halena Scanlon and Stephanie Chan were both part of ArcticNet Project 33: Using Co-Produced Knowledge to Understand and Manage Subsistence Marine Harvests in a Changing Climate. This project sought to co-produce knowledge of marine species in the Canadian Arctic in partnership with Inuit.

Their research was based in Ulukhaktok, an Inuit community in the Northwest Territories. Both research projects focused on pairing Inuit and scientific knowledge to deepen our understanding of the ecology of two fish species, Greenland cod and Arctic char.



Right: Stephanie Chan
Left: Halena Scanlon with Mary Akoaksion and Mary Kudlak, Ulukhaktok NT.





Student and Alumni Research

Community Engagement in Environmental Reclamation and Remediation in the Sahtu Region, Northwest Territories

ANNIE KING

MA, NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

Committee: Dr. Tristan Pearce, Dr. Sinead Earley & Paul Dixon
Annie King is working as a Northern Community Engagement Specialist for the Land and Water Boards (LWBs) of the Mackenzie Valley. She has taken on the role of Project Lead for updating the LWBs' Engagement Guidelines.



In October 2024, she spent time in the Sahtú community of Fort Good Hope conducting outreach, even speaking on local radio. From November 5–7, she attended the NWT All Boards Forum in Fort Smith, NWT, as a delegate for the Land and Water Boards of the Mackenzie Valley.



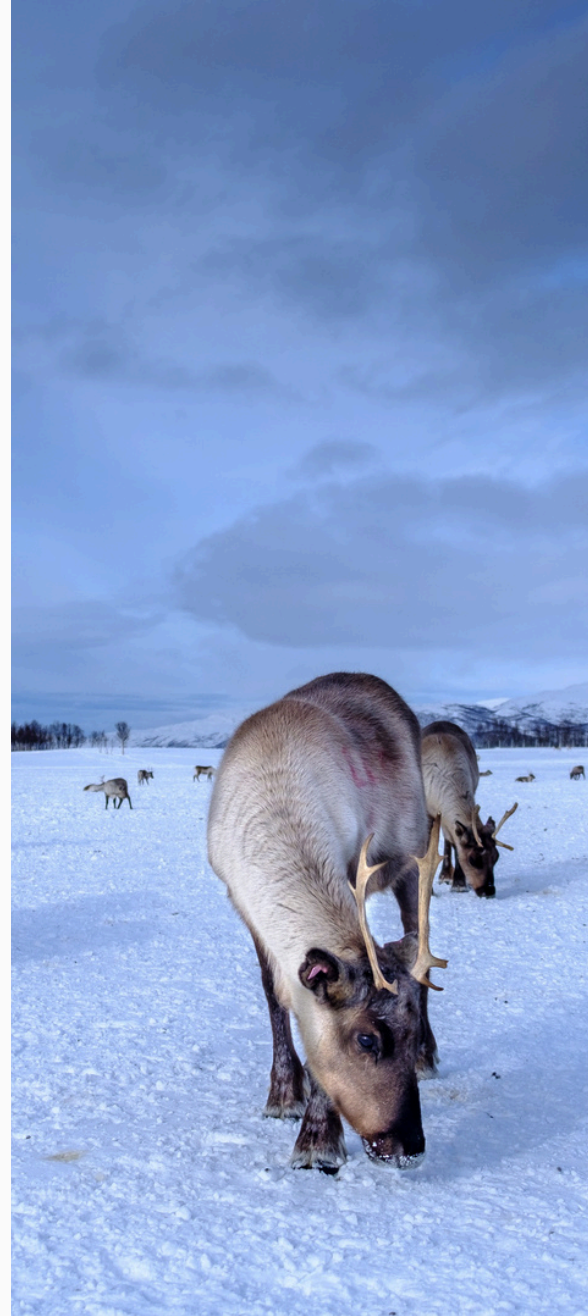
Events and Conferences

ARCTIC CONGRESS - BODØ, NORWAY

UNBC Northern Studies faculty Dr. Gary Wilson and Dr. Gail Fondahl and undergraduate student Madeleine Fisher attended the Arctic Congress Bodø 2024 for a unique event that combined the International Congress of Arctic Social Sciences (ICASS) XI, UArctic Congress 2024, and High North Dialogue 2024. Madeleine shared some reflections on her experience with *The Northern Voice*.



From left to right: Madeleine Fisher with Dr. Gary Wilson, Dr. Gail Fondahl, and Nicole Fraser at Arctic Congress.



“While it was strange to know my graduation ceremony was happening over 6000 kilometres away from me, I wouldn’t change a thing. Attending the Arctic Congress and representing the Northern Studies program at UNBC has been an incredible opportunity, full of connection, adventure, and learning, as well as both old and new friendships. Scientists, researchers, policymakers, and leaders from across the planet shared their work through panels, presentations, and posters. Witnessing the passion and perseverance that these individuals have poured into their work has been incredibly inspiring. In my time in Bodø, Norway, I participated in many academic sessions full of illuminating discussions. I also took part in Congress activities across the Arctic city, from hikes to networking events, and even a visit to Saltstraumen, one of the strongest tidal currents in the world. I am incredibly grateful for my time there, and will never forget this vibrant experience.” - Madeleine Fisher



ARCTICNET'S ARCTIC CHANGE CONFERENCE - OTTAWA, CANADA

From the 9th to the 12th of December, 2024, Northern Studies faculty member Dr. Tristan Pearce and Masters students Madeleine Fisher and Halena Scanlon attended ArcticNet's fifth Arctic Change Conference. While there, they networked with other researchers and organisations working in the Arctic, and Halena presented on her Masters research.

UNBC NORTHERN DAYS - PRINCE GEORGE, CANADA

From the 20th to the 24th of January 2025, UNBC will host Northern Days - an event that brings researchers and those working in the North together. Please join us at the following scheduled events:

Dr. Gail Fondahl, Professor Emerita of Geography at UNBC, will present at Global Fridays from 12:00 to 1:30 on the 24 January, 2025

Title: A Fractured North: Musings on Coping with the Closure of the Russian North to Scholars

Abstract: Russia's invasion of Ukraine has mostly 'paused' the 30+ years of collaborative research carried out by Western scholars with Indigenous partners in the Russian North that Gorbachev's 1987 Murmansk speech instigated. These academics now must decide how to move forward in their careers, given the current geopolitics. In a series of volumes, colleagues Erich Kasten, Igor Krupnik and I have collected 40 papers addressing this scholarly fracture in circumpolar social sciences. Authors span the spectrum from early career researchers to retired colleagues who, like me, began their careers during the previous Cold War. Papers address the ethical dilemmas of continuing versus ceasing research in the Russian North; offer past histories of researchers dealing with repressive regimes; describe collaborative projects that are now 'on hold'; and discuss new ways of moving forward with research. I will summarize some of the offerings of these three volumes and offer my own thoughts on 'moving onward' with work on the Russian North.



Dr. Graham McDowell, Director of Science and Knowledge at the Yellowstone to Yukon Conservation Initiative, will present at the NRESi Colloquium Series from 3:30 to 4:30 on the 24 January, 2025.

Title: The journey to the first formal assessment of mountain systems in Canada: The Canadian Mountain Assessment

Abstract: The Canadian Mountain Assessment (CMA) is the first formal assessment of what we know, do not know, and need to know about mountains in Canada. It is based on insights from First Nations, Métis, and Inuit knowledges of mountains, as well as findings from an extensive assessment of pertinent academic literature. Its inclusive knowledge co-creation approach brings multiple forms of evidence together in ways that enhance collective understanding of mountains in Canada, while also respecting and maintaining the integrity of different knowledge systems. The CMA provides insights into applied reconciliation efforts in the context of a major assessment initiative and points the way forward for mountain-focused research, relationships, and actions in Canada. In this presentation the CMA's Project Leader will discuss the research experiences that led him to founding the CMA, the rationale for an assessment of mountain systems in Canada, and details of the assessment's unique knowledge co-creation approach. The talk will conclude with reflections on the implications of the CMA for mountain research in Canada and future knowledge assessment initiatives more broadly. The Canadian Mountain Assessment can be accessed through the [University of Calgary Press](#).



Through the Travelling Knowledges program, UNBC students can take part in international field schools or other travel for course credit all over the world. The program provides financial support for domestic undergraduate students in any discipline for trips ranging from three weeks to one year. Students can use the funds to help pay for travel, living and academic expenses as well as costs related to childcare, travel documents and health insurance when participating in international field schools or individual travel related to course study.

“Travelling Knowledges makes global education more accessible for UNBC students. When students travel as part of their undergraduate program they can make new connections, engage with different cultures, learn in new places and appreciate new experiences that simply are not possible in a traditional classroom.”

Dr. Geoff Payne, UNBC President and Vice Chancellor

TAYLOR COLETTI - ICELAND AND NORWAY

Taylor Coletti is a third-year human geography student pursuing an independent study supervised by Dr. Tristan Pearce and supported by the Travelling Knowledges program. Her travels have taken her from the Nordic worlds of Iceland and Norway to the Celtic influences of Ireland and Scotland. She also had the opportunity to explore themes of folklore and mythology and how they shape environmental attitudes and perceptions of place. She stated that “the chance to experience immersive, heuristic learning outside of a classroom has completely shifted my educational mindset and introduced new interests and lines of inquiry that I may never have encountered otherwise”.

Taylor Coletti commemorating their first time crossing the Arctic Circle with a photo of Heimskautsgerði (Arctic Henge), a monument rooted in Icelandic folklore (Raufarhöfn, Iceland).



Students in the Circumpolar Arctic - Travelling Knowledges Program



JULIE FORREST - SWEDEN

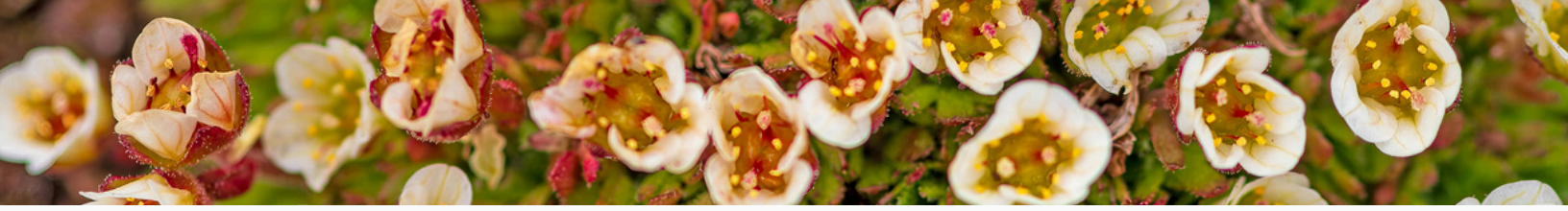
Julie Forrest studied at Ájtte, a Sámi museum and cultural center, in Northern Sweden as part of the Travelling Knowledges program. She worked on an independent study (GEOG 499) supervised by UNBC professor Dr. Tristan Pearce, looking into the northward expansion of “green energy” (windfarms, mining) on Sámi lands. She also assisted the research unit at Ájtte in their search for collaborative planning tools for land use conflicts between Sámi reindeer herders and mining activity in the region.

MADELEINE FISHER - NORWAY

With the Travelling Knowledges program, Madeleine Fisher travelled to Sogndal, Norway for an independent study supervised by Dr. Tristan Pearce. While there, she worked as an intern at the Western Norway Research Institute, where she supported research for the SHIFT-PLASTICS project, which aims to create sustainable circular value chains for plastics used in the fisheries and aquaculture industries. For the project, she produced and presented a paper on Canadian policies regarding fisheries and aquaculture management, gained valuable first-hand experience working with fishers on the ocean, and collected plastic pollution. She travelled around the country, experienced the Arctic, made lasting friendships, and went on many hikes. She found working alongside researchers and policymakers while in Norway to be an incredibly inspiring and invigorating experience, stating that she returned home with a deeper understanding of herself, and what it means to be involved in research.

Top: Julie Forrest while on their independent study in Northern Sweden.

Bottom: Madeleine Fisher while on their independent study in Sogndal, Norway.



Recent Publications by Northern Studies Faculty

Hawkins, A.C., Menounos, B., Goehring, B.M., Osborn, G., Pelto, B.M., Darvill, C.M., Schaefer, J.M., 2023. Late Holocene glacier and climate fluctuations in the Mackenzie and Selwyn mountain ranges, northwestern Canada. *The Cryosphere* 17, 4381–4397.

Kasten, Erich Igor Krupnik, Gail Fondahl (eds.) 2024. *A Fractured North – Facing Dilemmas*. Fürstenberg/Havel: Kulturstiftung Sibirien. Available at: <https://dh-north.org/publikationen/a-fractured-north-facing-dilemmas/de>

Kasten, Erich Igor Krupnik, Gail Fondahl (eds.) 2024. *A Fractured North – Journeys on Hold*. Fürstenberg/Havel: Kulturstiftung Sibirien. Available at: <https://dh-north.org/publikationen/a-fractured-north-journeys-on-hold/en>

Lindahl, Karin Beland, Wilson, Gary N., Allard, Christina, Poelzer, Greg (2024). “To Approve or Not to Approve? A Comparative Analysis of State-Company-Indigenous Community Interactions in Mining in Canada and Sweden.” *Environmental Management*. 73: 946-961.

Oke, Barbara, Wilson, Gary N. (2024). “Health Services Impacts and Extractive Industries: Experiences from Health Service Leaders Operating in a Resource Dependent Region.” *The Extractive Industries and Society*. 19: 1-10.

Pearce, T.D., Gallagher, C.P., Lea, E.V., Kudlak, G., Kuptana, D., Pettitt-Wade, H., Smart, J., Memogana, S., Scanlon, H., Loseto, L. (2024). “Inuit traditional ecological knowledge of anadromous Arctic char, *Salvelinus alpinus* under changing climatic conditions in the Amundsen Gulf, western Canadian Arctic.” *Arctic*. (in press)

Spinola, D., Margerum, A., Zhang, Y., Hesser, R., D’Amore, D., & Portes, R. (2024). “Rapid soil formation and carbon accumulation along a Little Ice Age soil chronosequence in southeast Alaska.” *CATENA*, 246, 108460. <https://doi.org/10.1016/j.catena.2024.108460>

Wilson, Gary N., Allard, Christina (2023). “Institutional Determinants of Mining Projects in Canada and Sweden: Insights from the Prosperity and Kallak Cases.” *Environmental Management*. 72: 53-69.

Wilson, Gary N., Fondahl, Gail (2024). “Ethnofederalism and Indigenous Self-Determination in Northern Canada and the Russian Federation.” *The Polar Journal*. 14/1: 68-88.

