



UNIVERSITY OF
CALGARY



Arctic Institute of North America

Advancing Knowledge for a Changing North



Photo credit Erik Haag

Annual Report 2014 and 2015

ARCTIC INSTITUTE OF NORTH AMERICA ANNUAL REPORT, 2014 AND 2015
Advancing Knowledge for a Changing North

The Arctic Institute of North America was created by an Act of Parliament in 1945 as a nonprofit tax-exempt research and educational organization. Originally based at McGill University in Montreal, the institute moved to the University of Calgary in 1976. In 1979 the Institute became part of the University of Calgary as a university research institute.

MANDATE

Our mandate is to advance the study of the North American and circumpolar Arctic through the natural and social sciences, the arts and humanities and to acquire, preserve and disseminate information on physical, environmental and social conditions in the North.

Board of Directors

Chair:.....Henry Sykes, Calgary, Alberta
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Cooper Langford, Calgary, Alberta (2002–14)

Staff

Executive Director:Maribeth Murray
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Administrative Assistant:Melanie Paulson
Arctic Journal Editor:Karen McCullough
Data and Information Services Manager:.....Shannon Vossepoel
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University of Calgary Librarian, AINA Collection:..Claudette Cloutier
Kluane Lake Research Station (KLRS) Managers:..Sian Williams, Lance Goodwin
KLRS Science Coordinator:.....Michael Schmidt
Post-Doctoral Fellows:.....Gabriela Iburguchi, Annie Quinney, Patricia Wells, and
.....Bindu Panikkar (now at University of Vermont)
Graduate Student:.....Kent Spiers

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MESSAGE FROM THE CHAIR



Welcome to the 2014/15 Annual Report of the Arctic Institute of North America. In preparing this year's message, I reviewed what I said in my last note. I told you that 2013 had been quite eventful, principally because we had, after some time, engaged our new Executive Director. If I thought 2013 had been eventful, I have been quite stunned by the events of 2014 and 2015. The Arctic Institute has been so active, on so many fronts, that it is difficult to know where to begin.

I will mention our Kluane Lake Research station, where I last noted that great improvements were underway. These continued in 2014, and if possible picked up steam in 2015, and the Station is, I believe, in better shape, both physically and financially, than it has ever been.

Our scholarly journal, *Arctic*, continues to be the premier journal in its field, under the very capable leadership of Dr. Karen McCullough. In 2014 we published our regular four issues, as well as a special issue in honour of the 50th anniversary of the Kluane Lake Research Station. Five issues were also published in 2015, with the production of a supplement focusing on papers from the first biennial Arctic Observing Summit, held in Vancouver, British Columbia, in 2013. Our Arctic database, ASTIS, under the capable direction of Shannon Vossepoel, is expanding its reach. Our speaker series continues to attract the best Arctic researchers today. We have had post-doctoral students join the Institute and have brought on a part-time research assistant. Finally, Dr. Murray is now supervising a PhD student. And much, much, more.

AINA has been very fortunate to have the full support of the University of Calgary, and once again, I must thank Dr. Ed McCauley, Vice-President (Research) for his unstinting support on so many fronts.

On behalf of the board, I would also like to thank our staff, who continue to demonstrate the meaning of commitment every day. We are very grateful to them.

A very special thanks and debt of gratitude is owed to both Dr. Cooper Langford and Dr. David Hik. Cooper, who is retiring this year as a director of the Arctic Institute has, I believe, given more than 20 years of service to the Institute. He is our institutional memory, and we will miss his sense of devotion to the Institute as well as his wisdom and counsel. David Hik joined the Board of the Institute in 2005, and over the years has provided not only invaluable insight and advice, but he has been our eyes and ears at Kluane Lake, stepping in when we needed help. The Board joins me in thanking Cooper and David for their efforts on behalf of the Institute over the years and wishing them well in the future.

We have also strengthened our Board since my last report. Drs. Susan Kutz and Brian Moorman, both of the University of Calgary, have joined the Board. Susan is Associate Professor of Ecosystem Public Health in the Faculty of Veterinary Medicine and Brian is a Professor in the Department of Geography. Chris Shapardanov, Executive Director, Circumpolar Affairs and Energy Division, Department of Foreign Affairs, Trade and Development, Government of Canada, is another welcome addition. These appointments amply demonstrate the signal strength and I suggest, unique feature of the Institute: our commitment to a multidisciplinary approach to understanding the Arctic.

2015 marked the 70th anniversary of the founding of the Arctic Institute. I can't say with any certainty what the vision of our original founders was when this journey began, but I like to think that our founders would be well pleased with our current state of affairs. We held a number of special events to mark this milestone, and all were well attended and, I believe, appreciated. We look forward to our 75th anniversary before long, and to the decades to come.

Thank you for your support of the Arctic Institute of North America. If you are not yet a member, becoming one is very simple, and can be done on-line. The annual membership fee is very reasonable (I would go so far as to say a bargain), and includes a subscription to Arctic.

Finally, I said in my last report that “[c]hange at the top generally means more change is on the way . . . I look to the future with a great deal of optimism, and I look forward to sharing that future with you.” I also said, in reference to Maribeth Murray’s appointment, that “the result was worth the wait.” On the basis of what I have described to you, and what I believe the future holds, I am very pleased to conclude that in my last report, I was indeed, for a change, prescient!

Henry W. Sykes, QC, Chair of the Board

AINA US CORPORATION



The Arctic Roundtable series, one of the major activities of AINA U.S. Corporation, was reactivated in 2014 with two events. The Arctic Roundtable was designed to create a venue for people from various departments with interests in the Arctic on the University of Alaska Fairbanks (UAF) campus to meet and discuss topics of broad interest. It is an attempt to overcome the issue of increasing specialization, and to bring together our colleagues in federal and state agencies and consulting groups, as well as interested members of the general public. The Roundtable formula, with an introductory presentation by a panel of experts followed by discussion from the group, has proven successful.

On 6 May 2014, the 16th Arctic roundtable was held at the Westmark Hotel in Fairbanks, with a focus on education in rural Alaska. Panelists included Dr. Raymond Barnhardt, Director of the Center for Cross-Cultural Studies, UAF; Laura Conner, College of Natural Sciences and Mathematics, UAF; Gwen Holdmann, Alaska Center for Energy and Power, UAF; Peggy Carlson, Fairbanks North Star Borough School District; and Jennifer Schmidt, a retired educator. Dermot Cole from *Alaska Dispatch News* acted as moderator for the discussion.

The 17th Arctic Roundtable, "The Peopling of the Americas: Who, Where, and When," was convened on 14 November in the Morris Thompson Cultural Center in Fairbanks. The panel members were Daniel Mann, Geography/Geosciences, UAF; Mike Kunz, Bureau of Land Management and School of Natural Resources and Extension, UAF; David Meltzer, Department of Anthropology, Southern Methodist University; and Ben Potter, Department of Anthropology, UAF.

On 5 November 2015, the 18th Arctic Roundtable, "Agents of Change in the Alaskan Arctic" was convened in the Morris Thompson Cultural Center in Fairbanks. The panel members were Richard Glenn, Arctic Slope Regional Corporation; Carl Benson, Geology & Geophysics (emeritus), UAF; John Kelley, former Naval Arctic Research Lab Director, UAF; and Andrew Mahoney, Geology & Geophysics, UAF. Mary Ehrlander, Director of Arctic and Northern Studies at UAF, moderated a lively discussion of life in Arctic Alaska from before Yankee whalers, up through the construction of runways, oil & gas development, and climate change, examining the impacts of these changes to local people.

The Grant-in-Aid Scholarship program received a record 97 applications in 2014 and awarded 20 scholarships. The successful applicants included 9 from Canada, 8 from the United States, 2 from England, and 1 from Finland. Thanks to AINA members for their donations to the program and to our binational committee of reviewers for their time and effort in reading through the applications.

The Grant-in-Aid Scholarship program received 24 applications in 2015 and awarded 12 scholarships. The successful applicants included 5 from Canada and 7 from the United States. Thanks to AINA members for their donations to the program and to our binational committee of reviewers for their time and effort in reading through the applications.

The U.S. Board of Governors met on 19 May 2014 at the UAF campus and by teleconference with members from the contiguous U.S. On 13 June 2014, Carl Benson, Chairman of the U.S. Board, and Ken Tape, Executive Secretary, participated in the Canadian board meeting in Calgary. This was an excellent opportunity to introduce Ken to the Canadian board members and to the AINA staff at the University of Calgary. The U.S. Board of Governors met on 21 July 2015 at the UAF campus and by teleconference with members from the contiguous U.S.

Since we have secured a place within the UAF structure and have support for our executive secretary, we began pursuing corporate members for the U.S. Corporation and successfully added one in 2014.

Carl S. Benson, PhD, Chairman, Board of Governors

Ken Tape, Executive Secretary

OUTREACH

Over the years there has been an effort to increase the visibility of the Arctic Institute of North America through various community outreach activities.

AINA Speaker Series



Dr. Peter Dawson

Each month of the regular university semester, the Arctic Institute hosts a talk from leading edge researchers and students who work and study in the North. The talks are usually held on the third Wednesday of the month and are followed by a reception in the AINA offices at the University of Calgary.

From January to March 2014, the speaker series presented talks by Dr. Peter Dawson (University of Calgary), Dr. Julie Cruikshank (University of British Columbia), and by our Executive Director, Dr. Maribeth Murray.

The 2014 speaker series resumed in September with a presentation by six University of Calgary recipients of a grant from the Northern Scientific Training Program (NSTP). Michelle Blade, Jessie Fraser, Tyler Murchie, Sarah St. Germain, Josh Sullivan and Colleen Hughes each gave a brief talk on their northern fieldwork during the summer of 2014.

In October 2014, Dr. Patty Wells (AINA) spoke on modern and ancient seascapes in Newfoundland, and Dr. Hester Jiskoot (University of Lethbridge) wrapped up the 2014 speaker series with a talk on weather and sea ice records from journals kept by Dutch whalers.

Our 2015 speaker series kicked off with an open house at the Arctic Institute, in celebration of AINA's 70th anniversary. We returned to the speaker format in February with a talk by Dr. David Natcher (University of Saskatchewan) on Indigenous food systems in northern Canada. In March, AINA post-doctoral researcher Dr. Gabriela Ibarguchi spoke on cold-adapted biodiversity and in April, Dr. Nelta Edwards (University of Alaska Fairbanks) presented a comparison of housing adequacy in the Canadian and U.S. Arctic.



Dr. Joel Berger

The September 2015 speaker series slot was once again given over to the University of Calgary's NSTP students—Sarah Cole, Megan Goulding, Colleen Hughes, Laura Kapas, and Sarah St. Germain—for short presentations on their northern research. Elena Favaro (University of Calgary) spoke in October on suspended sediment transport in a High Arctic river, and world-renowned wildlife conservation biologist Dr. Joel Berger (Colorado State University) visited AINA in November to give a talk on science and conservation in an increasingly peopled world.

All talks are recorded with permission of the speaker and are posted on the AINA website <http://arctic.ucalgary.ca/arctic-speaker-series>

Marda Loop Justice Film Festival

In January 2014, Research Associate Jon Dudley participated as a “conversation leader” at one of the Marda Loop Justice Film Festival movie nights in Calgary. The movie night of January 21, 2014 screened the award-winning film, “People of a Feather,” which was an International Polar Year Production by Sanikiluaq Running Pictures. The proceeds of sales support the charitable Arctic Eider Society. The film documents the historical relationship between the Inuit people of Sanikiluaq (Belcher Islands) and the challenges currently faced by both the people and the eider ducks posed by the impact of hydroelectric projects on sea ice and ocean currents.

The event was attended by approximately 70 people, who participated in a post-film discussion moderated by Jon on a variety of issues brought out in the film.

Telus Spark Special Exhibit



From December 2013 to May 2014, the Science Centre in Calgary, known as “Telus Spark,” hosted a travelling exhibition created by the Field Museum in Chicago entitled “Nature Unleashed: Inside Natural Disasters.” AINA was invited to participate by providing a complementary activity. AINA Director Maribeth Murray, Office Manager Mary Li and Research Associates Jon Dudley and Vinay Rajdev created a display and hands-on activity how glaciers flow. The AINA activity was set up at Telus Spark for two days in March and was visited by about 200 children and their families over the two days.



“Glacier Table” at Telus Spark “Nature Unleashed: Inside Natural Disasters” exhibit. Vinay Rajdev (Research Associate) shows keen potential glaciologists how glaciers flow.

Photo credit: Jon Dudley

Auroral Zone Website



On August 13, 2015, the Department of Physics and Astronomy at the University of Calgary, in partnership with the Arctic Institute of North America, the Canadian Space Agency, Aurorasaurus, and AuroraMAX, kicked off a citizen science initiative to classify images of the aurora. The AuroralZone website allows the public to classify images of the aurora taken from the Canadian Arctic. In turn, their classifications are fed back to researchers to study the physics of the aurora and the near-earth environment.

The website launched at the Telus Spark Adults Only Night in Calgary, Alberta. Over 300 participants competed with each other on dueling touchscreen tables to see who could correctly classify the most images. The AuroralZone launch was among the top events of the evening. Visit <http://auroralzone.org>

2015 Beakerhead Festival

Beakerhead

The Arctic Institute of North America participated in the Beakerhead festival of arts, science and engineering on Friday, September 18, 2015 at the Rothney Astrophysical Observatory with Arctic talks and stargazing. John MacDonald, author of *The Arctic Sky*, told Inuit legends about the Arctic Universe. His talk was followed by a discussion of leading-edge auroral research and the AuroralZone citizen science initiative led by Eric Donovan, University of Calgary Associate Dean of Research and Graduate Education and a Professor in the Department of Physics and Astronomy. Throughout the evening, people were given the opportunity to star gaze through telescopes set up by the Calgary chapter of the Royal Astronomical Society of Canada. Approximately 300 people attended the event.

Polar Voices



PoLAR Voices is a podcast program that is part of the Polar Learning and Responding Climate Change Education Partnership led by Columbia University and funded through the National Science Foundation. It is produced by the University of Alaska Museum of the North in collaboration with the Arctic Institute of North America. Listen in as PoLAR Voices breaks down the science of climate change with people living and working in the polar regions. The Polar Voices podcast officially launched its second season this November. We have revamped the program with a new format, new style, and new content. The first three episodes are now available on the Polar Voices page at thepolarhub.org. The episodes address a broad range of topics including the incorporation of Indigenous perspectives and knowledge into Arctic policies through initiatives such as the Snowchange Cooperative, changing ice conditions on Alaskan rivers, and Arctic greening. The next three episodes are under review and will be available in early 2016. They discuss fires, permafrost, and food security. Several interviews were also collected for use in future episodes.

AINA Booths

- January 2014, Marda Loop Justice Film Festival, Calgary, Alberta
- September 2014 – University of Calgary, Eyes High Community Report by President Elizabeth Cannon, Calgary, Alberta
- December 2014 – Arctic Biodiversity Congress, Trondheim, Norway
- December 2014 – ArcticNet Annual Meeting, Ottawa, Ontario
- December 2014 – American Geophysical Union Fall Meeting, San Francisco, California
- February 2015 – Spiritus Chamber Choir, Northern Lights Performance, Calgary, Alberta
- April 2015 – Arctic Science Summit Week 2015, Toyama, Japan
- April 2015 – Faculty of Arts Change and Challenge in the Arctic, University of Calgary
- May 2015 – Canadian Meteorological and Oceanography Society Congress & American Meteorological Society Conference on Polar Meteorology and Oceanography, Whistler, BC
- October 2015 – Earth Matters Conference, Canmore, Alberta
- October 2015 – University of Calgary Open House, Calgary, Alberta
- November 2015 – The Association of Canadian Universities for Northern Studies (ACUNS) Student Conference, University of Calgary, Calgary, Alberta
- December 2015 - American Geophysical Union Fall Meeting, San Francisco, California
- December 2015 - ArcticNet Annual Meeting, Vancouver, British Columbia



Bindu Panikkar, Mike Schmidt, Gabriela Ibarguchi, AGU 2014 Photo Credit: Gabriela Ibarguchi

AMBASSADOR ACTIVITIES 2014 and 2015

For several years, Research Associate Jon Dudley has provided tremendous service to the Arctic Institute with his outreach activities to better inform the public about both the Arctic and the mission and goals of the Arctic Institute of North America. These activities include: 1) elementary school visits, 2) partnership with Adventure Canada, and 3) engaging Northern communities.

Elementary School Visits

The Alberta Grade 2 Social Studies curriculum includes a study of communities from the Prairies, the Maritimes, and the Arctic. Over the past five years, Jon has been visiting Grade 2 classes to aid their learning about Arctic communities. As of the end of 2015, he has presented to 45 classes (~ 988 students). Two schools were visited in 2014 and three in 2015.

Each class receives a one-hour program, during which they are introduced to a number of artifacts. The students spend time sketching and predicting what each object is made of and what it might have functioned as. This exercise is followed by a discussion of the items and whether they are something still used in Arctic communities today.

The minimum time required for each school visit is on the order of 7–8 hours, assuming a one-day visit and 5 classes. School visits are a very worthwhile activity as reflected in the feedback from both teachers and students.

Because of a growing demand for school visits, Jon was joined in 2015 by Research Associate Annie Quinney, who fulfilled some of the school visits. Our Administrative Assistant Melanie Paulson created an online request form to aid in coordinating the school visits.



Typical school visit set-up.

Photo credit: Jon Dudley

A highlight of these sessions is the opportunity for the students to see and touch artifacts as well as the nanuq (polar bear) pelt and the wool blanket amauti (woman's parka) from the AINA collection. Two mannequins are used to effectively display clothing such as the amauti.



Grade 2 student displays as part of their "Inuit Museum" at Saddleridge School, March 3, 2015.



Up close and personal. Touching and trying on artifacts is the highlight.

Adventure Canada Partnership

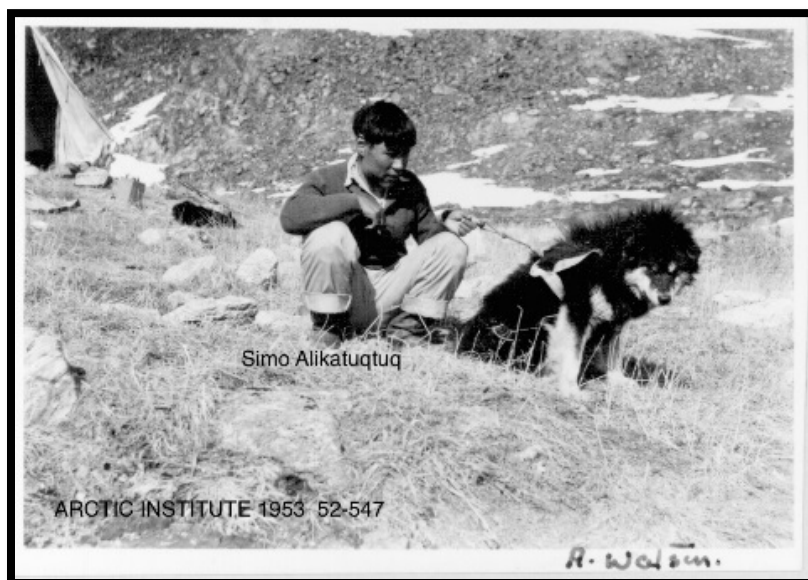
**ADVENTURE
CANADA**



Since mid-2010, Jon has been facilitating a partnership between the Arctic Institute of North America (AINA) and Adventure Canada (AC) to mutually benefit from the synergy between AINA's mandate of promoting and supporting the study of the North and Adventure Canada's now over 25 year history of award-winning discovery voyages including many to Canada's Arctic.

This partnership provides unique outreach opportunities in the form of displays and presentations on Arctic expedition cruises. Further outreach is provided by posting of news on the partner website and newsletter.

Each summer Jon works as resource person to interpret Arctic geology to the passengers. During the cruises he also has an opportunity to publicize the Arctic Institute to the passengers by offering an illustrated talk on the Institute and having brochures and the AINA poster available.



Unidentified Inuk photographed by A. Watson in 1953 on Baird Expedition now identified and available to family members.

For the past two year, Jon has also developed the Historical Photo Provenance Project, with the goal of increasing the value of the AINA historical photo collection by improving the identification of the Inuit in the photos and identifying ways in which Inuit would like to have these shared as part of their respective family's heritage.

To date, the focus of the project has been on historical photos from the 1953 Baird Expedition as it occurred in the Pangnirtung area where Jon has made acquaintances with a number of Inuit over the years.

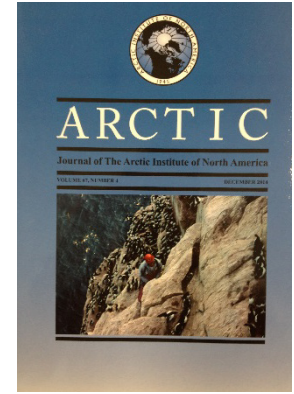
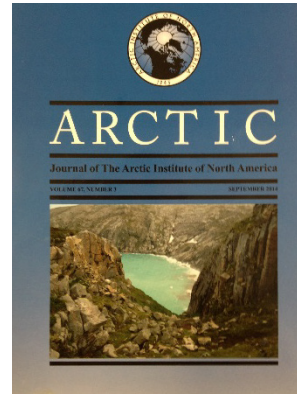
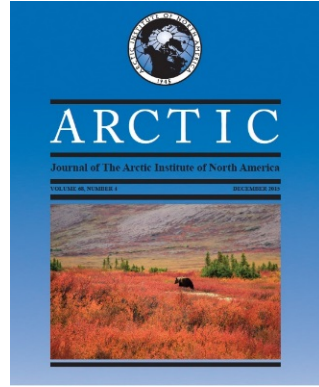
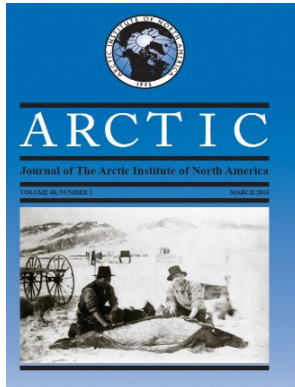
THE INTERNATIONAL STUDY OF ARCTIC CHANGE (ISAC)



The International Study of Arctic Change (ISAC; <http://www.arcticchange.org/>) is an international Arctic environmental change program that includes three core components as the framework to guide research: observing, understanding, and responding to change. The ISAC International Program Office is now based at the Arctic Institute of North America. Since July 2014, Gabriela Ibarguchi has served as the ISAC Associate Director, working in collaboration with ISAC Executive Director (and AINA Executive Director) Maribeth Murray.

The Arctic Observing Summit (AOS) is a pillar activity organized by ISAC. AOS serves as an international forum and workspace to guide, develop, and implement a comprehensive and sustained Arctic observing systems network. ISAC and AOS tasks include bringing the Arctic science community together with stakeholders, conducting research and synthesis activities, creating capacity-building and cooperation opportunities, and facilitating the implementation of research knowledge for solutions-based applications.

ARCTIC JOURNAL IN 2014 and 2015



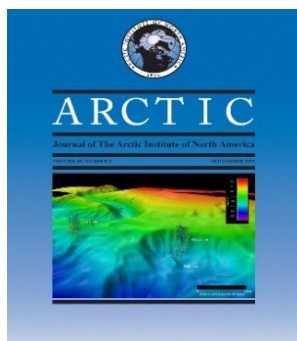
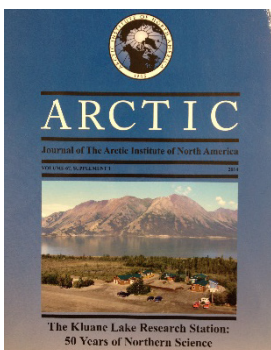
The four regular issues of the journal *Arctic* published in 2014 contained a total of 40 research articles, 1 commentary, 19 book reviews, 5 obituaries, 2 Arctic profiles, 2 Letters to the Editor, and 5 InfoNorth essays. Our page count for Volume 67 was 580 pages. Of the 40 research articles published in 2014, 12 (30%) were from the social sciences, 20 (50%) from the biological sciences, and 8 (20%) from the physical sciences. Among the papers published in 2014 was a series of three papers focusing on sustainable agriculture in Alaska and the circumpolar North. In 2014, we received 73 submissions for consideration for publication; of these, eight were deemed unsuitable for the journal and were not sent out for peer review.

The year 2015 ended with a total of 59 papers submitted for consideration for publication in *Arctic*. The four regular issues of Volume 68 included 37 research articles, 14 book reviews, 1 commentary, 6 obituaries, 1 Letter to the Editor, and 5 InfoNorth essays. The page count for Volume 68 was 539 pages. Of the 37 papers published in 2015, 12 (32%) were from the social sciences, 20 (54%) from the biological sciences, and 5 (14%) from the physical sciences.

In 2014 we also published a supplementary issue of *Arctic*, which contained papers written to celebrate the 50th anniversary of the Kluane Lake Research Station (KLRS) in 2011. Initially published online, the seven papers in the issue provide an overview and synthesis of the research results derived from five decades of research at the KLRS. We are deeply grateful to the authors of the KLRS 50th anniversary papers, who provided funding for the print publication. Long-time KLRS researchers Ryan Danby and David Hik, along with former station manager Andy Williams, provided an Introduction, and station manager Lance Goodwin contributed an excellent photograph of the station for the cover. The KLRS issue was distributed to all AINA members in August 2014.

We also published a supplementary issue in 2015, composed of 11 papers from the first biennial Arctic Observing Summit (AOS), held in Vancouver, British Columbia, from April 30 to May 2, 2013. Like the KLRS papers, the AOS papers were published online as each was finalized. A print version of the supplement was published in October 2015 and distributed as a bonus issue to all AINA members. The International Study of Arctic Change (ISAC) coordinates the planning and development of the AOS, which is focused on the design, development, and implementation of a comprehensive circumpolar observing system.

The International Study of Arctic Change (ISAC) coordinates the planning and development of the AOS, which is focused on the design, development, and implementation of a comprehensive circumpolar observing system.



DATA AND INFORMATION SERVICES

Arctic Science and Technology Information System (ASTIS)

The Arctic Science and Technology Information System (ASTIS) is Canada's national northern publications and research projects database. ASTIS contains 82,000 records describing publications and research projects about northern Canada and the circumpolar Arctic. The database covers all subjects including the earth sciences, the biological and health sciences, engineering and technology, the social sciences, traditional knowledge, history, and literature. ASTIS has been in operation since 1978 and is funded through contract work and donations.

The ASTIS database is available from a free bilingual website at www.aina.ucalgary.ca/astis, and is searchable from Simple and Advanced Search pages or by clicking on hyperlinks in database records. ASTIS records contain abstracts and detailed subject and geographic indexing terms from the ASTIS thesauri. The publications cited in the database include both peer-reviewed and grey literature. More than 24,500 records contain links to PDF files of publications that are available online. As of 2014, many ASTIS records also contain ORCID identifiers (<http://orcid.org/>), enabling ASTIS to connect an author's research and make it accessible across different databases.

The ASTIS database contains 17,600 records describing research projects conducted in Canada's three northern territories since 1974. These records are based on information provided by organizations that license all territorial research: the Aurora Research Institute, the Central and Arctic Region of Fisheries and Oceans Canada, the Northwest Territories Department of Environment and Natural Resources, the Nunavut Department of Culture, Language, Elders and Youth, the Nunavut Department of Environment, the Nunavut Research Institute, the Prince of Wales Northern Heritage Centre, and the Yukon Heritage Resources Unit.

ASTIS continued to grow in 2014–15 with support from funders. In 2014, ASTIS received general funding from BP Canada, ConocoPhillips Canada, and TransCanada.

ASTIS specializes in the preparation of bibliographic databases about northern Canada and can easily make those databases available from customized websites for clients. The ASTIS Subset Databases listed on the Institute's website (<http://arctic.ucalgary.ca/databases>) provides access to 16 such databases.



In 2014–15, ASTIS redesigned and upgraded the NCP Publications Database for Aboriginal Affairs and Northern Development Canada's (AANDC) Northern Contaminants Program (NCP) and it now serves as the NCP's records repository. ASTIS completed the addition of historical documents pertaining to the Mackenzie Basin to the database, under a contract from the Walter & Duncan Gordon Foundation. ASTIS also continued to work on the ArcticNet Publications Database funded by the ArcticNet Network of Centres of Excellence Canada, and the Hydrocarbon Impacts database funded by the AANDC's Northern Oil and Gas Branch. ASTIS also worked with Makivik Corporation on the Nunavik Bibliography, and with the Yukon Heritage Resources Unit to index Yukon research projects.



ASTIS continued work on several internal Arctic Institute projects in 2014 and 2015, including the Kluane Lake Research Station Bibliography; the *Arctic Contents* and *Arctic Search* pages of the Institute website; and maintenance of the Institute's publications server, which makes 4600 publications available on the Web as PDF files.

All of these projects are moving ASTIS closer to its goals of providing comprehensive coverage of northern Canadian publications and research projects and of connecting and collaborating with other organizations collecting information and data in the circumpolar Arctic.

ArcticConnect



In 2014, the Arctic Institute of North America and the University of Calgary's Department of Geomatics Engineering in the Schulich School of Engineering received funding from CANARIE to launch ArcticConnect, a network-enabled platform for realizing geospatial referencing of information about the Arctic system derived from research, education, and private sector activities in the Arctic and Subarctic (www.arcticconnect.org).

Launching to the public in mid-2015, ArcticConnect is an innovative platform for Arctic research and information sharing. ArcticConnect captures biological, ecological, technological, and social data at multiple scales generated from a host of sensors, from human observers, from field experiments and research stations, from satellites and from publications, reports, photographs and even artwork. It enables networking and interoperability of disparate datasets, and makes information available across multiple applications and devices. ArcticConnect also enables display of heterogeneous data and information within a coherent geospatial platform consisting of four major components:

Arctic Web Map (AWM) is a web-based mapping tool based on accurate polar projections. This Arctic-specific web mapping tool will offer researchers scientifically accurate map projections for visualization and analysis, a function that is critical for Arctic system research but missing in existing web mapping platforms; it also provides a visually appealing tool for education and outreach to a wider audience. <http://webmap.arcticconnect.org/>

Arctic Sensor Web (ASW) enables research stations around the pan-Arctic to connect their sensors, including those that provide near real-time data, to a cloud service for visualization, information sharing, and collaborative analysis. <http://sensorthings.arcticconnect.org/>

Arctic Scholar (AS) is a demonstration site that shows how ArcticConnect can enable researchers, educators, interested private sector entities, government agencies, and the general public to access and share Arctic data

and information contained in assorted formats including publications, grey literature, research licenses, photo archives, field notes, and project metadata from Arctic field stations. <http://records.arcticconnect.org>

Arctic BioMap (ABM) enables members of the scientific community and northern residents to contribute observations on Arctic wildlife for the purpose of biodiversity & wildlife health monitoring, assessment, research, management and education. For information, contact the Arctic Institute at arctic@ucalgary.ca.

This state-of-the-art approach to data display, management and sharing will link efforts among northern communities, researchers, the private sector, and government agencies to advance the science and education needed for decision making in the rapidly changing Arctic.

The AINA Collection

The Arctic Institute of North America is home to a large and unique collection that includes:

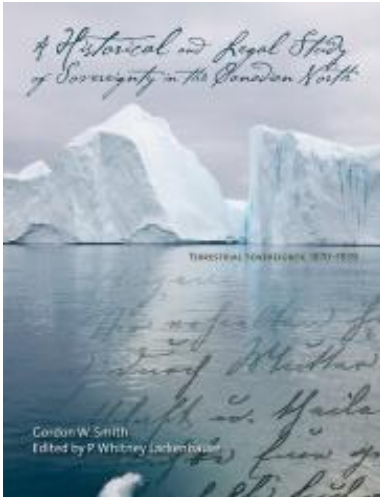
- Books, publications, maps, and audio files: Primarily held at and under the stewardship of the University of Calgary Libraries, the AINA collection contained 60,000 items when it moved to the University of Calgary from the Institute's original home at McGill in 1976 and it continues to grow. A number of the collection items, including a letter from Lady Franklin, are rare or unique, and housed in the university's special collections.
- Oil, gas, and engineering reports: The Institute holds one of the largest collections available of petroleum industry documents from the Arctic. Although it is indexed and abstracted in ASTIS, a large proportion of this collection is currently in storage and unavailable until funding allows for it to be catalogued.
- Photographs: Over 4,000 photographs dating from the late 1800s through the 1900s are housed at the Arctic Institute. They are also available for personal information purposes online at <http://contentdm.ucalgary.ca/cdm/search/collection/aina>.
- Art and artefacts: The Institute holds an extensive art and artefact collection that ranges from paintings and sculptures to furs and indigenous clothing.

Many of these items are rare, uncatalogued, and provide invaluable information about the Canadian and circumpolar Arctic. The Arctic Institute is currently seeking funding to make these items more accessible by developing a complete catalogue of all materials and getting the rarest items digitized for preservation and public use.



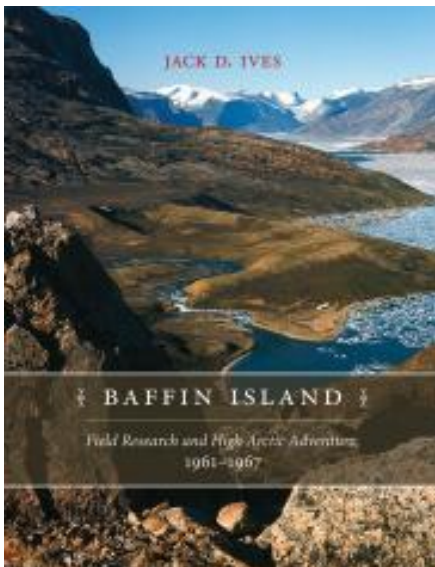
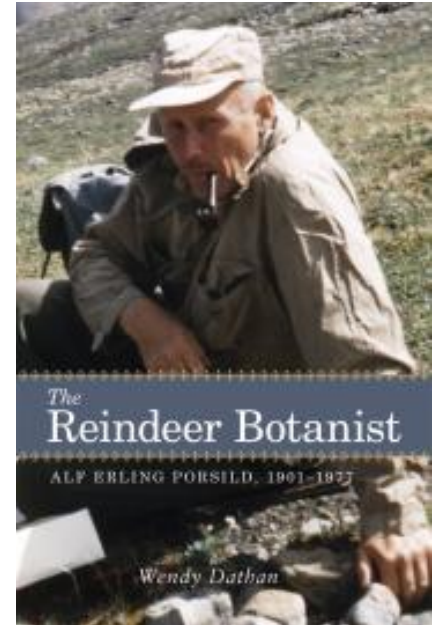
*Canadian Arctic Expedition, 1913
Photo from the AINA Collection*

NORTHERN LIGHTS SERIES



The 17th book in the Northern Lights Series was published in 2014. *A Historical and Legal Study of Sovereignty in the Canadian North: Terrestrial Sovereignty, 1870–1939* was written by the late Gordon W. Smith and edited by P. Whitney Lackenbauer. The book is a comprehensive study of post-Confederation issues related to sovereignty in the Canadian Arctic. Smith’s book has won two awards: the 2014 John Lyman Book Award for Canadian Naval and Maritime History from the North American Society for Oceanic History and, in 2015, an Alberta Book Publishing Award in the Scholarly and Academic Book category.

We are pleased to report that *The Reindeer Botanist: Alf Erling Porsild, 1870–1977*, by Wendy Dathan, and published in 2012 was short-listed for The William Mills Prize for Non-Fiction Polar Books.



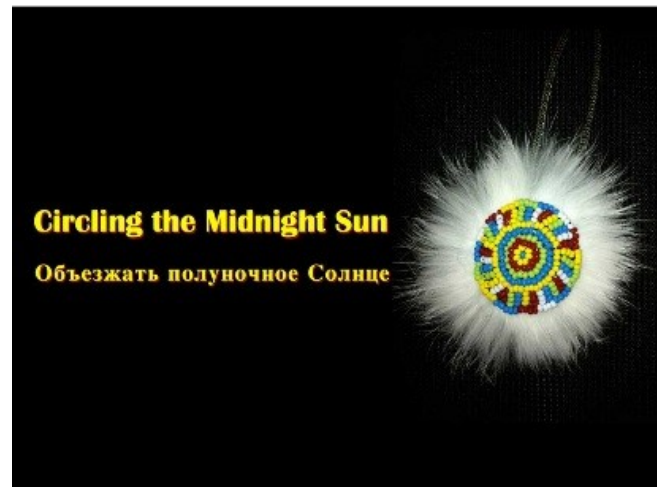
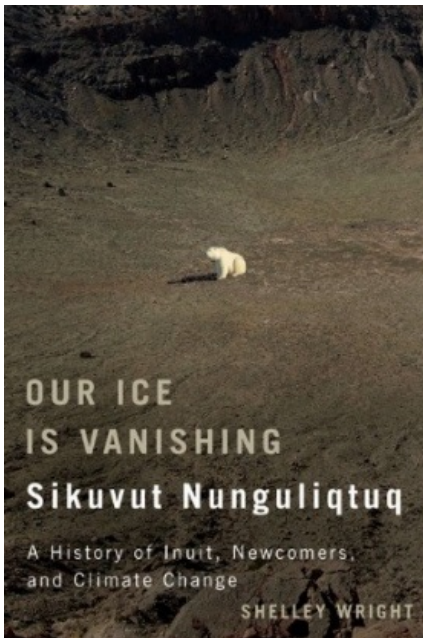
During 2015, two manuscripts were prepared for publication: *Baffin Island, Field Research and High Arctic Adventure, 1961–1967*, by Jack D. Ives, and William Barr’s translation of Emil Bessel’s, *Polaris: The American North Pole Expedition 1871-73*. An additional manuscript was undergoing peer review.

More information about the Northern Lights Series books can be found on the UC Press website: <http://press.ucalgary.ca/node/10203#northern-lights>

AINA LIBRARY

Libraries and Cultural Resources at the University of Calgary continues to provide stewardship for the Arctic Institute of North America collection, which attracts students, researchers, and an interested public from across campus and from around the world.

In summer 2014, 20,030 volumes from the Arctic Institute of North America were transferred from the Gallagher Library to the High Density Library (HDL), an environmentally controlled storage facility that will allow Libraries and Cultural Resources to maintain the integrity of this collection and to preserve it as a valuable research resource for years to come. Material can be requested through the Library Catalogue by selecting the “Place Hold” button. In addition, Libraries and Cultural Resources staff added 249 items to the collection that have been indexed within ASTIS.

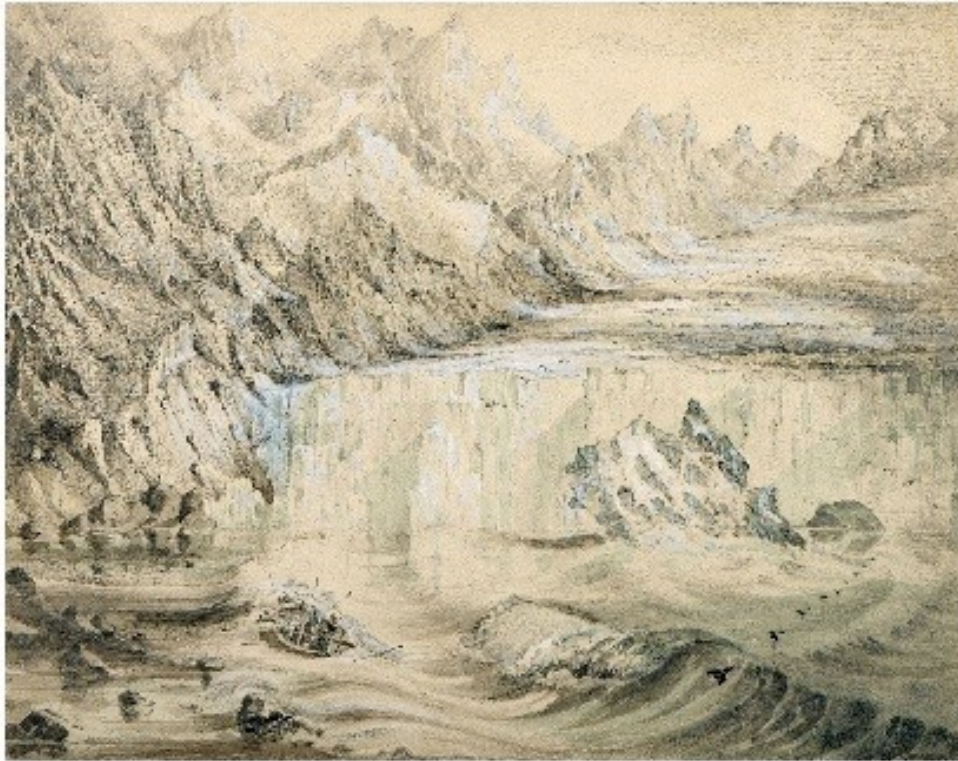


As an emerging leader in northern research, the University of Calgary Library is developing a research collection in support of Arctic and polar research. These materials are distributed across the University collection. Thirty-seven items were purchased during 2014, including *Our Ice is Vanishing: A History of Inuit, Newcomers, and Climate Change*, by Shelley Wright and *Circling the Midnight Sun: Culture and Change in the Invisible Arctic*, by James Raffan.

In 2015, Libraries and Cultural Resources initiated a number of projects that will strengthen the discoverability of our Arctic-focused collections.

After a number of years, priority has been given to cataloging materials housed in the Pipeline Room. These materials were donated to AINA by petroleum companies in the 1980s after northern petroleum exploration was no longer considered viable. A project cataloguer is reviewing the materials to ensure that unique content is added to the library collection. Over the past year 1293 items have been added.

In Archives and Special Collections, work has been underway to ensure that the rare books portion of the AINA Collection is added to the library catalogue according to Library of Congress classification. This project is half complete, and will ensure greater discoverability of AINA rare books.



In autumn 2015, a practicum student from the Museum and Heritage Studies program completed 80 hours of work cataloguing audiovisual materials from the AINA collection so that they too could be discovered. This student, who is a trained library technician, also completed a description project of original drawings by Frederick William Beechey under the supervision of an archivist. These drawings have been individually described and digitized in a format that can be ingested into the archival management system used by Archives and Special Collections and made available for others to access.

Finally, captions and information were added to letters in the AINA archival fonds to prepare the collection for digitization.

For information on how to access these collections, please consult the online research guide developed to support the use of the Arctic Institute of North America's collection and other polar-related materials: <http://libguides.ucalgary.ca/content.php?pid=561210&sid=4626202>.

Claudette Cloutier, the Liaison Librarian for Northern Studies, provides research assistance to students, faculty, staff, and visiting researchers looking for northern and polar-related information. Please contact her at ccloutie@ucalgary.ca for research assistance.

SCHOLARSHIP WINNERS

Jennifer Robinson Memorial Scholarship

The members of the Jennifer Robinson Scholarship Committee for 2014 and 2015 were Ryan Danby, John Krebs, Geoff Scudder, and Mary Vetter.

Recipients:

2014 – Jennifer Provencher, Biology Department, Carleton University

2015 – Jeff Werner, Department of Zoology, University of British Columbia

Lorraine Allison Memorial Scholarship

The Lorraine Allison Scholarship Committee members for 2014 and 2015 were May Allison, Bill Elton, Dee McRae, Heather Myers, Everett Peterson, and Janet Wright. May Allison passed away in December 2014. We remember her fondly.

Recipients:

2014 – Emily Choy, Biological Sciences, University of Manitoba

2015 – Chanda Brietzke, School of Environmental Studies, University of Victoria

Jim Bourque Scholarship

The members of the Jim Bourque Scholarship Committee for 2014 and 2015 were Chris Branch, Valerie Janz, and Joel Holden.

Recipients:

2014 – Tiana Shea, Environmental and Conservation Sciences and Native Studies Program, University of Alberta

2015 – Nicole Iaci, Law School, University of British Columbia

Budget Rent a Car Scholarship

2015 – Colleen Hughes, Department of Anthropology and Archaeology, University of Calgary

Grant-in-Aid Scholarships



Photo courtesy Erik Haag

The selection committee received a record 97 applications for grants-in-aid in 2014. Twenty of those applicants were awarded grants to assist with their research costs. The successful applicants for 2014 were Tayana Arakchaa from the Department of Anthropology, University of Alaska Fairbanks; Lauren Bell, School of Fisheries and Ocean Sciences, University of Alaska Fairbanks; Matthew Binnington, Physical and Environmental Sciences, University of Toronto – Scarborough; Michelle Cason, Department of Biology and Wildlife, University of Alaska Fairbanks; Emily Choy, Freshwater Institute and Department of Biological Sciences, University of Manitoba; Sarah Crump, Geological Sciences, University of Colorado Boulder; Greg de Wet, Geosciences, University of

Massachusetts, Amherst; Celine Dupont-Hebert, Historical Science, Laval University; Mike Grocott, School of Geography, Earth and Environmental Sciences, University of Birmingham; Rachel Shively Hart, Department of Biology and Wildlife, University of Alaska Fairbanks; Laura Kaupas, Biological Sciences, University of Calgary; Laura Kelvin, Anthropology, Western University; Jeff Kerby, Biology, Penn State University; Chris McNeil, Alaska Pacific University; Jennifer Provencher, Biology, Carleton University; Hunter Snyder, St. Hugh's College; Sarah St. Germain, Geography, University of Calgary; Christine Urbanowicz, Ecology and Evolutionary Biology, Dartmouth College; Jeff Werner, Zoology, University of British Columbia; and Vitali Zverev, Biology, University of Turku, Finland. The members of the Grant-in-Aid Selection Committee for 2014 were Alexander Braun, Peter Johnson, Thomas Newbury, Mary Stapleton, Wayne Strong, Matthew Sturm, John Yackel, and Ken Tape.

In 2015, the selection committee received 25 applications for grants-in-aid and awarded grants to 12 successful applicants. Razak Abu, University of Saskatchewan, is studying the changing livelihoods of the Cumberland House Metis and Cree Nation; Alix Conway, University of Saskatchewan, is examining how mammalian herbivores affect tree growth and forest composition in the boreal forest; Kelly Eldridge, University of California Davis, is documenting an Early Contact Period migration in Norton Sound, Alaska; and Caitlin Holloway, University of Alaska, is carrying out a paleoethnobotanical study in the Tanana River Basin, Central Alaska. Laura Kelvin, Western University, is conducting a community-based archaeological project on Banks Island, Northwest Territories; Jordan Munizzi, Western University, is using isotopic zooarchaeology to reconstruct muskox and caribou ecology on Banks Island; Courtney Scerbak, University of Alaska Fairbanks, is focusing on the outreach component of a study of Alaskan botanicals and neuronal aging; and Erin Siracusa, University of Guelph, is studying adaptive behavioural plasticity in the highly territorial red squirrel. Sarah St. Germain, University of Calgary, is researching the evolution of supraglacial streams; Rebecca Stubbs, Florida Museum of Natural History, University of Florida, seeks to understand Arctic flora by using a model plant group to study evolution at high latitudes; Julianne Yip, McGill University, is using an anthropological perspective to investigate what we can learn from Earth's melting cryosphere; and Scott Zolkos, University of Alberta, is studying the influence of massive permafrost thaw slumps on the carbon balance in streams of the Peel Plateau, Northwest Territories. The members of the Grant-in-Aid Selection Committee for 2015 were Alexander Braun, Mark Johnson, Tom and Abbe Dunning Newbury, Mary Stapleton, Ken Tape, and John Yackel.

RESEARCH ASSOCIATES

Arctic research involves areas of expertise not encompassed by any one discipline or department. This fact is reflected in the Institute's research associates—a diverse group of individuals whose work is advancing the study of the North and the mission of the Arctic Institute. Their interests cover a wide range of disciplines in the natural, physical, and social sciences, as well as the humanities and fine arts.

- Don Albright, Biology
- Thomas D. Andrews, Archaeology and Museology
- Charles Arnold, Archaeology and Museology
- William Barr, Geography and History
- Margaret Bertulli, Archaeology
- Ellen Bielawski, Anthropology
- Lloyd Binder, Economic Development
- Jean Blodgett, Art
- Alexander Braun, Geodesy
- Dave Button, Education
- Garry Clarke, Glaciology
- Helen Corbett, Film and Journalism
- Peter Dawson, Archaeology
- Ken de la Barre, Human Geography
- Mark Dickerson, Political Science
- Jon Dudley, Earth Science Outreach, Geology, Canadian Arctic Culture
- Jeff Gilmour, Law
- Gunhild Hoogensen Gjørsv, Political Science
- John Graham, Social Work
- Norman Hallendy, Ethnohistory
- Alexander Hill, History
- Gerald Holdsworth, Glaciology
- Robert Huebert, Political Science
- Martha Johnson, Anthropology
- Peter Johnson, Geography
- Kenneth Jones, Geology, Geography, Archaeology, History
- Karim-Aly Kassam, Arctic Social Science
- Barbara Kingscote, Veterinary Medicine
- Heidi Klein, Environmental Planning
- Susan Kutz, Veterinary Medicine
- P. Whitney Lackenbauer, History
- Line Laplante, Spirituality and the Environment
- Nic Larter, Zoology
- Alice Legat, Anthropology
- David Lertzman, Aboriginal Studies
- Robert MacDonald, History
- Sean Maher, Anthropology
- Constance Martin, Art History
- Arthur Mason, History, Politics and Culture
- Robert McPherson, Geology and History
- Frank Miller, Wildlife Biology
- Magdalena Muir, Law, Environment and Resource Management
- Dave Norton, Ecology
- Marc Poulin, Medicine and Kinesiology
- Martin Raillard, Arctic Ecology
- William Semple, Northern Housing
- Alan Smart, Anthropology
- Jane Sproull Thomson, Inuit Art and Culture, Heritage Planning
- Mary Stapleton, History and Planning
- Emma J. Stewart, Geography
- Wayne Strong, Forest Ecology
- Susanne Swibold, Film and Journalism
- Darielle Talarico, Ecotourism
- Callum Thomson, Archaeology and Expedition Cruise Tourism
- Robert van Everdingen, Hydroecology
- Wanda Wuttunee, Native Studies, Law and Management
- John James Yackel, Geography
- Jose Zorrilla, Interdisciplinary

SELECTED RESEARCH PUBLICATIONS

- Barr, W. 2014. German paddle-steamers on the Yenisey. *Hakluyt Society Journal*, August. 28 p.
- . 2014. The long wait: The award to John Rae of the reward for first determining the fate of the Franklin expedition. *Orkney Antiquarian Journal* 7:83–86.
- Barr, W.**, and Green, L. 2014. Lt. Aemilius Simpson’s survey from York Factory to Fort Vancouver, 1926. *Hakluyt Society Journal*, August. 106 p.
<http://dx.doi.org/0.1017/S0032247412000630>
- Barr, W.**, and Forestier-Blazart, N., and Forestier-Blazart, J.-C. 2014. ‘The last duty of an officer’: Lieutenant de vaisseau Joseph-René Bellot 1826–1853, in the Franklin search. *Polar Record* 50(252):1–30.
- Barr, W.**, Berger F., and Mazzoli, E. 2014. The northernmost naval officer: Eduard Orel of the Austro-Hungarian North Pole Expedition 1872-1874. *Il Polo* 59(3):9–43.
- Holdsworth, G.**, and Lacourse, T. 2014. Discovery of mid-third millennium BP wood at Ogilvie Pass in the St. Elias Mountains of Canada. *Alaska Journal of Anthropology (Research Notes)* 12(2):92–94.
- Huebert, R.** 2014. Canada and future challenges in the Arctic. In: *Arctic 2014: Who gets a voice and why it matters*. Polar Initiative Policy Brief Series. Washington, D.C.: Wilson Center. 5 p.
- . 2014. The quest for a Canadian naval strategy 1991-2014: Why it matters. 2014. *Northern Mariner* 24(3-4):324-344.
- . 2014. Rising temperatures, rising tensions: Power politics and regime building in the Arctic. In: Stephens, T., and VanderZwaag, D.L., eds. *Polar oceans governance in an era of environmental change*. Cheltenham, United Kingdom: Edward Elgar Publishing. 65–85.
- . 2014. Canadian Arctic security: Shifting challenges. In: Murray, R.W., and Nuttall, A.D., eds. *Amherst*, New York: Cambria Press. 131–164.
- . 2014. The transformation of Canadian Arctic sovereignty and security: From myth to reality? In: Briggs, C., ed. *Modern Canada: 1945 to present*. Don Mills, Ontario: Oxford University Press. 257–271.
- . 2015. The case for a more combat-capable Arctic offshore patrol ship. *Canadian Naval Review* 10(3):4–8.
- . 2015. The Canadian-American “special” defence relationship: New challenges and demands. *On Track* 20(2):39–41.
http://www.cdainstitute.ca/images/on_track/On_Track_20.2.pdf
- Ibarguchi, G. 2014. From Southern Cone arid lands, across Atacama, to the Altiplano: Biodiversity and conservation at the ends of the world. *Biodiversity* 15(4):255–264.
<http://dx.doi.org/10.1080/14888386.2014.973446>
- Ibarguchi, G., and Murray, M. 2015. The Arctic Observing Summit. Report on the AOS 2014 for the Office of Naval Research Global. Calgary, Alberta: ISAC International Program Office.
- Ibarguchi, G.**, **Murray, M.S.**, Schlosser, P., **Rajdev, V.**, and van der Watt, L.-M. 2015. The Arctic Observing Summit: Progress toward an integrated, multipurpose, and international Arctic observing system. *Arctic SIGnal Newsletter* 2(2):5–10.
<http://www.cmos.ca/site/sig>
- Ibarguchi, G.**, Doyle, M., **Murray, M.**, Beamish, A., Brooker, A., Carpenter, M., Ernst, C., et al. 2015. Arctic Regions Essential Components Integrated Monitoring Design (AREC). Integrated Arctic Site-based Monitoring Design: Freshwater and Terrestrial Ecosystems. (Version: 2015-03-31). Final report for Environment Canada. Calgary, Alberta: Arctic Institute of North America, University of Calgary.
- Jones, K. 2014. Foxe Basin. In: Hund, A.J., ed. *Antarctica and the Arctic Circle: A geographic encyclopedia of the Earth’s polar regions*. Santa Barbara, California.

- Lackenbauer, W., and **Huebert, R.** 2015. Premier partners: Canada, the United States and Arctic security. *Canadian Foreign Policy Journal* 20(3):320–333.
<http://dx.doi.org/10.1080/11926422.2014.977313>
- Larter, N.C.**, Macdonald, C.R., Muir, D., Elkin, B.T., and Wang, X. 2014. Multi-elements, radionuclides and persistent organics in tissues of mountain goats in Northwest Territories. *Biennial Symposium of the Northern Wild Sheep and Goat Council* 19:98–107.
- Lertzman, D., writer and producer. 2015. *Pimachihowin: Living With the Land*. Energy Indigenous Environment Interface Research Program Dissemination Video.
<https://vimeo.com/115838446>
- Liggett, D., and **Stewart, E.J.** 2015. Polar tourism (research) is not what it used to be: The maturing of a field of study alongside an activity. *The Polar Journal* 5(2):247–256.
<http://dx.doi.org/10.1080/2154896X.2015.1104802>
- — —, eds. 2015. Polar tourism gateways. *The Polar Journal* 5(2).
- Murray, M., and Ibaraguchi, G. 2015. Partnership between the Scientific Community and Arctic Stakeholders (PaSCAS): Responding to Change Workshop. Report from the Arctic Science Summit Week (ASSW) 2015, Toyama, Japan. ISAC International Program Office. 9 p.
<http://www.arcticchange.org/publications>
- Pashkevich, A., Dawson, J., and **Stewart, E.J.** 2015. Governance of expedition cruise ship tourism in the Arctic: A comparison of the Canadian and Russian Arctic. *Tourism in Marine Environments*, 10(3-4):225–240
<http://dx.doi.org/10.3727/154427315X14181438892883>
- Stewart, E.J.**, Dawson, J., and Johnston, M. 2015. Risks and opportunities associated with change in the cruise tourism sector: Community perspectives from Arctic Canada. *The Polar Journal* 5(2):403–427.
<http://dx.doi.org/10.1080/2154896X.2015.1082283>
- Strong, W.L. 2015. High-latitude Yukon Boreal-Cordilleran grassland plant communities. *Arctic* 68(1):69–78.
<http://dx.doi.org/10.14430/arctic4453>
- — —. 2015. Range-level lodgepole pine (*Pinus contorta* var. *latifolia* Engelmann ex S. Watson) understory types in western North America. *Forest Science* 61(2):247–257.
<http://dx.doi.org/10.5849/forsci.14-020>
- Vossepoel, S. 2014. From data to publications: The Polar information spectrum. *Data Science Journal* 13:PDA32–PDA36.
<http://doi.org/10.2481/dsj.IFPDA-06>
- Whittle, P.M., **Stewart, E.J.**, and Fisher, D. 2015. Re-creation tourism: De-extinction and its implications for nature-based recreation. *Current Issues in Tourism* 18(10):908–912.
<http://dx.doi.org/10.1080/13683500.2015.1031727>

Financial Report for the Fiscal Year Ended March 31, 2014 (Condensed)

The Institute's financial year ends on March 31, and the figures here reflect the latest complete year and comparatives. The information presented in this document is an extract from the financial statements. This summary financial information cannot be expected to provide as comprehensive an understanding of the performance of the Institute as the full financial statements. Financial statements can be obtained by contacting the Institute. The Institute is a wholly owned subsidiary of the University of Calgary. The results of operations and the financial position of the Institute are included in the consolidated financial statements of the University. Funding for general and administrative expenses is received from the Province of Alberta, Department of Advanced Education, through the University. The University has also provided substantial in-kind support.

The Notes and Schedules accompanying these financial statements form part of the statements. To see the Notes and Schedules, please contact the Institute Manager at arctic@ucalgary.ca, 403-220-7515.

	2014	2013
ASSETS		
Cash	194	-
Due from the University of Calgary	431,745	361,722
Investments	1,404,914	1,241,979
Accounts receivable	211,552	88,522
Inventories and prepaid expenses	25,961	30,305
Tangible capital assets	2,425,130	2,441,252
	4,499,496	4,163,780
LIABILITIES		
Accounts payable and accrued liabilities	47,910	49,439
Deferred revenue	2,537,047	2,571,528
	2,584,957	2,620,967
NET ASSETS		
Endowments	595,488	477,490
Accumulated surplus	1,269,539	1,017,278
Accumulated re-measurement gains (losses)	49,512	48,045
	1,914,539	1,542,813
	4,499,496	4,163,780

STATEMENT OF OPERATIONS, as at March 31, 2014

	2014	2013
REVENUE		
University of Calgary and government grants	350,722	298,833
<i>Sales of services and products</i>	343,823	288,843
<i>Donations and other grants</i>	309,323	473,261
<i>Investment income</i>	150,325	49,536
	1,154,193	1,110,473
EXPENSE		
<i>Research</i>	901,933	1,114,972
	901,933	1,114,972
<i>Excess/(deficiency) of revenue over expense</i>	252,261	(4,499)
<i>Change in accumulated surplus</i>	252,261	
<i>Transfer from endowment</i>		
<i>Accumulated surplus, beginning of year</i>	1,017,278	1,021,777
<i>Accumulated surplus, end of year</i>	1,269,539	1,017,278

STATEMENT OF CASH FLOW, as at March 31, 2014

	2014	2013
OPERATING TRANSACTIONS		
Excess/(deficiency) of revenue over expense	252,261	(4,499)
Add (deduct) non-cash items:		
Amortization of tangible capital assets	27,648	91,677
Amortization of deferred capital contributions	-	90,369
Gain on non-endowed investments	-	-
Total non-cash items	27,648	182,047
Net change in non-cash working capital	(143,133)	(295,995)
Cash Provided by (applied to) operating transactions	136,776	(118,448)
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	11,525	11,703
Cash Provided by (applied to) capital transactions	11,525	11,703
INVESTING TRANSACTIONS		
Proceeds from (purchase of) long-term investments, net	(91,822)	(48,272)
Endowment investment income	21,746	7,641
Cash Provided by (applied to) investing transactions	(70,076)	(40,631)
FINANCING TRANSACTIONS		
Endowment contributions	(8,008)	3,498
Cash Provided by (applied to) financing transactions	(8,008)	3,498
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	70,216	(143,879)
DUE FROM THE UNIVERSITY OF CALGARY, BEGINNING OF YEAR	361,723	505,601
DUE FROM THE UNIVERSITY OF CALGARY, END OF YEAR	431,939	361,723



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