



Arctic Institute of North America

ANNUAL REPORT 2008



Board of Directors

- Michel Scott, Calgary, Alberta (Chair)
- Patrick Borbey, Gatineau, Quebec
- Louis Fortier, Quebec, Quebec
- Rose Goldstein, Calgary, Alberta
- David Hik, Edmonton, Alberta
- Cooper Langford, Calgary, Alberta
- Shawn Marshall, Calgary, Alberta
- Sandy Murphree, Calgary, Alberta
- Leon Sorenson, Calgary, Alberta
- Henry Sykes, Calgary, Alberta
- Harry Wilmot, Calgary, Alberta
- Carl Benson, Fairbanks, Alaska (Ex officio)

Staff

Executive Director:

Benoît Beauchamp

Institute Manager:

Mary Li

Director of Communications:

Ruth Klinkhammer

Administrative Assistant:

Trisha Carleton

Arctic Editor:

Karen McCullough

Book Review Editor:

Peter Schledermann

ASTIS Manager:

Ross Goodwin

ASTIS Information Analysts:

Lynda Howard, Lynne Howard, and Pam Scowen

ASTIS Volunteer:

Robert van Everdingen

University of Calgary Librarian, AINA Collection:

Claudette Cloutier

Kluane Lake Research Station Manager:

Andrew Williams



Arctic Institute of North America

University of Calgary

2500 University Drive NW

Calgary, Alberta, Canada T2N 1N4

Phone (403) 220 • 7515

Fax: (403) 282 • 4609

Website: www.arctic.ucalgary.ca

Photo Credits: Marie Auger-Méthé, Benoît Beauchamp, Chris Fuller, Mukesh Gupta, Lance Goodwin, Dr. Jean Rawling and John Yackel.



Message from the Executive Director

WITH INTERNATIONAL POLAR YEAR (IPY) IN FULL FORCE, 2008 was a memorable year for Arctic research in Canada and abroad. Hundreds of scientists roamed the Arctic landscape as undeniable evidence for rapid warming continued to accumulate. While seasoned scientists fine-tuned their latest models and theories, a new cohort of young scientists were introduced to the Arctic for the first time, heralding a much welcome generational change among the polar research community.

IPY was a big driver of some of our 2008 activities at the Arctic Institute of North America (AINA). Our research station at Kluane Lake was bustling with IPY-related activities as dozens of researchers and their students used the unique environmental setting of Kluane Lake to carry out their investigations. Meanwhile, Ross Goodwin, Manager of the Arctic Science and Technology Information System (ASTIS) and his staff added the first wave of IPY publications to the Canadian IPY Publications Database and worked on two other IPY projects. In addition, AINA published a revised edition of Dr. William Barr's book, *The Expeditions of the First International Polar Year 1882–83*, which was officially launched in Calgary's Aquila bookstore in November 2008. Finally, AINA received generous funding from the federal IPY Education and Outreach Program to make scientific stories available to a broad segment of the population, including Northerners. Our Director of Communications, Ruth Klinkhammer, is spearheading this project. Many stories have appeared on our website, which has been modified to give the IPY project the prominence it deserves. Please come for a visit at www.arctic.ucalgary.ca.

Dr. Karen McCullough, Editor of *Arctic* journal, was also busy this year with not only the publication of William Barr's IPY book and four regular issues of *Arctic*, but also a supplementary issue of *Arctic* on *Arctic Change and Coastal Communities*. The journal continues to be an important intellectual beacon within the Arctic knowledge community and the number of papers submitted annually keeps increasing.

For my part, I have continued to work hard to ensure that AINA solidifies its leadership position with our host, the University of Calgary (U of C), when it comes to developing northern research and education programs. The U of C possesses an excellent roster of world-class researchers, many of whom are already AINA Research Associates. Increasing our partnership with these individuals on the research, education and outreach fronts has been one of my priorities in 2008. This effort culminated in December 2008 when I was invited to address the U of C's prestigious Chancellor's Club on Arctic issues.



In 2008, we published our business plan in the form of a visually appealing prospectus that is available to anyone upon request. The Arctic is hot indeed and the Arctic Institute is poised to develop exciting new programs to engage a whole new generation of people fascinated by Arctic knowledge. To achieve this, we continue to rely on the excellent work of many people dedicated to making things happen. In addition to those individuals mentioned above, I want to extend my sincere appreciation to Andy Williams, who continues to man the fort at Kluane Lake, to our dedicated ASTIS information analysts, Lynne Howard, Lynda Howard and Pam Scowen, to our Institute Manager, Alvina Mountenay, to our Senior Financial Analyst, Bobbi Tomchuk, and to our Administrative Assistant, Jenny Hoops. And while Alvina and Jenny have moved on to different jobs, we were fortunate to welcome the highly qualified Mary Li and Trisha Carleton to carry the Institute's administrative torch. I also want to take this opportunity to thank our Board of Directors for its continual support and the time and energy each member puts into supporting AINA, especially our Chairman Michel Scott. And finally I want to thank the many organizations and corporations that lend their financial support to the Arctic Institute, as well as our 1400 members without whom the Institute would not exist.

Benoît Beauchamp, PhD, Executive Director

Message from the Chair

THE PAST YEAR SAW THE BEGINNING OF WHAT IS turning out to be a tumultuous time for institutions and corporations. While the Arctic Institute has not been immune to these financial stresses, our sound fiscal management practices have left us well placed to weather the storm. Consequently, at the end of 2008 the Institute was able to move forward with all of its programs and staff positions intact.

Throughout the year, the Arctic continued to grab headlines and our experts were in demand for their insights and thoughtful comments. Executive Director Benoît Beauchamp spoke at several events and was, most notably, asked to be one of the featured speakers at Arctic Change 2008, an international conference that attracted more than 800 participants to Quebec City. Benoît was not the only Institute representative at the conference. I am proud to note that board members Patrick Borbey, Assistant Deputy Minister with Indian and Northern Affairs Canada, Louis Fortier, Scientific Director of ArcticNet, David Hik, Director of the Canadian International Polar Year (IPY) Secretariat, and several research associates and institute staff spoke as well. This strong showing by the Arctic Institute demonstrates the high calibre of people working with and for the organization.

Our board enjoyed a year of stability. We retained all members and welcomed one new person—Leon Sorenson, Vice President, Arctic Islands, for Petro-Canada. This experienced team served the Institute well and I am confident that with their steady guidance we will maintain our forward momentum in the coming year. We welcomed two new staff members and said regretful goodbyes to two others. Trisha Carleton joined our staff in



the fall, replacing Jenny Hoops. We were also fortunate to hire Mary Li as our new Institute Manager. Mary replaces Alvina Mountenay who accepted another position at the University of Calgary.

Our keystone programs continued to perform well under the stewardship of our excellent managers. The Arctic Science and Technology Information System began several new projects. We worked with the University of Calgary Press to publish two new books under the Northern Lights Series. The journal *Arctic* continued with its record of publishing exceptional peer-reviewed research papers—a fact that was publicly recognized by one of Canada’s foremost science journalists, Peter Calamai.

One of the highlights of the year was the IPY grant the Institute received to promote Arctic science. This grant, awarded by the Government of Canada Program for IPY, is being used for a program to notify Canadian media about noteworthy Arctic research being published in national and international scholarly journals. The Institute also developed an innovative map system that tells the story of Arctic exploration by Canada’s military, RCMP and research community. The site, created by PhD student Adam Lajeunesse, uses text, photos and interactive maps to pull the reader through seven exciting ventures.

Although 2009 marks the end of IPY, it does not signal a slow-down of activity at the Arctic Institute. An unprecedented convergence of issues is bringing change to the North, making the need for the services of the Arctic Institute more important than ever. We will continue to pursue our mandate of promoting the Arctic to academics, the public and other stakeholders.

Michel Scott, Chairman of the Board

AINA US Corporation Report

THE ARCTIC INSTITUTE OF NORTH AMERICA (AINA) was founded jointly in Canada and the United States in 1945 with recognition of the cost of ignorance about the Arctic during World War II. We are now going through a time of rapid changes on a global scale, which are pronounced in the Arctic. These changes in climate and socio-political activity present new challenges to Canada and the U.S. and emphasize the need for joint, cooperative activity. The University of Alaska and the University of Calgary have been considering ways to enhance this collaboration through the Arctic Institute.

One joint project, underway for the past 15 years, is the AINA Grant-in-Aid Program. This project is administered by a binational committee, chaired by Erich Follmann of University Alaska Fairbanks (UAF) and funded entirely from member donations. In 2008, 19 proposals were received, of which 10 were funded at \$1,000 each. Since the program was reestablished in 1994, 121 out of 263 proposals have been funded for a total of \$94,000.

Our public outreach programs include the Arctic Roundtable. The 15th Arctic Roundtable, “Coping with Change,” was held in September. Panel members were Terry Whitledge, Director of the Institute of Marine Science, UAF; Gary Kofinas, Director of the Resilience and Adaptation Program UAF;





and Deborah Williams, President, Alaska Conservation Solutions and former Special Assistant to the U.S. Secretary of Interior for Alaska. In addition to the Arctic Roundtable, AINA joined the U.S. Arctic Research Commission and the University of Alaska Museum of the North in presenting a series of well-received IPY lectures for the general public at the University of Alaska Museum of the North.

At its Board of Governors meeting in September, AINA U.S. said goodbye to four of our board members: Harold W. Borns, John J. Burns, John J. Kelley, and Charles Roots. John Kelley remains as the Executive Secretary and several new board members will be appointed in the near future.

In July, AINA U.S. executives met with the new UAF Chancellor, Brian Rogers, and the Vice Chancellor of Research, Buck Sharpton, about future plans. The fact that AINA is the oldest organization in North America dedicated to advancing knowledge about the Arctic and that it is both an international and a membership organization was appreciated as a base upon which to build.

Media and Outreach

THROUGHOUT 2008, THE MEDIA CONTINUED TO FOCUS ON the Arctic as an example of climate change, and journalists frequently approached Arctic Institute staff, board members and research associates for interviews.

As well as publicity in local and national media, the Institute was featured a number of times on the University of Calgary's homepage, a site that receives 70,000 hits per day. Two popular pieces were coverage of the participation by Executive Director Benoît Beauchamp and Professor Rob Huebert in the Canadian military venture, Operation Nunavut, in April, and blogs posted from the Canadian icebreaker *Amundsen* by two of AINA Research Associate John Yackel's graduate students.

Inuit elders (from left) Louis Angalik, Mark Kalluak and Donald Uluadluak wear stereoscopic glasses to take a tour through a computer-generated whalebone hut created by Dr. Peter Dawson, AINA Research Associate and University of Calgary (U of C) Archaeology Professor, and Dr. Richard Levy, a U of C Professor in the Faculty of Environmental Design. The three elders traveled from Arviat to Calgary to view the hut, which was generated in the U of C's Schlumberger iCentre.





Selected Media Mentions of Arctic Institute Staff and Affiliates

DATE	MEDIA OUTLET	HEADLINE
January 17	Bavarian Radio	Dr. John Yackel interviewed about sea ice.
February 15	<i>Globe & Mail</i>	The Inuit cultural matrix reloaded.
March 2008	<i>Petroleum Review</i>	How much heat can a polar bear?
March 13	<i>Daily Oil Bulletin</i>	With 17 Tcf discovered, Arctic Islands beckon.
March 22	<i>Calgary Herald</i>	Rediscovering the Arctic.
April 2008	<i>Natural Gas Intelligence</i>	‘Polar Bear’ warns against Arctic gas boosterism.
April 4	<i>Edmonton Journal</i>	Arctic fantasies need reality check.
April 10	CBC North	Beaufort Sea polar bears starving to death, scientist finds.
June 10	<i>Calgary Herald</i>	BP’s \$1B bid points to Arctic oil rush.
July 2008	<i>Sharp</i>	Who owns the North?
July 9	Radio Canada	Benoît Beauchamp interviewed about new airship technology.
August 17	<i>Calgary Herald</i>	Arctic energy bounty rife with obstacles.
August 17	<i>Montreal Gazette</i>	Riches beckon—but risks are high.
September 2	<i>Daily Oil Bulletin</i>	Is the Arctic ‘Cold Rush’ about to begin?
December 1	<i>New Technology Magazine</i>	Northern Exposure: As the ice recedes, Arctic exploration, and technology development, heats up.

Photographic North

In February, Adam Lajeunesse, a PhD student studying Canadian military history, was contracted to add content to portions of the Institute’s online photo collection. Lajeunesse wrote detailed histories about several northern scientific and military expeditions contained in the collection. He also developed a series of interactive maps that help tell the story of the journey explorers made.

The new content, entitled Sovereignty, Defence and Discovery can be viewed online at <http://www.ucalgary.ca/arcticexpedition/>.





Events

The Arctic Institute staged a very exciting ‘Fear Factor Arctic’ booth for the University’s 2008 Campus Fair. Kids and adults delighted in trying their hands at a variety of activities including the Polar Bear Plunge, Operation MuskoX, and the Caribou Eyeball Chase. For Sneak-a-Peak, a University of Calgary event held for junior high school students, the Institute joined with the Faculty of Veterinary Medicine to stage the Caribou Migration Game. The game was a favourite with students and was featured by *Global TV* on its evening news show.

Two book promotion events were held. In October, Senior Research Associate William Barr spoke at the University of Calgary Press’ initiative “Making a difference. Making you think.” Barr spoke about the two Northern Lights Series titles published in the fall: *Lands that Hold One Spellbound: A Story of East Greenland*, by Spencer Apollonio, and *Resurrecting Dr. Moss: The Life and Letters of a Royal Navy Surgeon*, by Paul Appleton.

A book launch was held at Aquila Books on November 26 for the Apollonio and Appleton books and for the second edition of Barr’s book, *The Expeditions of the First International Polar Year, 1882–83*.

Booths were hosted at several events during the year, including the Canadian Society of Petroleum Geologist’s Honorary Address in Calgary, the international Arctic Change 2008 conference in Quebec City, and the Harsh Climate Canada conference, also in Calgary.

Arctic Science & Technology Information System

THE ARCTIC SCIENCE AND TECHNOLOGY INFORMATION SYSTEM (ASTIS) is Canada’s northern database. ASTIS contains 66,200 records describing publications and research projects about northern Canada. ASTIS includes all subjects, has been in operation since 1978 and is funded through contract work and donations.

The ASTIS database is available for free on the Arctic Institute’s website. ASTIS is searchable from a Simple Search page, from an Advanced Search page and by clicking on hyperlinks in database records. If the full text of a publication is available online, the ASTIS record will provide a link to it. The bilingual ASTIS website also provides search help, information about the scope of the database, instructions for obtaining publications and a list of the organizations that have supported ASTIS.

The ASTIS database currently contains 15,200 records describing research projects conducted in Canada's three northern territories since 1974. These records are based on information provided by the 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.

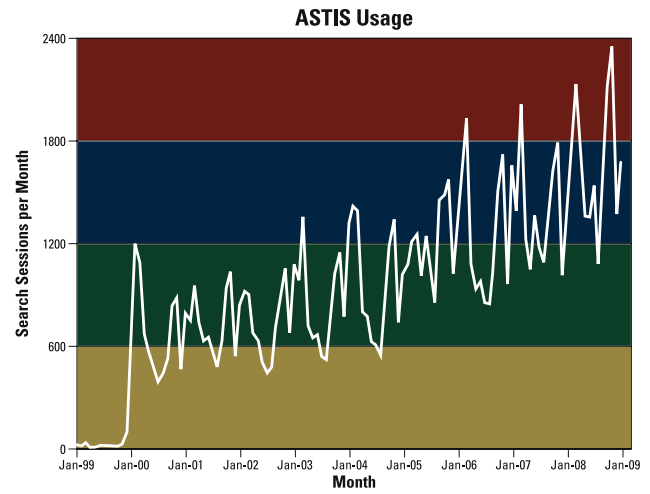
ASTIS specializes in the preparation of bibliographic databases about northern Canada, and can easily make these databases available from customized websites for clients. The ASTIS page of the Institute's website provides access to thirteen such databases. ASTIS is also available with the world's other major polar databases in EBSCO Publishing's international *Arctic & Antarctic Regions* database, which describes more than one million polar publications.

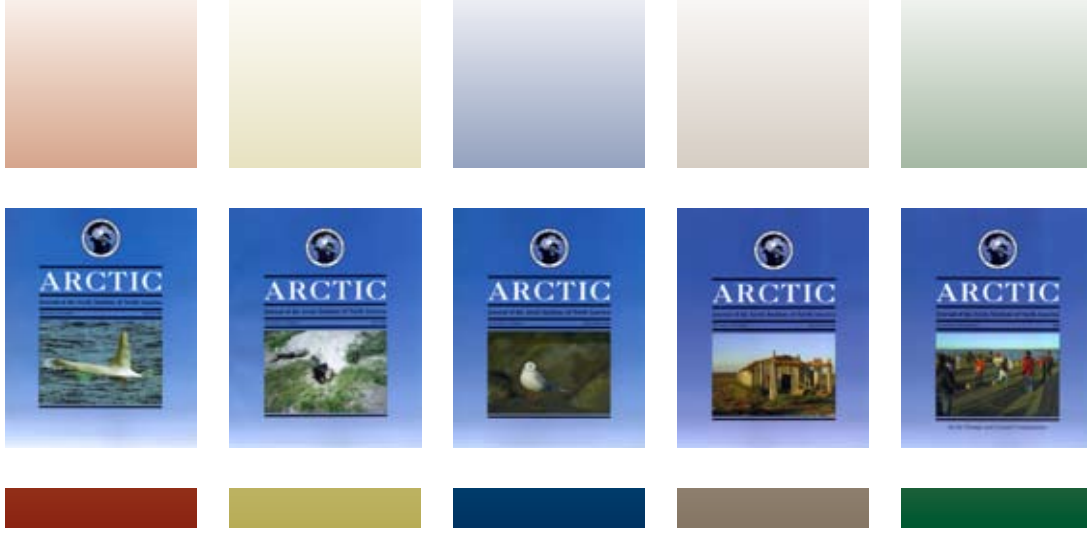
Ongoing ASTIS projects that continued during 2008 included the *Canadian IPY Publications Database* funded by the Government of Canada Program for International Polar Year (IPY) and EnCana Corporation (and which included work with the American Geological Institute, the Scott Polar Research Institute, the University of Colorado and National Information Services Corporation on the international *IPY Publications Database*); the *Hydrocarbon Impacts* database funded by Indian and Northern Affairs Canada (INAC); the *Circumpolar Health Bibliographic Database* funded by the Canadian Institutes of Health Research Team in Circumpolar Health Research; the *NCP Publications Database* funded by the INAC Northern Contaminants Program; work with the Inuvialuit Joint Secretariat on the *Inuvialuit Settlement Region Database* funded by Shell Canada and MGM Energy; the *Northern Granular Resources Bibliographic Database* funded by the INAC Land and Water Management Directorate; work with the Yukon Biodiversity Working Group on the *Yukon Biodiversity Database* funded by Foothills Pipe Lines; work with Makivik Corporation, INAC, the Canadian Circumpolar Institute and the Centre d'études nordiques on the *Nunavik Bibliography*; work for the Canadian Arctic Shelf Exchange Study at Université Laval to ensure that all of their peer-reviewed publications are included in ASTIS; and work for the northern Canadian petroleum industry to cover publications about geographic regions that are of interest for oil and gas exploration, production and transportation.

New ASTIS projects that began in 2008 included work with Makivik Corporation to train Inuit students to organize the Nunavik Research Centre Library using funding provided by the Government of Canada Program for IPY; work on the *Canadian Permafrost Conferences* website funded by the Geological Survey of Canada; and work with McGill University Library to index the serial publications of Makivik Corporation as part of the Université du Québec à Montréal project *Hearing and Sharing the Voices of Nunavik*, funded by the Government of Canada Program for IPY.

ASTIS also worked on several internal Arctic Institute projects in 2008, 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 3700 publications available on the Web as PDF files.

More than 12,000 ASTIS records now provide links to PDF files using URLs or DOIs. As shown in the accompanying graph, ASTIS usage continues to increase.

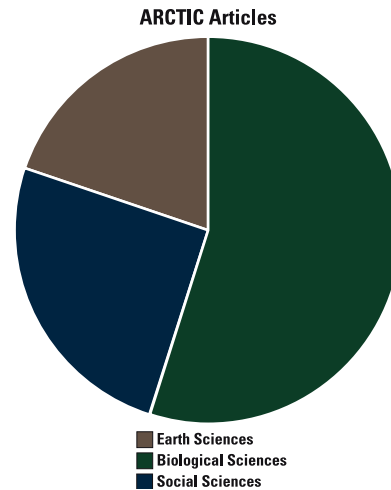




Arctic

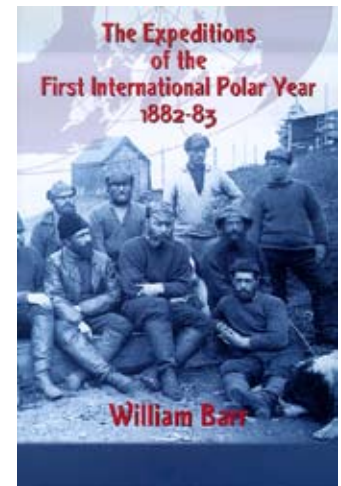
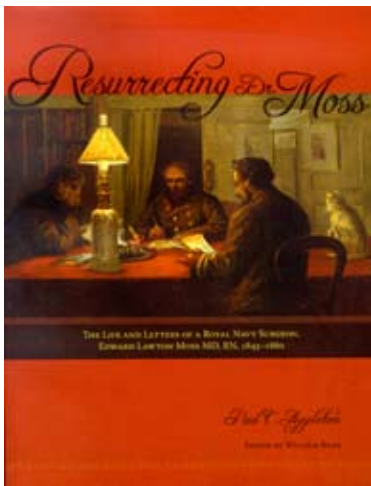
SUBMISSIONS TO THE JOURNAL CONTINUED TO BE STRONG IN 2008, with a total of 61 papers received for consideration for publication. In addition to the four regular quarterly issues of *ARCTIC* produced in 2008, we also published a supplementary issue, which was mailed out to all AINA members along with the December issue. The regular issues included 34 research articles, 2 research notes, 24 book reviews, 2 obituaries, and 5 *InfoNorth* essays. The chart shows the breakdown of the research articles by major disciplinary category.

The supplementary issue published in 2008 comprised papers from the “Arctic Change and Coastal Communities” conference, which was held by the Coastal Zone Canada Association in Tuktoyaktuk in August 2006. The papers published in the supplementary issue of *ARCTIC* cover the three main themes of the conference: Drivers of Change in the Arctic, Community Well-being, and Arctic Ocean Management and Governance. The supplement contained an introduction, a plenary speech from Inuit elder Peter Irniq, a summary report of the Northern Forum held at the Coastal Zone Canada conference, nine articles, and a conference statement, entitled the “Tuktoyaktuk Declaration.” We gratefully acknowledge the Coastal Zone Canada Association for funding the production of the supplementary issue, Dr. David Rosenberg for coordinating the submission of the papers and for his editorial work, Dr. Helen Fast for her great assistance, patience, and support throughout the publication process, and all of the contributors to the issue for their perseverance and cooperation in reworking their conference presentations into scholarly journal articles.



International Polar Year Project

IN MAY, THE ARCTIC INSTITUTE LEARNED that its proposal for International Polar Year communication and outreach funds had been successful. The funds, awarded by the Government of Canada Program for IPY, have been used to develop a program to promote Arctic science to media outlets in northern and southern Canada. Northern media outlets, such as CBC North, have been especially interested in the news releases issued by the Institute. Work on the project will continue until January 2011.



Northern Lights Series

THE NORTHERN LIGHTS SERIES OF BOOKS REPRESENTS a collaborative effort of the Arctic Institute of North America and the University of Calgary Press. Two new titles were published in 2008.

The first is *Resurrecting Dr. Moss: The Life and Letters of Royal Navy Surgeon, Edward Lawton Moss MD, RN, 1843–1880*, by Paul Appleton. Dr. Moss was one of the surgeon-naturalists on the British expedition that attempted to reach the North Pole from northern Ellesmere Island in 1875–76. This expedition was only one event in a short but full life. Of particular interest to Canadians is that Dr. Moss was in charge of the Royal Navy's hospital at Esquimalt, near Victoria, BC in 1872–75.

The other book published in 2008, *Lands that Hold One Spellbound: A Story of East Greenland* by Spencer Apollonio, provides a comprehensive history of East Greenland, covering every aspect of that complex history from the Paleo-Eskimos around 2,200 BC, to the present-day development of adventure-tourism cruises. The intervening 4,000 years saw the progressive exploration of this coast, which is notoriously difficult to reach by sea because of the constant stream of ice carried by the East Greenland Current. That history had more than its share of drama—from the disappearance of Ludwig Mylius-Erichsen's expedition in 1908 and the equally eventful search for that expedition by Ejnar Mikkelsen in 1909–12, to the secret German weather stations established during World War II and the clashes between the Germans and the Danish sledge patrol.

Library

THE ARCTIC INSTITUTE OF NORTH AMERICA (AINA) Library collection, housed in the Gallagher Library, remains an area of strength for the University of Calgary Library. The collection's multidisciplinary focus attracts students, researchers and an interested public from across campus and indeed from around the world. This year the collection has been used to answer a wide range of questions from Dome Petroleum and their work in the Arctic to a plane crash over Clyde Inlet in 1949.

The northern research collection at the University of Calgary continues to grow. A total of 30 new titles were ordered through the Northern Studies fund in 2008 and the collection is further enhanced by the addition of titles ordered through other library funds. In the summer of 2008, a STEP student added 630 items to the collection that had previously been housed in the Pipeline

Room. During the project, priority was given to environmental and geoscience-related items. An additional 476 copy records for 443 titles were also added to the Library with assistance from Bibliographic Services, from donations of materials received from ASTIS.

The University of Calgary Library is committed to making northern material more accessible. For an overview of the AINA collection and links to other research resources for Northern Studies, visit the web pages created at <http://kbsubguides.library1.ucalgary.ca/?CategoryID=64>.

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.

Kluane Lake Research Station

SINCE 1961, THE KLUANE LAKE RESEARCH STATION (KLRS) has played a critical role in fostering northern research by providing scientists with a base from which to operate. Located in the Yukon near the St. Elias Mountains, the station is a gateway to some of the highest icefields in Canada. The extreme elevation difference (> 5,000 m) between Kluane Lake and the crest of the St. Elias Mountains creates exceptionally diverse research opportunities in a relatively small geographic area.

Operation of the station has allowed AINA to position itself as a key player in the network of northern organizations. We are one of the few research institutes in the country that provides logistical support to northern researchers. Each year, KLRS attracts researchers from across the country and from a variety of disciplines including biology, geomorphology, high-altitude physiology, anthropology, archaeology, ecology, botany, hydrology, limnology, climatology, geography, and geology. We are proud that the station is available to all researchers, regardless of institutional affiliation.

The summer of 2008 was very busy as we hosted close to 100 researchers and university students. Some of the projects underway examined glacial surging, how animals cope with natural stressors, postglacial development of the Kluane region ecosystems, plant-herbivore-climate dynamics in alpine ecosystems, the dynamics of frozen ground, and the structure of plant and herbivore communities in the boreal forest and nearby grasslands.



One of the highlights of the summer was a visit to the Research station by Patrick Borbey, a member of AINA's Board of Directors and Assistant Deputy Minister of the Northern Affairs program of Indian and Northern Affairs Canada (INAC), at the end of May. He was accompanied by Danielle Labonte, Director General.

This visit showed Borbey the breadth of scientific activities taking place at Kluane Lake and gave him a first-hand impression of the state of the 50-year-old infrastructure. KLRS Base manager Andy Williams accompanied Borbey and Labonte during their visit and flew them over the St-Elias ice fields west of the station. KLRS was also visited by Michael Wernick, INAC Deputy Minister, and his entourage in July.

Also this year was a September field trip to the station by participants taking part in the 11th International Grouse Symposium, held in nearby Whitehorse. During the two-day trip, the 50 visitors toured the KLRS facilities, took part in a variety of field trips around the station, and listened to a talk by Research Station Manager Andy Williams about early aviation-supported research in the St. Elias Mountains.

Scholarships

Jennifer Robinson Scholarship – \$5,000

Joan Bunbury, PhD candidate with the Department of Geography at the University of Ottawa, is the 2008 recipient of the Jennifer Robinson Scholarship. Bunbury is investigating the impact that the White River tephra had on aquatic ecosystems in the southwest Yukon. A second objective of her work is to study how aquatic ecosystems of this region have responded to climatic change over the past 2,000 years.

Lorraine Allison Scholarship – \$3,000

Marianne Marcoux, a PhD candidate in the Department of Natural Resource Sciences at McGill University, is the 2008 winner of the Lorraine Allison Scholarship. Marcoux is investigating the social organization and communication of narwhals in Milne Inlet on Baffin Island. She is also working with the residents of Pond Inlet to study the impact of shipping traffic on narwhals.

Jim Bourque Scholarship – \$1,000

Jarett Nevill, a fifth year BSc student majoring in biological sciences at the University of Alberta, has been awarded the Jim Bourque Scholarship. Nevill is a Metis from Lac La Biche, Alberta who hopes to gain employment in the environmental sector of the oil and gas industry after graduation. As well as an interest in science, Nevill is an accomplished pianist who enjoys working with computers.



ABOVE: Dr. Marc Poulin, AINA Research Associate and Professor in the Faculties of Medicine and Kinesiology at the University of Calgary, poses with Kluane Lake Research Station manager Andy Williams (left) and pilot Donjeck Upton (right). Dr. Poulin, who works on high altitude medicine, toured the research station in 2008.

BELOW: Marianne Marcoux, a PhD candidate in Natural Resource Sciences at McGill and winner of the Lorraine Allison Scholarship, photographs narwhals swimming in Kluktoo Bay, which is located near Pond Inlet. The dog, owned by an Inuit guide, keeps her company and guards against polar bears. Marianne is studying the social organization and communication of narwhals in the Baffin Island region.





Randy Scharien, a PhD student in the University of Calgary's Department of Geography and winner of an NSTP grant, records measurements in Franklin Bay, NWT. Randy, who spent four weeks on the Canadian research icebreaker CCGS *Amundsen* last summer, is examining the spatio-temporal evolution of fast-ice from spring snow cover to summer melt ponds.

Northern Scientific Training Program

THE NORTHERN SCIENTIFIC TRAINING PROGRAM was established to help young scientists in Canada offset some of the significant expenses of northern travel. The grants are funded by Indian and Northern Affairs Canada but adjudicated and administered by the Arctic Institute.

2008 Northern Scientific Training Program Grant Recipients

NAME	DISCIPLINE	PROJECT
• Jesse Chambers	Environmental Science	Habitat carrying capacity for elk (<i>Cervus canadensis</i>) in the Takhini Valley, Yukon Territory.
• Patricia Curry	Veterinary Medicine	A new community-based technique for monitoring disease in caribou: Assessing and implementing the use of blood-on-filter paper collected by hunters.
• Howard Cyr	Archaeology	Maguse Lake archaeological project.
• Nathan deBruyn	Veterinary Medicine	Application of a non-invasive diagnostic tool to describe the diversity and distribution of gastrointestinal nematodes in northern cervids.
• Ave Dersch	Archaeology	Material culture change among the Dene.
• Christopher Fuller	Physical Geography	Parameterization of snow on sea ice using polarimetric microwave remote sensing.
• Bryanne Hoar	Veterinary Medicine	Impacts of climate change on the development and survival of <i>Ostertagia gruebneri</i> , a trichostrongylid parasite in barren-ground caribou.
• Calla McNamee	Archaeology	Maguse Lake archaeological project.
• Aiden Morrison	Engineering	Collection of ionospheric scintillation data at high latitude.
• Randy Scharien	Physical Geography	Spatio-temporal evolution of fast-ice from spring snow cover to summer melt ponds.
• Pablo Wainstein	Physical Geography	Importance of glacier-permafrost interactions in the preservation of a proglacial icing.
• Ken Whitehead	Physical Geography	Analysing changes in the seasonal flow patterns of a polythermal Arctic glacier through a combination of ground-based photogrammetry and satellite interferometry.

Grant-in-Aid Program

THE GRANT-IN-AID PROGRAM IS A JOINT CANADA-U.S. endeavor that has provided funds of \$1,000 to young investigators for the past 14 years. Applications for the program are encouraged from researchers, especially graduate students, focused on the natural and social sciences.

In 2008, the Grant-in-Aid committee received 19 applications and awarded grants of \$1,000 to ten students. On the binational committee were chair Erich Follmann in Alaska, Stephen Braund in Alaska, Matthew Sturm in Alaska, and Peter Johnson in Canada.

The committee congratulates the successful applicants, whose names and research topics are:

- **Beatrix Arendt**, University of Virginia, is conducting excavations at a mid-18th-century Inuit sod house village in Labrador, Canada;
- **Jesse Chambers**, University of Calgary, is researching the habitat carrying capacity for elk (*Cervus canadensis*) in the Takhini Valley, Yukon Territory;
- **Ben Dantzer**, Michigan State University, is studying hormone-mediated maternal effects and the impact of simulated population density on offspring phenotype in North American red squirrels in the Southwest Yukon;
- **Simone Duvette**, University of Western Ontario, is undertaking ethnographic research on Inuit beliefs and values regarding child development and well-being;
- **Stacey Fritz**, University of Alaska Fairbanks, is investigating the legacies of Arctic militarization with respect to the DEW Line;
- **Allison Hayward**, Trent University, is analyzing phytochelatin accumulation in metal-tolerant populations of tufted hair grass (*Deschampsia cespitosa*) in the Yukon;
- **Bryanne Hoar**, University of Calgary, is looking at the impact of climate change in the North on the development and survival of *Ostertagia gruehneri*, a pathogenic, gastrointestinal nematode in barren-ground caribou;
- **Lisa-Marie Leclerc**, Narwhal Tusk Research and Harvard University, is collecting Inuit traditional knowledge to understand the function of the tusk in narwhals (*Monodon monoceros*);
- **Michael Sheriff**, University of British Columbia, is testing the theory of maternal programming in snowshoe hares by assessing the impact of stress on reproduction, in an effort to further understand the extended low phase seen in all cyclic populations; and
- **Dan Shugar**, Simon Fraser University, is researching large, catastrophic landslides on glaciers.





Research Associates

ARTIC RESEARCH INVOLVES AREAS OF EXPERTISE not encompassed by any one discipline or department. This 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
- **Cindy Allen**, Dene Musicology
- **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
- **Rai Brown McCutcheon**, Gender Studies
- **Dave Button**, Education
- **Garry Clarke**, Glaciology
- **Helen Corbett**, Film and Journalism
- **Peter Dawson**, Archaeology
- **Ken de la Barre**, Human Geography
- **Mark Dickerson**, Political Science
- **Elmer Ghostkeeper**, Aboriginal Studies
- **Jeff Gilmour**, Law
- **John Graham**, Social Work
- **Norman Hallendy**, Ethnohistory
- **Alexander Hill**, History
- **Gerald Holdsworth**, Glaciology
- **Gunhild Hoogensen**, Political Science
- **Robert Huebert**, Political Science
- **Martha Johnson**, Anthropology
- **Peter Johnson**, Geography





- **Karim-Aly Kassam**, Arctic Social Science
- **Barbara Kingscote**, Veterinary Medicine
- **Heidi Klein**, Environmental Planning
- **Susan Kutz**, Veterinary Medicine
- **P. Whitney Lackenbauer**, History
- **Nic Larter**, Zoology
- **Allice Legat**, Anthropology
- **David Lertzman**, Aboriginal Studies
- **Robert MacDonald**, History
- **Sean Maher**, Anthropology
- **Constance Martin**, Art History
- **Arthur Mason**, History, Politics and Culture
- **Virginia McGowan**, Health Sciences
- **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 & 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
- **Jack van Camp**, Environmental Science
- **Robert van Everdingen**, Hydroecology
- **Wanda Wuttunee**, Native Studies, Law and Management
- **John James Yackel**, Geography
- **Jose Zorrilla**, Interdisciplinary



Research Publications

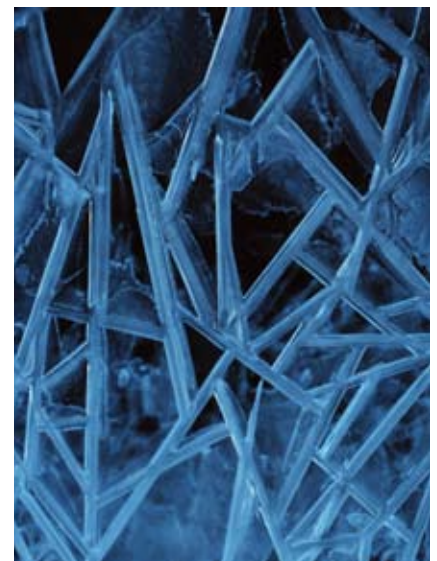
ONE MEASURE BY WHICH RESEARCH INSTITUTES AND THEIR ASSOCIATES are judged is through scholarly research. By this standard, the Arctic Institute receives high grades. Many of our research associates, members and fellows have active research programs and are renowned in their fields. What distinguishes our group of scientists is the multidisciplinary nature of their work. A few of the areas in which Arctic Institute associates work are political science, social work, geology, geography, glaciology, veterinary medicine and archaeology.

Following is a short list of selected publications from a few of the researchers who are associated with AINA.

- Baud, A., Nakrem, H.A., **Beauchamp, B.**, Beatty, T.W., Embry, A.F., & Henderson, C.M. 2008. Lower Triassic bryozoan beds from Ellesmere Island, Arctic Canada. *Polar Research* 27:428–440.
- Bensing, J.P., James, N.P., & **Beauchamp, B.** 2008. Carbonate deposition during a time of mid-latitude ocean cooling: Early Permian “subtropical” sedimentation in the Sverdrup Basin, Arctic Canada. *Journal of Sedimentary Research* 78:562–578.
- Boonstra, R., Desantis, L., Krebs, C.J., & **Hik, D.S.** 2008. Climate and nutrient influences on the growth of white spruce trees in the boreal forests of the Yukon. *Climate Research* 36:123–130.
- Dawson, P.** 2008. Using observations of Inuit spatial behavior to design culturally sustaining houses in the Canadian Arctic. *Housing Studies* 23:111–128.
- Frame, P.F., Cluff, H.D., & **Hik, D.S.** 2008. Wolf reproduction in response to caribou migration and industrial development on the central barrens of mainland Canada. *Arctic* 61:134–142.
- Graham, J.R.**, Brownlee, K., Shier, M., & Doucette, E. 2008. Localization of social work knowledge through practitioner adaptations in northern Ontario and the Northwest Territories, Canada. *Arctic* 61:399–406.
- Grasby, S.E., & **Beauchamp, B.** 2008. Intrabasin variability of the carbon-isotope record across the Permian-Triassic transition, Sverdrup Basin, Arctic Canada. *Chemical Geology* 253: 141–150.
- Hoberg, E.P., Polley, L., Jenkins, E.J., **Kutz, S.J.**, Veitch, A.M., & Elkin, B.T. 2008. Exploring emerging parasitic diseases in northern wildlife: Integrated approaches and empirical models. *Emerging Infectious Diseases* 14:10–17.

- Hudson, J.M.G., Morrison, S.F., & **Hik, D.S.** 2008. Effects of leaf size on forage selection by collared pikas, *Ochotona collaris*. *Arctic, Antarctic, and Alpine Research* 40:481–486.
- Huebert, R.** 2008, September. Canada and the changing international Arctic: At the crossroads of cooperation and conflict in northern exposure. Monograph. Institute for Research on Public Policy.
- Huebert, R.** 2008. Canadian Arctic security: Understanding and responding to the coming storm. Preliminary Paper for Canadian International Council.
- Hurst-Thomas, D., Kelly, R. & **Dawson, P.** 2008. *Archaeology, 5th ed.* Thompson Wadsworth Publishing.
- Kraft Sloan, K., & **Hik, D.S.** 2008. International Polar Year as a catalyst for sustaining Arctic research. *Sustainable Development Law and Policy* 8(3):4–8.
- Kutz, S.J.**, Thompson, R.C.A., Kandola, K., Nagy, J., Wielinga, C., et al. 2008. *Giardia* assemblage A: Human genotype in muskoxen in the Canadian Arctic. *Parasites and Vectors* 1:32.
- Morrison, S.F., & **Hik, D.S.** 2008. Discrimination of intra- and inter-specific forage quality by collared pika (*Ochotona collaris*). *Canadian Journal of Zoology* 86:456–461.
- Reid, C.M., James, N.P., Kyser, T.K., & **Beauchamp, B.** 2008. Diagenetic cycling of nutrients in sea floor sediments, and the carbonate-silica balance in the Palaeozoic cool-water carbonate system, Sverdrup Basin, Canadian Arctic. *Journal of Sedimentary Research* 78:562–578.
- Salb, A.L., Barkema, H.W., Elkin, B.T., Thompson, A., Whiteside, D.P., Black, S.R., Dubey, J.P., & **Kutz, S.J.** 2008. Domestic dogs as sources and sentinels of parasites in northern people and wildlife. *Emerging Infectious Diseases* 14:60–63.
- Stewart, E.J.**, Jacobson, D., & Draper, D. 2008. Public participation geographic information systems (PPGIS): Challenges of implementation in Churchill, Manitoba. *The Canadian Geographer* 52(3):351–366.
- Stewart, E.J.**, & Draper, D. 2008. The sinking of the MS *Explorer*: Implications for cruise tourism in Arctic Canada. *Arctic (InfoNorth)* 61:224–231.
- Weir, J.N., Morrison, S., & **Hik, D.S.** 2008. Linking foraging to population density: An assessment of GMM models for Dall sheep. *Ecological Modelling* 211:396–402.

Dr. John Yackel, Institute Research Associate and University of Calgary Geography Professor, stands on sea ice near the CCGS *Amundsen*, a Canadian research icebreaker. Yackel was on the ship for several weeks over the summer conducting sea ice research as part the IPY Circumpolar Flaw Lead research project.





Financial Report for the Fiscal Year Ended March 31, 2008 (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 of 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. Audited 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, which are audited by the Auditor General of Alberta. To reflect the total amount of Institute activity, project grants of \$17,600 (2007: \$30,200) and expenses in the amount of \$17,600 (2007: \$28,200) were also administered. These grants were received by the University of Calgary and were administered by the Institute. Funding for general and administrative expenses is received from the Province of Alberta, Department of Advanced Education and Technology, through the University. The University has also provided substantial in-kind support.



Statement of Financial Position as of March 31, 2008

	2008	2007
ASSETS		
Current Assets:		
Due from University of Calgary	\$744,141	\$785,347
Petty cash	400	400
Accounts receivable	55,555	105,813
Inventory	11,048	12,102
Prepaid expenses	2,553	2,745
	\$813,697	\$906,407
Investments	1,050,878	1,216,597
Capital assets and collections	677,792	619,421
	\$2,542,367	\$2,742,425
LIABILITIES AND NET ASSETS		
Current Liabilities:		
Accounts payable and accrued charges	77,685	\$87,291
Deferred revenue	58,298	65,555
Deferred contributions	126,125	145,450
	\$262,109	\$298,296
Unamortized deferred capital contributions	118,476	112,747
Net Assets:		
Unrestricted net assets	1,125,446	1,338,370
Investment in capital assets and collections	559,316	506,674
Internally restricted net assets	54,537	95,033
Endowments (Note 8)	422,483	391,305
	2,161,782	2,331,382
	\$2,542,367	\$2,742,425

Statement of Revenue and Expense for Year Ended March 31, 2008

	2008	2007
Revenue:		
University of Calgary and Government grants	\$450,377	\$435,293
Sales of services and products	292,243	367,353
Donations and other grants	187,452	151,144
Investment (loss) income	(3,557)	127,041
Earned capital contributions	5,878	6,996
	<u>\$932,393</u>	<u>1,087,827</u>
Expense:		
Salaries	746,999	632,969
Benefits	96,689	96,992
Materials	267,531	259,287
Grants, scholarships and awards	23,133	24,250
Amortization of capital assets	12,998	24,346
Travel and meeting	25,821	38,530
	<u>1,173,171</u>	<u>1,076,374</u>
(Deficiency) / Excess of revenue over expense	<u>(\$240,778)</u>	<u>\$11,453</u>

Statement of Cash Flows for the Year Ended March 31, 2008

	2008	2007
Cash provided from (used in):		
Operating Activities:		
(Deficiency)/Excess of revenue over expense	(\$240,778)	\$11,453
Items not affecting cash flow:		
Amortization of capital assets	12,998	24,346
Amortization of deferred capital contributions	(5,878)	(6,996)
Loss (Gain) on non-endowed and internally restricted endowment investments	75,294	(20,391)
Net change in non-cash working capital	40,449	(14,417)
Cash applied to operating activities	(\$117,915)	(\$6,005)
Investing Activities:		
Purchase of capital assets, net	(71,369)	(43,404)
Contribution of non-amortizable assets	40,000	—
Proceeds from (purchase of) long-term investments, net	65,293	(1,415)
Cash applied to investing activities	33,924	(44,819)
Financing Activities:		
Endowment contributions	31,178	8,998
Capital contributions	11,607	39,891
Cash generated through financing activities	42,785	48,889
Decrease in cash and cash equivalents	(\$41,206)	(\$1,935)
Due from University of Calgary at beginning of year	785,347	787,282
Due from University of Calgary at end of year	\$744,141	\$785,347
Net change in non-cash working capital:		
Accounts Receivable decrease / (increase)	50,258	(\$7,880)
Inventory decrease	1,054	2,230
Prepaid Expenses decrease / (increase)	192	(1,005)
Accounts Payable decrease	(9,605)	(1,925)
Deferred Revenue (decrease) / increase	(7,257)	1,914
Deferred Contributions* increase / (decrease)	5,807	(7,751)
	40,449	(\$14,417)

* Adjusted for unrealized investment gains/losses



Financial Support

Financial Support for the programs of the Arctic Institute, Canadian Corporation, during 2008, was provided by the Government of Canada, the Government of Alberta, the University of Calgary, the University of Alaska, over 1200 members and subscribers, and the following corporate associates and sponsors:

- ATCO Frontec
- BP Canada Energy Company
- Canadian Association of Petroleum Producers
- Chevron Canada Resources Ltd.
- Colt Engineering Corporation
- ConocoPhillips Canada Resources Ltd.
- Devon Canada Corporation
- EnCana Corporation
- Imperial Oil Resources Limited
- MGM Energy Corp.
- Petro-Canada
- Shell Canada Limited
- TransCanada Pipelines Limited



Arctic Institute of North America MEMBERSHIP APPLICATION

Thank you for your interest in becoming a member of the Arctic Institute of North America. The only requirement for membership in AINA is an interest in the North. Members receive the quarterly journal Arctic while supporting a vibrant organization devoted to the dissemination of northern research and knowledge.

MEMBERSHIP IS BY CALENDAR YEAR, JANUARY TO DECEMBER. DUES ARE AS FOLLOWS:

Member.....	\$ 70
Student.....	\$ 47
Retired (65 or older)	\$ 47
Subscribing Organization.....	\$ 155
Lifetime Membership.....	\$ 700
Corporate Associate	\$ 2500

NOTE: Inside Canada, add 5% GST
(or 13% HST where applicable)
Outside Canada, dues are in U.S. dollars

(Corporate Associate dues include Subscribing Organization fee and GST)

I WISH TO BECOME A MEMBER OF THE ARCTIC INSTITUTE OF NORTH AMERICA:

Name: _____ Address: _____
 City: _____ Province/State: _____ Country: _____ Postal/Zip Code: _____
 E-mail Address: _____

I WISH TO GIVE AN ARCTIC INSTITUTE MEMBERSHIP TO:

Name: _____ Address: _____
 City: _____ Province/State: _____ Country: _____ Postal/Zip Code: _____
 E-mail Address: _____ Gift From: _____

PAYMENT:

Total amount of payment, including taxes:

\$ _____ Canadian Funds U.S. Funds
 Cheque VISA MasterCard

Credit Card Number: _____

Expiry Date: _____

Signature: _____

Please mail or FAX this form with payment information to:

Arctic Institute of North America
University of Calgary
2500 University Drive NW
Calgary, Alberta, Canada T2N 1N4
Website: www.arctic.ucalgary.ca
Phone (403) 220 • 7515
Fax: (403) 282 • 4609



Arctic Institute of North America
University of Calgary
2500 University Drive NW
Calgary, Alberta, Canada T2N 1N4
Website: www.arctic.ucalgary.ca
Phone (403) 220 • 7515
Fax: (403) 282 • 4609

