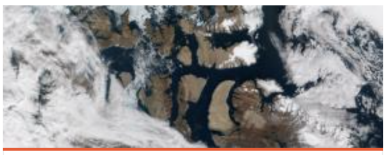
The Northwest Passage: Myth, Environment, and Resources

Elena Baldassarri

This exhibition tells the story of the Northwest Passage from the pursuit of a myth to the exploitation of natural resources. Historian Elena Baldassarri takes readers on a multimedia tour of the Arctic, featuring interactive maps, photographs, videos, and interviews with experts, scholars, and elders of Cambridge Bay, Nunavut, Canada.



Introduction

Myth and Adventure

Sovereignty

Further Reading

The Northwest Passage Timeline

Natural Resources

Security

How to cite:

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254 .

ISSN 2198-7696 Environment & Society Portal, *Virtual Exhibitions*

The original virtual exhibition includes video, soundbites, dynamic maps, and a story map. Please view the captions of the screenshots in this PDF for more information about these items. A link to the online versions is included in each caption.

Introduction

No. 1. The Northwest Passage. Myth, Environment, and Resources. Introduction. Video by Elena Baldassarri. Interviews with Franklyn Griffiths, Joe and Susie Koaha, Adam Lajeunesse, Timothy Leduc, and Susie Maniyogina. This work is licensed under a Creative Commons Attribution 4.0 International License. Screenshot from the Vimeo video - https://vimeo.com/111724573.

The Northwest Passage is a sea corridor connecting the Atlantic and Pacific through the Canadian Arctic Archipelago and along the northern coast of North America. It consists of a series of deep channels from the north of Baffin Island to the Beaufort Sea, with a total length of around 1,500 kilometers in length. It does not consist of one single passageway, but rather a number of alternative routes.

European explorers searched for the passage for 300 years with the aim of finding a commercially viable westward sea route between Europe and Asia. It was finally traversed successfully by Roald Amundsen between 1903 and 1906, but it proved impractical as a regular shipping route.

Even today, it continues to be one of the most difficult maritime routes due its position north of the Arctic Circle and because it requires a hazardous voyage through wind and giant icebergs drifting south, posing a serious hazard to shipping in winter and in summer. The dense ice prevents commercial ships from traversing the passage without the assistance of icebreakers.

In 2014 the MV *Nunavik*, was the first cargo ship to sail through the Northwest Passage without an escort from icebreakers. Although the winter challenges will remain, the processes of climate change may now be opening the once-icebound passage to more regular shipping and permitting the summer shipping season in Arctic Canada to be extended. The number of transits increased from 4 per year in the 1980s to 20–30 per year in 2009–2013, according to the State of the Environment, 2015 . The National Snow and Ice Data Center registered yearly record low levels , but the Canadian Government recent researches cast doubt on whether its regular use for commercial shipping will be happening any time soon. The studies finds that even with declining ice overall, the waters of the Northwest Passage are still full of thick and persistent ice, which is detracting the predictability of navigation. However, the navigation for smaller boats, yachts, and tourist cruises is evaluated differently, it is expected to increase exponentially. Recent studies about this topic are: Whitney Lackenbauer and Adam Lajeunesse. *On Uncertain Ice: The Future of Arctic Shipping and the Northwest Passage* , Policy Paper, December 2014. Prepared for the Canadian Defence & Foreign Affairs Institute and C. Haas, and S. E. L. Howell. "Ice thickness in the Northwest Passage". *Geophys. Res. Lett.* 42 (2015): 7673–7680, doi:10.1002/2015GL065704 . In other words: It is very difficult to make any previsions for several reasons: the collection of data was only started recently; weather conditions are very variable; and Canadian Government doesn't encourage the passage because they don't have the means to patrol and control the sea.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

This exhibition approaches the Northwest Passage from several different perspectives: the epic voyages in search of the mythical passage; the topography of the territory and how states have asserted sovereignty over such Arctic regions; the debates fueled by the discovery of oil in the Alaska North Slope area in 1968; and the effects of climate change and ice melt. Combining text and multimedia components, the exhibition also explores questions about the relationship between tradition, culture, environment, and economic benefit.

> Climate defines the Arctic and the people who live within it. Compared to other parts of the Earth, it is especially deeply affected by the changes resulting from human and natural causes.

Climate defines the Arctic and the people who live within it. Compared to other parts of the Earth, it is especially deeply affected by the changes resulting from human and natural causes. Westerners' approach to climate change in this remote part of the world oscillates between paranoid apprehension and boundless expectations of the possibilities and resources.

Local Inuit and Natives react in a different manner. Their experiences date back several millennia and move between temporal and spatial boundaries. For those who must survive this harsh climate, constant observation of the weather continues to be an important part of daily life. As a result, Inuit have much to contribute to our awareness of climate. What can we understand from the different approaches? Is the Passage today, as it was in past, a place where the two different cultures and "knowledge systems" can meet and interact?

> Is the Passage today, as it was in past, a place where the two different cultures and "knowledge systems" can meet and interact?

These questions were not fully clear when I started my research, but rather evolved gradually as I interacted with Inuit residents. The exhibition benefits from the results of a voyage in the Arctic and the opportunity to meet with the elders of the Community of Cambridge Bay, Nunavut; it was supported by the Kitikmeot Heritage Society and the Rachel Carson Center for Environment and Society. These encounters, parts of which are presented in the short videos included in this exhibition, showed me how much my Western perspective influenced my views on the environmental experience.

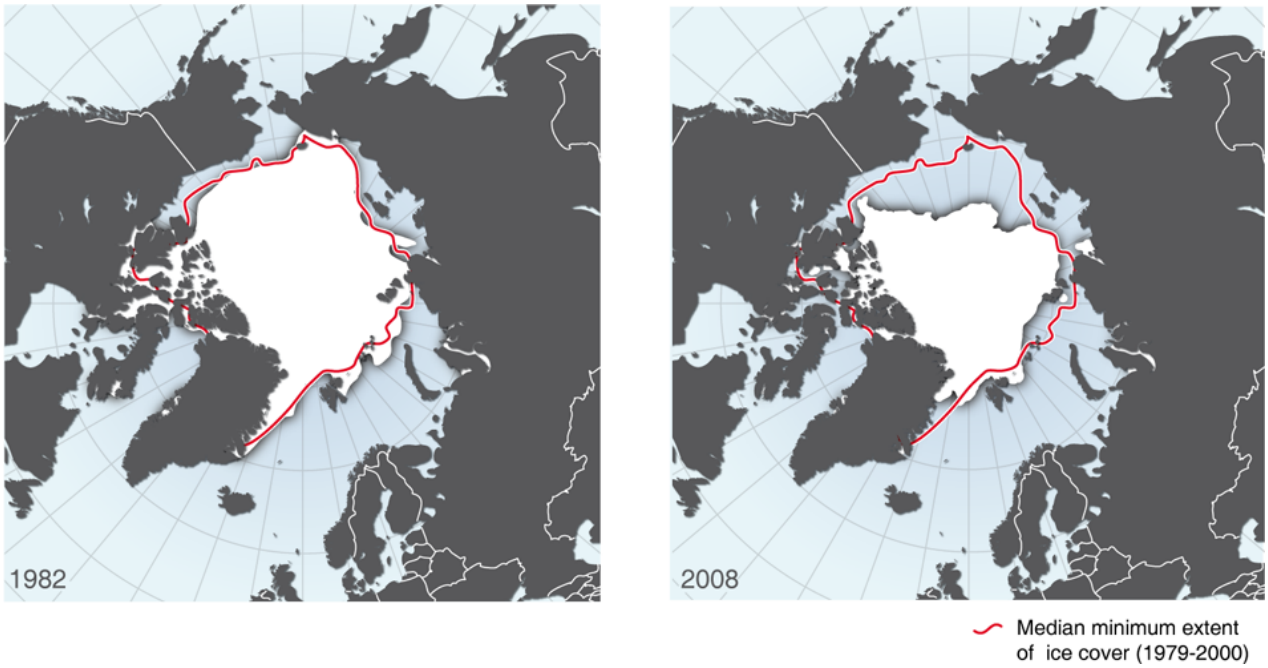
> On this journey the Passage becomes a sort of key, a metaphor of the meeting between the Western thirst for understanding, mapping, owning and ruling, and the Native spiritual, adapting, holistic, and integrated way of reacting to changes and to the unknown.

Inuit voices led me to ask some very different questions concerning the way we think about and respond to our climatic reality, and how, taken together, Western scientific knowledge and Inuit knowledge could provide complementary ways of knowing. On this journey the Passage becomes a sort of key, a metaphor of the meeting between the Western thirst for understanding, mapping, owning and ruling, and the Native spiritual, adapting, holistic, and integrated way of reacting to changes and to the unknown.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Observing Change, Feeling Nature

Global warming and climate change refer to an increase in average global temperatures. Whatever the causes—natural events, human activities, greenhouse gases—and long-term forecasts and predictions, we know that rising global temperatures will speed up the melting of glaciers and ice caps, and cause early ice thaw on rivers and lakes. Shrinking Arctic sea ice is one of the most visible indicators of this change in climate, and year-round scientific analysis of ice conditions and permafrost temperatures confirm such changes.



Source: Hugo Ahlenius, UNEP/GRID-Arendal
Publisher: International Polar Year (IPY) educational posters, 2008
Click here to view source.

No. 2. Arctic sea ice minimum extent in September 1982 and 2008. The red line indicates the median minimum extent of the ice cover for the period 1979–2000. This figure compares the Arctic sea ice extent in September for the year 1982 (the record maximum since 1979) and 2008. The ice extent was 7.5 million square kilometers in 1982, only 5.6 million square kilometers in 2005 and down to 4.3 million square kilometers in 2007. As has been observed in other recent years, the retreat of the ice cover was particularly pronounced along the Eurasian coast. Indeed, the retreat was so pronounced that at the end of the summers of 2005 and 2007 the Northern Sea Route across the top of Eurasia was completely ice-free. Source: Hugo Ahlenius, UNEP/GRID-Arendal.

Melting ice caps will lead to larger ice-free water areas for longer periods of time and an Arctic Ocean that is open for business at least through the summer months. This in turn will increase seasonal shipping and provoke territorial disputes among the powers that lay claim to sovereignty for the exploitation of the riches in the subsoil. Shorter ice periods will open up historically closed shipping routes, including the Northwest Passage.

In Inuit culture, changing weather is interpreted in connection with *Sila* mythology. *Sila* is an important aspect of *Inuit Qaujimajatuqangit*, an Inuktitut term that translates as "Inuit traditional knowledge," but is very

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

difficult to define. It encompasses all aspects of traditional Inuit culture, including values, world view, language, social organization, knowledge, life skills, perceptions, and expectations. *Inuit Qaujimajatuqangit* is a complex concept connected to the "Inuit way of doing things," and includes the past, present, and future knowledge of the Inuit society.

Scientists refer to *Sila* as weather, while ethnographers consider it a mystic power or a godlike Supreme Being. For Inuit elders the term includes more than this: it is the forces that push or pull a person through life, or simply wisdom. *Sila* is the primary component of everything that exists, the breath of life as well as the motion for any movement or change. It has the power to control everything that goes on in one's life and is also the substance of which souls are made. *Sila* is a deity of the sky, the wind, and weather. *Sila* is not a personification of human beings, but rather the person is owned by *Sila*: humanity is the personification of *Sila*.

No. 3. *Sila*. The video defines the meaning of "Sila" in Inuit culture. Video by Elena Baldassarri. August 2013. Interviews with Timothy Leduc, Jimmy Maniyogina, Ana Nahogaloak. This work is licensed under a Creative Commons Attribution 4.0 International License. Screenshot from Vimeo video - https://vimeo.com/video/99642101.

In their rich history of living as hunters, Inuit have developed intimate cultural ties to life and death. They hold a deep understanding that without the death of the living, there is no life, so the dead are the foundation upon which life exists: death gives rise to life. Breathing is what distinguishes living creatures from dead ones. This life force can neither be created nor destroyed, because it recycles itself continually: when any creature—human or beast—perishes, its *Sila* ("breath" or "life") leaves that particular body, dissipates into the larger whole, or finds its way into a new form.

Sila, with all its different meanings, refers to life, nature, observation of the environment, and adaption. *Sila* permeates and surrounds Inuit communities as a constantly-moving spiritual force. Understanding *Sila*, and allowing it to own our selves, could help to guide human actions.

Another Inuit concept related to *Sila* is the *Silarjuaq*, the universe, which is in constant flux and change, a condition suggestive of the human mind. *Sila* is sentient because it modifies nature and spirit. Thanks to the transformation it obligates each being to be responsible for the other and enables us to contextualize ourselves within the environment—that is, to be fully part of the environment.

Talking with Inuit and listening to their stories raises two pivotal concepts likely to interact with changes in nature: observation, and adaptation, both of which pass through *Inuit Qaujimajatuqangit*. As *Inuit Qaujimajatuqangit* is an accumulated and evolving body of knowledge, conciliating intergenerational survival skills, practices, and experiences, it is grounded on an acute awareness of dynamic interactions between humans, land, and resources.

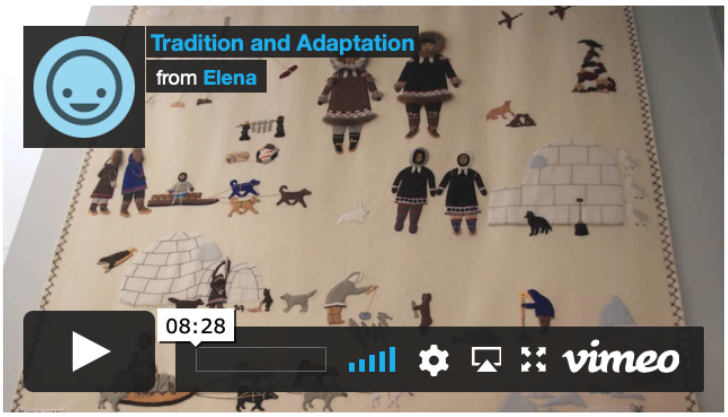
> Even if Western scientific observations are based on instrumental documentation and on observations over a specific period of time, Inuit traditional knowledge represents an understanding of change. Together, Inuit Qaujimajatuqangit and Western scientific knowledge provide complementary ways of knowing.

Even if Western scientific observations are based on instrumental documentation and on observations over a specific period of time, Inuit traditional knowledge represents an understanding of change. Together, *Inuit Qaujimajatuqangit* and Western scientific knowledge provide complementary ways of knowing.

Traditional knowledge helps to preserve experiences and indigenous history in the collective memory, but also the dynamics, and the manners in which they have faced major changes in the past. Indigenous resilience has always been considered to be connected with their degree of vulnerability: the more flexible the Inuit were, the higher a chance they had of surviving. Today, their resilience is essential to determining how they will respond to the challenges posed by climate change. Even in the face of major changes, indigenous communities will attempt to adapt within the constraints of the cultural, economic, political, international, and local circumstances that shape their lives. As with all adaptations, the measures developed in the Arctic in response to change will protect some aspects of society at the expense of others.

> Nature has the last word, and humanity's obligation is to reflect that wisdom.
> —Jaypeetee Arnakak

The history of the Northwest Passage is essential to understanding this resilience. Historically, the Passage was thought to be the way through which Westerners approached, bringing with them not only tools but also new creeds, spirituality, and morality, thus changing Inuits' connection with nature. This encounter, or clash, deeply transformed the Inuit way of life and in some cases nearly destroyed their traditional knowledge. However, the Inuits' flexibility, and their accumulation of specialist and generalist knowledge, equipped them with resilience. Such adaptations enhanced their options and were—and still are—important for survival. If we do not expand scientific data with historical *Inuit Qaujimajatuqangit*, there will continue to be significant deficiencies in our understanding of Arctic climate change, because, as the Inuit philosopher Jaypeetee Arnakak has stated: "Nature has the last word, and humanity's obligation is to reflect that wisdom."



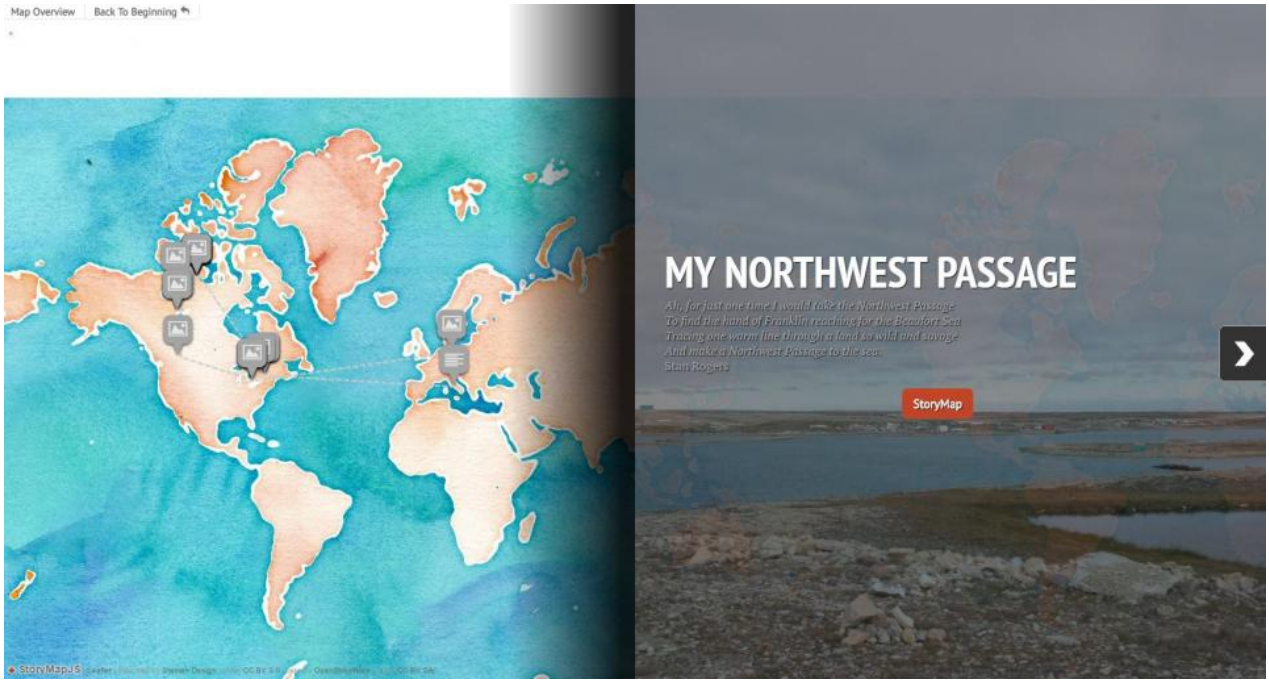
No. 4. Adaptation and tradition. Video covering the meaning of climate change and adaption in both southern and Native culture. Interviewers relate, from their different points of view, to the issue of tradition and knowledge, and how it can be used to build resilience to the adverse impacts of climate change. Video by Elena Baldassarri. August 2013. Interviews with Joe and Susie Koaha, Timothy Leduc, Jimmy Maniyogina, Ana Nahogaloak, Brenda Sitatak, and Mary Avalak. Screenshot of Vimeo video - https://vimeo.com/102758483.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

Acknowledgments

I would like to thank the Rachel Carson Center for Environment and Society which provided full funding to complete the study and offered the possibility to organize a challenging travel. Similarly, I would like to extend great thanks to the Environment & Society Portal team who generously offered time, assistance, commitment, and encouragement. This research looks very different because of their input, help and expert knowledge. This project is the result of the author's research and studies, and in particular of an excursion to the Arctic Circle in summer 2013 that took the author across the Atlantic and to Nunavut, specifically to Cambridge Bay, on a twenty-first century journey in search of the Northwest Passage. Meeting scholars, authorities, and local people helped the author to understand the complexity and richness of this issue: everyone has their own point of view and experience, with each perspective further enhancing the project.

Many thanks to all those interviewees for sharing their stories, opinions, and feelings.



No. 50. Map showing the journey taken by the author. Click here to open this storymap in a new tab. Screenshot from the storymap - read an offline version of the storymap here or view the online version here - https://uploads.knightlab.com/storymapjs/3c4cceed70636f19e5cb7a489b164ea1/prova-1/draft.html.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

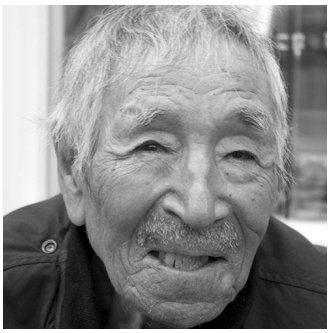
Cambridge Bay

Many thanks to the Nunavut Research Institute (NRI), who granted the Scientific Research License for the project and so made it possible to meet and talk with elders in Cambridge Bay. The Community of Cambridge Bay warmly welcomed us, and the Kitikmeot Heritage Society offered its space. The hamlet was named by Hudson's Bay Company in 1839 and is located on the shore of the Northwest Passage. The HBC opened a post in 1927 and the Royal Canadian Mounted Police arrived in 1926. Until the 1950s few Inuit lived here; it was not until the construction of a LORAN Navigational Beacon in 1947 and of a Dew Line site in 1955 that the community began to expand.

I cannot express enough thanks to Renee Aldona Krukas of the Kitikmeot Heritage Society for her continued support and help in Cambridge Bay. My voyage could not have been accomplished without her.

A special thanks to Ana Shorter for providing her voice for the audio recording, and for her suggestions for the videos.

Finally, my deepest gratitude to Enrico Mariotti, who shared with me this trip, the never-ending flights, and the snow and summer blizzards, and whose presence and sensitivity are reflected in the pictures included in the exhibition.



Jimmy Maniyogina
Elder of Cambridge Bay community

Jimmy Maniyogina, Elder of Cambridge Bay community

Susie Maniyogina
Elder of Cambridge Bay community

Susie Maniyogina, Elder of Cambridge Bay community

Mary Avalak
Elder of Cambridge Bay community

Mary Avalak, Elder of Cambridge Bay community

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

Anna Nahogaloak
Elder of Cambridge Bay community

This work is used by permission of the copyright holder.

Anna Nahogaloak, Elder of Cambridge Bay community

Brenda Sitatak
Manager. Ekaluktutiak Hunters & Trappers Organization, Cambridge Bay

This work is used by permission of the copyright holder.

Brenda Sitatak, Manager of Ekaluktutiak Hunters & Trappers Organization, Cambridge Bay

Cecilia Hagaluk
Social Worker. Cambridge Bay, Community Wellness Center

This work is used by permission of the copyright holder.

Cecilia Hagaluk, Social Worker at the Community Wellness Center, Cambridge Bay

Dr. Kathrin Keil
Europe Director—The Arctic Institute Center for Circumpolar Security Studies

Kathrin Keil wrote her PhD Dissertation at the Berlin Graduate School for Transnational Studies (BTS) at the Freie Universität Berlin on the international politics of the Arctic, with a focus on international regimes and institutions in the areas of energy, shipping and fishing. She further has a Bachelor of Arts in International Relations from the Technische Universität Dresden and a Master of Science in European Affairs from Lunds Universitet in Sweden. Her fascination with the Arctic began during an internship at the German Institute for International and Security Affairs (SWP Berlin) in 2009 and continued during her doctoral research.

This work is used by permission of the copyright holder.

Dr. Kathrin Keil, Europe Director of the Arctic Institute Center for Circumpolar Security Studies

Dr. James Manicom
Research Fellow at the Centre for International Governance Innovation (CIGI)

Research Fellow at the Centre for International Governance Innovation (CIGI) contributing to the development of the Global Security Program. Previously, he held fellowships at the Ocean Policy Research Foundation in Tokyo and the Balsillie School of International Affairs. His current research explores Arctic governance, East Asian security and China's role in ocean governance.

This work is used by permission of the copyright holder.

Dr. James Manicom, Research Fellow at the Centre for International Governance Innovation (CIGI)

Ray Snook
Lieutenant Commander. Canadian National Defense

This work is used by permission of the copyright holder.

Ray Snook, Lieutenant Commander with the Canadian National Defense

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

Prof. Franklyn Griffiths
Department of Political Science, Toronto University.

Prof. Franklyn Griffiths

Professor Emeritus, Department of Political Science, Toronto University. Research interests include international politics, particularly international security affairs; the politics and foreign policy of Russia and the USSR; and Arctic international relations. Publications include: Skilling, H. Gordon, and Franklyn Griffiths. *Interest groups in Soviet politics*. Princeton, N.J.: [Published for the Centre for Russian and East European Studies, University of Toronto by] Princeton University Press, 1971; Griffiths, Franklyn, and J. C. Polanyi. *The Dangers of nuclear war: a Pugwash symposium*. Toronto: University of Toronto Press, 1979; Griffiths, Franklyn. *Arctic alternatives: civility or militarism in the circumpolar North*. Toronto, Ont., Canada: Science for Peace, 1992; Griffiths, Franklyn. *Strong and free: Canada and the new sovereignty*. Toronto: Stoddart, 1996.

Prof. Franklyn Griffiths, Professor Emeritus at the Department of Political Science, Toronto University

Prof. Timothy Leduc
Assistant Professor, York University

Prof. Timothy Leduc

Assistant Professor, York University. Before graduating with a PhD in Environmental Studies, CHN Contributor, Timothy Leduc, completed a masters degree in social work, and worked for a number of years in northern indigenous communities and on anti-violence issues. His doctoral research built on these experiences by bringing Inuit ecological and cultural views of northern warming into dialogue with Western climate research as a means for interculturally assessing the current politics of inaction. The resulting book, Climate, Culture, Change: Inuit and Western Dialogues with a Warming North, was shortlisted for the 2012 Canada Prize, and related articles have been published in journals like Tikkun Magazine and Worldviews.

Prof. Timothy Leduc, Assistant Professor at York University

Dr. Adam Lajeunesse
Research Assistant, Department of History, University of Calgary

Dr. Adam Lajeunesse

Research Assistant, Department of History, University of Calgary. He received his Doctorate in History at the University of Calgary in December 2012. His research has focused on the evolution of Canadian government policy over the Arctic waters and on Canadian-American defence and law of the sea relations in that area. He has also written on a number of other subjects, including contemporary Arctic sovereignty and security concerns, shipping prospects, hydrocarbon development and international relations.

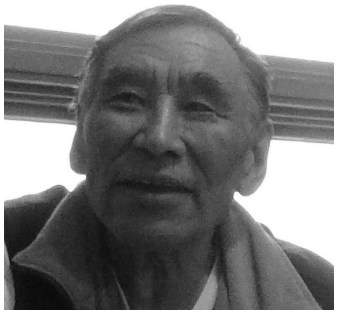
Dr. Adam Lajeunesse, Research Assistant at the Department of History, University of Calgary

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

Diego Creimer
Media and Public Relations Office

Diego Creimer
Media and Public Relations Office. Greenpeace Canada. He is the manager for Greenpeace Arctic campaign Save the Arctic .

Diego Creimer, Media and Public Relations Officer for Greenpeace's Arctic Campaign



Joe Koaha
Elder of the Cambridge Bay community

Joe Koaha, Elder of the Cambridge Bay community

John Higginbotham
Senior Fellow at the Centre for International Governance Innovation (CIGI)

John Higginbotham

Senior Fellow at the Centre for International Governance Innovation (CIGI). Expert on international economic relations, maritime, air, road, and rail transportation systems and systems of governance, he leads CIGI's global security and politics research project on the Arctic. He is also a senior distinguished fellow at Carleton University, where has he been working on the Arctic, China, and the United States, as well as a transport studies initiative drawing on the strengths of Carleton's faculties of Business, Public Administration, and Engineering. He has worked for the Government of Canada and served as assistant deputy minister in three departments, including Transport Canada. He has served abroad in senior positions in Washington for six years, Hong Kong for five years, and in Beijing on two occasions, as a trade commissioner and political counselor.

John Higginbotham, Senior Fellow at the Centre for International Governance Innovation (CIGI)

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Introduction
Source URL: http://www.environmentandsociety.org/node/6318
PDF created on: 05 May 2021 14:56:03

How to cite

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254 .

ISSN 2198-7696 Environment & Society Portal, Virtual Exhibitions

Websites linked in this text:

- https://vimeo.com/111724573
- https://vimeo.com/user25250799
- http://www.enr.gov.nt.ca/state-environment/73-trends-shipping-northwest-passage-and-beaufort-sea
- http://earthobservatory.nasa.gov/IOTD/view.php?id=88597
- http://www.cdfai.org.previewmysite.com/PDF/On%20Uncertain%20Ice.pdf
- http://onlinelibrary.wiley.com/doi/10.1002/2015GL065704/full
- https://vimeo.com/99642101
- https://vimeo.com/user25250799
- https://vimeo.com/102758483
- http://vimeo.com/user25250799
- https://uploads.knightlab.com/storymapjs/3c4cceed70636f19e5cb7a489b164ea1/prova-1/draft.html
- https://doi.org/10.5282/rcc/6254

Websites linked in image captions:

- https://nordpil.com/static/images/arctic_sea_ice_extent_full.png
- https://www.savethearctic.org/

The Northwest Passage as a Voyage to Myth and Adventure

Myth

> *Not many people have long stories—only short stories. Little stories, here and there. We don't know much at all.*
>
> - Quoted in Dorothy Harley Eber, *Encounters on the Passage: Inuit Meet the Explorers.* Toronto: University of Toronto Press, 2008.

The myth of the Northwest Passage is part of the northern romance of the conflict between men and nature. In Western culture the North is not just a matter of geography but a place where humans are forged and strengthened, where cultural and technological progress seems useless without fortune and courage. The attitude of southerners to the North has traditionally been based on two different and conflicting perceptions: on the one hand a romantic feeling based upon the mysterious nature and power of the wilderness, but on the other a greedy desire to possess and exploit its resources.

> The myth of the Northwest Passage is part of the northern romance of the conflict between men and nature. In Western culture the North is not just a matter of geography but a place where humans are forged and strengthened, where cultural and technological progress seems useless without fortune and courage.

The choices and decisions made in both the past and present in relation to the North in general, and to the Northwest Passage in particular, have been strongly influenced by mythology. In Canadian identity, for example, the harsh climate of the Arctic landscape served to create the image of Canada as a northern and vigorous country: "the true North strong and free," as the national anthem puts it.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

The frontier myth has deeply shaped and influenced human behavior and is present in the construction of the national identity of both the USA and Canada. The North has been, and still is, regarded as the last real frontier. This myth continues to influence the cultural and political ideas and economic ambitions of development and resource extraction at high latitudes, as well as the sovereignty and representations of Canada and the United States as a nation, place, and space.

In North America, the frontier was first identified by the historian Frederick Jackson Turner in his famous speech to the American Historical Association in 1893. Seen as an area of free land on the edge of settlements, into which pioneers and settlers advance, the frontier is the point where the "desert" or "wild" meets "civilization." For Turner, the American West was a land of opportunity. He celebrated open spaces and wilderness, and often lamented its dissolution through domestication, regulation, and cultivation. In a sense, the frontier serves as a shifting boundary between the constant and domesticated, cultivated land, and the endless natural beauty of the wild. The border, according to Turner, has exerted great influence in the history of the United States: as a peripheral space it has defined the character of a nation. The definition given by Turner has also sparked immense debate amongst historians. Walter Prescott Webb stressed the difference in meaning between Europe and America: "The American thinks of the frontier as lying within, and not at the edge of a country. It is not a line to stop at, but an area inviting entrance. Instead of having one dimension, length, as in Europe, the American frontier has two dimensions, length and breadth. In Europe the frontier is stationary and presumably permanent; in America it was transient and temporal" (Walter Prescott Webb, The Great Frontier [Austin: University of Texas Press, 1952], 2–3. Webb added that "frontier" is not a static concept but rather a transitional one, geographically and temporally, stating that "inherent in the American concept of a moving frontier is the idea of a body of free land which can be had for the taking."

Historians have also discussed the importance of Turner's frontier thesis for the analysis of the development of Canada as a nation in the Northwest. First they point out that the border of the Canadian Northwest was different from that of the American West, a lawless land of hardy pioneers and Indians. By contrast, up until the second half of the nineteenth century Canadian "civilization" developed under the careful supervision of the government and Hudson Bay Company, which ran this immense territory before the arrival of settlers. Both frontiers, however, represent a "relief valve" of the wide open spaces against the pressure created by immigration in the cities. The settlers were immigrants from Europe, with the dream of a new life in a "promised land."

Turner's frontier thesis can help us understand the representation of the Northern frontier as a physical manifestation of "endless opportunities," as a metaphor of progress that transcends physical and geographical space. With this interpretation, boundary, wilderness, and the frontier and its spatial and temporal implications, continue today to be an essential part of the image of the North in terms of its controversial nature and its transient state. For many, the frontier still exists in the Arctic, remaining vast, open, and free.

Climate change and melting ice have shed new light on the Arctic. Some commentators call it the last frontier for the extraction of oil, gas, and minerals, a frontier that is essential for the supply of the world's growing energy needs. With global warming occurring on an unprecedented scale, it is widely believed that the melting of ice and permafrost will make access to the Arctic and its resources in the coming decades easier than ever before.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Is the Arctic the "last frontier?" To answer this question it is important, first of all, to recognize how popular knowledge of North American exploration and westward expansion has often been shaped by tales of heroic bravery, divine providence, and manifest destiny, even though the motives that have driven individuals in every century to undertake this venture have sometimes had more to do with economic gain and the rewards of discovery than with heroism.

As the world looks to the North for the exploitation of resources, new shipping routes and unprecedented opportunities for trade, scientists, politicians, Natives, and non-residents place the Arctic and its transformation into a transnational context as a pivotal part of the global economy.

This is nothing new for the North and its inhabitants, however, as they have a rich history of changes exerting a deep impact on their lives, including white European contact, relocation, changes in diet and the social effects of the loss of traditional knowledge.

> *All true wisdom is only to be found far from the dwelling of man, in great solitudes; and it can only be attained through suffering. Suffering and privation are the only things that can open the mind of man to that which is hidden from his fellows.*
>
> - Igjugarjuk to Knud Rasmussen. Quoted in Maria Coffey, *Explorers of the Infinite (*New York: Penguin, 2008).

In Inuit culture, myths and history come to us through legends: storytelling traditions are passed from generation to generation, linking people to their cultures and ancestors. Traditional stories are an important aspect of Inuit culture: Inuit myths and legends are usually narratives in dramatic form that deal with the wonders of the world, creation, love, hunting, respect for parents and elders, death, and mystery. Inuit believe in other worlds beneath the sea, the Earth, and in the sky from which new creatures come and where angakoks (shamans) have the power to move in trances and dreams.

These stories express the frontier between human and spirit: protagonists are spirits and shamans, and describe the fears and significant moments of the people. Even if, in Inuit culture, there is no "frontier" between humans and animals, because spirits pass throughout each form, some "borders" are fixed and must not crossed, regardless of the consequences.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

No. 5. Nanavut Animation Lab: Qalupalik. This animated short tells the story of Qalupalik, a part-human sea monster that lives deep in the Arctic Ocean and preys on children who do not listen to their parents or elders. That is the fate of Angutii, a young boy who refuses to help out in his family's camp and who plays by the shoreline, until one day Qalupalik seizes him and drags him away. Angutii's father, a great hunter, must then embark on a lengthy kayak journey to try and bring his son home. Qalupalik. Ame Papatsie, 2010, 5 min 34 s. National Film Board of Canada. Screenshot from the short-film on YouTube - http://www.nfb.ca/film/nunavut_animation_lab_qalupalik.

One legend, recorded in the Kitikmeot region, describes the moment when the most important border was established: the one between life and death. This legend, called *Uvajuq*, retraces the Inuit genesis and was collected from a group of elders in the Community of Cambridge Bay. The story took place when people and animals lived in such harmony and unity that they could speak to each other. For Inuit this idyllic existence came to an abrupt end a long time ago.

And still,
both people and animals lived on Earth,
but there was no difference between them...
A person could become an animal,
and an animal could become a human being.
There were wolves, bears, and foxes
but as soon as they turned into humans
they were all the same.
They may have had different habits,
but all spoke the same tongue,
lived in the same kind of houses,
and spoke and hunted in the same way.
That is the way they lived here on Earth
in the very earliest times,
times that no one can understand now.
That was the time when magic words were made.
A word spoken by chance would suddenly
become powerful, and what people wanted
to happen could happen, and nobody could explain how it was.

- Naalungiaq, 1923

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Uvajuq was a giant who led his family on a quest for survival by walking across Victoria Island. The family of giants all perished, and their bodies created the hills that today mark the flat landscape near Cambridge Bay known as Uvajuq. The story goes on to describe how those facing starvation fought among themselves to the death; those who shared with one another, by contrast, survived. The legend is an allegory based on the Inuit philosophy of how sharing has given them strength to survive through the centuries.

History

> Many talented men set out to prove the existence of the passage, not only by sailing and risking their lives on the northern waters but by exerting influence, writing, publishing, and financing expeditions of discovery.

The history of the search for the Northwest Passage stretches over five centuries. The discoveries and visionary undertakings stimulated by the possibility of a commercially and strategically advantageous seaway have become the symbol of the struggle between the best of Western civilization and nature, pitting courage and technology against the rigors of the Arctic environment. Many talented men set out to prove the existence of the passage, not only by sailing and risking their lives on the northern waters but by exerting influence, writing, publishing, and financing expeditions of discovery.

There are some aspects that have not changed since John Cabot's first attempt to reach Cathay in 1497. The interest in this remote part of the world is driven by two contemporary forces that are crucial to the success of any enterprise: on the one hand, the courage of a few men who risk their lives in their attempts, and on the other the constant subterranean work of men to convince public opinion as well as sovereigns, governments, and financiers of the benefits of the venture.

The Beginning (1497–1553)

England was the first, and certainly the most active, country to search for the Passage, primarily because of the advantages offered by its geographical location. The fruitless search for a passage to the Indies in the central and southern regions of the New World and the consideration, after Magellan's voyage, that the southern route existed but was also distant and difficult, left the possibility of finding another passage in North America or Eurasia as the only alternative to accepting the Portuguese and Spanish dominance.

The first real attempt to find a passage to circumnavigate the new continent was made by the Portuguese mariners Gaspar and Miguel Corte-Real.

France, too, joined the race. Emulating the other kingdoms, Francis I approved the voyages of Giovanni da Verrazzano and Jacques Cartier to explore the coastline of North America in search of a channel through the continent.

The discovery and exploration of the Americas by Europeans and the subsequent effort to control and divide those lands revived interest in scientific mapping methods. The cartographers Diogo Ribeiro, Gerardus Mercator, Gemma Frisius, and Bolognino Zaltieri contributed to a vast collection of maps influenced by the information collected on the voyages of exploration.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Credit: Canadian Government
Click here to view source.
This work is licensed under the Open Government Licence - Canada .

No. 6. Routes of Explorers. Contained in the second edition (1915) of the Atlas of Canada is a map showing the routes followed by the principal explorers from 1497 to 1906. Each route is marked as a red line on the map, giving the name of the explorer or company, and the dates on which each person traveled the route. The map also provides the dates of the founding principal forts and trading posts of the French, Hudson's Bay and North West Companies. *Atlas of Canada*, Canadian Department of the Interior, 1915. In Routes of Explorers .

In Search of the Anian Strait (1542–1677)

In the second half of the sixteenth century, interest switched to the western part of the new continent. Spain and England started a new race to find the passage from the Northeast in the mistaken belief that Asia and America were in the same place separated only by a channel, the Anian Strait.

Belief in the existence of the Anian Strait was strengthened by the publication of maps and pamphlets such as Giacomo Gastaldi's *Universale Descrittione del Monde* and the *Theatrum Orbis Terrarum* of Abraham Ortelius, which described a strait separating the two continents of Asia and America, albeit in confusing and ambiguous terms. All of the maps showed that the passage would be easy to navigate.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Public Domain. Courtesy of Universität Bern. Click here to view source.

No. 7. *Typvs orbis terrarvm* [Kartenmaterial]: cum privilegio / Franciscus Hogenbergus sculpsit. Abraham Ortelius and Frans Hogenberg, *Typvs orbis terrarvm cum privilegio.* [Antwerpen]: [s.n.], 1573.

The Anian Strait remained on maps for several centuries, albeit in different locations, as the western end of a Northwest Passage. While it was obviously never found—as no such strait exists—the search for it led to the exploration of the Pacific coast from California to the Bering Strait.

Elizabethan and Stuart Trading Ventures (1566–1634)

The first concrete explorations to reach the Passage started from England in the second half of the sixteenth century. For half a century English navigators risked their lives in the icy seas of the Arctic and along the northeast coast searching for a route to the Pacific. English merchants, politicians, seamen, and adventurers, such as Humphrey Gilbert, regarded the search for a Northwest Passage as a means of breaking the Spanish hold on

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

the spice trade and on the riches of the New World. Their pressure towards a possible imperial destiny for England was finally supported by Queen Elizabeth I, and through changes in policy and diplomacy.

Martin Frobisher left England in 1576 on the first concrete and well-planned English attempt to find the Passage. He sailed from the southern coast of Greenland across the Davis Strait to a latitude of 62° N, and was convinced that he had found what he was looking for. In actual fact, as he realized on his subsequent voyage, it was just a long fjord on the southeast coast of Baffin Island, which bears his name today.

Credit: Library of Congress, Washington.

No. 8. Frontispiece of Frobisher's *Historia Navigationis. Pictura vel delineatio hominum nuper ex Anglia AD vectorum una cum corum armis tentoriis, & naviculis.* The drawing is a modern copy of the frontispiece to Frobisher's *Historia Navigationis*, an account of his travels to the Davis Straits area of Greenland in the 1570s. It shows an Inuit hunting birds from a kayak, while another man holds his kayak on the shore. An Inuit woman carries her infant on her back. To the left is a village scene with tents, Inuit families, and a dog harnessed to a kayak, pulling it along. "Pictura vel delineatio hominum nuper ex Anglia AD vectorum una cum corum armis tentoriis, & naviculis." Drawing. Between 1850 and 1920. From the Library of Congress: Documentary Drawings Collection.

On Baffin Island, Frobisher and his men met, for the first time, Inuit—in kayaks—who considered Westerners to be enemies. Five of the crew disappeared while returning an Inuit hostage, and, before he departed, Frobisher

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

managed to kidnap an Inuit kayaker by using a hook on a pole. Frobisher brought him to England, where he was publicly displayed as a "strange man of Cathay" showing his resemblance to Tartars as proof of the existence of the passage. The Inuit died within a few weeks of landing in London.

> *When the ship was spotted, the Inuit took their kayaks and went to meet the ship. They had never seen such a big ship and the people were strange, just different. Right away there were some grudges. The Qallunaat fired two warning shots in the air. I'm sure the Qallunaat had good intentions, but they had never seen Inuit before and Inuit had never seen Qallunaat. So when they met there was a lot of uncertainty. The Inuit were scared. They didn't want to give in to these people because they didn't know what they were. Because they weren't quite Inuit. And their clothes—how they dressed! The Inuit dressed in sealskin or caribou skins. The Qallunaat looked so different. They were different beings. The Inuit had never seen clothes like that. At first contact Inuit thought, "How come they dress like this?" It's very cold; their clothes are not fit for this kind of weather. They used to wonder... They were ghostly.*
>
> - No. 9. The stories of the first encounter between Europeans and Inuit as told by the elder Inookie Adamie of Iqaluit. Reported in Dorothy Harley Eber, *Encounters on the Passage: Inuit Meet the Explorers.* Toronto: University of Toronto Press, 2008. In this Soundcloud recording produced by Elena Baldassarri, the text is read by Ana Shorter. Screenshot of the Soundcloud player - https://soundcloud.com/ebaldassarri/frobisher.

After a pause in exploration activities due to the need to safeguard the homeland against the Spanish attempt of invasion with the Armada (1587–88), interest was rekindled in the 1580s. Humphrey Gilbert, Walter Raleigh, and John Davis all undertook expeditions along different routes. Their experiences revealed the morphology of the Arctic regions but also began to show that the search would be much more difficult than expected.

To encourage exploration and to seek funds for such endeavors, gentlemen and members of the British elite published several books about the voyages. These efforts molded public opinion and attracted government attention and went on to encourage the writing of narratives of polar voyages in the years following.

A dramatic attempt was made in the service of the English crown by the Dutchman Henry Hudson, one of the greatest explorers of the northern regions, who reached the bay that now bears his name in 1610 but was then forced to halt by the onset of winter. He wanted to resume explorations the following spring, but his exhausted men mutinied and sailed away with the ship, leaving him in a small boat with a few companions.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

The Hudson's Bay Company (1668–1791)

It was the English Hudson's Bay Company that gave new impetus to the quest for a Passage, albeit reluctantly, at the end of the seventeenth century. The company had been founded in 1670 by Pierre-Esprit Radisson and Médard des Groseilliers, two French traders excluded by the French monopoly of the fur trade who consequently joined forces with an English partner to set up a trading post on the Hudson Bay, northwest of Lake Superior.

While the Hudson's Bay Royal Charter specifically mentioned the company's mission to seek the Northwest Passage, for the first thirty years of its existence this aim took second place to the fur trade south of the Hudson Bay. It was not until the eighteenth century that the company was forced to take part in a sustained effort to find the passage from the bay with the voyages of James Knight, Samuel Hearne, and Christopher Middleton, thus surviving the political pressure of critics seeking to end its trading monopoly.

The Pacific Search Resumed (1761–1795)

> All these explorers left important information in terms of geographical discoveries but the passage remained as elusive as ever.

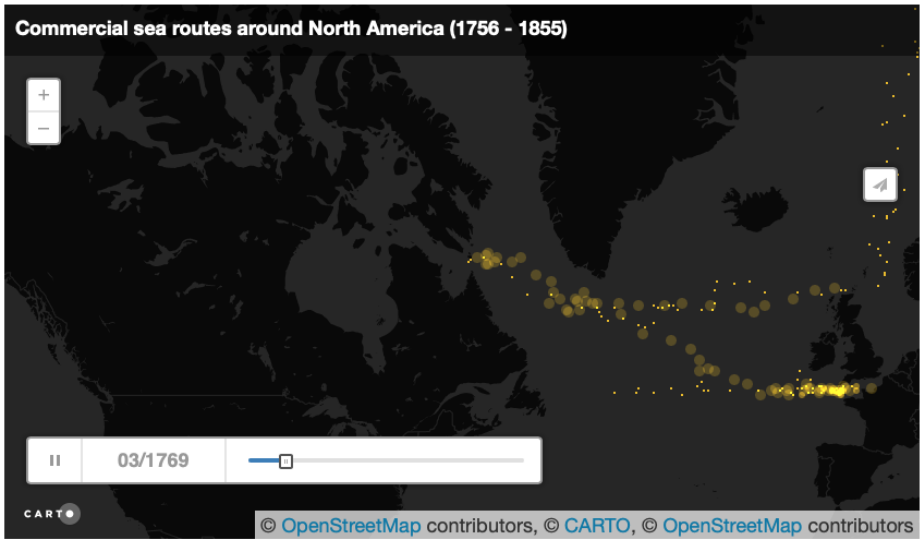
Even though Hearne's journey along the Coppermine River had demonstrated the non-existence of a passage through Hudson's Bay, the Anian Strait was still believed to offer a possible route.

The Spanish resumed their search for a Pacific entrance to a northern seaway in the second half of the eighteenth century, largely because of their fears of Russian invasion and English intrusion.

British, French, Spanish, and Russian navigators started a series of voyages to map and mark out the territory with the aim of finding a passage that would threaten strategic control of the coastline of northwest America and establish or consolidate trade in the Pacific.

The voyages of John Byron, Juan Francisco de la Bodega y Quadra, James Cook, Alejandro Malaspina, and George Vancouver took place in this context. All these explorers left important information in terms of geographical discoveries but the passage remained as elusive as ever. Russian exploration established that Asia and North America were separated by the open seas and that the Anian Strait, now named the Bering Strait, was further northwest than had been thought. English hopes and Spanish fears of a navigable and commercially useful passage were still, however, prevalent.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49



Map created by Elena Baldassarri

No. 10. Commercial sea routes around North America (1756–1855). This map was created using the CLIWOC project dataset (Climatological Database for the World's Oceans 1750–1850). The principal objective of the CLIWOC project was to recover information on climates over the ocean in the pre-instrumental period using abundant meteorological data from the logbooks of different European countries. The analysis of the logbooks' content contributed to the characterization of climate during the eighteenth and nineteenth centuries and to the assessment of climate change. For more information about the project check CLIWOC . This map extrapolates from records of the passage of British vessels, focusing on their position (latitude and longitude) with the purpose of demonstrating graphically the intensity of the commercial passage through the north in the period 1750–1850. In doing so, we must consider that not all the vessels are recorded in CLIWOC. However, the data provide a picture of the behavior and interests of the Navy towards the Arctic. The map shows the high priority the Royal Navy granted to the Northern route during the second half of the eighteenth century, displaying the activity in the Pacific in the 1780s. A slowing-down during the Napoleonic wars and the Anglo-American War of 1812–14 is also noticeable. This work was created by Elena Baldassarri in 2014 and is licensed under a Creative Commons Attribution 4.0 International License. Screenshot of the OpenStreetMap - https://baldassarri.carto.com/viz/5e475ef0-5161-11e3-8712-554421b60c18/public_map .

The Royal Navy by Land and Sea (1815–1839)

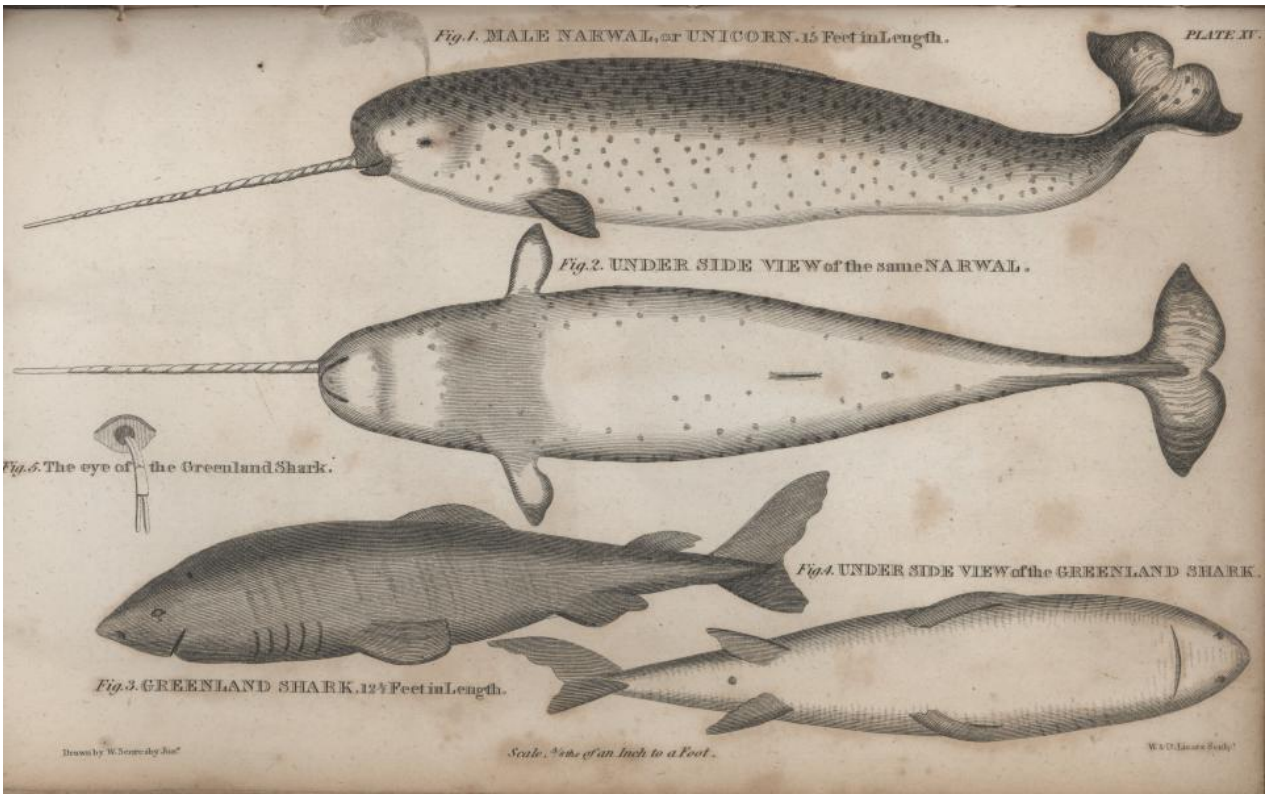
After the Revolutionary and Napoleonic Wars, the British government renewed its efforts under the initiative of John Barrow, second secretary of the Admiralty. A powerful man firmly convinced of the existence of a navigable passage, Barrow sought to persuade the British government and public that its discovery was a matter of national interest for the empire and therefore a duty for the Royal Navy.

His efforts were strengthened by speculation that a general reduction of the Arctic ice barrier might have occurred, and that shipping at higher latitudes had become possible. The sustained efforts of the Royal Navy enabled progress with mapping unknown regions.

One of the first attempts was made in 1818, when Captain John Ross sailed with ships of the Royal Navy under instructions to proceed north to the Davis Strait and explore Baffin Bay. His conclusion that this could form no part of the passage created a great deal of controversy.

Ross was followed by William Edward Perry. Having arrived at longitude 112° west, where nobody had ever been before, he was halted by the barrier of permanent ice and forced to turn back. It was a remarkable success, but still the Passage remained to be discovered. His experience nurtured a great literary production based on his journals and the memories recorded by his crew.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49



"Male narwhal or unicorn. Greenland shark." In: Scoresby, William. 1820. *An account of the Arctic regions with a history and description of the northern whale-fishery*, 588, Vol. II. Plate XV. Library Call Number G742 .S42 1820. Printed for Archibald Constable and Co. Edinburgh: and Hurst, Robinson and Co. Cheapside, London.

Credit: National Oceanic and Atmospheric Administration/Department of Commerce.
Source: NOAA Library Collection.
Click here to view source.

No. 11. Male narwhal or unicorn. Greenland shark. In: W. P. Scoresby, "An Account of the Arctic Regions with a History and Description of the Northern Whale-Fishery," 588, Vol. 2, Plate 15. Library Call Number G742. S42 1820, 1820. Source: NOAA Library Collection . The narwhal's [*Monodon monoceros*] range is west of Greenland to eastern Canada (Hudson and Baffin Bays) as well as northern Russia. The Greenland shark [*Somniosus microcephalus*] is a large, coldwater shark that lives in very deep water from the North Atlantic to the coast of Maine. Source: NOAA Library Collection.

In this period, whaler captain William Scoresby published his observations of natural phenomena in the Arctic as the book *An Account of the Arctic Regions with a History and Description of the Northern Whale-Fishery*. He also mapped and charted the east coast of Greenland on his voyage in 1823. In the same years, George Francis Lyon published an account of his adventures on Parry's voyages, where he described an Inuit igloo village and observed closely the Inuit use of dogs for sledging.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Click here to view source.

No. 12. An Inuit igloo village, by G. F. Lyon, *The Private Journal of Captain G.F. Lyon, of HMS* Hecla *during the Recent Voyage of Discovery under Captain Parry.* Boston: Wells and Lilly, 1824.

John Franklin penetrated land in two expeditions to map more than 1800 miles of Canadian coastline. The ambitions of the Hudson's Bay Company and the Royal Navy mission led up to deeper geographical discoveries in the Arctic, including the discovery of the North Magnetic Pole by James Clarke Ross. Thanks to William Jackson Hooker the British government agreed that botanists could be appointed to expeditions in order that English herbariums received large and valuable additions from all parts of the globe, and some books recording the natural effects of the voyages were published.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

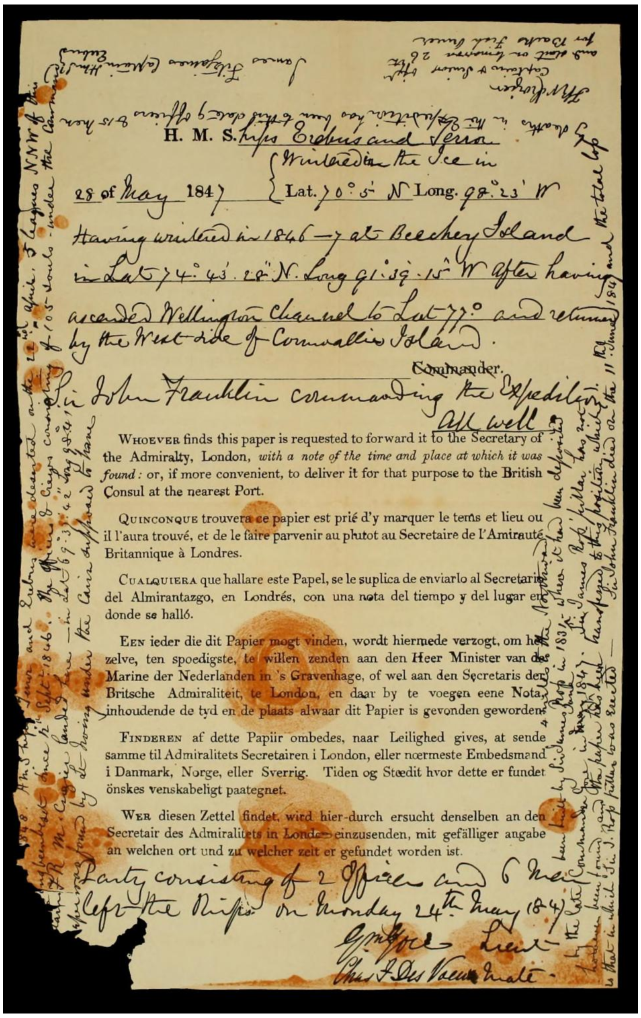
Click here to view source.

No. 13. Tofieldia coccinea Richardson. In William Jackson Hooker, George A. Walker Arnott, and Frederick William Beechey, *The Botany of Captain Beechey's Voyage Comprising an Account of the Plants Collected by Messrs. Lay and Collie, and Other Officers of the Expedition, during the Voyage to the Pacific and Bering's Strait, Performed in His Majesty's Ship Blossom, under the Command of Captain F. W. Beechey, R. N., F. R. S., & A. S., in the Years 1825, 26, 27, and 28.* London: H.G. Bohn, 1839.

Franklin's Expeditions

Explorations of the Arctic coastline seemed to show that discovery of the Northwest Passage was imminent. Determined to be the man who succeeded, Sir John Franklin led three expeditions, from the last of which no one returned alive. He sailed in May 1845 with the ships *Erebus* and *Terror* and a crew of 129; in late July they were seen by a whaler in Baffin Bay, waiting for the ice to clear in the Lancaster Sound so that they could begin their journey to the Bering Strait.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49


H. M. Ships Erebus and Terror
Wintered in the Ice in
28 of May 1847 Lat. 70°5' N Long. 98°23' W

Having wintered in 1846–7 at Beechey Island in Lat 74°43'28" N. Long 91°39'15" W after having ascended Wellington Channel to Lat 77° and returned by the West side of Cornwallis Island.

Commander.

Sir John Franklin commanding the Expedition.

All well

WHOEVER finds this paper is requested to forward it to the Secretary of the Admiralty, London, *with a note of the time and place at which it was found*: or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

QUINCONQUE trouvera ce papier est prié d'y marquer le tems et lieu ou il l'aura trouvé, et de le faire parvenir au plutot au Secretaire de l'Amirauté Britannique à Londres.

CUALQUIERA que hallare este Papel, se le suplica de enviarlo al Secretario del Almirantazgo, en Londrés, con una nota del tiempo y del lugar en donde se halló.

EEN ieder die dit Papier mogt vinden, wordt hiermede verzogt, om het zelve, ten spoedigste, te willen zenden aan den Heer Minister van der Marine der Nederlanden in 's Gravenhage, of wel aan den Secretaris der Britsche Admiraliteit, te London, en daar by te voegen eene Nota, inhoudende de tyd en de plaats alwaar dit Papier is gevonden geworden.

FINDEREN af dette Papiir ombedes, naar Leilighed gives, at sende samme til Admiralitets Secretairen i London, eller nærmeste Embedsmand i Danmark, Norge, eller Sverrig. Tiden og Stædit hvor dette er fundet önskes venskabeligt paategnet.

WER diesen Zettel findet, wird hier-durch ersucht denselben an den Secretair des Admiralitets in London einzusenden, mit gefälliger angabe an welchen ort und zu welcher zeit er gefundet worden ist.

Party consisting of 2 Officers and 6 Men left the Ships on Monday 24th May 1847

Gm. Gore Lieut.
Chas. F. Des Voeux Mate

Click here to view source.

No. 14. The final Franklin communication found by Hobson and McClintock in May 1859 in a cairn south of Back Bay, King William Island. From Francis Leopold McClintock, *The Voyage of the 'Fox' in the Arctic Seas a Narrative of the Discovery of the Fate of Sir John Franklin and His Companions*. Boston: Ticknor and Fields, 1860.

The second part of the nineteenth century saw a constant stream of expeditions to search for John Franklin and his companions. At least thirty expeditions were made with no success, and many died in their attempts.

> Each expedition added a new element to our knowledge of the Canadian Arctic, and it soon became clear that the route was more difficult than crossing the Southwest and thus was, in practice, unusable.

Each expedition added a new element to our knowledge of the Canadian Arctic, and it soon became clear that the route was more difficult than crossing the Southwest and thus was, in practice, unusable. The first expedition to cross from the Bering Strait to the Davis Strait, albeit traveling from west to east, was that led by Robert McClure, who arrived in the Arctic in 1849 in search of the Franklin expedition. It was not an easy task: Franklin and his men were not found, and McClure's ship became stuck in the ice so that he was forced to proceed by sleigh to Melville Island, where he was rescued by another expedition patrolling the area.

The way my father told it they buried their leader, the captain, on a hill—on the rocks—somewhere on the northwest of King William Island. They gave him a proper burial. They buried him with respect. There was a proper burial in the north of King William Island. Or somewhere else. Nobody knows exactly where. A lot of people went looking for him but nobody ever found him. In the same place, they packed up his logbook or some papers. They wrapped them up properly so they wouldn't get wet or damaged by the weather, so that those who found him would be able to understand exactly what had happened. They probably didn't leave them on the ground, so probably they covered them with rocks. We heard they buried the captain on a hill—a long narrow hill. So if people were looking in the right place, they would probably find him. If he was a captain, if he was buried properly, there should be signs of something—the ground stirred round, rocks as a marker. We heard they buried the captain carefully. That's the way we heard it. We heard he was buried on a long narrow hill. The people who went looking for him probably were not looking in the right places.

- No. 15. Elder Jimmy Qirqut of Gjøa Haven on King William Island remembers the stories told about the fascinating missing expedition of Sir John Franklin, and the supposed burial of the Captain. Quoted in Dorothy Harley Eber, *Encounters on the Passage: Inuit Meet the Explorers.* Toronto: University of Toronto Press, 2008. In this Soundcloud recording produced by Elena Baldassarri, the text is read by Ana Shorter. Screenshot of the Soundcloud player - https://soundcloud.com/ebaldassarri/john-franklin.

In September 2014 an expedition led by Parks Canada discovered the wreck of Sir John Franklin HMS Erebus, in the south of Victoria Island in Nunavut. Two years later, in September 2016, the other vessel, the HMS Terror, was found in Terror Bay, further north. The condition of the wrecks seems to prove that Terror and Erebus, trapped in ice off King William Island, were abandoned by the crew who had planned to walk toward the Back River on the Canadian mainland. Unfortunately all of them would die along the way, for a combination of cold, starvation, and disease such as scurvy, pneumonia, and tuberculosis. Most of the bodies were found in King William Island and in Beechey Island. Wrecks and the mournful march of the crew members were recorded by the Inuit in theirs stories.

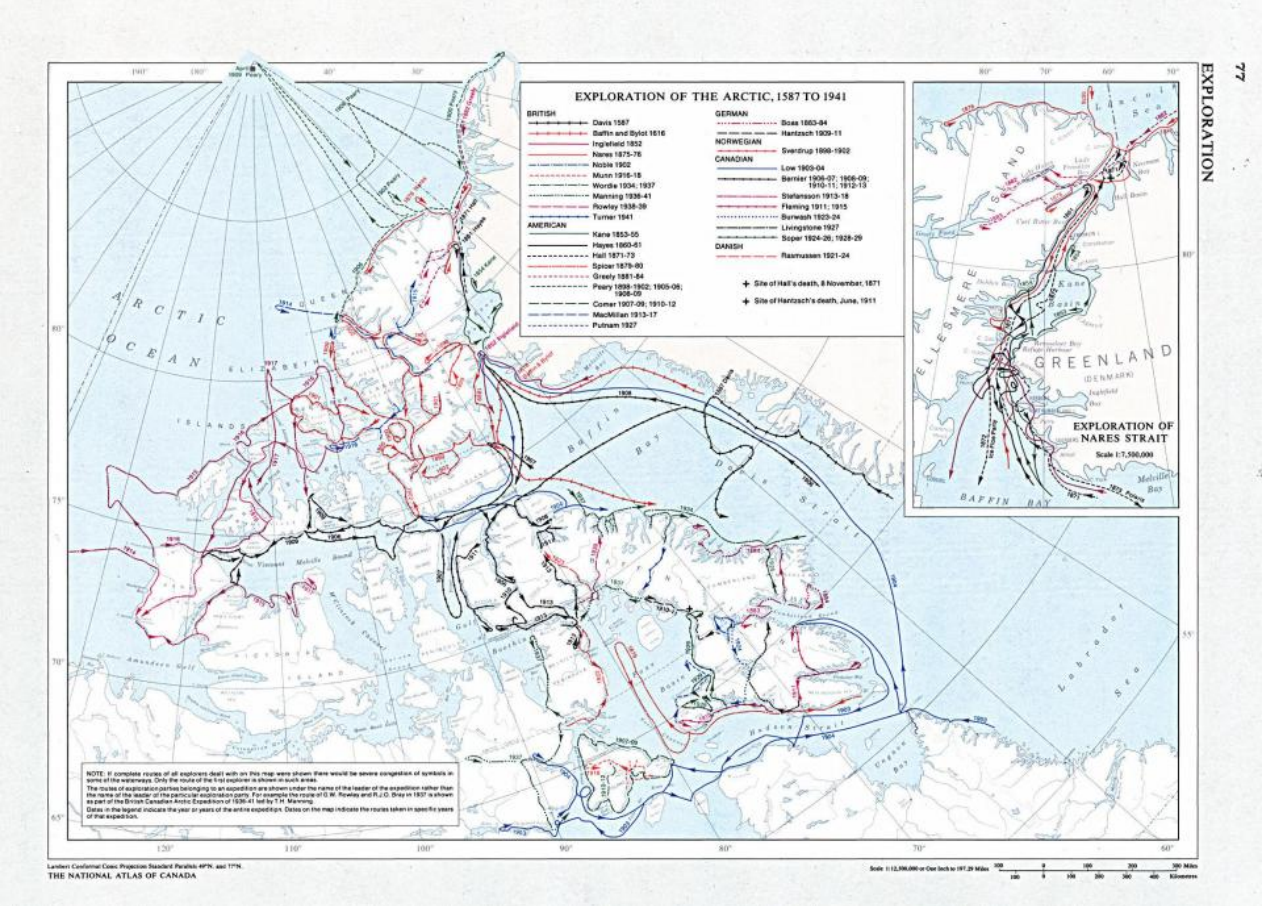
The Passage Navigated (1903–1984)

The twentieth century opened with a deep faith and confidence in progress and the future. It seemed that all the prodigious scientific discoveries and inventions to be achieved would be for the benefit of mankind.

The geographical explorations reached their peak in this period, although some journeys have since been made to emulate the feats of the great explorers in search of small corners of the world left untouched, either because of

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

their marginal interest in the advanced nations or because they proved too difficult to achieve, as is the case of the Northwest Passage.



No. 16. Exploration of the Arctic, 1587–1941. The fourth edition (1974) of the *Atlas of Canada* contains a map showing exploration routes of the Arctic between 1587 and 1941 for American, British, Canadian, Danish, German, and Norwegian explorers. A 1:7,500,000 scale supplementary map detailing the exploration of Nares Strait accompanies it. *Atlas of Canada,* Canadian Department of the Interior, 1974.

> While the aims were purely scientific in some cases, especially towards creating further knowledge of the world, the desire for personal fame, and often the enhancement of national prestige, was by no means a secondary factor.

This last series of explorations was encouraged by a belief in progress and the ideals of European civilization. While the aims were purely scientific in some cases, especially towards creating further knowledge of the world, the desire for personal fame, and often the enhancement of national prestige, was by no means a secondary

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

factor.

It was a real race between explorers from Nordic countries and those born in other European countries who were not accustomed to the rigors of the polar regions, but who possessed profuse experience of mountaineering.

The first vessel to navigate the Northwest Passage was Roald Amundsen's ship, the *Gjøa*, a small 47-tonne boat with a crew of just six men. Amundsen passed across Baffin Bay, through Lancaster Sound and Barrow Strait, and reached Beechey Island on 22 August 1903, anchoring in Erebus Bay. From there he followed Franklin's route towards King William Island, securing for the winter on the eastern coast of the island in a natural harbor, where they established the community of Gjøa Haven. For two winters Amundsen and his crew dedicated themselves to conducting magnetic and meteorological observations, learning Inuit survival skills from the Nattilingmiut who lived there.

The original virtual exhibition features an interactive gallery of images of the remains of the the Maud, explorer Roald Amundsen's schooner, sunk in front of Cambridge Bay. The boat was purchased by the Hudson Bay company for use as a supply and trading ship. Cambridge Bay, Nunavut. August 2013. Photos taken by Enrico Mariotti. View the images on the following pages.

The rest of the Maud (1)
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

The rest of the Maud (2)
Photo by Enrico Mariotti, 2013.

The rest of the the Maud (3)
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

The rest of the the Maud (4)
Photo by Enrico Mariotti, 2013.

The rest of the the Maud (5)
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

The rest of the the Maud (6)

No. 17. The remains of the the *Maud*, explorer Roald Amundsen's schooner, sunk in front of Cambridge Bay. The boat was purchased by the Hudson Bay company for use as a supply and trading ship. Cambridge Bay, Nunavut. August 2013. Photos taken by Enrico Mariotti. These works are licensed under a Creative Commons Attribution 4.0 International License .

After Amundsen's passage until the 1930s, the Canadian government demonstrated interest in the High Arctic, patrolling islands and expressing Canada's sovereignty with a photographic campaign that documented Northern people and the environment.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Public domain. Photo by George Lancefield, 1906.

Courtesy of Library and Archives Canada. Credit: J.-E. Bernier / Library and Archives Canada / C-000744.

Click here to view source.

No. 18. Inuit woman and child outside wooden buildings. Skins hanging in background. George Lancefield, "Inuit Woman." Digital image. Library and Archives Canada , 1906.

The next passage, made by the Royal Canadian Mounted Police vessel *St. Roch* under the command of Corporal Henry Larsen, did not take place until 1940. It was the first Canadian vessel to sail the Northwest Passage, the first vessel to complete the trip from west to east (1940–42), and the first vessel to make the journey in only one season (1944).

During the Cold War new responsibilities arose in the Arctic areas. US military bases in the region required periodic resupplying, and starting in 1955 Coast Guard vessels were involved in facilitating the construction of the Distant Early Warning (DEW) line of northern radar installations.

In 1957, the delivery of these stations resulted in the first transit of three US Coast Guard cutters: the *Storis*, *Spar*, and *Bramble*. In the same period a new intensive underwater journey using nuclear submarines was initiated. The first transit was registered on 23 July 1958, when the USS *Nautilus* departed from Pearl Harbor,

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Voyage to Myth and Adventure
Source URL: http://www.environmentandsociety.org/node/6319
PDF created on: 17 May 2021 10:21:49

Hawaii, under top-secret orders to conduct "Operation Sunshine," the first crossing of the North Pole, where it arrived on 3 August 1958.

After the end of the Cold War, and with temperatures increasing, the Northwest Passage became a traffic route: icebreakers, Coast Guard vessels, research boats, passenger cruises, and cargo ships navigated the passage more frequently every year, leaving the risks, hazards, and perils that made a legend out of this part of the world.

Websites linked in this text:

- http://www.nfb.ca/film/nunavut_animation_lab_qalupalik
- http://www.nfb.ca/explore-all-directors/ame-papatsie/
- http://www.nfb.ca
- http://geogratis.gc.ca/api/en/nrcan-rncan/ess-sst/3923ef2c-1287-50da-8828-cd151c1145b9.html
- http://www.loc.gov/pictures/item/2004662201
- http://www.knmi.nl/cliwoc/
- http://www.photolib.noaa.gov/htmls/libr0420.htm
- https://archive.org/details/voyageoffoxinarc00mcli_0
- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=3652541

Websites linked in image captions:

- http://ftp2.cits.rncan.gc.ca/pub/geott/atlas/archives/english/2ndedition/historical/page57_58.jpg
- http://data.gc.ca/eng/open-government-licence-canada
- https://baselbern.swissbib.ch/Record/126261660/Similar
- http://www.photolib.noaa.gov/bigs/libr0420.jpg
- http://commons.wikimedia.org/wiki/File:Inuit_igloo_village.jpg
- http://www.plantillustrations.org/ILLUSTRATIONS_HD/38728.jpg
- http://upload.wikimedia.org/wikipedia/commons/9/94/Franklinexpeditionnote.jpg
- http://data.gc.ca/eng/open-government-licence-canada
- http://data.gc.ca/eng/open-government-licence-canada
- http://data2.archives.ca/ap/c/c000744.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Northwest Passage as a Question of Sovereignty

Sovereignty

> The possibility of using the passage for shipping touched off a dispute between the United States and Canada, with the former claiming that the passage was an international waterway and the latter claiming sovereignty over much of the route.

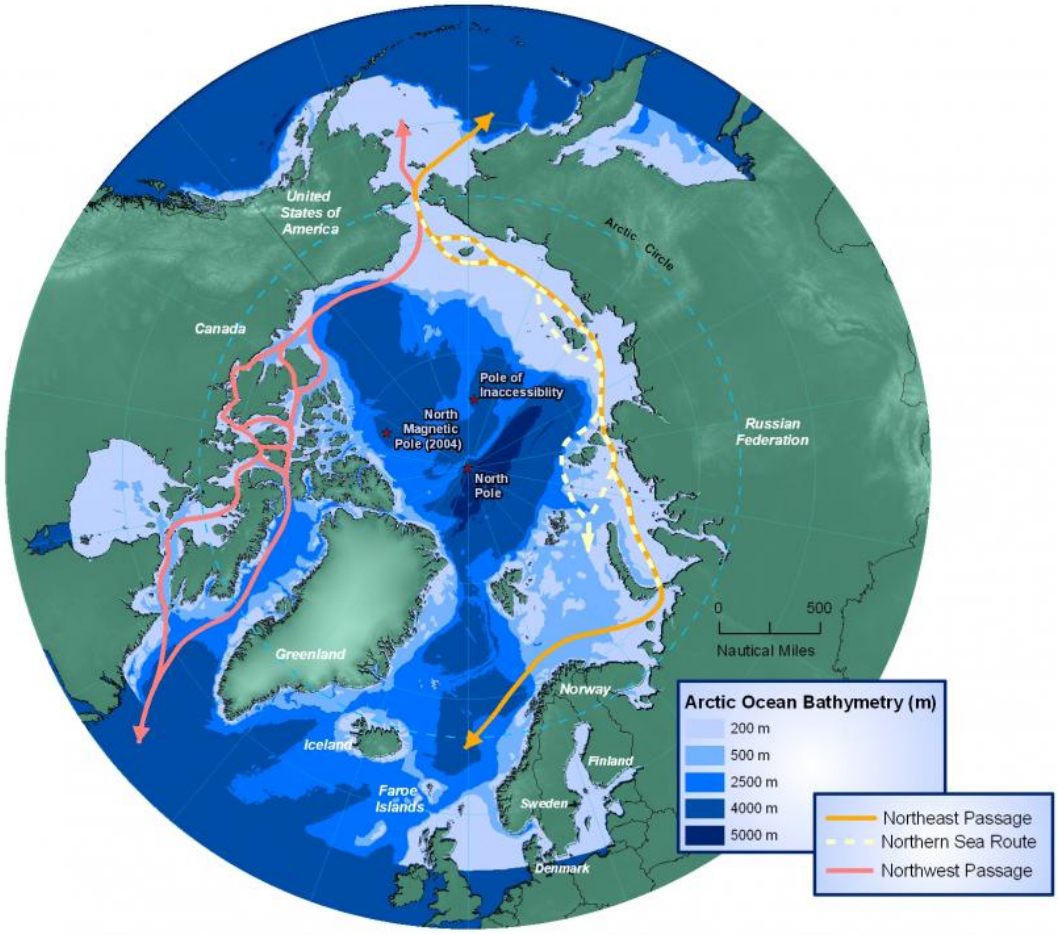
Surface vessels and nuclear submarines have crossed the Arctic Archipelago since Roald Amundsen first navigated the Northwest Passage in 1903. The possibility of using the passage for shipping touched off a dispute between the United States and Canada, with the former claiming that the passage was an international waterway and the latter claiming sovereignty over much of the route. Canadian concerns took a more radical turn due to various factors connected directly with the relationship between the passage and Canadian identity.

In recent years climate change has increased the possibility of the development of new sea navigation routes to secure access to energy for Arctic petroleum extraction—considerably shortening the distance between Europe and North America to Asia—and has opened up new opportunities for fishing. All of these possibilities for exploitation, transport, and fishing have given rise to concern about the environmental risks connected to increased human activity and economic interests in the area, such as the threat to the traditional livelihoods of the indigenous populations.

The growing interest in the Far North has also increased the rivalry between the five Arctic states (USA, Canada, Russia, Denmark/Greenland, and Norway) over issues of sovereignty. At the same time, various international bodies of a private or governmental nature from areas like the European Union, China and Japan have shown interest in the area.

Today there are three shipping routes across the Arctic Ocean that offer great potential to transform commercial shipping in the twenty-first century: the Northwest Passage (NWP), the Northern Sea Route (NSR), and the Transpolar Sea Route (TSR). In addition, the Arctic Bridge, a shipping route linking the Arctic seaports of Murmansk (Russia) and Churchill (Canada), could also develop into a future trade route between Europe and Asia.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43



Arctic Marine Shipping Assessment 2009 Report, Arctic Council, April 2009".
Click here to view source.

No. 19. Circumpolar routes. The map shows the different shipping routes across the Arctic. Source: Arctic Council, "Circumpolar Routes," *Arctic Marine Shipping Assessment 2009 Report*, available at arcticdata.is.

The NSR off Russia's northern coast is the only one of these routes that is extensively used. Under Russian law, all vessels must pay an "ice-breaker fee" for use of the NSR route. These fees are high and do not correlate directly to cost of the services rendered.

It is calculated that Arctic shipping routes could be 40 percent cheaper than traditional shipping via the Suez Canal. This means considerable savings on fuel costs, increased revenue, and potentially greater profit due to the lower number of days at sea and the possibility of a ship making a greater number of trips. Global shipping depends, however, on factors such as punctuality, predictability, and infrastructures, all of which are very difficult with the Arctic routes.

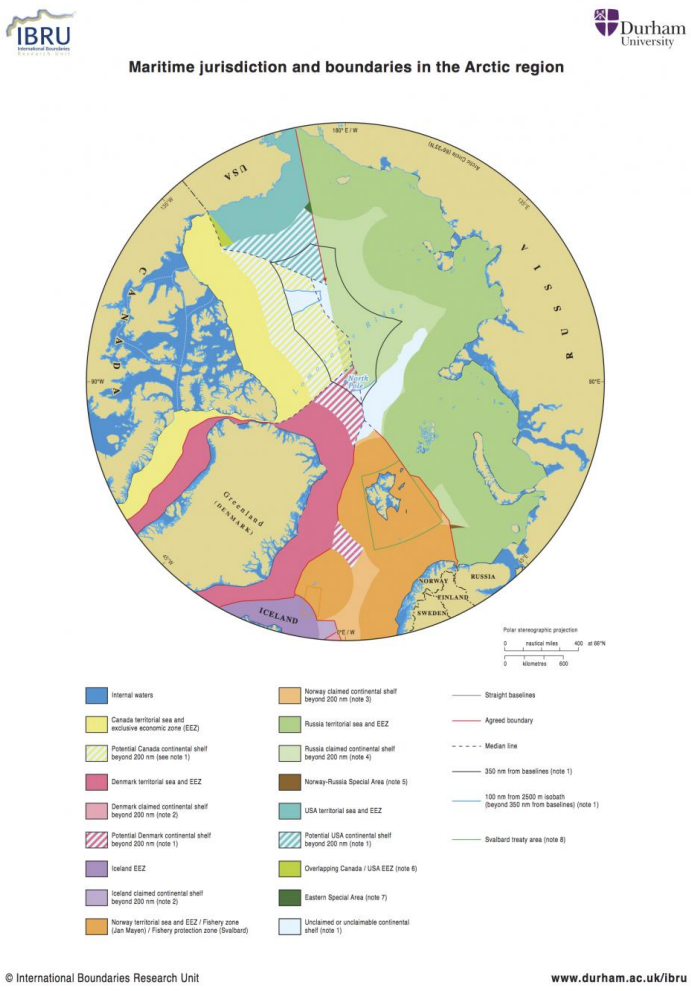
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

Arctic shipping is governed by the United Nations Convention on the Law of the Sea (UNCLOS) and the applicable established international law. Ratified by all the countries involved except for the United States, UNCLOS balances the different rights and responsibilities of states in their capacities as coastal, port, and flag states in the respective maritime zones.

Another organization that plays a key part in the international framework of UNCLOS is the International Maritime Organization (IMO), which is responsible for issues including safety and the control and prevention of vessel-source pollution and has already implemented two specific sets of recommendations for the Arctic. Most importantly, the IMO developed a mandatory Polar Code that entered into force on 1 January 2017.

An increasingly important feature of the legal landscape of marine infrastructure and offshore development in the Arctic as a whole is the Arctic Council. Created in 1996 under the terms of the Ottawa Declaration, this is an intergovernmental forum to foster cooperation, coordination, and interaction among the Arctic states with the involvement of the indigenous peoples of the whole circumpolar region. The member states are Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the USA; in addition, it includes non-national bodies known as Permanent Participants, consisting mostly of indigenous peoples' organizations.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43



Maritime jurisdiction and boundaries in the Arctic region. The map identifies known claims and agreed boundaries, plus potential areas that might be claimed in the future. Source: © 2008 International Boundaries Research Institute, Durham University, England.
Click here to view source.

No. 20. Maritime jurisdiction and boundaries in the Arctic region. The map identifies known claims and agreed boundaries, plus potential areas that might be claimed in the future. Source: International Boundaries Research Institute, Durham University, England, 2008.

UNCLOS, the IMO, and the Arctic Council are all concerned with the Northwest Passage in different ways. The continental shelf and the mineral resources of its subsoil are another area of legal controversy involving the Arctic states. UNCLOS allows the states to claim an extended continental shelf of 200–350 nautical miles (370–650 km) from the baselines used to measure their territorial seas. Russia, Denmark, and Canada are currently engaged in making such a claim, which involves assembling scientific data and submitting it to the United Nations Commission on the Limits of the Continental Shelf within a certain deadline.

All the actors with an interest in the Passage have different opinions and perspectives on sovereignty over this area. In this context, the Inuit perspective is completely unique. In a world of shifting ice and harsh weather in which the movements of animals have no regard for borders, Inuit understand their surroundings in terms of cosmological and existential factors rather than political boundaries. Typical is the fact that, in Inuktitut, there is no word for "sovereignty."

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

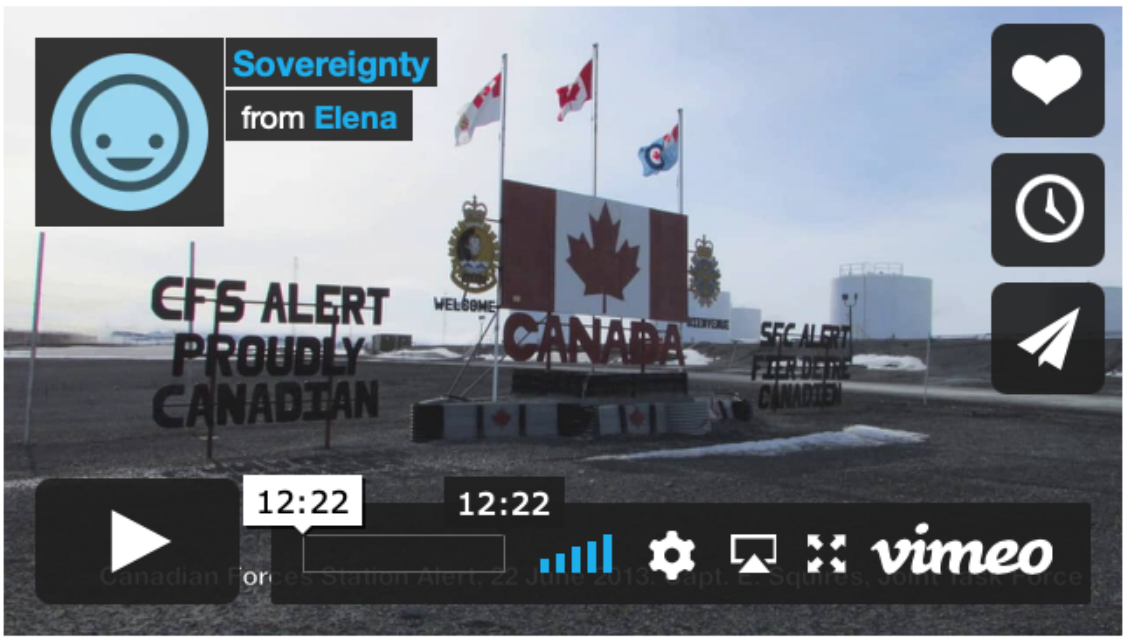
> To translate the concept of sovereignty, the word *aulatsigunnarniq*, was used, which literally means "the ability to make things move," in the context of being able to control something.

For thousands of years, Inuit had words for everything around them, perfectly articulating how they understood the world. When people came from other cultures, they brought not only their own morals and values with them, but also new words. To translate the concept of sovereignty, the word *aulatsigunnarniq*, was used, which literally means "the ability to make things move," in the context of being able to control something.

In Inuit culture one cannot expect to impose geometry upon the world, since it is the world itself that dictates all conditions. Therefore, contrary to Western culture that opposes a rational, delimited order to undisciplined, imperfect chaos, Inuit culture does not fight against any perceivable chaos but rather works with and within an acceptable whole that has little to do with human rational tyranny.

The Inuit cosmological trinity *Imaq–Nuna–Sila* (Water–Land–Sky, each with a complex different meaning) does not leave man as a passive player at the mercy of a capricious world, but enables him, upon observation and adaptation, to participate in a dynamic system. In this system the True Human [*Inummarik*] acts as a sort of model, "a free human, sovereign over the self, respectful of the self-sovereignty of others. It is the human whose awareness not only renders self-sovereignty possible, but comprehends how self-sovereignties—those of others in society—synergize toward a system of self-perpetuating health." (Rachel A. Qitsualik. *Inummarik: Self-Sovereignty in Classic Inuit Thought in Nilliajut: Inuit Perspectives on Security, Patriotism and Sovereignty*, 35. Ottawa: Inuit Tapiriit Kanatami. Inuit Qaujisarvingat, 2013.)

During the last century, in spite of this path, Inuit had to confront attempts and governments interventions used to assert sovereignty in the Arctic.



No. 21. Sovereignty. Video presenting the sovereignty question in relation to Arctic and Northwest Passage shipping. Interviewers underlined the connection between the historical problem and geopolitical issues. Video by Elena Baldassarri, August 2013, with interviews with Franklyn Griffiths, James Manicom, Adam Lajeunesse, John Higginbotham, and Kathrin Keil. This work is licensed under a Creative Commons Attribution 4.0 International License. Screenshot from the Vimeo video - https://vimeo.com/104400714.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

"Use It or Lose It": Canadian Sovereignty in the Passage

Various scholars have sought to underline how different meanings of sovereignty are used by the Canadian government to justify its territorial claims on the Arctic and the Northwest Passage. The challenge of the Passage is in fact one of self-discovery and self-definition for Canada in close connection with its claims on the Arctic. Canada purchased the Hudson Bay territories in 1870 and received the consent of the British crown in 1880 to the transfer to Canada of "all British territories and possessions in North America, not already included within the Dominion of Canada and all Islands adjacent to any such Territories or Possessions." There is nothing in this transfer to support Canada's claims to sovereignty with respect to the United States or any European powers. The responsibility for consolidating Canada's title was left to Captain Bernier's voyages of 1904–11 and other government-funded expeditions.

> The concept of sovereignty is somewhat elusive and changeable over time, with varying degrees of emphasis placed on different elements such as control, authority and perception.

The concept of sovereignty is somewhat elusive and changeable over time, with varying degrees of emphasis placed on different elements such as control, authority and perception. It is the central pillar of international law, and its definition reflects a state's right to jurisdictional control, territorial integrity, and non-interference on the part of other states.

Sovereignty is connected, first of all, with topography. In this respect, the original topographic surveys of the Arctic waters are inadequate and this has not greatly improved over the centuries. Melting ice and increased accessibility have led to disputes between the bordering nations. In 2003 Canada ratified the UNCLOS, which grants states rights to the natural resources of the sea within the exclusive economic zone (EEZ) of 200 nautical miles from the coast. Today Canada is mapping its continental shelf with a view to expanding its control over the Arctic.

In addition to geography, the concept of sovereignty in the Arctic involves aspects such as human presence, exploitation of the territory, and its military and environmental defense. The unusual feature of the Northwest Passage is that even if Canada enjoys undisputed possession of the islands, waters, seabed, and subsoil of the Arctic Archipelago, it still has to demonstrate its ability to control this territory. Canada argues that the Arctic waters of the Northwest Passage are "inland waters for historical reasons" and under Canadian jurisdiction, although this claim is disputed, especially by the United States and the European Union. As internal waters, they are subject to the sovereign will of Canada by virtue of a historical title transferred from Britain and from the Inuit people, who are now Canadian and have occupied the waters from the very outset. In short, Canada claims the historical right to grant or deny access to all foreign vessels—naval, commercial, and private—wishing to enter or sail through the Arctic Archipelago.

Canada also defines sovereignty in terms of responsibility. This includes the state of exercising control and authority over the territory, and the perception, by other states, of the presence of control. The political scientist Franklyn Griffiths defines sovereignty as "the ability of the state to exercise recognized rights of exclusive jurisdiction within a territorially delimited space." In other words, sovereignty derives from the capacity for recognition and enactment: i.e., to secure recognition of one's rights and to enact or act on these rights. Until recently, Canada has favored recognition over enactment in its approach to Arctic sovereignty.

An essential aspect of the assertion of Canadian sovereignty over Arctic waters regards the concept of the human

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

dimension and is related to the presence of Native peoples. In particular, "use and occupation" by the inhabitants of northern Canada is significant in terms of sovereignty as enactment. This means that the country not only governs, but also "watches, keeps, takes care of and provides for in the running of things."

Encouraging Arctic development is also connected to the higher aim of securing Canadian sovereignty in the Arctic, by the logic of the motto "use it or lose it."

In the last few years, the Canadian government has been encouraging Arctic exploration projects with the twin goals of demonstrating Canada's effective occupation of its vast Arctic territory and improving the economic and social conditions of the local communities. The creation of jobs and the possibility of improving education opportunities and expanding social welfare systems are regarded as positive effects that in turn pay dividends in the form of increased tax revenues. Encouraging Arctic development is also connected to the higher aim of securing Canadian sovereignty in the Arctic, by the logic of the motto "use it or lose it."

Arctic traffic jam by Andy Donato. First published in Toronto Sun, 1993. Reproduced with permission of the copyright owner © Andy Donato.

No. 22. Arctic traffic jam by Andy Donato. First published in the *Toronto Sun*, 1993. Reproduced with permission of the copyright owner, Andy Donato.

United States

The US approach to the Arctic during the Cold War was linked to national security and continental defense. The USA has argued consistently that the Northwest Passage is an international strait (international waters) through which the vessels and aircraft of all countries have considerable rights of transit under the Law of the

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

Sea. For this reason, it is reluctant to accept Canadian sovereignty over the Arctic, as this would threaten freedom of navigation, which is essential for US maritime activities worldwide, and would be contrary to the fundamental tenet that the Law of the Sea can be amended only by multilateral agreement. US efforts to limit any extension of the sovereignty of coastal states over the high seas in the rest of the world would also be impaired.

Supported by other delegations, the USA is particularly concerned that the Polar Code could provide an international legal basis for Canadian and Russian regulation of shipping traffic in the Arctic waters to which they lay claim. In future they will also play a decisive role in the prevention, control, and reduction of maritime pollution across all of the possible polar routes, because they will have the authority under general international law to impose conditions on the entry of foreign ships into their ports.

A Flag Beneath the North Pole: The Russian Point of View

The Russian Arctic encompasses 44 percent of the entire circumpolar area, according to the Arctic Council. Consequently, physical presence the North is pivotal to Russian identity, but in a different way to that of Canada: it is not a romantic, exotic concept, but a reality, and a big concern as has been expressed in past by historical Russian policy in the Arctic and today by the development of the Northern Sea Route. This route is not only a summertime operation, but a year-round transportation artery.

In recent decades Russian administrations have placed emphasis on increasing maritime traffic and maintaining control over the shipping lane, as well as financing first-class navy and naval bases. The navy is an instrument to protect national economic interests in the Arctic, where some of the world's richest biological and mineral resources are concentrated.

In 2007 a Russian expedition deployed two submersibles to the ocean floor beneath the North Pole to collect samples and data, with the primary objective of gathering scientific evidence to support Russia's territorial claims and, as a symbolic step, setting a Russian flag on the bottom of the seabed underneath the North Pole. This act raised wide concerns among international public opinion and governments, highlighting the uncertain legal status of the Arctic region.

The Kremlin has petitioned the UNCLOS Commission on the Limits of the Continental Shelf to recognize Russia‘s exploration rights for the Arctic undersea territory, including the Lomonosov Ridge and Mendeleyev Ridges. The Russian claim is that the Arctic Ocean seabed is a projection of the Siberian continental shelf. The exploration and development of new offshore resources in the Arctic could present Russia with a vital opportunity to boost its gas and oil reserves.

From this perspective the Northern Sea Route is essential: most of the resources put into the route's infrastructure are funneled into the Murmansk-Dudinka-Krasnoyarsk transport corridors. Murmansk is the largest city in the Arctic, in the far west of Russia, while Dudinka is a port on the Yenisey River. International shipping along the Northern Sea Route is posed to explode in the coming decades. Along with it, other facilities supporting marine transport will also expand, including intermodal connections, cranes, search and rescue

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

capabilities, and weather satellites.

This image was taken by L. Murphy of the NOAA Ocean Explorer. Click here to view source.

No. 23. This image shows a Mir submersible. A similar submarine placed a Russian state flag in the seabed of the Arctic Ocean at a depth of 4,261 meters (13,980 feet). Russian newspapers lauded members of an Arctic expedition who planted a Russian flag in the seabed four kilometers (2.5 miles) beneath the North Pole.

External Actors

> Each year marks a new record in the number of ships going through the corridor, but this is always minuscule in comparison to the other trade routes. Multi-year ice and the limited seasonal window for trans-Arctic voyages will constitute major obstacles in the future: trans-Arctic shipping routes

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

will not be a substitute for existing shipping lanes but instead provide additional capacity for growing volumes of transportation.

In the past the European Union took little interest in the Arctic region, which was considered a peripheral area of little importance, especially after 1985 when Greenland formally withdraw from what was then the European Community. It was not until Finland and Sweden joined in 1995 and the EU Northern Dimension was created that interest in the Arctic was renewed.

The area's new importance was evidenced in the 2007 report "On Strategic Issues Relating to the Arctic Ocean" and by the 2006 Green Paper "Towards a Future Maritime Policy for the Union ," which also discussed the problem of climate change. As the European Union is one of major parties involved in world trade, largely in the form of shipping, it has considerable interest in increased shipping capacity and potential alternatives to historical shipping routes. In particular, crucial importance is attached to trade between Europe and the Asian markets, and to the possibility of new routes to substitute or supplement the existing one through the Suez Canal. For this reason, many argue that the European Union should improve its policy in the region through an approach shared by all its member countries. This is not easy to achieve, however, due to the differing claims and interests within the EU assembly.

EU interest in the Arctic and in NWP shipping is dominated by the debate on issues including monitoring and surveillance, as well as the expansion of the tourism sector. Moreover, the EU approach still lacks an economic angle due to the unpredictability of future Arctic shipping.

The development of Arctic offshore resources and related economic activities will improve the integration of the Arctic economy in global trade. Each year marks a new record in the number of ships going through the corridor, but this is always minuscule in comparison to the other trade routes. Multi-year ice and the limited seasonal window for trans-Arctic voyages will constitute major obstacles in the future: trans-Arctic shipping routes will not be a substitute for existing shipping lanes but instead provide additional capacity for growing volumes of transportation.

In this race, powerful and interested parties such as China, Japan, and India have persistently increased their activity in the area through investments, economic cooperation, and research.

Indigenous Peoples

Sovereignty of the Arctic became a concern for Canada later, when international conflicts urged the Canadian government to assert their presence in the region. The Canadian Arctic Archipelago was inhabited largely by Inuit, and it was not until 1880 that an Order in Council confirmed to the Dominion of Canada the title and ownership of the Arctic Archipelago. At the beginning of the twentieth century, the government became worried about the presence of foreign vessels sailing between the Arctic islands, and funded several expeditions captained by J. E. Bernier and his Canadian ship, *Neptune*, to make annual tours along the Arctic coast and islands to collect navigational and scientific data and to declare Canadian sovereignty on many Arctic islands.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

No. 24. This map shows the history of several trading posts of the Hudson' s Bay Company. Thanks to the trading post records available in the Hudson' s Bay Company Archives , it was possible to determine the dates of opening and closing of each post. Note the choice of settlement sites that were generally an easy landing place or a meeting place for the Inuit in the area. Most of these posts became places of pilgrimage for hunters for fur trading. Over time mounted police bases and DEW Line military bases would be added, turning them into villages and finally into hamlets. A " hamlet" describes a municipal corporation with the status of a hamlet established by a governmental Act with a delineated geographical area of jurisdiction. All of Nunavut' s 25 municipalities are hamlets, except for the City of Iqaluit. This work was created by Enrico Mariotti in 2013 and is licensed under a Creative Commons Attribution 4.0 International License. Screenshot of the interactive OpenSourceMap Carto map - https://mariotti.carto.com/viz/e9117958-3d0e-11e6-88a0-0ecd1babdde5/public_map.

To ensure control over land and water, beginning in 1920, the Canadian government facilitated Inuit relocations. In the first instance these relocations were motivated by subsistence needs, and Inuit were moved to regions with better natural resources to prevent starvation, but this procedure was soon boosted by sovereignty claims and economic concerns. To ensure success of its business, the Hudson's Bay Company (HBC) pressed the federal government for relocation projects that would group Inuit trappers near HBC posts across the Arctic. In 1953, however, the situation became distressing: relocations of Inuit families from Port Harrison (now Inukjuak) and Pond Inlet to Resolute Bay and Grise Fiord (Craig Harbor) produced big changes in Inuit communities.

> The government exerted pressure upon Inuit to abandon their *ilagiit nunagivaktangat* ("camp") and move into settlements, refusing to help those wanting to return to their land.

The motivations for the relocation were not clear for people who had to adapt to distant areas where they had no experience with the environment, the colder climate, or with the longer periods of total light or darkness. Even though Inuit had been migrating for centuries to follow seasonal routes, for trading or to maintain kinship networks, these changes were totally different. The government exerted pressure upon Inuit to abandon their *ilagiit nunagivaktangat* ("camp") and move into settlements, refusing to help those wanting to return to their land. Worsening the situation was the government's decision to provide school buildings and staff in the settlements, forcing Inuit to move there so their children could pursue education and have the opportunity to participate in the wage economy.

To accommodate children in the settlements, the government began building school hostels, supervised by Inuit, which were an alternative to sending young children to residential schools. The Indian Residential School (IRS) system grew out of Canada's missionary experience with various religious organizations. The federal government began to play a role in the development and administration of this system as early as 1874 and ceased to operate them by the mid-1970s. Some parents tried to oppose the abandonment of traditional learning in favor of Western schooling, but they felt they had no choice when social workers, teachers, or Royal Canadian Mounted Police (RCMP) officers came to their *ilagiit nunagivaktangit* and told them "children have to go to school."

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

Unidentified class of students Coral Harbour , N.W.T., [(Salliq), Nunavut], 1964. Health Canada fonds / Library and Archives Canada / © Library and Archives Canada.

Credit: Health Canada fonds / Library and Archives Canada / e002216411

Click here to view source.

No. 25. Unidentified class of students at Coral Harbor, Northwest Territories, [(Salliq), Nunavut]. Digital image. Health Canada fonds, Library and Archives Canada, 1964.

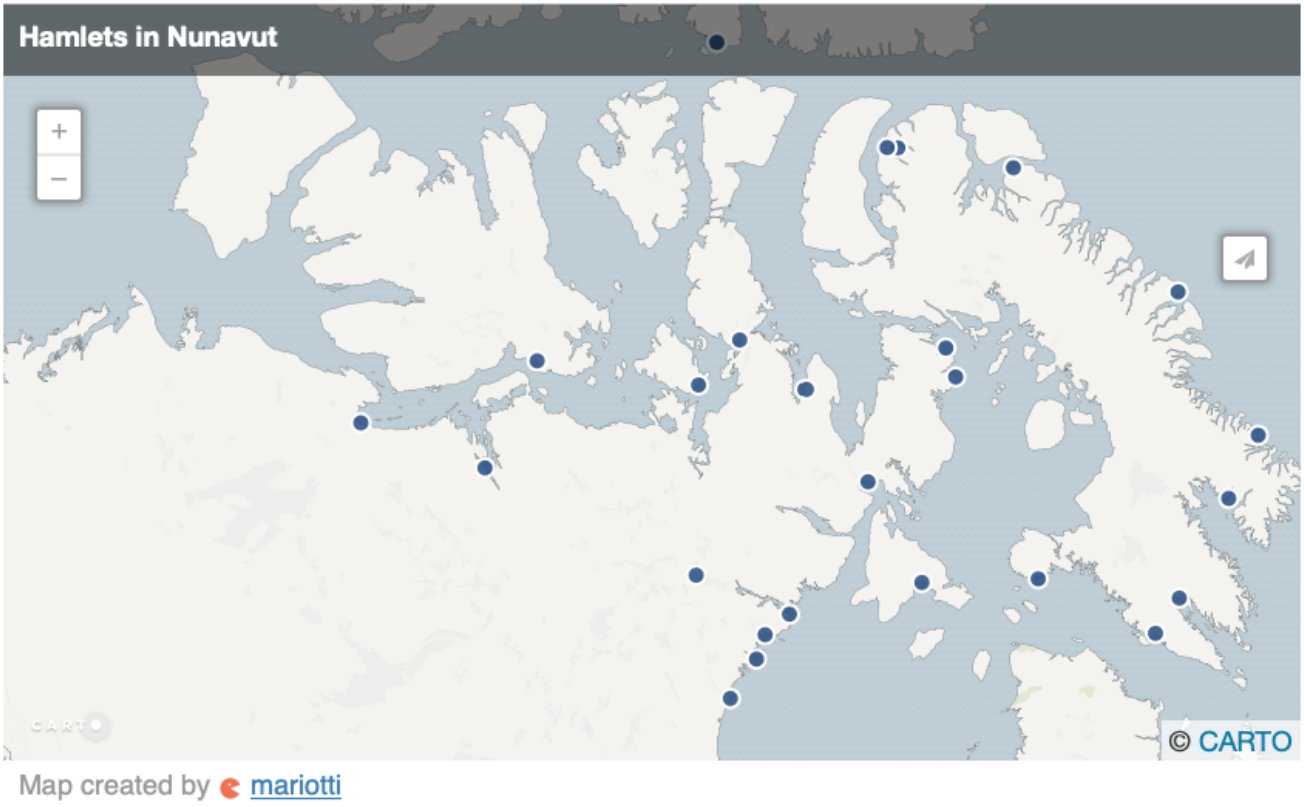
The impacts of these movements, relocations, and residential schools on Inuit society were inextricably linked to the Inuit sense of place and kinship. An entire generation of youth lost contact with the land and, as a result, a real understanding of Inuit culture, language and practices was also lost: the Inuit had no opportunities to exercise traditional knowledge and use their languages.

> An entire generation of youth lost contact with the land and, as a result, a real understanding of Inuit culture, language and practices was also lost: the Inuit had no opportunities to exercise traditional knowledge and use their languages.

Inuit migrations between 1950 and 1975 were a mix of voluntary, pressured, and forced moves, usually in response to government priorities. These policies had long-term effects: Inuit felt deep cultural and personal

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

losses resulting from family separations and ties to the land, and relocations altered their lives and made people vulnerable by forcing them to become dependent on government, thus diminishing Inuit self-sufficiency, self-esteem, and personal autonomy.



No. 26. The map shows the position of the hamlets in Nunavut and gives some information about their dates of incorporation. This work was created by Enrico Mariotti in 2013 and is licensed under a Creative Commons Attribution 4.0 International License . Screenshot of the interactive Carto map - https://mariotti.carto.com/viz/946b98d4-9743-11e3-bf7c-0e49973114de/embed_map.

Today, Canadian and US laws require consultation with the indigenous populations for all projects involving development and encroachment on lands or waters occupied and used from time immemorial by Native peoples. Land-claim agreements in Canada require any proposed project on the territory to have an impact-benefit agreement with the Native populations affected and seek their approval. In the USA, aboriginal consultations are required by former President Clinton's Executive Order of 6 November 2000, and the First Nations have systematically used the US judicial system to defend their way of life and environment. Moreover, Alaskan and Inuit authorities are gradually making use of the traditional knowledge of the Native peoples in planning and carrying out projects concerning northern development. The proposals are very often in stark contrast to the environmental concerns of the indigenous people of the North, who see their traditional ways of life threatened by increasing external influences. In some cases, however, indigenous peoples are also calling for economic development with no unnecessary impediments because they see this as a way to obtain a more adequate economic position. This marks an important shift from merely environmental protection to a growing awareness that the consolidation and development of the Arctic societies must rest on economic development.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

Tim Dolighan. Inuit Snub. Creation date: 29 March 2013. Reproduced with permission of the copyright owner © Tim Dolighan. In http://dolighan.com/ .

This work is used by permission of the copyright holder.

No. 27. Tim Dolighan. Inuit Snub. Creation date: 29 March 2013. Reproduced with permission of the copyright owner, Tim Dolighan .

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Question of Sovereignty
Source URL: http://www.environmentandsociety.org/node/6321
PDF created on: 06 May 2021 12:41:43

Websites linked in this text:

- http://geo.abds.is/geonetwork/srv/ger/catalog.search#/home
- http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx
- https://vimeo.com/104400714
- https://vimeo.com/user25250799
- http://www.northerndimension.info/northern-dimension
- http://europa.eu/documents/comm/green_papers/pdf/com_2006_0275_en_part2.pdf
- http://www.gov.mb.ca/chc/archives/hbca/
- http://dolighan.com/

Websites linked in image captions:

- http://arcticdata.is/index.php?option=com_phocadownload&view=file&id=106:sipping-routes&Itemid=166
- http://www.durham.ac.uk/ibru/resources/arctic
- https://en.wikipedia.org/wiki/Mir_(submersible)#/media/File:Mir_front.jpg
- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=3603045
- http://dolighan.com/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Northwest Passage as a Matter of National Security

Security

> Neither the United States nor Canada looked on the North as a place to be protected because of some intrinsic value. Rather it was seen as a direction, as an exposed flank.
> —Kenneth C. Eyre

Security, which in the period after World War II and during the Cold War was thought of in terms of military power, confrontation, and strategic policy, has today become a much more complex question. In the context of the Northwest Passage, security priorities have been extended from traditional concerns to newer ones related to the changing environment. The result of this is the systematic consolidation of nature as a military entity. The early period of the Cold War saw attempts to overcome what was perceived to be a hostile environment. As Kenneth Eyre observes, "neither the United States nor Canada looked on the North as a place to be protected because of some intrinsic value. Rather it was seen as a direction, as an exposed flank" [Kenneth C. Eyre, "Forty Years of Military Activity in the Canadian North, 1947–87," *Arctic* 40, no. 4 (1987): 294].

As the polar ice recedes, the exploitation of resources increases, and the Arctic is a vast territory that is rich in oil and minerals. It is traversed by national boundaries and commercial shipping lines, but is also a vulnerable and changing ecosystem that is home to unique fish and wildlife populations. The real conflict in the Arctic today is not, in fact, between military forces, but rather between the competing needs of resource exploitation and environmental protection. The Canadian government aims to play the leading role in the region, but in order to be successful it must also demonstrate its ability to guarantee the security of the area—something that is more than a matter of simply patrolling the coasts.

> Climate change is enormously worrisome for people living in the Arctic: nature's instability generates concerns about the sustainability of many aspects of Inuits' inherited and acquired patterns of life, extending even to the question of what it means to be an Inuit today.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

Inuit have accepted military activity as part of life in the Arctic and consider monitoring and surveillance to be fundamental to the region's survival. However, the quest for international stability and harmony does not need to emphasize military infrastructure and investment at the expense of social and economic security. Climate change is enormously worrisome for people living in the Arctic: nature's instability generates concerns about the sustainability of many aspects of Inuits' inherited and acquired patterns of life, extending even to the question of what it means to be an Inuit today.

During the Cold War, the Arctic was a place of direct confrontation between the superpowers, and hence a theater for operations and the development of strategic weapons. Interest in the region began during World War II, when Greenland in particular was seen as a possible point from which to launch an attack from Europe on North America. Following the end of the war with Germany, the United States sought to acquire bases as close to the Soviet Union as possible, and also to ensure some amount of control over the Northwest Passage. In 1946 the United States proposed the construction of several weather stations in the Arctic Archipelago, which would be established and operated in cooperation with Canada. The result was an agreement in 1947 that established joint weather stations at Resolute, Eureka Sound, Mould Bay, Isachsen, and Alert.

The onset of the Cold War generated pressure to balance sovereignty concerns with North American continental security imperatives because of the strategic position of the Northwest Passage between the USA and the Soviet Union. The region became the area in which the two superpowers faced one another geographically. The defense of the Arctic was inevitably linked to American security, and the Far North became a barrier against possible Soviet invasion. Canada, Denmark, and Norway, the three non-superpower Arctic coastal states, joined the North Atlantic Treaty Organization (NATO) when it was founded in 1949. The United States built up bases in Alaska, Canada, Greenland, and Iceland as an additional element of its global strategy to contain the Soviet Union.

Photo by Enrico Mariotti, 2013.

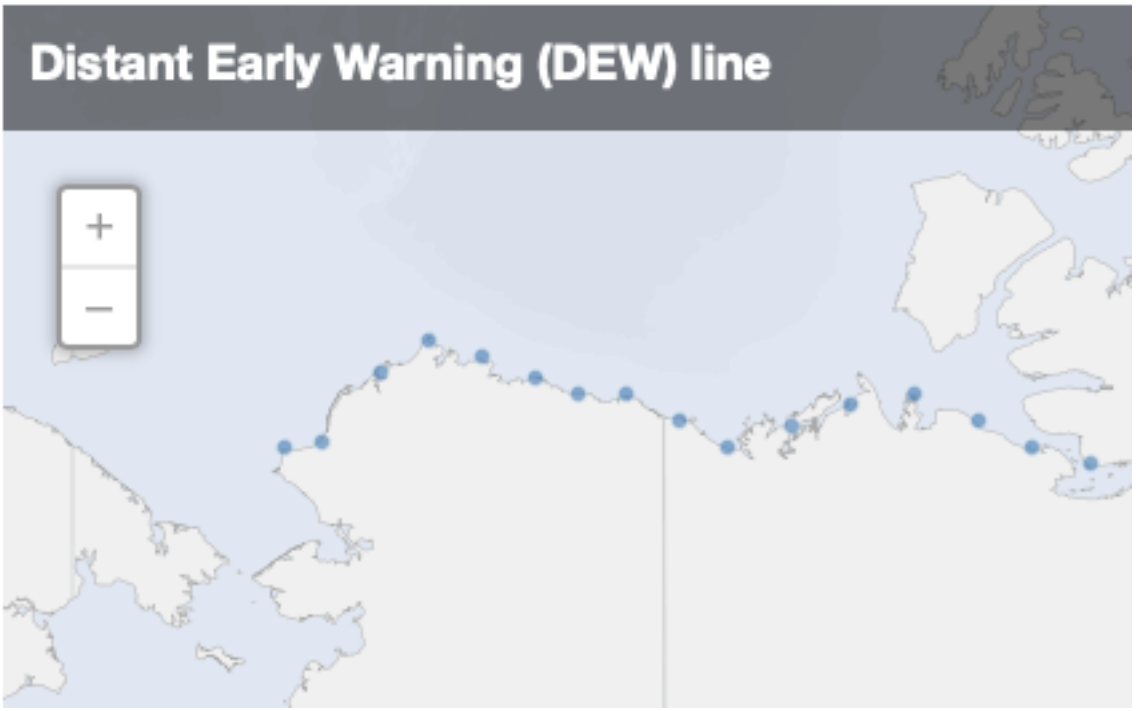
No. 28. The Cambridge Bay long-range navigation (LORAN) tower was built in 1947–48 for radio transmissions. It was 189 meters tall and was used until recently as a non-directional beacon. The tower was demolished in August 2014 because it was structurally unsound. Cambridge Bay, Nunavut. August 2013. Photos taken by Enrico Mariotti.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

During the Cold War, membership in NATO and bilateral agreements with the United States guaranteed Canadian security to some extent, with no major expense for the federal government. Even if there were no risks to Canadian sovereignty, however, there were certainly important cultural and environmental consequences.

In the 1950s, the United States extended its air defense systems with the Distant Early Warning (DEW) Line, a network of radar stations along the 70th parallel designed to detect Soviet bombers. The Canadian military negotiated a favorable agreement that protected Canada's sovereignty and secured economic benefits for Canadian companies, but opposition politicians saw this as a loss of control over the North.

The Canadian Department of National Defense saw the DEW Line as a major coup for Canadian sovereignty, because the United States, as an ally, explicitly recognized that the islands in the Arctic Archipelago belonged to Canada. While the costs of construction and operation were to be borne by the United States, Canada was to be entitled to take over its running and management in the future, which meant that port and airstrip facilities constructed for the DEW Line stations were to be available for Canadian use. The DEW Line agreement was followed by an agreement on the Ballistic Missile Early Warning System in 1959.



No. 29. The map shows the sites of the DEW Line bases and their operational period from 1957, when the system became active, to their closure in the 1990s. The construction of the 58 sites took place between 1955 and 1957, and they were declared fully operational on 31 July 1957. In 1988 the transition to the North Warning System (NWS) began, and those few DEW sites that were not integrated in the North Warning operation were eventually closed down. This work was created by Enrico Mariotti in 2014 and is licensed under a Creative Commons Attribution 4.0 International License . Screenshot of the Carto map - https://emariotti.carto.com/viz/d04ee4b0-8694-11e3-b4a1-4b321f7d2bcf/public_map.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

The main difference between weather stations and DEW Line stations was the way their locations were selected: The selection of the sites for the weather stations was carried out by sea and based largely on places that had provided good anchorage for explorers' vessels during the previous centuries. Aerial photographs and onsite inspections were both used in choosing the numerous locations for the DEW Line from Alaska to Greenland, with the distance between the radar facilities being regarded as the main criteria. As a result of this procedure, many of the sites of the DEW Line stations had inadequate anchorage and hence experienced major problems with the transportation of supplies. About half of the radar stations were soon abandoned for reasons of location as well as advances in radar and communication technology. However, other sites along the DEW Line in the Arctic stimulated the birth and growth of settlements, thus altering the character of formerly populated places to the advantage of new military bases. The possibility of working for the southerners, rather than fishing and trapping, encouraged the Inuit people to relocate.

The design of the new military stations posed numerous engineering problems. The Arctic's cold climate adversely affected land, water, and people, and caused serious problems for construction and transportation. The practicability of human work was determined by ice and freezing temperatures. While surface geology and topography may favor the building of airstrips and roads, these can soon be damaged if the layer of permafrost is disturbed. With a large settlement the cost of maintenance is high, and convenient access by sea is required. A year-round supply of freshwater is essential, and the topographical features and permafrost layer must be suitable for building stable structures.

The Northwest Passage was also considered an important supply channel for the DEW Line in the event of Soviet attack, as military reinforcements could arrive by this route.

No. 30. DEW Line . Video describes the importance of the construction of the DEW Line and its impact on Inuit life and culture. Interviews with Adam Lajeunesse, Susie Maniyogina, Jimmy Maniyogina, Ana Nahogaloak, and Mary Avalak. Video by Elena Baldassarri , August 2013. This work is licensed under a Creative Commons Attribution 4.0 International License . Screenshot of Vimeo video - https://vimeo.com/104382124.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

Submarines

> American, Russian, and British nuclear submarines regularly passed beneath the Arctic Ocean ice pack during the Cold War, often traveling from ocean to ocean on secret missions. Sometimes they surfaced at the North Pole using special sonar technology to determine the point at which to break through the ice.

Cold War conflict increased the strategic importance of the Arctic and the Northwest Passage, but also created new challenges. From the late 1950s to the 1980s, the area saw attempts by Soviet nuclear submarines to sail undetected through Canadian Arctic waters, on the one hand, and the efforts of Allied Forces to prevent an attack on the other.

American, Russian, and British nuclear submarines regularly passed beneath the Arctic Ocean ice pack during the Cold War, often traveling from ocean to ocean on secret missions. Sometimes they surfaced at the North Pole using special sonar technology to determine the point at which to break through the ice.

The first attempt dates back to the voyage of the USS *Nautilus* in 1958 from the Pacific to the Atlantic via the Bering Strait and beneath the North Pole. Even though this was more of a scientific and a media venture than a military expedition, it emphasized the strategic significance of the polar waters. The first voyage through Canadian waters was by the USS *Seadragon*; it sailed east to west through the Parry Channel in 1960. Its success soon raised the question of regular naval operations in a potentially important new maritime region.

The fact that the nuclear submarines of several countries were probably transiting Canadian waters on a regular basis has led to major speculation about US threats to Canadian sovereignty, but recent work by historians, and records recently made available, show that most of the voyages were made with Canadian permission.

The increase in technological conflict and the activities of US and Soviet submarines in the Arctic saw a decrease in the importance of the DEW Line as a security measure, with the realization that the main threat would come from intercontinental missiles rather than bombers. For this reason, the Canadian and US navies continued to cooperate on the development of under-ice detection systems to improve anti-submarine capabilities, and ultimately on the creation of an operational submarine detection network.

No. 31. Security Submarine. Importance of submarine activity in securing the Passage from the Cold War period to today. Interviews with Adam Lajeunesse, Franklyn Griffiths, Ray Snook, John Higginbotham, and James Manicom. Video by Elena Baldassarri , August 2013. This work is licensed under a Creative Commons Attribution 4.0 International License . Screenshot of the Vimeo video - https://vimeo.com/104816641.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

The *SS Manhattan*

In 1968, the change of government in Canada with the election of Pierre Elliott Trudeau as Prime Minister, combined with the discovery of oil on Alaska's North Slope by Atlantic Richfield (ARCO) in October of that year, unleashed competing interests and forces that changed the history of the Arctic and increased Canadian anxieties. Canadian sovereignty in the Arctic was challenged by development in the region and especially investigations as to the most economical means of transporting oil south. The press reported that maps had been issued by US oil companies showing the islands of the North Archipelago as disputed territories. The US State Department denied that such maps, if they existed, had any official standing in the eyes of the United States government.

The Trudeau government had to face a serious crisis with the United States in 1969, when three US and British oil companies (Humble, Atlantic Richfield, and BP) planned to send the *Manhattan*, a specially reinforced oil tanker, on a test run through the Northwest Passage to Prudhoe Bay, Alaska. It was not the first time a vessel had navigated the Passage, but the Canadian media seized upon it as a sensational story and a potential threat to Canadian sovereignty. The difference this time was that the *Manhattan* was a commercial vessel, and the US government refused to request official permission to enter the passage. Doing so would have meant *de facto* US acceptance of Canadian sovereignty over the waters, which the United States had never acknowledged.

No. 32. Map showing the SS *Manhattan*'s route through the Northwest Passage. This work was created by Elena Baldassarri in 2014 and is licensed under a Creative Commons Attribution 4.0 International License .

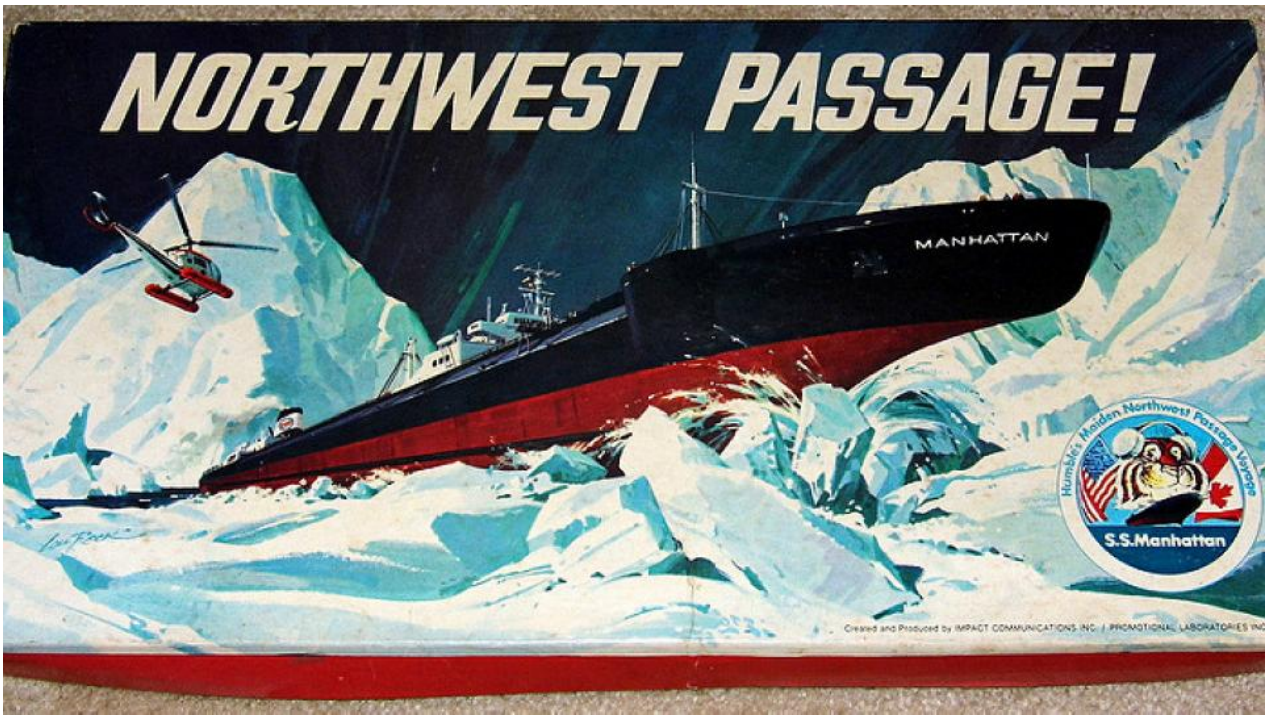
The purpose of the test run was to determine the feasibility of this method of transporting Alaskan oil to markets in the northeast United States. The oil companies sought Canadian cooperation with this project, and as a result of discussions with the Department of Transport, the Canadian icebreaker *John A. Macdonald* supported the test run of the *Manhattan*. However, the opposition and the press suggested that the passage of the oil tanker might have adverse implications for Canada's claims to the northern waters.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

No. 33. The SS *Manhattan* breaking the ice of the Northwest Passage. Photo taken by Auke Visser, http://www.aukevisser.nl .

Even though the government was well aware of the significance of the test, further arrangements were made to "show the flag" during the test run, including a visit by a group of members of parliament and other Canadian representatives at an appropriate point along the Northwest Passage, and flights by aircraft over the ships involved in the exercise at the points of commencement and termination of their passage through the Arctic Archipelago.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44



January 2014. © Joe Haupt.

Click here to view source.

No. 34. The expedition and adventures of the SS *Manhattan* became the inspiration for a game manufactured by Impact Communications and Promotional Laboratories in 1969. The game's tasks include bringing oil using an icebreaking tanker from Alaska to Humble City through the Northwest Passage. Whatever happened to the SS *Manhattan*, the world's largest icebreaking tanker?

Created by Joe Haupt, January 2014.

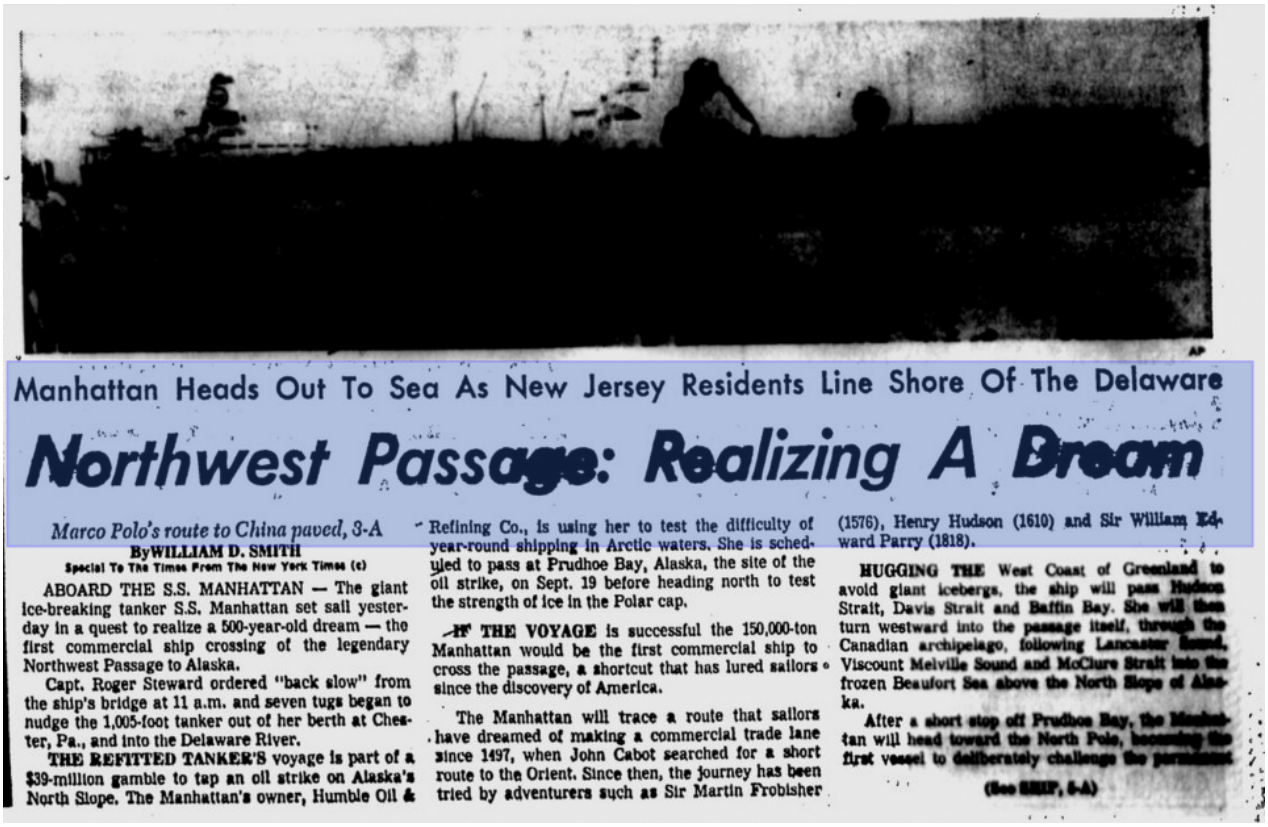
The *Manhattan* crisis showed the difficulties connected with *de facto* sovereignty over Arctic waters and the Northwest Passage. The Canadian government therefore looked for other ways to assert *de jure* sovereignty. Canada cooperated closely with the United States in rallying support for agreement on narrow territorial seas, and played a very active role in negotiations to define the Law of the Sea, which was the subject of international conferences in 1958 and 1960. The issue was seen in Ottawa as one of control over adjacent waters and in Washington as one of national security.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Chapter: The Northwest Passage as a Matter of National Security

Source URL: http://www.environmentandsociety.org/node/6320

PDF created on: 06 May 2021 12:41:44



Manhattan Heads Out To Sea As New Jersey Residents Line Shore Of The Delaware

Northwest Passage: Realizing A Dream

Marco Polo's route to China paved, 3-A

By WILLIAM D. SMITH
Special To The Times From The New York Times (c)

ABOARD THE S.S. MANHATTAN — The giant ice-breaking tanker S.S. Manhattan set sail yesterday in a quest to realize a 500-year-old dream — the first commercial ship crossing of the legendary Northwest Passage to Alaska.

Capt. Roger Steward ordered "back slow" from the ship's bridge at 11 a.m. and seven tugs began to nudge the 1,005-foot tanker out of her berth at Chester, Pa., and into the Delaware River.

THE REFITTED TANKER'S voyage is part of a $39-million gamble to tap an oil strike on Alaska's North Slope. The Manhattan's owner, Humble Oil & Refining Co., is using her to test the difficulty of year-round shipping in Arctic waters. She is scheduled to pass at Prudhoe Bay, Alaska, the site of the oil strike, on Sept. 19 before heading north to test the strength of ice in the Polar cap.

IF THE VOYAGE is successful the 150,000-ton Manhattan would be the first commercial ship to cross the passage, a shortcut that has lured sailors since the discovery of America.

The Manhattan will trace a route that sailors have dreamed of making a commercial trade lane since 1497, when John Cabot searched for a short route to the Orient. Since then, the journey has been tried by adventurers such as Sir Martin Frobisher (1576), Henry Hudson (1610) and Sir William Edward Parry (1818).

HUGGING THE West Coast of Greenland to avoid giant icebergs, the ship will pass Hudson Strait, Davis Strait and Baffin Bay. She will then turn westward into the passage itself, through the Canadian archipelago, following Lancaster Sound, Viscount Melville Sound and McClure Strait into the frozen Beaufort Sea above the North Slope of Alaska.

After a short stop off Prudhoe Bay, the Manhattan will head toward the North Pole, becoming the first vessel to deliberately challenge the permanent

(See SHIP, 8-A)

Publisher: St. Petersburg Times.
Image found on Google News.

No. 35. Newspaper headline about the voyage of the SS *Manhattan*. William D. Smith, "Northwest Passage: Realizing a Dream," *St. Petersburg Times* [Pinellas - St. Petersburg], 25 August 1969: front page. Google News Archive.

In 1965, fearing US objections, the Canadian government introduced legislation to establish an exclusive fishing zone along the east and west coasts but not in the Arctic. As reactions in the United States gave no grounds for hope, however, the Canadian parliament went ahead despite Washington's protests and approved the Arctic Waters Pollution Prevention Act (AWPPA) on 17 June 1970, asserting Canada's right to regulate all shipping in zones up to 100 nautical miles (185 km) off its Arctic coasts in order to guard against pollution of the region's coastal and marine resources.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

Photo by Enrico Mariotti, 2013.

No. 36. Canadian icebreaker on the coast of Cambridge Bay. August 2013. Photo taken by Enrico Mariotti.

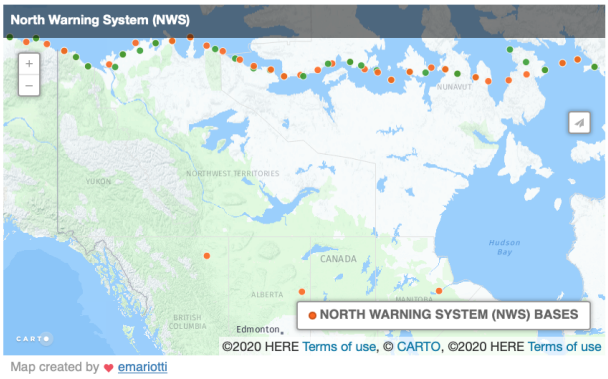
With the passing of the act and associated legislation, the Law of the Sea became a highly politicized issue in both countries. Canada also indicated its support for the regime of innocent passage (the right for peaceful foreign ships to pass through territorial waters) in all straits thus covered by 12-mile territorial seas, taking special care to point out that the Northwest Passage is not an international strait. The AWPPA represented the Liberal government's "functional" approach to Canadian sovereignty. It presented the Arctic as an ecologically delicate region and suggested that it was important for Canada to extend its jurisdiction northward in order to ensure that foreign vessels did not pollute Canadian waters. The AWPPA also enabled Canada to regulate and control future tanker traffic through the Northwest Passage by creating a pollution prevention zone outside the archipelago as well as in the waters between the islands. The United States and other major maritime powers (notably the UK and Japan) objected to Canada's unilateral assertion of anti-pollution jurisdiction in the waters of the Arctic Archipelago. Canada attempted to counter these objections and to secure international acceptance of its Arctic water legislation by convening a multilateral conference intended to secure agreement on a treaty that would open an international legal "umbrella" over the Canadian legislation.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

The North's relevance to US policy increased in the early 1980s with the Reagan administration's efforts to confront the Soviet Union more actively, in particular in the maritime domain. The year 1981 saw the deployment of the Typhoon-class nuclear-powered ballistic missile submarine (SSBN), the first Soviet vessel specifically designed for under-ice operations and equipped with long-range submarine-launched ballistic missiles (SLBMs). This development gave rise to serious concerns about the defense of the Arctic. The Canadian Arctic offered an ideal position for the launching of missiles against targets on the East Coast unimpeded by any significant Western anti-submarine warfare assets.

US naval strategy underwent a significant and aggressive shift towards Arctic operations, not least as a reaction to this Soviet build-up, and increased US activity in the Arctic gave rise to strengthened expressions of Canadian national interest. Public outcry led to confrontation with the United States in 1985 when an icebreaker, the US Coast Guard cutter *Polar Sea*, navigated the Northwest Passage from Greenland to Alaska without formal authorization from the Canadian government, forcing the Canadian Mulroney government to negotiate with the USA in an atmosphere of public hostility and intense political pressure.

Interest in the North decreased with the end of the Cold War and the slackening of tension in the area. The United States was engaged for some years in the development of a new strategic policy in which the Arctic had no vital place. Cooperation on issues such as environmental protection and sustainable development became significant as the Arctic Council was established in 1996.



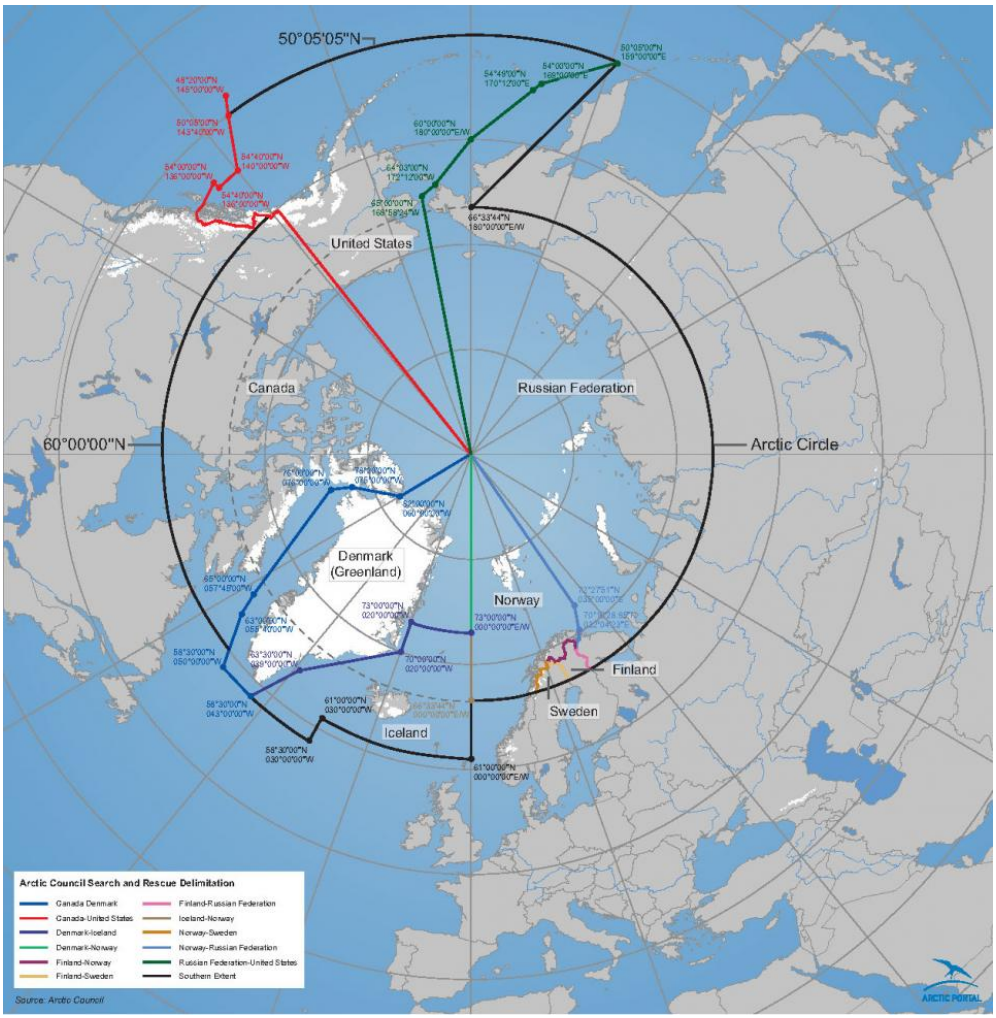
No. 37. The North Warning System became operational in 1985 and was completed in 1992 as the successor of the DEW Line. Canada and the United States share the information collected by the NWS in the North American Aerospace Defense Command (NORAD). This work was created by Enrico Mariotti in 2014 and is licensed under a Creative Commons Attribution 4.0 International License .

> The Bush and Obama administrations have revised the US Arctic policy, not least as a result of the increased attention focused on the region by other powers—most importantly Russia—and new awareness of the region's potential as a source of energy.

Joint military exercises have been carried out by Norway, Russia, Canada, the United States, and Denmark within the framework of military cooperation between the Arctic states. Eagle Vigilant, the first such exercise to include Russia, practiced coordinating responses to the scenario of terrorists hijacking planes in the Arctic air space.

The Bush and Obama administrations have revised the US Arctic policy, not least as a result of the increased attention focused on the region by other powers—most importantly Russia—and new awareness of the region's potential as a source of energy. Both presidents declared on various occasions that the United States has fundamental national security interests in the Arctic region.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44



Click here to view source.

No. 38. Arctic Search and Rescue Delimitation Map. The map shows the Arctic Search and Rescue Agreement areas of application. The Search and Rescue (SAR) Agreement is the first legally binding agreement established under the auspices of the Arctic Council. It was signed on 12 May 2011 at the Arctic Council Nuuk Ministerial Meeting. Source: Arctic Portal .

While it is no longer believed that North America is in danger of imminent attack or invasion via the Northwest Passage, Canada and the United States must devote ships and personnel to operations in the Arctic, mostly under the terms of the Arctic Search and Rescue Agreement signed by the members of the Arctic Council in 2011. At the same time, the safeguarding of neighboring waters is the responsibility of the Canadian and US coast guards with support from the new offshore patrol boats and the underwater protection of US submarines.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

Inuit Perspectives

> What does security mean to Inuit? Security doesn't come from the comfort that some find in icebreakers, sonar detectors, and Arctic military capabilities. Security from our societal perspective comes from access to the basic essentials of life—food, shelter, and water.
> —Udloriak Hanson, Co-Chair of the Arctic Peoples and Security Research Pillar, Munk-Gordon Arctic Security Program

Indigenous people represent the mainstay of human security in the Canadian North. This aspect of security relates to the relationship between corporate development projects and indigenous political power and control over the environment, resources, and land rights.

Historically, Inuit living on the land faced several dangers: predators, starvation, migration of animals, and fluctuations in wildlife populations. All of these factors were outside human control, and the security of the people came from their ability to predict them and to adapt. The awareness of, and respect for, such dangers were part of Inuit culture and history. Today some of the dangers of living on the land have been modified by modern technologies, but newer dangers have emerged.

Indigenous and regional governance, co-management boards, land claims, respect for traditional knowledge, sustainable industrial projects, and the opportunity for employment, education, and health services have become even more important today for the future of the Arctic.

> The problem is that the northern populations feel insecure today because of climate change, conflict over maritime borders, and threats to traditional livelihoods such as hunting. At the same time, they are faced with mega-projects, such as diamond mining, which bring jobs, training programs, education, and health facilities to the North on the one hand, but come with high costs in terms of health and the environment on the other.

The problem is that the northern populations feel insecure today because of climate change, conflict over maritime borders, and threats to traditional livelihoods such as hunting. At the same time, they are faced with mega-projects, such as diamond mining, which bring jobs, training programs, education, and health facilities to the North, but come with high costs in terms of health and the environment.

In a broader sense, the real test of human security in the North is whether the economic gains made over the last two decades will increase partnership at the local, regional, and indigenous levels. To achieve this, it will be necessary to redirect attention from the problems of military security in the North to the realities of food, economics, and human security in a broader sense. In order to do so, it will be necessary to divert investment from industries to knowledge in a real attempt to ensure that the northern communities enjoy more of the benefits of development.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

No. 39. Video on social environmental security. Climate change impacts nature and people who live in the arctic. Video by Elena Baldassarri. August 2013. Interviews with: Diego Creimer and Cecilia Hagaluk. This work is licensed under a Creative Commons Attribution 4.0 International License. Screenshot of the Vimeo video - https://vimeo.com/111847260.

Websites linked in this text:

- https://vimeo.com/104382124
- https://vimeo.com/user25250799
- https://vimeo.com/104816641
- https://vimeo.com/user25250799
- http://www.aukevisser.nl
- http://library.arcticportal.org/1500/
- http://arcticportal.org/
- https://vimeo.com/111847260
- https://vimeo.com/user25250799

Websites linked in image captions:

- http://www.aukevisser.nl
- http://farm3.staticflickr.com/2889/11786890816_f99ea2729c_c.jpg
- http://library.arcticportal.org/1500/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage as a Matter of National Security
Source URL: http://www.environmentandsociety.org/node/6320
PDF created on: 06 May 2021 12:41:44

Natural Resources

Exploitation of Resources, and Environmental Hazards

> As gas, oil, and military development spread throughout the Arctic, infrastructures such as roads, pipelines, airstrips, and ports have disrupted and fragmented the habitat.

For millennia, the peoples inhabiting the Arctic region have lived on the resources of land and sea through hunting, fishing, and herding. Human impact and environmental transformation intensified with the beginning of the fur trade, followed by settlement by non-indigenous people, the Gold Rush, exploitation of minerals and fossil fuels, and finally the construction of military infrastructure during the Cold War. These activities encroached on traditional indigenous ways of life and the balance between humankind and the environment. Understanding the sustainability and impact of resource exploitation on these fragile ecosystems requires tracing this history. The Native peoples have long been involved in struggles to mitigate the effects of industrial development of their land, but also in trying to control these changes as well as benefit from them. As the extraction of resources intensifies around the Arctic, more infrastructure and industrial enterprises are being set up in the region.

As gas, oil, and military development spread throughout the Arctic, infrastructures such as roads, pipelines, airstrips, and ports have disrupted and fragmented the habitat. While less than five percent of the Arctic was affected by infrastructure development between 1900 and 1950, transport is considered crucial to the exploitation of the area today.

The original virtual exhibition features an interactive gallery of pictures of the Giant Mine, a gold mine located outside Yellowknife, Northwest Territories. Located along the Great Slave Lake's beautiful Back Bay and along what is now the historic Ingraham Trail, it was one of the richest gold mines ever found in Canada. Gold was discovered in 1935, leading to the production of seven million ounces and resulting in one of the longest continuous gold mining operations in Canadian mining history. Ore processing at Giant Mine ceased after 1999, and in 2005 Giant Mine officially became an abandoned mine site. When the mine closed, attention focused on the environmental issues left behind, notably 237,000 tonnes of arsenic trioxide stored in underground chambers. For this reason the Canadian government started the Giant Mine Remediation Project, designed to protect the environment and human health and safety by means of long-term containment and management of arsenic trioxide waste, water treatment, and surface clean-up of the site. Yellowknife, Northwest Territories. August 2013. Photos taken by Enrico Mariotti.

View the images on the following pages.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Giant gold mine (1)
Photo by Enrico Mariotti, 2013.

Giant gold mine (2)
Photo by Enrico Mariotti, 2013.

Giant gold mine (3)
Photo by Enrico Mariotti, 2013.

Giant gold mine (4)
Photo by Enrico Mariotti, 2013.

Giant gold mine (5)
Photo by Enrico Mariotti, 2013.

Giant gold mine (6)
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Giant gold mine (7)
Photo by Enrico Mariotti, 2013.

Giant gold mine (8)
Photo by Enrico Mariotti, 2013.

Giant gold mine (9)
Photo by Enrico Mariotti, 2013.

Giant gold mine (10)
Photo by Enrico Mariotti, 2013.

Giant gold mine (11)
Photo by Enrico Mariotti, 2013.

Giant gold mine (12)
© Enrico Mariotti.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Giant gold mine (13)
Photo by Enrico Mariotti, 2013.

Giant gold mine (14)
Photo by Enrico Mariotti, 2013.

Giant gold mine (15)
Photo by Enrico Mariotti, 2013.

Giant gold mine (16)
Photo by Enrico Mariotti, 2013.

Giant gold mine (17)
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

No. 40. Pictures of the Giant Mine, a gold mine located outside Yellowknife, Northwest Territories. Located along the Great Slave Lake's beautiful Back Bay and along what is now the historic Ingraham Trail, it was one of the richest gold mines ever found in Canada. Gold was discovered in 1935, leading to the production of seven million ounces and resulting in one of the longest continuous gold mining operations in Canadian mining history. Ore processing at Giant Mine ceased after 1999, and in 2005 Giant Mine officially became an abandoned mine site. When the mine closed, attention focused on the environmental issues left behind, notably 237,000 tonnes of arsenic trioxide stored in underground chambers. For this reason the Canadian government started the Giant Mine Remediation Project, designed to protect the environment and human health and safety by means of long-term containment and management of arsenic trioxide waste, water treatment, and surface clean-up of the site. Yellowknife, Northwest Territories. August 2013. Photos taken by Enrico Mariotti.

After World War II, North America experienced economic growth stimulated by consumer demand and supported by government policies. The need to provide power for economic expansion and modernization plans led Canada and the United States to develop more efficient infrastructure networks and identify new sources of energy. Between 1946 and 1961, energy derived from gas and oil increased to account for over 80 percent of total consumption. Pipelines and high-voltage transmission lines brought cheap energy from the North to consumer markets in the South, and radically transformed the environments of Canada and the United States as well as people's attitudes and socioeconomic behaviors. Optimism and faith in progress experienced a setback in the 1960s with economic problems, political turmoil (connected with opposition to the role of the USA in Vietnam) and the growth of a new movement against standardization and for individual freedom (counterculture, left wing and peace movements, etc.). Strategies for developing the North have sometimes been bound up with political ambition: in 1958, for example, the Canadian Prime Minister John Diefenbaker presented the construction of roads in the North as a central part of his vision for the country's future during his re-election campaign.

Diefenbaker drew inspiration from the achievements of John A. Macdonald, Canada's first Prime Minister, in opening up Canada's West by promising to allow vast new areas for oil and mineral exploration. Diefenbaker invested millions of dollars in a northern infrastructure program known as "Roads to Resources." While this led to the construction of over 2,000 kilometers of roads across the northern territories, it eventually proved too difficult to build roads above the tree line, including one along the Mackenzie Valley intended to connect the Northwest Passage corridor to the southern market.

> On 12 March 1968 the Atlantic Richfield Company (ARCO) and Exxon discovered North America's largest oil field in Prudhoe Bay, Alaska. This find awakened hopes of solving North America's energy supply problems through large-scale exploitation of the northern territory.

It was, however, the events of 1968 that radically changed any plans for progress involving the northern part of the American continent. On 12 March 1968 the Atlantic Richfield Company (ARCO) and Exxon discovered North America's largest oil field in Prudhoe Bay, Alaska. This find awakened hopes of solving North America's energy supply problems through large-scale exploitation of the northern territory. In the meantime, a heated debate about the delivery system took place in the media and agitated public opinion both in Canada and in the US.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

The relationship between the exploitation of resources and territorial sovereignty was also blown up in Alaska, which has long been a battleground between development interests and environmentalists, especially after Congress made Alaska a state in 1959. The new state and the Native tribes discussed the selection of lands for acquisition for the next twenty years, and in 1966 the Secretary of the Interior Stewart Udall halted all applications for the use of free land in Alaska until Congress had reached a decision on Native claims. The Prudhoe Bay discovery, however, made everything much more complicated.

The controversy over oil drilling and transportation divided public opinion into two different camps: those who wanted to explore for oil and gas, and those who wanted to keep the area off-limits to all development. For advocates of the wilderness, compromise was unthinkable: any development in a pristine area constituted an unacceptable violation. For those advocating development, this attitude reflected a lack of concern for the area's economic needs.

The extraction and transportation of Arctic resources brings with it various difficulties and high costs; it also affects the northern mythology embedded in the minds of many Canadians. Together with this political situation, the discovery of oil on Alaska's North Slope in 1968 triggered a combination of competing interests and forces that changed the history of the Arctic and increased Canadian anxieties. Canadian sovereignty in the Arctic was challenged by development in the region and especially investigations as to the most economical means of transporting oil southwards. The press reported that maps had been issued by United States oil companies showing the islands of the North Archipelago as disputed territories. There were also apparently groundless rumors that the US government had questioned Canada's right to lease areas in the Canadian Arctic for exploration purposes.

On 10 February 1969, the three major US and British oil companies (Humble, Atlantic Richfield, and BP) that had been developing oil reserves on Alaska's North Slope joined forces in a loose consortium called the Trans-Alaska Pipeline System (TAPS), announcing plans to build a 798-mile pipeline from the oil fields at Prudhoe Bay to the port of Valdez. The announcement resulted in a surge of national environmental sentiment.

The opponents used technicalities, legal quibbles, Native rights and land claims in an attempt to delay the project, and whipped up public opinion over the oil industry's destructive practices in the Arctic. In 1969 the former governor of Alaska, Walter Hickel, was appointed by President Nixon to head the Department of the Interior, where he was able to push for his Trans-Alaskan Pipeline project.

The original virtual exhibition features an interactive gallery of pictures taken by Dennis Cowals for the Documerica Project (1971-1977). During August 1973 and August 1974, Cowals documented sites of the future Alaskan Pipeline in their pre-pipeline Alaska wilderness from Prudhoe Bay south to Valdez, the terminus of the pipeline. Documerica was a project sponsored by the Environmental Protection Agency (EPA) that hired freelance photographers to capture images relating to environmental problems, EPA activities, and everyday life in the 1970s. Dennis Cowals - National Archives and Records Administration .

View the images on the following pages.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977). Dennis Cowals - National Archives and Records Administration

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (2)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (3)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (4)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (5)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (6)

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (7)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (8)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (9)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (10)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (11)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (12)

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (13)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (14)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration
Alaska Pipeline (15)

Pictures taken by Dennis Cowals for the Documerica Project (1971-1977).Dennis Cowals - National Archives and Records Administration. Alaska Pipeline (16)

No. 41. Pictures taken by Dennis Cowals for the Documerica Project (1971–77). In August 1973 and 1974, Cowals documented sites of the future Alaskan pipeline in the pre-pipeline Alaskan wilderness from Prudhoe Bay south to Valdez, the pipeline's terminus. Documerica was a project sponsored by the Environmental Protection Agency (EPA) that hired freelance photographers to capture images relating to environmental problems, EPA activities, and everyday life in the 1970s. Dennis Cowals—National Archives and Records Administration , no known copyright restrictions.

The Native claims seemed to reach a solution in December 1971, when the US Congress passed the Alaska Native Claims Settlement Act granting the Natives 44 million acres and one billion dollars payable in oil royalties. While this decision gave the Natives great financial power, the act denied any claims to the corridor earmarked for an oil pipeline so as to ensure that property rights could not be used to block the project.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

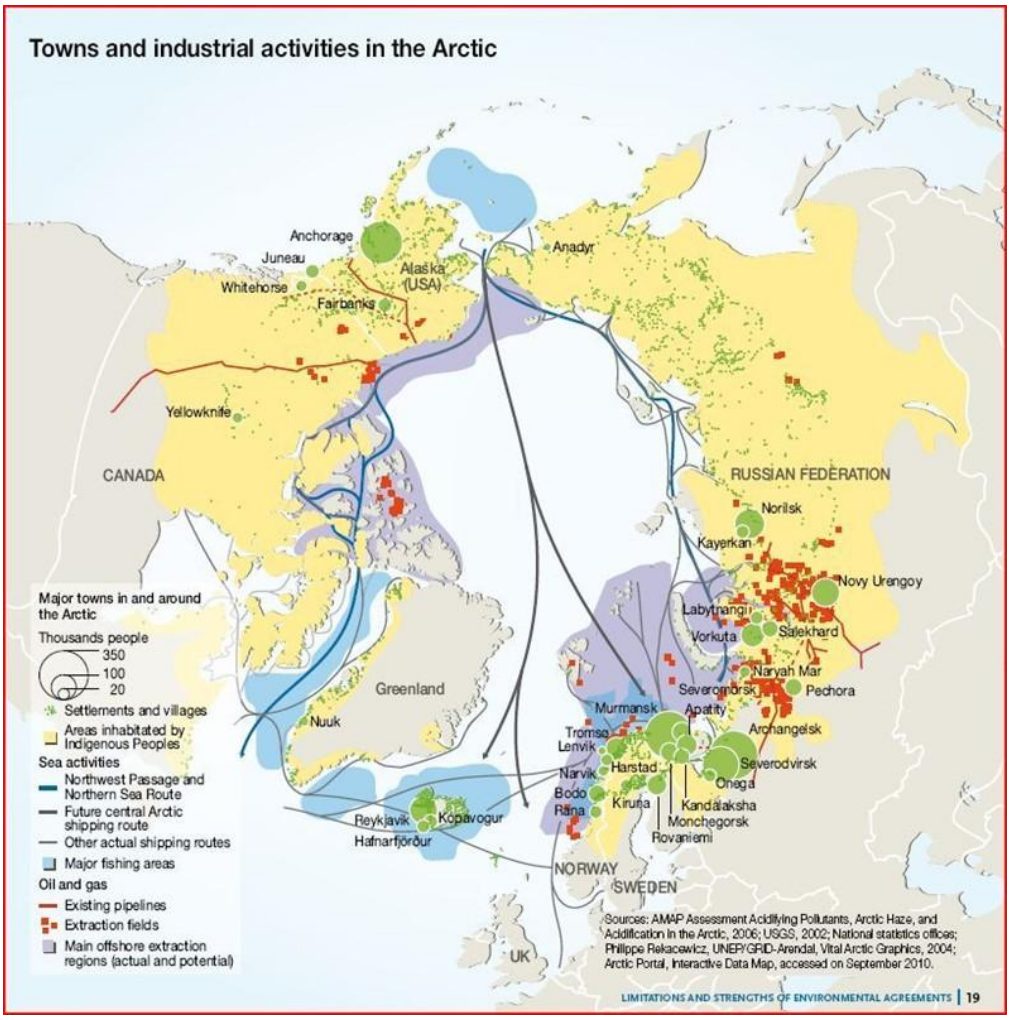
In Canada the possibilities for new investigations included two different areas—namely, the Mackenzie Delta and the High Arctic Island—where large deposits of natural gas and a moderate amount of commercial oil were found. In the ensuing excitement, and considering also the international implications, the government under Pierre Elliott Trudeau took an interest in the economic exploitation of the North and provided funds for petroleum exploration, also coming to regard oil companies as instruments of foreign policy to solidify Canada's hold on the North.

To further Canadian-based exploration efforts in the Arctic, Panarctic Oils was founded as a consortium of companies with the government as a major shareholder. Panarctic made a significant discovery of gas at Drake Point on Melville Island in 1969. As exploration proceeded in the upper Arctic, attention also focused on the Mackenzie Delta. The first successful onshore oil strikes were at Atkinson Point on the Tuktoyaktuk Peninsula in 1969 and at Parson's Lake in 1970.

The new resources brought to the surface the problem of distribution: How were the oil and gas to get from the Arctic Archipelago to the southern markets? One of the major projects presented was the Mackenzie Valley Pipeline, a proposed corridor to transport natural gas from the Beaufort Sea through Canada's Northwest Territories to connect with gas pipelines in northern Alberta. The project aroused great concern and was ultimately scrapped in the wake of an inquiry conducted by Justice Thomas Berger. When the pipeline proposal emerged, it acted as a catalyst for the feelings of frustration and concern of the northern Native communities. Land claims become the means of opposing and trying to reverse the social and cultural erosion to which they were being subjected in the name of development.

Northern exploration increased after the oil crisis of the early 1970s. The oil shortage stimulated general public awareness of just how precarious previously reliable sources of hydrocarbons actually were. By that time, production within the US, even including the large contribution from Prudhoe Bay, could no longer meet internal needs, and dependence on imported supplies grew as a result. In view of this, activities in the Beaufort Sea and Mackenzie Delta area were stepped up with the drilling of many onshore and offshore wells. Pending the findings of the Mackenzie Valley Pipeline Inquiry, fleets of reinforced drill ships were used to withstand the rigors of deep water in the Beaufort Sea. The first Beaufort Sea wells were drilled from manmade islands of silt developed by Dome Petroleum and Gulf. Political maneuvers and lobbying, aimed at securing economic and political interests, led to public frustration.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46



Credit: Riccardo Pravettoni, UNEP/GRID-Arendal.
Click here to view source.

No. 42. Towns and industrial activities in the Arctic . The Arctic is home to approximately four million people, with the share of indigenous and non-indigenous populations varying widely between the Arctic states. Larger settlements are usually located in resource-strategic positions. Rich deposits of natural resources are spurring industrial activity in the region. The Russian Arctic, for example, has only 1.5% of the country's population, but accounts for 11 percent of its gross domestic product and 22 percent of its exports. The Arctic could also hold up to 22 percent of the world's undiscovered oil and natural gas reserves. Commercial shipping across the Arctic along the Northeast Passage and Northern Sea Route is expected to increase dramatically over the next few decades with retreating ice conditions.

Source: Riccardo Pravettoni, UNEP/GRID-Arendal, 2010.

As a result, opposition groups arose in Canada, inspired by the US civil rights and anti-war movements of the 1960s. The environmental justice movements embodied some of the principles of social and ecological citizenship. These campaigns make it clear how the poor, and often certain ethnic groups, suffer disproportionately from environmental harm.

Some Canadian politicians underlined public concern for the wilderness as a basic component of Canadian identity. Prime Minister Pierre Elliott Trudeau went so far as to claim that Canada could become the world leader in the protection of air, water, and living resources.

Some Canadian politicians underlined public concern for the wilderness as a basic component of Canadian identity. Prime Minister Pierre Elliott Trudeau went so far as to claim that Canada could become the world leader in the protection of air, water, and living resources. The broad shape of Canada's environmental institutions was established in the early 1970s with the creation of Canada's first environment ministries at the federal and provincial levels. In the meantime, other movements and individuals focused specifically on the problems of the northern environment and responded to the 1971 government statement on the Mackenzie Valley Oil Pipeline. The significance of the modern environmental movement lies in the changing definition of citizenship in relation to an increasingly powerful state. The "green revolution" at the national level was built upon the "rights revolution" that preceded and accompanied it. It goes further than existing conceptions of social citizenship in seeking to include human "non-citizens" (i.e., non-citizen residents of a territory, residents of other territories, and future generations) in the decision-making process, as well as recognizing the supranational nature of environmental concerns and questions of global justice.

There have been many examples of how indigenous peoples, as nations, communities, and governments, have diverse and sometimes contradictory collective interests in the environment that differ from those of non-Native or mainstream environmentalists.

Although the indigenous experience of the environmental movement is connected with other movements, the Native peoples' battle remains a challenge to the whole of society, as they are fighting for the survival of their nations and ways of life. There have been many examples of how indigenous peoples, as nations, communities, and governments, have diverse and sometimes contradictory collective interests in the environment that differ from those of non-Native or mainstream environmentalists. Their distinct interests stem primarily from the central role of the environment within their cultures and the economic importance of subsistence activities in their communities. The material reality of their cultures, spiritualities, and livelihoods is based on keeping the environment healthy for future generations. For this reason, they mobilize as an autonomous cultural bloc in opposition to the dominant system with the aim of creating space outside capitalist society for the liberation of indigenous nations and nature. These basic elements account for the Native peoples' interest in resisting development and their concurrent interest in participating in the development of resources in the hope of improving the health and well-being of the communities. These dual and contradictory aims explain the Native approach to the policies of northern development and their difficult relations with the south.

The polar regions have long provided key ecosystem services, particularly where biodiversity and the harvesting of resources are concentrated. However, the sensitivity of these ecosystems to disturbances caused by resource extraction makes them extremely vulnerable. In the last 20 years, climate change has substantially affected ecosystem services and human well-being. Today, rising temperatures are also having a major effect on human services, including subsistence resources and support for industrial infrastructure. Important changes include the

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

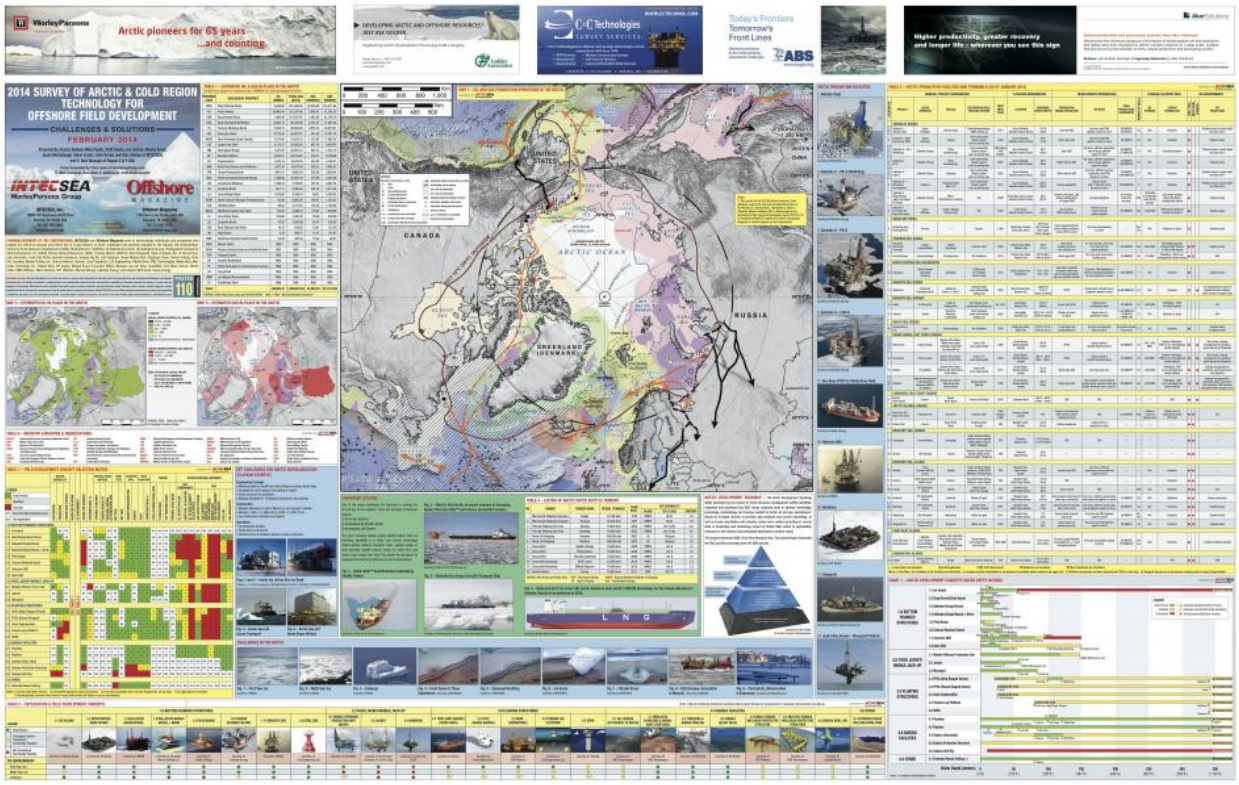
increased dominance of shrubs in the Arctic wetlands, which contributes to summer warming trends and alters the forage available to caribou; changes in insect populations that alter the food sources available to birds; and a rapid increase in the prevalence and impact of invasive alien species, such as moose and the grizzly bear, which have moved northwards in response to warming.

Climate change will also have a major impact on human projects through the thawing of permafrost, rapid melting of ice cover, and increasing precipitation levels. Rising temperatures are affecting one of the most important routes of transportation in the permafrost areas of North America, namely temporary winter ice roads that cross frozen lakes, rivers, and tundra.

In the Northwest Passage, warming has reduced access to marine mammals, as a result of the decrease in sea ice, and made the physical and biotic environment less predictable. At the same time, however, it has increased shipping. Reductions in the extent of sea ice in the summer months will increase access along sea routes, thus fostering northern development, and together with the rising sea levels it will hasten the coastal erosion currently threatening many villages. Climate change will also have a major impact on human projects through the thawing of permafrost, rapid melting of ice cover, and increasing precipitation levels.

Rising temperatures are affecting one of the most important routes of transportation in the permafrost areas of North America, namely temporary winter ice roads that cross frozen lakes, rivers, and tundra. These corridors have played an increasingly important role for community supply and industrial development because of their practical advantages, such as low costs and minimal environmental impact. The construction of these roads depends each year on the structural stability of the frozen base material, and recent data show a reduction in the duration of the opening and closing dates for tundra travel on the North Slope of Alaska and in the Canadian Arctic.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46



No. 43. 2014 survey of Arctic & Cold Region Technology for Offshore Field Development. Source: INTECSEA and Offshore Magazine .

Mining and Offshore Exploitation

> According to estimates of the US Geological Survey, about 13 percent of the world's undiscovered oil, 30 percent of its undiscovered natural gas, and 20 percent of its undiscovered natural gas liquids lie beneath the Arctic ice.

According to estimates of the US Geological Survey, about 13 percent of the world's undiscovered oil, 30 percent of its undiscovered natural gas, and 20 percent of its undiscovered natural gas liquids lie beneath the Arctic ice.

As outlined in the United Nations Convention on the Law of the Sea, a country can legally extend its rights over oil and gas deposits to the edge of its continental shelf, even if this stretches beyond the 200-mile exclusive economic zone. It is necessary to develop infrastructure in order to exploit this undiscovered treasure. Russia has

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

made this one of its highest national priorities and has consequently built up the world's largest fleet of icebreakers and invested more in Arctic infrastructure than any other country. Russia is also building deepwater ports and rail terminals to service the Northern Sea Route, while the USA and Canada have thus far only floated proposals for similar kinds of infrastructure for the Northwest Passage. There are also problems, however, such as drilling setbacks and an uncertain regulatory environment, which have led in the past to the withdrawal from Alaska of three major oil companies, ConocoPhillips, Royal Dutch Shell, and Statoil. Even with adequate infrastructure in place, however, the Arctic will be a difficult place to operate in. The cost of entry, including insurance and fuel consumption, is extremely high: floating pieces of ice can damage hulls, and it is extremely dangerous to pass through in a ship not designed, and a crew not trained for these conditions, because there are no repair services for much of the route and the cost of repair in Canada or the USA would consume the profits from the trip.

No. 44. Northwest Territories and Nunavut Active Mineral Exploration Projects for the year 2012.

Source: NWT & Nunavut Chamber of Mines. "Active Mineral Exploration Projects 2012." *NWT & Nunavut - Chamber of Mines*. In www.miningnorth.com

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

The Arctic is also currently a destination for supplies needed by drilling and mining ventures and small local communities, as well as a loading point for raw materials headed for the world market. This means traveling with cargo equipment such as graders for roads, camp facilities, cranes, bulldozers, trucks, and explosives. Once the mine is up and running, it is necessary to resupply it using cargo with raw materials from the mine. Because air transport remains too expensive for mineral cargo, and road and pipeline routes are complicated in areas of permafrost, frozen ground, and fragile ecosystems, Arctic shipping is growing. New icebreakers are improving in efficiency, and climate change means that ice-free navigation seasons will likely be extended.

This scenario raises important questions about how development can be sustainable and how it might directly benefit Inuit communities, taking into account the high costs, uncertainty over rights to the land, and sometimes reduced estimates of reserves that can cause the delay and even the abandonment of mining projects.

After the Deepwater Horizon blowout disaster in the Gulf of Mexico, the Canadian National Energy Board—the federal body responsible for regulating offshore drilling in the Canadian Arctic—announced a strict procedure for reviewing drilling proposals. Even if there are no companies actively drilling, or applying to drill, in Canada's Arctic waters, Shell, BP, ExxonMobil, and Imperial Oil all hold exploration licenses in the region.

The primary consideration is that an oil spill similar to that of the Deepwater Horizon case would have devastating consequences in the Arctic, as both the Canadian and US coastguard have indicated that they lack the technology, equipment, workforce, and vessels to cope with a major spill in the Arctic once sea ice has formed in the winter.

In December 2016, Canadian Prime Minister Justin Trudeau and US President Barack Obama conjointly signed an act to ban offshore oil and gas activity for 5 years. On 28 April 2017 the newly elected US President Donald Trump signed an executive order to implement an "America-First Offshore Energy Strategy." Trump's executive order could rescind Obama's withdrawal of Arctic and Atlantic waters, and it instructs the US Department of Interior to review the various ways it could take down barriers to drilling.

Nunavut: Our Land

> Even if their levels of comfort and wellness have increased, today the connection between Inuit and the land has weakened.

The survival of Inuit once depended on the land. They have both a physical and a spiritual relationship with the environment, and this relationship is embodied in their traditional practices of hunting and seasonal migration. Inuit lived as nomads, moving from place to place in order to follow the migration routes of caribou, seals, fish, and birds. In Inuit society, animals hold the central role; not only do they share the land on which the Inuit live and serve as the traditional food source, but they are also present in every part of Inuit culture, religion, and art. Their culture is deeply connected to the vast land they inhabit: for thousands of years, Inuit observed the climate, landscapes, and seas. Thanks to their knowledge of the land and its life forms, they developed the skills they needed to adapt and survive. Inuit have always assisted one another and helped when food was scarce. It was through this connection to land, wildlife, and to each other that they survived for centuries. Because each region has its own distinct ecosystem, Inuit faced different hunting challenges in every area in which they lived. Inuit diet includes animals from various habitats, such as caribou, seals, Arctic char, walruses, and whales.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

No. 45. Nunavut Animation Lab: I Am But a Little Woman. Inspired by an Inuit poem first written down in 1927, this animated short evokes the beauty and power of nature, as well as the bond between mother and daughter. An Inuit woman creates a wall hanging filled with images of the spectacular Arctic landscape and traditional Inuit objects and iconography while her daughter looks on. Soon the boundaries between art and reality begin to dissolve. Gyu Oh, 2010, 4 min 39 s. National Film Board of Canada. Screenshot of Vimeo video.

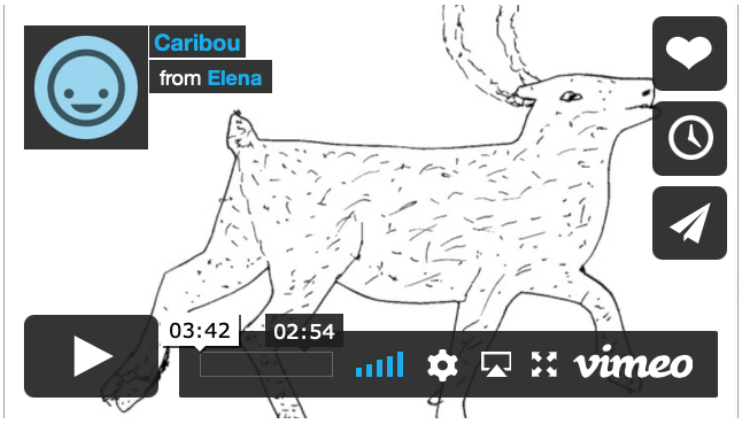
In the twentieth century, Europeans and Americans introduced many new goods, such as instant foods, rifles, snowmobiles, and wooden houses, that transformed the Inuit lifestyle. Even if their levels of comfort and wellness have increased, today the connection between Inuit and the land has weakened. In the early 1970s, Inuit formed the Inuit Tapiriit Kanatami (ITK) to represent them and defend their interests in the face of mining, oil, and gas companies and governments wanting to use their land. Their negotiation led to the legislation that created the new territory of Nunavut, where they oversee how the land and water are used and how wildlife is managed and preserved. Thanks to the creation of several co-management bodies, and through the implementation of the Nunavut Land Claims Agreement, Inuit have the future well-being of the land and wildlife in their hands.

Inuit have had limited historical experience with mining in what is now Nunavut Territory. The first mine operated at Rankin Inlet in the Kivalliq region from 1957 until 1962, when international prices for nickel fell. Between 1978 and 2002, the Nanisivik Mine on the northern part of Baffin Island produced lead and zinc for the European market, and the zinc mine Polaris operated on Little Cornwallis Island. It produced 21 million tonnes of ore. Of the 250 employees, only 20—Inuit from Resolute Bay—were northerners.

There exists only limited literature on indigenous peoples and mining in the Arctic that has been written with the consultation and support of these communities. Most of the authors, apart from a few exemplary cases, register people's dissatisfaction. Many of them make reference to the imposition of Western values through economic and political structures, while others underline the complicity between the government and extractive industries.

Historically, Aboriginals' concerns about development projects are not only connected to the physical environment, but also to a wide range of social, economic, cultural, and health issues. In this extended perspective priority is given to reducing socioeconomic and sociocultural stress and racism, maintenance of traditional life based on hunting and gathering, combating social ills, and promoting personal development and confidence. Although people in the mining industry can access a degree of income security, the benefits of these projects are not distributed equally between the industry and those directly affected. Mining projects bring with them Western principles, including individualism, competition, and a belief that markets are the best way to organize social and economic affairs. These approaches create cultural friction and lack of understanding with cultures, such as indigenous cultures, that are centered on collective rights and collective awareness.

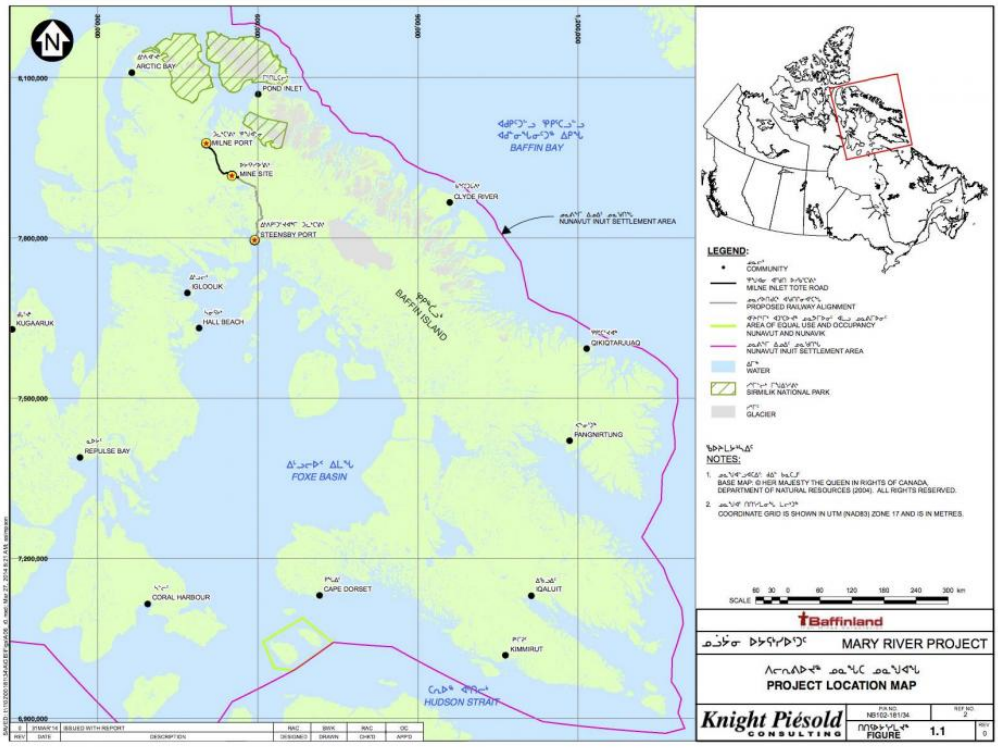
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46



No. 46. Video of Caribou. Short video created by Elena Baldassari using Elders and hunters stories on Inuit traditions and relationship with caribou and drawing from the Tuktu and Nogak Project of the Kugluktuk Angoniatit Association (KAA). This work is licensed under a Creative Commons Attribution 4.0 International License. Screenshot of the Vimeo video - https://vimeo.com/111630762.

Mary River Project

The Mary River Project is an iron ore mine located on North Baffin Island in the Qikiqtani Region of Nunavut, which opened in 2014. It is one of the largest and richest undeveloped iron ore projects in the world, and involves the construction, operation, closure, and reclamation of an open pit mine. It is one example of a mining project proposed on Inuit-owned land, from which Inuit should receive significant mineral royalties.



Source: Nunavut Impact Review Board (NIRB). This work is used by permission of the copyright holder.

No. 47. Mary River Project. Map from the final environmental impact statement on Baffinland's Mary River iron mine project. This image is a publicly filed documentation, Baffinland Company, 2013.

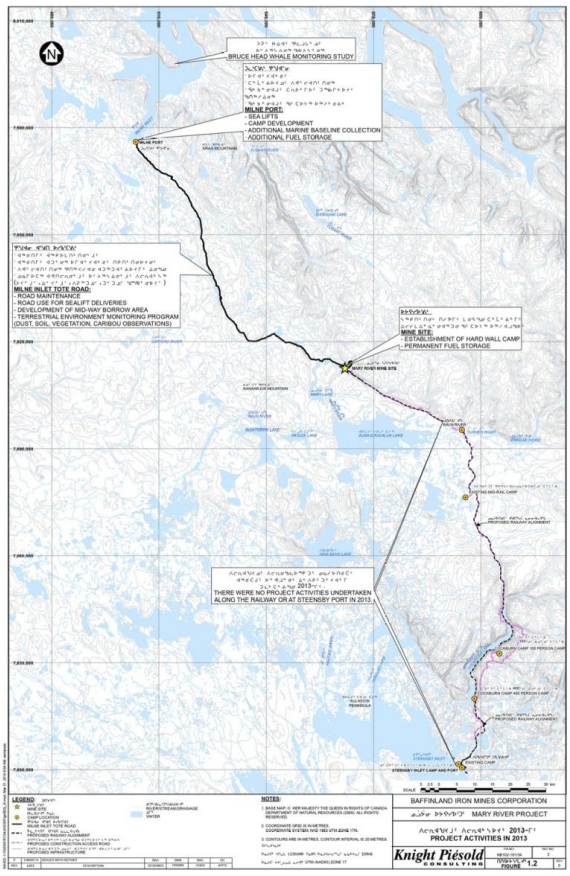
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

The proposer was Baffinland Iron Mines Corporation, which, after many years of environmental reviews and negotiations, presented probably the most ambitious mining project undertaken in the Arctic. The Mary River Property contains approximately 365 million tonnes of high-grade, direct-shipping, lump and fine iron ore that can be mined, crushed, and screened with no other processing (tailings). Due to the purity of the ore, no chemical processing facilities are required for this project, reducing the overall impact on the environment. The iron ore consists mainly of hematite and magnetite.

Mary River is important both because of the scale of the project and as a precedent for mining in Nunavut. The first plan presented provided for the shipment of about 3.5 million tonnes of ore annually through a port at Milne Inlet: to this purpose the construction of a railway from the mine site to Steensby Inlet was considered. The 149-kilometer rail line should have operated year-round and posed huge engineering challenges, at a cost of two billion Canadian dollars. The construction—over environmentally sensitive and highly unstable permafrost—was supposed to take four years.

In addition, the project should have provided for a new port at Steensby Inlet from which iron ore should have been shipped through Foxe Basin or Hudson Strait throughout the year to Rotterdam and other European ports. The project was seen as an important form of financial security for the future, and for the Inuit it has the potential to be the economic driver for Baffin Island communities for decades to come.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46



Nunavut Impact Review Board (NIRB).

No. 48. Mary River Project. Map from the final environmental impact statement on Baffinland's Mary River iron mine project. The map shows the 149-kilometer rail line proposed that would connect the mine site to Steensby Inlet. This image is a publically filed documentation, Baffinland Company, 2013.

Nevertheless, to approve the project the Planning Commission had to hold public hearings to allow members of the public in Igloolik, Pond Inlet, Arctic Bay, Hall Beach, Clyde River, Kimmirut, and Cape Dorset to share their views and concerns about Baffinland Iron Mines Corporation's proposal. Having reviewed and analyzed every aspect of the question, the project created an impressive detailed documentation of 15,610 pages in length and containing extensive technical data. The number of pages demonstrates the complexity of the effects of a project like this. Among the positive consequences are employment opportunities and greater income.

The final environmental impact statement (FEIS) prepared by Baffinland Iron Mines Corporation declared that between 800 and 2,700 jobs should be created during the construction and operational phases, mostly based at Mary River mine and Steensby port, not including the additional employment expected to be created indirectly

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

due to the economic growth generated by the project.

On the other hand, it may have a negative impact on Inuit harvest activities and environmental protection, for the project interacts deeply with wildlife (as, for example, access and rail crossings). Another concern is the effect of shipping on marine environment. Most of the concerns are related to the "cumulative impact" of climate change as a challenge for mining activity.

Important, too, is assuring the preservation of the integrity of the ground surface, the protection of natural resources, and minimization of disturbances in several areas of permafrost management, including the building and stabilization of the mining area, the proposed railway, and the operation area.

Other concerns are connected to Inuit traditional life and community well-being. For this issue it is very important to highlight that if, for most people, earning a living is at the center of their lives—providing sustenance, reinforcing self-respect and community and family relationships—in Nunavut communities, harvesting is an essential aspect of earning a living. Modern harvesting is today integrated with the cash economy, and harvesting provides a social safety net for community members, a practical way to provide high quality food, and a respected and deeply valued form of work.

It is important to notice how "cultural" differences were sometimes used to excuse the failure of employment programs, as if "Inuit culture," or rather the failure of that "culture" to change in the right direction, could impede the participation of Inuit in the new projects. These and additional concerns and questions were presented during hearings in 2012 that were designed to incorporate Inuit participation and knowledge into mining decisions.

By raising the level of informed participation and lowering the amount of secrecy involved in negotiations with mining companies, the Digital Indigenous Democracy project was created by Isuma TV. This system uses multimedia conversation as a key means of meeting the legal obligation to inform and consult with indigenous people. Isuma performed live audio broadcasts of the hearings, allowing anyone to listen to proceedings usually restricted to bureaucrats and industry representatives.

After years of technical meetings, public hearings, and thousands of pages of material describing the potential impacts of an iron mine on the Mary River, the supporter, Baffinland, finally received a project certificate to go ahead with the mine in December 2012. They announced, however, that because of slumping steel prices they had to scale back their proposal to a phased-in approach that would involve temporarily postponing construction of the railway to Steensby Inlet and its year-round port. Instead, they decided to ship only 3.5 million tonnes of ore a year out of the Milne Inlet, and only between July and October using a newly constructed tote road. The setback created great surprise and some suspicion between the interested hamlets and communities, so demonstrating the difficulty and complexity of harmonizing development, environment, profit, and traditional knowledge.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Conclusion

> Like all peoples who have been, and remain, close to the land, Inuit are an optimistic and persistent people. Inuit regard all transformations in the Northwest Passage with concern and curiosity simultaneously.

Scientists and northern residents are witnessing increasing evidence of the direct impacts of the accelerated warming in this region. This warming, combined with changes in the natural and the socioeconomic environment, is having cascading effects on the ecosystem and society, with significant impacts on human health and quality of life. Like all peoples who have been, and remain, close to the land, Inuit are an optimistic and persistent people. As Terry Audla, the former President of Inuit Tapiriit Kanatami, has stated, Inuit are also mindful of, and grateful for, the great joys and compensations of life and the mysteries that mix hardships and comforts together. Inuit regard all transformations in the Northwest Passage with concern and curiosity simultaneously. Climate change is a pressing issue because of its impact on Arctic wildlife and its potential to accelerate the loss of the traditional Inuit hunting culture. These effects are challenges that will concern tomorrow's youth and the well-being of future generations. For these reasons it is urgent that elders and community members have the opportunity to contribute their *Inuit Qaujimajatuqangit* to a local and regional understanding of climate change. Many elders who were born and raised on the land and have decades of relevant knowledge, have already passed away, leading to the loss of their comprehensive understanding of climate change trends, impacts, and adaptations. Some efforts have been made to collect such a perspective, which will enhance a global awareness of climate change phenomena.

> Many elders who were born and raised on the land and have decades of relevant knowledge, have already passed away, leading to the loss of their comprehensive understanding of climate change trends, impacts, and adaptations.

Inuit organizations such as Nunavut Tunngavik Inc. (NTI), Inuit Tapiriit Kanatami, and the Hunters and Trappers Organization (HTO) have organized and hosted several workshops to enable Inuit express their views before research agendas that are, in general, set on southern priorities. *Inuit Qaujimajatuqangit* and societal values deem the exchange of community-based and science-based knowledge around the same table to be the most useful approach.

The following is a compilation of observations and concerns brought up repeatedly during several of these workshops:

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Observations included:
• The sea ice is generally thinner.
• Winds and currents are stronger.
• Melting and absence of multi-year ice is occurring near communities.
• Berries are not as abundant as in the past.
• "Foreign" insects have arrived.
• Caribou are altering their migration routes.
• Caribou and fish are unhealthy.
• Shoreline erosion and melting of permafrost is evident.

Effects included:
• Seal and floe edge hunting techniques are not successful.
• Unpredictability of ice formation and break-up, and therefore of the boating season.
• Sea ice situation impacts on the health and movement of polar bears so that incidents are increasing.
• Absence of multi-year ice near communities means that the calming effect of icebergs on surrounding waters and ice is disappearing, along with the traditional use of iceberg water.
• Currents are stronger and tides are more pronounced.
• Commercial fishery potential may be increasing.
• Caching meat is now difficult because it is too warm and the meat spoils.
• "Foreign" insects and parasites could affect the health of caribou and other animals.
• The quality of skins and furs is deteriorating.
• Interaction between communities may decrease if snow cover is insufficient to allow travel by dog team or snowmobile.
• The weather forecasts of elders are now often incorrect because climatic changes affect the meaning of the observations on which they base their predictions.
• Community planning must include updated building design and techniques.
• Lone airstrips in communities were built parallel to prevailing winds; crosswinds may become a safety issue warranting alternative airstrips.
• There is difficulty in surviving through the traditional economy and more pressure to adopt and develop the wage economy.
• Fewer full-time harvesters/seamstresses means fewer young adults acquiring the knowledge/skills required to help the adaptation of younger generations.
• Fewer traditional/land-related skills means more dependence on the government.

Source: What if the winter doesn't come? Report of a workshop held in Cambridge Bay, March 2001. Published online by the Nunavut Tunngavik Inc., May 2005.

No. 49. What if the winter doesn't come ? Report of a workshop held in Cambridge Bay, March 2001. Published online by the Nunavut Tunngavik Inc., May 2005. This table was created by the Portal team and is licensed under a Creative Commons Attribution 4.0 International License .

The issues are problematic, numerous, and ambiguous. As this exhibition shows, everyone involved has his or her own approach to these problems. A better understanding of these changing effects is necessary. Much can be learned of the changing conditions by observing animals—just as Inuit have done since the beginning of the time.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Websites linked in this text:

- https://www.flickr.com/photos/usnationalarchives/sets/72157622370007931/
- http://www.grida.no/graphicslib/detail/towns-and-industrial-activities-in-the-arctic_cfe8
- http://www.intecsea.com/
- http://www.offshore-mag.com/index.html
- http://www.miningnorth.com
- http://www.nfb.ca/film/nunavut_animation_lab_i_am_but_a_little_woman
- http://www.nfb.ca/explore-all-directors/gyu-oh/
- http://www.nfb.ca
- https://vimeo.com/111630762
- https://vimeo.com/111630762
- http://www.isuma.tv/DID
- http://www.tunngavik.com/documents/publications/2005-03-15-Inuit-Perspectives-on-Climate-Change-Adaptation-Challenges-in-Nunavut-English.pdf

Websites linked in image captions:

- http://www.grida.no/graphicslib/detail/towns-and-industrial-activities-in-the-arctic_cfe8
- http://www.intecsea.com/
- http://www.offshore-mag.com/index.html
- http://www.miningnorth.com/_rsc/site-content/library/NWT-NU_2011_Exploration_Map_B_W_11x17.pdf
- http://www.tunngavik.com/documents/publications/2005-03-15-Inuit-Perspectives-on-Climate-Change-Adaptation-Challenges-in-Nunavut-English.pdf

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Natural Resources
Source URL: http://www.environmentandsociety.org/node/6322
PDF created on: 06 May 2021 12:41:46

Further Reading

What follows is a selected bibliography and reference list on the Arctic and the Northwest Passage. The list is not comprehensive, but is intended merely as a primer for readers looking to better familiarize themselves with the issue. As this exhibition is original in its multimedia perspective, I have focused this bibliography on books, papers, and resources available online. There are many books that will be of interest, however, which are not cited here.

History

The huge body of literature on the Northwest Passage bears witness to its importance. Four centuries of exploration have been documented, described, and narrated by protagonists, historians, and poets. The effect of this allure is an impressive range of works that have been constantly increasing in number. As a first orientation in this sea of information, one of the essential references is the Alan Edwin Day's comprehensive *Search for the Northwest Passage: An Annotated Bibliography* (New York: Garland, 1986), and his more recent *Historical Dictionary of the Discovery and Exploration of the Northwest Passage* (Lanham, MD: Scarecrow, 2006).

Probably the most useful bibliographical information regarding the people of Canadian history, such as indigenous people, explorers, and politicians, can be found in the Dictionary of Canadian Biography , which is also available in an online version.

Another easily accessible source of information about Canadian history is the three-volume *The Historical Atlas of Canada* (Toronto: University of Toronto Press, 1987–1993). It is possible to explore major theme maps online, thanks to the Online Learning Project .

The arguably pivotal reference for amateurs and students of the North and its geographical discovery is Derek Hayes's *Historical Atlas of the Arctic* (Seattle: University of Washington Press, 2003). The book, which includes more than three hundred stunning maps, provides an account of the expeditions as well as of the geographical notions that motivated historical maps.

For those passionate about the subject, a massive literary production is available in the form of historiographical,

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Further Reading
Source URL: http://www.environmentandsociety.org/node/6578
PDF created on: 06 May 2021 12:41:46

travel, autobiographical, and fictional writings on the experience of Arctic explorations. A number of logbooks, journals, and memoirs on this topic are accessible freely online at the Open Library Project ; some are mentioned in the timeline linked to this exhibition.

In addition, the following is a very short selection of relatively recent publications that were particularly useful for this project: Shelagh Grant, *Polar Imperative: A History of Arctic Sovereignty in North America* (Vancouver: Douglas and McIntyre, 2010); John McCannon, *A History of the Arctic: Nature, Exploration and Exploitation* (Chicago: UCP, 2012); Robert McGhee, *The Last Imaginary Place: A Human History of the Arctic World* (Chicago: UCP, 2007); and Glyn Williams, *Arctic Labyrinth: The Quest for the Northwest Passage (*London: Penguin, 2009).

The attention paid to Inuit Qaujimajatuqangit and Sila is demonstrated by the huge number of related texts: Frank James Tester and Peter Irniq, "Inuit Qaujimajatuqangit: Social History, Politics and the Practice of Resistance," *ARCTIC* 61, no. 5 (August 2009): 48–61; Timothy B. Leduc, "Sila Dialogues on Climate Change: Inuit Wisdom for a Cross-cultural Interdisciplinarity," *Climatic Change* 85, no. 3–4 (December 2007): 237–50; National Collaborating Centre for Aboriginal Health, Inuit Qaujimajatuqangit, "The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut," fact sheet published online 2012. Information about Arctic Resilience can be found in the *Arctic Resilience Interim Report 2013* , Stockholm Environment Institute and Stockholm Resilience Centre, Stockholm.

Sovereignty

The importance of the Arctic in Canadian and international politics is also demonstrated by the numerous studies on the topic. Once considered a strictly Canadian legal conjecture, in the last two decades the sovereignty issue has been one of the major geopolitical discussions about the North. For this reason the massive range of Canadian publications concerning the Cold War period are useful. Franklyn Griffiths's works represent an important resource, for example: Griffiths, *A Northern Foreign Policy (*Toronto: Canadian Institute of International Affairs, 1979); Griffiths, "On This Day, Grab a Cold One and Think Pan-Arctic Thoughts," *The Globe and Mail,* 30 June 2009; Griffiths, "Towards a Canadian Arctic Strategy," *Foreign Policy for Canada* no.1, Canadian International Council, 2009; Griffiths, ed., *Politics of the Northwest Passage* (Kingston & Montreal: McGill-Queen's University Press, 1987); Griffiths, ed., *Arctic Alternatives: Civility or Militarism in the Circumpolar North* (Toronto: Science for Peace/Samuel Stevens, 1992). A vast publication documenting all the different point of views is also available in Shelagh Grant, *Polar Imperative* (Vancouver: Douglas and McIntyre, 2010) and Grant, "The Weight of History in the Arctic," *Canadian International Council*, OpenCanada.org Canada's Hub for International Affairs, 25 Febuary 2013.

On East Asia's Arctic interests see P. Whitney Lackenbauer and James Manicom, "Canada's Northern Strategy and East Asian Interests in the Arctic." East Asia-Arctic Relations Paper no. 5, Centre for International Governance Innovation, 2014.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Further Reading
Source URL: http://www.environmentandsociety.org/node/6578
PDF created on: 06 May 2021 12:41:46

Very important, too, is the Native perspective. One source is the compendium by Inuit Qaujisarvingat, an association focused on ensuring an increasingly active role for Inuit in research and generating innovative knowledge for improved research, science, and policy-making; it is published by Inuit Tapiriit Kanatami, *Inuit Qaujisarvingat, Nilliajut: Inuit Perspectives on Security, Patriotism and Sovereignty* (Ottawa, 2013).

On the impact of residential schools on Natives' traditional knowledge and system of life, a very important source is the publication by the Truth and Reconciliation Commission established by the Canadian Government in 2008. Government and religious bodies have partnered programs to assist school survivors, to create a public and historical record of this period, and to promote public awareness, understanding, and education of the history and legacy of residential schools; these include the Legacy of Hope Foundation (LHF), a national Aboriginal charitable organization, Where are the Children? , and Historical Sketch for Anglican Residential Schools . The history and effects of the High Arctic relocation is a relatively new topic: a very important source of information is the Qikiqtani Truth Commission (QTC), established and financed by the Qikiqtani Inuit Association to create a more accurate history of the decisions and events that affected Inuit living in the Baffin Region from 1950 to 1975 and to document their impact on Inuit life. The final report is an outstanding document for research purposes. Important, too, is the history and meaning of the Arctic Exile Monument Project commissioned by Nunavut Tunngavik Inc. to two Nunavut carvers, Simeonie Amagoalik of Resolute Bay and Looty Pijamini of Grise Fiord. Using local stone, Amagoalik created a carving of a man in Resolute Bay. Pijamini created a granite carving of a woman and child in Grise Fiord. The monuments depict how families were separated during relocation.

For weekly information about articles and news in the media, check The Arctic This Week newsletter published by the Arctic Institute, an interdisciplinary, independent think tank focused on Arctic policy issues.

The high relevance ascribed by the Canadian government to sovereignty issues is shown by the variety of research projects it has funded, such as the Foreign Affairs and International Trade Canada—Northern Dimension of Foreign Policy ; Canadian Polar Commission ; Arctic Institute of North America ; Canadian Circumpolar Institute ; and ArcticNet , a network that brings together scientists and managers in the natural sciences, human health, and social sciences, with their partners from Inuit organizations, northern communities, federal and provincial agencies, and the private sector.

Another source of information on Arctic politics and environment is the Arctic Council website, which has a rich documents section.

Security

Security concerns connected to the Arctic and the Northwest Passage during the Cold War era are analyzed by several authors. Accessible online, recommended sources include the works of P. Whitney Lackenbauer and Robert N. Huebert: Lackenbauer, ed., *Canadian Arctic Sovereignty and Security: Historical Perspectives* , *Calgary Papers in Military and Strategic Studies,* no. 4 (2001); Lackenbauer, "The Military as Nation Builder:

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Further Reading
Source URL: http://www.environmentandsociety.org/node/6578
PDF created on: 06 May 2021 12:41:46

The Case of the Canadian North," *Journal of Military and Strategic Studies* 15, no. 1 (2013): 1–34; Lackenbauer, "From Polar Race to Polar Saga: An Integrated Strategy for Canada and the Circumpolar World," *Foreign Policy for Canada's Tomorrow* 3 (2009). Further reading on the arguments include: Lackenbauer, "Further Reading," *Calgary Papers in Military and Strategic Studies,* no. 4 (2011): 437–46; Adam Lajeunesse, "Lock, Stock, and Icebergs? Defining Canadian Sovereignty from Mackenzie King to Stephen Harper," *Calgary Papers in Military and Strategic Studies*, no. 1 (2008): 1–14; Lajeunesse, "Claiming the Frozen Seas: The Evolution of Canadian Policy in Arctic Waters," *Calgary Papers in Military and Strategic Studies*, no. 4 (2011): 233–59; Lajeunesse, "The Distant Early Warning Line and the Canadian Battle for Public Perception," *Canadian Military Journal* 8, no. 2 (Summer 2007): 51–59; Robert N. Huebert, "Climate Change and Canadian Sovereignty in the Northwest Passage," *Calgary Papers in Military and Strategic Studies*, no. 4 (2011): 383–400; David VanderZwaag, Robert N. Huebert, and Stacey Ferrara, "The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters," *Denver Journal of International Law and Policy* 30, no. 131 (2001): 131–71; Robert N. Huebert, Heather Exner-Pirot, Adam Lajeunesse, and Jay Gulledge, *Climate Change & International Security: The Arctic as a Bellwether* (Arlington, Virginia: Center for Climate and Energy Solutions, 2012).

On submarine activity under the Arctic ice, see Adam Lajeunesse, "A Very Practical Requirement: Under-Ice Operations in the Canadian Arctic, 1960–1986," *Cold War History* 13, no. 4 (2013): 507–24, and on the passage of the SS *Manhattan* see Ross Coen, *Breaking Ice for Arctic Oil: The Epic Voyage of the SS* Manhattan *through the Northwest Passage* (Fairbanks: University of Alaska Press, 2012); and Matthew Willis, "The *Manhattan* Incident Forty Years On: Re-assessing the Canadian Response," *Calgary Papers in Military and Strategic Studies*, no. 4 (2011): 259–82; the 1969 report by CBC journalist Norman DePoe is available at the CBC archive and Sun Ship Historical Society's website, where some information about the history and the characteristics of this tanker is stored .

On the history of the DEW Line, Lynden T. Harris's comprehensive website, The DEW Line Chronicles , is essential, and for a list of major archival collections with materials related to the DEW Line, consult P. Whitney Lackenbauer, Matthew Farish, and Jennifer Arthur-Lackenbauer, The Distant Early Warning (DEW) Line: A Bibliography and Documentary Resource List .

In addition, several articles on the DEW Line and the Cold War Arctic are useful: Daniel Heidt and P. Whitney Lackenbauer, "Sovereignty for Hire: Civilian Airlift Contractors and the Distant Early Warning (DEW) Line, 1954–1961," in *De-icing Required! The Historical Dimension of the Canadian Air Force's Experience in the Arctic*, edited by P. Whitney Lackenbauer and W. A. March, 95–112 (Ottawa: National Defense, 2012); and Alexander Herd, "A Practicable Project: Canada, the United States, and the Construction of the DEW Line," *Calgary Papers in Military and Strategic Studies*, no. 4 (2011): 171–200.

For further information on recent studies of the impact of the military presence in the Arctic on environment and society, see P. Whitney Lackenbauer and Matthew Farish, "The Cold War on Canadian Soil: Militarizing a Northern Environment in Environmental History," *Environmental History* 12, no. 4, Special Issue on Canada (Oct. 2007): 920–50; and P. Whitney Lackenbauer and Ryan Shackleton, "Inuit-Air Force Relations in the Qikiqtani Region During the Early Cold War," in *De-icing Required! The Historical Dimension of the*

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Canadian Air Force's Experience in the Arctic, edited by P. Whitney Lackenbauer and W. A. March, 73–94 (Ottawa: National Defense, 2012). There also is an *RCC Perspectives* article dealing with national parks and Nunavut; see Claire Elizabeth Campbell, "Pragmatism and Poetry: National Parks and the Story of Canada." *RCC Perspectives* 2011, no 4.

On the role of climate in Canadian and global history, listen to the podcast by Sean Kheraj, Stacy Nation-Knapper, and Andrew Watson, "Episode 31: Histories of Canadian Environmental Issues, Part 1 – Global Warming," *Nature's Past,* 26 September 2012.

Resources

On the importance of developing more infrastructure in the Arctic and the Northwest Passage in order to form an alternative to a Russian monopoly, see John Higginbotham, "Nunavut and the New Arctic," Policy Brief 27, Centre for International Governance Innovation, 2013; and Higginbotham, "What's in Store for the Arctic?" *CIGI Global Security Research Project on Arctic Governance*. On the influence of extracting resources on relations between indigenous and non-indigenous peoples see Mark Nuttall, *Pipeline Dreams: People, Environment, and the Arctic Energy Frontier*, International Work Group for Indigenous Affairs, 2010.

On the role of traditional knowledge in existing governance arrangements in the Arctic see Terry Fenge and Bernard W. Funston, "Arctic Governance: Traditional Knowledge of Arctic Indigenous Peoples from an International Policy Perspective," Arctic Governance Project, 2009; and Cecile Pelaudeix, "Inuit Governance in a Changing Environment: A Scientific or a Political Project?," in *What Holds The Arctic Together?*, edited by Cecile Pelaudeix, Alain Faure, and R. Griffiths, 67–83 (Paris: L'Harmattan, 2012).

On Inuit perspectives, fears, and expectations, see the website of the Inuit (ITK), the national Inuit organization in Canada, representing four Inuit regions: Nunatsiavut (Labrador), Nunavik (northern Quebec), Nunavut, and the Inuvialuit settlement region in the Northwest Territories.

Analysis of the impact of mining activity on Inuit society can be found in Gérard Duhaime, Nick Bernard, Pierre Fréchette, Marie-Annick Mallé, Alexandre Morin, and Andreé Caron, "The Mining Industry and the Social Stakes of Development in the Arctic," Online Research Collection, Université Laval, 2002; Christine Cleghorn, "Aboriginal Peoples and Mining in Canada: Six Case Studies," *Mining Watch Canada*, 1 September 1999; Roy Kwiatkowski and Maria Ooi, "Integrated Environmental Impact Assessment: A Canadian Example," *Bulletin of the World Health Organization* 81, no. 6 (2002): 434–48. The Canadian Women's Foundation provides information on the impact that resource extraction is having on Inuit women and their families in the Qamani'tuaq region of Nunavut. On the impact of climate change on Nunavut, see "Unikkaaqatigiit: Putting the Human Face on Climate Change Perspectives from Inuit in Canada" published in partnership between ITK, Inuvialuit Regional Corporation, Nunavut Tunngavik Incorporated, Makivik Corporation, Labrador Inuit Association, the Nasivvik Centre for Inuit Health, the Changing Environments program at Laval University, the Ajunnginiq Centre at the National Aboriginal Health Organization, and communities across the

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Further Reading
Source URL: http://www.environmentandsociety.org/node/6578
PDF created on: 06 May 2021 12:41:46

Arctic. Other resources can be found in Kenyon Bolton, Martin Lougheed, James Ford, Scot Nickels, and Carrie Grable, *What We Know, Don't Know, and Need to Know about Climate Change in Inuit Nunangat: A Systematic Literature Review and Gap Analysis of the Eastern Arctic* (Ottowa: Inuit Tapiriit Kanatami, 2011); and from the website The Nunavut Climate Change Centre .

Websites linked in this text:

- http://www.biographi.ca/en/index.php
- http://www.historicalatlas.ca/website/hacolp/
- https://openlibrary.org/
- http://pubs.aina.ucalgary.ca/arctic/arctic61-s-48.pdf
- http://link.springer.com/article/10.1007/s10584-006-9187-2
- http://www.nccah-ccnsa.ca/en/publications.aspx?sortcode=2.8.10&publication=6
- http://arctic-council.org/arr/
- http://fw.to/G70Dc1a
- http://wp.opencanada.org/wp-content/uploads/2011/05/Towards-a-Canadian-Arctic-Strategy-Franklyn-Griffiths1.pdf
- https://www.opencanada.org/features/the-weight-of-history-in-the-arctic/
- http://issuu.com/cigi/docs/no5_16320d54196342/1?e=0%22%20\t%20%22_blank
- http://www.trc.ca/websites/trcinstitution/index.php?p=905
- http://www.legacyofhope.ca/
- http://wherearethechildren.ca/en
- http://www.anglican.ca/tr/schools/
- http://www.qtcommission.ca/
- http://www.qia.ca/en/node/721
- https://www.tunngavik.com/blog/initiative_pages/arctic-exile-monument-project/
- http://www.thearcticinstitute.org/
- http://library.arcticportal.org/1255/1/The_Northern_Dimension_Canada.pdf
- http://www.polarcom.gc.ca/eng
- http://arctic.ucalgary.ca/
- http://www.ualbertacentennial.ca/organization/affiliated/circumpolar.html
- http://www.arcticnet.ulaval.ca/
- http://www.arctic-council.org/index.php/en/
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/issue/view/1
- http://jmss.org/jmss/index.php/jmss/article/view/522/509
- http://dspace.africaportal.org/jspui/bitstream/123456789/23860/1/From%20polar%20race%20to%20polar%20saga.pdf?1

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/21/18
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/34/25
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/13/10
- http://www.journal.forces.gc.ca/vo8/no2/lajeunes-eng.asp
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/18/15
- http://poseidon01.ssrn.com/delivery.php?ID=854006004112116118069019020066111069053032069011093069025100070025001116086106075006030110036003123013013080102094007119124108028051002032011068090083030077012077026060014118018070071122098065096117115090027092119025072103118028123073020030091073084&EXT=pdf
- http://www.c2es.org/docUploads/arctic-security-report.pdf
- http://www.tandfonline.com/doi/abs/10.1080/14682745.2012.727800?journalCode=fcwh20
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/14/11
- http://www.cbc.ca/archives/
- http://lswilson.dewlineadventures.com/dewhist-a.htm
- http://pubs.aina.ucalgary.ca/aina/dewlinebib.pdf
- http://publications.gc.ca/collections/collection_2013/dn-nd/D4-7-4-2012-eng.pdf#p110
- http://cpmss.journalhosting.ucalgary.ca/index.php/cpmss/article/view/11/8
- http://www.jstor.org/stable/25473167?seq=1#page_scan_tab_contents
- http://publications.gc.ca/collections/collection_2013/dn-nd/D4-7-4-2012-eng.pdf#p88
- http://www.environmentandsociety.org/perspectives/2011/4/article/pragmatism-and-poetry-national-parks-and-story-canada
- http://niche-canada.org/2012/09/26/natures-past-episode-31-histories-of-canadian-environmental-issues-part-1-global-warming/
- https://www.cigionline.org/publications/2013/7/nunavut-and-new-arctic
- https://www.cigionline.org/articles/2014/01/whats-store-arctic
- http://www.iwgia.org/publications/search-pubs?publication_id=451.
- http://www.arcticgovernance.org/arctic-governance-traditional-knowledge-of-arctic-indigenous-peoples-from-an-international-policy-perspective.4667262-142902.html
- https://halshs.archives-ouvertes.fr/halshs-00752302/document
- http://www.chaireconditionautochtone.fss.ulaval.ca/documents/pdf/116.pdf
- http://miningwatch.ca/blog/1999/9/1/aboriginal-peoples-and-mining-canada-six-case-studies
- http://www.who.int/bulletin/volumes/81/6/kwiatkowski.pdf
- http://www.canadianwomen.org/
- http://www.naho.ca/documents/naho/publications/ac/climate_change.pdf
- http://www.inuitknowledge.ca/sites/naasautit/files/attachments/ITK_ClimateChange.pdf
- http://climatechangenunavut.ca/en/resources

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Further Reading
Source URL: http://www.environmentandsociety.org/node/6578
PDF created on: 06 May 2021 12:41:46

The Northwest Passage Timeline: Maps and Expeditions

This timelines about the history of the Northwest Passage takes its readers on a journey of discovery from the mid-fifteenth century to today.

The original virtual exhibition features the interactive Northwest Passage timeline of maps and expeditions. Read an offline version of the timeline on the following pages or visit the online version here (http://www.environmentandsociety.org/exhibitions/northwest-passage/timeline/northwest-passage-timeline).

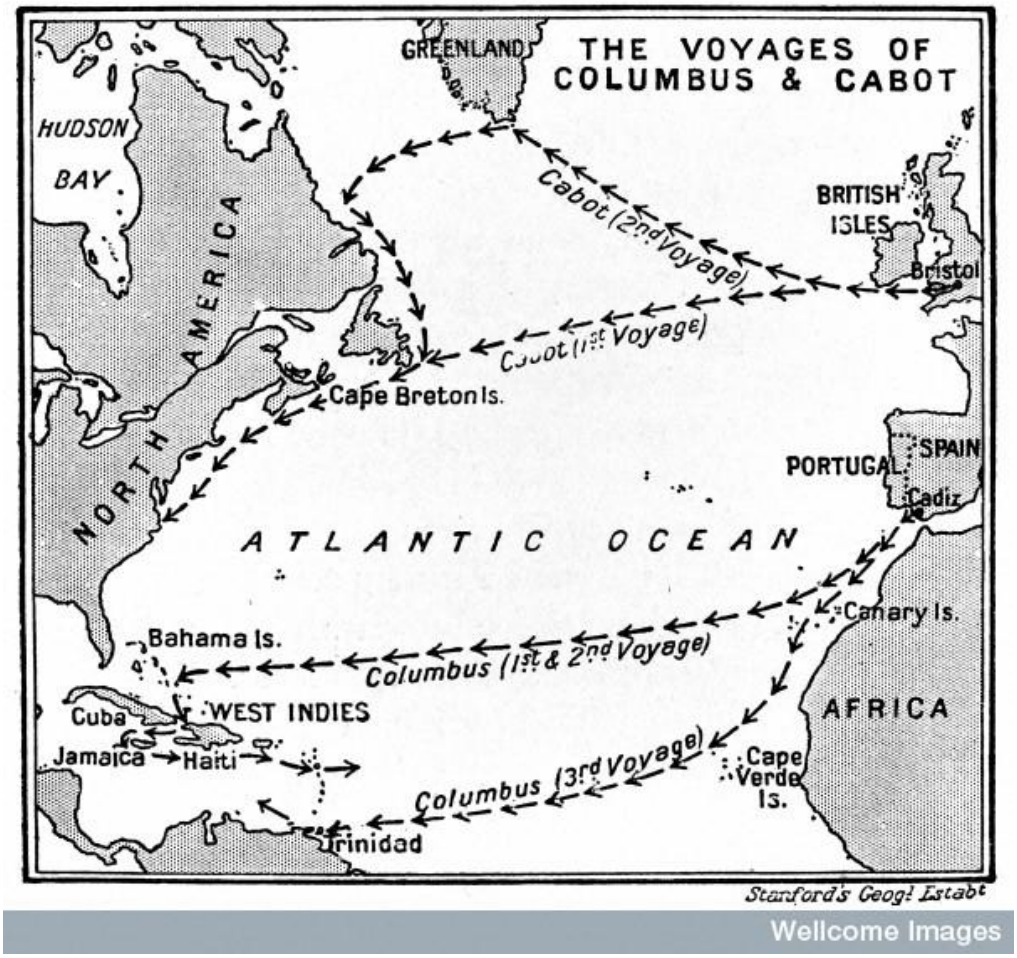
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: The Northwest Passage Timeline: Maps and Expeditions
Source URL: http://www.environmentandsociety.org/node/6580
PDF created on: 06 May 2021 12:41:47

The search for the Northwest Passage begins

1496

A desire for a route to Asia motivated the first attempts to find a Northwest Passage. Yet explorer John Cabot soon realized that he had found "no great state or Governement, no cities, seaports, ship no spices and silks for barter—or in a word, no Asia."

—John Cabot, quoted in James A. Williamson, *The Cabot voyages and Bristol discovery under Henry VII: with the cartography of the voyages, 6*. Cambridge: Published for the Hakluyt Society at the University Press, 1962.



Map of the voyages of Columbus and Cabot. In Netta Syrett, *Sketches of European History*. London: John Murray, 1931.

Source: Wellcome Library, London. CC BY 4.0. Click here to view source.

Websites linked in image captions:

- https://wellcomeimages.org/indexplus/result.html?*sform=wellcome-images&_IXACTION_=query&%24%3Dtoday=&_IXFIRST_=1&%3Did_ref=M0007960&_IXSPFX_=templates/t&_IXFPFX_=templates/t&_IXMAXHITS_=1

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

John Cabot's first voyage

1497

The voyage of John Cabot in the *Matthew* is commonly considered the first attempt to find the Northwest Passage. Cabot, like Christoph Columbus and other navigators of the fifteenth century, had no conception of the existence of the American continent. Cabot was crossing the Atlantic to look for China.

Giovanni Caboto. Painting by Giustino Menescardi (1762) in Palazzo Ducale, Venice.

Websites linked in image captions:

- http://upload.wikimedia.org/wikipedia/commons/2/2d/JohnCabotPainting.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Gaspar Corte-Real reaches Greenland and Newfoundland

1500

Gaspar Corte-Real initiated Portuguese attempts to find the Passage, reaching Greenland and Newfoundland. The following year Corte-Real returned with three caravels to explore the Labrador coast and the Hamilton Inlet. Two of them returned, but his vessel disappeared.

Statue of Gaspar Corte-Real, Central, St. John's, NL, Canada.

Photo by Eric Harrison. CC BY-SA 2.0.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:49:58

France enters the fray for the Passage, financing Verrazzano's voyage

1524

King François I financed Giovanni da Verrazzano's voyage to explore the eastern coast of America from Carolina to New England.

Giovanni da Verrazano engraving by Francesco Allegrini, 1768.

Public domain. Click here to view source.

Websites linked in image captions:

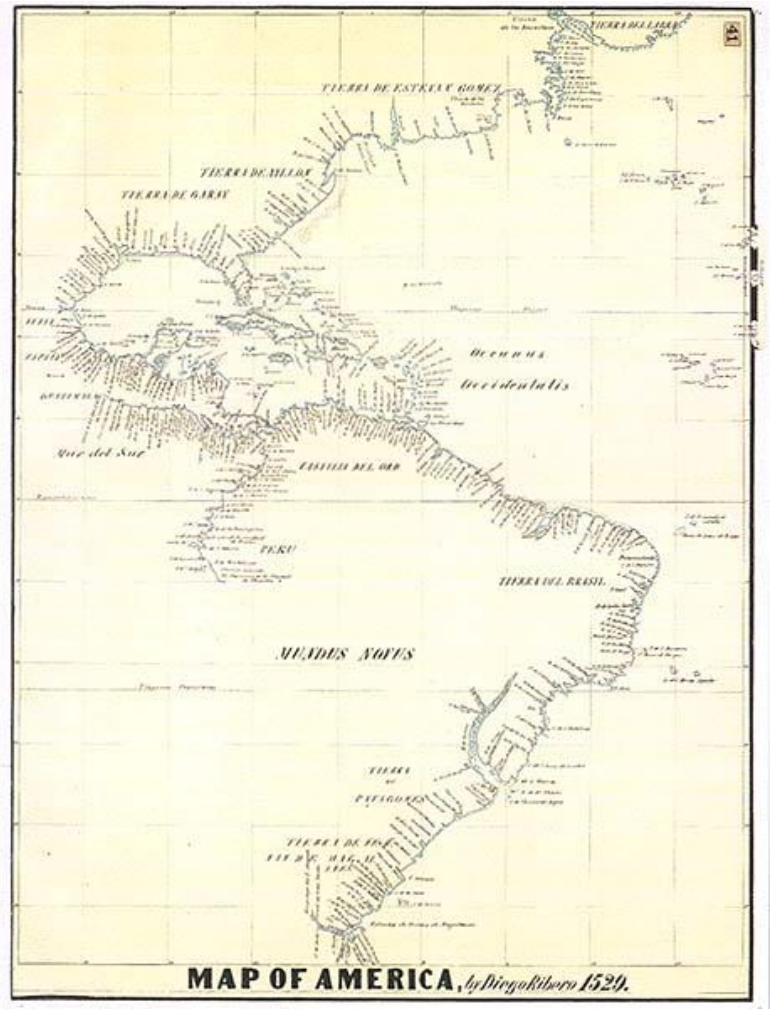
- https://upload.wikimedia.org/wikipedia/commons/0/0d/Giovanni_da_Verrazano.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Estêvão Gomes explores the eastern American coast

1524 - 1525

Estêvão Gomes explored the eastern part of the American coast from Florida to Newfoundland to strengthen Spanish claims to a Passage.



Diego Ribero, *Map of America,* 1529. The map depicts the coast explored by Estêvão Gomes.

Public domain. Courtesy of the Library of Congress, Geography and Map Division. Click here to view source.

Websites linked in image captions:

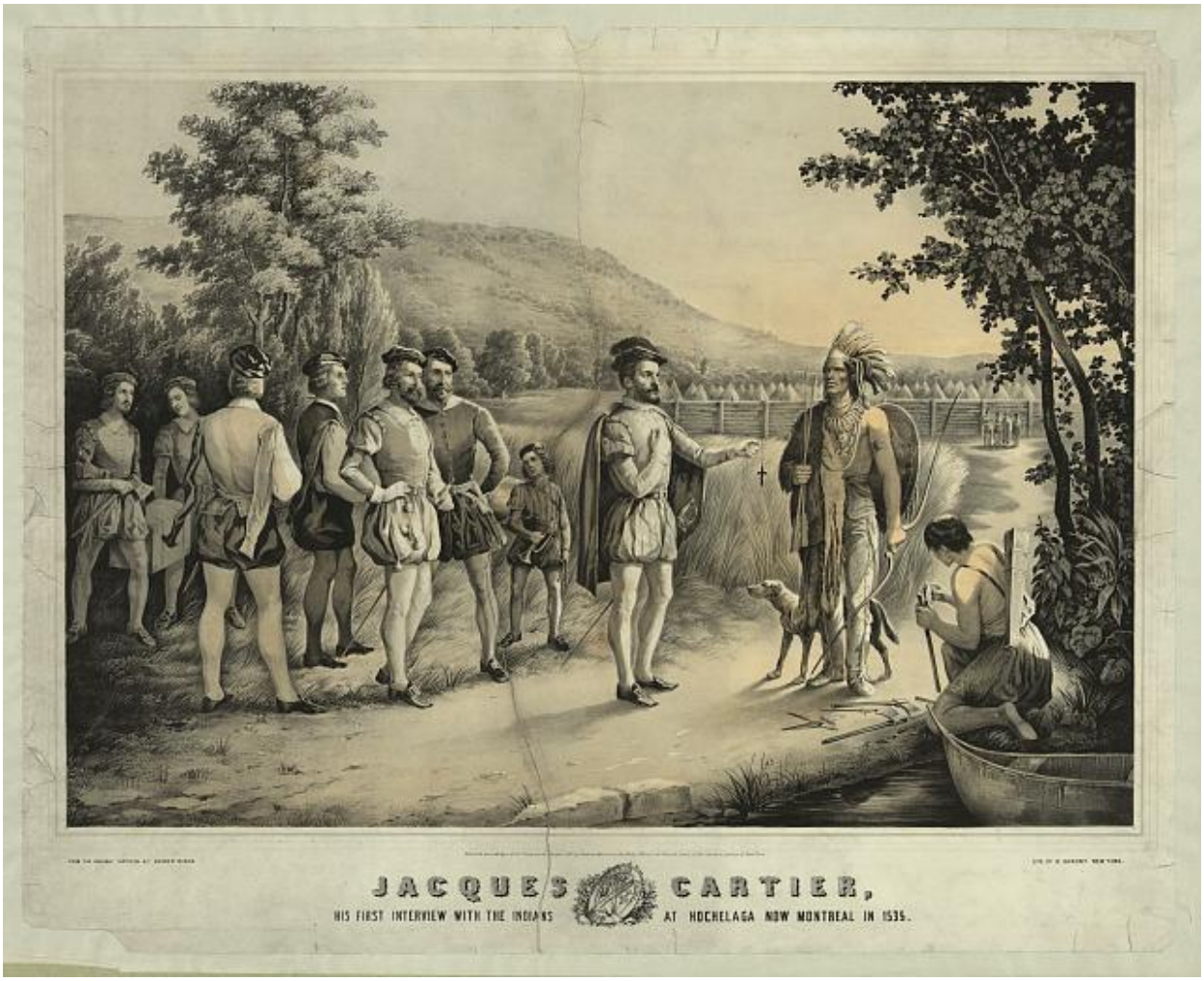
- https://www.loc.gov/resource/g3201c.ct001316/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Jacques Cartier explores New France

1534 - 1535

With the aim of following Verrazzano's voyage, Jacques Cartier sailed the Labrador coast, the western part of Newfoundland, Gaspé Bay, and the Gulf of Saint Lawrence. In the second voyage he travelled up the Saint Lawrence river to Mont-Royal, thinking he had found the Passage, until he was stopped by the La Chine Rapids.



Jacques Cartier, his first interview with the Indians at Hochelaga (now Montreal) in 1535.

Public domain. Courtesy of the Library of Congress, Washington. Click here to view source.

Websites linked in image captions:

- http://www.loc.gov/pictures/item/2003664061/

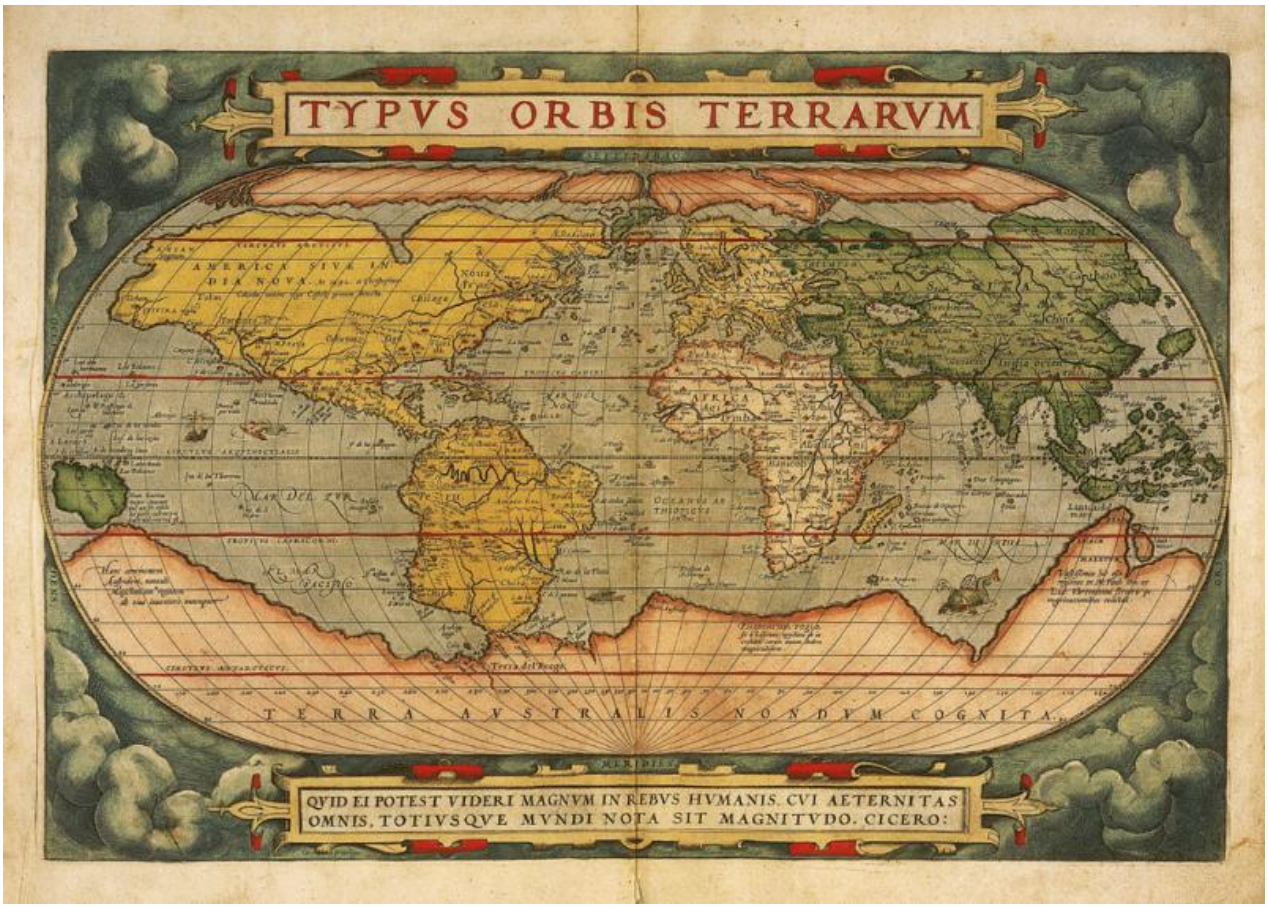
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:06

The Strait of Anian

1542 - 1677

Early modern cartographers assumed a boundary existed between North America and Asia permitting access to the Northwest Passage, and called it the "Strait of Anian." The true strait would be discovered in 1728.

The name "Anian" was probably derived from the Japanese name for the strait between Sakhalin island and the mainland. The legend of Anian seems to come from the writings of Marco Polo, but it was also the result of a mixture of other myths and "the intense desire to find a short cut to the riches of the Far East." Alan Edwin Day, *Search for the Northwest Passage: An Annotated Bibliography* New York: Garland, 1986, 114.



Public Domain. Courtesy of Universität Bern. Click here to view source.

Websites linked in image captions:

- https://baselbern.swissbib.ch/Record/126261660/Similar

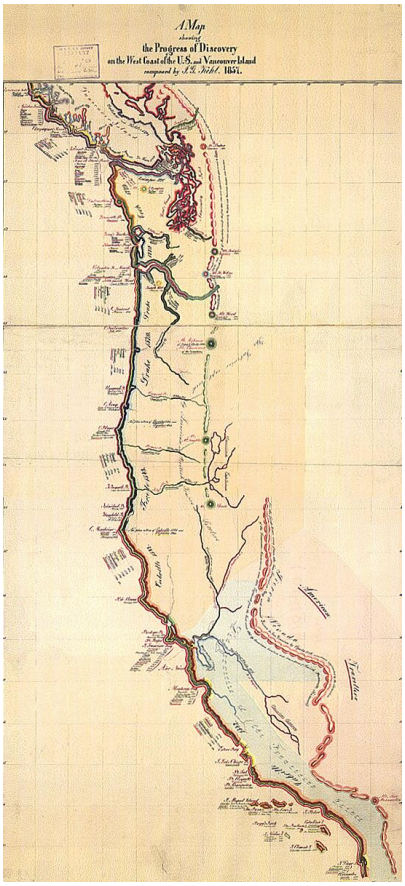
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:26

João Rodrigues Cabrilho and Bartolomé Ferrelo explore the California coast

1542 - 1543

João Rodrigues Cabrilho and Bartolomé Ferrelo were the first Europeans to explore the California coast in search of a big river to prove the existence of a passage. They advanced to the southern coast of Oregon, but although their explorations added more than 800 miles to maps of the coastline, they were neglected in subsequent Californian voyages because Madrid considered it in Spain's interests to keep geographic details as secret as possible, to avoid attracting the attention of pirates.

This 1857 map by Johann Georg Kohl shows the exploration of the west coast of the United States and Vancouver Island. Cabrilho's and Ferrelo's voyages are marked in reddish brown and light blue.



A Map showing the Progress of Discovery on the West Coast of the U.S. and Vancouver Island composed by J.G. Kohl. 1857.

Websites linked in image captions:

- http://www.loc.gov/rr/hispanic/portam/img/kohlall.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Münster maps the New World as islands

1545

Sebastian Münster's map depicts America as more of an "oceanic archipelago" than a continental land mass. It includes a large illustration of Magellan's ship on its ill-fated voyage crossing the "Unfortunate Islands."

Sebastian Münster and Heinrich Petri, *Novae insulae XXVI nova tabula: Novus orbis,* Basel: Heinrich Petri, 1545.

Courtesy of Osher Map Library and Smith Center for Cartographic Education. CC BY-NC-SA 4.0. Click here to view source.

Websites linked in image captions:

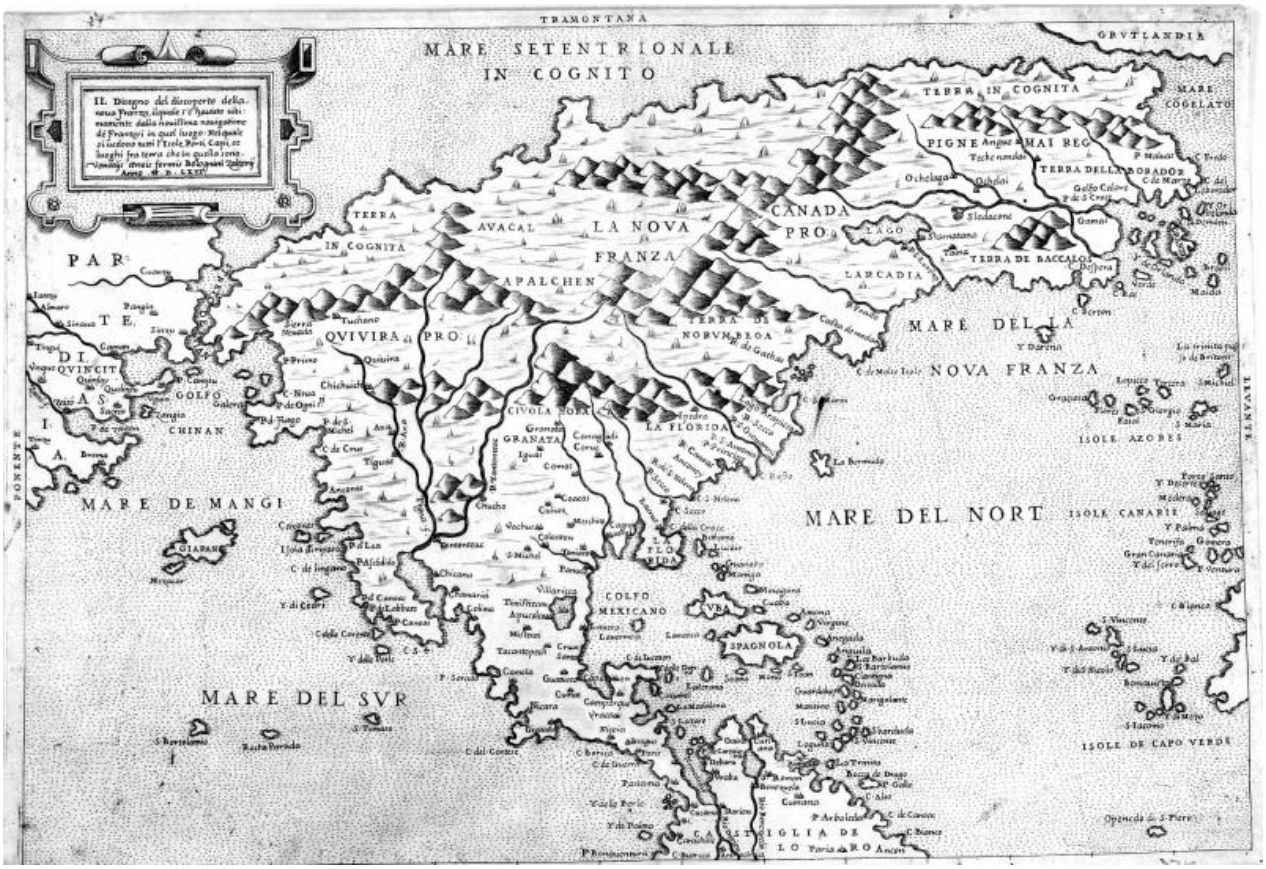
- https://oshermaps.org/map/1640.0001

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:28

Bolognino Zaltieri maps the discovery of New France

1566

Published in Venice, this was the first printed map to show the Strait of Anian as described by Giacomo Gastaldi.



Bolognino Zaltieri, *Il Disegno Del Discoperto Della Nova Franza,* 1566.

Public domain. Courtesy of Osher Map Library and Smith Center for Cartographic Education.

Click here to view source.

Websites linked in image captions:

- https://oshermaps.org/map/1649.0001

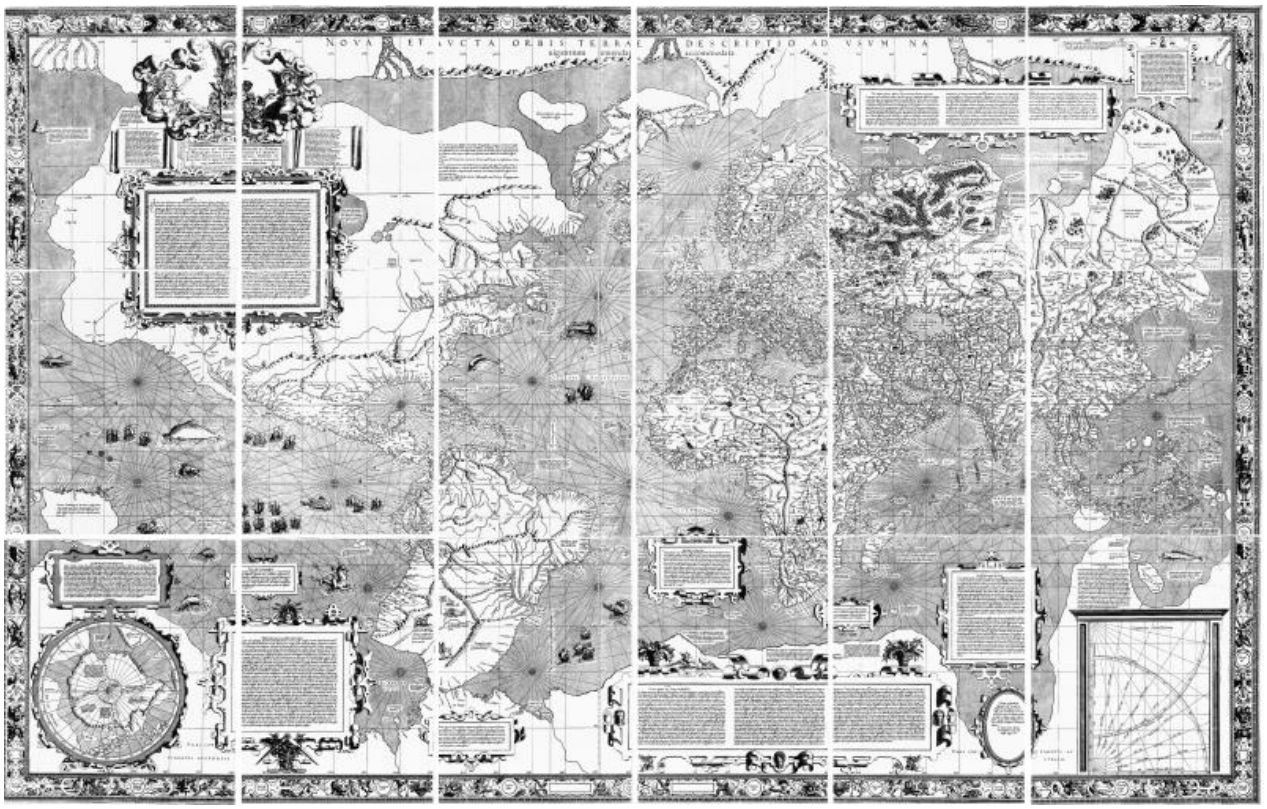
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:30

Mercator's map of the world

1569

Mercator's map shows a long, narrow passage extending north of America. The eastern entrance lies between Greenland and the so-called Estotilant; the western entrance is in the polar sea, north of the passage between Asia and America. This passage is not named, but "Anian" appears on the American side, and by a process of extension, the passage became known as the Strait of Anian.

The map's projection, which represents sailing courses (rhumb lines) as straight lines, is one of the most significant milestones in the history of cartography.



Gerhard Mercator's map of the world, 1569.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Mercator_1569_world_map_composite.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:30

Ortelius's world map

1570

The *Typus Orbis Terrarum* is a world map showing a sea above the Arctic Circle and, to the west, the Strait of Anian. This cartographic portrayal of the strait was used as proof of its existence.

Detail depicting an open passage. Abraham Ortelius, *Typus Orbis Terrarum,* in *Theatrum Orbis Terrarum,* 1570.

Public domain. Courtesy of Library of Congress, Geography and Map Division.
Click here to view source.

Websites linked in image captions:

- https://www.loc.gov/resource/g3200m.gct00003/?sp=18

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:50:31

Côrte-Real makes landfall at the Hudson Strait

1574

To advance its interests in the Passage and in trade with Asia, Portugal sponsored voyages by Vasques Eanes Côrte-Real (sometimes also spelled as Anus Corteriall) to discover the Northwest Passage in 1574. He wrote of discovering "a great entraunce very deep and broad ... unto which they passed xx leagues and found it alwayes trended toward the south." This was probably the Hudson Strait.

Lisbona—Lisbon, Portugal, from Georg Braun, Frans Hogenberg, and Raleigh Ashlin Skelton. *Civitates Orbis Terrarum.* "The Towns of the World." *1572-1618*. Cleveland and New York: The World Publishing Company, 1966.

Public domain. Click here to view source.

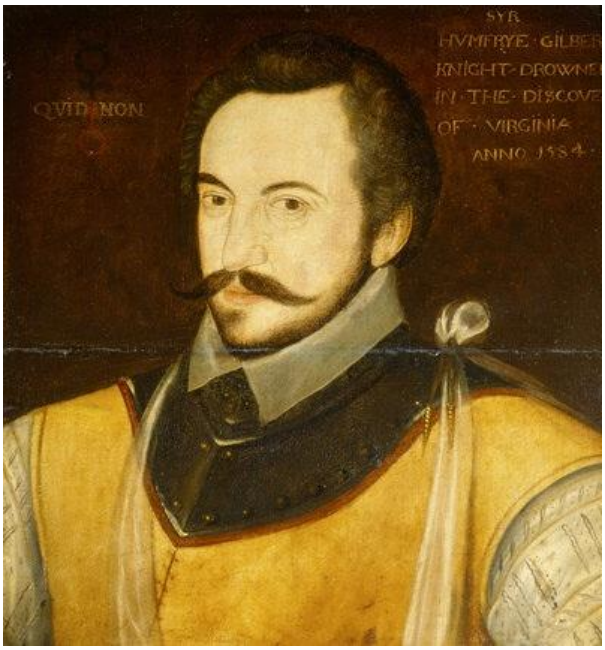
Websites linked in image captions:

- https://pt.wikipedia.org/wiki/Castelo_de_S%C3%A3o_Jorge#/media/File:Lisbon_-_Lisbonne_-_Lisboa_1572.png

Humphrey Gilbert argues for existence of a Passage

April 1576

Sir Humphrey Gilbert used contemporary and historical sources to put forward his case for a passage to the Northwest. His *A discourse of a discouerie for a new passage to Cataia*, written in 1566, was published in 1576 and used to promote Frobisher's voyages by raising awareness of and interest in the potential of such a venture: "All which learned men ... have affirmed ... that America was an island and that there lyeth a great sea between it, Cataia and Grondland, by which any man of our contry (could) passe to Cataia, the Moluccae, India and all places in the East." Gilbert asked why there were animals or peoples from Asia living in America if no navigable passage existed.



Portrait of explorer Sir Humphrey Gilbert at Compton Castle. Artist unknown.

Public domain. Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Sir_Humphrey_Gilbert_Compton_Castle.jpg#/media/File:Sir_Humphrey_Gilbert_Compton_Castle.jpg

The Muscovy Company and a Northeast Way

June 1576

Not everyone in England agreed with Humphrey Gilbert's theories. Anthony Jenkinson, a member of the Muscovy Company, believed, like the founders of his company, that a better route lay to the northeast. He supported his argument with sailors' stories of mythical beasts. "Unicorn horns" also feature in accounts of Frobisher's voyages; these turned out to be narwhal tusks.

Seal-die of the Muscovy Company, showing the date of its charter to trade with Russia, 1555. Probably made in England, mid-16th century. Found in Hackney, London.

Websites linked in image captions:

- http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=75137&partId=1

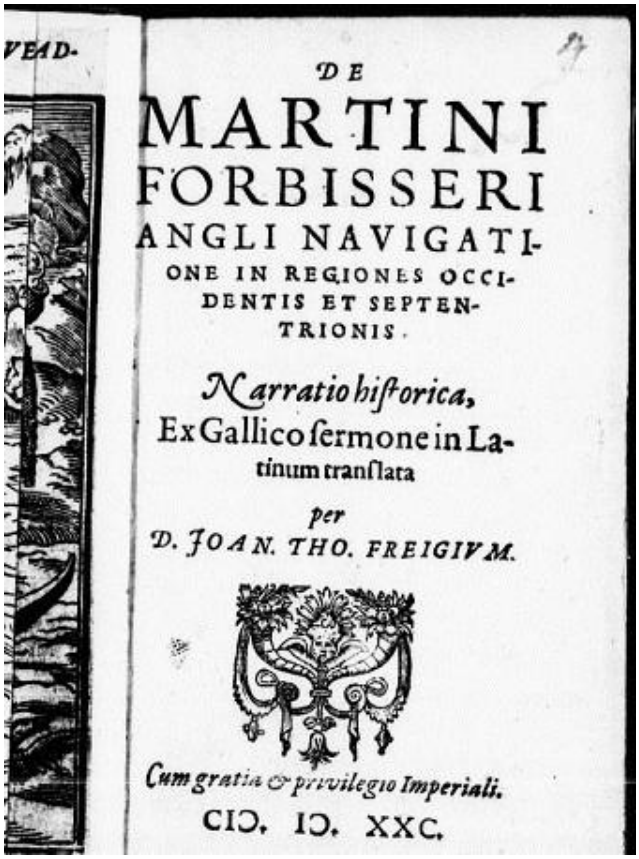
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Martin Frobisher's first voyage

June 1576

Frobisher obtained the command of three small ships. With one of these he succeeded in crossing the Atlantic. He reached Labrador and Baffin Island and discovered the bay that now bears his name: "A great gut, bay, or passage, divided as it were, by two maine landes or continents, asunder." Stopped by ice, winds, and currents, he returned to England. There he reported that he had found the Northwest Passage, and he presented some black stones brought back from Baffin Island as evidence of possible gold mines.

View the full document here.



Martin Frobisher, Johann Thomas Freige, Katharina Gerlach, and Joannes Vom Berg, *De Martini Forbisseri angli navigatione in regiones occidentis et septentrionis Narratio historica, Ex Gallico sermone in Latinum translata per D. Joan*, Tho. Freigivm, 1580.

Websites linked in image captions:

- http://ia600805.us.archive.org/BookReader/BookReaderImages.php?zip=/31/items/cihm_94151/cihm_94151_jp2.zip&file=cihm_94151_jp2/cihm_94151_0010.jp2&scale=4&rotate=0

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Frobisher's first encounter with the Inuit

June 1576

One of the crew, Christopher Hall, recorded the details of the encounter: "They be like Tartars, with long black hair, broad faces, and flat noses, and tawney in color, wearing seal skins, and so do the women, not differing in the fashion, but the women are marked in the face with blue streaks down the cheeks, and round about the eyes. Their boats are made all of seal skins, with a keel of wood within the skin; the proportion of them is like a Spanish shallop, save only they be flat on the bottom, and sharp at both ends." Quoted in Richard Hakluyt, *Voyages in Search of the North-West Passage.* London: Cassell & Company, Limited, 1892.

John White, *An Eskimo man with bow,* 1585-1593. Pen, brown ink, and watercolor over graphite, touched with white (oxidized).

Courtesy of The British Museum , London.

Websites linked in image captions:

- http://www.britishmuseum.org/join_in/using_digital_images/using_digital_images.aspx?image=ps289219.jpg
- http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=753476&partId=1&people=103070&peoA=103070-2-9&page=1

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Francis Drake's circumnavigation

1577 - 1580

Sir Frances Dranke's voyage represents one of the clearest displays of English maritime ambition, prompting concern in Spain.

Portrait of Sir Francis Drake by an unknown artist; oil on panel, circa 1580.

Click here to view source.

Websites linked in image captions:

- http://www.npg.org.uk/collections/search/use-this-image.php?mkey=mw01932

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Frobisher's second and third voyages

1577 - 1578

With the promise of "gold ore," Martin Frobisher had no major difficulty securing a backer for new expeditions. He arrived at Hell Island, searching for a gold mine that would allow him to establish a mining camp in Frobisher Bay. He returned in 1578 to Countess of Warwick Island. Frobisher's single-minded pursuit of gold and other minerals limited the exploratory value of his voyages, and when the ores he brought back from his third voyage proved to contain neither silver nor gold, his financing collapsed and he was forced to seek other employment.

A modern copy of the frontispiece to Frobisher's *Historia Navigationis*, an account of his travels to the Davis Straits area of Greenland the 1570s, showing an Inuit hunting birds from a kayak while another man holds his kayak on the shore. An Inuit woman carries her infant on her back. To the left is a village scene with tents, Inuit families, and a dog harnessed to a kayak, pulling it along. *Pictura vel delineatio hominum nuper ex Anglia AD vectorum una cum corum armis tentoriis, & naviculis.* 1850.

Public domain. Courtesy of the Library of Congress, Washington.

Click here to view source.

Websites linked in image captions:

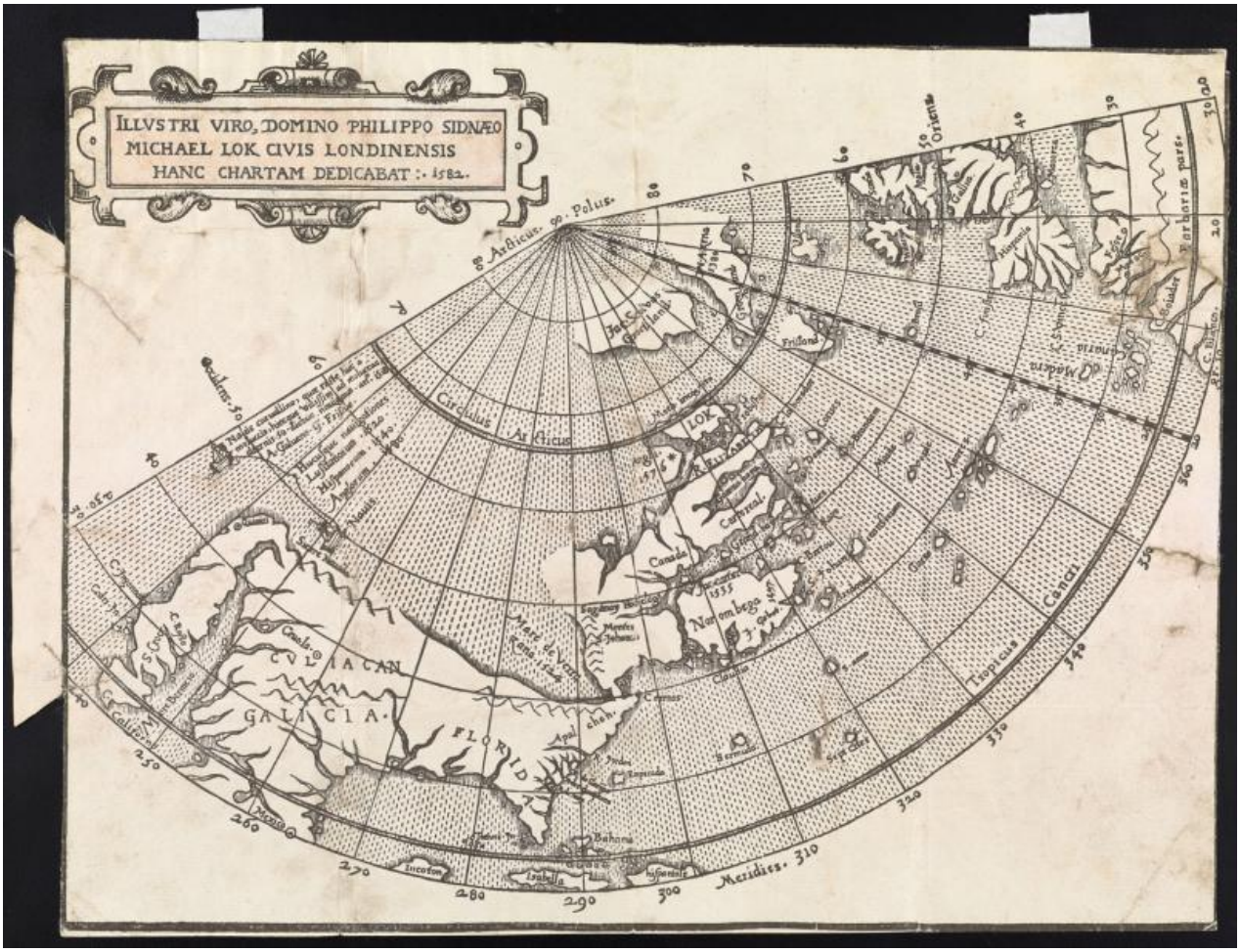
- http://www.loc.gov/pictures/item/2004662201/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Lok's semicircular map promotes investment in further expeditions

1582

Illustrated semicircular map of North America. Dedicated to the illustrious Sir Philip Sidney, 1582. London merchant Michael Lok, an investor in Frobisher's first voyage, created this map to encourage further expeditions and to attract investors to Sir Humphrey Gilbert's plan to colonize Newfoundland.



Michael Lok, *Illusti Viro, Domino Phillippo Sidnaeo Michael Lok Civis Londinensis Hanc Chartam Dedicabat 1582,* Illustrated semicircular map of North America, 1582.

Click here to view source.

Websites linked in image captions:

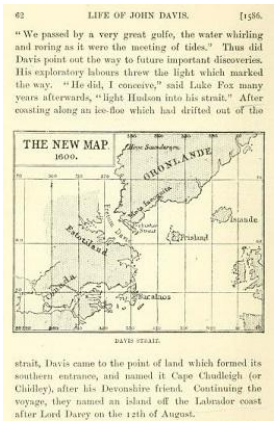
- https://oshermaps.org/map/316.0001

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:51:09

John Davis arrives in the Cumberland Gulf

1585

Under the auspices of the Muscovy Company, Davis arrived in the Cumberland Gulf and returned convinced that "the Northwest passage is a metter nothing duobtful, but at any tyme almost to be passed, the sea navigable, voyd of yse, the ayre tolerable and the waters very depe." He failed to find the route he took in the first voyage, and to recognize the entrance of the Hudson Strait. His last attempt came to an end at Lord Lumly's Inlet, near the entrance to Hudson's Bay, where he was forced to turn back because of bad weather: "The sea falling down into the gulf with a mighty overfall, and roaring, and with divers circular motions like whirlpools."


62 LIFE OF JOHN DAVIS. [1586.

"We passed by a very great gulfe, the water whirling and roring as it were the meeting of tides." Thus did Davis point out the way to future important discoveries. His exploratory labours threw the light which marked the way. "He did, I conceive," said Luke Fox many years afterwards, "light Hudson into his strait." After coasting along an ice-floe which had drifted out of the

THE NEW MAP 1600.

strait, Davis came to the point of land which formed its southern entrance, and named it Cape Chalileigh (or Chidley), after his Devonshire friend. Continuing the voyage, they named an island off the Labrador coast after Lord Darcy on the 12th of August.

Davis Strait. Markham, Clements R. *A life of John Davis, the navigator, 1550-1605: Discoverer of Davis Straits.* London: George Philip & Son, 1889. p. 62. Click here to read the text.

Public domain. Courtesy of the Library of Congress, Washington.

Click here to view source.

Websites linked in image captions:

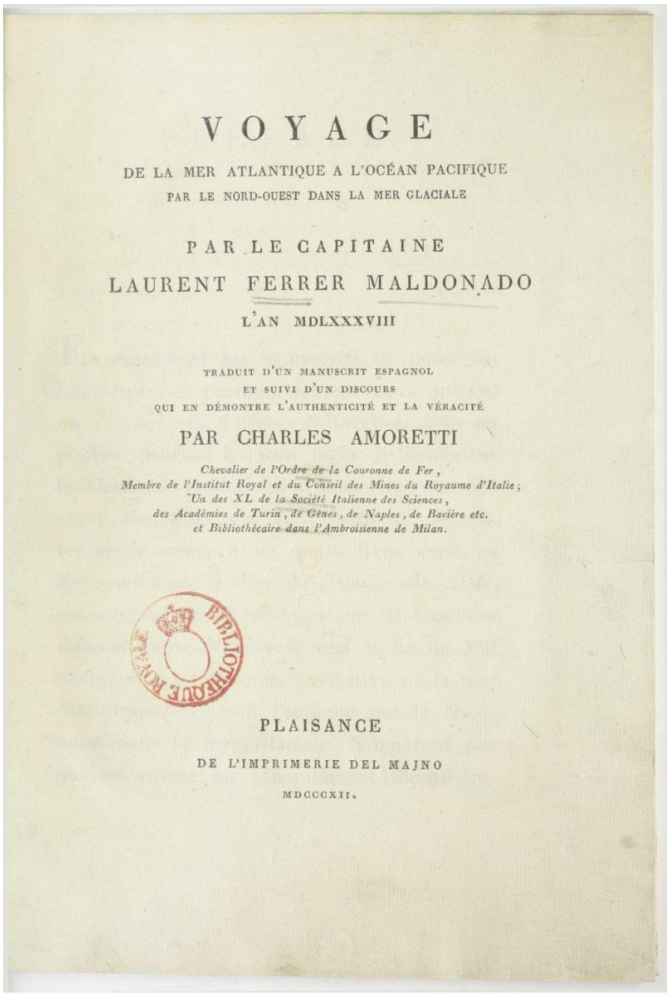
- https://archive.org/stream/lifeofjohndavisn00mark
- https://archive.org/details/lifeofjohndavisn00mark

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:51:10

Lorenzo Ferrer Maldonado's claimed passage

1588

In a 1609 submission to the Spanish court, Ferrer Maldonado claimed to have completed the entire Northwest Passage in 1588. He said that he sailed the South Sea from the north, through the Strait of Anian at 55° N, and then reached China from the northwest coast of America. He also claimed to have returned to Spain by the same route. Though he may have been hoping to profit from Spanish interest in the Passage, some did believe him.



VOYAGE

DE LA MER ATLANTIQUE A L'OCÉAN PACIFIQUE
PAR LE NORD-OUEST DANS LA MER GLACIALE

PAR LE CAPITAINE
LAURENT FERRER MALDONADO
L'AN MDLXXXVIII

TRADUIT D'UN MANUSCRIT ESPAGNOL
ET SUIVI D'UN DISCOURS
QUI EN DÉMONTRE L'AUTHENTICITÉ ET LA VÉRACITÉ
PAR CHARLES AMORETTI

Chevalier de l'Ordre de la Couronne de Fer,
Membre de l'Institut Royal et du Conseil des Mines du Royaume d'Italie;
Un des XL de la Société Italienne des Sciences,
des Académies de Turin, de Gênes, de Naples, de Bavière etc.
et Bibliothécaire dans l'Ambroisienne de Milan.

PLAISANCE
DE L'IMPRIMERIE DEL MAJNO
MDCCCXII.

Lorenzo Ferrer Maldonado and Carlo Amoretti, *Voyage de la mer Atlantique a`l'oce'an Pacifique par le nord-ouest dans la mer Glaciale*, Plaisance: Impr. del Majno, 1812.
Click here to read the text.

Websites linked in image captions:

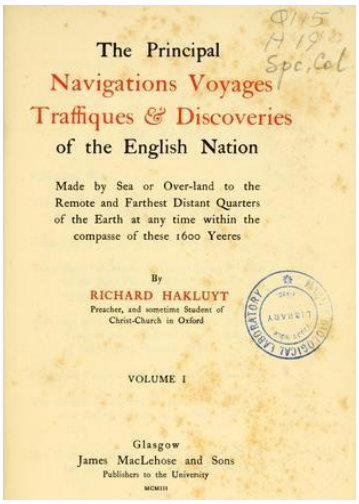
- http://gallica.bnf.fr/ark:/12148/bpt6k6528824m

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation

1589 - 1600

Richard Hakluyt, a lecturer in geography at Oxford and a writer, promoted expansion into the New World in his *Principal Navigations,* first published in 1589 and expanded in 1598-1600. He used Gilbert's writing as a blueprint, quoting him extensively. He recognized a need to establish settlements and a supply base, and suggested that the New World had a climate perfect for this.



Richard Hakluyt, *The Principal Navigations, Voyages, Traffiques & Discoveries of the English Nation, Made by Sea or Overland... at Any Time Within the Compasse of These 1500 [1600] Yeeres, &c.,* London: G. Bishop, R. Newberie, and Barker, 1599.

Websites linked in image captions:

- https://archive.org/stream/principalnavigat01hakl

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 12:13:51

Vizcaino maps the California Coast

1602

The conquistador Sebastian Vizcaino was tasked with mapping in detail the California coastline. One of his ships, the *Tres Reyes*, commanded by Martin d'Aguilar, continued to sail up the coast to Oregon. Spain began to change its policy regarding the Passage as influential figures at court suggested the discovery could be damaging for Spain.

Joan Vinckeboons, *Map of California shown as an island,* ca. 1650.

Public domain. Courtesy of the Library of Congress, Geography and Map Division.

Click here to view source.

Websites linked in image captions:

- https://www.loc.gov/resource/g3291s.mf000074/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:51:13

Hudson's crew mutinies

1611

The Muscovy Company sponsored Henry Hudson's voyage in search of a northern passage to China and the East Indies. Hudson passed through what is known as the Hudson Strait and into Hudson Bay. He wintered in James Bay, but in 1611 his crew mutinied and cast him adrift in an open boat. It was clear that no passage could be found in this direction.

Lewis & Brown, *Henry Hudson. The celebrated and unfortunate navigator, abandoned by his crew in Hudson's Bay 11 June 1610*, 1840. (Editor's note: While the title says 1610, Hudson was set adrift in 1611.)

Public domain. Courtesy of the Library of Congress, Washington.

Click here to view source.

Websites linked in image captions:

- http://www.loc.gov/pictures/item/2003670428/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Bylot and Baffin discover Baffin Bay and Baffin Island

1615 - 1616

Robert Bylot and William Baffin explored Foxe Basin and sailed up Davis Strait and the west coast of Greenland, discovering Baffin Bay and Baffin Island.

Hendrick van der Borcht, *Navigator with Globe and Dividers* (Portrait of William Baffin), 1624. Oil on canvas.

Public domain. Click here to view source.

Websites linked in image captions:

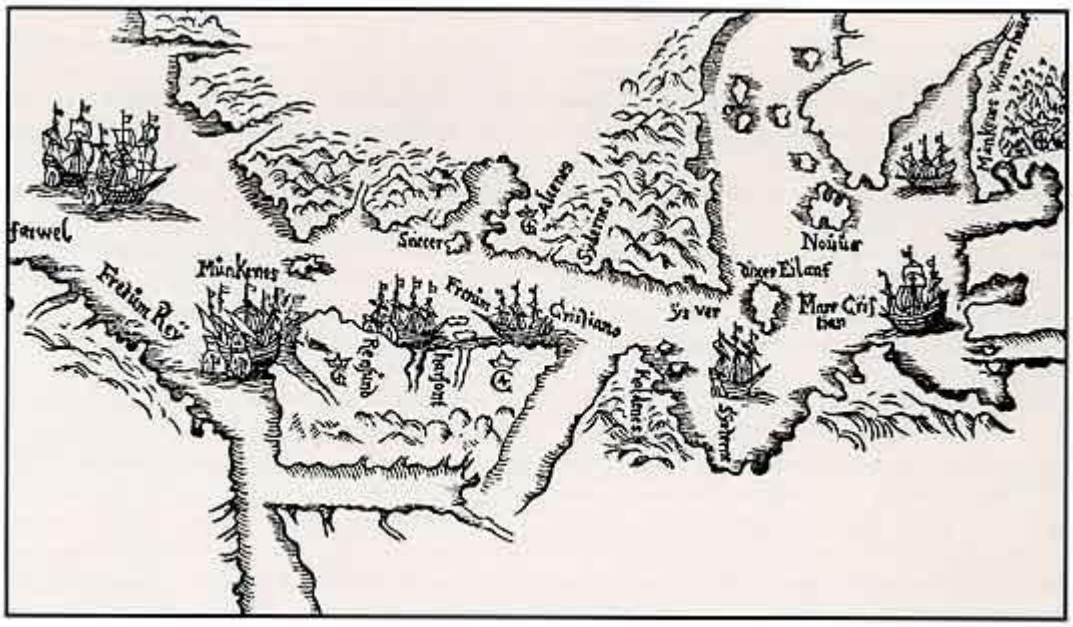
- https://commons.wikimedia.org/wiki/File:Hendrick_van_der_Borcht,_Navigator_with_Globe_and_Dividers.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Jens Munck

1619 - 1620

Jens Munck and his crew spent the winter on their ship in the Churchill River estuary.



Jens Munck's map of the route from Cape Farewell (Greenland) to the Hudson Bay, from the north, in Jens Munck, *avigatio, septentrionalis*, (...) Prentet i Kiøbenhaffn: Hoss H. Waldkirch, 1624.
Click here to read the text.

Public domain. Courtesy of University Library of Tromsø.

Click here to view source.

Websites linked in image captions:

- http://books.google.com/books?id=Hu0xAQAAMAAJ
- https://commons.wikimedia.org/wiki/File:Map_of_Hudson_Strait_And_Hudson_Bay_by_Jens_Munck_1624.jpg

Mercator's map of the North Pole

1623

Gerardus Mercator's map of the north polar regions represents additional data gathered on Willem Barentsz's voyages.

Gerardus Mercator, *Septentrionalium Terrarum descriptio*, A map of the North Pole, Helmink Antique Maps, 1623.

Public domain. Click here to view source.

Websites linked in image captions:

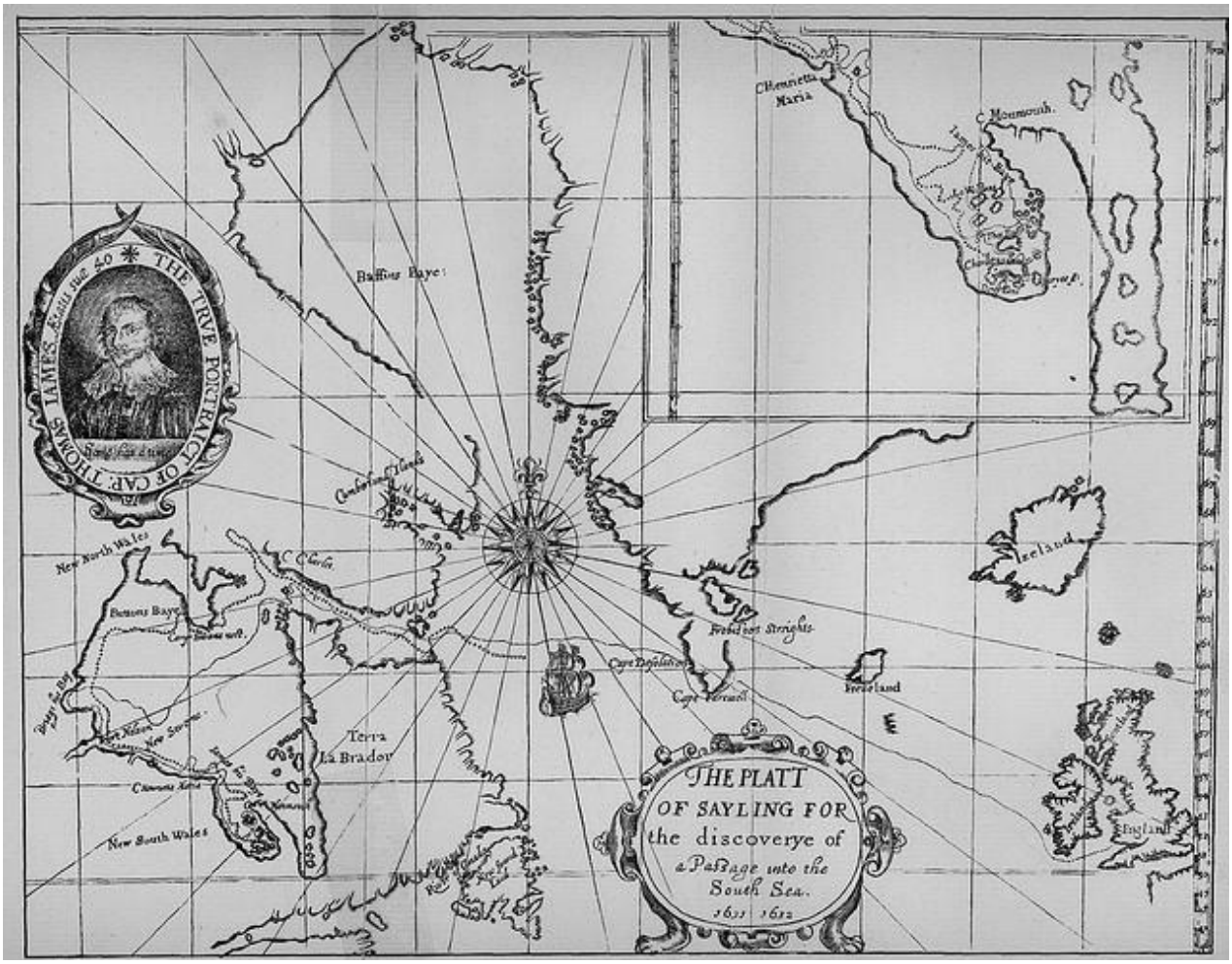
- https://commons.wikimedia.org/wiki/File:Mercator_Septentrionalium_Terrarum_descriptio.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:51:35

Thomas James searches for a Passage

1631 - 1632

James entered Hudson Bay to search for a passage leading west into the Western (or Southern) Ocean. His search was unsuccessful. He clarified the character of the west mainland shore south of Cape Henrietta Maria, and he made further voyages south of the Nelson River in search of the western waterway.



Thomas James, *The Platt of Sayling For The Discoverye Of A Passage Into The South Sea 1631-1632.* In: Christy Miller, *The Voyages of Captain Luke Foxe of Hull, and Captain Thomas James of Bristol, in Search of a Northwest Passage, in 1631-32 with Narratives of the Earlier Northwest Voyages of Frobisher, Davis, Weymouth, Hall, Knight, Hudson, Button, Gibbons, Bylot, Baffin, Hawkridge, and others*, London: Hakluyt Society, 1884.

Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:The_Platt_of_Sayling_For_The_Discoverye_Of_A_Passage_Into_The_South_Sea_1631-1632.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

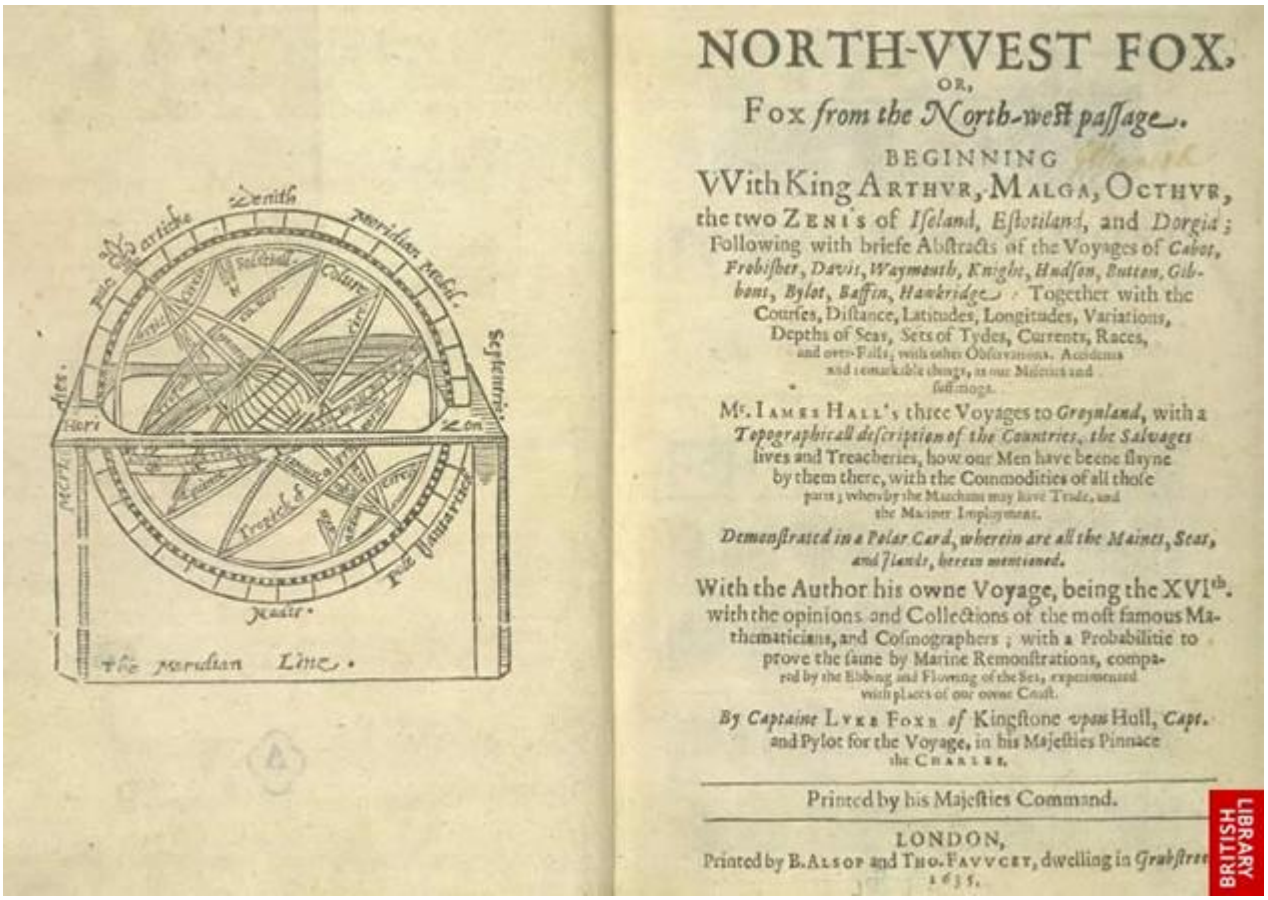
PDF created on: 19 May 2021 11:51:35

Luke Foxe attempts to discover the Northwest Passage

1635

Luke Foxe, an English explorer, sailed to North America in order to observe the western coast of Hudson Bay in 1631. His voyage ended in Foxe Channel, dampening hopes of finding the Passage.

A book about his expedition was published in 1635, the same year he died in England.



Luke Foxe, *North-west Fox, or, Fox from the North-west passage ...: with briefe Abstracts of the Voyages of Cabot, Frobisher, Davis, Waymouth, Knight, Hudson, Button, Gibbons, Bylot, Baffin, Hawkridge; ... With the Author his owne Voyage , being the XVIth*. London: B. Alsop and Tho. Fawcet, 1967.
Click here to read the full text.

Public domain. Courtesy of The British Library Board.

Click here to view source.

Websites linked in image captions:

- https://archive.org/stream/cihm_89806
- http://www.bl.uk/onlinegallery/features/northwpass/images/globelge.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Semyon Dezhnyov sails through Bering Strait

1648

Semyon Dezhnyov was a Russian explorer of Siberia and the first European to sail through the Bering Strait. However, Vitus Bering, who passed through the strait on his 1733-43 expedition, is usually given credit for discovering the strait that bears his name.

An early (1773) map of Chukotka, showing the route of the Dezhnyov expedition of 1648. Jean-Baptiste Bourguignon d'Anville, *A General Atlas Describing the Whole Universe, Being a Compleat and New Collection of the Most Approved Maps Extant; Corrected with Utmost Care, and Augmented from the Latest Discoveries; the Whole Thing Being an Improvement of the Maps of d'Anville and Robert. Engraved in the Best Manner on Sixty-Two Copper Plates, By Thomas Kitchen, Senior, and Others* London: Printed for Robert Sayer, Map and Printseller, at no. 53, in Fleet-Street, 1773.

A fragment of the map of Russian Empire (pages 21-22), said to be based on d'Anville's work.

Click here to view source.

Websites linked in image captions:

- https://en.wikipedia.org/wiki/Semyon_Dezhnev#mediaviewer/File:Kitchen-21-Russia-Chukotka-2823.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:52:08

The Hudson's Bay Company

1670

The Hudson's Bay Company was incorporated in 1670 to exploit the commercial advantage of sailing through the Hudson Strait and into Hudson Bay to acquire furs.

Plaque for the Hudson's Bay Company in Toronto, Canada.

CC BY-NC-SA. Photograph by Greg H.

Click here to view source.

Websites linked in image captions:

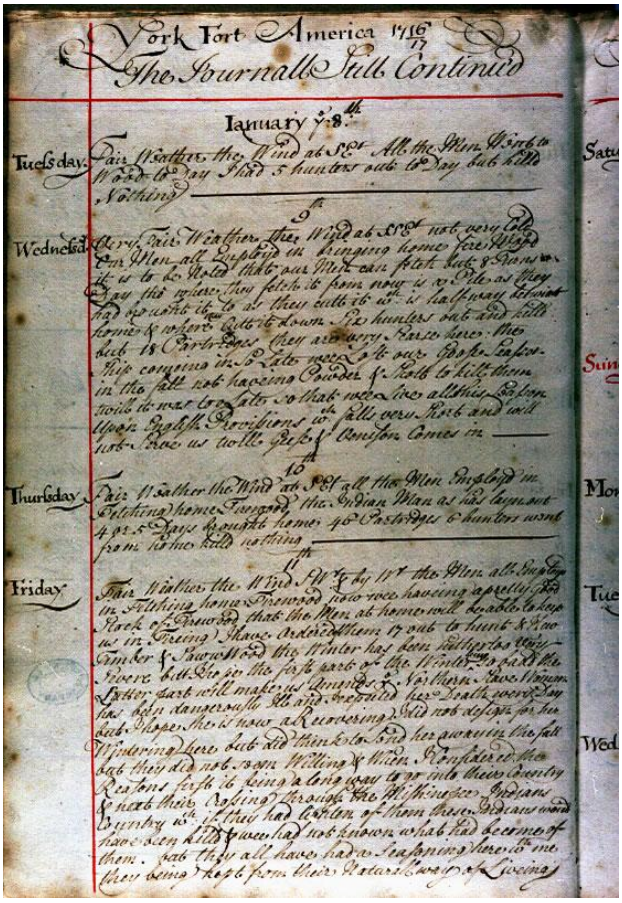
- https://www.flickr.com/photos/projekta8/
- https://www.flickr.com/photos/projekta8/4348472632

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

James Knight's voyage for Hudson's Bay Co. fails

1714 - 1720

James Knight was a Hudson's Bay Company trader who persuaded the company to give him two vessels—the *Discovery* and the *Albany*—to look for the Passage. The expedition set out from Gravesend but never returned. What is known is that the two ships reached Marble Island and wintered there, but for some reason were unable to sail again in the spring. The wrecks of both ships were found at the bottom of the bay by divers in 1991–92.


York Factory post journal, 11 and 29 January 1717, signed by James Knight.

Public domain. Courtesy of Hudson's Bay Company Archives, B.239/a/2. Archives of Manitoba.

Click here to view source.

Websites linked in image captions:

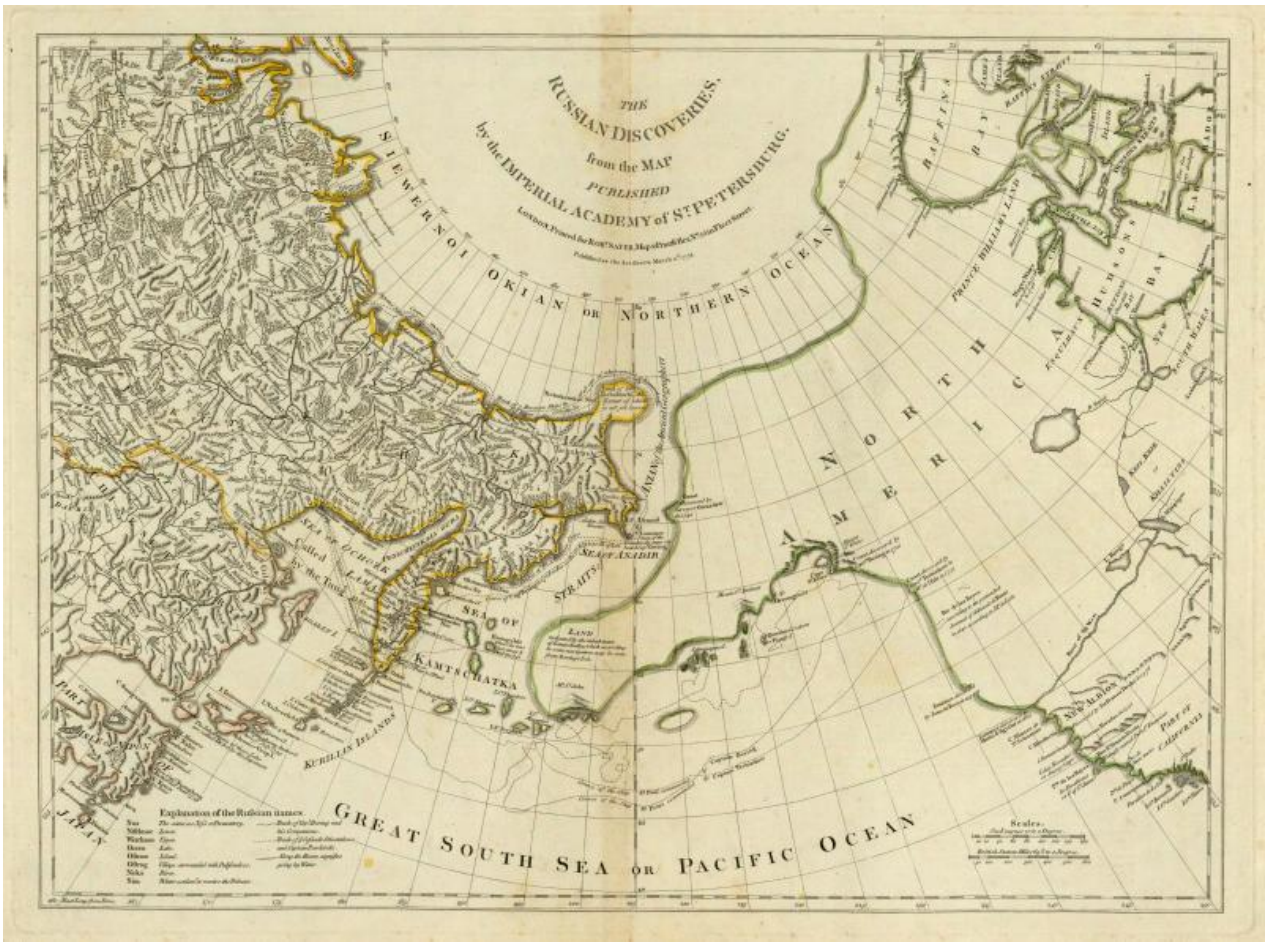
- http://www.gov.mb.ca/rearview/thanadelthur/images/4h1.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

On second Kamchatka expedition, Bering passes between two continents

1733 - 1743

Vitus Jonassen Bering, explorer and officer in the Russian Navy, traveled from the Kamchatka Peninsula and passed between two continents via the strait that would later bear his name.



Thomas Jefferys, Robert Sayer, and Gerard Fridrikh Miller, *The Russian discoveries from the map published by the Imperial Academy of St. Petersburg,* London: American Atlas, 1776.

Public domain. Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Jefferys_-_The_Russian_Discoveries.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:52:08

Middleton expedition begins

1742

Thanks to Arthur Dobbs' pressure on the English government, Christopher Middleton obtained ships to depart from Port Churchill in late June 1742. He discovered and entered what is now known as Wager Bay, concluding that it was indeed a closed bay and did not lead to the Northwest Passage. After leaving Wager Bay, Middleton headed north into Roes Welcome Sound, where ice made it impossible to enter Foxe Basin. An investigation of Repulse Bay left the captain convinced that there was no westward route to the Pacific. He set sail for England, where Dobbs refused to accept this analysis, initiating a long dispute.

Christopher Middleton and Richard William Seale, *To the King this Chart of Hudson's Bay & Straits, Baffin's Bay, Strait Davis & Labrador Coast & c.: is Most Humbly Dedicated & Presented by His Majesty's Most Obedient & Faithful Subject & Servant C. Middleton*, London: C. Middleton, 1743.

Source: Schwartz, Seymour I. *The Mismapping of America,* figure 34. Rochester NY: Boydell & Brewer Ltd., 2008; Cumming, William. P. et al. *Exploration of North America, 1630-1776*, p.188. New York: HarperCollins, 1971. Image and description courtesy of Barry Lawrence Ruderman Antique Maps Inc .

Websites linked in image captions:

- http://tinyurl.com/zelgv6y

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

An Account of a Voyage for the Discovery of a North-West Passage

1744

Arthur Dobbs published this pamphlet to prove the existence of the Passage.

AN
ACCOUNT
OF THE
HUDSON's BAY,
IN THE
NORTHWEST PART of *AMERICA.*
CONTAINING

LONDON:

Arthur Dobbs and Joseph La France, *An account of the countries adjoining to Hudson's Bay, in the north-west part of America containing a description of their lakes and rivers, the nature of the soil and climates, and their methods of commerce, &c. ... with an abstract of Captain Middleton's journal and observations upon his behaviour during his voyage and since his return ... the whole intended to shew the great probability of a north-west passage, so long desired, and which (if discovered) would be the highest advantage to these kingdoms,*

London: Printed for J. Robinson, 1744.
Click here to read the full text.

Websites linked in image captions:

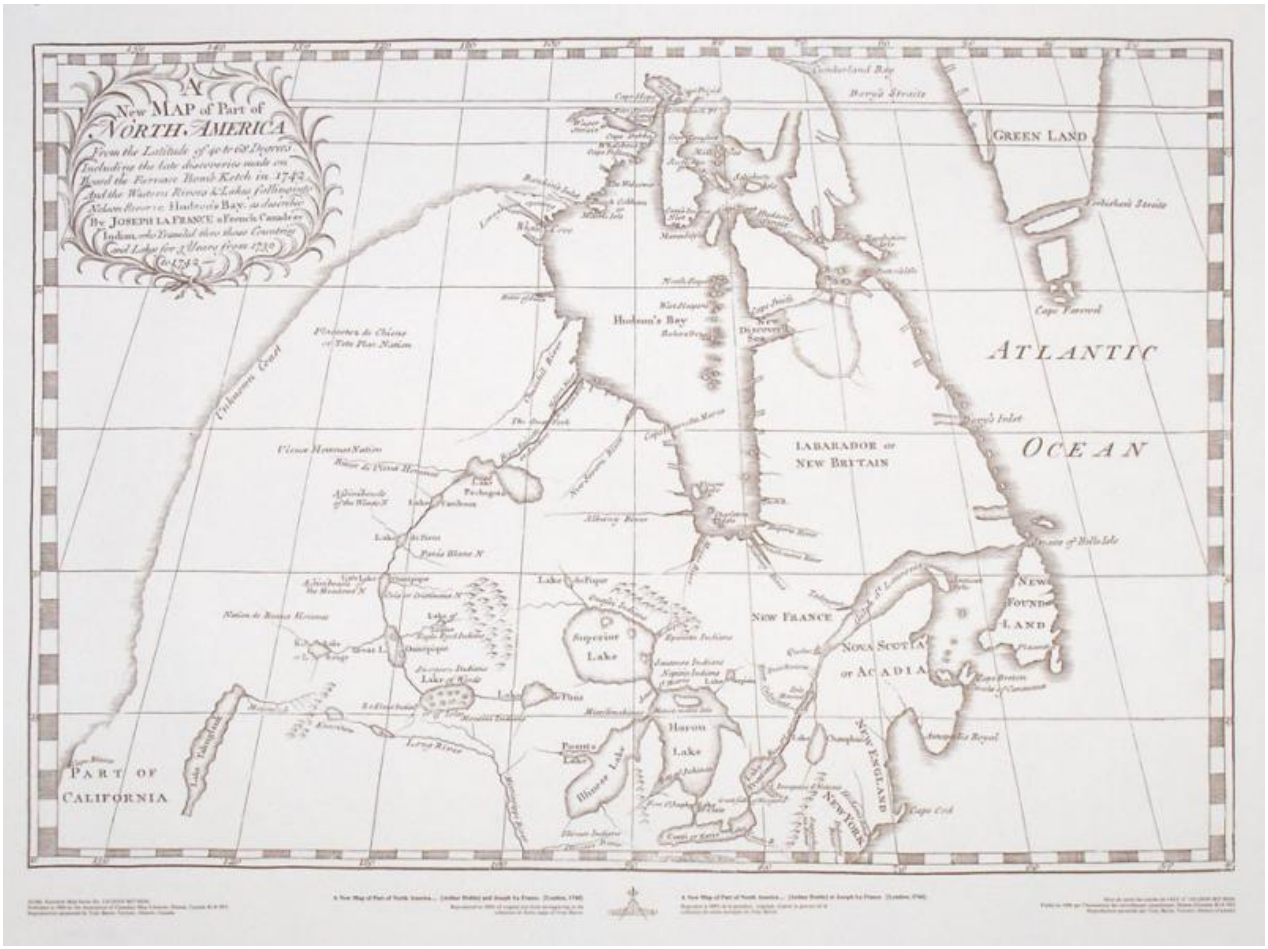
- https://archive.org/stream/cihm_35075

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Dobbs and La France's *A New Map of Part of North America*

1744

This new map of a part of North America was produced by Arthur Dobbs and Joseph La France, a Metis fur trader, who traveled these regions from 1739 to 1742.



Arthur Dobbs and Joseph La France, *A new map of part of North America: from the latitude of 40 to 68 degrees : including the late discoveries made on board the Furnace Bomb ketch in 1742: and the western rivers & lakes falling into Nelson River in Hudson's Bay: as described by Joseph La France a French Canadese Indian, who traveled thro those countries and lakes for 3 years from 1739 to 1742,* Ottawa: Association of Canadian Map Libraries, 1986.

Courtesy of the ACMLA Map Collection.

Click here to view source.

Websites linked in image captions:

- http://www.acmla-acacc.ca/maps/110.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:52:13

Carver's *New Map of North America* shows a "River of the West"

1766

Jonathan Carver, a settler-colonialist and writer, explored several northern tributaries of the Mississippi, attempting to find a river passage to the west coast. His map of North America shows a “River of the West,” promoting the misconception that the Pacific could be reached directly from the Mississippi River.

Jonathan Carver, *A New Map of North America, From the Latest Discoveries 1778. Travels Through the Interior Parts of North America*, 1781.

Public domain. Courtesy of the Library of Congress, Geography and Map Division.

Click here to view source.

Websites linked in image captions:

- https://www.loc.gov/item/74693082

Baldassarri, Elena. “The Northwest Passage: Myth, Environment, and Resources.” Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:52:31

Samuel Hearne chisels his name into a rock

1767

During the 32 months of his expedition, Samuel Hearne walked from Hudson Bay to the Arctic Ocean and back without crossing or seeing any body of water that might form part of the Passage. He concluded that if the Passage existed, it must lie much further north.

Samuel Hearne's signature cut into rock, Churchill, MB.
Photograph by John M. Kinnaird, 1928-1936.

CC BY-NC-SA. Courtesy of McCord Museum.

Click here to view source.

Websites linked in image captions:

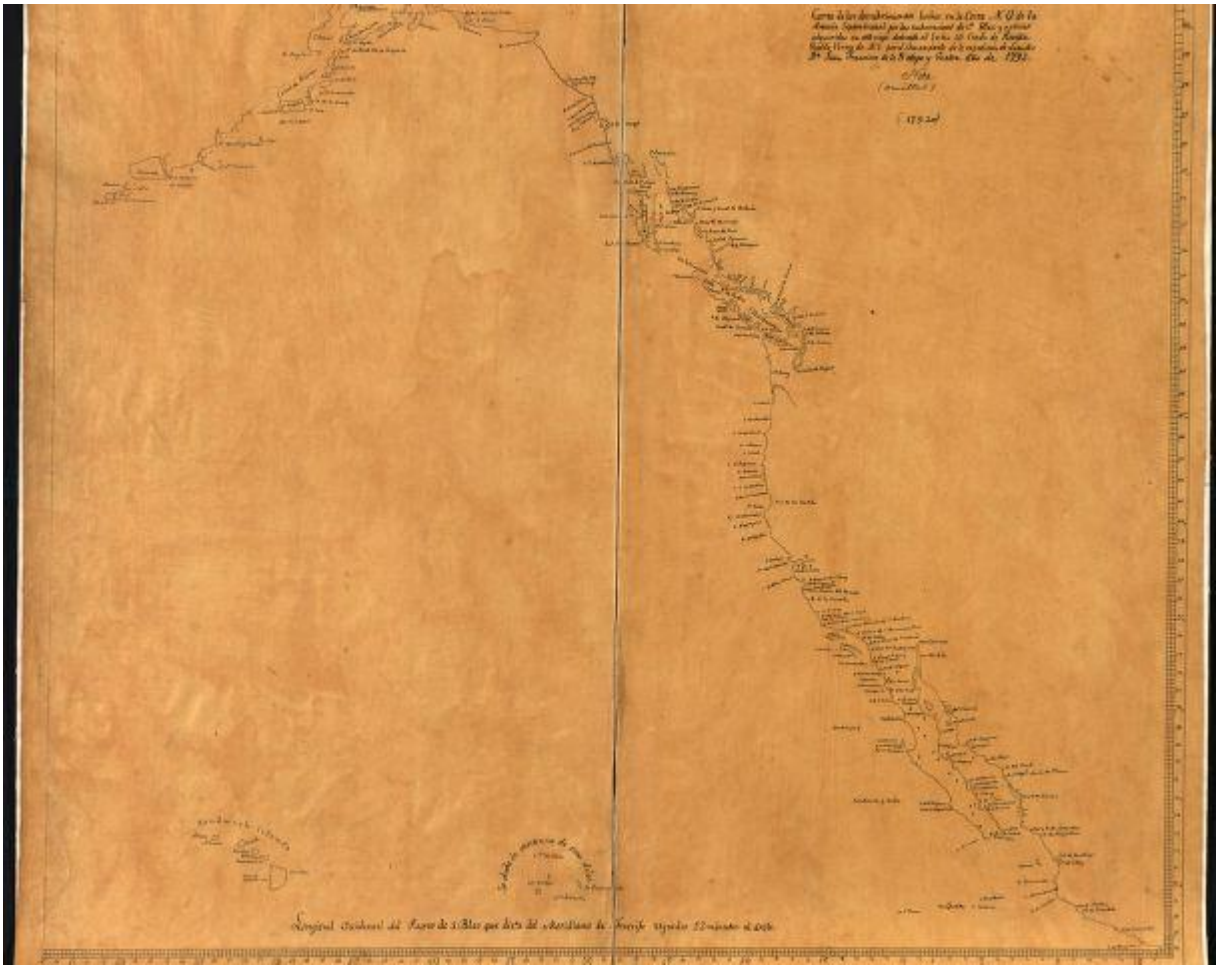
- http://www.mccord-museum.qc.ca/scripts/viewobject.php?Lang=1&section=false&accessnumber=MP-1986.71.184&imageID=251703&pageMulti=1

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

J. F. de la Bodega y Quadra explores Pacific Northwest

1775

One of the last Spanish explorers, Juan Francisco de la Bodega y Quadra explored the North American Pacific Northwest. He was ordered to go ashore and explore the coast so that the newly discovered territories would be recognized as Spanish lands. His expedition confirmed no major presence of Russian colonies in the region and produced, for the first time, a reasonably accurate map of the west coast of North America.



Juan Francisco de la Bodega y Quadra, *Carta de los descrubrimientos hechos en la costa N.O. de la America Septentrional, 1792.*

Courtesy of the Library of Congress.

Click here to view source.

Websites linked in image captions:

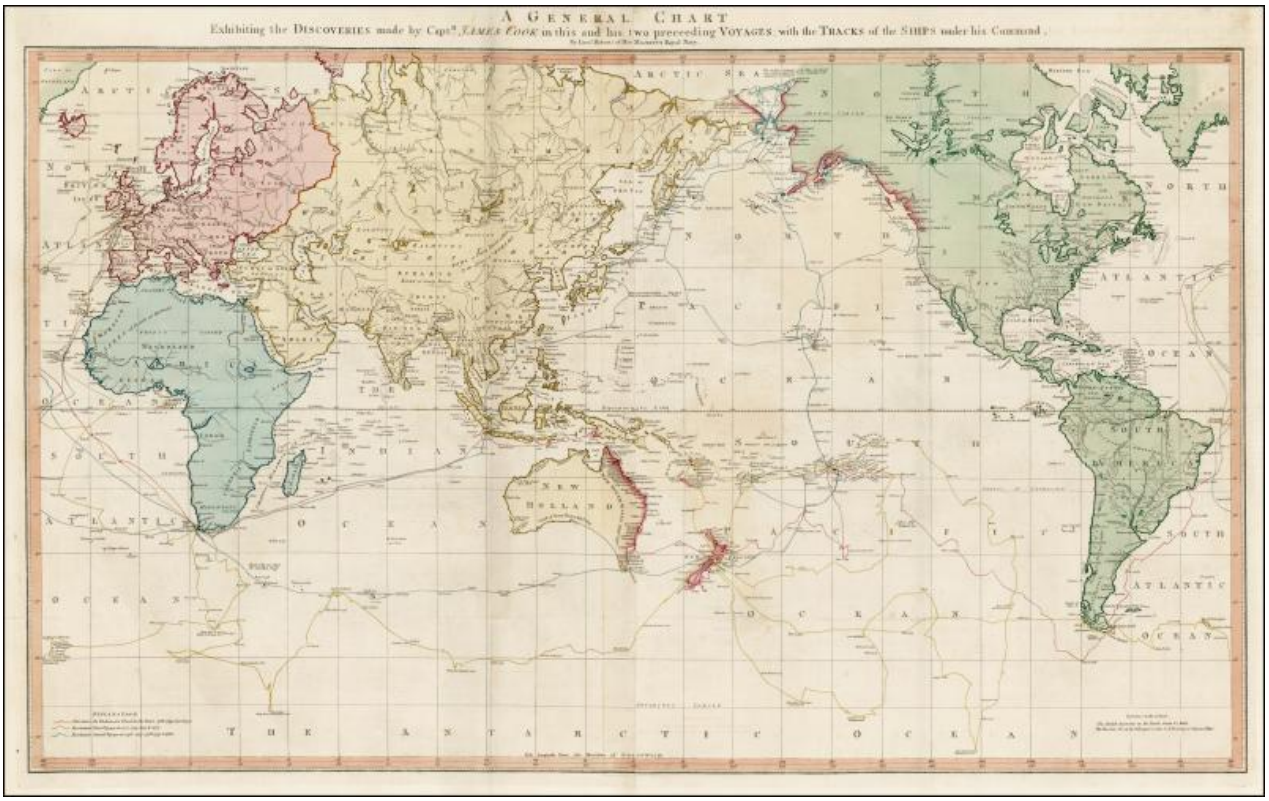
- https://www.loc.gov/item/99446215/#rights-and-access

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

James Cook and Charles Clerke

1778

Although he was fully aware that the finding of a Passage would be strategically useful to Britain, James Cook's Pacific voyage was scientific in purpose. From March to June 1778, Cook sailed northwest from New Albion in the Alaskan Peninsula to latitude 61°30' and through the Bering Strait. Cook was murdered in Hawaii on Valentine's Day 1779. Captain Charles Clerke took command of the ships and returned to the Arctic to continue the search for the Passage.



Map of the world using Mercator's projection, identifying the routes of Captain James Cook's voyages aboard the *Endeavor* (1768-1771) and *Resolution* (1772-1780) and Russian explorations in the North Pacific. Drawn by Lt. Henry Roberts, who accompanied Cook on his voyages, the map provides a detailed, large format account of Cook's three expeditions, including dates and the many places where Cook landed during his 12 years at sea.

A General Chart Exhibiting the Discoveries made by Captn. James Cook in this and his two preceeding Voyages; with the Tracks of the Ships under his Command. By Lieut. Roberts of His Majesty's Royal Navy. Image and description provided by Barry Lawrence Ruderman Antique Maps Inc . Used with permission.

Websites linked in image captions:

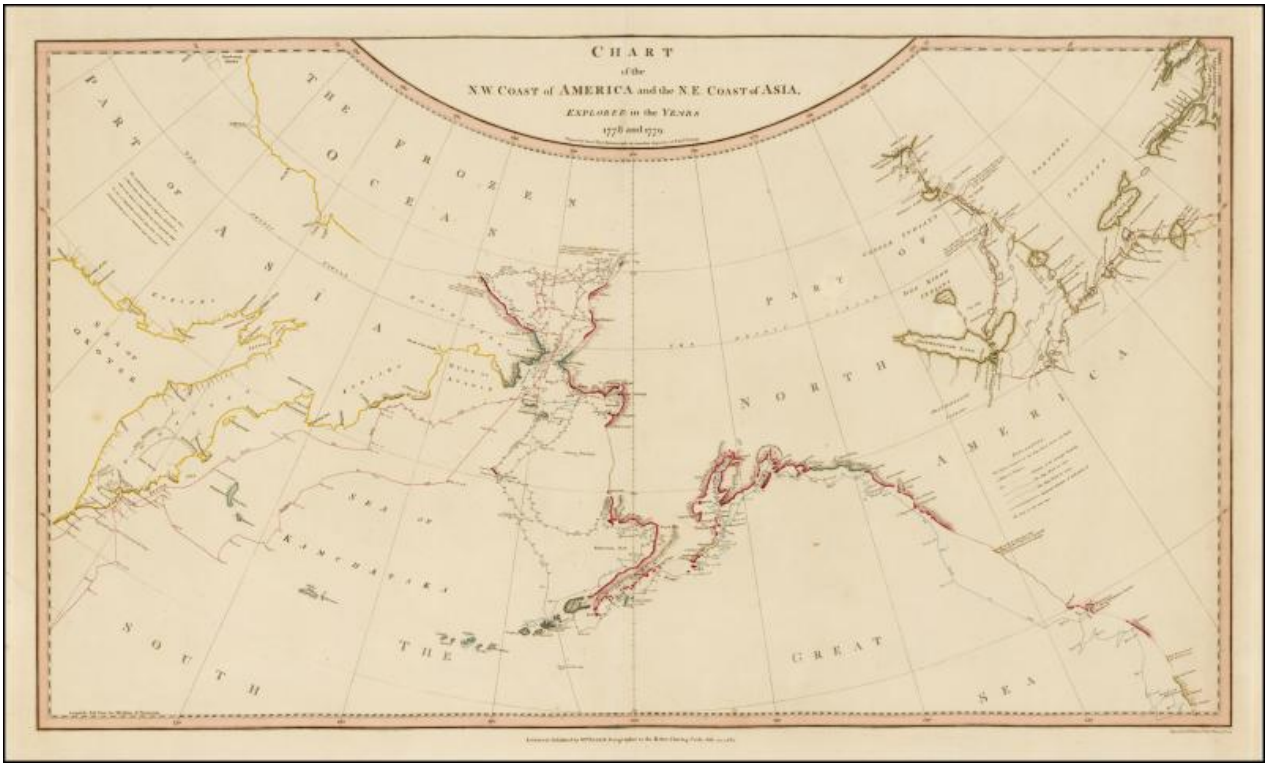
- http://tinyurl.com/zelgv6y

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The legendary lost chart of Captain James Cook

1778 - 1779

The chart indicates known and unknown regions along the Northern Pacific coastlines of America and Asia, illustrating James Cook's routes in 1778 and 1779 in red and blue. The areas of British, Russian, and Spanish discoveries are coded in red (British), blue (Russian), and yellow (Spanish). This extraordinary map was prepared by Cook's primary cartographic assistant on his third voyage, Lieutenant Henry Roberts.



Henry Roberts, *Chart of the N.W. Coast of America and the N.E. Coast of Asia [...] prepared by Henry Roberts under the immediate Inspection of Capt Cook [...],* 1784. Known as the "Legendary Lost Chart of Captain James Cook."

Websites linked in image captions:

- http://tinyurl.com/zelgv6y

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Bodega y Quadra's second voyage, claiming Pacific Northwest for Spain

1779

In contrast to the previous mission, this time the goal was to explore the northwest coast, and not to interact with the English navigators assumed to be operating there. The mission charted every bay and inlet in search of the Northwest Passage, going north to 58°30′ before turning back from Alaska because of bad weather. The mission completed the complex process of claiming the Pacific Northwest for Spain. The expedition anchored in Port Etches, near Prince William Sound. The harbor was given the name "Puerto de Santiago" on 23 July 1779. The name of the harbor was important for years afterwards, as it formed the basis of Spain's claim to sovereignty in the North Pacific up to 61°17′ N.

Portrait of Captain Juan Francisco de la Bodega y Quadra, Marina real, ca. 1785. Artist unknown.

Public domain. Courtesy of Museo Naval de Madrid.

Click here to view source.

Websites linked in image captions:

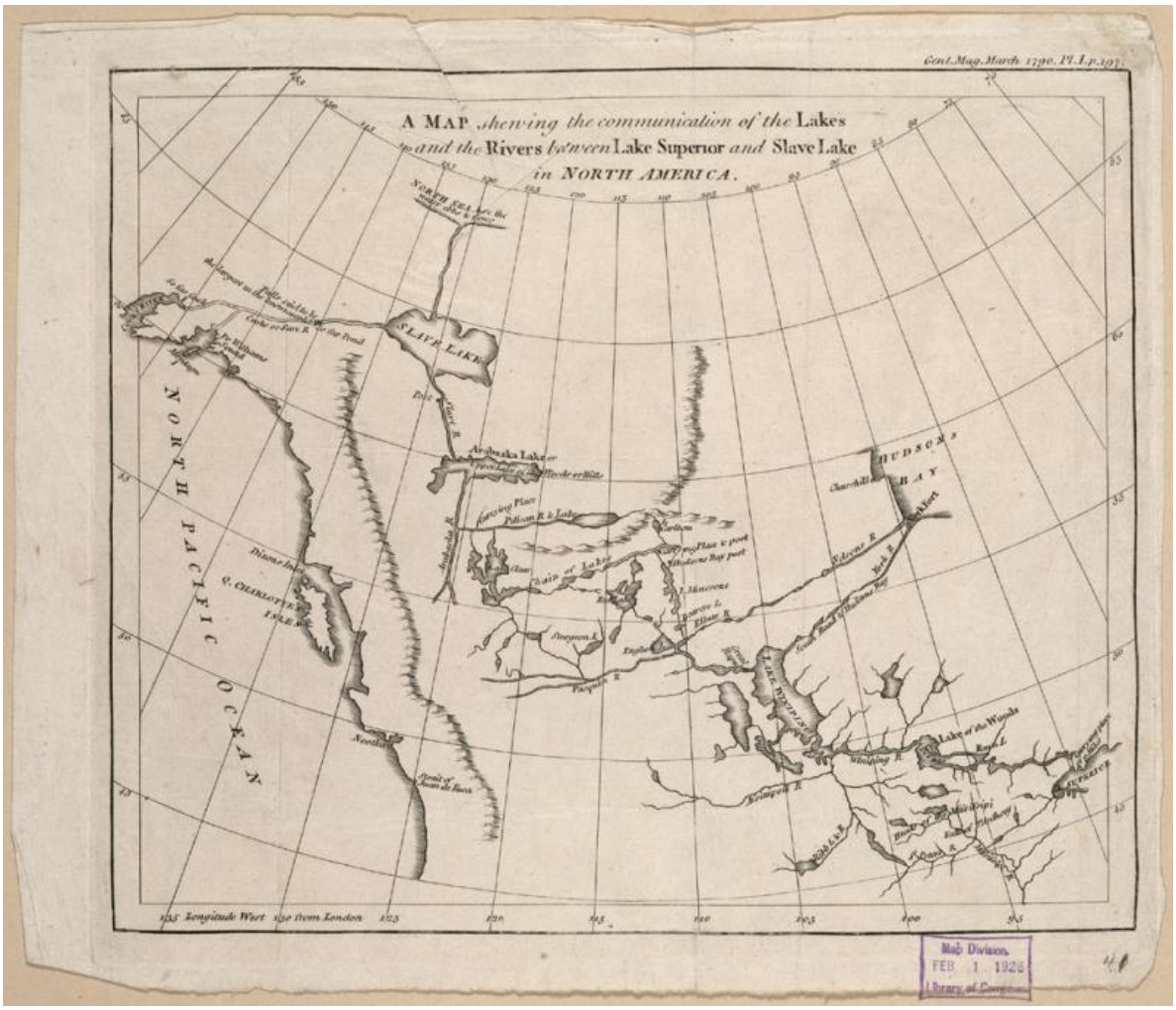
- https://commons.wikimedia.org/wiki/File:Juan_Francisco_de_la_Bodega_y_Quadra.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Peter Pond produces first comprehensive map of the Canadian northwest

1785

Peter Pond, a soldier, fur trader, explorer, and cartographer, produced the first comprehensive map of the Canadian Northwest, it was submitted to the United States Congress in 1785.



Peter Pond, *A map shewing the communication of the lakes and the rivers between Lake Superior and Slave Lake in North America,* 1790.

Public domain. Courtesy of the Library of Congress, Geography and Map Division.

Click here to view source.

Websites linked in image captions:

- https://www.loc.gov/item/2004629167

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:53:27

Alexander Mackenzie's expedition to the Arctic Ocean

1789

Alexander Mackenzie departed from the Athabasca region and settled at Fort Chipewyan on Lake Athabasca, reaching the Arctic Ocean in 1789. After crossing Great Slave Lake, the expedition followed the river to its mouth in the Arctic Ocean, returning the same way. The river today bears Mackenzie's name. His voyage of over 3,000 miles was accomplished in only 102 days, but it did not reach the Pacific as hoped.

Thomas Lawrence, Portrait of Alexander MacKenzie, c. 1800.

Public domain. Courtesy of National Gallery of Canada.

Click here to view source.

Websites linked in image captions:

- https://en.wikipedia.org/wiki/Alexander_Mackenzie_(explorer)#mediaviewer/File:Alexander_MacKenzie_by_Thomas_Lawrence_(c.1800).jpg

George Vancouver charts the west coast of North America

1792 - 1794

George Vancouver reached the west coast of North America in 1792 and he was instructed to map all of the many channels and inlets on the west coast of Canada. Finding no navigable waterways at latitudes not hampered by ice, he concluded that if any passage did exist it must be much further north and, because of the polar ice, impractical.

George Vancouver, *A Chart Shewing Part of the Coast of NW America [...]. A Voyage of Discovery to the North Pacific Ocean, and Round the World,* 1798.

Websites linked in image captions:

- https://www.loc.gov/item/2003627084

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:53:29

Arrowsmith's highly accurate map of North America

1802

This map by Aaron Arrowsmith was one of the most accurate cartographic representations of western North America available at the beginning of the nineteenth century. Arrowsmith's sources included Indian maps, reports, manuscript maps from the British fur trade, and British Navy exploration reports and charts of the Pacific Coast.

Aaron Arrowsmith, *A map exhibiting all the new discoveries in the interior parts of North America inscribed by permission to the honourable governor and company of adventurers of England trading into Hudsons Bay in testimony of their liberal communications to their most obedient and very humble servant A. Arrowsmith, January 1st 1795,* Atlas to Thompson's Alcedo, or, Dictionary of America & West Indies, 1818.

Public domain. Courtesy of the Library of Congress, Geography and Map Division.

Click here to view source.

Websites linked in image captions:

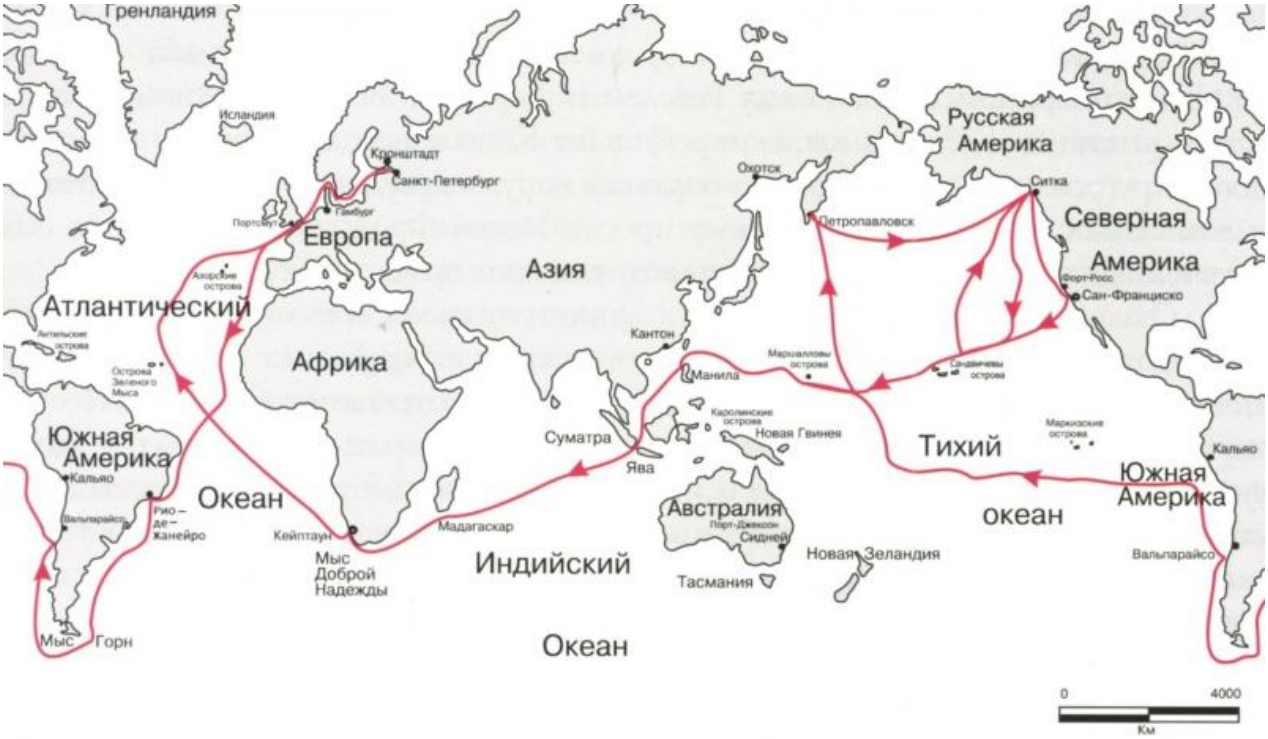
- https://www.loc.gov/item/2001620920

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:53:31

Otto von Kotzebue

1815 - 1818

Otto von Kotzebue explored the Bering Strait for Russia.



Map created by "pliskin," showing Kotzebue's voyages around the world, 2009.

CC BY-SA. Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Kozebuemap.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

John Ross encounters Inuit at Prince Regents Bay

1818

Captain John Ross's attempt to go north through the Davis Strait and Baffin Bay to find an open passage strengthened the British government's interest in the quest. At Prince Regent's Bay, an inlet in Baffin Bay, Ross and his crew exchanged gifts with local Inuit. John Sackheouse, the native interpreter for the expedition, illustrated the encounter. Ross explored Baffin Bay, concluding that it could form no part of the Passage. His decision to turn back was controversial.

John Sackhouse, *First communication with the Natives of Prince Regents Bay, as Drawn by John Sackhouse and presented to Capt. Ross, Augt 10, 1818.*

Courtesy of Princeton University Library.

Click here to view source.

Websites linked in image captions:

- http://libweb5.princeton.edu/visual_materials/maps/websites/northwest-passage/ross1-3.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

John Barrow maps arctic regions

1818

John Barrow, an English statesman and writer, produced this map showing the the Arctic regions.

John Barrow, *A Chronological History of Voyages into the Arctic Regions Undertaken Chiefly for the Purpose of Discovering a North-East, North-West, or Polar Passage Between the Atlantic and Pacific*, London: J. Murray, 1818. Click here to read the text.

Public domain. Courtesy of MBLWHOI Library.

Click here to view source.

Websites linked in image captions:

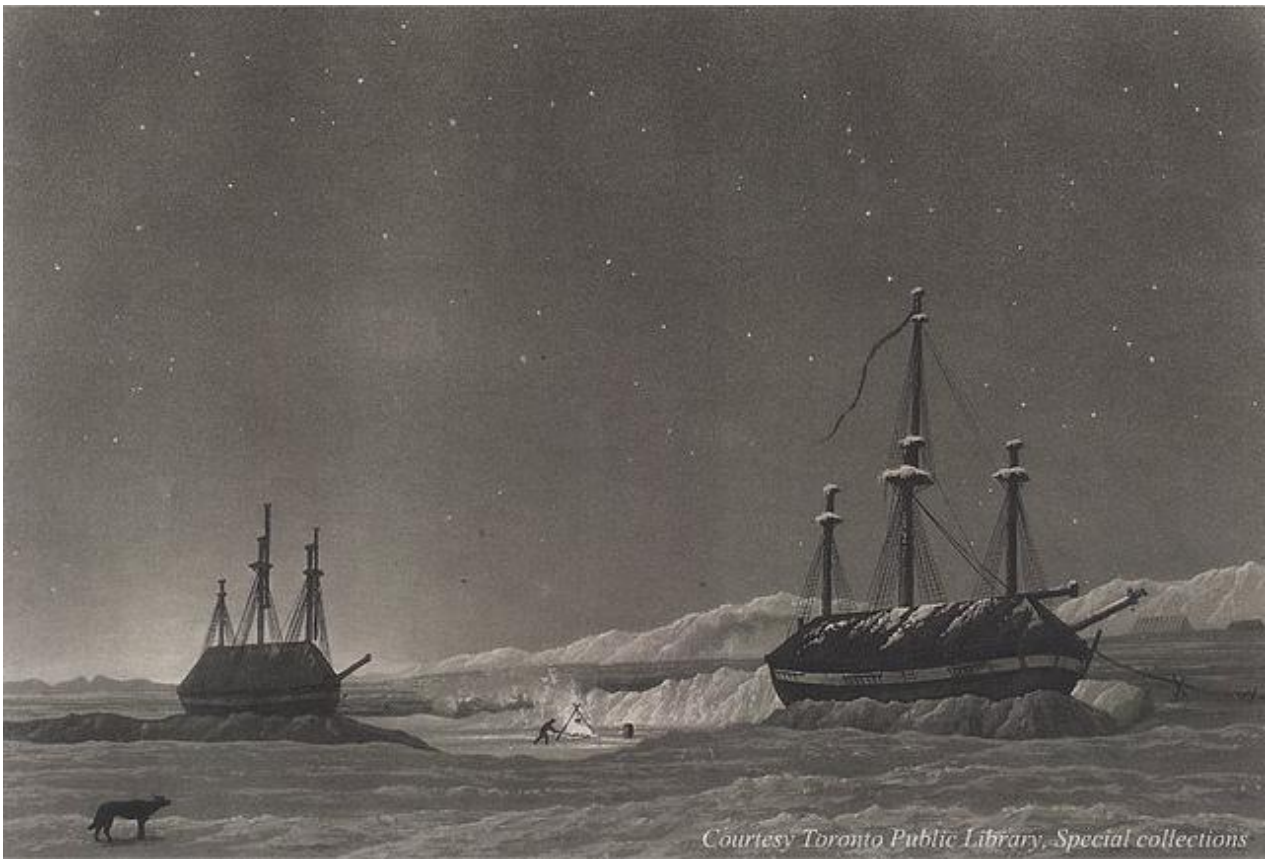
- http://tinyurl.com/jem5lyp
- http://tinyurl.com/huq8ffs

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 11:53:33

William Edward Parry's first voyage

1819 - 1820

William Edward Parry progressed to Baffin Bay and entered Lancaster Sound with high hopes. He sailed past the mountains that John Ross had believed enclosed an inlet, and he investigated and named the Prince Regent Inlet, which he found blocked by ice. He then advanced through Barrow Strait to Melville Island, first crossing a longitude of 110° west. When the sea froze, Parry's crew wintered on the south coast of Melville Island for ten months. The expedition established the existence of a westward route through Lancaster Sound. It mapped the numerous islands around which the Northwest Passage would have to be navigated and demonstrated that, with sufficient provisions, a ship and crew could successfully winter above the Arctic Circle.



Lieutenant Beechy, *H.M Ships Heda & Griper in Winter Harbour*, 1821.

Public domain. Courtesy of the Toronto Public Library, Special Collections.

Click here to view source.

Websites linked in image captions:

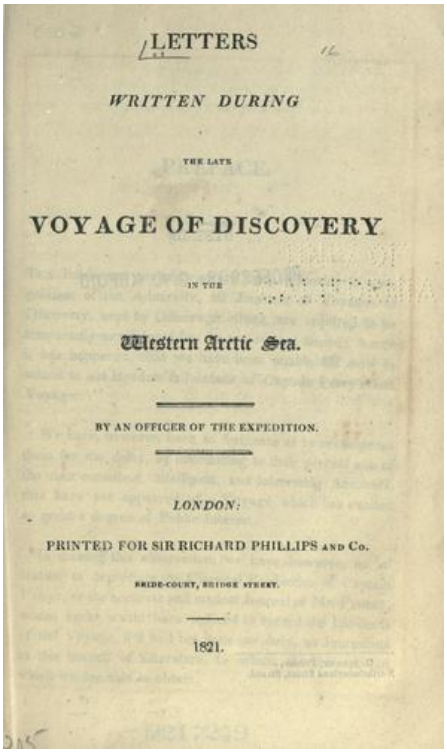
- https://www.flickr.com/photos/43021516@N06/5448891228/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Other narratives of the Parry expedition

1821

In subsequent years certain books appeared that took information from William Edward Parry's narrative, perhaps plagiarising it. Some publishers issued a number of such miscellaneous voyages by subscription, and engaged writers to compile these from any possible source.


LETTERS

WRITTEN DURING

THE LATE

VOYAGE OF DISCOVERY

IN THE

Western Arctic Sea.

BY AN OFFICER OF THE EXPEDITION.

LONDON:

PRINTED FOR SIR RICHARD PHILLIPS AND Co.

BRIDE-COURT, BRIDGE STREET.

1821.

Vilhjalmur Stefansson, *Letters Written during the Late Voyage of Discovery in the Western Arctic Sea*, London: Printed for Sir Richard Phillips, 1821.

Public domain. Courtesy of University of Alberta Libraries.

Click here to view source.

John Franklin's first voyage

1821 - 1822

John Franklin started an expedition to explore the coast of the Arctic Ocean eastwards, starting at the Coppermine River. He recruited native guides and hunters, but poor organization led to starvation and ten men died.

John Franklin. *Narrative of a Journey to the Shores of the Polar Sea, in the Years 1819, 20, 21, and 22 ... with an Appendix on Various Subjects Relating to Science and Natural History.* London, 1823.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Franklin_expedition1-02.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

William Edward Parry's second voyage

1821 - 1823

During his second voyage, William Edward Parry followed a more southerly route, investigating Repulse Bay and sailing along the coast of the Melville Peninsula to see if any bays and inlets might yield a passage west. This endeavor was unsuccessful. In October the sea iced over and the expedition was trapped at "Winter Island" for nine months. Having learned from previous experience, on this voyage Parry was able to improve living conditions, reducing humidity in the cabins and replacing sailors' cots with hammocks for better air circulation. Aware of the importance of maintaining morale in the dark of the northern winter, he organized the Royal Arctic Theatre, put on a play, and set up classes for the sailors to learn to read and write.

George Francis Lyon, *Eskimaux [sic] Children Dancing, Igloolik, 1823.* In Lyon, G. F. *The Private Journal of Captain G. F. Lyon of H.M.S. Hecla during the Recent Voyage of Discovery under Captain Parry.* London: J. Murray, 1824.

Public domain. Courtesy Library and Archives Canada.

Click here to view source.

Websites linked in image captions:

- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=2837883

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Inuit woman Iligliuk draws map of coastline

1822

An Inuit woman by the name of Iligliuk was asked to chart the coastline in present-day Canada. The map includes elements such as locations, topography, and routes which the Inuit take commonly.

Eskimaux Chart drawn by Iligliuk at Winter Island, 1822. In William Edward Parry, *Journal of a second voyage for the discovery of a north-west passage from the Atlantic to the Pacific performed in the years 1821-22-23, in His Majesty's ships Fury and Hecla, under the orders of Captain William Edward Parry, R. N., F. R. S., and commander of the expedition,* London: J. Murray, 1824.

Public domain. Courtesy of National Library of Canada.

Click here to view source.

Websites linked in image captions:

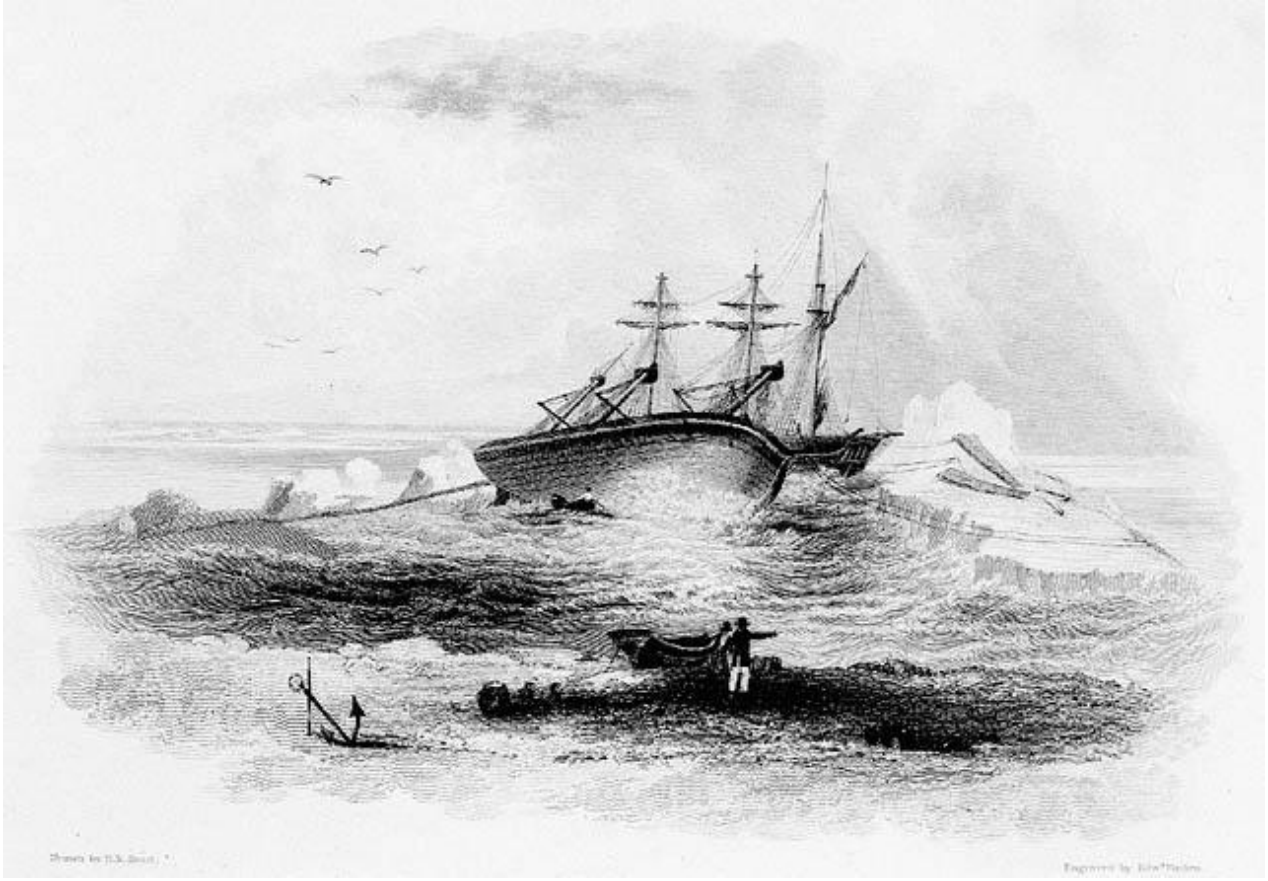
- http://www.collectionscanada.gc.ca/obj/h24/f1/nlc001128-v6.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

William Edward Parry's third voyage

1824 - 1825

William Edward Parry renewed his efforts to find a passage through Prince Regent Inlet. Ice in Baffin Bay blocked the expedition at Lancaster Sound. The crew was forced to winter in Prince Regent Inlet. Nine months later, while searching for openings on the west side, one of the ships, the *Fury*, was damaged and forced aground by ice. Unable to repair the vessel, Parry abandoned and sank it, obliging his return to England.



Horatio Nelson Head, *Heaving Down the Fury*. 18 August 1825.

Public domain. National Library of Canada.

Click here to view source.

Websites linked in image captions:

• http://collectionscanada.gc.ca/ourl/res.php?url_ver=Z39.88-2004&url_tim=2014-07-10T13%3A25%3A13Z&url_ctx_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Actx&rft_dat=2952753&rfr_id=info%3Asid%2Fcollectionscanada.gc.ca%3Apam&lang=eng

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

George Francis Lyon's voyage

1824 - 1825

George Francis Lyon commanded the HMS *Griper* on an unsuccessful expedition. The goal was to sail to Hudson Bay, head north through Roes Welcome Sound to Repulse Bay, and then travel overland to Point Turnagain on the Kent Peninsula. Lyon had difficulty navigating the craft and returned to England. He described an encounter with a man from Southampton Island who paddled not in a kayak but on a raft made of three inflated walrus skins.

Inuit man (Sadlermiut?) paddling an inflated walrus-skin boat (Northwest Territories). The Sadlermiut died of dysentery, introduced by a whaling ship, in 1902-1903. In Lyon, G. F. *A brief narrative of an unsuccessful attempt to reach Repulse Bay, through Sir Thomas Rowe's "Welcome", in His Majesty's ship Griper, in the year MDCCCXXIV,* London: J. Murray, 1825.

Public domain. Courtesy of Library and Archives Canada.

Click here to view source.

Websites linked in image captions:

- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=2838071

John Franklin's second expedition

1825 - 1827

John Franklin and John Richardson's second expedition was better planned and supplied. They reached the North American coast at the mouth of the Mackenzie River: Franklin attempted to go west to meet Captain Beechey, who was in command of the *Blossom*, at Icy Cape; Richardson headed east, reaching the mouth of the Coppermine River. Franklin travelled beyond Icy Cape to Point Barrow but failed to reach the *Blossom*. Nevertheless, together Franklin and Richardson charted over 1,000 miles of the North American coast.

Map shewing the discoveries made by British Officers in the Arctic Regions from the years 1818 to 1826. A basic map of the Northwest coast of America, Canada and Greenland, extending to Baffin Bay and the North Georgian Islands, illustrating British discoveries in the Arctic. The map accompanied the first edition of Franklin's narrative of his second expedition to the Arctic, with his route from Lake Superior and Fort William to the Arctic Sea noted in red. It includes interesting details of northwestern US and Canada, including a good snapshot of the upper Missouri, Columbia, and Fraser (unnamed) River regions, along with details along Franklin's route. The map represents an important milestone in the exploration of the region and pursuit of the Northwest Passage.

Image and description courtesy of Barry Lawrence Ruderman Antique Maps Inc .

Click here to view source. This work is used by permission of the copyright holder.

Websites linked in image captions:

- http://tinyurl.com/zelgv6y
- http://www.raremaps.com/maps/large/12106.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Frederick William Beechey encounters Inupiat at Kotzebue Sound

1825 - 1828

Frederick William Beechey commanded the HMS *Blossom* and explored the Bering Strait from the east. In 1826, he reached 71°23'31" N and 156°21'30" W, and named it Point Barrow. He reached Kotzebue Sound, where he encountered native Inupiat, who came out to trade in their umiaks (which Beechey calls "baidars").

Inupiat of Kotzebue Sound, wishing to trade, and approaching the Blossom in two umiaks. In: Frederick William Beechey, *Narrative of a Voyage to the Pacific and Beering's Strait, to Co-operate With the Polar Expeditions: Performed in His Majesty's Ship Blossom, under the Command of Captain F.W. Beechey ... in the Years 1825, 26, 27, 28*, v. 02. [S.l.]. London, H. Colburn and R. Bentley, 1831. Click here to read the text.

Public domain. Courtesy of MBLWHOI Library.

Websites linked in image captions:

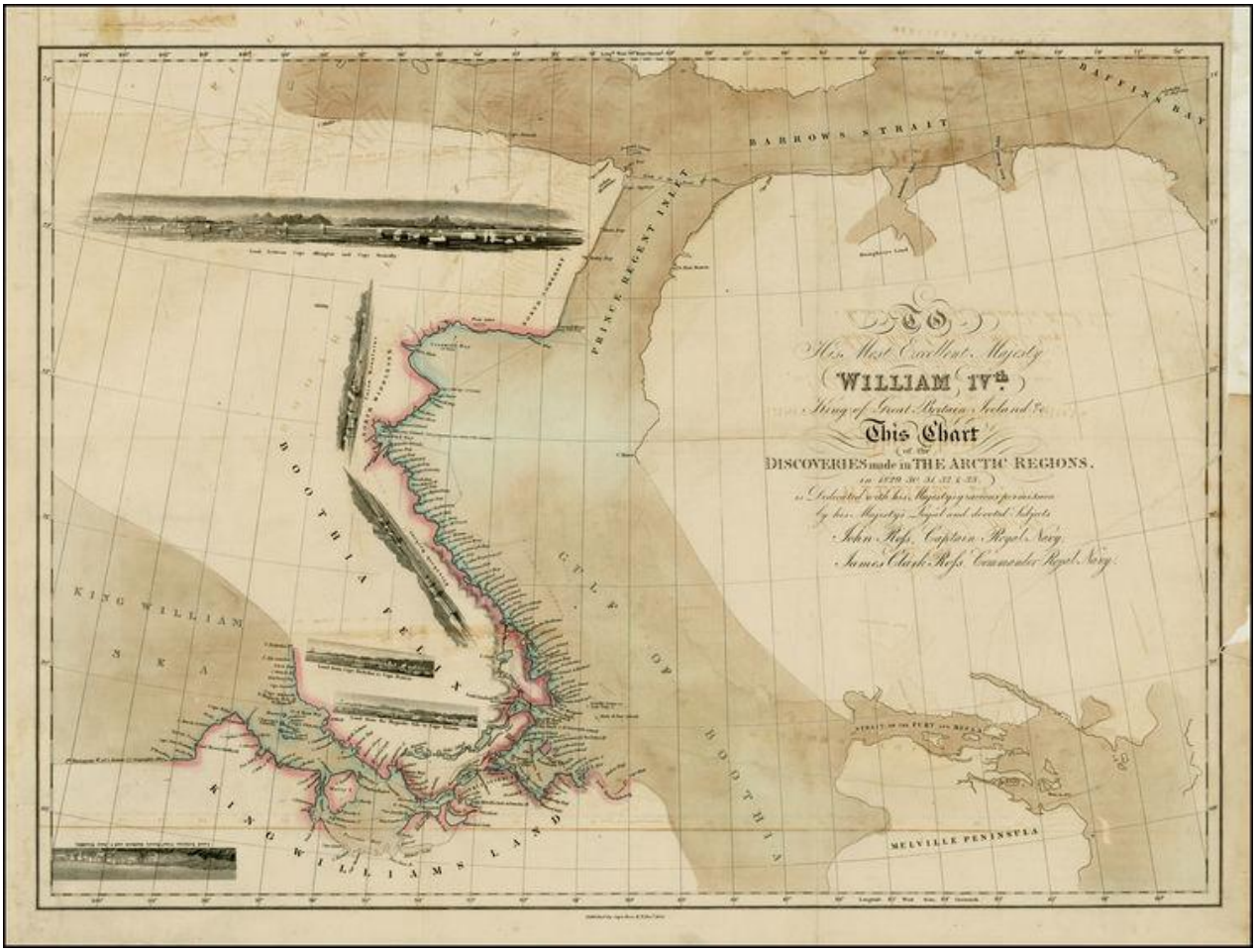
- https://archive.org/details/narrativeofvoyag01beec

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 12:18:01

John Ross travels Gulf of Boothia

1829 - 1833

John Ross convinced a London gin merchant, Felix Booth, to finance a private venture. In 1829, Ross and his nephew, James Clark Ross, managed to travel far down the Gulf of Boothia and wintered at Felix Harbour. However, in the summer they were unable to move, so they spent three winters in the Gulf. Finally, Ross abandoned the ship and they took sleds up to Fury Beach, where they helped themselves to provisions and boats left by Parry. They spent another winter there before escaping via Lancaster Sound and being picked up by a whaler.



John Ross and James Clark Ross, *To His Most Excellent Majesty William IVth, King of Great Britain, Ireland, &c., this Chart of the Discoveries Made in the Arctic Regions in 1829, 30, 31, 32 & 33,* Philadelphia: E. L. Carey & A. Hart, 1835.

Image and description courtesy of Barry Lawrence Ruderman Antique Maps Inc.

Websites linked in image captions:

- http://tinyurl.com/zelgv6y

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Boothians

1829 - 1833

John Ross and the crew became quite interested in and friendly with the local Inuit; Ross called them "Boothians." Several of them drew a map of the region, which turned out to be quite accurate.

"North Hendon snow cottages," in John Ross and James Clark Ross, *Narrative of a Second Voyage in Search of a North-West Passage, and of a Residence in the Arctic Regions During the Years 1829, 1830, 1831, 1832, 1833,* 249-250, London: A. W. Webster, 1835. Click here to read the text.

Public domain. Courtesy of Library and Archives Canada.

Websites linked in image captions:

- http://www.archive.org/stream/cihm_42231

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Ross expedition discovers North Magnetic Pole

1 June 1831

Unlike the Geographical North Pole, the North Magnetic Pole moves over time due to magnetic changes in the Earth's core.

James Clark Ross planting the British standard on the true position of the magnetic pole, in Huish, Robert, *The last voyage of Capt. Sir John Ross, R.N. Knt. to the Arctic regions for the discovery of a north west passage; performed in the years 1829-30-31-32 and 33: to which is prefixed an abridgement of the former voyages of Captns. Ross, Parry, & other celebrated navigators to the northern latitudes: compiled from authentic information and original documents, transmitted by William Light, purser's steward to the expedition: illustrated by engravings from drawings taken on the spot, Saint John, N.B,* 1835.

Public domain. Courtesy of the Toronto Public Library.

Click here to view source.

Websites linked in image captions:

- https://flic.kr/p/9iqMUa

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Last sighting of John Franklin's *Erebus* and HMS *Terror*

1845

As explorations of the Arctic coastline made it seem that the final section of the Northwest Passage was close to being found, John Franklin attempted an exhibition with two ships, the *Erebus* and the *Terror,* departing in 1845. In late July 1845 a whaler in Baffin Bay sighted the expedition waiting for ice to clear in Lancaster Sound so that they could begin their journey to the Bering Strait. It was the last time any of the 129 crew members was seen alive.

Finetooth, Kennonv, U.S. Central Intelligence Agency, Map of the routes probably taken by the *Erebus* and *Terror* during Franklin's lost expedition.
Blue line: Disko Bay (5) to Beechey Island, in 1845.
Purple: Around Cornwallis Island (1), in 1845.
Red line: From Beechey Island down Peel Sound between Prince of Wales Island (2) and Somerset Island (3) and the Boothia Peninsula (4) to near King William Island in 1846.
Disko Bay (5) lies about 3,200 kilometers (2,000 mi) of the mouth of the MacKenzie River (6).

Websites linked in image captions:

- http://commons.wikimedia.org/wiki/File:Franklin's_lost_expedition_map.png

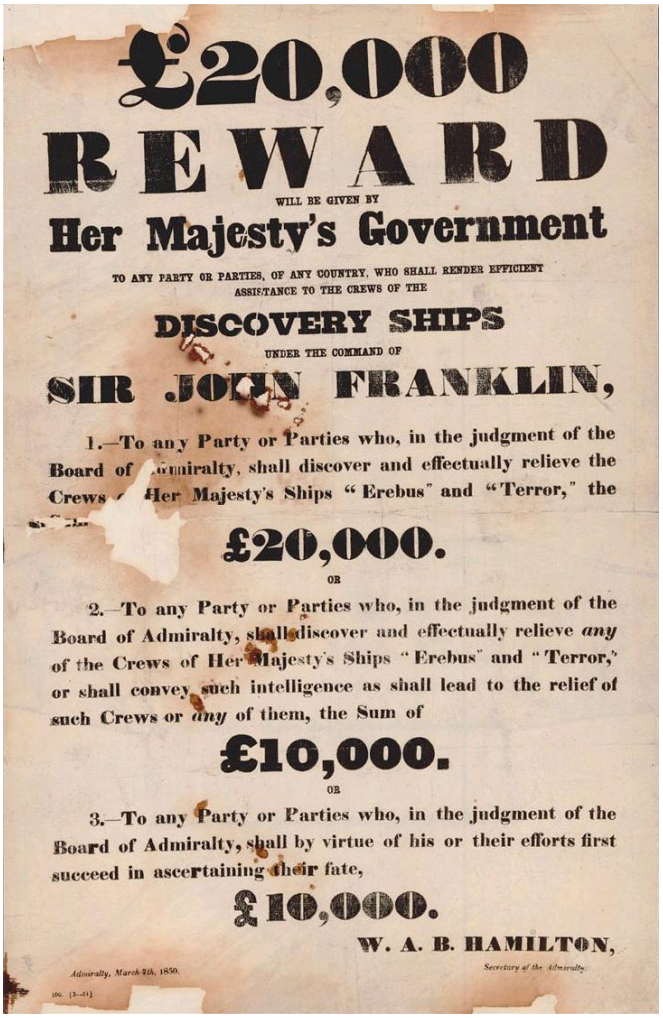
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

PDF created on: 19 May 2021 12:18:19

Search for Franklin

1847 - 1880

At least 30 expeditions searched for John Franklin without success; many perished in the attempt. It is likely that the men succumbed to a combination of hunger, scurvy, and tainted food, and resorted to cannibalism as their situation became desperate. Search efforts funded by his wife, Lady Jane, captured the public imagination.



£20,000

REWARD

WILL BE GIVEN BY

Her Majesty's Government

TO ANY PARTY OR PARTIES, OF ANY COUNTRY, WHO SHALL RENDER EFFICIENT ASSISTANCE TO THE CREWS OF THE

DISCOVERY SHIPS

UNDER THE COMMAND OF

SIR JOHN FRANKLIN,

1.—To any Party or Parties who, in the judgment of the Board of Admiralty, shall discover and effectually relieve the Crews of Her Majesty's Ships "Erebus" and "Terror," the

£20,000.

OR

2.—To any Party or Parties who, in the judgment of the Board of Admiralty, shall discover and effectually relieve *any* of the Crews of Her Majesty's Ships "Erebus" and "Terror," or shall convey such intelligence as shall lead to the relief of such Crews or *any* of them, the Sum of

£10,000.

OR

3.—To any Party or Parties who, in the judgment of the Board of Admiralty, shall by virtue of his or their efforts first succeed in ascertaining their fate,

£10,000.

W. A. B. HAMILTON,

Admiralty, March 7th, 1850.

Secretary of the Admiralty.

A poster offering a reward for anyone assisting, or ascertaining the fate of, Franklin's lost expedition. Issued 7 March 1850 by W. A. B. Hamilton, Secretary of the Admiralty.

Public domain. Courtesy of Library and Archives Canada. Click here to view source.

Websites linked in image captions:

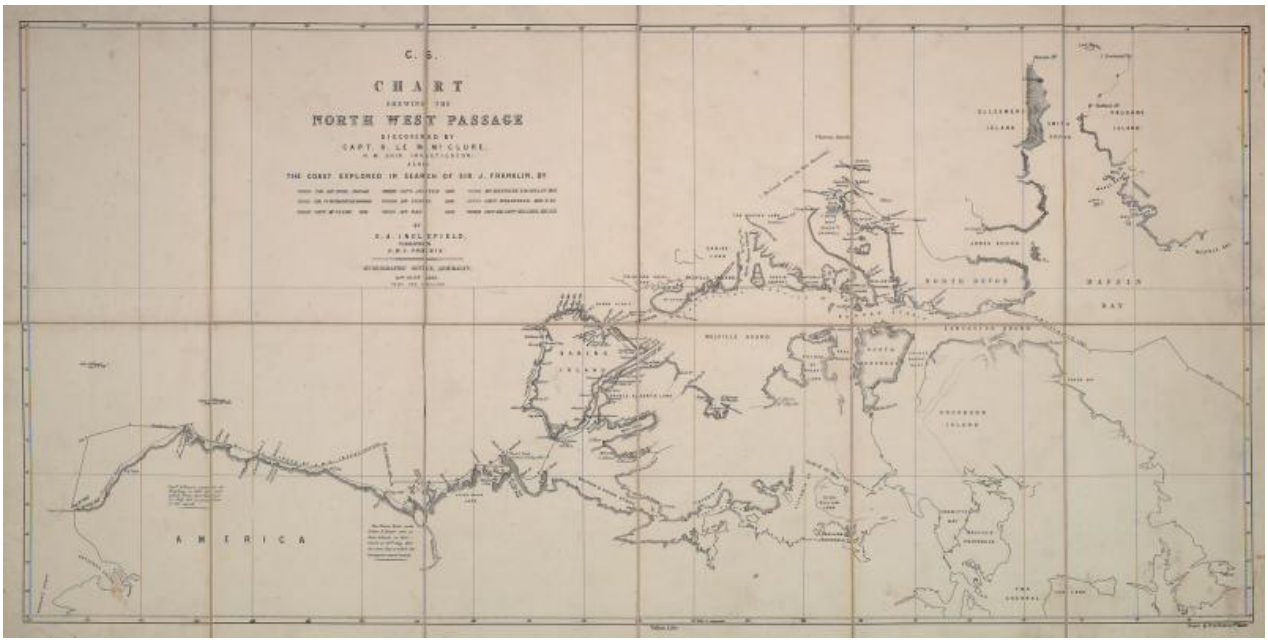
- https://commons.wikimedia.org/wiki/File:Reward_for_finding_Franklin_Expedition.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

McClure discovers unnavigable Passage

1850 - 1854

Robert John le Mesurier McClure discovered (and named) the Prince of Wales Strait, between Banks Island and Victoria Island, but was trapped by ice for the winter. During the winter McClure organized an overland expedition across Banks Island on the north coast. On 26 October 1850 he discovered the Northwest Passage. McClure's party could clearly see Melville Island and the frozen waters of Melville Sound, reached by Parry on his westward journey in 1820. Although the Northwest Passage had finally been found, it could not be sailed through. When the ice receded, he attempted to navigate the Passage but failed. McClure and his crew then spent a fourth winter (1853-54) in the Arctic when the *Resolute* itself became trapped in the ice. He returned to England only in September 1854.



Sir Edward Augustus Inglefield, with W. H. Fawekner (drawing), and Walker (lithograph), *Chart shewing the North West Passage discovered by Capt. R. Le M. McClure HM Ship Investigator also the coast explored in Search of Sir John Franklin,* London: Walker Litho, 1853.

Public domain. Courtesy of the Toronto Public Library. Click here to view source.

Websites linked in image captions:

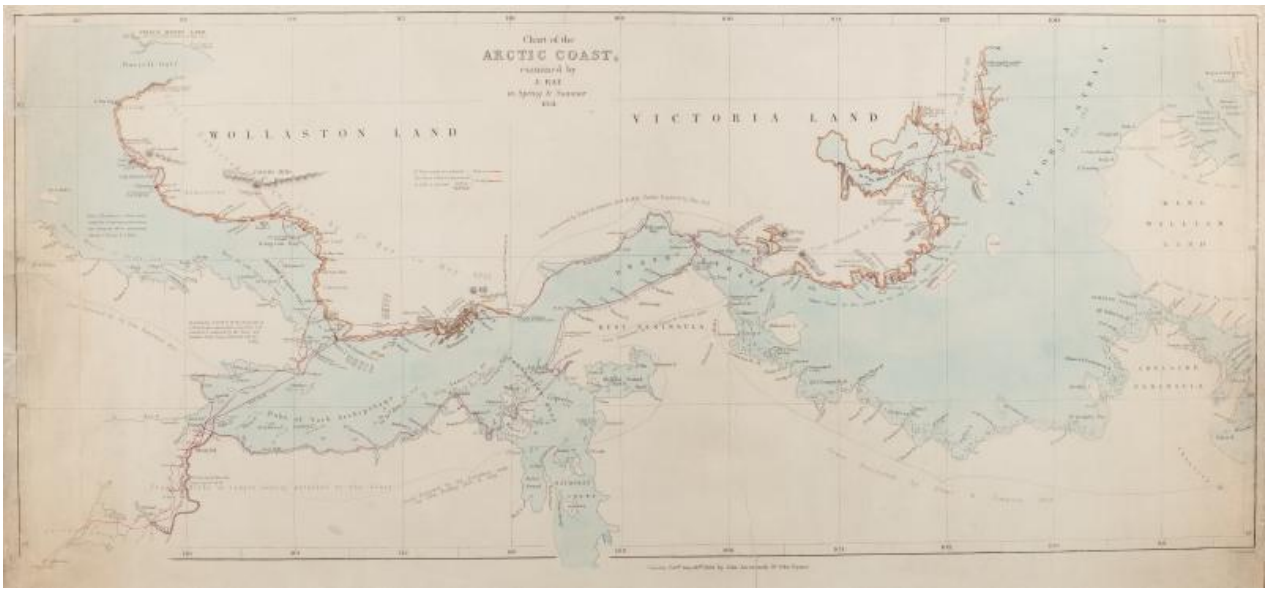
- http://www.torontopubliclibrary.ca/detail.jsp?Entt=RDMDC-912-71223I54FOLDFO&R=DC-912-71223I54FOLDFO

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

John Rae believes he discovered the last link in the Northwest Passage

1851

John Rae traveled to Repulse Bay and Roes Welcome Sound. Arriving at Rae Strait, he was convinced he had discovered the last link in the Northwest Passage.



John Arrowsmith, *Chart of the Arctic Coast, examined by J. Rae in Spring & Summer 1851,* London, 1852. Courtesy of Hudson's Bay Company Archives (G.3/39), Archives of Manitoba.

Public domain. Click here to view source.

Websites linked in image captions:

- http://www.gov.mb.ca/chc/archives/hbca/spotlight/images/chart_arctic_coast.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Rae and Richardson find relics from Franklin's expedition

1854

Sir John Richardson and John Rae set out to determine the fate of the lost Franklin expedition. They explored the accessible areas along Franklin's proposed route near the Mackenzie and Coppermine Rivers, but found no relics of Franklin's crew there. From local Inuit, however, Rae obtained credible accounts, which helped him find some relics of John Franklin's expedition. The local Inuit also suggested Franklin's desperate crew had resorted to cannibalism. This hypothesis was so distasteful that he lost favor with both the Admiralty and the public.

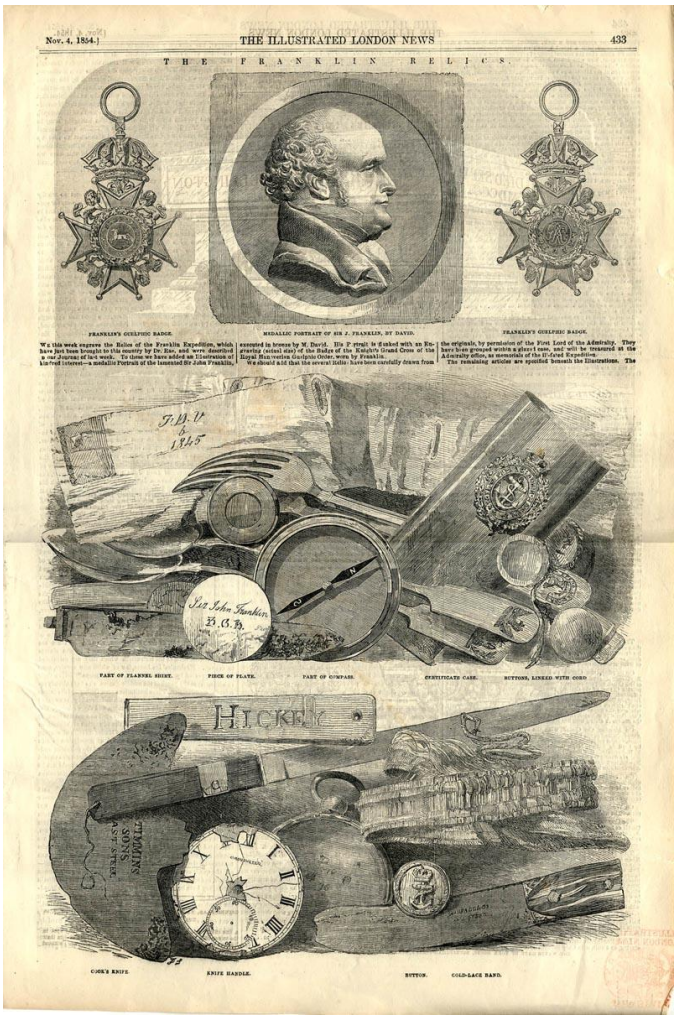


Illustration of relics of the Franklin expedition. *Illustrated London News,* October 1854.

Public domain. Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Franklin_raerels_800.jpg

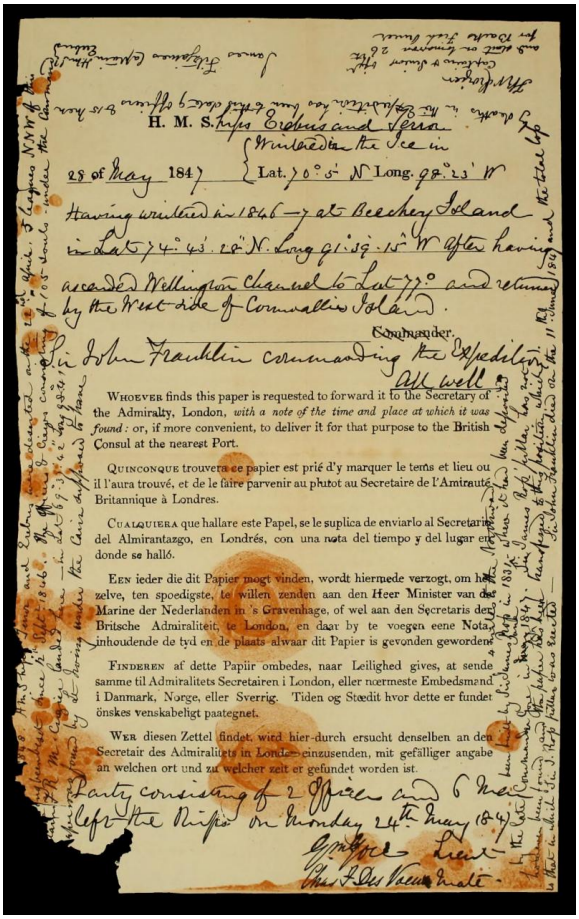
Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 12:21:29

Francis Leopold McClintock

1857 - 1859

McClintock found relics and human remains on King William Island. Among the items found were two Standard Admiralty forms. The margins of one contained a note detailing the fate of the Franklin Expedition:

"April 25th, 1848—HM's Ships *Terror* and *Erebus* were deserted on 22nd April, 5 leagues NNW of this, having been beset since 12th September 1846. The Officers and crews, consisting of 105 souls, under the command of Captain F. R. M. Crozier, landed here in lat 69°37'42" N, long 98°41' W ... Sir John Franklin died on 11th June 1847; the total loss by deaths in the Expedition has been to this date 9 officers and 15 men.—James Fitzjames, Captain HMS *Erebus*,—F. R. M. Crozier, Captain and Senior Officer, And Start tomorrow, 26th, for Back Fish River."


H. M. S. Ships Erebus and Terror

28 of May 184 } Lat. 70° 5' N Long. 98° 23' W

Having wintered in 1846—7 at Beechey Island in Lat 74° 43' 28" N. Long 91° 39' 15" W after having ascended Wellington Channel to Lat 77° and returned by the West side of Cornwallis Island.

Commander.

Sir John Franklin commanding the Expedition

All well

Whoever finds this paper is requested to forward it to the Secretary of the Admiralty, London, *with a note of the time and place at which it was found*: or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

Quinconque trouvera ce papier est prié d'y marquer le tems et lieu ou il l'aura trouvé, et de le faire parvenir au plutot au Secretaire de l'Amirauté Britannique à Londres.

Cualquiera que hallare este Papel, se le suplica de enviarlo al Secretario del Almirantazgo, en Londrés, con una nota del tiempo y del lugar en donde se halló.

Een ieder die dit Papier mogt vinden, wordt hiermede verzogt, om het zelve, ten spoedigste, te willen zenden aan den Heer Minister van de Marine der Nederlanden in 's Gravenhage, of wel aan den Secretaris der Britsche Admiraliteit, te London, en daar by te voegen eene Nota, inhoudende de tyd en de plaats alwaar dit Papier is gevonden geworden.

Finderen af dette Papiir ombedes, naar Leilighed gives, at sende samme til Admiralitets Secretairen i London, eller nœrmeste Embedsmand i Danmark, Norge, eller Sverrig. Tiden og Stædit hvor dette er fundet önskes venskabeligt paategnet.

Wer diesen Zettel findet, wird hier-durch ersucht denselben an den Secretair des Admiralitets in London einzusenden, mit gefälliger angabe an welchen ort und zu welcher zeit er gefundet worden ist.

Party consisting of 2 Officers and 6 men left the Ships on Monday 24th May (84)

Standard Admiralty form with handwritten margin notes describing the fate of the Franklin Expedition.

Public domain. Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:Franklinexpeditionnote.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

First book of Arctic photographs

1873

This first book of Arctic photographs was compiled by William Bradford, a prominent American artist. He traveled to the Arctic in the summer of 1869 with two Boston photographers, George Critcherson and John L. Dunmore. They voyaged up the west coast of Greenland and returned down the east coast of Baffin Island. Despite enormous technical difficulties caused by the cold, the photographers took more than three hundred glass negatives depicting Arctic scenery. The book includes 141 of them.

The *Panther,* anchored to the heavy ice. In William Bradford, *The Arctic Regions Illustrated with Photographs Taken on an Art Expedition to Greenland*. London, 1873.

Public domain. Courtesy of the Toronto Public Library. The photographs can be viewed on the New Bedford Whaling Museum flickr page .

Websites linked in image captions:

- https://www.flickr.com/photos/nbwm/sets/72157626119769801/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

George S. Nares

1875 - 1876

The British Arctic Expedition led by George S. Nares was the first to reach the northern part of Ellesmere Island in its attempt to reach the North Pole. Nares named the place where the expedition wintered "Alert," after his ship. It was the world's northernmost settlement.

Discovery Bay in the winter. In George S. Nares, H. W. Feilden, Thomas Mitchell, and George White, *Woodburytype illustrations in Narrative of a voyage to the Polar Sea during 1875-6 in HMS 'Alert' and 'Discovery'*, London: Low, Marston, Searle, & Rivington, 1878. Click here to read the text.

Public domain. Courtesy of Marine Biological Laboratory Woods Hole Oceanographic Institution Library.

Websites linked in image captions:

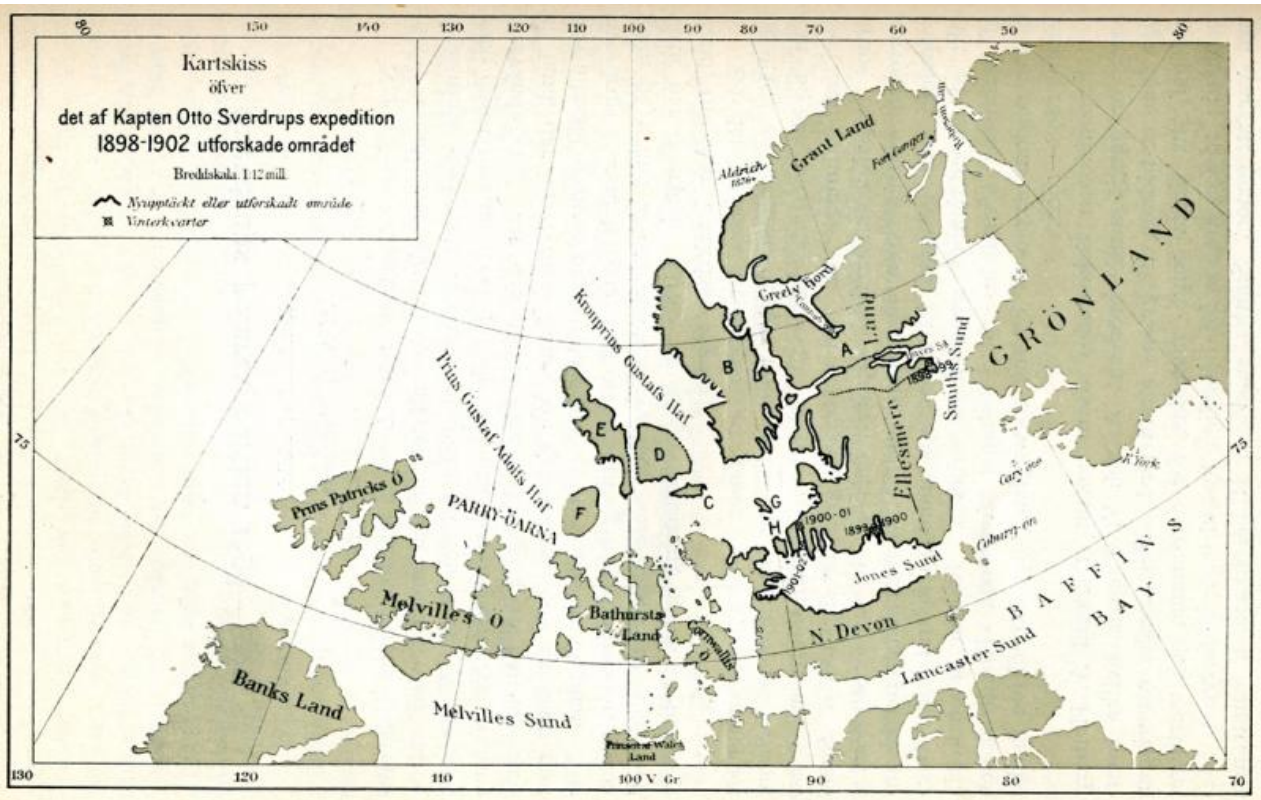
- https://archive.org/stream/narrativeofvoyag02nare

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Otto Sverdrup

1898 - 1902

Using his ship the *Fram* as a base for long journeys with dog sleds, Norwegian explorer Otto Sverdrup discovered three islands to the west of Ellesmere Island. Four scientists participated: a cartographer, a zoologist, a botanist, and a geologist.



Otto Sverdrup's polar expedition, 1898-1902.

Source: A.G. Nathorst; Ymer 1902. Courtesy of Norwegian Polar Institute, Tromsø.

Click here to view source.

Websites linked in image captions:

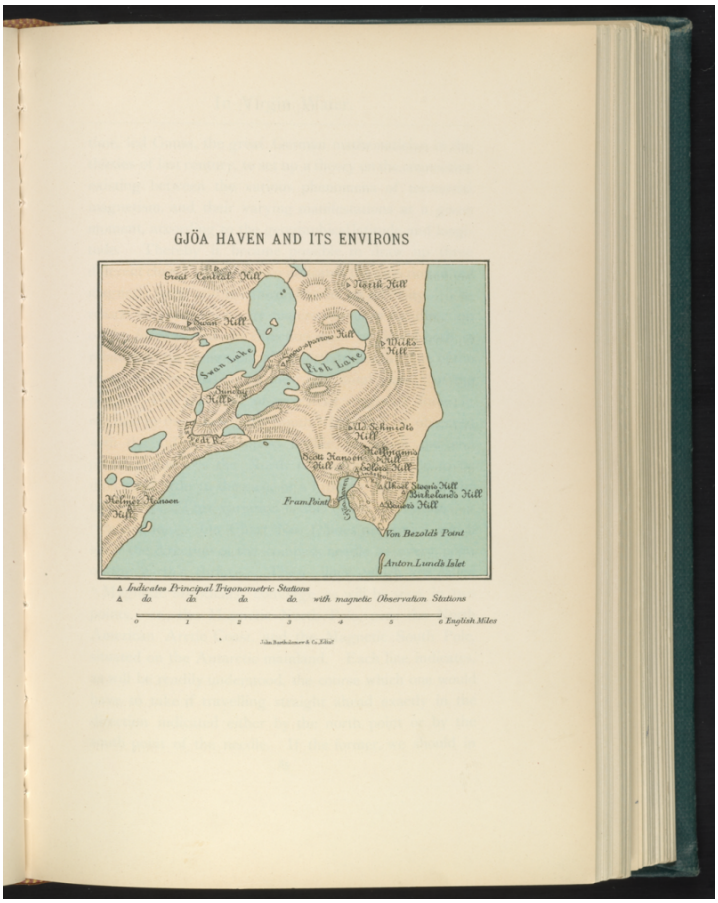
- http://www.polarhistorie.no/filearchive/New_sverdrup.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Roald Amundsen at Gjøa Haven

1903 - 1905

Roald Amundsen's ship, the *Gjøa,* weighed only 47 tonnes and had a crew of 6 men. The expedition crossed Baffin Bay, passed through Lancaster Sound and Barrow Strait, and reached Beechey Island on 22 August 1903. Amundsen continued on to King William Island, anchoring at Gjøa Haven for two winters. Here Amundsen and his crew conducted magnetic and meteorological observations. They never reached the North Magnetic Pole because it had moved about 30 miles to the north.



Gjøa Haven and its environs. In Roald Amundsen, "'The North West Passage.' Being the Record of a Voyage of Exploration of the Ship *Gjöa*," 1903-1907.

Public domain. Courtesy of the Library of Congress.

Click here to view source.

Websites linked in image captions:

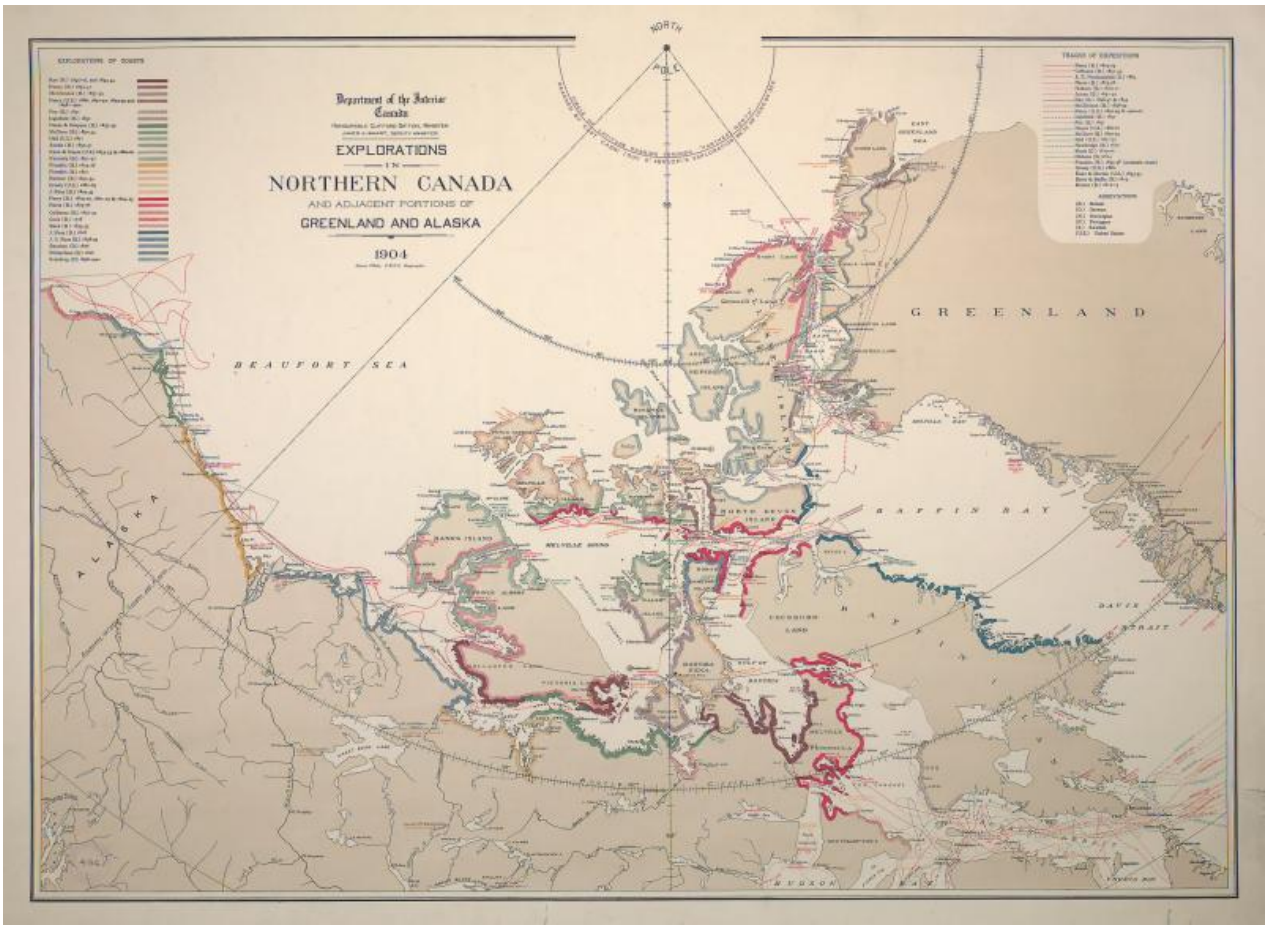
- https://www.wdl.org/en/item/7316/#q=+Gj%C3%B8a+expedition&qla=en

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Arctic expeditions between 1610 and 1902

1904

James White's map, *Explorations in Northern Canada and Adjacent Portions of Greenland and Alaska, 1904,* shows the path of expeditions in the years 1610–1902 and coastal explorations in the years 1631–1902.



James White, *Explorations in Northern Canada and Adjacent Portions of Greenland and Alaska, 1904.* Ottawa: Dept. of the Interior, Canada, 1904.

Public domain. Courtesy of Toronto Public Library.

Click here to view source.

Websites linked in image captions:

- http://www.torontopubliclibrary.ca/detail.jsp?R=DC-912-71C125-5

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Joseph-Elzéar Bernier

1904 - 1911

As Captain of the *Arctic*, Joseph-Elzéar Bernier began a series of extensive voyages (1906–1907, 1908–1909, 1910–1911) to various islands in the Canadian Eastern Arctic. He found no new land but visited islands that had been at least superficially charted. Claiming these lands, he raised the Canadian flag and placed official declarations of Canadian possession in large stone cairns.

Captain Joseph-Elzéar Bernier and his crew at Winter Harbour, 1909.

Public domain. Courtesy of Bibliothèque et Archives Canada/C-001198.

Le capitaine Joseph-Elzéar Bernier et son équipage à Winter Harbour, (N.W.T.) sur l'île Melville en 1908-09. Photo taken on 1 July 1909.

Click here to view source.

Websites linked in image captions:

- http://collectionscanada.gc.ca/ourl/res.php?url_ver=Z39.88-2004&url_tim=2014-07-11T09%3A35%3A43Z&url_ctx_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Actx&rft_dat=3652544&rfr_id=info%3Asid%2Fcollectionscanada.gc.ca%3Apam&lang=eng

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

"The North-West Passage was done"

1905

On 13 August 1905 Roald Amundsen sailed through Simpson Strait to the south of King William Island and on to the Bering Strait. Here Amundsen encountered a whaling ship from San Francisco coming from the opposite direction. He realized that he had completed the Northwest Passage. In his diary, he famously wrote:

"The North-West Passage was done. My boyhood dream—at that moment it was accomplished. A strange feeling welled up in my throat; I was somewhat over-strained and worn—it was weakness in me—but I felt tears in my eyes."

Captain Raoul Amundsen, discoverer of North West Passage, 1906.

Public domain. Courtesy of John Francis Sugrue/Library and Archives Canada/C-0014073.

Click here to view source.

Websites linked in image captions:

- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=3214291

George Lancefield, Bernier's photographer

1906

To secure proof of Canadian possession of the islands, Captain Joseph-Elzéar Bernier enlisted the help of the ship's photographer, George Lancefield.

Public domain. Photo by George Lancefield, 1906.

Courtesy of Library and Archives Canada. Credit: J.-E. Bernier / Library and Archives Canada / C-000744.

Click here to view source.

Websites linked in image captions:

- http://data2.archives.ca/ap/c/c000744.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Knud Rasmussen

1921 - 1924

Knud Rasmussen was a Danish Greenlander and the first European to cross the Northwest Passage by dog sled. He brought specialists in zoology, geology, and mineralogy on the exhibition, and filled 32 journals with notes. Known as the "father of Eskimology," he studied the folklore of the native cultures and explored the Inuit legends, which would later be translated into Danish..

Knud Rasmussen bundled in a fur coat, n.d.

Public domain. Courtesy of the Library of Congress.

Click here to view source.

Websites linked in image captions:

- http://www.loc.gov/pictures/item/ggb2004002631/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Arctic during World War II

1939 - 1945

The Arctic was drawn into the Battle of the Atlantic, partly in response to Soviet activity in the Northern Sea Route. The Germans tried to establish weather stations on the coast of Greenland but were unsuccessful due to local resistance and US presence.

The view from the bridge of the Royal Navy cruiser HMS *Sheffield* as she battles heavy seas while escorting convoy JW 53 to Russia, February 1943. The ship suffered severe structural damage during three days of storms and had to return to port for repairs.

Photograph: Royal Navy official photographer.

Click here to view source.

Websites linked in image captions:

- http://www.iwm.org.uk/collections/item/object/205148009

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Henry Larsen and RCMP *St. Roch*

1940 - 1944

The Royal Canadian Mounted Police vessel *St. Roch*, commanded by Corporal Henry Larsen, was the first Canadian vessel to travel through the Passage and the first ship to make the Passage from west to east. The *St. Roch* sailed from Vancouver on 23 June 1940, but was trapped in the ice for two winters and did not reach Halifax until 11 October 1942.

Lake Harbour Eskimos pay a visit to the schooner *St. Roch*, Lake Harbour, NWT [Kimmirut (formerly Lake Harbour), Nunavut].

Public domain. Courtesy of Henry A. Larsen / Library and Archives Canada / PA-121419.

Click here to view source.

Websites linked in image captions:

- http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=3328227

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

The Cold War period

1947 - 1989

In the late 1940s and 1950s, the Cold War powers began to compete for influence in the Arctic. The US built military bases in the region to deter a Soviet attack or invasion.

This postcard celebrating Soviet dominance in the Arctic was published after the International Geophysical Year (1 July 1957–31 December 1958). The postcard reads “с новым годом!” (“Happy New Year!”).

USSR postcard.
Illustration by I. Znamenskii. Published by the Ministry of Communications of the USSR, 1959.

Click here to view source.

Websites linked in image captions:

- http://65.media.tumblr.com/tumblr_ltvcjtBjUW1qb2sxmo1_1280.jpg

Baldassarri, Elena. “The Northwest Passage: Myth, Environment, and Resources.” Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

First warship to transit the Passage

1954

Commanded by O. C. S. Robertson, the HMCS *Labrador* was the first warship to cross the Passage and the first to circumnavigate North America when, in 1954, it sailed through the Passage and returned to Halifax through the Panama Canal.

HMCS *Labrador*, seen here against the backdrop of an iceberg, was the Royal Canadian Navy's only icebreaker.

Public domain. Courtesy of Canadian War Museum.

Click here to view the flickr photo album.

Websites linked in image captions:

- http://www.environmentandsociety.org/Album%20in%20https%3A//flic.kr/s/aHsjsEEXbH

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Construction of the DEW Line

1955 - 1957

In 1955, American and Canadian vessels and military forces were involved in facilitating the construction of the DEW (Distant Early Warning) Line, a series of radar installations in the far north. Later, these same stations would require icebreakers for their resupply.

Taken 20 February 1987, this photo shows the shadow of an aircraft passing over one of 30 radar stations under US Air Force control on the Distant Early Warning (DEW) Line. The DEW Line runs approximately 3,600 miles, from Alaska, across Northern Canada to Greenland.

Photograph: TSGT Donald L. Wetterman. Public domain. US Department of Defense, American Forces Information Service. Defense Visual Information Center. 1994-
Click here to view source.

Websites linked in image captions:

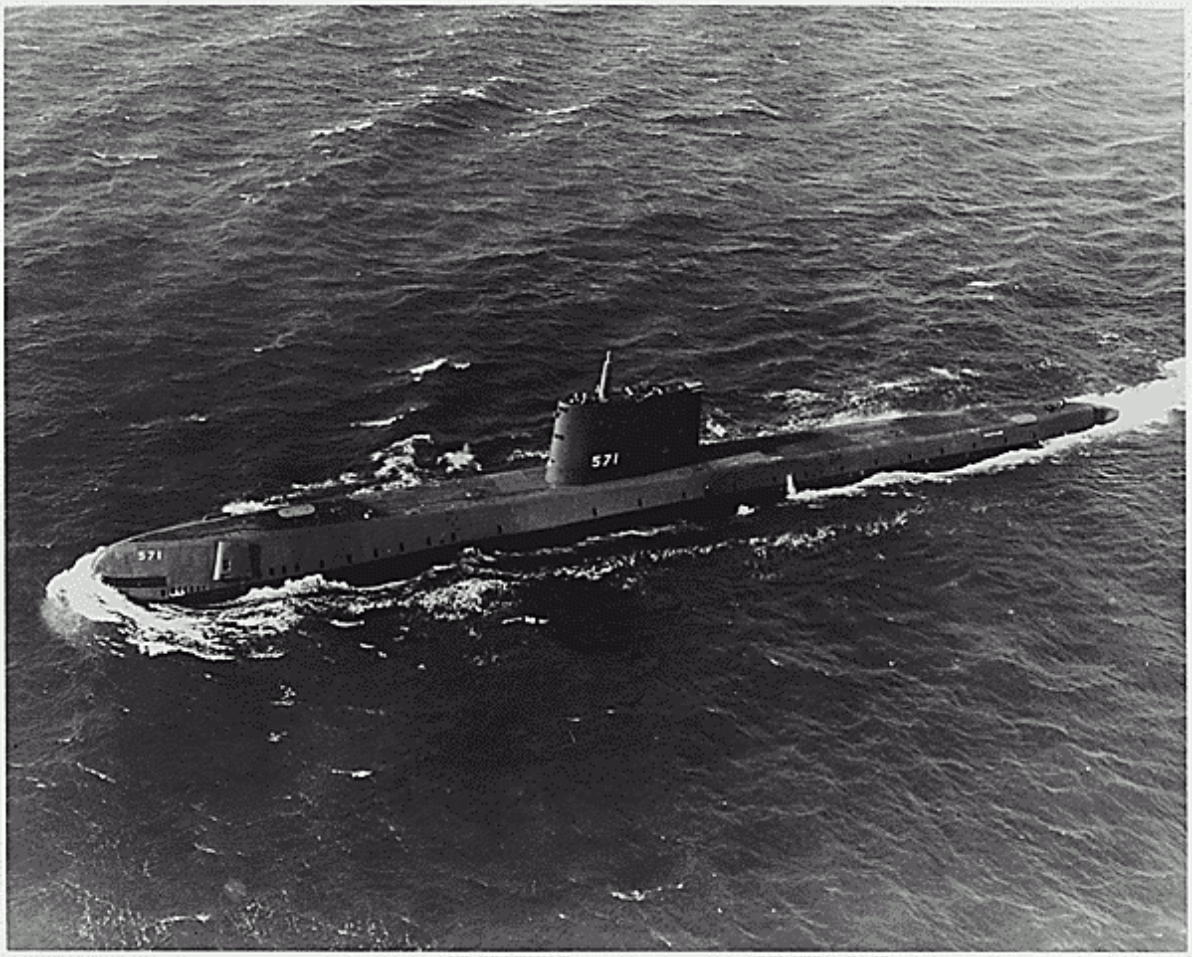
- https://catalog.archives.gov/id/6426535

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

First known underwater transit of the Passage

1958

The USS *Nautilus* conducted the first known underwater transit of the Northwest Passage. On 23 July, the submarine departed Pearl Harbor, Hawaii, under top secret orders to conduct "Operation Sunshine," the first crossing of the North Pole by a ship.



USS *Nautilus* (SS-571), the US Navy's first atomic powered submarine, on its initial sea trials, 20 January 1955.

Public domain. Courtesy of National Archives at College Park - ARC Identifier 521003 / Local Identifier 80-G-709366.

Click here to view source.

Websites linked in image captions:

- https://www.flickr.com/photos/usnationalarchives/5882636867/

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

First east-to-west transit of the Passage

1960

The USS *Seadragon* made a full transit through Parry Sound and Lancaster Sound. The submarine surfaced at the North Pole and was the first vessel to make an east to west transit of the Northwest Passage.

The USS *Seadragon* (SSN-584), passing through the Arctic Ocean ice pack in 1960.

Public domain. Courtesy of the US Navy.

Click here to view source.

Websites linked in image captions:

- http://www.navsource.org/archives/08/0858409.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Leninsky Komsomol

1962

The *Leninsky Komsomol*, a USSR submarine commanded by Captain L. M. Zhiltsov, surfaced near the North Pole on 17 July 1962 and passed under the pole twice. It was the first Soviet submarine to make the Passage. The Captain was awarded the Hero of the Soviet Union medal.

Twenty-kopek Soviet postage stamp from 1970 showing the atomic submarine *Leninsky Komsomol.*

Public domain. From the electronic catalog "Stamps of the Soviet country."

Click here to view source.

Websites linked in image captions:

- https://commons.wikimedia.org/wiki/File:The_Soviet_Union_1970_CPA_3913_stamp_(Nuclear_Submarine_%27Leninsky_Komsomol%27).jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 12:25:43

CCGS *John A. Macdonald*

1967

The CCGS *John A. Macdonald* traveled through the Passage from east to west, assisting the USCGC *Northwind*, which had become trapped in ice.

CCGS *John A. Macdonald.*

Public domain. Courtesy of Canadian Coast Guard.

Click here to view source.

Websites linked in image captions:

- http://www.ccg-gcc.gc.ca/eng/CCG/USQUE_Icebreaker

SS *Manhattan*

1969

The SS *Manhattan,* an oil tanker chartered by the Humble Oil & Refining Company, became the first commercial vessel to make a full transit. It navigated the Northwest Passage from east to west, accompanied by the USCGC *Northwind* and the USCGC *Staten Island.*

The SS *Manhattan*, here beached in Florida.

This image was taken by a sailor or an employee of the US Navy and is in the public domain.

Click here to view source.

Websites linked in image captions:

- https://en.wikipedia.org/wiki/File:SS_Manhattan2.jpg

MS *Lindblad Explorer*

1984

The *Lindblad Explorer* was the first passenger ship to successfully navigate the Northwest Passage. Its voyage began on 20 August 1984 and concluded on 29 September 1984. From 1985–1992 the ship was known as MS *Society Explorer* and from 1992–2007 as MS *Explorer*. The ship sank after it hit what was thought to be an iceberg in Antarctica.

The ship in 2005, then known simply as the MS *Explorer,* Antarctic Peninsula, January 2005. The ship sank in 2007. Photograph by Constantine Evans.

CC BY. Photograph by Constantine Evans.

Click here to view source.

Websites linked in image captions:

- http://en.wikipedia.org/wiki/File:MS-Explorer-2005-1.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

First solo circumnavigation via the Passage

1986 - 1990

In a 12.8-meter converted lifeboat called *Polar Bound,* David Scott Cowper completed the first solo circumnavigation of the world via the Northwest Passage. He traveled for four years and two months and survived three Arctic winters in the Passage before reaching the Bering Strait in August 1989.

David Scott Cowper's boat *Polar Bound* near Fort Ross in the Northwest Passage.

Websites linked in image captions:

- http://commons.wikimedia.org/wiki/File:Cowper_fortross_2004.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Kapitan Khlebnikov transits the Passage 17 times

1992 - 2012

From its first transit in 1992 to the end of its career in 2012, the *Kapitan Khlebnikov,* a Russian icebreaking vessel operating as a cruise ship, made 17 transits of the Northwest Passage through various routes—more than any other vessel.

The icebreaker *Kapitan Khlebnikov* in the Arctic, 2009. Photograph by Ian Duffy.

Websites linked in image captions:

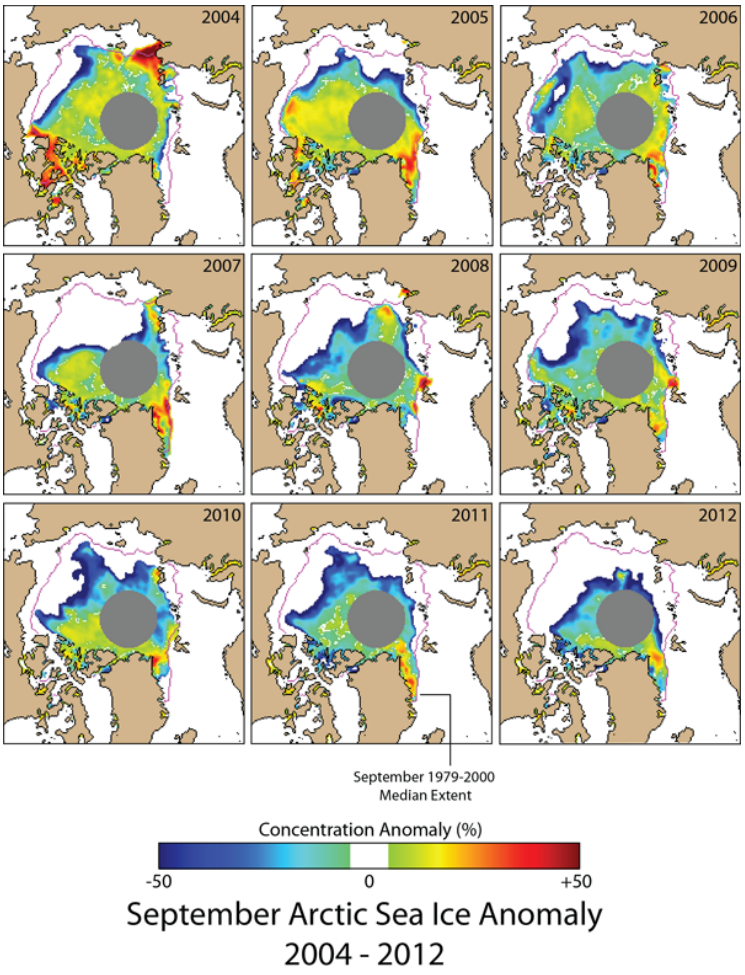
- http://commons.wikimedia.org/wiki/File:Kapitan_Khlebnikov_-a.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Timeline of the Northwest Passage
PDF created on: 19 May 2021 12:25:47

Effects of climate change in the Arctic

2004 - 2012

Global warming has led to a dramatic decrease of summer ice cover in the Arctic, suggesting it may soon be possible to sail Arctic sea routes with ease. This graphic compares sea ice conditions for the September months from 2004 through 2012 based on data from the National Snow and Ice Data Center's (NSIDC) Sea Ice Index. Each map shows the ice concentration anomaly (see color key) and the 1979–2000 mean September ice edge (pink line). Nearly every year, the ice edge is well north of its mean position off the coasts of Alaska and Siberia.



September Arctic Sea Ice Anomaly, 2004–2012. NSIDC, University of Colorado.

Public domain. Courtesy of the National Snow and Ice Data Center, University of Colorado, Boulder.

Click here to view source.

Websites linked in image captions:

- https://nsidc.org/sites/nsidc.org/files/images//sep_anom_2004-2012.png

Northwest Passage opens

2007

According to the National Snow and Ice Data Center's *Arctic Sea Ice News* (Fall 2007), the Passage was nearly ice-free for several weeks.

On 15 September 2007, the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Terra satellite captured a largely cloud-free image of the Northwest Passage.

Public domain. Courtesy of NASA /Jeff Schmaltz, MODIS Rapid Response Team, Goddard Space Flight Center.

Click here to view source.

Websites linked in image captions:

- http://eoimages.gsfc.nasa.gov/images/imagerecords/18000/18964/nwp_tmo_2007258_lrg.jpg

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

MV *Nunavik*

2014

The *Nunavik* is the world's most capable conventional (non-nuclear) icebreaking bulk carrier. It sailed from Deception Bay, Northern Quebec, transporting large amounts of nickel concentrate from the Canadian Royalties mine to Bayuquan, China. This route is roughly 40 percent shorter than the alternative through the Panama Canal, reducing greenhouse gas emissions.

MV *Nunavik* at Deception Bay, winter 2014. CNW Group/Fednav Ltd.

CNW Group/Fednav Limited..

Click here to view source.

Websites linked in image captions:

- http://www.newswire.ca/news-releases/first-arctic-cargo-shipped-through-the-northwest-passage-515674471.html

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Erebus found in Queen Maud Gulf

2014

An expedition led by Parks Canada discovered the wreck of Sir John Franklin's HMS *Erebus*. The ship's bell was found detached on the deck. An underwater video was captured using a remotely operated vehicle. Click here to watch the full video.

The detached bell of Franklin's HMS *Erebus.* The wreck was found on a Parks Canada expedition in in 2014.

Click here to view source.

Websites linked in image captions:

- http://www.pc.gc.ca/~/media/culture/franklin/gallery03/89M0515EF-550.ashx

Luxury tour through the thawed Northwest Passage

2016

Crystal Serenity is a US $350 million tourist cruise ship, 820 feet long with 13 decks and 535 state rooms. Thanks to ice melt, it carried 1,100 passengers through the Northwest Passage. Climate change and retreating ice permits ships of ever-larger sizes to cross the Arctic Ocean.

Click here to view the video.

Screenshot from the video *In Awe in the Arctic - Crystal Serenity Northwest Passage.*

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Second ship of the Franklin Expedition discovered

2016

The Arctic Research Foundation's research vessel, the *Martin Bergmann*, discovered the HMS *Terror*, in Terror Bay, located on the southwest shore of King William Island. The perfectly preserved *Terror* sank during a disastrous expedition led by British explorer Sir John Franklin.

Parks Canada underwater archaeologists observe the wreck of the HMS *Terror,* found in excellent condition. Amazingly, a captain's cabin window at the ship's stern is still in place. The dives took place during difficult weather conditions and through poor visibility in Terror Bay. By comparing solid archaeological data to an extensive research archive, the Parks Canada's Underwater Archaeology Team was able to confirm that the wreck is indeed HMS *Terror*.

Click here to view source.

Websites linked in image captions:

• http://www.pc.gc.ca/eng/culture/franklin/photos/confirmation.aspx?a=1&photo={6BDD0550-49A3-440E-B5DD-D5510DFD8D9E}

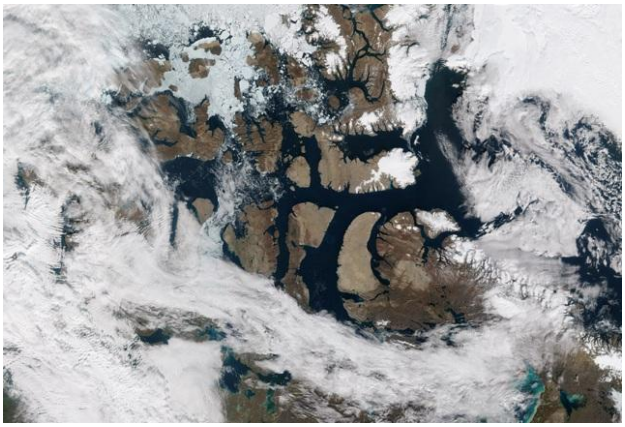
About the Author

Elena Baldassarri is an Assistant Professor in North American History at the Humanistic Department of Roma Tre University, Rome, Italy. Her research interests focus on the history of Canada and the United States, and the relationship between cultural and social rights in Canada. Her most recent publications cover US environmental policy, Canada's sovereignty over the lands and waters of the Arctic. In past she has obtained a Canada Grant (2012) at the John-F.-Kennedy-Institut für Nordamerikastudien, Freie Universität Berlin, a Faculty Research Grants/Bourses de recherche International Council for Canadian Studies (ICCS) (2007), and a Travel Grant from the Italian Association for Canadian Studies (AISC) (2006). She is the author of several articles and books including *Canada e Quebec: Un problema di identità nazionale (1947–70)* [*Canada and Quebec: a problem of national identity*]. Roma: Viella, 2009, and has edited *Percorsi migratori e accoglienza fra storia e politiche di gestione* [*Migration routes and migrant reception: history and policies*], edited with Pia G. Celozzi Baldelli. Roma: Aracne, 2009, and *La Guerra Fredda nella satira politica Est/Ovest* [*Cold War and political satire*] edited with Pia G. Celozzi Baldelli. Roma: Aracne, 2010.

Elena Baldassarri
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: About the Author
Source URL: http://www.environmentandsociety.org/node/6588
PDF created on: 06 May 2021 12:41:49

Copyright Information



Partial Opening of the Northwest Passage, 31 August 2015

NASA Earth Observatory images by Jesse Allen, using VIIRS data from the Suomi National Polar-orbiting Partnership . Suomi NPP is the result of a partnership between NASA, the National Oceanic and Atmospheric Administration, and the Department of Defense. Landsat data from the U.S. Geological Survey . Multisensor Analyzed Sea Ice Extent (MASIE) data courtesy of the National Snow and Ice Data Center.

Click here to view source.

NASA Airborne Campaigns focus on climate impacts in the Arctic. This red plane is a DHC-3 Otter, the plane flown in NASA's Operation IceBridge-Alaska surveys of mountain glaciers in Alaska

Chris Larsen, University of Alaska-Fairbanks, 16 September 2014.

Click here to view source.

Wall-hanging tapestry created by the Elders in residence and school students at the Kitikmeot Heritage Society. May Hakongak Centre, Cambridge Bay, Nunavut (Canada)

Photo by Enrico Mariotti, 2013.

Rest of one of the towers of the Giant Mine, a gold mine located outside Yellowknife, Northwest Territories

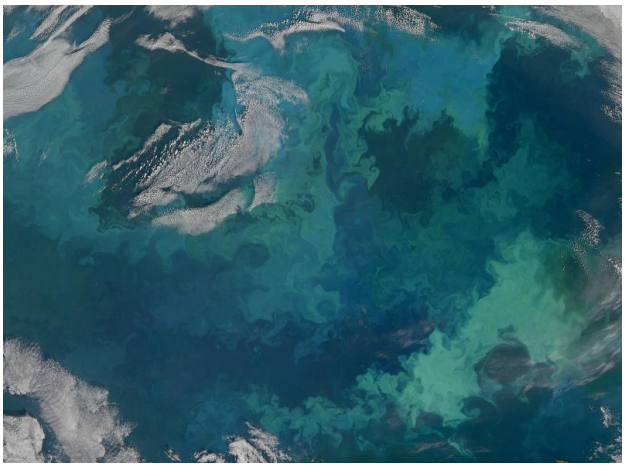
Photo by Enrico Mariotti, 2013.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.
Chapter: Copyright Information
Source URL: http://www.environmentandsociety.org/node/7596
PDF created on: 06 May 2021 12:41:42

Large group of Inuit with crewmen of the C.G.S. ARCTIC at ceremonial taking of possession by Capt. Joseph-Elzéar Bernier, Baffin Island, Northwest Territories, [Nunavut], 9 November 1906

Courtesy of Library and Archives Canada / PA-165672.
Click here to view source

Sovereignty



Phytoplankton Bloom in the Barents Sea. NASA image acquired on 31 August 2010

NASA image courtesy Norman Kuring, NASA Ocean Color Group. August 31, 2010.

Click here to view source.

Security

Renda near Nome. The Coast Guard Cutter Healy leads the 370-foot Russian tanker Renda closer to Nome, 14 January 2012. The Renda is carrying 1.3 million gallons of petroleum products to deliver to Nome residents

U.S. Coast Guard photo by Petty Officer 2nd Class Charly Hengen.

This image was slightly cropped. Click here to view the original source.

Further Reading

For more information on the historical photographs and maps, please go to the respective chapters.

Baldassarri, Elena. "The Northwest Passage: Myth, Environment, and Resources." Environment & Society Portal, *Virtual Exhibitions* 2017, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6254.

Chapter: Copyright Information