# Photoatlas by

## D. R. Fraser Taylor, Romola V. Thumbadoo and Alexander Wolodtschenko











## 10 Selected Indigenous Cybercartographic Atlases











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#### 1. Preface

ABOUT THE PROJECT: The illustrative atlas "10 Selected Indigenous Cybercartographic Atlases" is a Canadian-German project initiated by Fraser Taylor, Romola V. Thumbadoo, (Geomatics and Cartographic Research Centre/GCRC, Department of Geography and Environmental Studies, Carleton University, Ottawa, Canada) and Alexander Wolodtschenko (Section "Environment and Carto-Atlassemiotics" of the German Society for Semiotics/GSS), Dresden, Germany.

The project aim is to create an illustrative atlas of 10 selected Indigenous cybercartographic atlases. The illustrative atlas is designed to reach a wide range of users; it supports the visualization and popularization of cultural and historical knowledge about Indigenous Peoples of Canada, and demonstrates the potential range of application of Cybercartography through the Nunaliit atlas framework developed at the GCRC.

CYBERCARTOGRAPHY: Taylor argues that "Cybercartography is a complex holistic concept which is in simplest terms the application of location-based technologies to the analysis and understanding of issues of importance to society, and the dissemination of the results through cybercartographic atlases. A cybercartographic atlas is a metaphor for the analysis of all kinds of qualitative and quantitative information linked by location and displayed in innovative multi-sensory and multi-media formats which people readily understand.

Cybercartography is also much more than a web-based technique. It involves imagination, foresight, as well as a holistic approach that includes bridging science and art, and Indigenous and non-Indigenous perspectives. It is also a part of the paradigm shift towards critical approaches to cartography in an iterative, evolutionary manner. It has a strong qualitative element and includes art, theatre and a range of human activities, emotions and topics not usually 'mapped'" (D. R. F. Taylor, "Cybercartography Revisited" In: Taylor, D. R. F., Anonby, E. and Murasugi, K. Further Developments in the Theory and Practice of Cybercartography. San Diego, Elsevier. 2019. 6.)

#### 1. Preface

SEMIOTIC CONCEPTION: The illustrative atlas "10 Selected Indigenous Cybercartographic Atlases" is a project in which the core content of the atlas is formed by 20 slides: 10 images (screenshots of the title pages of 10 cybercartographic atlases) and 10 complementary texts indicative of the structural-semiotic meta-variables (text, photo, map).

The Geomatics and Cartographic Research Centre (GCRC) at Carleton University partnered with the Indigenous communities in the creation of the innovative atlases, which they retain ownership of; communities defined and developed the content, and in several cases, provided funding for the projects.

The illustrative atlas is designed for smart phones and tablets. It is compact (up to 25-35 slides and file "weight" of 10-20 MB), ubiquitous (usable anytime and anywhere), and presents generalized thematic information about ten selected Indigenous cybercartographic atlases.

The illustrative atlas is part of the project "Iconic Atlassing" of the Section "Environment and Carto / Atlassemiotics of the GSS.

## 2. Ten Selected Indigenous Cybercartographic Atlases

(Alphabetical list of ten atlases)

- 1. Arctic Bay Atlas
- 2. Clyde River Atlas
- 3. Gwich'in Atlas
- 4. Inuit Places Atlas
- 5. Inuit Siku Atlas
- 6 Lake Huron Treaty Atlas
- 7. Pan Inuit Trails Atlas
- 8. Residential Schools Land Memory Atlas
- 9. Thule Atlas
- 10. Views from the North

The list contents 10 names of the selected interactive Indigenous web-atlases, which were analysed and included in the photoatlas.

## 2.1. Arctic Bay Atlas

Arctic Bay Atlas Introduction Spoken Map Quest Map PDF Maps Artists About Welcome Login Introduction

Welcome to the Arctic Bay Place Name Atlas

The Cybercartographic Atlas of Arctic Bay is an online, community-based atlas project to engage youth and Elders of Arctic Bay, Nunavut in researching, documenting, and representing their multi-faceted spatial knowledge. It involves a partnership between Nunavut Youth Consulting, the Geomatics and Cartographic Research Centre (GCRC) at Carleton University, and Nunavut Arctic College.

The Atlas includes an interactive spoken map of Inuktitut place names in the Arctic Bay Region. These place names are spoken by local Inuktitut speakers. The Atlas also includes an interactive map of the 2008 Nunavut Quest, an annual inter-community dog sled that begins in Igloolik and ends in Arctic Bay.

Arctic Bay is called Ikpiarjuk — "the pocket" — because of the high hills that surround the almost landlocked bay. Arctic Bay is located on Borden Peninsula, a rolling undulating plateau dissected by numerous river valleys. In the northern part of the peninsula, where the Hamlet is located, mountains reach as high as 1,300 metres. Flat-topped King George V Mountain dominates the view to the southeast from the community. As you look southward from the Hamlet toward Adams Sound, Uluksan Point is on your right, while Holy Cross Point is at the end of the long peninsula to your left.

Terrestrial wildlife around Arctic Bay is minimal. In the last few years, caribou have come close to the community, but sightings are more common farther south near Admiralty Inlet. Polar bears frequent the area. Narwhals frequent the waters and occasionally come into Arctic Bay itself. Narwhals are hunted for their ivory tusk and maktaag. Walrus are often seen in western Admiralty Inlet.

The Hamlet of Arctic Bay developed as a result of government housing initiatives in the 1960s. Arctic Bay is noted for miniature ivory carvings, traditional clothing and other arts and crafts.

The largest employer is the Hamlet, followed by the school and the Housing Association. The Hunters and Trappers Association manages local harvesting issues and participates in wildlife management initiatives, regionally and Nunavut wide. It also operates the sport hunts in Arctic Bay.



Arctic Bay in the fall time - Ron Elliott

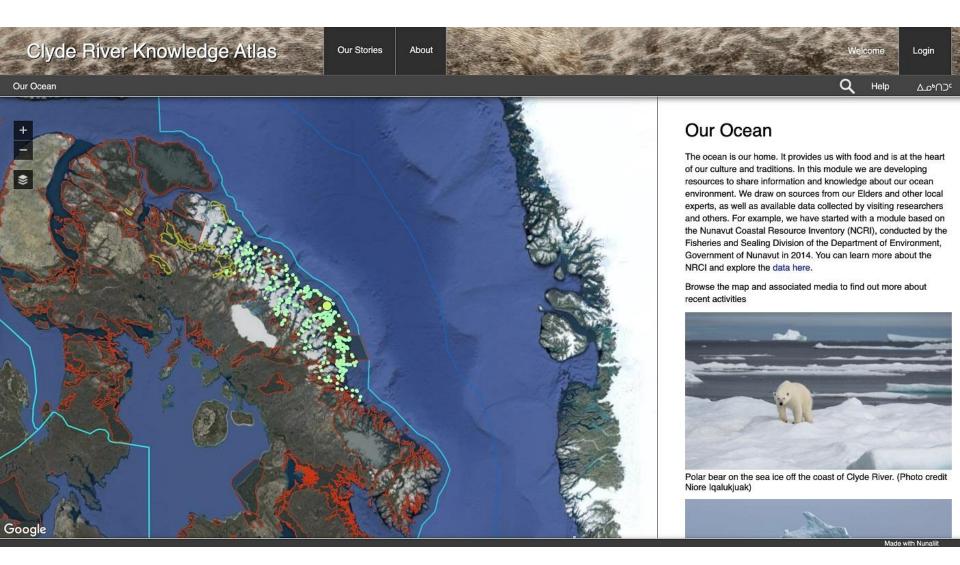
Made with Nunalii

## 2.1. Arctic Bay Atlas

The Cybercartographic Atlas of Arctic Bay (http://arcticbay.gcrc.carleton.ca/) is an online, community-based atlas project to engage youth and Elders of Arctic Bay, Nunavut in researching, documenting, and representing their multi-faceted spatial knowledge. It involves a partnership between Nunavut Youth Consulting, the Geomatics and Cartographic Research Centre (GCRC) at Carleton University, and Nunavut Arctic College. The Atlas includes an interactive spoken map of Inuktitut place names in the Arctic Bay Region.

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## 2.2. Clyde River Atlas



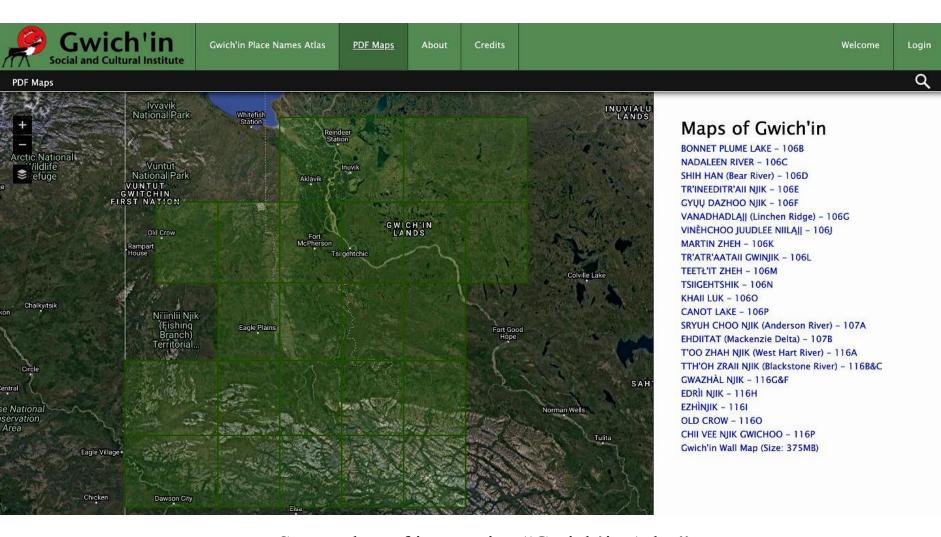
Screenshot of interactive "Clyde River Atlas"

## 2.2. Clyde River Atlas

Since 2005, the Ittaq Heritage and Research Centre has specialized in Inuit design and leadership of heritage, media, and research activities in the community and surrounding areas of Clyde River (Kangiqtugaapik), Nunavut. Ittaq works with Elders, youth, and local experts, as well as visiting professionals, to carry out projects that benefit the community and other Nunavummiut. Ittaq offers a broad range of expertise and services to support heritage, media, and research activities through our strong relationships in the community and resources found at the Ittaq building and media centre.

Over the years, Ittaq has facilitated and produced a diverse range of products from its activities including films, books, maps, research reports, this atlas, and more. A great deal of this work documents the detailed knowledge of our Elders and hunters. Other work highlights collaboration between our local experts and visiting researchers. This cyberatlas is a way to share this work with our community, other communities, and beyond. It is also a tool to support new research and tell our own our stories. We hope this site will be a place for our youth, leaders, and community members to find resources they need for all their interests and activities. For visitors, we hope it shows the depth of Inuit knowledge and the critical importance of local leadership and involvement in researching our environment.

#### 2.3. Gwich'in Atlas



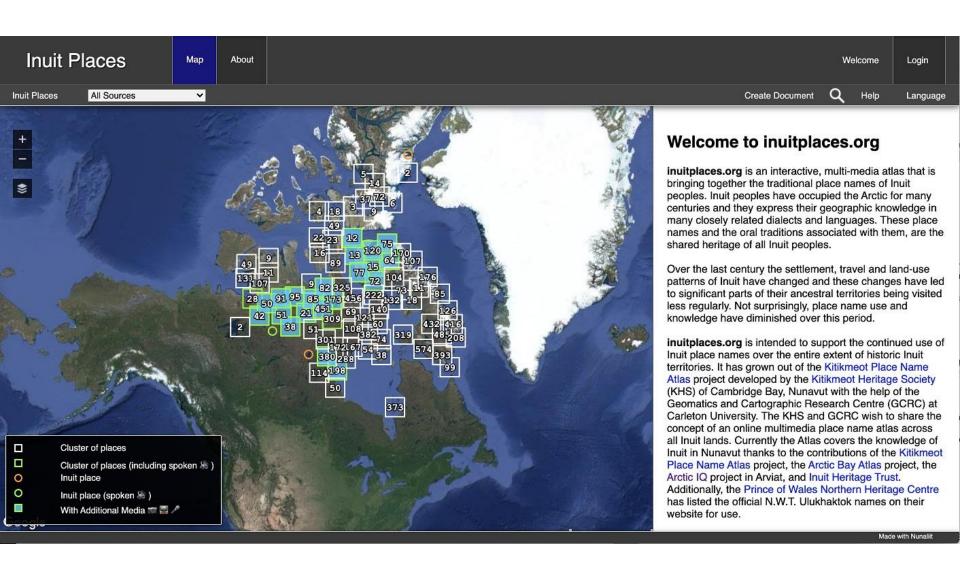
Screenshot of interactive "Gwich'in Atlas"

#### 2.3. Gwich'in Atlas

Since 1992, the Gwich'in Social and Cultural Institute (GSCI) has worked with Gwich'in Elders and traditional land users to document place names and create an inventory of heritage sites in the Gwich'in Settlement Region. Elders recognized that putting their names on maps would keep Gwich'in history and knowledge of the land alive. From 1992-2012, over 74 Gwich'in Elders and traditional land users ranging in age from 55-95 years were interviewed in the communities and on-the-land. This research, which built on previous work in the 1970s by linguist John Ritter working with Gwich'in Elders, has resulted in the documentation of more than 900 named places with their translations and associated stories for Gwich'in traditional lands in both the Northwest Territories and Yukon. Trails, traditional camp sites, graves, historic sites, harvesting locales, and sacred or legendary places were also recorded on topographic maps. Gwich'in place names are rooted in Gwich'in knowledge about their lands and are a window into how the Gwich'in world was culturally constructed. Given that the Gwich'in language is the most endangered Athapaskan language in the Northwest Territories, documenting the names has also preserved ancient aspects of the language and place-based knowledge (including traditional knowledge) so it can be used today and carried forward into the future.

The Gwich'in Place Name and Story Atlas is an interactive online Atlas that invites visitors to explore the culture, history, traditional knowledge and land use of the Gwich'in through Gwich'in place names. The Atlas was created in partnership with the Geomatics and Cartographic Research Centre at Carleton University and the maps in partnership with MDT Communications Ltd.

#### 2.4. Inuit Places Atlas



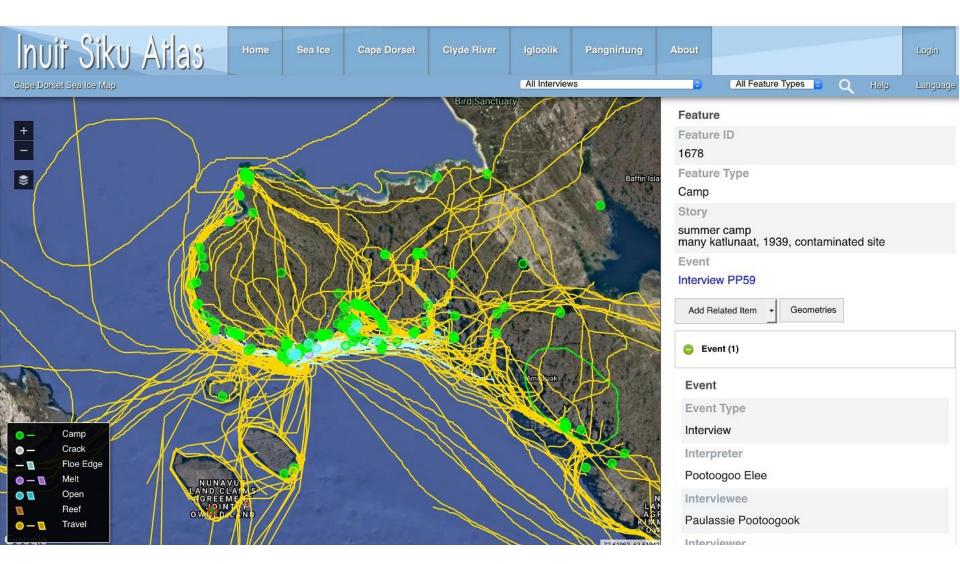
Screenshot of atlas start page on inuitplaces.org

#### 2.4. Inuit Places Atlas

inuitplaces.org is an interactive, multi-media atlas that brings together the traditional place names of Inuit peoples. Inuit peoples have occupied the Arctic for many centuries. They express their geographic knowledge in many closely related dialects and languages. The place names and the oral traditions associated with them are the shared heritage of all Inuit peoples. Over the last century the settlement, travel and land-use patterns of Inuit have changed, and these changes have led to significant parts of their ancestral territories being visited less regularly. Not surprisingly, place name usage and knowledge have diminished over this period.

inuitplaces.org supports the continued use of Inuit place names over the entire extent of historic Inuit territories. It has grown out of the Kitikmeot Place Name Atlas project developed by the Kitikmeot Heritage Society (KHS) of Cambridge Bay, Nunavut with the help of the Geomatics and Cartographic Research Centre (GCRC) at Carleton University. Currently the Atlas covers the knowledge of Inuit in Nunavut thanks to the contributions of the Kitikmeot Place Name Atlas project, the Arctic Bay Atlas project, the Arctic IQ project in Arviat, and Inuit Heritage Trust.

### 2.5. Inuit Siku Atlas



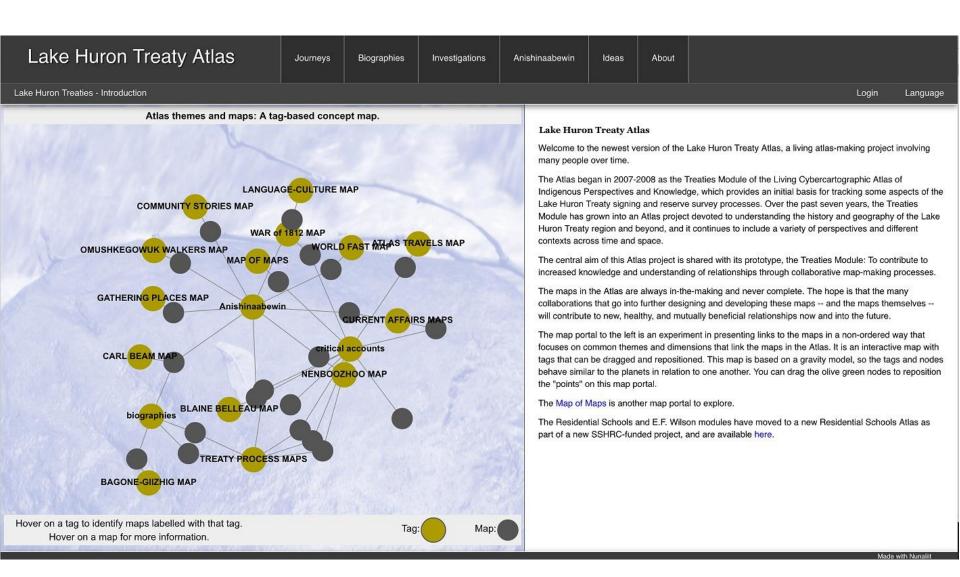
Screen short of interactive "Inuit Siku Atlas"

#### 2.5. Inuit Siku Atlas

Sea ice is a part of life for Inuit in northern communities, with many Inuit families still relying on the sea ice for travel, hunting, harvesting, diet, recreation, livelihoods, health and cultural values. Sea ice drives seasonal patterns of land and ocean use for both people and animals by freezing in the fall, being a solid cover or moving ice in the winter, and melting in the spring. The Siku Atlas contains detailed knowledge on sea ice. A group of Inuit experts, community researchers, and university researchers, have worked together over the past several years to document specialized Inuit knowledge about sea ice. Although things have changed with most Nunavummiut (people of Nunavut) living in communities now, sea ice continues to be an important part of northern life and culture.

Sea ice is a fundamental feature of the polar environment; it is also one of the most tangible indicators of change in the Arctic. During the last two decades, and in the past several years in particular, both polar scientists and local Inuit residents have detected important shifts in the extent, timing, dynamics and other key parameters of arctic sea ice. The Inuit Sea Ice Use and Occupancy Project (ISIUOP), which builds on previous sea ice research in Nunavut and Nunavik communities (for the past 4 – 8 years), works to further document and map local sea ice expertise. Conventional maps show terrestrial variations and features in great detail, while water bodies are outlined and left "blank." Therefore, inspired by the Inuit Land Use and Occupancy Project of 1976, ISIUOP has undertaken collaborative investigations to document and map sea ice knowledge and use around several Inuit communities.

## 2.6. Lake Huron Treaty Atlas



Screenshot of interactive "Lake Huron Treaty Atlas"

## 2.6. Lake Huron Treaty Atlas

The Lake Huron Treaty Atlas builds on the Treaties Module of the Living Cybercartographic Atlas of Indigenous Perspectives and Knowledge by continuing to tell the story of the Lake Huron Treaty negotiation, signing and survey processes through collaboration with Anishinaabe community members from the Lake Huron Treaty region, researchers, technical specialists and other community members. The atlas takes a two-pronged approach involving Anishinaabe approaches to understanding and knowledge gathering, and critical academic approaches (including critical cartography) that are explicitly critical of colonialism and the worldview that supports it. The atlas gives back knowledge to the community through a series of geonarrative maps and evolves in an iterative way over successive funding phases.

Over the past seven years, the Treaties Module has grown into an Atlas project devoted to understanding the history and geography of the Lake Huron Treaty region and beyond, and it continues to include a variety of perspectives and different contexts across time and space. The central aim of this Atlas project is to contribute to increased knowledge and understanding of relationships through collaborative mapmaking processes.

## 2.7. Pan Inuit Trails Atlas

Pan Inuit Trails Introduction Maps About Login

Introduction





View the Atlas

Begin your exploriation of the Pan
Inuit Trails Atlas



About the Atlas

Learn what is unique about the Atlas, find instructions on how to navigate it, and learn more about the significance and implications of the research contained within it.

Made with Nunal

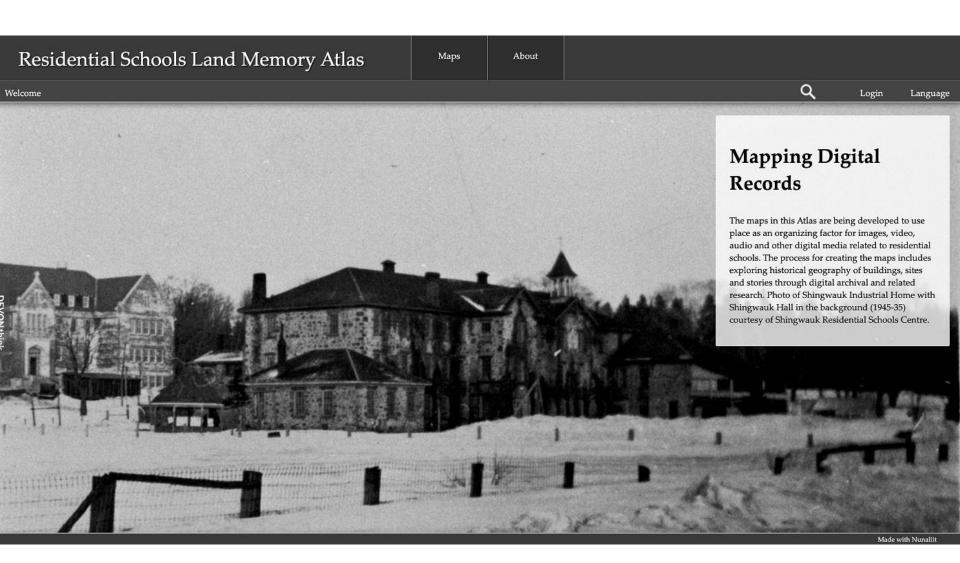
Screenshot of interactive "Pan Inuit Trails Atlas"

#### 2.7. Pan Inuit Trails Atlas

The Atlas provides a partial, synoptic view of Inuit mobility and occupancy of Arctic waters, coasts and lands, including its icescapes, as documented in written historical records (maps of trails and place names). The documents that form the foundation of this Atlas consist of both published and unpublished accounts of Inuit engagement with cartography during the 19th and 20th centuries. All documents are held in public libraries or archives. The focus of the Atlas in this initial project is on material from the Eastern and Central Canadian Arctic. Delineations of trails and place names play a critical role in documenting the Inuit spatial narratives about their homelands. To show where these trails lead and connect to other trails, the historical records used in making this Atlas are being relationally linked, referenced geospatially, and displayed on a base map.

Viewers can also explore the source maps to understand better how this dynamic network of trails, part of the fabric of Inuit territory and history, has been mapped piecemeal by explorers, missionaries, and scientists in the course of cartographic encounters. What is too often lost, however, is a sense of the bigger picture, the territorial coherence of the Inuit people over Arctic waters. It is hoped that the Atlas can be further developed in subsequent phases to present material of other Inuit groups such as the Inupiat, Inuvialuit, and peoples of Nunatsiavut (Labrador) and Nunavik. These largely encompass and exceed the scope of the hydrographic mapping surveys that have taught generations of students to envision Inuit Arctic waters through the more limited vision of Northwest Passage routes.

## 2.8. Residential Schools Land Memory Atlas

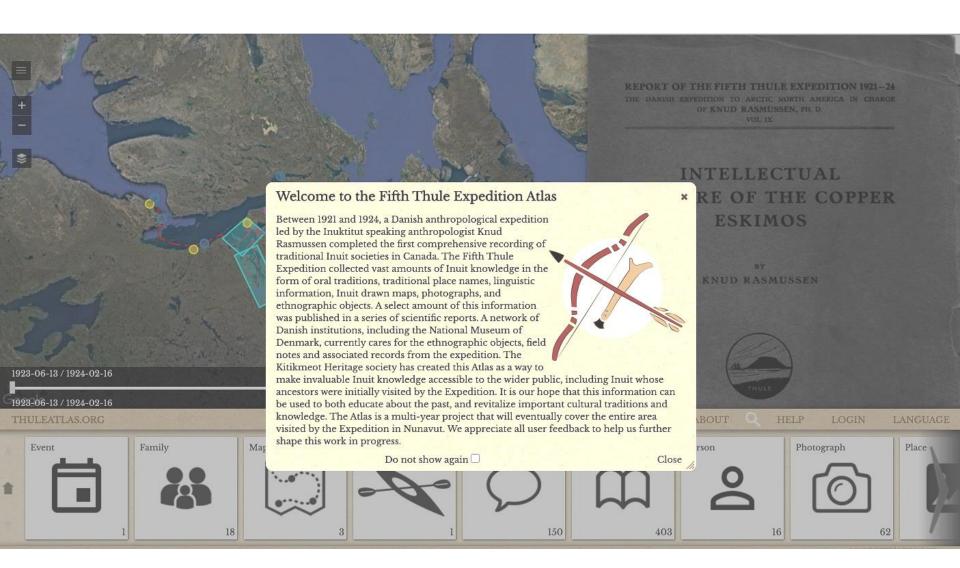


Screenshot of interactive "Residential Schools Land Memory Atlas"

## 2.8. Residential Schools Land Memory Atlas

The Residential Schools Land Memory Atlas is the digital aspect of a five-year project funded by the Social Sciences and Humanities Research Council (SSHRC). The project emerged from collaborative research in partnership with the Shingwauk Residential Schools Centre (SRSC) to create the cybercartographic Lake Huron Treaty Atlas. This atlas involves a specific focus on residential schools and aims to enrich knowledge and education relating to Residential Schools, their sites and Survivors' perspectives, expanding research, education and community networks, increasing awareness of critical approaches to cartography. Work under the project to develop this atlas has involved a cybercartographic approach to the collaborative creation of maps that incorporates both archival and experience-based knowledge of the schools and their sites; involving a broad base of collaborators with distinct tasks and functions in collaborative processes related to cybercartographic atlas development; creating and using cybercartographic map strategies for organizing and documenting the project; this atlas project provides an opportunity to build on previous work in a number of significant areas, including involvement of a broader range of collaborators in both online and "on the ground" cybercartographic mapping; map enrichment as the result of input by a diverse range of contributors; special interest in Residential School buildings and their sites. The Atlas builds on theoretical and methodological developments in Cybercartography. It takes a holistic approach that is consistent with Indigenous worldviews. This relationship-focused approach involves: reciprocity, engaging people in the production of maps to tell the stories they wish to tell, and giving these stories back to communities for education and further input.

#### 2.9. Thule Atlas



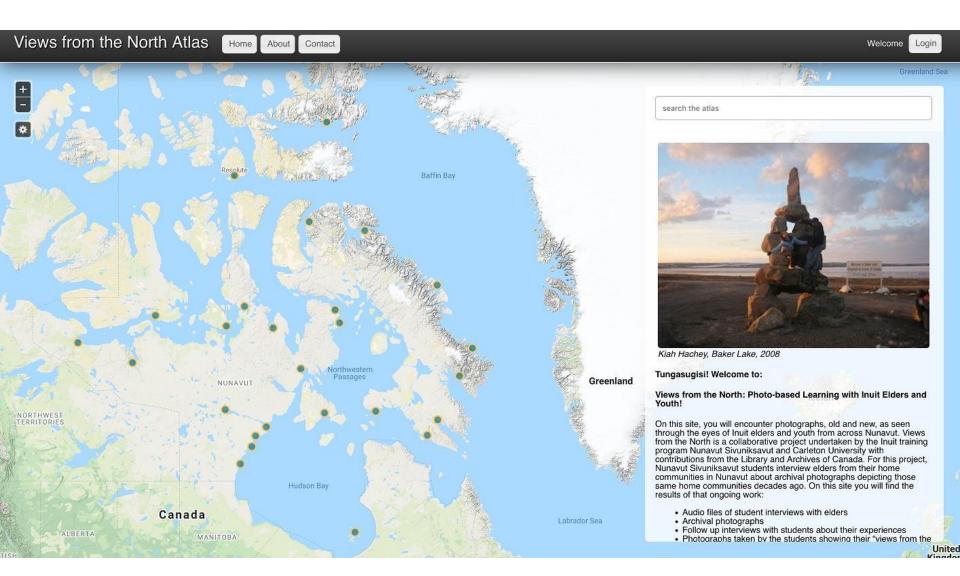
Screenshot of interactive "Thule Atlas"

#### 2.9. Thule Atlas

The Kitikmeot Heritage Society has been in operation as a registered charity and non-profit organization in Nunavut since 1996. It has built local desires for cultural and educational programming into a combined heritage centre, library, archives and museum that is dedicated to setting new standards for community-based research in Nunavut. The KHS is recognized both nationally and internationally as a model for the integration of social, cultural and academic research and promotes a mandate of preserving, promoting and celebrating the history, culture, language and diversity of Inuit throughout both the Kitikmeot and Nunavut as a whole with projects that range from community-oriented research and cultural revitalization programs to initiatives that manage knowledge and create capacity at a territorial scale.

Between 1921 and 1924, a Danish anthropological expedition led by the Inuktitut speaking anthropologist Knud Rasmussen completed the first comprehensive recording of traditional Inuit societies in Canada. This expedition occurred during an era when many Inuit still adhered to a pre-contact and pre-Christian worldview and material lifestyle. The expedition collected vast amounts of oral traditions, traditional place names, linguistic information, Inuit drawn maps, photographs, and ethnographic objects, currently held at the National Museum of Denmark, located in Copenhagen. KHS is building an innovative digital research tool to allow users to discover Inuit knowledge and materials by virtually re-navigating the expedition's travel route. Expedition fieldnotes, data and collections will be geo-located and search-able according to mapped culture areas, regional groupings, and camp locations. Users are able to access various forms of archived knowledge linked to these places, including recorded oral traditions and songs, photos of individuals, historical photos and modern photospheres of places visited by the Expedition, digitized field notes, Inuit-drawn illustrations and maps, imagery of artifacts and descriptions of ethnographic objects.

## 2.10. Views from the North



Screenshot of interactive atlas "Views from the North"

#### 2.10. Views from the North

The Views from the North atlas displays photographs, old and new, as seen through the eyes of Inuit elders and youth from across Nunavut. Views from the North is a collaborative project of photo-based learing undertaken by the Inuit training program Nunavut Sivuniksavut and the Carleton University with contributions from the Library and Archives of Canada. For this project, Nunavut Sivuniksavut students interview elders from their home communities in Nunavut about archival photographs depicting those same home communities decades ago.

On this site you will find the results of that ongoing work, comprising audio files of student interviews with elders, archival photographs, follow up interviews with students about their experiences and photographs taken by the students showing their "views from the north."

#### 3. List of slides and references

Slides 1, 5 -24: from https://gcrc.carleton.ca/index.html?module=module.gcrcatlas\_atlases

Slide 28: photo archive D. R. Fraser Taylor

Slide 28: photo archive Romola V. Thumbadoo

Slide 28: photo archive Alexander Wolodtschenko

#### **Selected publications:**

Taylor, D. R. F., (Ed.) (2005). Cybercartography: Theory and Practice, Volume 4. Amsterdam: Elsevier Taylor, D. R. F., (Ed.) Anonby, E., Murasugi, K. (Associate Editors). (2019) Further Developments in the Theory and Practice of Cybercartography: International Dimensions ad Language Mapping Volume 9. Elsevier, Amsterdam

#### **Selected web addresses:**

https://gcrc.carleton.ca/index.html?module=module.gcrcatlas\_atlases

https://atlas-semiotics.jimdofree.com/bild-atlantothek/

http://www.semiotik.eu/Oeko-und-Kartosemiotik

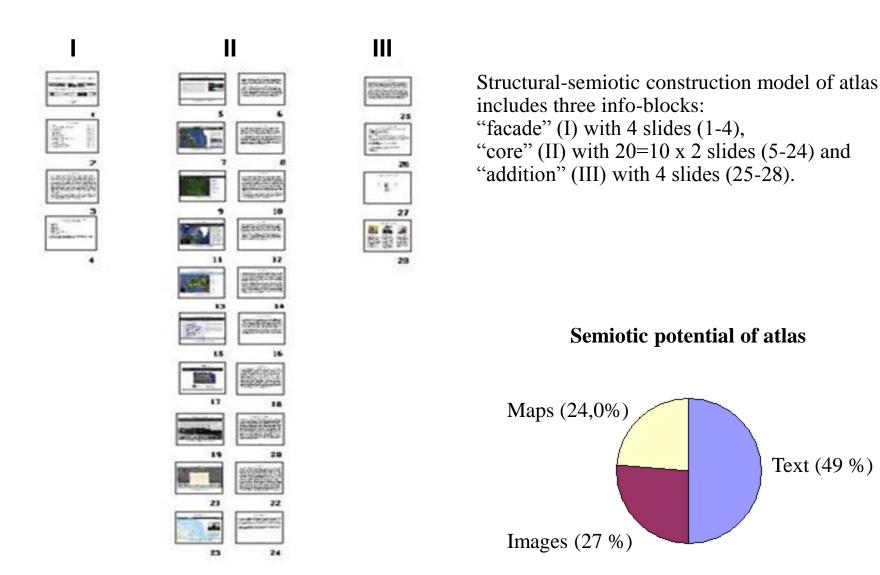
D. R. Fraser Taylor, Romola V. Thumbadoo and Alexander Wolodtschenko

10 Selected Indigenous Cybercartographic Atlases

**Photoatlas** 

Dresden-Ottawa 2021

## 4. Slide profile and semiotic potential



## **5.** About the authors of photoatlas



D. R. Fraser Taylor, professor, dr.
Founder and director of Geomatics and Cartographic Research Centre (GCRC),
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Carleton University, Canada.
ICA President (1987-1995).
He is the author of Cybercartography-Concept (1997) and editor of "Cybercartography" (2005, 2019).



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Author of ca. 150 photoatlases.