102 Winter 2025-26
hiver 2025-26

CARTOUCHE

CANADIAN CARTOGRAPHIC ASSOCIATION

50th
Anniversary
Edition
Édition du
50e
anniversaire

Winter 2025-26
Hiver 2025-26

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Canadian Cartographic Association
l'Association canadiene de cartographie

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Terrain Map from Previous Cartouche Cover sourced from Roger Wheate

Cartouche content compiled and edited by Stephanie Pyne; Further Editing and Layout by Marikka Williams

Cartouche is the Association's annual publication, featuring updates by the executive committee, news about conferences and events, member submitted articles and much more. CCA members receive Cartouche as part of the membership. Current versions are sent directly to members, and past editions are added to the website: https://cca-acc.org/cartouche

PRESIDENT'S MESSAGE

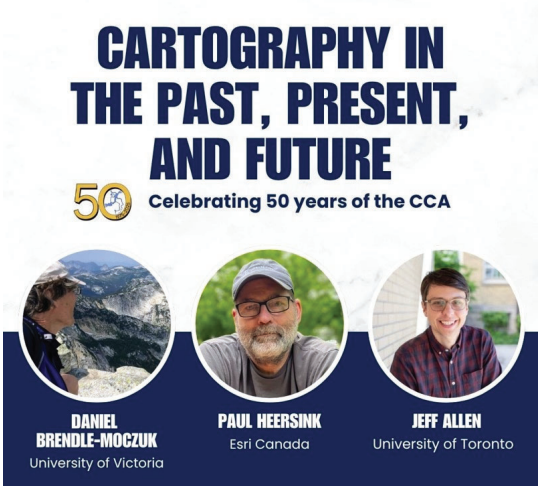
Paul Heersink

Industry Manager
Esri Canada

It is an honour and a privilege to serve as President of the Canadian Cartographic Association—especially as we mark our 50th anniversary this year. This milestone offers a meaningful moment to reflect on where we've come from, where we are now, and where we hope to go. Although I have not been part of the CCA for the entire half-century of its existence, I have been connected to this community since 1998, when I was a cartography student at Sir Sandford Fleming College. Since then, I've attended 14 CCA conferences, including the most recent one in Ottawa, held in conjunction with the Canadian Association of Geographers. This conference, much like the others I attended, was filled with thoughtful presentations, engaging conversation, and that warm sense of collegiality that has always been part of our association's culture.

As I step into this role, I would like to share some of my thoughts on the association that I've formed over my time with the CCA.We like getting together. One of the defining strengths of the CCA has always been the sense of community. Whether in-person at conferences or online in more recent years, we genuinely enjoy each other's company. Our gatherings are spaces where people are not only willing but eager to share their work, exchange ideas, and encourage one another. Maintaining and nurturing these connections is something we should never take for granted.

We are a small organization—and our numbers are slowly dwindling. It's no secret that the CCA is a relatively small association. Over the years, our membership has gradually declined, a trend that mirrors what many similar volunteer-driven associations are facing. This is not necessarily a cause for alarm, but it is a call to action. We must consider how to stay relevant, how to draw in younger members, and how to demonstrate the continued importance of cartography in a world awash with digital maps and spatial data.



Technology has changed—but the need for cartography has not. The tools of our trade have evolved dramatically since the CCA was founded in 1975. From drafting tables to digital design, from paper atlases to interactive web maps, technology has transformed how maps are made and shared. Yet the core need for cartography remains unchanged. People still require maps that are accurate, clear, informative, and compelling. Our role as cartographers is just as vital as ever, perhaps even more so as we navigate an age of information overload and spatial complexity.

We are all busy—and we need to talk more about what we do. Our members come from academia, government, private industry, and beyond. We are researchers, teachers, analysts, designers, and students. We are doing fascinating, diverse work—but often in isolation from one another. If we want to inspire the next generation, support our peers, and build public awareness of cartography, we need to talk more about what we do and how we do it (even if the work we are doing is unfinished or our thoughts half formed).

Cartouche, Cartographica, our conferences, our website and our social media are all tools we can use more effectively to showcase the talents and contributions of our members. Following up on the last point, we ALL need to promote ourselves—and our profession and association—more. The CCA has always been a relatively low-key organization. That humility is part of our charm, but it may also be holding us back. We need to get better at telling the story of cartography—why it matters,

how it shapes our understanding of the world, and what makes it a meaningful and creative discipline. That means promoting not just the CCA as an organization but also the work that each of us do. Whether through public talks, teaching, writing, or simply sharing our work online, we all have a role to play in raising the profile of our profession. .

The 50th anniversary is a perfect moment to celebrate the legacy of the CCA and to renew our commitment to its future. I look forward to the year ahead, to hearing from more of you, and to working together to ensure that cartography—and our community—continues to thrive.

Paul HeersinkPresident
Canadian Cartographic Association
pheersink@gmail.com

PAST PRESIDENT'S MESSAGE

Glenn Brauen

Associate Professor, Teaching Stream
in the Department of Human Geography
at the University of Toronto Scarborough

I transitioned to the role of Past President after the 2025 AGM, and welcomed Paul Heersink (past Vice-President) as our new President. Ted MacKinnon's role as Past President also ended at this time. Ted is continuing to support the website and Membee, our subscription-based membership management application. Thanks to Ted for all of his contributions to the association and, in particular, his efforts to help CCA take our conferences online from 2020-22 during the pandemic.

CCA's 2025 Annual Conference and General Meeting, which was a two-day track at Confluence held jointly with CAG, was an excellent meeting. CAG and CCA organized separate but related calls for abstracts and sessions, the latter being unusual for us because of our practice of organizing single-track conferences. Where possible we co-wrote shared text for the conference theme and promotional emails.

The CAG local organizing committee hired an event planner who offloaded much of the organizing work. CCA shared the event organizer's fees but at a lower fee tier, which was generously offered by the CAG organizing committee based on its understanding that, when organizing on our own, CCA tends to take a more DIY approach to organizing. With the larger numbers at a CAG conference, that would have been too burdensome.

Thanks to the following organizers (plus others helping to sort presentations into multiple tracks / sessions):

- Scott Mitchell (Chair)
- Peter Pulsifer (Program Chair)
- Pablo Mendes
- Dipto Sarkar
- Kristen Allen
- Chantelle Verhey, Volunteer Coordinator
- Glenn Brauen
- Thomas Herbreteau
- Paul Heersink
- Stephanie Pyne

Thanks also to Niesa Silzer, Details Convention and Event Management. Between the 2024 and 2025 AGMs, the CCA executive committee focused on the following new priorities:

- Recruitment into the executive,
- Solidifying communication to the membership, and
- Refining membership renewal.

The following new executive committee members were approved at the AGM:

- Yegane Vahidi - Communications co-lead
- Jessica Murdoch - Communications co-lead and website
- Jamison Cooper-Leavitt - Membership coordinator
- Juliette Bricker - Student Representative

We also have some remaining open positions on the executive (see Executive List later in this issue).

We purchased a subscription to Membee in 2023 and membership renewals for 2024 were completed using this system. Although Membee intrinsically sends emails to members, we did not initially use it for informational emails, limiting its use for member renewal. During 2024, informational messages being sent via phpList, the email campaign system we were using, seemed to suffer noticeable, if not high, rates of being rejected or marked as spam by a growing number of email systems. This inhibited our ability to communicate to members and undermined our confidence in the system and prompted us to experiment with using Membee's email facilities for more of our communications. Any messages you see now coming from info@cca-acc.org were sent by somebody using Membee's facilities. It seems these messages are successfully reaching members.

Although Membee provides a method for the CCA to distribute association news and personalized membership reminders, we continue to look at options for member-to-member communication. Yegane Vahidi and Jessica Murdoch, our communications co-leads, are working together to create and post content to CCA's LinkedIn and Instagram accounts, keeping those channels looking fresh, and have started to gather a small group of followers on those platforms. Thanks, Yegane and Jessica, for sharing association news. For more refer to these links: https://www.linkedin.com/company/the-canadian-cartographic-association-cca and https://www.instagram.com/cca_acc_org/.

Although the CCA-list email listserve is still running, it is very lightly used with many people no longer being sure what email address they used to subscribe to it. To send to it, you need to know this because you must be subscribed to it to send a message through the list. The list runs on a server at UBC, having been established there when Brain Klinkenberg was CCA President (1998), but the contacts who had helped us maintain the list over the years have retired. Happily, at the 2025 AGM, Luke Bergmann, Department of Geography UBC, offered to look into CCA-list and is now helping us to once again maintain and monitor subscriptions on this list. Not strictly a member's email list, CCA-list offers a channel for members and anyone interested in cartography to share and follow news. For more info: https://cca-acc.org/membership/listserver.

The association's support for member-to-member communication concerning items of interest could be improved. Differences of opinion concerning which services or platforms we should be on and the fragmentation of social media spaces mean that the choice of which platforms / channels / media we should put energy into are not obvious. As always, if you have feedback on how we are communicating with members, please send email to any member of the executive.

Through April 2025, CCA held an online vote to decide if we should switch membership renewals to the anniversary of the date on which a member joined the association instead of always selling Calendar year memberships. The vote was strongly in favour of moving to rolling anniversary renewals (Yes: 30 / No: 1). We have updated our constitution and by-laws to make the change and are moving ahead with rolling anniversary memberships.

We received more President's Prize entries this year than we have in recent years, with six entries for each of the College and University categories and one entry for the Carto-Québec Prize. The display of maps adjacent to the Confluence 2025 poster gallery drew a lot of interest. The quality of the competition was very high, impressing many viewers. We also received one entry for the Web Map competition. See the separate item in this issue for more information about the 2025 map competitions.

I have enjoyed my time as President and Vice-President and look forward to continuing to help where needed. Many thanks to all of you, the association membership, for making CCA a friendly, interesting and fun venue in which to promote the creation and use of maps, focusing on developing skills and supporting each other's interests. To all members of the executive, thank you for your enthusiasm, advice and efforts during my term!

Glenn Brauen
President
Canadian Cartographic Association
glenn.brauen@utoronto.ca

CCA Treasurer's Report for 2024

Andy Black

This is a summary of the CCA annual financial report for 2024, presented at our AGM in May 2025. The full report was sent out to members. Copies may be requested at cancartassoctreasurer@gmail.com. CCA was in good financial shape at the end of 2024. We had total assets of about $59500 including cash of around $14000. The tables below include columns for the three previous years for general comparison. Please note that some comparisons are less exact due to differences in calculation methodology, as indicated in the footnotes. Over the last few years, we have generally stayed close to break even on an

Canadian Cartographic Association
Statement of Revenue and Expenditures
December 31, 2024

Association-Specific Revenue and Expenses[1]

Association Revenue	**2024**	**2023**	**2022**	**2021**
Membership fees (balance of year)	$6,361[2,3]	$11,0313	$6,402	$6,741
Membership/conference fees (2023 transfer from ACMLA)	$6,002[2]	$1,380	$378	$2,020
Conference Support (in 2024 from Univ of Toronto)	$600	$0	$0	$0
Interest received CCA-specific term deposits	$0	$2619	$793	$3,440
Total Association Revenue	**$12,963**	**$15,030**	**$7,573**	**$12,201**
Association Expenditures	**2024**	**2023**	**2022**	**2021**
Cartographica distribution	$2,207	$5,399	$3,480	$3,347
AGM Travel for Executive (2021-22 Online only)	$3,414	$2,165	$0	$0
Website expenses (hosting and domain)	$524	$605	$0	$36
Conference expenses	$4,888	n/a	$525	$4,632
Bank service fees[4]	$219	$327	$132	$157
Membership in ICA for 2 years (shared with CIG)	$0	n/a	$457	$0
Administrative/Office Expenses	$311	$226	$76	$958
Student Awards – President's prize, Webmap, Presentation	$750	$750	$1,500	$1,000
Association Management – Membee license	$1,329	$1,329	-	-
Accountant, for business income tax filing	$1,452	$1,000	-	-
Total Association Expenditures	**$15,094**	**$11,801**	**$6,170**	**$10,130**
Excess of Association revenue over expenditures	**- $2,131**	**+ $3,229**	**+ $1,403**	**+ $2,071**

Notes:

1. Association-specific revenues and expenditures are those revenues and expenditures dedicated to the running of the organization and are not designated to other funds such as Student Awards.
2. Net after Stripe service fees of approximately 3%.
3. The change to Membee shifted membership renewals into the prior year starting in 2023. This continued in 2024.
4. Bank service fees: not including Stripe processing fees (approximately 3% on each transaction).

annual basis, while investing in the activities and growth of the association.

In 2024, while we gained assets due to unrealized interest in our GICs (~$1900), on an Operating Basis, we lost about $2100 on overall revenue of about $13000 despite only publishing Cartographica twice (at about $1100 per issue) compared with 5 times in 2023. Higher conference and travel costs account for some of the difference from 2023; and, starting in 2023, membership renewals have mostly shifted earlier due to when Membee sends renewal reminders. This caused a bulge in 2023 membership revenue, which returned to normal in 2024.

On the bright side, thanks to Glenn Brauen's initiative, the University of Toronto Scarborough Campus provided CCA with a grant of $2248 to support our 2024 conference. This was received in 2025, so is not reflected in this 2024 Financial Report. However, if included, we would have had a +$100 year, plus interest on our GICs.

Membee has been a valuable time-saving investment and well worth the cost. It simplifies issuing renewal notices, receipts, and keeping track of financial information.

Thanks to Byron Moldofsky for a smooth and complete handover of the Treasurer role. His excellent record-keeping and complete files made the transition easy. I have big shoes to fill. I also want to thank the members of the executive, especially Glenn Brauen and Byron Moldofsky, who have welcomed me to the fold and facilitated the transition. It is a pleasure to be working with the entirety of the CCA.

Andy Black
Treasurer
Canadian Cartographic Association
cancartassoctreasurer@gmail.com

Canadian Cartographic Association
l'Association canadiene de cartographie

Canadian Cartographic Association Awards of Distinction

The Canadian Cartographic Association (CCA) Awards of Distinction program was initiated in 1994 to help recognize individuals or groups who have made exceptional contributions in the field of Cartography in one of three categories:

1. Exceptional professional contributions to the practice of cartography
2. Exceptional scholarly contributions to cartography
3. Roger Wheate Award of Distinction for Exceptional Contributions to the Canadian Cartographic Association.

Nominations for future awards may be forwarded by any CCA member to the *Past-President or any member of the CCA Executive*, refer to page 42 of this issue or https://cca-acc.org/about-us/contact-us

Note: Awards of Distinction are not necessarily awarded every year.

Visit the *CCA website* *at* https://cca-acc.org/about-us/awards-of-distinction to view lists of all the distinguished recipients from over the years, as well as links to other CCA awards and scholarships.

CCA Annual General Meeting

May 22, 2025

Stephanie Pyne CCA Secretary

The CCA held its 2025 Annual General Meeting (AGM) on May 22, 2025, 12:00 PM EDT (9:00 AM PDT; 1:00 PM ADT) during CCA2025. The meeting was attended both in-person at CCA2025 (Carleton University) and online via Zoom. Full minutes are available at https://cca-acc.org/membership/agm

Welcome and Reports from CCA President

Glenn Brauen

Glenn welcomed members and provided a summary of the CCA 2025 conference held jointly with the Canadian Geographic Association (CAG) at Carleton University, May 21-22. In addition to thanking organizers and volunteers, Glenn compared this conference with the previous conference held in May 2024 at University of Toronto (Scarborough). A discussion with the membership followed on conference, membership and other issues.

Treasurer's Report and Summary of Finances

Andy Black

Andy thanked Byron Moldofsky for his assistance in transitioning materials to Andy as the new treasurer, and reviewed the Treasurer's Report that was shared with the membership. Andy commented that the CCA is financially in good shape and that Membee is working well so far. A brief discussion with the membership followed.

Cartographica

Stephanie Pyne

Stephanie reviewed a slide deck, which was shared with the membership, that provided some information on recent journal contents and circulation.

50th Anniversary Projects

Stephanie Pyne

- Stephanie Pyne announced planning for Cartouche issue 102, the publication's 50th anniversary edition, and put out an open call for submissions.
- Marikka Williams indicated that, in her role as Cartouche co-editor, she would be designing the cover and formatting the layout for the 102 edition.
- Roger Wheate reported on the completion of the digitization of Cartouche issues, which will be added to the collection on the CCA website.

Membership

Jamison Cooper-Leavitt

Jamison reviewed the membership report, which was shared with the membership, and made some comments. A discussion among the membership followed.

Changes to CCA Executive Committee

Glenn Brauen

Glenn provided an update on Executive Committee changes, and a motion was moved by Luke Bergmann, seconded by Byron Moldofsky, and carried for changes since the 2024 AGM, including changes made at the AGM 2025. Glenn made some remarks about his time in the executive and thanked the executive for support (see Past President's Column). Glenn also announced the two open executive committee positions:

- Vice President
- History of Cartography Interest Group Chair

International Cartographic Conference 2025

Julia Siemer

Julia talked about ICC2025 and encouraged CCA members to attend the conference in Vancouver.

Upcoming Conference Discussion

Suggestions for the CCA 2026 venue were discussed by the membership, including the possibility of an eastern province and a joint conference with the Geomatics Association of Nova Scotia (GANS).

Awards

Glenn Brauen

Glenn commented that the Student Map Competitions & Best Paper Awards were still in the judging stage. Glenn also presented Dr. Julia Siemer with the Roger Wheate Award of Distinction for Exceptional Contributions to the Canadian Cartographic Association for her exceptional contributions to the Canadian Cartographic Association as a long-time member of the executive, as an enthusiastic participant in association activities, and as CCA's delegate to ICA. Association as a long-time member of the executive, as an enthusiastic participant in association activities, and as CCA's delegate to ICA.

Closing Remarks and Adjournment

Glenn Brauen

Glenn thanked everyone for attending and adjourned the meeting adjourned at 2:20 p.m

Award of Distinction

Julia Siemer: Award of Distinction for exceptional contributions to the Canadian Cartographic Association presented by Glenn Brauen

Julia Siemer has made exceptional contributions to the Canadian Cartographic Association as a long-time member of the executive, as an enthusiastic participant in conferences, and as a CCA's delegate to ICA. Julia Co-Chaired the Organizing Committee for Prairie Summit 2010, the joint Annual Meeting and Conference of the Canadian Association of Geographers (CAG), the Canadian Cartographic Association (CCA), the Canadian Geomorphology Research Group (CGRG) and the Canadian Remote Sensing Society (CRSS), University of Regina. A well attended and successful conference that I remember well. From there, Julia immediately entered the CCA executive as interest group chair for map use, design, and education interest groups from 2010-2014. The IG names shifted a bit during her tenure while CCA experimented with different IG organizations but she seems to have shifted her focus, at least in this role, from the map use to enthusiastically supporting the student mapping competitions. In 2014, Julia became CCA's Vice President, completing a 2 year term before assuming the presidency of the association from 2016-2018. After completing 2 years as Past President, Julia stepped away from the executive briefly. After a well deserved break, in 2023 Julia became CCA delegate to the Canadian National Commission of the ICA, a role she continues to fulfill, and this year, with the International Cartographic Conference in Vancouver, Julia is coordinating the Cartographic Exhibition for the conference.

In my experience, Julia has been a exemplary participant in association activities, enthusiastically participating at conferences, taking on tasks to promote mapping in Canada and to support the activities of the association. Within the executive, she offers thoughtful advice and willingly takes on time consuming tasks such as helping us to update the association constitution in 2020. It is my pleasure to award Julia with the Roger Wheate Award of Distinction for Exceptional Contributions to the Canadian Cartographic Association including Executive roles as follows:

2010-2012: Map Use & Design IG
2012-2013: Mapping & GIS Education
2013: Education
2014-2016: Vice president
2016-2018: President
2018-2020: Past President
2023-present: ICA Delegate
2024-present: Coordinator, National Map Exhibit

Photo of Julia Siemer receiving the Roger Wheat Award of Distinction for Exceptional Contributions from outgoing President, Glenn Brauen.

Overview of CCA 2025

Conference Event Summary

Stephanie Pyne and Yegane Vahidi

Figure 1. Carleton University, Ottawa, Ontario. Photo by Yegane Vahidi

This year the Canadian Cartographic Association (CCA) in collaboration with the Canadian Association of Geographers (CAG) hosted its 50th Annual Conference from May 21 to 22 at Carleton University. The joint conference with CAG celebrated the theme "Confluence" referencing the meeting of three rivers in Ottawa, Rideau and Gatineau to symbolically represent the convergence of disciplines, perspectives and mapping practices. Participants submitted a diverse set of abstracts and delivered great presentation sessionsBusiness of Cartography and concluded with a CCA Executive Meeting. A full list of presentation titles and their presenters can be found on the CCA website at the following link: https://cca-acc.org/conferences/2024-cca-conference-program

Many thanks to the presenters, to those who volunteered in the roles listed in the President's Message and to the people who supported the conference by chairing or moderating sessions, and to the attendees! The conference could not happen without your support. We were honored to join CAG in welcoming Justin Roy, Councillor and Director of Economic Development for Kebaowek First Nation, as the keynote speaker on Day 1 of the CCA conference track. His presentation, "Protecting Water, Asserting Rights: Kebaowek First Nation's Journey" educated delegates about threats to water security of Kebaowek First Nation "due to the proposed Near Surface Disposal Facility (NSDF) for nuclear waste at Chalk River, upstream on the Ottawa River – a place of great cultural and ecological importance". On Day 2, we were privileged to have Martin Gamache, Chief Cartographer at the National Geographic Society, deliver a keynote address on "Current Cartographic Efforts at the National Geographic Society", which included descriptions of progress on the Cartographic Database of the world V2 and a custom relief tile set for web mapping developed using Eduard software. Several recent maps were presented, including a map of Ukraine and of Mt. Logan, and examples were provided of how his work supports the Society's Explorers and Storytellers. CCA sessions were well attended, with the Maps, Memory and the Digital session spanning across two sessions. Other CCA sessions included, Environmental and Urban GIS, Place-making and Mapping: Historical and Literary, AI and Spatial Data, and Cartographic Projects and Methods, and the CCA and Canadian Cartography 1975-2025 and D. R. Fraser Taylor's Work and Legacy.Social events were well attended by both CAG and CCA members, and included an informal pub dinner at the Lowertown Brewery in Ottawa's historic Byward Market. The Poster and Map Gallery was set up in Teraanga Commons, with a visit and discussion held on May 22. The CCA's AGM was held during lunchtime on the second day of the conference. It was well-attended and Julia Siemer was presented with the Roger Wheat Award of Distinction for Exceptional Contributions by outgoing President, Glenn Brauen.

Figure 2. Map Gallery in Teraanga Commons. Photo by Yegane Vahidi

CCA Student Map Competitions 2025

President's Prize Map Competition

The CCA President's Prize recognizes excellence in student map design and is open to all students at Canadian post-secondary institutions who have completed and produced a cartographic thematic map during the preceding school year.

2025 President's Prize (College or CEGEP)

Awarded to: **Deanne Watts**

The 2024 college-level / CEGEP award was presented to Deanne Watts, Centre of Geographic Sciences (COGS) [Map Title: "Walking with Ghosts: A Walking Tour & Guide to Halifax's Greatest Haunts"] (see Figure 1).

Figure 1. 'Walking with Ghosts: A Walking Tour & Guide to Hallifax's Greatest Haunts' Deanne Watts You can view a higher resolution image at this link https://cca-acc.org/about-us/awards-prizes-and-scholarships/presidents-prize.

2025 President's Prize (University)

Awarded to: Caroline Kuhn

The 2025 university-level / CEGEP award was presented to Caroline Kuhn, University of British Columbia [Map Title: "Elementary Schools: Demand and Capacity"] (see Figure 2).

2025 Web Map Award

Awarded to: Laurence Jang

The 2025 Web Map award was presented to Laurence Jang, University of Toronto Scarborough [Map Title: "10 Years at the Toronto Public Library"] (see Figure 3).

2025 Canadian Cartographic Association Best Student Paper / Presentation

Awarded to: Emily Mills

The Best Student Presentation award for the CCA sessions at Confluence 2025 was presented to Emily Mills, Brock University, for her presentation entitled "Mapping Ann-Marie MacDonald"(see presenttion summary starting on the next page of this issue of Cartouche) (refer to page 21-24 for student presentation summary)

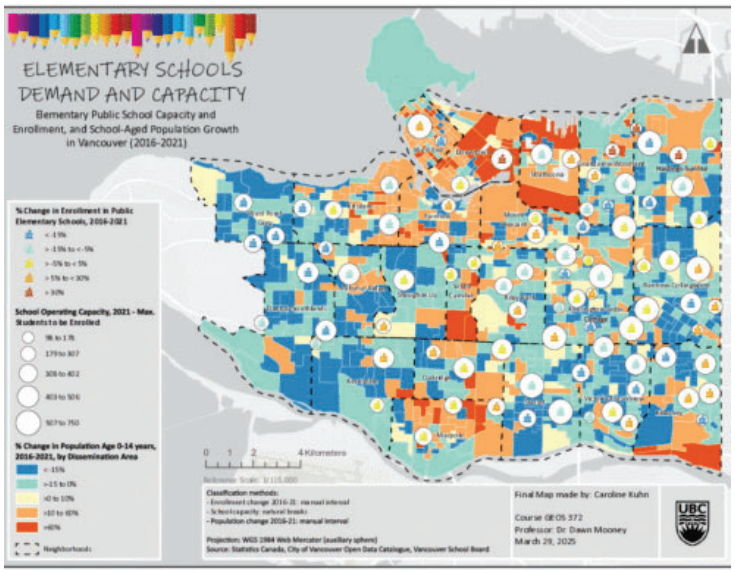


Figure 2. 'Elementary Schools: Demand and Capacity' C Kuhn.

For more details see 2025 Student Competition Winners at cca-acc.org/2025-student-competition-winners.html or access web page with QR Code

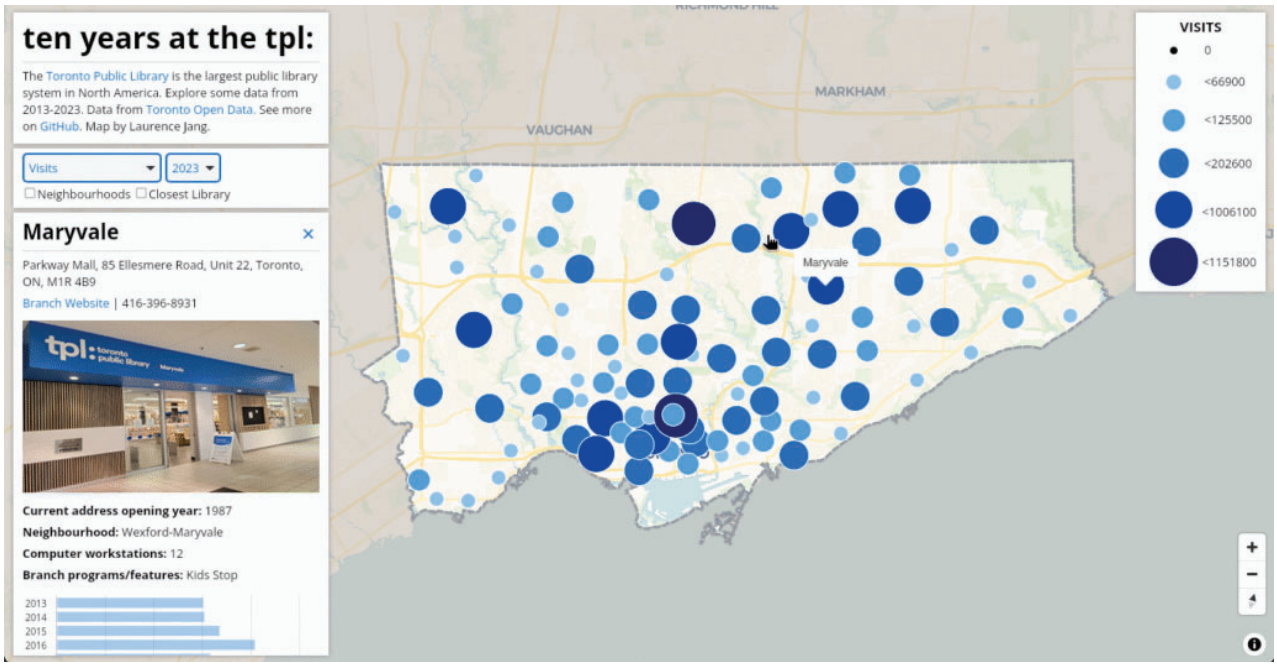


Figure 3. '10 Years at the Toronto Public Library"' Laurence Jang.

CCA 2025 Presentation Summaries

The CCA and Cartography/GIS 1975–2025

Roger Wheate, *Professor UNBC*

This article is based on a presentation at the joint CCA-CAG 'Confluence' conference, Ottawa, May 2025, celebrating the CCA 50th and CAG 75th anniversaries. I identify the 50 years of the CCA by decade along with the associated developments in Cartography and Geomatics, which helped drive those changes.

1975-1984: Formation and Growth

The co-founders of the CCA in 1975 were Louis Sebert and Bernard Gutsell. Louis Sebert (1916-2002) was a classic surveyor/cartographer, ground surveying many map sheets of Northern Canada and the Arctic for our first NTS maps (1945-81). He authored many articles and classic books including "The Maps of Canada" (1981) and "Mapping A Northern Land" (1999). He loved maps, life and the landscape, and was an early ACMLA President. His founding motivation for the CCA was that Cartographers needed their own association beyond a subset of the Canadian Institute of Surveying. Bernard Gutsell (1914-2020) was a Cartographer / Geographer / Publisher working for the Federal Geographic bureau, 1948-65, then a Professor of Cartography at York University, 1965-79. He was the founder/editor of The Cartographer (Canadian Cartographer) which then became Cartographica. His motivation was more pragmatic: His journal needed a home.

In spring 1975, ~300 people responded to a survey on a proposal for a cartographic association, mailed out by Lou Sebert, with a proposed annual membership fee of $10. The CCA would be for anyone with an interest in maps, not just professional cartographers. Early membership numbers were at a similar number (source: Canadian Cartographer, 12(2) June 1975). The Canadian Cartographic Association was officially founded in Ottawa, in October, 1975, at an inaugural meeting with 82 members present; Janusz Klawe (U. Alberta) was elected as the first president; he had also been instrumental in the founding of the ICA in the 1950s. The CCA logo was designed by Henry Castner (see Cartouche 60, 2005). The Canadian Association of Geographers (CAG) had a similar origin in 1950, and was organised by a committee of nine, which included Bernard Gutsell and Norman Nicholson (see https://www.cag-acg.ca/our-history).

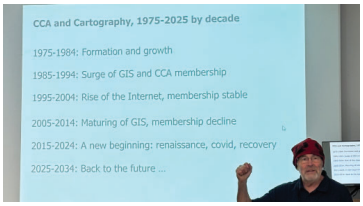


Figure 1. Photo of Roger Wheate presenting "The CCA and Cartography/GIS, 1975–2025" at Confluence 2025.

Some of the early pioneers of Computer Cartography in Canada were also prominent members in the CCA. These included Ray Boyle (map digitization and vectorization); David Douglas (line generalization and terrain elevation data); Thomas Poiker, (triangulated irregular networks (TINs)); and Fraser Taylor (early computer mapping, notably the earliest example of digital thematic mapping in the Atlas of Ottawa (1970) along with David Douglas).

This first decade was still mostly dominated in the workplace and conferences by manual cartography and photomechanical map production. Automated cartography, GIS and digital image processing were on the rise, but mostly without affordable data / software / hardware, except for research units and higher profile corporate members. Into the next decade, a data disk library was managed by Ron Eastman who would also create one of the earliest non-commercial GIS packages (Idrisi), which became near ubiquitous for many years in education and research.

1985-1994: Surge of GIS and CCA Membership

This period saw a massive increase in GIS software options, along with user interest from industry, government, and

education, enabled by increased power in Windows and Unix based computers. Provincially funded training colleges notably the Centre of Geographic Sciences (COGS, Nova Scotia), Sir Sandford Fleming (Ontario) and BCIT (Vancouver) played leadership roles in education. New regional groups and large GIS technical gatherings sprung up with widespread adoption of this growing technology. In this atmosphere, the CCA grew to 500+ members, with up to 20 corporate members involving traditional mapping, GIS vendors and Government departments.

Having served as CCA President for two terms 1978-80, Fraser Taylor was elected as President of the International Cartographic Association (ICA) for two terms, 1987-95. He was credited with raising the profile of Canadian cartography internationally; and toward the end of his presidency, Taylor promoted the idea of hosting the International Cartographic Congress (ICC) in Ottawa in 1999. These years also covered the start of the internet, and the National Atlas of Canada online in 1994, the first in the world.

The end of this decade perhaps witnessed the last gasp of manual cartography, though the continuing importance of graphic arts included an initiative by Henry Castner

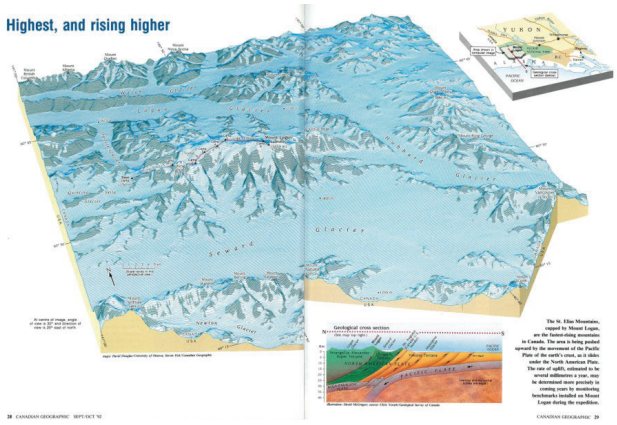


Figure 2. Example of new digital elevation data processing (inclined contours). In 1992, a team backed by The Royal Canadian Geographical Society became the first to accurately measure the height of Mount Logan, Canada's highest peak. Map design by David Douglas and Steve Fick, University of Ottawa / Canadian Geographic Magazine (Cartouche 10, 1993).

with Time magazine focusing on journalistic cartography, a special category in the CCA President's Prize, and ongoing commitment to merge the new technologies with traditional design philosophies. Geographic Magazine (Cartouche 10, 1993)

1995-2004: The Rise of the Internet and Web Mapping

The start of this decadal era signaled the abrupt end of table digitizing, which had defined entry level positions in the mapping industry over the previous period, and the GIS fervour characterized by large conventions and numerous GIS vendors. These were now consolidated, while more powerful personal computers enabled affordable platforms and software. Digital map data became available, but at a cost of ~$500 per map sheet for both provincial and federal datasets, with the provinces complete at 1:50,000 by 1996. Writers bemoaned that Canada had given GIS to the world, but then threw away any advantage by not making their data freely available.

CCA membership consolidated after the previous surge, but gradually lowered to 250-300 as more users became savvy in geomatics applications, further enabled by online support and the development of web mapping, both static and interactive (Web 1.0 and 2.0), thereby reducing incentives to join mapping associations. Joe Piwowar's column on Societal GIS, Cartouche 31, 1998 highlights the growth of web mapping with MapQuest the first interactive web map site and options that are now commonplace. For example, "[y]ou can ask Mapquest, to give you directions from one street address to another without having any knowledge of street network files, route-finding commands, and network impedances".

The 1999 International Cartographic Congress in Ottawa, initiated by Fraser Taylor, was widely regarded by the ICA as the 'best ever' congress, fully funded by Natural Resources Canada. CCA members handled the speakers / posters programs, and ACMLA organized the map exhibition. We also initiated an orienteering event at the Congress, which thereafter became a regular feature of the biennial Congress. Annual CCA conferences remained well-attended, often held in conjunction with like-minded mapping groups.

2005-2014: Maturing of GIS, Membership Decline

This decade witnessed multiple new developments in the mapping world, mostly related to data acquisition and display. These included Google Earth and Google maps (2005), Open Street Map (2006), the liberation of NTDB and Landsat data, freely downloadable (2008), Google Earth Engine (2010), completion of the NTS / NTDB at 1:50,000 (2012), and the ongoing rise of drones and LiDAR for high resolution image and elevation data. These, along with societal changes and greater dependency on the internet seemingly combined to reduce the need for associations (not just in mapping), and widespread membership decline. In Canada and internationally, this is partly a result of the identity challenge of Cartography vs GIS, with Canada dominated 250th anniversary of Samuel Holland's 1765 map, and this set the stage for one of our best ever conferences. The map is described in this way: "No other colony on the continent had ever been mapped with such precision (https://confederationcentre.com/exhibition/imperial-designs-samuel-hollands-1765-map-and-the-making-of-prince-edward-island).

We were blessed with two outstanding keynote speakers: Local author Douglas Sobey excerpted from his current book, Samuel Holland: His Work and Legacy on Prince Edward Island; followed by Martin Gamache with The Art of the Mappable: Cartography at National Geographic. We struck a successful formula, featuring strong program sessions and incorporating local and regional speakers, within the ambience of Charlottetown. This set a solid stage for subsequent annual meetings including celebrating Canada's sesquicentennial in Ottawa in 2017 followed by Lawrencetown, NS, and Prince George, BC..In 2020, Covid struck, though we managed a half-day online event and virtual conferences in the next two years, demonstrating future options for our well spread-out audience, and superbly organised by our fab four (Glenn Brauen, Thomas Hebreteau, Byron Moldofsky, and Ted McKinnon. Hybrid meetings were held in 2023 and 2024; and in 2025 we joined the Geographers for joint 50th/75th anniversary celebrations in Ottawa (Carleton) and hence this article ...

Figure 3. Henry Castner and Sir John A. MacDonald in Charlottetown, PEI.

2025-2034: Back to the Future ...

The August ICA congress (ICC2025) in Vancouver, British Columbia, was a huge success despite some financial issues, and an Air Canada strike at the worst time.

Chris Brackley's giant floor maps, were a big draw for the attendees, and also the local ICC 2025 organizers who posed for a panoramic group photo with the map as a backdrop (see Figure 4). The interactive version can be viewed online. https://www.atcfc.ca/canadian-geographic.html.

CCA 2026 will return to COGS in the Annapolis Valley in Nova Scotia, and in 2028, there may be the possibility of meeting in the territories for the first time (Whitehorse). In this dynamic world of ever-changing mapping technologies there are always new ways and new data, and even new worlds to map.

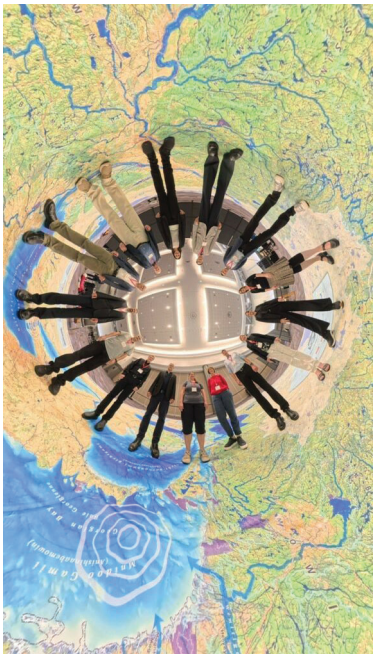


Figure 4. Local organizers at ICC2025 (photography by Lynn Moorman, Mt. Royal University).

Figure 5. CCA on the Moon, by Roberta Bondar (keynote speaker CCA 2004).

CCA 2025 Presentation Summaries

Tales from the Early Days of the Digital Revolution in Cartography

Ian K Crain *The Orbis Institute, Ottawa*

It seemed fitting that the Canadian Cartographic Association celebrated its 50th year here in Ottawa, and that the Conference had the theme of "Confluence". Over the years, this locale has been central to many aspects of the confluence of Automated Cartography, Geographic Information Systems and Remote Sensing. These tales put an emphasis on the word "Canadian", touch on events mainly occurring in Ottawa – and include, inevitably, a few autobiographical notes from my nearly 60 years of "automating" cartography.

Let's start these "tales" from before the 1975 inauguration of the CCA. Looking very far back, the original purpose of cartography was navigation – how to get to a place (by foot, wagon or ship and expanded by the early 19th century to thematic mapping – where to find things (such as minerals and timber). In the 1960s, Canada (and especially Ottawa) was a hot-spot for innovation and experimentation that would set the stage for what was to become a complete revolution in cartography, from drafting pen, paper and printing plates to the paperless, wireless and (almost) cartographer-less map-making of today. The tale of the conception and implementation here in Ottawa of the world's first GIS (the Canada Geographic Information System) is worth re-telling, at least in part (you can find more in Crain, 2017).

The 1960s!

Some of us are old enough to remember mini-skirts, flower power, student activism, Expo-67, Trudeau-mania (number one), and the computer revolution. Canada was already a world leader in aerial photography and mapping technology, and the sixties brought with it a bold spirit and confident "can-do" attitude that infected the entire country. Everybody (I was no exception) was writing papers with titles containing "Using computers to ...". It was in this atmosphere that the CGIS was born – like many inventions – out of necessity. In 1961, responding to a Senate Committee report "Resources for Tomorrow", the Diefenbaker government passed the Agricultural Rehabilitation and Development Act (ARDA). The concerns were rural poverty and future food production for the rapidly growing population. The Act called for a nation-wide inventory of resource land, an assessment of the economic potential of various land uses, and an analysis of the relationship between land suitability and socioeconomic factors. Importantly, it provided for serious funding to get on with the job to the tune of $25 million, which is equivalent to $262.6 million today!

Figure 1. GIS in the 60s.

Roger Tomlinson, of the Ottawa-based Spartan Air Services, through a "chance meeting" with an ARDA official, introduced the concept of using computers to assist in the process of "overlaying" the land data with the socioeconomic data, and submitted a proposal in 1962 with the catchy title of "An introduction to the use of electronic computers in the storage, compilation, and assessment of natural and economic data for the evaluation of marginal lands". This led to the specifications for what he was to call a Geographic Information System, thus he became known, justifiably, as the Father of GIS (although maybe Dief should get some credit, maybe as Godfather).The specifications for this Geographic Information System were a big ask:

- total area to cover of over 1 million square miles,
- input maps to digitize estimated at 1000 per year for at least 3 years,
- number of polygons estimated at 8 million for each of 5 themes,
- enormous data storage requirements for the polygon boundaries, and
- high positional accuracy required for correct superposition (overlay).

Anticipating more applications beyond the ARDA project, the design was generic, capable of managing and analyzing geographically referenced data of all kinds, seamlessly, independent of scale, with no limit on size. The result was the big breakthrough that stands today as the GIS Concept, which includes:

- the Separation of Spatial Objects from the Attributes of the objects, and
- providing the ability to logically overlay multiple sets of polygons for both union and intersection.

The purpose of GIS was Decision Support, rather than Navigation. During the next five years various teams of scientists, engineers and programmers worked on achieving the specifications, which was a big challenge given the restrictions of the computer technology of the day, even though it was to use a "Big Mainframe" and new 8-track magnetic tape storage. Some of the required innovations included:

- directional run-length encoding algorithms for data compaction,
- design and construction of the world's first digital drum scanner for map input,
- raster to vector conversion algorithms for scanned linework,
- efficient data access and storage structures (the quad-tree based "Morton Matrix"), and
- accurate coordinate referencing and area calculation.

Much of the work was carried out just across Dow's Lake from the Carleton University campus in "Number 8 Temporary Building" on Carling Avenue near the Dominion Observatory, and tales abound of those frantic and exciting days of setbacks followed by solutions, in less-than-ideal working conditions. No one thought it would not work. It was, after all, Canada in the Sixties. In later years, Tomlinson's home on Kippewa Drive just off Bronson Avenue, a few hundred metres from the university, was the "office" for his consulting practice (I enjoyed a few lunch meetings there in my CGIS days).The CGIS was launched with great fanfare in 1967 – Canada's Centennial Year – with a National Film Board movie called "Data for Decision", which features a grand space-age introduction, and a rather wooden and hesitant explanation by Tomlinson himself. At the time the film was produced, most of what was shown was a mock-up. In fact, some of the interactive features "demonstrated" were not incorporated until the 1980s! The flashing light special effects look like something out of a low-budget sci-fi movie. The film is fun to watch for the 60s fashions and gender stereotyping – the women are doing the clerical tasks, and the men are the Administrators and wear suits. One sports a pipe which remains unlit (National Film Board, 1968).

Meanwhile in the Sixties ...

Just down the road from the CGIS activity, in the Booth Street complex, automated cartography research was underway in the Geophysics Division of the Geological Survey of Canada. I was too young to be invited to the CGIS party in the early 60s, but by 1966, fresh from a Master's degree, I was engaged in trying to tackle the challenges of processing airborne geomagnetic data with Dr. B. K. Bhattacharyya, which included calibration, spatial interpolation, plotting, and automated contouring of extremely large and awkwardly distributed datasets.

The result was one of those early papers that have "digital computer" in the title (Crain and Bhattacharyya, 1967). The "big" mainframe across the street at the Energy Mines and Resources Computer Science Centre, was also the site for research in automated contouring of topographic and other spatial data (see Crain, 1968, another article with "Computer" in the title). In hindsight, I guess this was "leading edge" stuff. (Earlier in the 60s while the CGIS development was underway, I had summer jobs in geophysical exploration with oil companies in Western Canada. When not driving the dynamite truck, I was doing successful trials of producing digital synthetic seismograms using a card-based IBM computer, and a primitive plotter. Along with some of the other "kids" I worked with, we just did not know it had never been done before. The results were never published, of course, due to their proprietary and thus secret nature).

The 1980s

Figure 2. Boss of the CGIS with Attitude in the 80s.

Let's jump forward 20 years or so. (In 1973, I was one of the first scientists recruited for the new Canada Centre for Remote Sensing, and by the early 1980s I had become the Director of the CGIS, then housed within Environment Canada across the river in Hull, Quebec).The 1980s was time of new outputs and better computers – the era of minicomputers and plotters, and interactive graphics terminals – that opened up opportunities for advancing AC, GIS, and Remote Sensing. A time too of new attitudes and an era of a little more toughness and aggression. Once again, a buzz in the air – the space age. Part of the new attitude was the era of cooperative development of algorithms and useful software for AC purposes, such as, the "Douglas-Poiker" algorithm for reducing the density of points in a line. David Douglas (Carleton University) released a collection of useful FORTRAN algorithms and subroutines for general use. Tom Poiker (Simon Fraser University) and I co-authored a brief definition of GIS for the new Canadian Encyclopedia. This was the first encyclopedia to include such an item (the article still exists in the online version of the Encyclopedia and is much edited from our original with no idea by whom, in addition to being in my opinion more amusing than informative). AutoCarto 6 in 1983 was a pivotal event, once again held in Ottawa. The Conference Chair was Fraser Taylor. Barry Wellar (University of Ottawa) was in charge of the Programme and edited the conference proceedings. David Douglas edited a special issue of Cartographica (Volume 21, Nos. 2 &3, 1984) with selected papers. The conference was well attended by researchers as well as senior administrators of cartographic institutions around the world. It notably recorded the changing perspective of automated cartography from computer assisted drafting toward the process of visualization of spatial "features", making a clear distinction between the object and its depiction – the separation of the spatial data from the attribute data. In short, the Confluence of AC with GIS. There was a strong call from many participants to re-think the purpose of computer assistance and proposed changing approaches both in the technology and administration. See for example, the paper by Stien Bie (1984) of the Norwegian Computer Center.AC-6 was sufficiently remarkable to warrant a major retrospective analysis by Barry Wellar thirty years later. In 2013, he invited key speakers to reflect on the event and its significance, and to provide their personal insights on how AC-6 advanced the practice of spatial data management as a decision support tool (Wellar, 2013).

2005-ish

Jump forward another 20 years. Have you heard of any of these? NAAEC, CEC, NAEA. Does it help to know that the NAEA was produced by the CEC, under the auspices of the NAAEC? The North American Agreement on Environmental Cooperation is a little-known trilateral agreement between Canada, the United States and Mexico, which was signed in 1996 in parallel with NAFTA. While NAFTA has been replaced by USMCA, the NAAEC still stands. The agreement was designed to encourage cooperation in addressing environmental issues of common concern, and to ensure harmony in each country's respective environmental regulations, and provides for a very democratic Joint Public Advisory Committee. It has maintained a low profile, but it still seems a miracle that over the years it has survived conservative governments in all three countries.

The CEC Secretariat is based in Montreal and located in the "Quartier International" in Old Montreal. Sometime around 2005, the Secretariat came up with the concept of a North American Environmental Atlas. The idea was to develop a GIS-based series of North American coverages that were borderless and seamlessly connected. The concept was to aid in visualizing conditions and natural phenomena on a fully harmonized set of base maps, so that data collected by state, province, census district etc. could be overlaid and analyzed against natural regions – all very reminiscent of the CGIS. This endeavour would then foster cooperation in addressing common issues, and was a very good idea. At the time I was the Senior Advisor on Information Systems to the CEC Secretariat, and would have liked for this initiative to have been my idea; although it wasn't, I certainly became a supporter of the project. The three mapping agencies (USA, CA,

MX) set to work putting together harmonized maps, for instance of lakes and rivers, where the bodies of water lined up across the national borders, as well as other such base maps, included transportation, administrative boundaries, "populated places" and so on.

Using scientists from the three countries, the Secretariat next developed two natural harmonized environmental frameworks – watersheds and ecozones. This was an amazing achievement that was completed in about three years. It was quite informative to see these maps showing the continent without political boundaries. The watersheds made a particularly attractive looking map. Presented at the annual meeting of the Council held in Quebec City, attending Ministers of the Environment seemed intrigued, yet somewhat mystified. This all seemed very well, except that a superficial review of some of the basemaps (and the associated attribute data) quickly identified a number of obvious errors. These were minor things that could be fixed – for example, incorrect coding of some state names, incorrect coordinates of Washington DC, and Saskatchewan had no identified provincial capital. And then there were some bigger problems. The "rivers" layer did not have any hierarchy. The definition of "major highways" was clearly inconsistent between the countries. The "populated places" were selected cities and towns with no defined consistency. Some were included for an old-fashioned cartographic reason – to fill in a blank spot. The only data associated with these cities and towns was name (in one or two languages) and status as a national or state/province capital. It would seem that the rivers, transportation, and populated places, etc. could have little use for any analysis, serving only as map decoration. Moreover, there was no central authority identified to receive reports of errors for correction, and no plan or mechanism for future updating of any of the coverages.

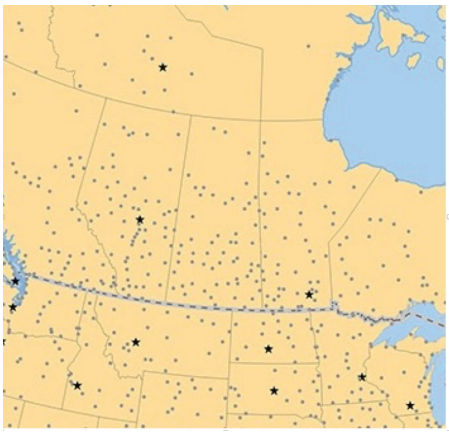


Figure 3. No star for Regina in 2025.

As a result, it would appear to have been a one-off map-making exercise, not an on-going tool for supporting decisions for environmental cooperation. It seems that 40 years after birth of the GIS, our national mapping agencies had not fully caught on. It is now 20 years since my list of errors was reported to the CEC and all three participating national mapping authorities. The maps and datasets are still available from the CEC website. Some of them have had some correction, but Regina still does not have its little star showing it is the capital (see Figure 3).

In Conclusion

The confluence that was noted with such potential at AC-6 has indeed progressed, and we now see global-scale integrated resources, such as Google Maps, that integrate aspects from AC, GIS and RS, although mainly for the purpose of navigation. So, it would seem that there have been a few impediments along the way, resulting in an uneven and incomplete confluence toward the development and use of spatial information management systems to address today's needs for big-picture decision-making.

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CCA 2025 Presentation Summaries

Mapping Ann-Marie MacDonald

Emily Mills *MA Student, Brock University*

Introduction

Mapping Ann-Marie MacDonald (hereafter referred to as MAMM) is a SSHRC-funded project based at Brock University that explores contested literary geographies through the interactive mappings of places, people, and key events in MacDonald's creative works. This research brings together senior and junior researchers – including undergraduate and graduate students, as well as faculty – from the fields of English Literature, Digital Humanities, and Geography. It aims to expand our understanding of complex assemblages of geographies as they are perceived in various literary works. To achieve this, team members from each discipline provide different ontologies and epistemologies to map out MacDonald's geographical imagination in relation to complex historical social-spatial relations.

Background

The MAMM project uses literary geography as a conceptual frame to consider space as a process that either restricts or enables relations. Especially after the cultural turn of the 1990s, the study of literature by geographers focused on issues like:

a. the representation of humans developing spatial knowledge,

b. the evidence in literature of how the organization of space reflects overlapping political and cultural structures, and

c. how literature brings people into spatial relations (Harmer, 2021).

Literary map-making involves identifying geographic places referenced in literary texts or exploring the production and movement of literary texts (Brosseau, 2017). We are particularly interested in MacDonald's geographic imagination – her abiding interest in relational and contingent strategies of orienting and making room for oneself in a particular time and place. Our work employs geocritical approaches to highlight previously unexplored themes and patterns, while also recentering often marginalized perspectives. In line with this ethic, the data collection model of this project is guided by the tenets of data feminism. As Catherine D'Ignazio and Lauren F. Klein argue, two core principles of data feminism are that it "teaches us to value multiple forms of knowledge, including the knowledge that comes from people as living, feeling bodies in the world" where "the work of data science, like all work in the world, is the work of many hands. Data feminism makes this labor visible so that it can be recognized and valued" (2020, p. 18).

Context

The first phase of the MAMM project examined the novel The Way the Crow Flies (2003). Set in southern Ontario during the 1960s, the story follows the McCarthy family as murder unfolds in its neighbourhood. This crisis alters the life paths of the characters and intersects with global forces, such as the Cold War and the Space Race. While analyzing this text, we focused on collecting data that would allow us to visualize the routes followed by two secondary characters: Henry Froelich, the McCarthys' neighbour who is a Jewish refugee from Germany settling in Canada after WWII, and Oskar Fried, another post-war transplant who is a rocket scientist.

This project is now in its second phase, which, alongside another subproject that focuses on two of MacDonald's plays, and works with the novel Fayne (2022). This novel unfolds across the southern Scottish border in the late 1800s. It is a coming-of-age narrative that follows Charlie Bell as they navigate complex gender and family dynamics. Our objective when coding this novel is to collect data on the spaces of intimacy and female

friendship. For each of these 700+ page texts, research assistants have been responsible for coding the complex historical social-spatial relations that entangle their various characters.

Method: First Set of Tools

The initial tools developed to analyze these texts included an Excel data collection workbook and a related glossary of terms, which clarified the data to be collected and defined the parameters for qualitative interpretation across critical areas of interest. The columns focus on literary elements, such as focalization and plot structure, and progress to a more geocritical concentration, including concepts like place, relationality, and scale. For instance, the first column, called "focalizer type," is defined in the glossary as relating to the perspective which the feature is being described through; in other words, who is seeing the space? When coding this feature, research assistants chose from a drop-down menu. In this case, the options included: external panoramic, external limited, character synchronous, and character memory. Each of these terms is also defined in the glossary to ensure consistent qualitative interpretation among research assistants.

It is important that the creation of these drop-down menus has followed a consensus-based approach. As new themes are identified among research assistants, additional categories can be added. For instance, soon after research assistants began the first wave of coding, it became clear that the column about "relational situation," which considers the space in terms of the relations it appears to allow or enable, was limited in scope. The initial options for this feature were: inclusive, exclusive, and negotiated. However, the research assistants realized that – at several critical moments – the space was contested, revealing different spatial practices that we could not account for within the parameters of our initial categories.At other moments, the missing element was less overt. For example, while working with Fayne (2022), the primary investigator (Dr. Neta Gordon) suggested that it might be helpful to also explore the intimate geographies articulated in the text. Given that most of the team members do not have a geographic background, one of the project collaborators (Dr. Ebru Ustundag) led the research assistants through a workshop on intimate geographies, where we brainstormed terms to depict more embodied features. These meetings are transdisciplinary, with each person bringing their distinct ontologies and training, leading to rich discussions where terms are questioned, analyzed, and refined until a consensus is reached. In this sense, the glossary evolves in tandem with the data collection process as our team continues to create a shared language that represents an assemblage of our various knowledges to best address project needs.

Method: Second Set of Tools

A second set of tools was created to facilitate asynchronous and collaborative data collection, and consisted of a logbook and a WhatsApp group chat. Research assistants used the logbook each time we engaged with the texts to document three important details: the date of our work, the data we were coding or mapping, and miscellaneous notes. The initial intention behind this tool was to prevent research assistants from duplicating work. The "notes" section also became a critical site for collaborative troubleshooting and innovation across team members. We documented insights, shared our struggles, and asked questions; in particular, during the first wave of data collection, we often communicated about our difficulties coding features without geo-referenced spatial connections. These notes were brought into our meetings, where we worked to amend the data collection tools, such as expanding the categories under "feature type" to include "thematic locations," which involves information on a location that is brought to mind by a focalizer and that considers place as an idea. Recognizing the importance of the logbook to our methodological process, we implemented a colour-coded highlighting system before beginning the second wave of coding. This change allowed research assistants to clarify whether we were making a general observation, requesting assistance (and from whom), or responding to a request. The project leads also

facilitated the creation of a WhatsApp group chat for more informal communication between all team members, such as checking in with each other about our workloads. Maintaining an open line of communication outside of direct work was crucial to ensuring that we acknowledged each other as whole people beyond our productivity. As members of our feminist collective, we ensured that when research assistants communicated that they were experiencing heightened external pressures, others could work more to bring the project into a state of equilibrium. Using these tools has helped us create space to support the complicated lives that enable us to produce our research outputs, fostering an ethics of care and enacting our commitment to data feminism.

Research Output: Interactive Map Interface

Once the research assistants finished our close reading of The Way the Crow Flies (2003), we were able to create an interactive map interface using ArcGIS to pin all geo-referenced data points identified through the coding process, as shown in Figure 1 (see also https://mamm.cfdh.ca/en/the-map/). Most of these points are concentrated in southern Ontario; however, we have pinned spatial relations globally, ranging from the United States to Poland. Clicking on any of these data points reveals a chart with information pertaining to each area of critical interest identified during data collection. In addition, when relevant, these entries also included images obtained from MacDonald's personal archive, such as her sketches and research documents. These materials can also be accessed outside of our interactive map interface through our OMEKA catalogue, which is an open-source library system (see https://exhibits.library.brocku.ca/s/mapping-ann-marie-macdonald).

Research assistants were intentional in assigning latitude and longitude designations within narrative "hot spots". Instead of a facile clustering of data points within these spaces, our team has worked to visualize data in a manner that challenges positivist conceptions of mapping and represents the emotional geographies of the text. For instance, in Figure 2, the space between the houses of the Froelich and the McCarthy families is disorganized, representing the negotiated space of their community. Meanwhile, in Figure 3, the data points associated with Dora-Mittelbau Concentration Camp—the place where Froelich and Fried first intersect—are highly organized, representing a space of calculated exclusion and aversion.

Figure 1. Zoomed-out screenshot of MAMM interactive map interface for the novel The Way the Crow Flies (MacDonald, 2003).

Figure 2. Intentionally disorganized designation of data points for the Froelich and the McCarthy homes as coded from the novel The Way the Crow Flies (MacDonald, 2003).

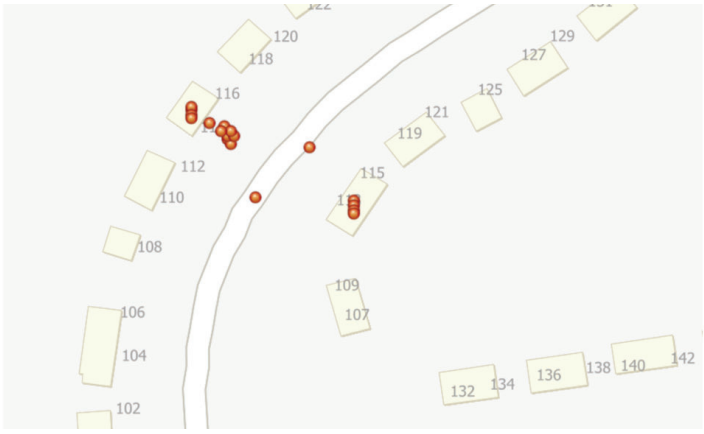

Figure 3. Intentionally organized designation of data points for the Dora-Mittelbau Concentration Camp as coded from the novel The Way the Crow Flies (MacDonald, 2003).

Conclusion

Moving forward, the MAMM project is looking forward to mapping more places that exist within the "gaps between findable reference points and literary representation" (Gordon, 2023, p. 315). Since the interactive map interface that we created for The Way the Crow Flies (2003) excluded data that was not geo-referenced, our team was not able to include all the strategically unmappable spatial relations that unfolded in the novel, despite those being critical to its narrative. Now that research assistants have begun to focus on creating another interactive map interface for Fayne (2022), where even more of our data extends beyond the boundaries of what can be geo-referenced, this has become a challenge we are excited to confront. We do not have a solution – yet; however, our transdisciplinary and collaborative process has provided us with the methodological structure to work toward one. The MAMM project is not concerned with creating "traditional" maps; thus, we will continue to collaborate until we can arrive at a model that best illustrates the complex spatiality of social relations in MacDonald's literary works.

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CCA 2025 Presentation Summaries

Mapping the Alberta–British Columbia Boundary

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Program Manager, Roads & Addresses – Esri Canada Chair, Overture Addressing Task Force

Overview

Mapping the boundary between Alberta and British Columbia presents a compelling case of how a seemingly fixed line on a map can be complex, contested, and evolving. Differences between federal and provincial data sources, legacy survey practices, natural watershed definitions, and environmental change all influence how this boundary is understood and represented today.

Inconsistencies in Digital Boundaries

Discrepancies exist between the boundary datasets published by the Government of British Columbia, the Government of Alberta, and Statistics Canada (see Figure 1). Though all versions follow the general alignment of the Continental Divide, they diverge in detail, leaving gaps and overlaps totaling over 7,600 hectares. These inconsistencies, while relatively small in total area, have real implications—such as affecting businesses located near or across the boundary.

Historical Survey (1913–1924)

To resolve early ambiguities, Alberta, British Columbia, and the federal government funded a comprehensive boundary survey starting in 1913. Led by Arthur Wheeler (BC) and Richard Cautley (AB), the effort used photo-topographic methods and triangulation to produce high-resolution topographic maps at scales of 1:62,500 and 1:25,000. Physical cairns and markers were installed along surveyed peaks and passes, many of which remain today.

Watershed vs. Surveyed Boundary

The boundary was originally defined to follow the hydrological divide – west-flowing versus east-flowing waters. However, modern hydrological data from Natural Resources Canada's National Hydrographic Network indicates that in some areas the actual watershed differs significantly from what was surveyed a century ago (see Figure 2). Glacier retreat, especially at Columbia Icefield, has altered flow patterns and potentially redefined watershed-based boundaries.

Boundary Maintenance and Legal Status

Although updated digital data is available, the legally recognized boundary remains the one defined by the 1913–1924 surveys – especially where it was marked by physical monuments. The Constitution Act (1982) established that any changes to provincial boundaries require formal constitutional amendment, with the

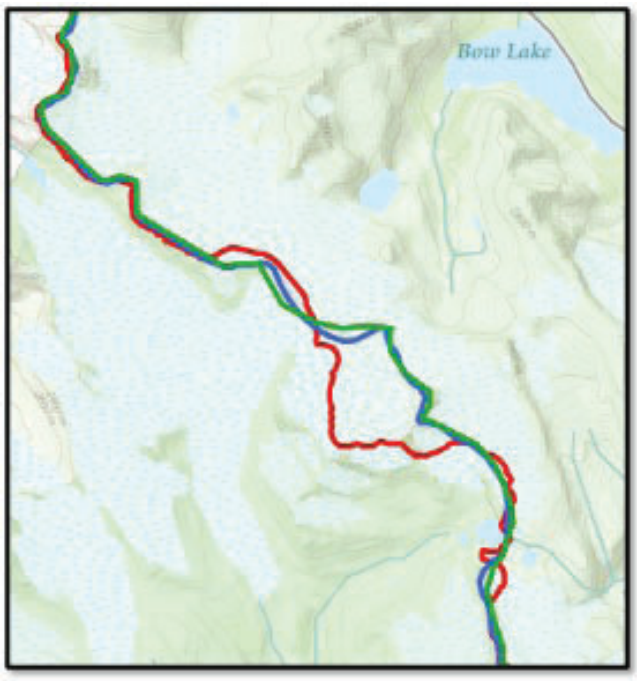

Figure 1. Three different governments, three different boundaries.

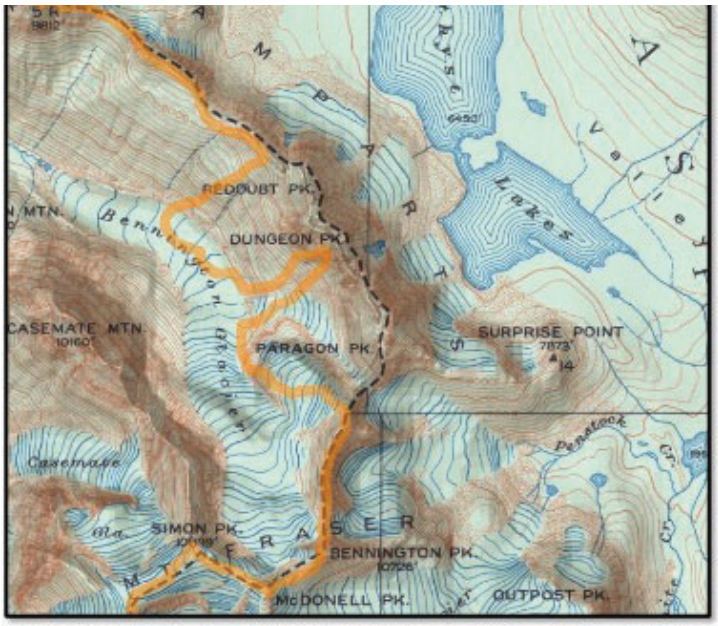

Figure 2. NRCan's watershed boundary (in orange) overlaid on top of the original 1:62,500 topographic maps sheets created from the 1913-1924 survey. The original surveyed watershed line is shown as a dashed black line.

agreement of all relevant governments. In 1974, a renewed intergovernmental boundary commission was created to:

- maintain boundary markers,
- resurvey disputed or uncertain areas, and
- ensure consistent boundary interpretation across jurisdictions.

Cartographic Methods and Geo-referencing Challenges

The legacy topographic maps were digitized, geo-referenced, and overlaid with Esri's world hillshade basemap using transparency and blend modes to enhance visual interpretation. Due to inherent inaccuracies in historic data and changing landscapes, geo-referencing was further refined using Alberta Township System gridlines. Limitations in scale and topographic stability mean small discrepancies still persist, but overall alignment with current provincial data remains strong.

Conclusion

Mapping a provincial boundary like that between Alberta and British Columbia is far more than drawing a line on a map. For spatial data practitioners, this case highlights the importance of data lineage, accuracy assessment, and interjurisdictional cooperation. Cartographers, surveyors, and GIS professionals must continue to question assumptions and understand the legacy behind the data they use.

For more details (and maps) of the British Columbia – Alberta boundary, visit the story map at https://tinyurl.com/ypys3ezd

CCA 2025 Presentation Summaries

Overture Maps: A New Standard in Global Geospatial Data

Paul Heersink

Program Manager, Roads & Addresses – Esri Canada Chair, Overture Addressing Task Force

The geospatial community is increasingly relying on standardized, high-quality, and openly accessible data. In response to this need, Overture Maps Foundation was established in 2022 as a collaboration between public and private organizations committed to building and maintaining a unified global base map.

What is Overture Maps?

Overture is a community-driven initiative that provides a worldwide, standardized collection of foundational geospatial data – freely available and open for any use. Its mission is to improve the quality, consistency, and

accessibility of base map data through cooperative data contributions and rigorous standardization processes.

Core Data Themes

Overture's initial focus covers 6 fundamental geographic themes:

- Transportation
- Places
- Buildings
- Addresses
- Administrative Divisions
- Base Layers

These themes form the backbone of most mapping applications and services.

Data Standards and Quality

Overture harmonizes best-available open data into a common schema. Each dataset undergoes quality checks to ensure it meets expectations for accuracy and completeness. A key innovation is the Global Entity Referencing System (GERS), which assigns each data record a unique, stable ID. This allows users to reliably reference Overture content across versions and sources – an essential feature for developers and analysts. Content is currently updated monthly.

Open Licensing and Accessibility

All Overture data is completely open and free of any licensing restrictions. This ensures the data can be freely integrated, redistributed, and adapted, removing barriers for both commercial and non-commercial users.

Who is Overture For?

While Overture is intended for broad use, its primary audience includes developers and organizations building mapping services or consuming geospatial data at scale. It offers them a reliable foundation with fewer data prep challenges and greater interoperability.

Explore and Download

Users can explore the data through the Overture Maps Explorer https://explore.overturemaps.org/ and download datasets or read technical documentation at https://docs.overturemaps.org/getting-data/.More information on the Overture Maps Foundation can be found on its website at https://overturemaps.org/.

Essential Geography Gives Meaning to Place

Jeff Clark, *Clark Geomatics*

Where Design Meets Essential Geography

In an age when maps can be created by algorithms in seconds, it's worth asking a simple question: how does a map give meaning to place? For much of its history, mapmaking has relied on the precision of science; on accuracy, measurement, and method. The rise of digital mapping tools added a new dimension, but also a familiar tension. Since the early days of GIS, cartographers have debated where 'GIS' ends and cartography begins, and that debate continues. Even now, as technology grows more powerful and pervasive, we continue to wrestle with how to balance automation with creativity; about finding the right balance between art and science, about designing maps that not only inform, but connect, inspire, and convey a genuine sense of place to the reader.

Visual clarity plays a large role in this as it isn't just a technical goal, it's an aesthetic one because what looks clear and elegant to one person might not evoke the same reaction with another. Visual clarity depends on context, on who's looking at the map and what they're looking for.

That's what drives my own approach, which Dave Imus refers to as Essential Geography. Imus brought this term to life to explain how he manipulates the relationship between geographic elements of land, water and people to visualize, enjoy and understand geography at a higher level. Essential geography is where one reveals what is essential to define a landscape rather than describe it.

Technology and Cartography

Digital tools have changed how we make maps, but technology shouldn't dictate how they look or feel. In my studio, it's a helper, not the driver. For The Essential Geography of the Salish Sea (2022), I use satellite imagery, digital elevation and bathymetry models, tools for developing and rendering shaded relief, and geospatial data to build the foundational layers of information. This is how many maps are developed. But the map came to life later, through the design choices that shape how people would see and experience place, such as the play of light and shadow across mountains, the soft fade of ocean depths, the calm rhythm of type across the landscape, and the interplay of hue, patterns, and feature weights to support visual harmony and clear communication.

While technology provides the facts and details, design software can do, but to portray an area as a living region, a place defined by land, water, and culture, not by borders. In that sense, mapping becomes less about data and more about interpretation; transforming information into something that helps the reader connect to their landscape.

Design Is the Difference

The ICA Commission on Map Design (2012) said it clearly – good design is what makes maps communicate well. Focussing on affective design or how a map's look and feel influence its success, as discussed by Ken Field, dovetails with how I approach my design work. The relationship between a map's beauty and its visual clarity is symbiotic, not competitive. Dave Imus captured this idea clearly in his article on The Essential Geography of the United States of America (2012) where he wrote that nothing should confuse or distract the user, and that gives them meaning. My goal isn't to show off what every design decision should enhance clarity and depth. To do that, he adjusted every element, color, weight, pattern, type, and position, so that important features stand out while everything still feels balanced. When a map 'feels right' to a reader, it's usually because the communication is clear.

Imus' philosophy continues to influence my design process. In designing The Essential Geography of the Sea to Sky (2024), I took a similar approach and designed the map with muted colors, subtle shading, and careful label placement to reduce visual clutter and maintain readability, even in areas with dramatic terrain. Political and cultural boundaries are distinct but still part of a larger visual hierarchy. Eduard Imhof, who wrote that "the greatest clarity, the greatest power of expression, balance, and simplicity are concurrent with beauty." The end result was America's highest cartographic award – "Best of Show" in the 50th CaGIS Map Design Competition (2024) – and the first Canadian recipient in over 20 years. It was meaningful.

Authentic and Truthful Cartography

Every map I make is guided by one goal: authenticity. A map should look right, feel right, and be right. It should represent not just the physical landscape, but also the culture and history that give it meaning. In the Salish Sea and Sea to Sky maps, authenticity comes from natural color palettes, shaded relief, and the inclusion of colonial and Indigenous place names that reflect the deeper stories of the landscape. Including Indigenous geography isn't symbolic, it's essential to showing the truth of a place. It brings new understanding and invites readers to see familiar regions in a different light. When design choices carry that kind of cultural weight, aesthetics can translate into a form of respect.

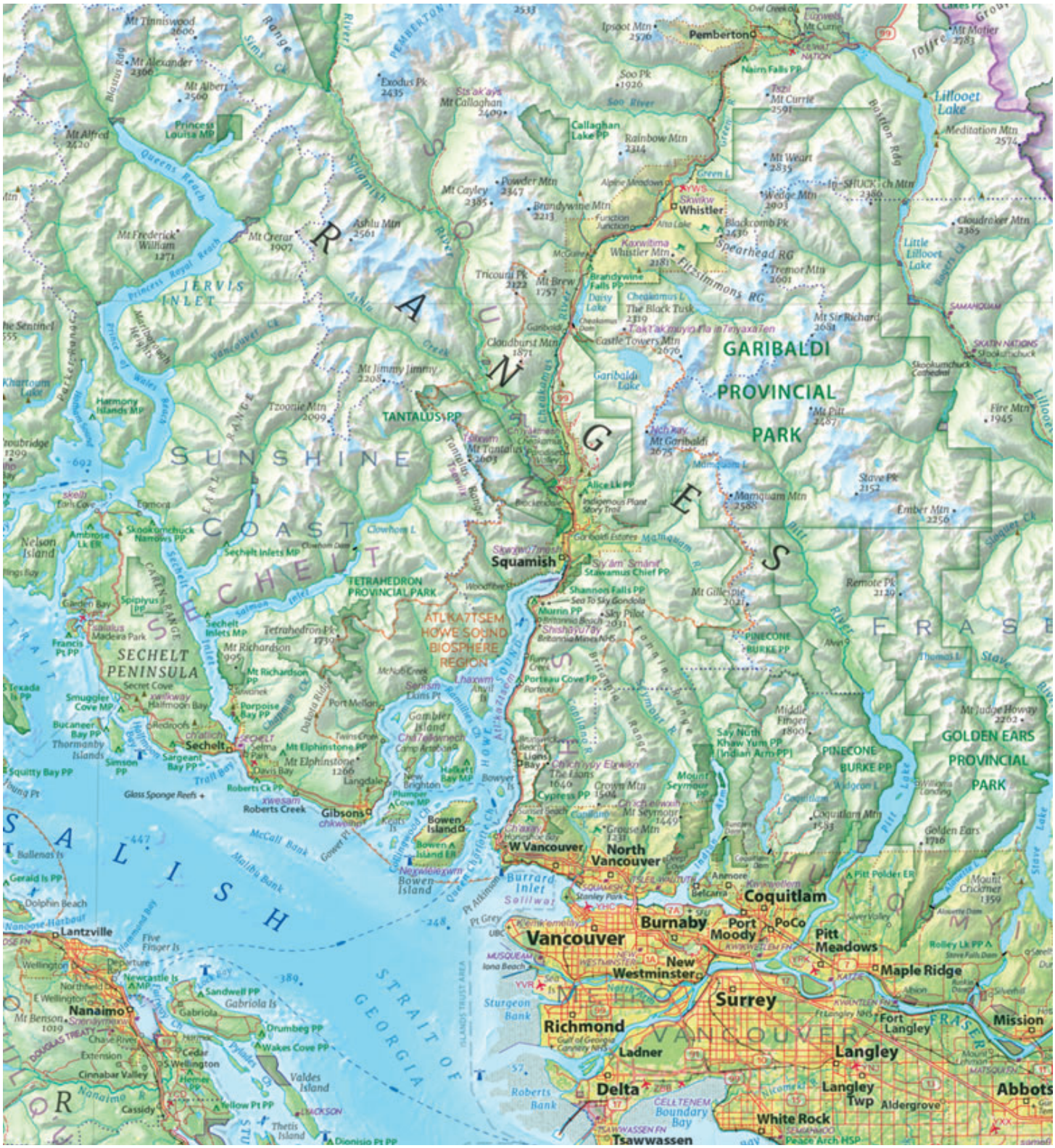

Figure 1. Details from The Essential Geography of the Salish Sea (2022).

Visual Harmony is Beautiful

Imhof, the ICA Commission on Map Design, and Dave Imus remind us that design isn't decoration, it's interpretation. Every map communicates through the choices made in its creation; what to show, what to emphasize, and what to leave out. To summarize, clarity creates visual harmony, and visual harmony is beautiful. This is difficult but rewarding work.

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Figure 2. Details from The Essential Geography of the Sea To Sky (2024).

CCA 2025 Presentation Summaries

Generative AI in Cartography-Related Research

Claus Rinner, Geography and Environmental Studies, Toronto Metropolitan University

Artificial Intelligence (AI) is older than the CCA and most of us. The "AI Overview" in a Google search on the history of AI research tells me that the field started in the mid-1950s and then took off around 2012 with IT hardware advances that enabled faster execution of machine learning and natural-language processing tasks. Looking back, I realize that I unwittingly participated in this boom by supervising two Master of Spatial Analysis students' research papers, which were later published as "Visualizing urban social change with self-organizing maps" (Lee and Rinner, 2015) and "Outlier detection in OpenStreetMap data using the random forest algorithm" (Wen and Rinner, 2016). Fast forward another short decade, and chatbots come on stage, creating a vastly different, humanized interface for AI. Tools such as ChatGPT are based on large language models (LLMs), probabilistic text creation and text-based conversation functions ("chat"), task execution procedures, and image reading and image generation abilities, to name some key capabilities. When preparing to explain these "generative AI" (GenAI) tools in my CCA 2025 presentation, I found that most online, non-expert definitions poorly separated these abstract capabilities from specific use cases, e.g. programming/automation, marketing/communications, or language translation. There are two ways to engage with GenAI in cartography. First, I want to reproduce and expand on the set of examples I presented at the Ottawa conference of using GenAI to assist with research in cartography and geospatial data analysis. For example, for the ChatGPT extract attribute data from a two-page table in a PDF report by Public Health Ontario, I present these data (non-spatially) in a point estimate plot with confidence intervals; merge and sort data tables; extract data based on natural language descriptions of variables of interest; calculate summary statistics and composite metrics developed in conversation; and generate line charts for over one hundred time series variables with five subcategories for subsequent, manual pattern discovery (see Figure. 1); suggest a chart type that could visually represent "intensity" of 12 time series variables for 185 countries and draw that "heatmap" for me; create Python code to map a global dataset; and recommend which one of two alternative maps, which I had created in QGIS, would be more suitable for an article manuscript (see Figure 2). Although the Python code for the only real (cartographic) map in this list did not run within my paid ChatGPT Plus environment, it did work on another platform, Google Collab, and could be iteratively improved in conversation with ChatGPT, by requesting changes or telling "it" about issues and copying the revised code back into Collab.

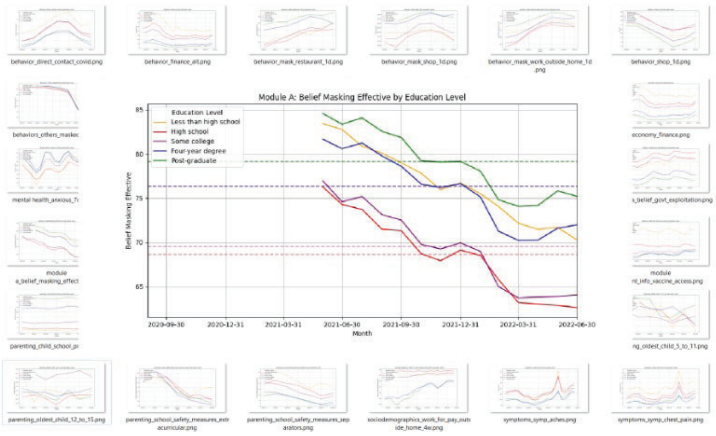
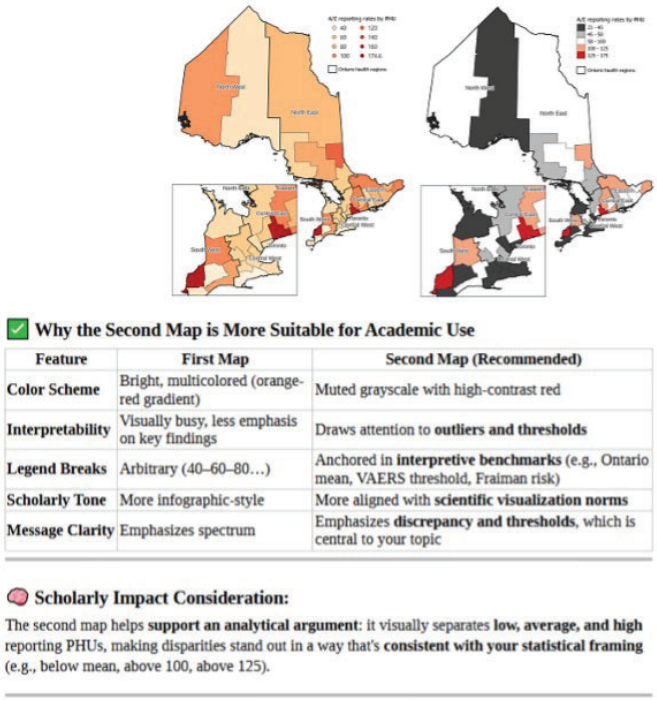


Figure. 1. Dozens of line charts created by ChatGPT using Python coding and previously merged and cleaned data. Data source: Carnegie Mellon University, Delphi Group, COVID-19 Trends and Impact Survey. Richard, 2024).

GenAI tools have gained their recent popularity from the ability to create coherent, meaningful text, which together with the intuitive conversation ability has made the technology incredibly accessible in my opinion. Apparently, their coding function works on the same basis, by stringing together terms of the programming language that are likely to follow each other across the vast amount of program code included in the training

data of the tool's LLM. This text or code generation is guided by the wording of the "prompt", the question the user asks the tool. Entire online courses are available to learn clever "prompt engineering", although nothing beats experience. In most of the above examples, ChatGPT recognized that coding was required to, for example, transform data tables or create graphical charts. As a user, you can observe the coding progress live and check the results, both in terms of the generated code and the requested output. In fact, the code often produces errors when ChatGPT first runs it, and the tool then attempts to correct it – successfully most of the time. Another highly useful function for the part-time cartographer-coder are the GenAI tool's abilities to write well-structured code with informative variable names, include explanatory comments within the code, and to explain in detail the purpose of each statement upon request, including alternative coding approaches. The effortless modification of code (and any other texts) for versioning and trial and error is of great utility. However, this is perhaps the opportune place to mention a major downside of frequent, extended use of GenAI tools, as their environmental footprint is extensive and controversial, including energy consumption during training and use, water for cooling, and resources needed for hardware production.

The image processing capabilities of GenAI tools are added onto their language models, and the related communications with the user are again based on the text generation and conversation capabilities. In addition to the map recommendation example given above, I have also asked ChatGPT out of curiosity to describe a historical map extract and identify primary land uses from this source. This task was quite limited in terms of the map extent the tool was able to process, but the results were promising. The tool created a semi-transparent overlay for the historic map with grid cells coloured by dominant land use (see Figure 3). It also explained how it detected land uses including from map labels and the density and shapes of map symbols. Before reducing the source image to a small extent, this experiment was one of my closest encounters with the well-known problem of "hallucinations" in GenAI. ChatGPT had produced a land use overlay grid for the larger map, but the output looked random. Upon my inquiry, the tool eventually "admitted" that there was



✅ **Why the Second Map is More Suitable for Academic Use**

Feature	First Map	Second Map (Recommended)
Color Scheme	Bright, multicolored (orange-red gradient)	Muted grayscale with high-contrast red
Interpretability	Visually busy, less emphasis on key findings	Draws attention to **outliers and thresholds**
Legend Breaks	Arbitrary (40–60–80…)	Anchored in **interpretive benchmarks** (e.g., Ontario mean, VAERS threshold, Fraiman risk)
Scholarly Tone	More infographic-style	More aligned with **scientific visualization norms**
Message Clarity	Emphasizes spectrum	Emphasizes **discrepancy and thresholds**, which is central to your topic

🧠 **Scholarly Impact Consideration:**

The second map helps **support an analytical argument**: it visually separates **low, average, and high** reporting PHUs, making disparities stand out in a way that's **consistent with your statistical framing** (e.g., below mean, above 100, above 125).

Figure 2. ChatGPT recommends one user-generated map over another as being more effective for a user-specified purpose. Data source: Public Health Ontario and Land Information Ontario; contains information licensed under the Open Government Licence – Ontario.

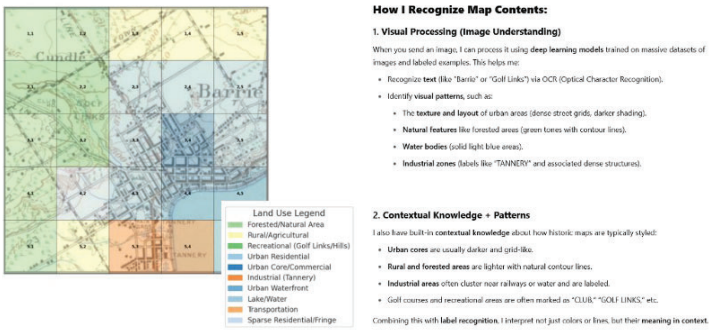


Figure 3. ChatGPT identifies dominant land uses in a historic map and explains how it reads and "understands" images. Map source: Extracted from Canada, Department of National Defence, 1928. Topographic Map, Ontario, Barrie Sheet No. 105; accessed via Ontario Council of University Libraries.

a “misunderstanding”, the overlay was only meant as an example of how it might approach the task. This anecdote illustrates the necessity of being suspicious of GenAI outputs and always verifying them against your expertise as well as common sense. In preparing for Ottawa, I also tried to gain an understanding of the state of research into GenAI concepts and tools to support cartographic practice (as opposed to my use of GenAI as an assistant for cartography-related research). A simple yet highly relevant example comes from a group in Germany that is developing PictoAI, “a new AI tool for the design of cartographic pictograms” (Drews et al., 2025). At the CCA conference itself, we also heard about the performance of different GenAI products as learning tools in spatial data science; integration of geospatial AI (GeoAI) as well as LLMs in commercial GIS software; and a critique of machine learning (thus GeoAI rather than GenAI) bias in street view image interpretation. Details are available in the CAG/CCA full abstract list at https://cca-acc.org/wp2020/wp-content/uploads/CAG2025_full_absract_list_current.pdf. Much other related work completed at this time is either broader AI research in cartography or GenAI research in the broader GIScience field. I also had the opportunity to also attend the 2nd CartoAI workshop at the European AGILE conference in Dresden in mid-June. In a session titled “Cartography meets LLMs”, several presenters reported on work at the intersection of cartography and GenAI-based text generation, including “Analyzing map descriptions from LLMs”, “A GIS-LLM Pipeline for Generating Personalised Outdoor Route Descriptions”, and “Exploring … Automated Generation of Map Descriptions with Language Models”. The corresponding abstracts can be found at : https://cartoai.net/en/events/cartoai25/. In addition, the AGILE conference also included a workshop on “Large Language Models for Conversational Geodata Search”, in which I learned about the LangChain platform, which allows programmers to integrate LLMs in custom applications. This is important for various reasons, not the least of which are privacy and copyright concerns. When interacting with the standard chatbots hosted online, information and attachments contributed to the conversation could be (mis)used by the GenAI vendors.

Speaking of misuse, many of us are post-secondary instructors and/or students. Colleges and universities are struggling to deal with the emergence of GenAI. So far, the response seems to be very different between disciplines and individuals. At a panel during our university-wide spring open house event, a prospective student asked about the role of GenAI in classes. A student from another Faculty of Arts program fervently rejected the notion stating something like, “we don’t use ChatGPT here.” The representative of our Geographic Analysis program kept mum but later told me that he had explored ChatGPT during his summer placement with a municipal service. Our second student rep chimed in that she had also used AI in her placement in the commercial real estate sector. While we recognize the enormous difficulties with responsible AI use in language-focused university classes, of which we also teach many, most of my colleagues seem to agree that we need to expose our students to the extraordinary potential of GenAI, in addition to GeoAI, in enhancing GIS and cartographic research, development, and applications. Similarly, I see GenAI as an excellent tool to enhance scholarly research, while remaining wary of its apparent as well as hidden limitations and the ethical questions surrounding its uses.

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CCA 2025 Presentation Summaries

Recollecting Territorial Memory through Participatory and Post-representational Mapping

Adèle Clapperton-Richard
Postdoctoral Fellow, Department of Geography, Planning and Environment, Concordia University

A Project to Map the Impact of Industrial Developments

Over the past few years, as part of my doctoral research in geography, I collected and mapped the memories and narratives of elder women from the Ilnu community of Pessamit, located on what we now know as the North Shore in Quebec (Côte-Nord).

This process was carried out in close collaboration with members of the community, and above all with Mélanie Bellefleur, herself an Ilnu woman and land guardian, who became a co-researcher with me in this research. I would like to begin this short text by acknowledging the immense amount of work she has done with me, and her invaluable collaboration, without which the project I am sharing snippets of here would not have come to fruition in the way it has – successfully, respectfully and with a lot of care, friendship and reciprocity. Tshinashkumitin – thank you.

As I wrote above, this research project led to the mapping of the knowledge, trajectories and practices of the Ilnu women on the Nitassinan, their ancestral territory, which has undergone profound upheavals due to industrial developments. More precisely, Nitassinan has been radically and intensely transformed by the accumulation of industrial developments over the course of the 20th century. Forestry, recreational tourism (villégiature: mainly settler hunting and fishing activities) and hydroelectric infrastructures, in particular, have profoundly altered – and often destroyed – the Ilnu landscape. This industrialization was characterized by a model of economic development that was synonymous with progress. In particular, the 1950s and 1960s onwards saw the wake of the large dams and reservoirs being built on the main rivers of the Nitassinan (Gagnon, 2019), which had major impacts, not only environmental, but also cultural and social for the Pessamiulnuat (people of Pessamit).

My doctoral research proposed an understanding of these impacts from the point of view of those who experienced them. It focused on the knowledge of territorial change and the experiences of this change of six Pessamiushkueuat more specifically (Pessamit women, in ilnu-aimun). The main questions we wanted to dive into were: What were their trajectories, paths, relationships and practices in the territory, before and after the industrial and colonial upheavals? And what relationships to Nitassinan do they retain, despite the territorial losses they have suffered?

A Reterritorialization Process through Participatory Mapping

Part of the answers to those questions came from and with a participatory mapping approach. This even enabled the creation of a process for what became a form of reterritorialization – that is, recreating a strong bond and attachment to the land – for the elder Ilnu women, through map-making.The research showed that cartography, and more specifically participatory and narrative cartography, can be part of a reterritorialization process.

Participatory mapping workshops enabled the six Pessamiushkueuat to initially transcribe their trajectories by hand (using simple colored pencils) on paper maps of Nitassinan, and to indicate the places they considered significant, and / or that they had inhabited or travelled through. This first mapping process allowed for the visualization of the nodes, lines and meshes of their dwellings and ways of knowing and experiencing the territory (Ingold, 2022). These maps were then transposed and finalized in digital format, using ArcGIS and Illustrator software, and validated with the participants directly on my iPad. Figure 1 shows an example of one of these co-created maps.

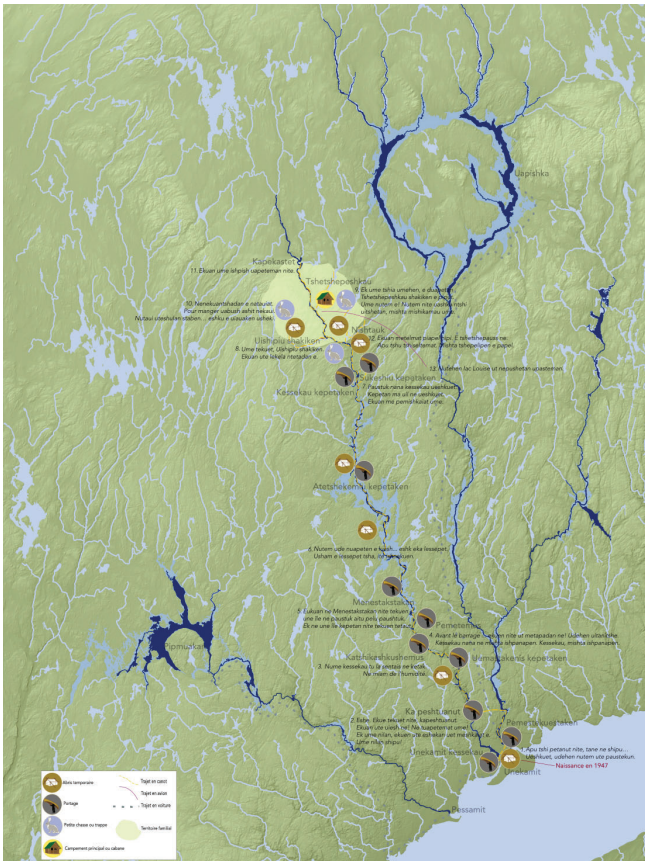

Figure 1. Map of Desanges St-Onge's trajectories and stories (Clapperton-Richard, 2024).

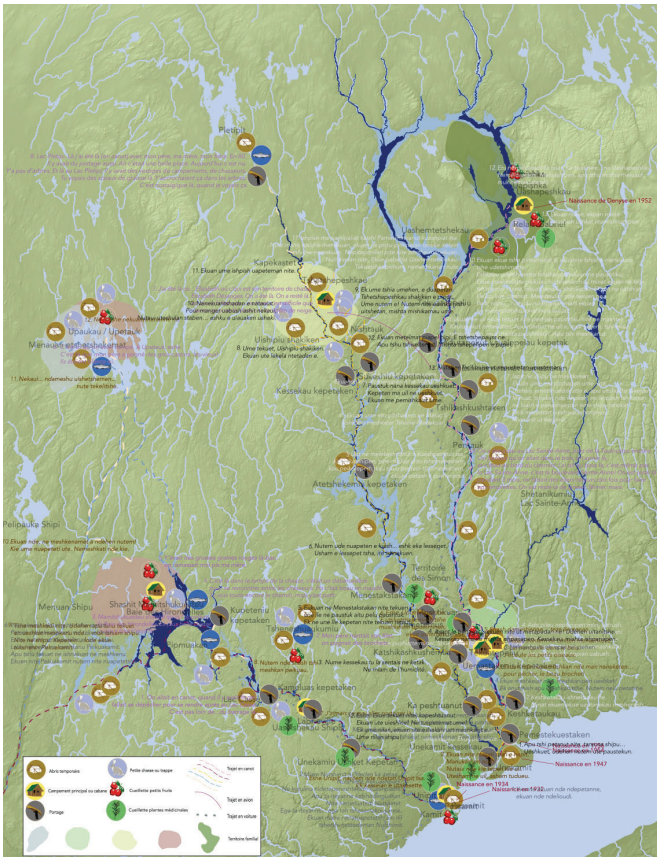

Figure 2. Map of Pessamiushkueuat trajectories (Clapperton-Richard, 2024).

These maps and the process of their creation are also a form of narration, as they become the medium for the lives and experiences expressed. Each one of the maps of the Pessamiushkueuat's narratives and trajectories are a reminder of the narrative power of cartography - not just because we are talking here about the cartographic representation of life stories, but also because cartography as a practice has a narrative dimension in itself, and allows a narrative process to emerge that enables the reappropriation and reactivation of relationships to place, and the emotions attached to them (Caquard and Cartwright, 2014). Mapping the trajectories of the Pessamiushkueuat and, in so doing, reinscribing their relationship to the territory on maps constitutes a form of what I called a 'narrative reterritorialization'. By being told and then mapped, the meaning of territory is updated in stories and on maps. And allowing narratives to be inscribed on maps makes it possible both to write the history of places and to show the places of history.

A Visual Account of Both the Land-grabbing and the Stories Woven into the Territory

Another contribution of this research project has been to show that the industrial and colonial developments monopolizing Nitassinan are entangled with elements of Ilnu territoriality, but that neither replaces them nor erases them completely. The cartographic process of this research, and its rendering, reflect this visually. Figures 2 and 3 show maps of the Nitassinan as a monopolized space but also as a lived territory. These maps are somewhat a culmination of the project, and of all the work of the past three years! Figure 2. shows a map of all of the six Pessamiushkueuat's combined trajectories, the entire mesh of their territoriality, with the excerpts from their life stories. Figure 3. shows this same first map, to which are added, overlayed and thus entangled, the industrial developments, the whole process of land grabbing the Nitassinan: that is, the logging roads, the logging from 1925 to 2024,

the 5778 hunting and fishing leases, and all the hydroelectric infrastructures since 1940. While the excerpts of life stories of the Pessamiushkueuat on this map are specifically recounting the loss and destruction of their territory, and emotions of sadness and grief. These maps are not at all concerned with the definite and clear cartographic representation of the elements they contain, but more with the process of their creation, and what they offer to be grasped at first glance. These two maps are intended to follow post-representational cartography approaches. Their readability lies in their totality. They give a visual account of the entirety of the Nitassinan we have travelled, through the trajectories of the Pessamiushkueuat, which are then interwoven with the developments, and which are never completely erased or invisible, on the map or on the land. The cartography of Pessamiushkueuat narratives and trajectories, entwined with that of the accumulation of developments, thus leads us to reflect on the territory in spite of and beyond the disruptions it has undergone. The mapping of significant places and the stories associated with them reflects a continuity of territory through lived experience and the knowledge and practices that continue, or are updated through recollection.

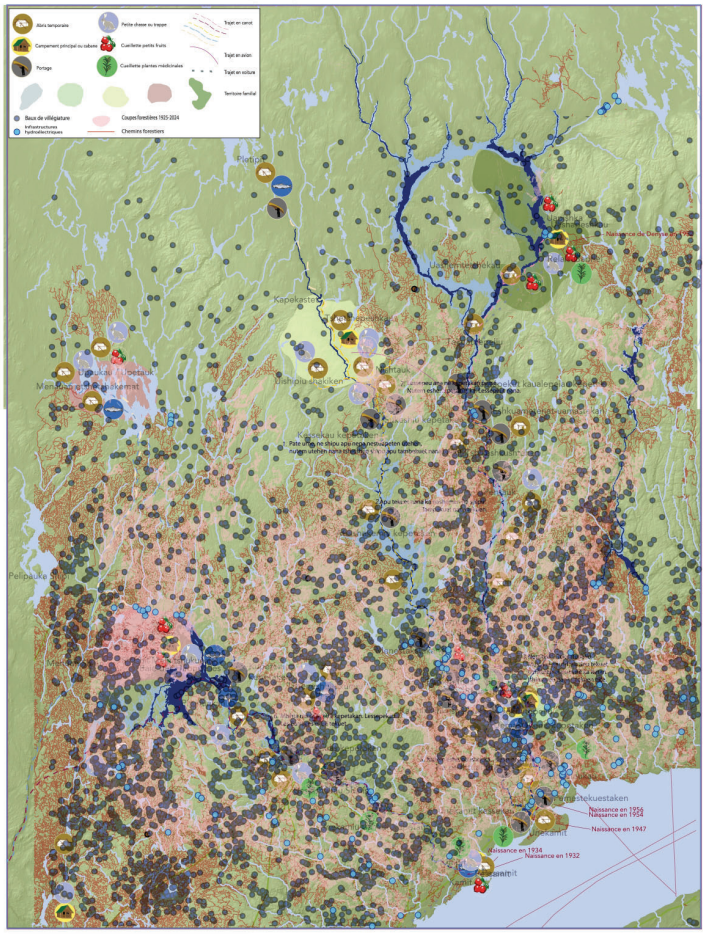

Figure 3. Map of Pessamiushkueuat trajectories and land grabbing entangled (Clapperton-Richard, 2024).

Map-making is Memory-making

To conclude briefly, these maps thus become both supports for the stories and narratives told, and processes for recounting and recollecting territorial memory. By involving ways of combining cartography and narratives, the research project, which included collaboration with the Ilnu women, allowed for the simultaneous production and transmission of both maps and memories of Nitassinan, more specifically the memories of the people who have known, travelled and lived this land, despite and through the territorial changes.

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CCA 2025
Presentation
Summaries

Espaces de mémoire, espaces de lutte : cartographies culturelles et résistances dans la Petite-Bourgogne

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Résumé

Dans un contexte où la gentrification transforme profondément le paysage social et bâti la Petite-Bourgogne à Montréal, cette contribution interroge le rôle de la cartographie – symbolique, visuelle et potentiellement numérique – dans les dynamiques de mémoire et de résistance des communautés noires locales. En m'appuyant sur une analyse de fresques murales, d'enjeux toponymiques et d'organismes communautaires emblématiques, je propose une lecture de l'espace urbain comme un terrain d'affrontement mémoriel, mais aussi comme un outil d'émancipation. Je suggère également la création d'une cartographie numérique participative, pensée comme mémoire vivante et ancrage culturel.

Berceau du jazz, théâtre d'effacements

La Petite-Bourgogne est souvent qualifiée de berceau du jazz canadien, mais cette reconnaissance masque trop souvent les précarités sociales et raciales qui y coexistent depuis plus d'un siècle. Le quartier s'est structuré autour de l'arrivée de porteurs de wagons-lits afrodescendants, venus des États-Unis, des Caraïbes et des Maritimes (Winks, 1997). Leurs familles, souvent exclues des circuits dominants, ont fondé des réseaux communautaires, éducatifs et politiques (Williams, 1997). Des lieux comme le Rockhead's Paradise ou l'Union United Church symbolisent cette vie collective noire. Cependant, cette histoire a été profondément perturbée par deux vagues de déplacement : la rénovation urbaine des années 1960, qui a laissé un traumatisme toujours vivant dans la mémoire des résident·es (High, 2015), suivie d'une gentrification plus récente, qui reconfigure le quartier tout en récupérant une esthétique jazz déconnectée de sa réalité sociale.

Fresques murales : archives visuelles à ciel ouvert

Dans un quartier marqué par l'effacement physique des lieux et la dispersion progressive de ses populations historiques, les fresques murales deviennent des marqueurs spatiaux puissants. Elles ne se contentent pas de décorer les murs ; elles incarnent une mémoire collective, un savoir diasporique situé. Les fresques dédiées à Oscar Peterson, Daisy Peterson Sweeney ou Oliver Jones réinscrivent dans l'espace urbain des récits souvent absents des récits institutionnels de la ville. Ces œuvres agissent comme des archives visuelles et affectives, au sens où elles condensent à la fois des histoires de résistance, de transmission, et de fierté culturelle noire. Comme le souligne Steven High (2019), elles matérialisent des épisodes douloureux – notamment les vagues d'expropriation du milieu du XXe siècle – tout en rendant hommage à la contribution inestimable des Afrodescendant·e·s à la culture montréalaise. Ce sont des formes de cartographie populaire, inscrivant dans le paysage les traces d'un passé trop souvent minoré. Cependant, ces fresques ne sont pas à l'abri des contradictions. Dans un contexte de gentrification avancée, elles peuvent être mobilisées dans des récits esthétisés de quartier, participant à un branding culturel qui rend invisibles les luttes présentes. Comme l'explique Doss (2012), les monuments publics et les expressions artistiques commémoratives peuvent devenir ambivalents : à la fois lieux de deuil et d'identification collective, mais aussi supports d'appropriation symbolique au service de dynamiques économiques.

Toponymie : cartographie du pouvoir symbolique

La toponymie urbaine constitue un véritable terrain d'affrontement symbolique, où s'opposent mémoires officielles et récits marginalisés (Trudel, 2017 ; Vaudour-

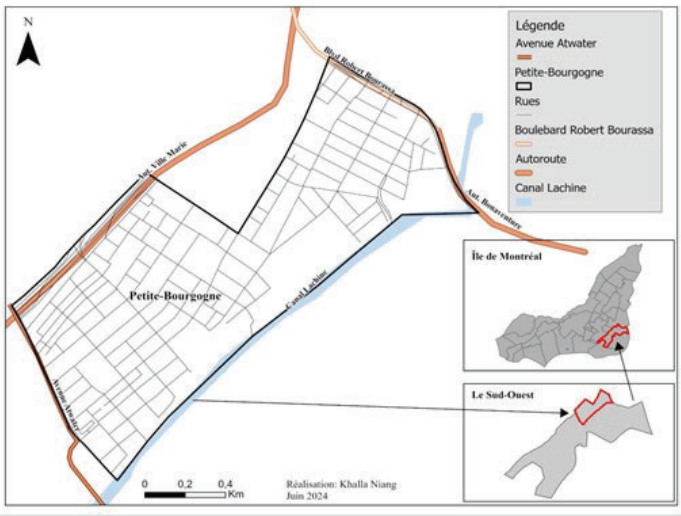
Jouve, 2001). Dans la Petite-Bourgogne, cette lutte s'incarne dans la proposition citoyenne de renommer la station Lionel-Groulx à Oscar Peterson. Lionel Groulx, figure du nationalisme québécois, a tenu des propos ouvertement antisémites et colonialistes, ce qui rend sa présence dans l'espace public problématique, notamment dans un quartier historiquement noir. Ce projet de redénomination ne relève pas seulement de la commémoration : il constitue un geste de réappropriation spatiale et mémorielle, une manière pour les résident·es et militant·es de revendiquer une place dans l'histoire officielle de la ville (Dufranne & Flotat, 2022 ; Hussain, 2020). Il illustre bien ce que les géographes critiques qualifient de "géopolitique des noms" (Rose-Redwood et al., 2010), où nommer, c'est aussi exclure ou inclure symboliquement.

Organismes communautaires : GPS sociaux

Dans un contexte de déplacements forcés et de fragmentation du tissu résidentiel, les organismes communautaires jouent un rôle central dans la préservation et la transmission de la mémoire noire à Montréal. Des institutions comme l'Union United Church, fondée en 1907, constituent non seulement des lieux de culte, mais aussi des foyers d'entraide, d'organisation sociale et de résistance historique. Des initiatives comme DESTA Black Youth Network, qui soutient la jeunesse noire en matière d'entrepreneuriat et de bien-être, ou Les Scientifines, qui outillent les filles afrodescendantes en science et technologie, incarnent une mémoire active, tournée vers l'avenir. Ces organisations fonctionnent comme des boussoles communautaires : elles aident à maintenir les repères dans un quartier en mutation, tout en reconstituant des réseaux d'appartenance. Elles produisent ce que l'on pourrait appeler une cartographie sociale vivante, fabriquée de relations, de pratiques quotidiennes, de soins et de luttes intergénérationnelles. Dans cette perspective, l'espace urbain n'est pas qu'une trame physique ; il est aussi le produit de relations sociales, comme l'a formulé Lefebvre (1974), et un vecteur d'émotions, de peurs ou d'attachements (Pain, 2009).

Cartographie numérique : une perspective de résistance digitale

Aujourd'hui, dans un contexte de disparition progressive des repères physiques et d'effacement culturel, la cartographie numérique apparaît comme un levier puissant de justice spatiale et de mémoire communautaire. Caquard (2014) souligne que la cartographie collective via les médias sociaux permet de créer des récits alternatifs et de contester les formes hégémoniques de représentation spatiale. Dans Queering the Map (LaRochelle, 2017), des expériences personnelles vécues sont géolocalisées en ligne pour créer une géographie queer collective, un modèle inspirant pour cartographier des mémoires noires sensibles et plurielles. Ces projets montrent que la carte se transforme en espace de prise de parole, bien au-delà d'un simple outil de localisation. Un atlas numérique pourrait relier ainsi fresques, archives sonores, témoignages et lieux de lutte à travers une interface interactive. Des exemples comme le Native Lands National Trails (2023) démontrent comment des cartes interactives peuvent reconnaître et visibiliser



l'histoire de communautés marginalisées, notamment autochtones. Une telle cartographie favoriserait une réappropriation narrative des espaces, en permettant aux membres de la communauté de produire leur propre mémoire numérique — un contrepoids aux dynamiques de gentrification. Toutefois, cela pose des défis : les questions de propriété des données, de transmission intergénérationnelle, et d'accès technique doivent être anticipées (Cantillon et al., 2024). En la combinant à la richesse des fresques et des organismes sociaux, la cartographie numérique devient un outil de résistance : une manière pour des communautés noires de Montréal de s'ancrer, se réinscrire, se raconter — même lorsque les murs changent.

Conclusion

La Petite-Bourgogne est un territoire palimpseste, marqué à la fois par une histoire dense de luttes et par des dynamiques contemporaines d'effacement. À travers ses fresques, ses luttes toponymiques, ses organismes communautaires et le potentiel d'une cartographie numérique participative, le quartier nous rappelle que la mémoire est une forme active de cartographie. Elle n'est ni figée ni neutre, mais sans cesse renégociée, retracée, actualisée. Cartographier, ici, c'est revendiquer. C'est inscrire dans l'espace des récits que l'urbanisme dominant tend à effacer. Et c'est, surtout, poser les bases d'une autre manière d'habiter la ville — une manière ancrée dans les mémoires vécues, les solidarités locales, et la capacité collective à nommer, représenter et imaginer autrement le territoire.

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CCA 2025 Presentation Summaries

Mapping the Memory and Power of Expropriation

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Introduction

The research summarized in this article explores how territories are first claimed, shaped and dispossessed through mapping practices. Far from being neutral tools, maps often reflect dominant geographical imaginaries and serve as instruments of power used by political and economic actors to assert control over land. Yet, these same maps frequently obscure the presence, practices, and perspectives of those who inhabit these lands.

Examining these struggles helps reveal historical inequalities and power structures, as well as the ways in which communities resist and reclaim their presence and spatial practices. Deconstructing these dynamics involves critically engaging with the maps themselves and making visible alternative narratives, lived experiences, spatial processes, and practices of resistance and reappropriation.

Canadian Airport Geography of Power and Expropriation

Focusing on the Mirabel airport megaproject in Quebec, a federally led infrastructure initiative from the 1970s that resulted in the expropriation of over 11,000 inhabitants, this case exemplifies how large-scale airport developments are embedded within a broader Canadian "airport geography." While airports are often seen as essential nodes in the mobility of Canadians across the Americas and beyond, their construction reveals a parallel geography of expropriation and territorial transformation. This pattern began with the establishment of Canada's first major international airport in the 1940s on the Island of Montreal, in the city of Dorval. As air travel and the airport economy expanded throughout the mid-twentieth century, the federal government identified the need for a new airport capable of accommodating projected future growth. The selected site, perceived by planners as largely uninhabited, was in fact a rural area composed primarily of long-established farmland. In this context, Mirabel became a paradigmatic case of airport-induced displacement, emblematic of a broader practice in which airports are inserted as territorial enclaves within existing communities, often disrupting and reconfiguring social, economic, and spatial relationships.

The Mirabel case, like many others across Canada and beyond, highlights the uneven power dynamics inherent in the planning and implementation of infrastructure megaprojects. The project was justified through appeals to the "general interest," a dominant narrative frequently invoked to legitimize state-led development, in which any residents were consulted during the decision-making process. While framed as a project for economic development and spatial modernization, Mirabel's airport project must be understood within the context of broader historical and political tensions between the federal government and Quebec during a period of profound transformation.

In Quebec, the Quiet Revolution (La Révolution tranquille), beginning in the early 1960s, marked a period of rapid modernization characterized by large-scale development projects, such as the James Bay hydroelectric complex. While driven by ambitions for economic and social modernization, this era was equally defined by the rise of a new form of Quebec néonationalisme, which sought to distance itself from traditional French-Canadian nationalism and assert a distinct Quebecois identity. It was in this context that the now-iconic slogan "Maître chez nous" ("Masters in our Home") emerged, encapsulating the province's growing desire for autonomy and self-determination. The federalist response, symbolized by Prime Minister Pierre Elliott Trudeau's famous rejection, "Non, merci!",

Figure 1. The Canadian airport geography (provided by author).

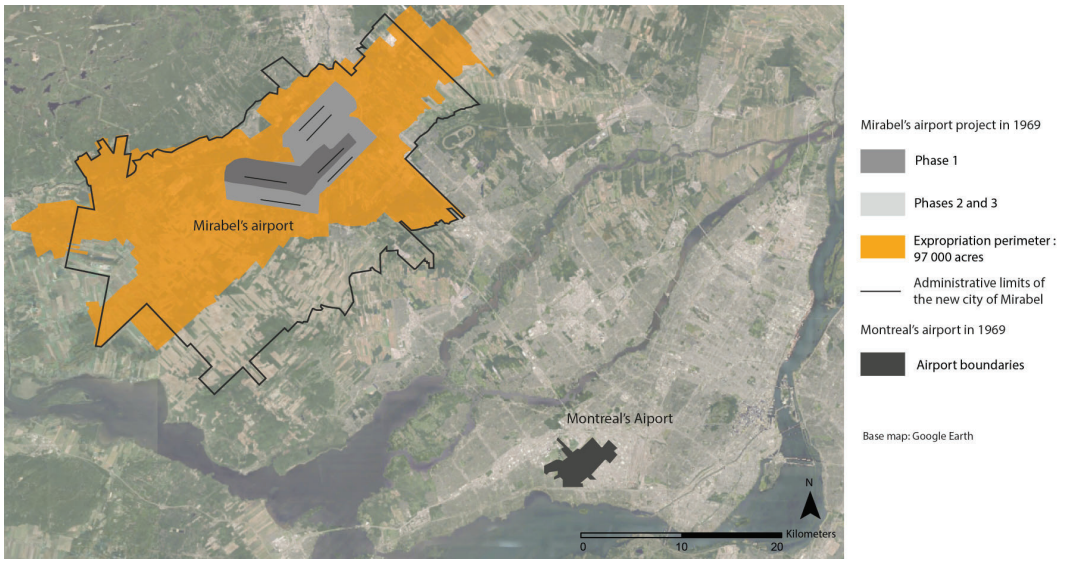

Figure 2. Mirabel's Airport Project and expropriation (provided by author).

highlighted the deep tensions between federal authority and Quebec's nationalist aspirations. This context deeply influenced the scale of the perimeter of expropriation in Mirabel's territory. Indeed, the question: Why so much land taken when the biggest airport at this time in Dallas (Texas) was only of 17,000 acres?

Archival research revealed a 1971 federal report where federal government ministers said: "The decision to acquire this excess land had been necessitated by the conditions which had existed at the time, and the need for quick action in the absence of real hope of immediate rapprochement with Quebec" (Minister's Cabinet 1971, p.9). Mirabel thus well reflects how the political power used the Airport Geography to assert national authority amid Quebec's growing calls for self-determination and reveals how megaprojects, while presented as neutral or technocratic, often carry deeper political intentions and historical weight.

Collectively Resisting and Remembering the Long-Term Impacts of ExpropriationBeyond dominant narratives of federal authority and spatial control, the Mirabel airport project exemplifies the emergence of a distinctly Canadian geography of resistance to state-led expropriation. Although my research focuses on Mirabel, comparable solidarities have surfaced across Canada and internationally revealing a broader socio-political response to the displacement associated with megaprojects. The unprecedented scale and visibility of the project transformed it into a national symbol of resistance. Media coverage and political mobilization elevated the struggle, galvanizing support from other communities confronting similar development projects, particularly during a period marked by the Trudeau government's ambitious modernization agenda. These struggles did not occur in isolation. Mirabel's expropriated residents actively shared knowledge, resources, and legal strategies with others

Figure 3. A geography shaped by powerful relations (provided by author).

facing displacement, while also drawing strength from parallel movements. In Pickering, Ontario, protest signs against a proposed airport explicitly referenced Mirabel, using its legacy to critique ongoing expropriations and to mobilize opposition. This wave of resistance left a lasting imprint on Canada's legal and political landscape. The cumulative pressure from Mirabel and other cases, such as Forillon National Park (Quebec), contributed to reforms in federal expropriation laws, enhancing the rights of displaced individuals to contest government actions. These shifts were instrumental in the eventual cancellation of the Toronto–Pickering airport project, supported by Ontario's premier. While not all projects were halted, this groundswell of opposition fundamentally reshaped public contestation over land use and development.

One of the most significant outcomes of this resistance is the enduring infrastructure of community-based activism it fostered. In the Hull district of Gatineau, for example, an unusually dense network of citizen committees emerged, many rooted in the expropriation struggles of the 1970s. Mirabel continues to exhibit similar patterns of civic engagement, particularly in sectors most affected by displacement, where residents remain committed to protecting local territory and advancing community-based planning. These movements have also catalyzed important forms of memory work. Through oral history, archival research, and counter-mapping, communities have documented the lived impacts of expropriation, transforming them into tools for critique, education, and resistance. These acts of remembrance not only work toward historical redress but challenge dominant planning narratives and call for more equitable approaches to land and development. By making these histories visible, this research contributes to breaking the long-standing silence around the impacts of expropriation in Canada. It also affirms the transformative potential of grassroots resistance in reshaping spatial politics and constructing more just and caring geographies.

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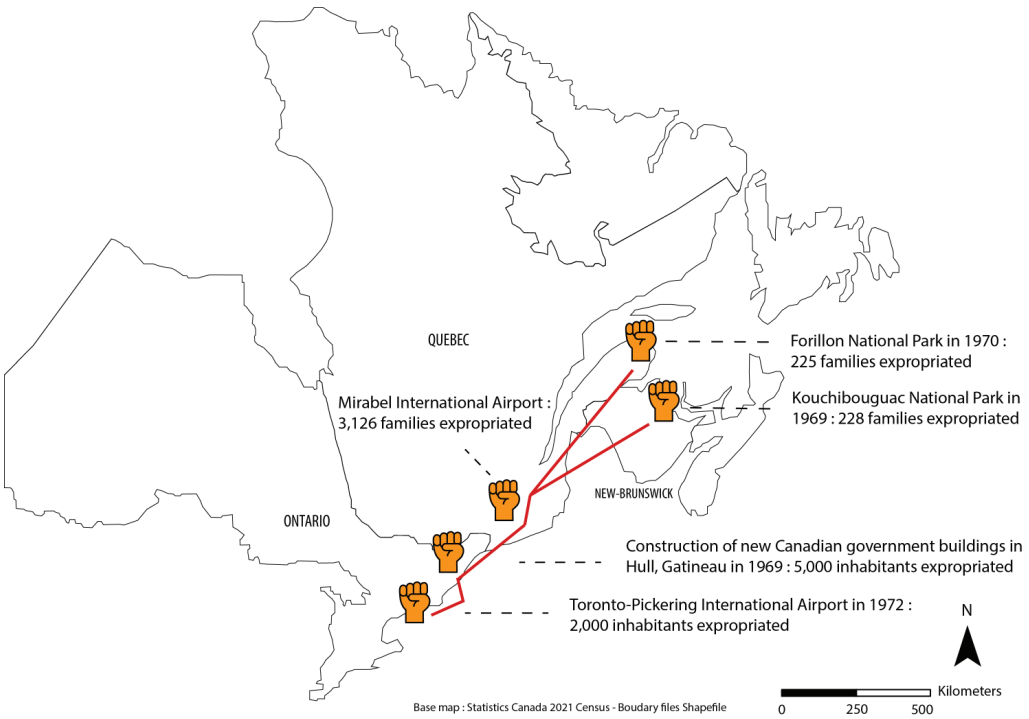

Figure 4. A Canadian geography of resistance against expropriation (provided by author).

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Mapping Memory and Identity: The Confluence of Oral Histories, Cemetery Mapping, and the Irish Diaspora in Saint-Colomban

Kelley O'Rourke *Concordia University*

At the Confluence

At the confluence of oral storytelling, community engagement, and historical mapping lies the Saint-Colomban Cemetery Project – a research initiative rooted in my master's thesis and supported by the Canadian Irish Migration Preservation Network (CIMPN). This work documents and maps the fragmented burial history of Irish settlers in rural Québec, focusing on the years 1836–1847, when the Saint-Colomban Parish and Cemetery were first established. This article provides a summary of the project based on a presentation given in at Confluence in May 2025 (see Figure 1).

A Cemetery as Cultural Archive

Cemeteries are cultural landscapes shaped by time, migration, and memory. In Saint-Colomban, Irish gravestones have been lost, broken, or left unmarked (see Figure 2). Yet through cemetery mapping, archival research, and interviews with descendants, this project has uncovered individual and collective stories once at risk of being forgotten. Many early Irish burials were undocumented or erased by time – gaps that leave the historical narrative incomplete.

Figure 1. Saint-Colomban Cemetery Project presentation at Confluence, May 2025 Image credit: Kelley O'Rourke,.

Figure 2. Saint-Colomban Cemetery: Discarded Monuments.

Memory Mapping & Atlascine Storytelling

My methodology was built around the idea of convergence. The project drew on primary records such as parish registers, in addition to field mapping, and family interviews. Using the Atlascine platform, I created genealogical and spatial profiles for 20 Irish families and combined recorded data with lived memories. Atlascine's visual storytelling tools helped bring these stories to life, blending location, lineage, and oral testimony into interactive maps that serve both research and public history (see Figure 3).

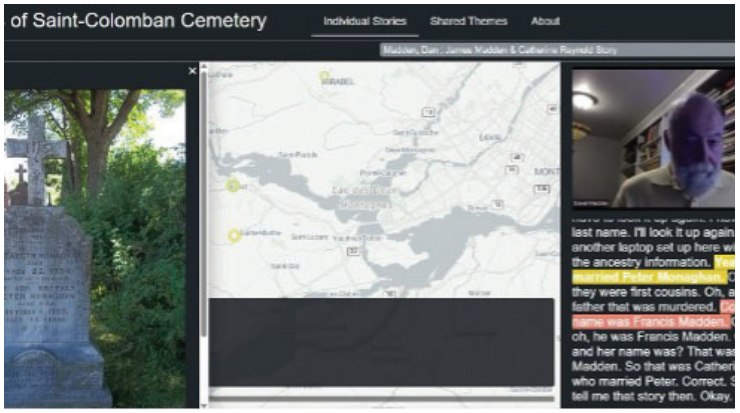

Figure 3. Atlascine Interviews with Dan Madden (with permissions). Image credit: Kelley O'Rourke.

Preservation, Policy, and Advocacy

Saint-Colomban's cemetery preservation raises broader questions about the fate of older burial sites across Québec (for example, see Figure 4). With growing concerns around space and finances, many cemetery administration bodies or Fabriques, have attempted to repurpose or build over older plots despite community resistance and documented burials. Headstones have been altered or removed without consent. This work has brought attention to the gaps in Québec's cemetery legislation, in particular around the protection of "perpetual" plots and the 100-year concession limit under the Québec Civil Code established in 1994, which states that perpetuity is not "eternal", and which leaves historic cemeteries vulnerable to extinction.

Connecting the Local to the Global

Although rooted in a rural parish, this project connects to a much larger story: the Irish diaspora in Canada and the global legacy of pre-famine and famine Irish migration. Many of the Irish people buried in Saint-Colomban arrived long before the Irish Famine. The earliest Irish baptismal record in the area was discovered in 1819. Their stories echo across the Atlantic and remain visible in the cemetery landscape – if we take the time to see and preserve them.

Final Reflections

The Saint-Colomban Cemetery Project is not only about preserving stones. It is about restoring memory. It is an invitation to see cemeteries as living archives, to recognize the power of mapping in reclaiming forgotten histories, and to consider how local heritage sites carry global significance.

Figure 4. Headstone for Timothy Kelly who died March 4, 1889. Image credit: Kelley O'Rourke.

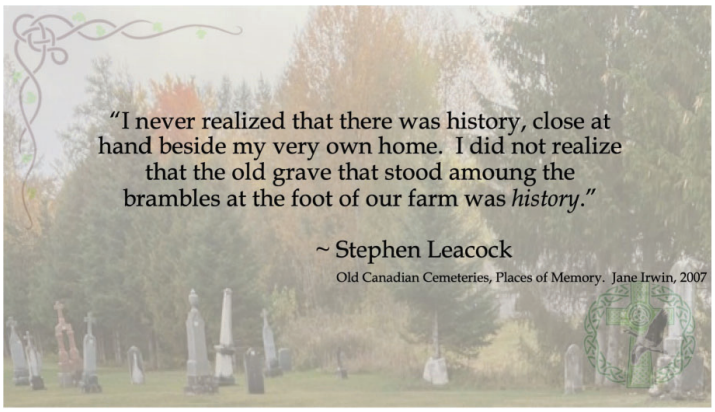

Figure 5. Slide from Confluence 2025 presentation on the Saint-Colomban Cemetery Project. Image credit: Kelley O'Rourke.

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Mapping Archives: Reclaiming the Tools of Evidence in a Context of Structural Inequality in Access to the Means of Uncovering Truth

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Context and Challenges

Celebrated archival scholar Jamila Ghaddar once wrote "colonizers love archives". Governments have long collected, and continue to collect, highly detailed records on Indigenous peoples. When the government controls access to crucial records, it limits the ability of Indigenous communities to uncover the truth and seek justice. Indigenous-led investigations into missing and disappeared children and potential sites of unmarked graves face significant obstacles due to systemic flaws and biases within the colonial justice system. To justify these investigations, Indigenous researchers, families, and communities must present detailed historical documentation, records that are often controlled, classified, or withheld by the very government institutions demanding their submission. Sometimes providing this kind of evidence is impossible because those records no longer exist.

In much the same way that governments decide what is preserved, disclosed, or withheld, maps and archives themselves are shaped by the needs, circumstances, and perspectives of their creators. Just as certain records are selected for preservation in archives, specific kinds of spatial data are privileged in map-making, reinforcing some narratives while omitting others. Institutional archives of space (maps, cadasters, land registries) impose a specific temporality (linear sequence of events) and spatial framing (e.g., land titles, private property boundaries) that reflect state-centric perspectives. This spatial and archival logic influences how researchers and community members reconstruct land histories, often aligning their narratives (perhaps unintentionally) with the frameworks imposed by the state rather than with Indigenous ways of remembering and storytelling. Yet, as Abenaki scholar Marge Bruchac reminds us, fully severing ties with colonial institutions is not always feasible: "It's very easy to say we should be done with these colonial institutions, that we should have nothing more to do with them, but yet they still hold materials that are so crucial to us".

Counter-archival and counter-mapping movements do not necessarily entail a wholesale rejection of institutional archives. Rather, they reflect a strategic and often ambivalent engagement with them. As much as archives and maps can misrepresent Indigenous histories and territories, they also hold materials that can be mobilized for Indigenous self-representation. Indigenous researchers are reclaiming and reinterpreting institutional archives, asserting presence within the very systems that once sought to make them into ghosts.

Haunting as resistance

The term "ghosting" can either mean "the appearance of a ghost" where the ghost is the object of a subject's gaze or "ceasing to respond to someone" where the subject is an active agent doing the ghosting. "Ghosting" can thus also be construed as the conscious choice to disengage from a relationship, a refusal to enter into agreements or pursue reconciliation. Akin to the politics of resistance, refusal to "ghost" (in the second sense of the term) can be generative and strategic, a deliberate move away from one thing (belief, practice, community) and toward another. The point is not to use spectral tropes to interpret Indigenous experiences (Indigenous people are not disappearing) but rather to highlight how the ongoing colonial occupation fosters conditions in which Indigenous communities resist erasure by reclaiming and subverting the act of haunting. Haunting thus becomes an act of defiance against erasure, a refusal to forget, and an invitation to remember. In a context of structural equalities in archival access, Indigenous researchers are experimenting

with new ways to engage with available records. Cartography is one medium being used to enhance archival data which I can cross-reference with other maps. I create a recovery, re-interpretation, and storage, leading to new, Indigenous-controlled geospatial repositories that better reflect Indigenous histories and needs.

Mapping to Reclaim and Reframe Institutional Archives

a. Community controlled geospatial archival repositories
Between 2020 and 2024 I worked with Land Defenders in Kanehsatà:ke to manually transcribe thousands of acts of sale which had been scattered across four different governmental and religious institutions to create one community controlled geospatial archival repository. As with the Ngāti Tipa in Aotearoa, the Mapuche in Chile, and many tribes across the United States this research shows that turning to bureaucratic sources of information has become an essential strategy for reclaiming stolen land. Building on the historiographical work of Kanien'kehá:ka, historians Arlette Kawanatatie Van Den Hende and Brenda Katlatont Gabriel Doxtator (1995) undertook the Kanehsatà:ke Land Defense mapping project, which features a website and interactive map that allows users to understand and trace parcel by parcel, and to appreciate how the Kanehsatakeró:non were dispossessed of their land (see Figure 1). Drawing on Quebec's and the Sulpician Priest's own archives, which are in the public domain, a Land Defender for the project and I used them to construct an alternative historical narrative. In our cartographic repurposing, the archives have become a space where the political and historical dimensions of Kanien'kehá:ka land claims come into focus, claims that ultimately culminated in the Siege of Kanehsatà:ke (also known as the Oka Crisis).

Sustaining such a mapping project is not merely a technical task; it is a political and ethical practice. Without continuous care and adaptation, mapping projects risk becoming obsolete or even harmful to the communities they aim to serve. After completing the project, the Land Defender and I had to consider what would happen next, specifically, who would be responsible for maintaining the geospatial database

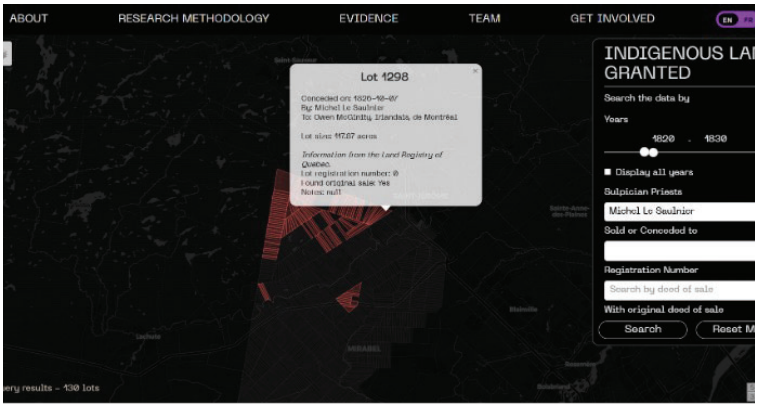


Figure 1. In this excerpt of the Kanehsatà:ke Land Defense mapping project database we can see that the Sulpician Priest Michel Le Saulnier conceded 130 lots of Indigenous land in 10 years between 1820 and 1830. Most of this land was given to Irish immigrants to populate the lands North of the Seigneurie.

we created. This moment of transition exposed the fact that the Land Defender was already overworked, underpaid, and dealing with dangerous and highly volatile living conditions in their community. These challenges made it unrealistic to expect them to take on the long-term maintenance of the database without support. We decided that the map would be hosted on Concordia university's server, but it would be stored on a private platform, and not be publicly available. In the meantime, I serve as the "firekeeper" for this mapping project. This means regularly checking in to see whether the map still aligns with the Land Defender's needs and vision, whether updates support or compromise the project's goals, and how institutional resources could be mobilized without undermining Indigenous data sovereignty.

b. Mapping historic open data

Many communities and survivors seeking recognition for historical wrongs never see formal acknowledgment or reparations. This reality reshapes the objectives of mapping projects from being closed, internal-use tools to being open-source platforms capable of disseminating information to future generations of researchers, community members and activists who seek to document, commemorate, or expose injustice.

For example, Benjamin Farmer Lacombe and Anishinaabe scholar Jackson Pind (2023) collaborated to build a digital map identifying 699 Day Schools across Canada, linking them to over 700,000 records from Library and Archives Canada (LAC). While they describe their project as "picking low-hanging fruit" since the database was compiled from already-public RG10 school files, their work goes far beyond simple data aggregation; they are making these government records interoperable. That is, it reconfigures them into usable, searchable, and spatialized tools that center survivors' needs (see Figure 2).

In a context where church archives, federal records, and legal documents were restricted by privacy laws or entangled in litigation, the open access to records on the map is not about accessibility for its own sake—it is an act of political visibility. For me this mapping project is haunting because it is relentless. The reclamation of the archive is manifested not by keeping data private but rather in making sure it never stays out of site. The map also repositions LAC archives within a framework of Indigenous cartographies, where the meaning of maps is fluid, shaped by those who interpret and share the stories. What once reinforced Canada's control over Indigenous peoples is now recontextualized in the service of Indigenous healing and historical justice. Through open-source mapping, the archive becomes a tool not of closure, but of continuity, a place where history can be reassembled, retold, and reclaimed.

Key messages:

- State and Church institutions responsible for violence cannot be trusted to hold evidence of that violence
- Indigenous communities are actively challenging the politics of erasure by reclaiming the concept of haunting
- Western cartography and archives serve dual roles as both agents of, and witnesses to, colonial violence
- Because of their dual roles, Indigenous researchers are repurposing institutional archives in mapping projects, making them interoperable with their own cultural and land-based perspectives.
- These mapping projects fundamentally speak to the ethical and philosophical demands of deconstruction and reconstruction: While a map can be used to recover and give access to institutional records, a deeper challenge is transforming the very logics, frameworks and objectives that produced and organized those archives in the first place.

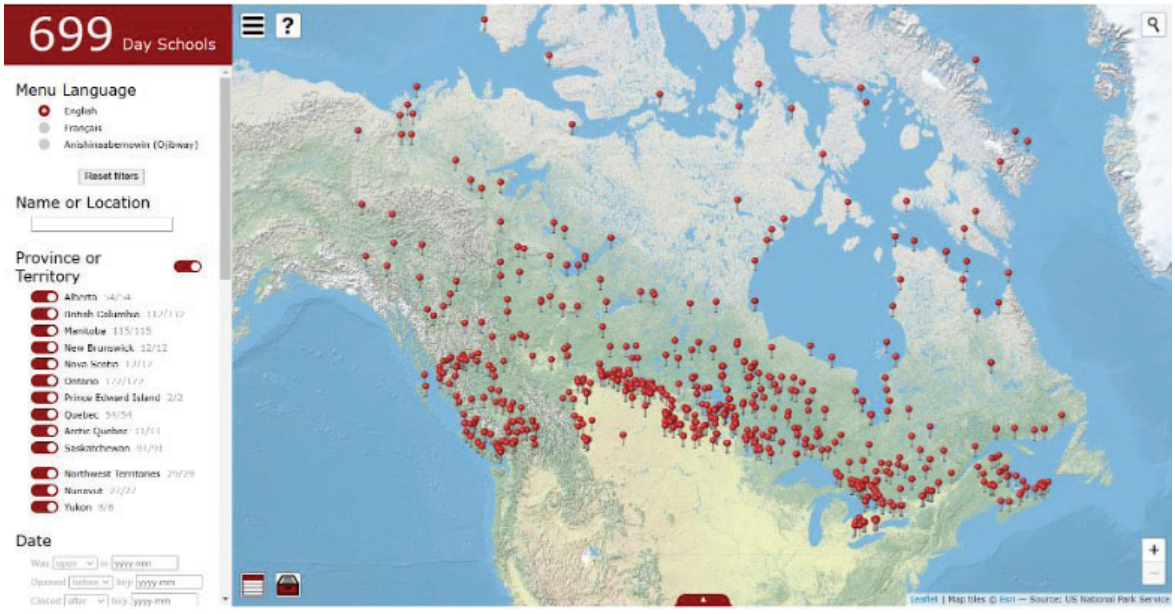


Figure 2. 699-day schools and their associated records hosted on a mapping interface. Reproduced with permission.

CCA 2025 Presentation Summaries

Mapping Oral Histories: The Tell Me about Riopelle Atlas[1]

Lea Kabiljo, and Sébastien Caquard *Concordia University*

In 2023, the art world marked the centenary of Canadian painter and sculptor Jean-Paul Riopelle (1923–2002). To honour the occasion, the Jean-Paul Riopelle Foundation initiated a series of projects and events celebrating the artist and his legacy. As part of these efforts, the Foundation commissioned the Centre for Oral History and Digital Storytelling at Concordia University (COHDS) to create a digital, oral biography archive that would contribute to our understanding of Jean-Paul Riopelle's life and career.

As part of this project, we conducted 23 video interviews: 17 in Canada, where Riopelle spent much of his life, and 5 in France, where he also lived and worked for more than four decades. In line with oral history ethics protocol, each participant signed a consent form specifying their preferred level of access. After review, one participant withdrew and four opted for restricted access, leaving 17 interviews publicly accessible in their entirety. These interviews were made available through a dedicated project website and an online atlas[2].

The Tell Me about Riopelle atlas was developed using Atlascine, a free open-source platform designed to map collections of stories and interviews[3]. Originally inspired by cinematographic techniques, Atlascine has, over the past decade, been shaped by oral history practices, ethics, and requirements[4]. This influence is reflected in several of its guiding principles that are particularly relevant when mapping oral history collections: "(1) the map never replaces the story and the mapmaker never replaces the storyteller; (2) the integrity and totality of each mapped story are preserved; (…) (5) the map acts as a portal for listening to stories as well as for (6) a creative interpretation of story collections that provides an essential pluralistic reading of places"[5].

These principles are reflected in features that link interviews (audio or video), transcripts, and their cartographic representation. Atlascine projects can be private or public and may be developed individually or collaboratively. Contributors define thematic tags and annotate transcripts directly on the platform, which then connects interviews based on shared places and themes. The platform integrates original recordings with transcripts and translations, enabling users to navigate within and across interviews. This combination of design and philosophy made Atlascine a fitting choice for mapping the Tell Me about Riopelle collection. The Tell Me about Riopelle atlas is fully accessible online and includes 17 open-access interviews with original transcripts and English translations. Each interview was annotated and mapped using approximately 300 tags defined by the research team. These tags were grouped into 13 thematic categories and linked to geographic locations that range from precise sites to broader regions. Themes determine the color of each map symbol, while location defines its placement (see figure 1).

Across the 17 interviews, 96 distinct places were identified—mostly in Quebec (including Montreal) and in France (particularly around Paris). Each interview is associated with a specific map that synthesizes the interviewee's memories and locations. For example,

[1] This article summarizes a longer paper currently under review in an academic journal.
[2] The website: https://racontemoiriopelle.ca/ - The atlas: https://rs-atlascine.concordia.ca/riopelle/index.html
[3] Atlascine is based on Nunaliit, a free open-source platform designed at Carleton University at the Geomatics and Cartographic Research Centre (GCRC). For more details about Nunaliit, see Hayes, A., and D. R. F. Taylor. 2019. Developments in the Nunaliit cybercartographic atlas framework. In Modern cartography series, 205–18. Elsevier.
[4] For more details about Atlascine, see Caquard, S., & Shaw, E. (2025). Story Mapping Praxis to Principles: Learning from the Atlascine Project. Annals of the American Association of Geographers, 1–17. https://doi.org/10.1080/24694452.2025.2470748
[5] Caquard, S., & Shaw, E. (2025), p.1

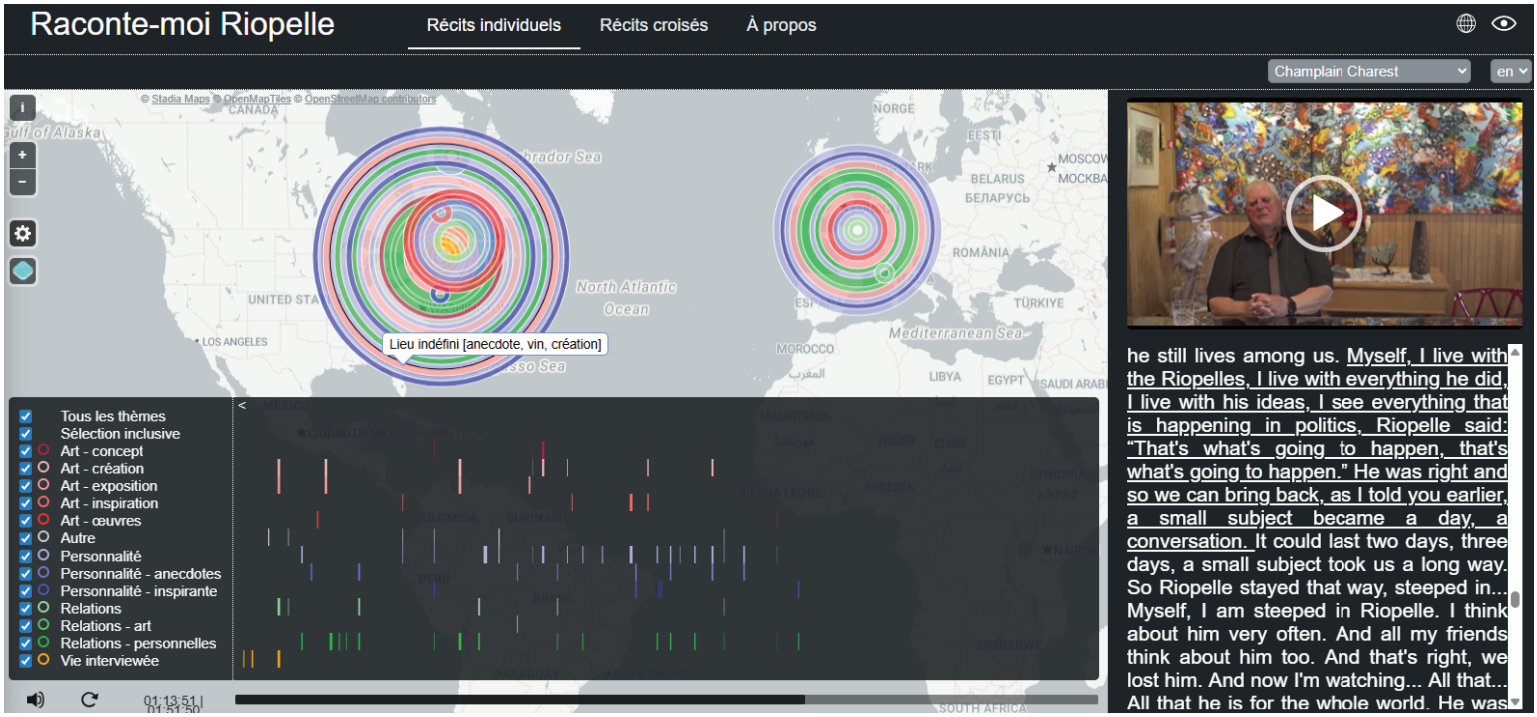


Figure 1. Screen capture of the Tell Me about Riopelle atlas. The full interview plays at the top right, with the transcript or translation below. Tagged segments are underlined in green and correspond to rings on the map. The 13 main themes appear in the legend (bottom left), and tag distribution is shown in the timeline below. All elements are interconnected, allowing smooth navigation between the interview, transcript, map, and timeline. The full atlas is available online (high-speed internet recommended): https://rs-atlascine.concordia.ca/riopelle/index.html

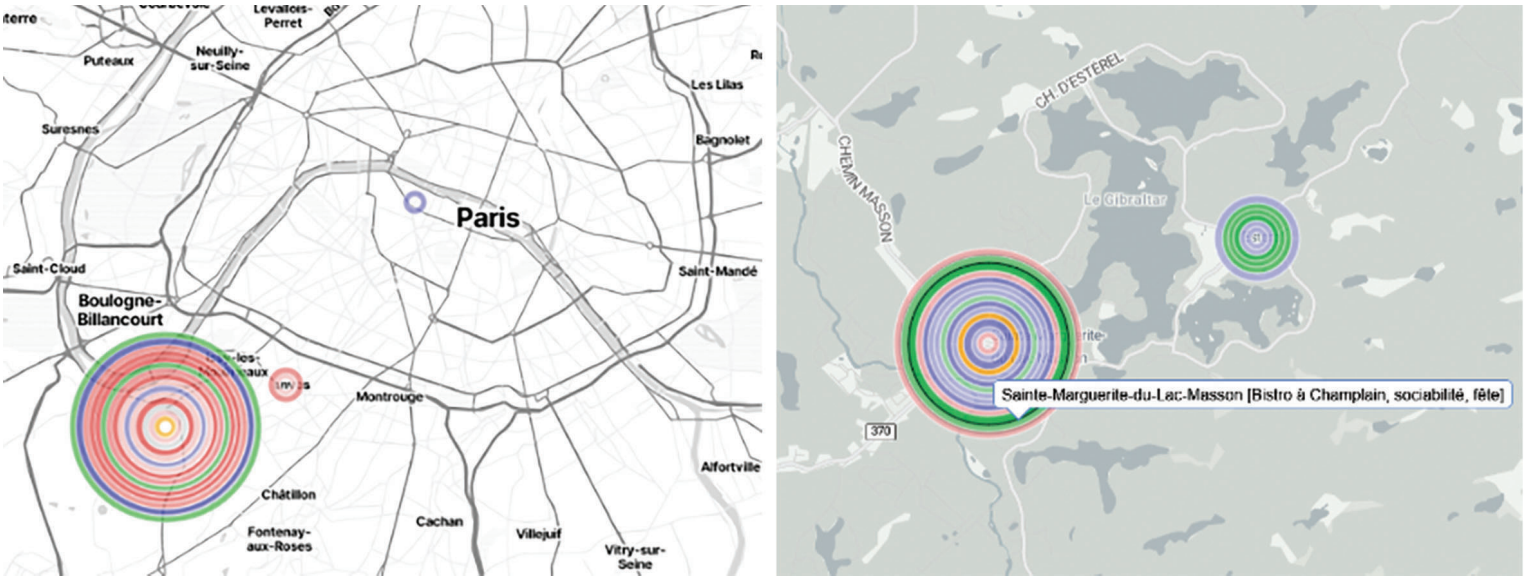


Figure 2. Left: Screen capture of the map of Roseline Granet, focusing on Meudon (near Paris), where she had her atelier and worked with Riopelle. Right: Screen capture of the map of Danielle Charrest, focusing on the village of Sainte-Marguerite du Lac Masson, where she grew up and where Riopelle lived for several years.

Roseline Granet's interview focuses on themes of artistic creation and her studio in Meudon (France), while Danielle Charrest reflects more on Riopelle's personality and the social networks in Sainte-Marguerite du Lac Masson (Quebec) (see figure 2).Just as each interview can be mapped individually, each of the 13 themes defined during the tagging process can also be mapped independently using Atlascine's 'Theme' module. This feature allows users to visualize the spatial distribution of any given theme across the entire collection. For instance, selecting the theme 'art creation' and zooming in on l'Île-aux-Grues and l'Île-aux-Oies in Quebec reveals that several interviewees discuss artistic creation in connection with these two islands (see figure 3). By clicking on each ring symbol, users can listen to the precise moment where each interviewee addresses this theme. Nicolas Alexandre Marcotte, who spent part of his youth on l'Île-aux-Oies with Riopelle and his mother, Huguette Vachon, shares memories of hunting, animals, and artistic inspiration. These recollections intersect with those of painter and academic Louise Prescott, who reflects on the island's impact on her practice, and with those of Lise Gauvin, a former neighbour and collaborator of Riopelle, who describes how it shaped her sense of time in the context of artistic creation. Artist and writer Marc Séguin, who later purchased Riopelle's house on the island, also shares memories of the site and its creative significance. Ultimately, the atlas offers a spatial synthesis of the interview collection while preserving full access to each conversation. It invites users to navigate within and between interviews, maintaining the integrity of individual narratives while creating a patchwork of interconnected memories through shared themes and places. Rather than advancing a fixed interpretation of Riopelle's life or work, the atlas opens the collection to multiple uses through an interactive, user-driven interface. Users can draw on existing tags and thematic categories or define their own, provided they have contributor access. By keeping the mapping process transparent and placing story and map side by side, the atlas invites users to explore the layered relationships between narrative and place on their own terms.[6]

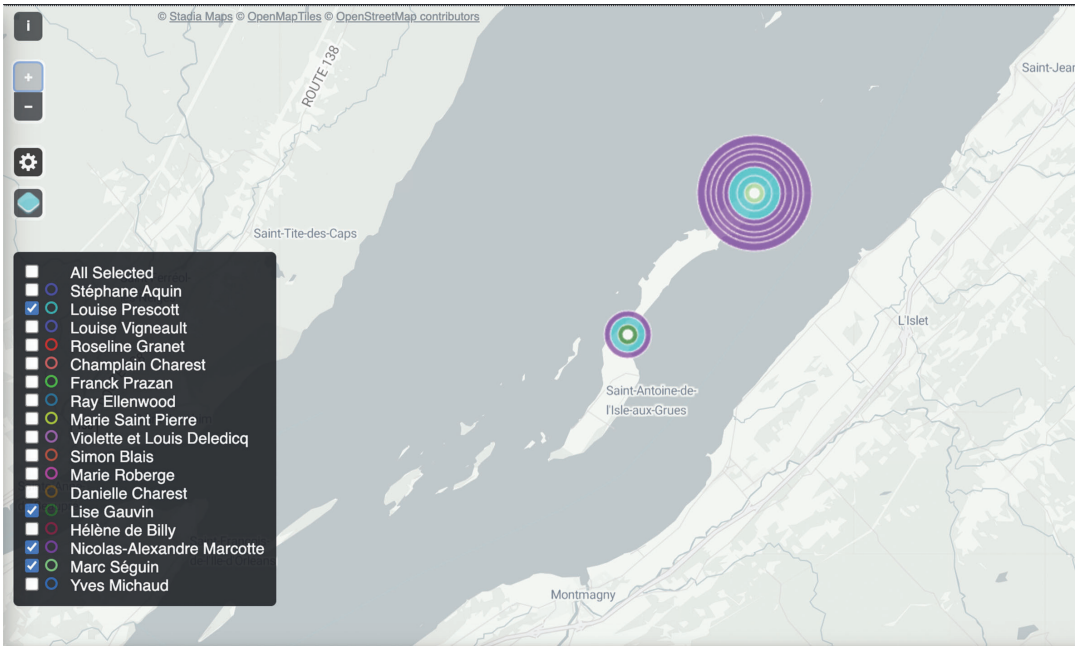


Figure 3. Segments of interviews about art creation associated with l'Île-aux-Grues and l'Île-aux-Oies. Each color is associated with a particular interview and each ring to a particular moment of this interview.Riopelle lived for several years.

References

Atlascine. Tell Me about Riopelle. Accessed July 9, 2025. https://rs-atlascine.concordia.ca/riopelle/index.htmlAtlascine. Accessed July 9, 2025.

Caquard, Sébastien, and Emily Shaw. "Story Mapping Praxis to Principles: Learning from the Atlascine Project." Annals of the American Association of Geographers, 2025, 1–17.

Tell Me about Riopelle. Accessed July 9, 2025. https://rs-atlascine.concordia.ca/riopelle/index.html

[6] *To learn more about the Atlascine project: https://atlascine.org*

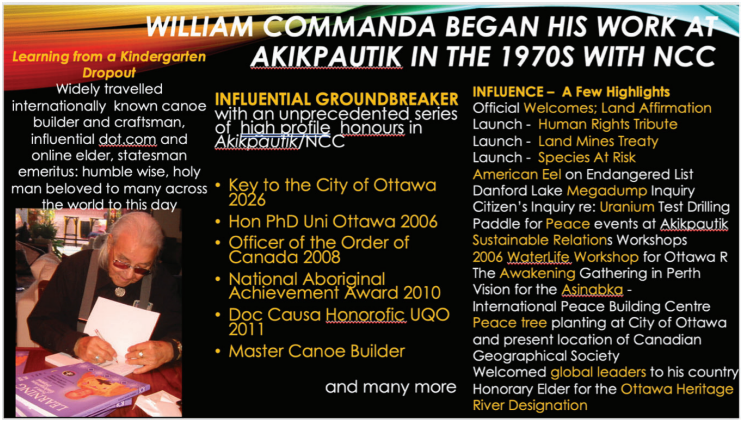
CCA 2025 Presentation Summaries

From Conflictual to Confluence and Children's Cognitive Story Mapping

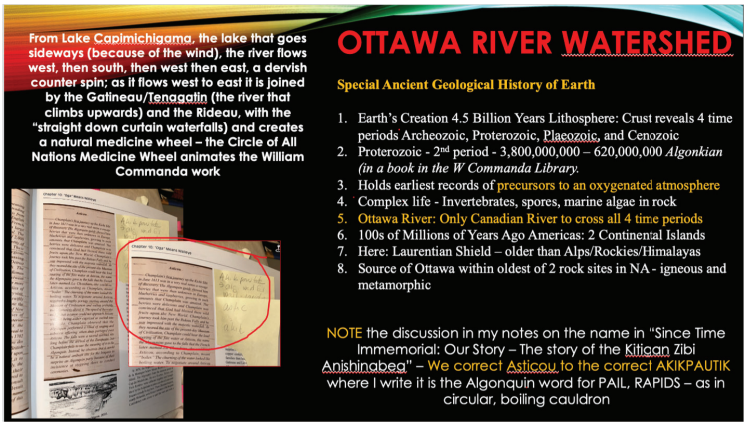
Romola V. Thumbadoo

In May 2025, CCA and CAG hosted their joint conference Confluence at Carleton University. The location was showcased as a zone of Confluence, referencing the meeting place of three rivers, the Ottawa, Gatineau and Rideau. These rivers converge in the heart of Canada's capital, within the National Capital Region, at the Akikpautik / Chaudiere Falls, which was described as a natural wonder and sacred meeting place of Indigenous Peoples. The session CS157 Indigenous Knowledges and Knowledge Systems gave me the opportunity to reflect briefly on my entry into the study of Geography at Carleton University in 2012. It was indeed challenging for me, a newcomer, to enter this domain; and, fresh from 15 years of a singular experiential introduction to Ottawa/Kichisippi River Watershed, together with an indoctrination into a particular lens of the Laws of Nature, via countless road trips, perspectives on history and environmental activism, with its foremost Indigenous Elder, William Commanda. Elder Commanda was a cartographer of note in his lived experience, knowledge and extensive travels. Sharing his knowledge and thinking in my thesis entitled, "Ginawaydaganuc and the Circle of All Nations, the Remarkable Environmental Legacy of Elder William Commanda", was challenging in a venue grounded in western science that was only just becoming acquainted with Indigenous thinking, including its earth-based spiritual dimension.

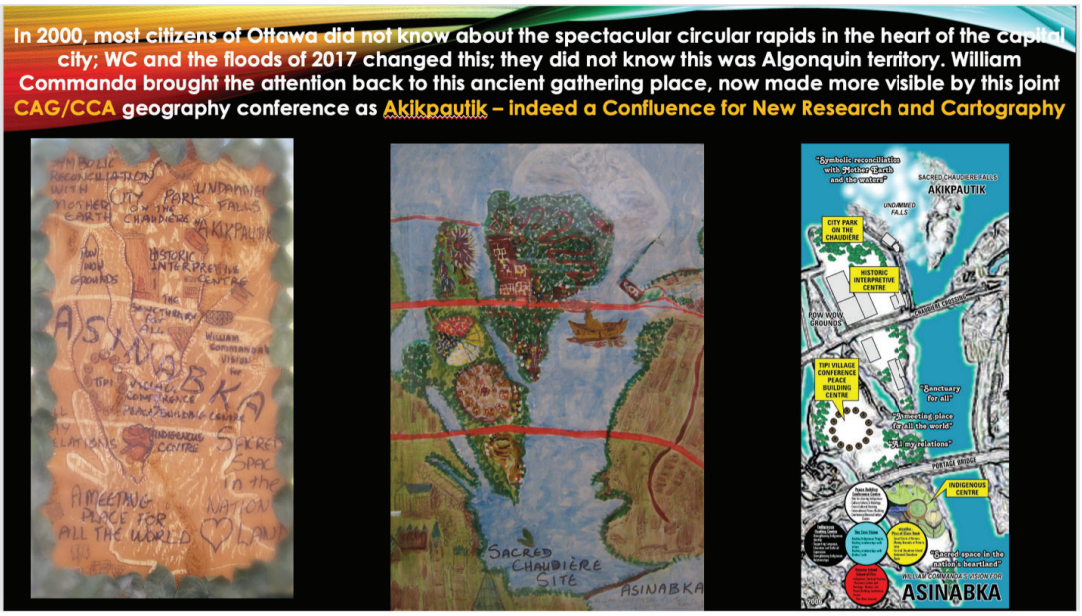
The description of the Confluence theme in the conference invitation obliged me to reflect on the Commanda legacy and research again: "By embracing confluence, geographers and cartographers can foster new connections, collaborations, and insights that illuminate complex issues. Cartographic representations of space similarly reflect the confluence of cultural, historical, philosophical, and economic understandings, which have been influenced by past and contemporary technologies, and demonstrate how maps shape and are shaped by our understandings of place, identity, and power. In celebrating this theme, we remember that embracing confluence is about both bringing different perspectives together and creating new possibilities for understanding and addressing complex geographical issues. By sharing knowledge in the spirit of confluence, we can deepen our understanding of geography and cartography and their relevance to contemporary opportunities and challenges".



I believe William Commanda contributed to this understanding. Perhaps the fact that the Confluence conference spins on the word Akipautik affirms this to some degree. Perhaps the affirmation of my presentation



by Adjunct Professor in the Department of Geography and Environmental Studies at Carleton University, Kwaku Kusi-Appiah, also gives some credence to this; he had been working for the then Mayor Bob Chairelli during the early 2000s and was personally acquainted with William Commanda's outreach and work. It was William Commanda himself who had stated that the Algonquin word for the sacred falls was Akikpautik; moving beyond place naming, it was his tireless work there that brought an obscured brownfield into public consciousness around the turn of the century, with his vision for peacebuilding and environmental stewardship. My presentation entitled "From Conflictual to Confluence" examined his discursive reach 13 years after his death, and its relevance to the objectives of this conference, and can be accessed at https://circleofallnations.ca/new/akikpautik-from-conflictual-views-to-confluence/



I also did a presentation on the art creation components of the Children's Cognitive Story Mapping initiative referenced above for the CCA's special session on art and cartography. The transdisciplinary collaboration initiated in 2022 by Circle of All Nations, Geomatics and Cartographic Research Centre, Carleton University, (in Canada), National Association of Child Care Workers and Durban University of Technology (in South Africa) integrates approaches from arts and humanities, social welfare and cartography in art story map creation with children. Children initiate the map creation activity with child care workers, and through memory/mind map visualization, engage in geo-narrative storytelling and story map production that surface unexpressed thoughts and positions therapeutic art creation in life-space work. Memory box activities that supported grieving during the HIVAIDs crisis are reconstituted as personal repositories of "safe space" aspirations articulated in art maps.

Preliminary analysis of the work demonstrates the transmutative (change at essence level) and transformational (change at structural level) potential of this work. Comparable to a topographic map that is a model of a geographical, geometric or geospatial landscape and abstraction of external space, so is the cognitive map a representation or abstraction of personal, interior landscapes, marked by dominant and recessive issues, connections, parameters, boundaries and borders. Mapping and storytelling are clearly the central and critical tools of communication and digital technology, and telecommunications make them important Cybercartographic and cybernetic transdisciplinary cartographic modalities of the age of information and global connection. Infographics, photoatlases (graphics/textual map collections), dynamic slideshows and cartoon art were examined through the lens of semiotic cartography and digitalization. Additional information about this project follows in my "ICC2025 Experiences and Reflections" later in this issue.

CCA 2025 Presentation Summaries

Revisiting Intangible Heritage through Stories and Maps: The Atlas of Intangible Heritage of Parc-Extension

Sepideh Shahamati and Sébastien Caquard *Concordia University*

Introduction

This research explores how stories and maps can deepen our understanding of intangible heritage. To do so, we use Atlascine, an online narrative mapping tool specifically designed for mapping stories. Our study focuses on three key relationships between stories and maps: (1) mapping personal and everyday narratives as valuable expressions of intangible heritage, (2) weaving individual stories into collective memory maps, and (3) approaching story mapping as a distinct form of storytelling. By engaging with these approaches, we aim to reveal how different ways of working with stories and maps can deepen our insight into the meaning of intangible heritage.

Methodology

This research is situated in Parc-Extension, an immigrant and low-income neighbourhood in Montreal that is currently undergoing rapid gentrification. We conducted 17 interviews with current and former residents, focusing on their memories and personal stories. These narratives were uploaded on the Atlas of Intangible Heritage of Parc-Extension (see Figure 1) within the Atlascine platform. Through this mapping process, we closely engaged with fragments of individual stories, linked them to specific physical locations in the neighbourhood, and wove them together to create more cohesive representations of particular themes, places, and experiences.

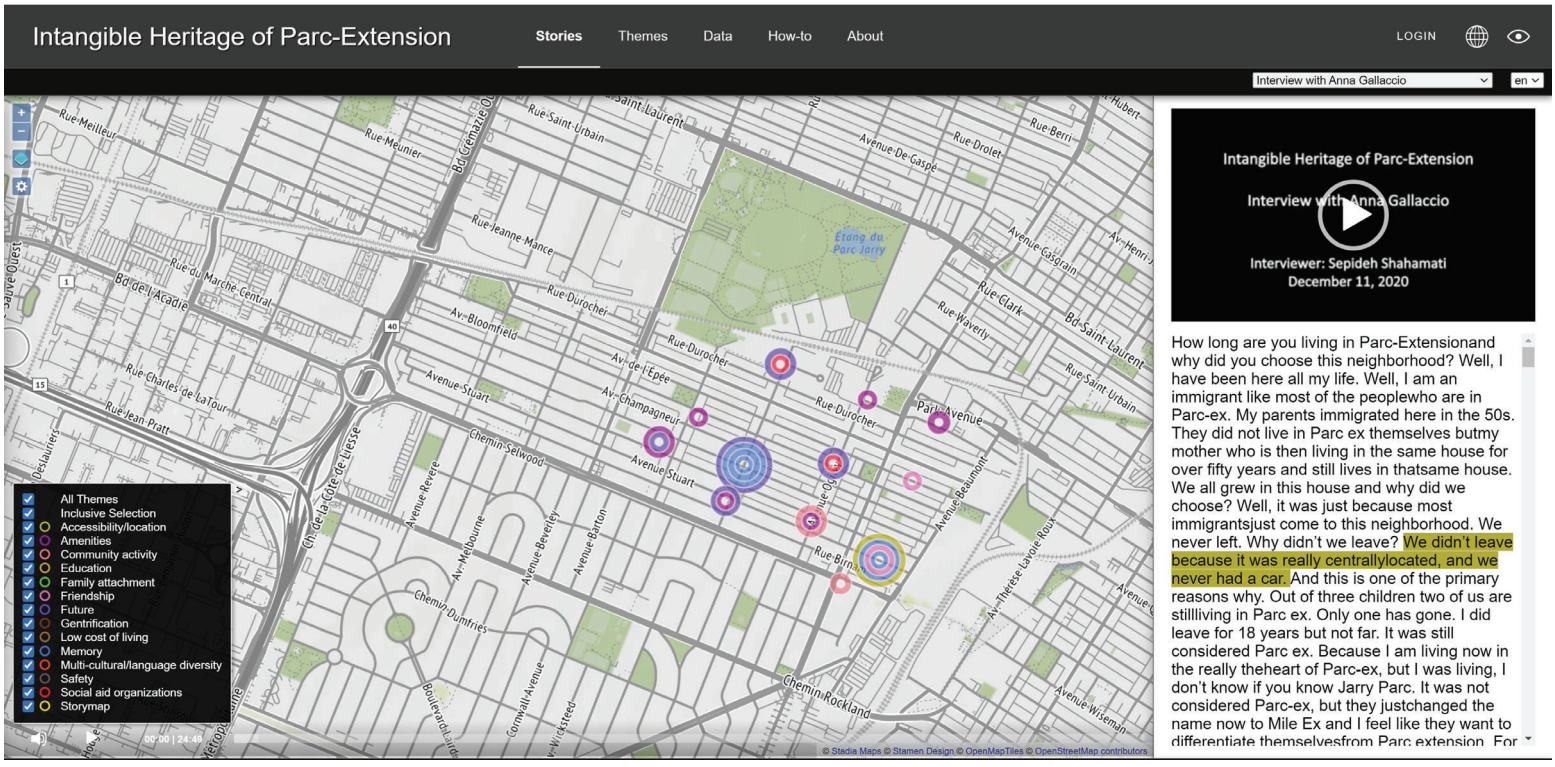


Figure 1.Screen capture of The Atlas of Intangible Heritage of Parc-Extension- The Atlas is available at https://rs-atlascine.concordia.ca/parcextension/index.html?module=module.stories

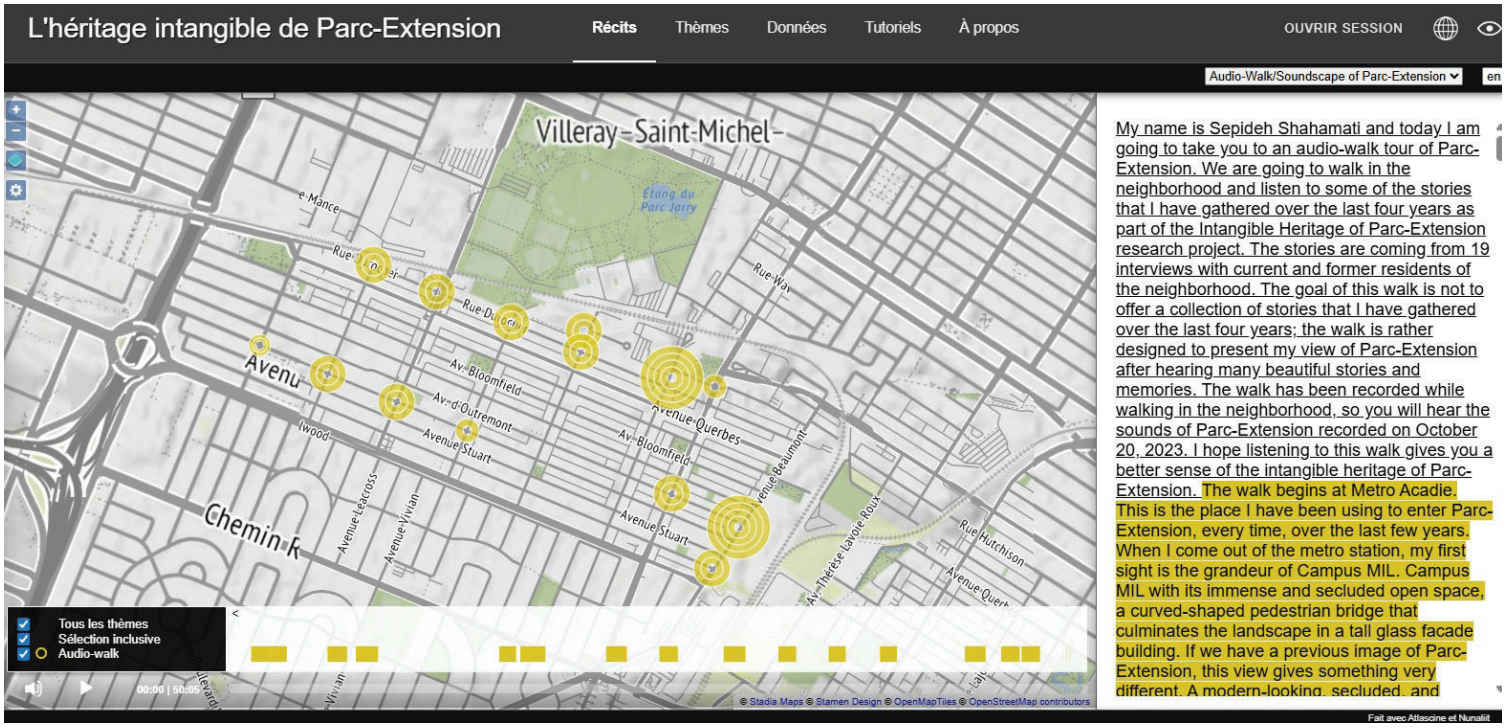


Figure 2.Screen capture of the Audio-walk in The Atlas of Intangible Heritage of Parc-Extension- The Atlas is available at https://rs-atlascine.concordia.ca/parcextension/index.html?module=module.stories

Through this engagement, we listened to and mapped small stories of the neighbourhood, wove certain narratives into collective memory maps of specific places, and re-told them through an audio walk. We listened to small, intimate stories that ranged from childhood memories to accounts of local businesses displaced by rising rents. These included memories of children playing on the train tracks in the 1940s and 1950s, as well as present-day stories centred around a grandfather's house. Beyond mapping individual and personal stories, this mapping process enabled us to gather and interweave narrative fragments, revealing specific places of shared memory. A prominent example is the William Hingston Centre – remembered by long-time residents as a former school, and by recent immigrants as a vital space for social integration. The accumulation of these small stories revealed the importance of this place across different generations and communities.

To *further emphasize the embodied experience of place, we also developed an audio walk. Narrated by the firs*t author and mapped using Atlascine, the walk invites participants to move through the neighbourhood while listening to selected stories. This sensory and spatial engagement foregrounds the role of walking, sensing, and physical presence in experiencing and understanding intangible heritage.

Conclusion

This research explored various ways of engaging with stories and maps to understand intangible heritage. By mapping the narratives of Parc-Extension using Atlascine, we highlighted the significance of small stories and residents' memories, identified shared places of meaning, and demonstrated the value of embodied engagement. Together, these approaches

[1] This is a summary of a manuscript currently under peer review for publication."
[2] For further information on Atlascine, see Caquard, Sébastien, and Emory Shaw. "Story mapping praxis to principles: Learning from the Atlascine Project." Annals of the American Association of Geographers 115, no. 5 (2025): pp 988-1004.
[3] Shahamati, Sepideh. "Mapping the invisible city: Revealing the intangible heritage of Parc-extension through narrative cartography." PhD diss., Concordia University, 2024

CCA 2025 Presentation Summaries

Collaborative Mapping with Urban Residential School Survivors

Stephanie Pyne, Glenn Brauen, Caléa Turner, Andrew Wiebe

The Collaborative Mapping with Urban Residential School Survivors project builds on previous research to design a multimedia Drupal-based GIAMedia website framework for mapping residential school survivor stories, including the project to create a map-based website around a chapter by the late Elder Theodore Fontaine, co-founder of the Assiniboia Residential School Legacy Group (the Group), in Did You See Us: Reunion, Remembrance, and Reclamation at an Urban Indian Residential School. Many chapters in the book are based on relatively brief interviews that were held during the storytelling component of the 2017 Assiniboia Residential School Reunion and Commemorative Event.

This project is being conducted alongside chapter authors where possible to share research progress, encourage reflection and ensure the resulting map accurately reflects their individual perspectives. Whereas Elder Theodore's story had a relatively short time frame and focused primarily on memories of a teenage trip to Winnipeg, chapter six by Elder Mabel Horton (co-president of the Group) features a longer time frame and reflections not explicitly linked to geographical locations. Research has included working with Elder Mabel on mapping her chapter and providing her with an opportunity to reflect further and to embellish where and how she wishes, while also learning about the online mapping platform. Titled "On the Whole it was a Good Experience", Elder Mabel's chapter covers her pre- and post-Assiniboia Residential School life and beyond in relation to her career in nursing and public health. Working with Elder Mabel has followed a similar method used to map Theodore Fontaine's story, and has extended beyond her chapter to include more details on Mabel's vast personal and professional travel, which she was inspired to reflect on during online meetings to view and discuss the evolving mapping of her chapter and during her time interacting directly with the story site. The mapping includes a geo-transcription of Elder Mabel's story with transcribed chapter text and associated places. Historical-geographical research to gather and present media for these places provides a way to honour her story and help others better understand the world as-it-happened through her eyes over time. The text and associated places are organized into "episodes" to guide a reader through Elder Mabel's mapped story (see Figures 1 to 3). o optimize the map view for transitions between episodes, Glenn Brauen designed a Grouped Narrative Area content type to allow for bounding box

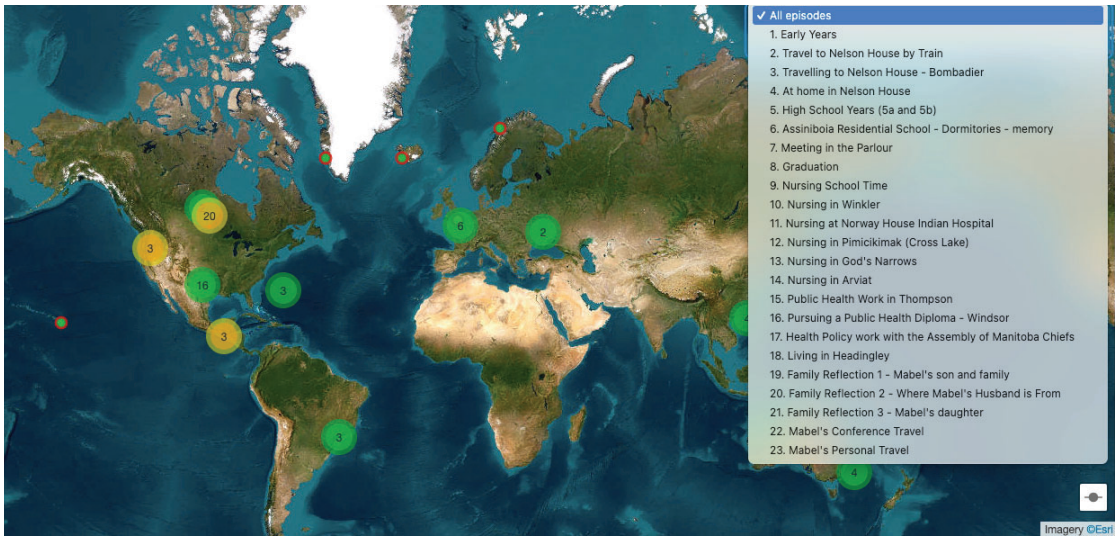


Figure 1. Screenshot from the Elder Mabel Horton Story mapping showing the broad geographical extent of her story and the drop-down display of the story episodes (Source: Stephanie Pyne).

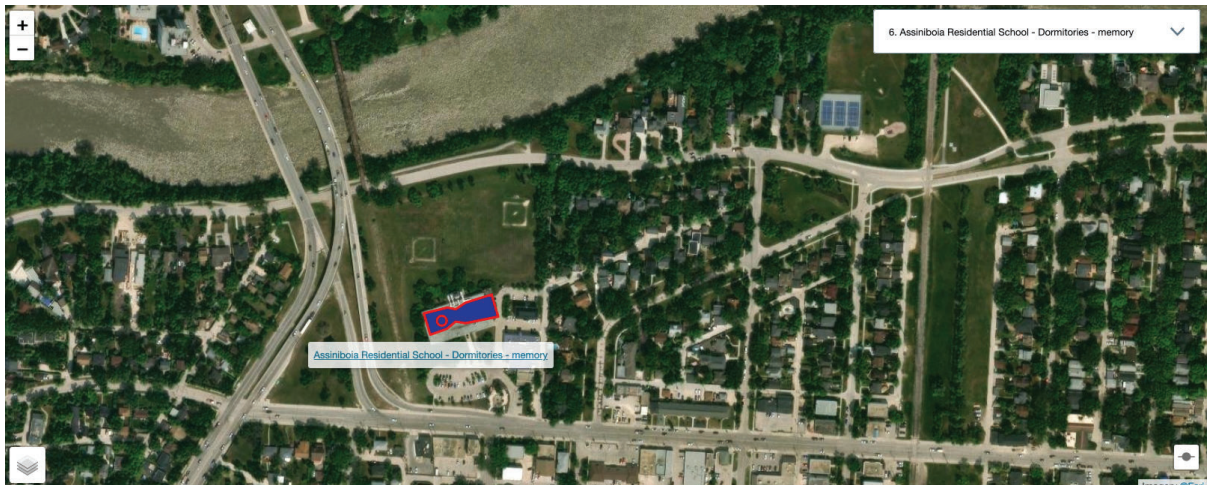


Figure 2. Screenshot from the Elder Mabel Horton Story mapping showing the location of the Assiniboia Residential School Dormitories for episode 6 (Source: Stephanie Pyne).

customization, which he later improved upon in his Narrative Extent Demo Map. A grouped narrative area is a geographic delimitation of a useful area for displaying elements of interest for part of a geographic narrative and maintaining a sense of spatial context. A grouped narrative area is intended to frame a map around one or more narrative elements within a story. As a set, grouped narrative areas can be used to (re)frame all parts of a geographic narrative. In this implementation, a group is defined as the minimum bounding box that encloses the story elements related to all narrative items to which the group is linked (see Figure 4).

In addition to gathering media and related resources to reflect the place-based historical geographical context of the various "episodes" in Mabel's chapter, we also have been experimenting with the "settler colonial mesh" construct (Woolford, 2019) as an organizing factor for information related to sociological context. The "settler colonial mesh" has three levels including the macro-societal level or "the broader social terrain" (130); 2. the upper and lower meso- or institutional level "where high level policy begins to take shape in the form of programs and systems"; and 3. the micro-level, which reflects "the everyday or intimate practice of assimilative education" (131). This approach, which has the potential to chart both similarities and differences in residential school experiences and related contextual factors, can provide a useful lens for the type of awareness that characterizes meaningful reconciliation (Crocker, 1999, 2015). Woolford (2019) pointed particularly to the potential of community and participatory mapping as a method to present micro-level phenomena. With respect to the meso-level, we have engaged in pilot research to create a timeline reflecting policy implementation at national, regional and local scales. With respect to the micro level of everyday experience,

With respect to the macro-societal level, we have engaged in pilot research on tracking attitudes reflected in news media, including ideologies and narratives that were common during the time that Elder Mabel went to Assiniboia Residential School.

Figure 3. Screenshot of students in the Girls Dormitory from the 1965 school yearbook, Keewatin, as an example of the historical geographical media accompanying each episode (Source: National Centre for Truth and Reconciliation).

With respect to the meso-level, we have engaged in pilot content analysis of the mapped and other chapters in the Book with particular interest in emotions associated with experience and events (see Figure 5). With respect to all levels, we have been exploring various approaches to geovisualization for future research.

Working with Survivors to map their stories in a context-rich manner can support experienced-based learning and give rise to new awareness. Presenting Survivors' stories in this way not only makes them more accessible, but can also facilitate connecting to these stories in a way that enables enriched awareness of place-based context and change over time. In addition, experimentation with the settler colonial mesh signals the potential for an enhanced appreciation of sociocultural, sociopolitical and socioeconomic contextual factors. While this work is still preliminary with the story map sites being limited to registered users, it provides the basis for moving forward with future research to map additional chapters from Did You See Us, expand on our initial work on sociological context geovisualizations, and create a new publicly available Did You See Us Atlas.

Acknowledgements

Mapping Assiniboia Residential School Survivor Stories: Did You See Us (the project revolving around Elder Theodore Fontaine's story) was supported by a Social Sciences and Humanities Research Council Partnership Engage-Residential School Joint Initiative Grant (2022-2024).

Collaborative Story Mapping with Urban Residential School Survivors (the project revolving around Elder Mabel Horton's story) is supported by a SSHRC Insight Development Grant (2024-2026).

The late Dr. Fraser Taylor (Geomatics and Cartographic Research Centre, Carleton University) was the principal investigator for these and previous projects prior to his passing in March 2025. His steadfast and engaged participation in our ongoing research on critical cartographic approaches such as cybercartography to residential schools and reconciliation is warmly appreciated and remembered.

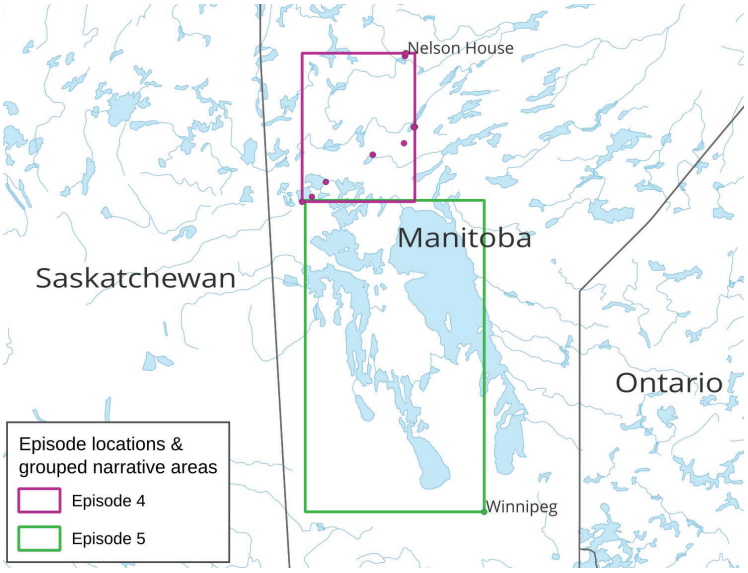


Figure 4. Map showing episode locations and grouped narrative areas for episodes 4 and 5. Episode 5 locations are in Winnipeg but the narrative area has been expanded by including a location from Episode 4 to maintain spatial context during this episode transition. (basemap: OpenStreetMap)".

Figure 5. Experimental preliminary graphic representation using colour to denote emotions associated with Assiniboia and previous residential schools as recounted by various authors in Did You See Us (Source: Caléa Turner).

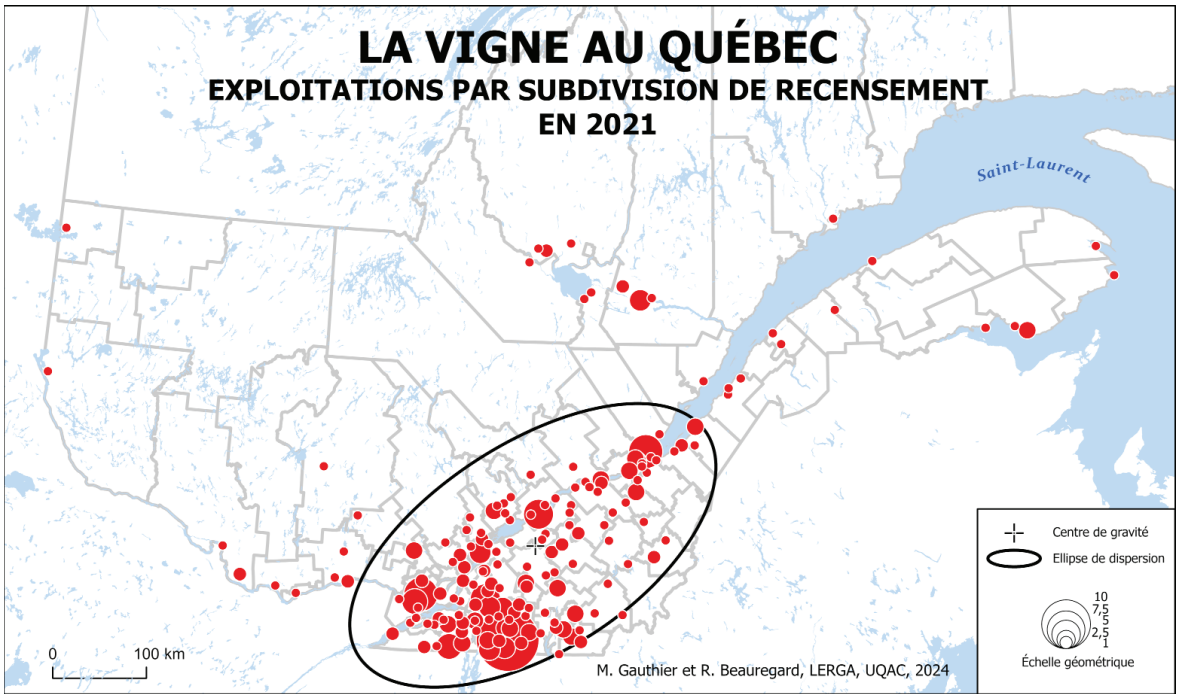
CCA 2025
Short Article

The Changing Landscape of Vine Cultivation in Québec

Majella-J. Gauthier and Réal Beauregard, *Université of Québec at Chicoutimi, Canada*

The use of maps to demonstrate a geographical phenomenon is always appropriate (obviously), especially when the subject to be dealt with requires the representation in space of situations and evolution over time. This is what we did in our study with vine cultivation in Québec, which was published in 2024 and is the first of its kind to cover the geographical development of this crop. The greatest challenge in our research was the availability of reliable data, both in terms of the definition of a farm producing grapes and in making the geographical areas agree over time. To produce the database, we focused on the Canadian Censuses of Agriculture, covering the period from 1961 to 2021 by decades. Then, we fixed what the successive farm definitions were for each census year and the geographic boundaries of census divisions and subdivisions.

One of the greatest difficulties has been also to unravel the variations in spatial entities in terms of division, name changes, boundaries, mergers and disappearances. Fortunately, we solved the problem, and then effectively used the centrographic method to analyze and illustrate the data, which show an obvious territorial densification and a non-surprising shift to the north (see Map 1). It should be noted that the number of vineyards and the hectares cultivated increased from 20 to 310 and from 5 to 940, respectively.



Map 1. Vine in Québec: Hectares by Census Subdivision in 2021.

The cultivation of vines not only contributes to the diversification of agricultural activities but also leaves a joyful mark on the landscape. The study includes 18 maps, 2 diagrams, 5 tables, 15 photos, and presents examples of vineyards throughout Quebec.

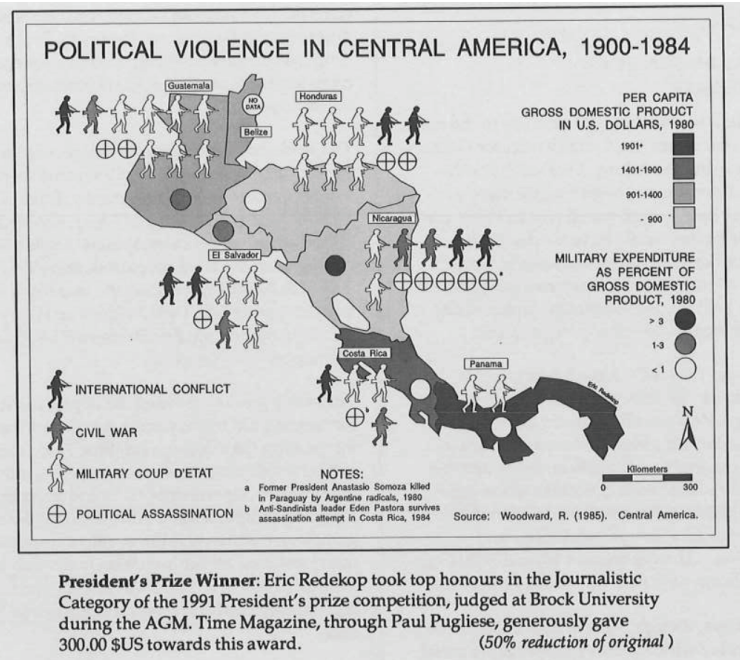
For more information and to order the report (published in French): see: La vigne au Québec: son essor géographique de 1961 à 2021, by Majella-J. Gauthier and Réal Beauregard, Laboratoire d'expertise et de recherche en géographie appliquée, publication of the Groupe de recherche et d'intervention régionales de l'Université du Québec à Chicoutimi, 2024, 69 pages.

50th Anniversary Photo Retrospective

Stephanie Pyne and Marikka Williams

The CCA transitioned in 1991 from its newsletter to the publication known as Cartouche, which is now 34 years old and has graphic and textual content reflecting the history of the CCA. Below is a selection of imagery from Cartouche back issues combined with a few photos from the CCA archive.

Selected Images from Previous Cartouche Issues



President's Prize Winner: Eric Redekop took top honours in the Journalistic Category of the 1991 President's prize competition, judged at Brock University during the AGM. Time Magazine, through Paul Pugliese, generously gave 300.00 $US towards this award. *(50% reduction of original)*

Figure 1. President's Prize winner (Cartouche Number 3, Autumn, 1991).

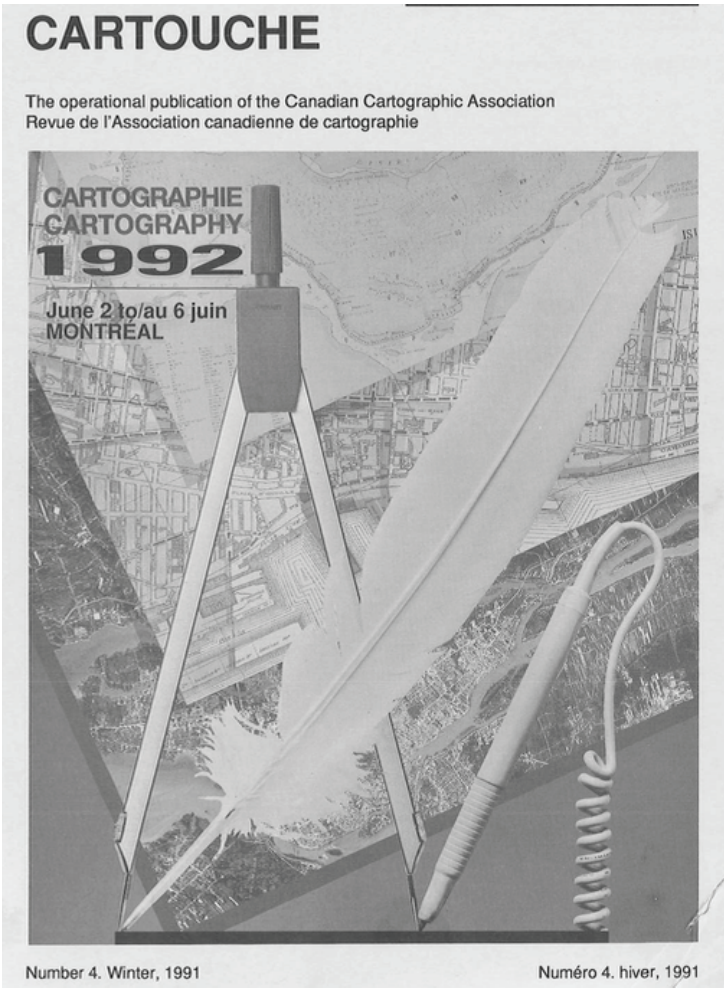
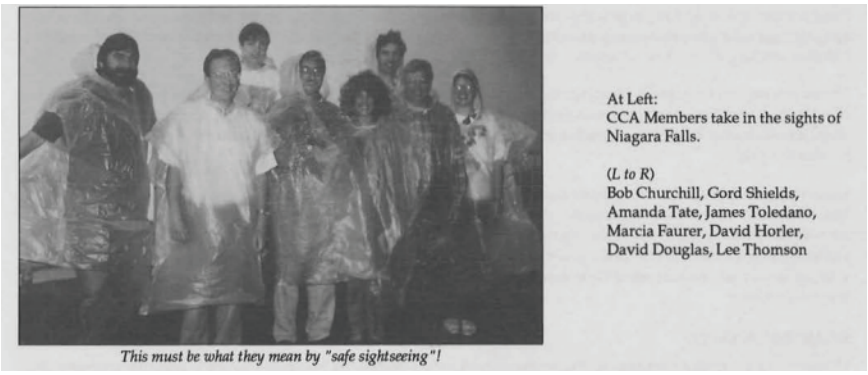


Figure 2. Cover (Cartouche No. 4, Winter 1991).



This must be what they mean by "safe sightseeing"!

At Left:
CCA Members take in the sights of Niagara Falls.

(L to R)
Bob Churchill, Gord Shields, Amanda Tate, James Toledano, Marcia Faurer, David Horler, David Douglas, Lee Thomson

"David, I thought you had the map showing where to meet!"

Figure 3. CCA AGM Niagara Falls Social Event (Cartouche Number 3, Autumn, 1991).

50th Anniversary Photo Retrospective

Figure 4. Cartoon (Cartouche No. 6, Summer 1992).

Alun Hughes presenting award to Claire Gosson. *Alun Hughes remettant le prix à Claire Gosson.*

Figure 5. Claire Gosson receiving the 1995 Award for Exceptional Contributions to Cartography (Cartouche 19, Autumn 1995).

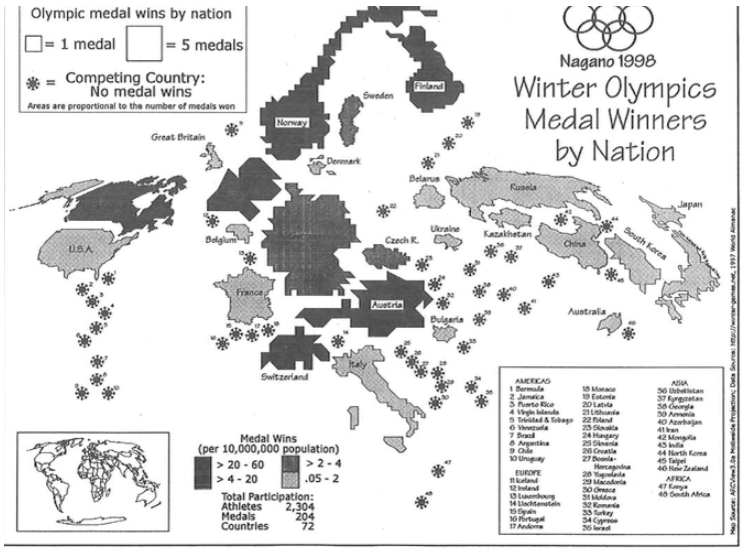


Figure 6. President's Prize winner (Cartouche 31, Autumn 1998).

Canadian Mappers on Top of the World

Southam Newspapers - Every year from 1947 to 1955, Louis Sebert led a team of six men on horseback up the treacherous Rocky Mountains in the Yukon-without a map. The group took photos from the peaks and measured angles, plotting the landscape between the Alaskan Highway and the Pacific Ocean. In the process, he encountered heavy storms, hungry bears, and saw four fellow topographers killed. "They were trying to cross a harsh space and they didn't quite make it," Sebert now 83, said in an interview from his Ottawa home. Sebert is one of the many men who according to Rick Boychuck, editor of Canadian geographic magazine, "either walked, climbed, paddled or flew their way across this entire country - and helped

Figure 7. Article on CCA co-founder, Louis Sebert (Cartouche 36, winter 1999).

50th Anniversary Photo Retrospective

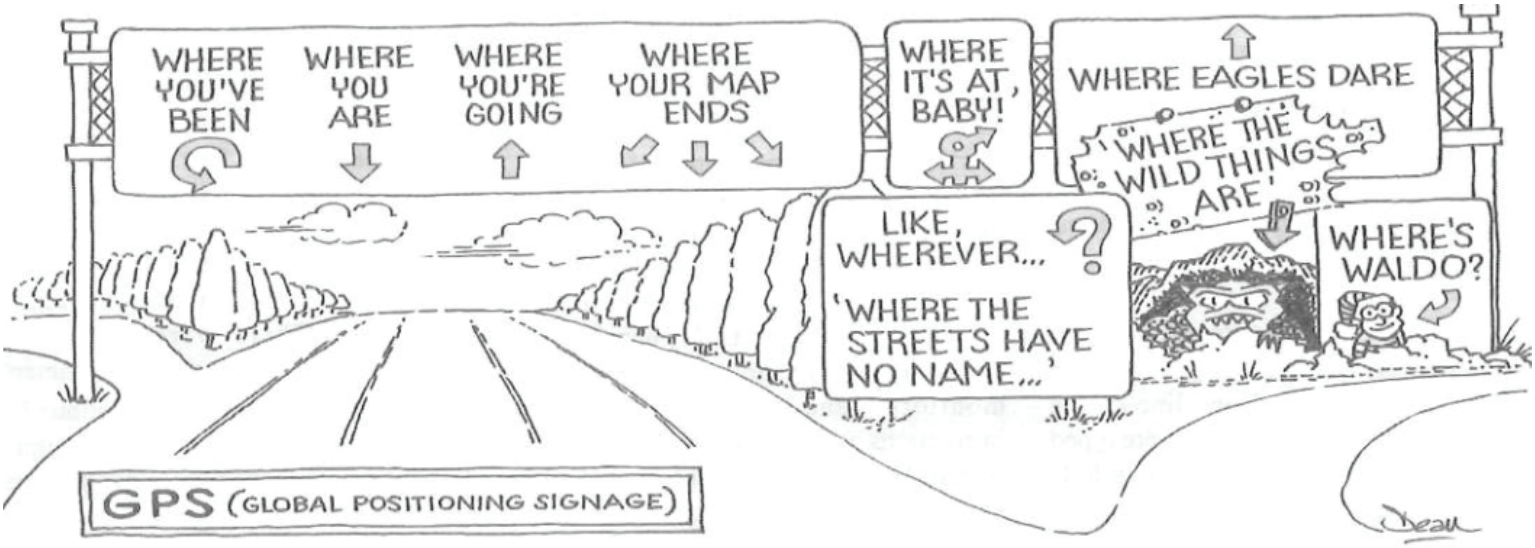


Figure 8. Cartoon (Cartouche 44-45, Winter/Spring 2001/02).

Figure 9. "Cover Map, "Rebuilding our World", by Keelan Albright, Canadian representative at the Barbara Petchenik Childrens World Map Competition (Cartouche 52, Winter 2003).

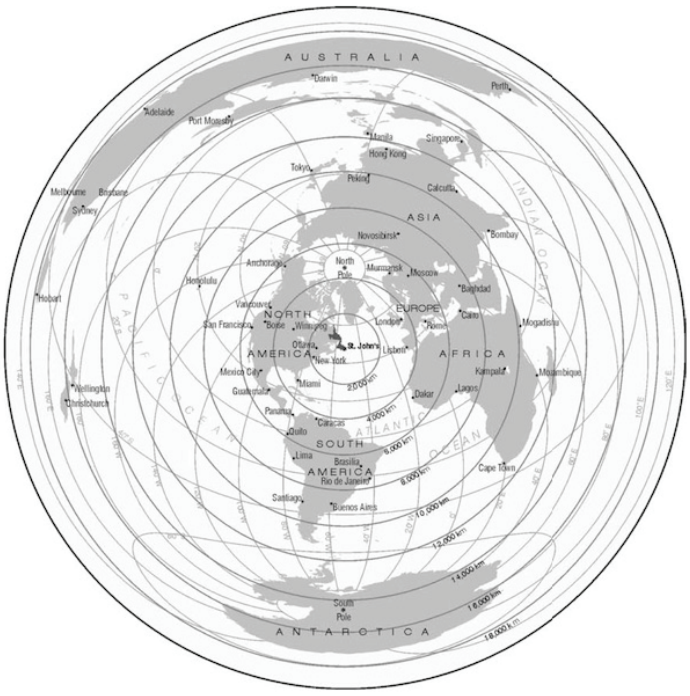


Figure 10. "Cover Map, (Cartouche 59, Fall 2005). This map of Newfoundland was produced as one of a series of prototypes for an Atlas of Newfoundland project proposed by Dr. William Summers who as Head of Geography at Memorial from 1960-1971. The map itself was drawn by Clarence Brown, an undergraduate in the Department, as part of student summer employment program.

50th Anniversary Photo Retrospective

Figure 11. Orienteering event at the CCA 2008 Conference in Vancouver, British Columbia.

Figure 13. Orienteering event at the CCA 2012 Conference in Waterloo, Ontario.

Figure 14. Group photo from CCA 2017 Conference in Ottawa, Ontario.

Figure 12. Group Photo at the CCA 2010 Conference (back row from left): Paul Heersink, Joe Piwowar, Detlef G-D, Kirsten Trede, Navdeep Sekhon,Derrick Hambly, Byron Moldofsky, Julia Siemer, Lisa Brunner; from top right : Roger Wheate, Will van den Hoonard, Janet Mersey, Fanny Luk, Fiona Ryle; front left: Jean-François Bissonnette, Trish Connor, Cliff and Alberta Wood.

Figure 15. Floor map at CCA 2019 Conference in Prince George. British Columbia."

50th Anniversary Photo Retrospective

Figure 16. Group photo from 2018 Summer/Autumn President's Message.

Figure 17. Group photo at CCA 2019 Conference in Prince George. British Columbia.

Figure 18. Drone workshop at CCA2023 at University of Calgary in Calgary, Alberta.

Figure 19. Lost Rivers event at the CCA 2024 Conference in Scarborough, Ontario.

Figure 20. Group photo from CCA 2024 Conference in Scarborough, Ontario.

Figure 21. Executive Committee Group photo from CCA 2025 Conference in Ottawa, Ontario.

Figure 22. CCA 2025 Conference in Ottawa, Ontario..

Figure 23. CCA Member Delegates gather for dinner at ICC2025 in Vancouver, BC.

Cartographica

Stephanie Pyne

Call for Papers

Cartographica invites submissions for upcoming issues

It was my pleasure to assume the role of Editor in Chief for Cartographica beginning in March 2025 upon the end of Heather McGrath's term. Thank you to Heather for her much-appreciated service in this role.

Cartographica is an international journal for geographic information and geovisualization. It is an interdisciplinary peer-reviewed journal that publishes transformative research, education, and practice contributions to the social, political, technological, and historical aspects of cartography.

As an official publication of the Canadian Cartographic Association (CCA) and an original publication of the International Cartographic Association (ICA), Cartographica provides a forum for the exchange of original perspectives and innovative findings in the production, design, use, cognitive understanding, and novel applications of maps (broadly understood) in arts, cartography, computer science, economy, engineering, geography, history, medicine, health, and surveying.

You may submit an article for publication.

For more information, read the Cartographica Submission guidelines at

https://utppublishing.com/journals/cart/guidelines-for-authors

On the next page I have provided is a summary of statistics for 2024, which were provided by University of Toronto Press.

- There were 32 manuscript submissions by authors from 19 countries
- There were 23,166 full text article downloads by readers from Canada (38%), the United States (21%), the United Kingdom (11%), and other countries (29%)

Top 10 Articles Downloaded from Cartographica – 2024

Article Title	Author(s)	Vol.	Iss.	Date	Down-loads
Decolonizing the Map: Recentering Indigenous Mappings	Annita Hetoevėhotohke'e Lucchesi, Natchee Blu Barnd, Reuben Rose-Redwood, Sharon Dias, Wil Patrick	55	3	2020	1438
Spatial Data and (De)colonization: Incorporating Indigenous Data Sovereignty Principles into Cartographic Research	Annita Hetoevėhotohke'e Lucchesi	55	3	2020	805
The Effects and Implications of Urbanization on the Environmental Integrity of the Oak Ridges Moraine in Ontario, Canada	Elliott K. Yee, Kevin M. Maynard, Mackenzie B. Gillies, Madeleine J.E. Baker, Rachel M. Liu, Spencer D. Williams	52	2	2017	569
Storytelling for Making Cartographic Design Decisions for Climate Change Communication in the United States	Elliott K. Yee, Kevin M. Maynard, Mackenzie B. Gillies, Madeleine J.E. Baker, Rachel M. Liu, Spencer D. Williams	55	2	2020	567
New Paradigm in Mapping: A Critique on Cartography and GIS	Carolyn Fish	54	3	2019	555
The Cartography of Kallihirua?: Reassessing Indigenous Mapmaking and Arctic Encounters	Bin Jiang	57	3	2022	298
The Geography of Devotion in the British Library Map Psalter	Peter R. Martin	53	3	2018	280
Mapping the Skin and the Guts of Stories – A Dialogue between Geolocated and Dislocated Cartographies	LauraLee Brott	57	2	2022	273
Introduction: The Limits to Deconstructing the Map	Élise Olmedo, Sébastien Caquard	50	1	2015	196
Mapping Colonial Massacres and Frontier Violence in Australia: "the names of places"	Reuben Rose-Redwood	55	3	2020	185

Report from the CCA Delegate to the International Cartographic Association (ICA)

32nd International Cartographic Conference Mapping the Future: Innovation, Inclusion, and Sustainability August 17–22, 2025, Vancouver, BC

Julia Siemer, Associate Professor at the University of Regina, Chair of the Canadian National Committee (CNC) on Cartography and CIG Technical Councillor for Cartography

The 32nd International Cartographic Conference (ICC) was the third time Canada has hosted the ICC. The location of Vancouver also marks the first time that an ICC was held on the West Coast of North America. The official opening ceremony of the conference was held on Monday afternoon (August 18, 2025) in the East Vancouver Convention Centre in Downtown Vancouver. The Spakwus Slolem or Eagle Song Dancers, a group of dancers from the Squamish Nation, welcomed the conference attendees with music and dance to their traditional lands.

The cartographic part of the ceremony began with welcoming addresses by the Director of ICC 2025, Emmanuel Stefanakis (University of Calgary), and the President of the Canadian Institute of Geomatics (CIG), Jonathan Li (University of Waterloo). Following another welcoming address by the President of the International Cartographic Association (ICA), Georg Gartner from Vienna University of Technology, Austria, the CCA was represented by our current president Paul Heersink, and Roger Wheate (University of Northern British Columbia) provided an overview of the 50-year history of CCA and its connections to the ICA (see Roger's piece below).

Two short keynote speeches followed. Eric Loubier, Director General of the Canada Centre for Mapping and Earth Observation (NRCan), talked about 'Mapping in an Era of Change: Perspectives from the Canada Centre for Mapping and Earth Observation' and Lynn Moorman, Professor in the Department of Earth and Environmental Sciences at Mount Royal University, Calgary, together with Sandra Aqqaq, a SmartICE Mapper from Taloyak, Nunavut, presented a glimpse into 'Contemporary Cartography as Agency for Climate Change Adaptation in the Canadian Arctic'.The opening ceremony was wrapped up with the opening of the International Cartographic Exhibition (ICE) 2025.

Scientific Program

Over six packed days, around 750 conference attendees from 60+ countries watched, listened, and engaged in over 100 technical sessions with 359 technical talks. While all sessions were well attended, sessions on GeoAI and its impact on cartography were particularly popular.

A total of nine short (half hour) additional keynote speeches were presented throughout the main program. Speakers included Michael Goodchild (University of California), Rylan O'Krane (The Firelight Group), Renzhong Guo (Shenzhen University), Ryan Emanuel (Duke University), Evan Thornberry (David Rumsey Map Centre, Stanford University), Alexander Zipf (Heidelberg University), Amy Rose (Overture Maps Foundation), Sonia Talwar (Geological Survey of Canada), and Chris Brackley (Canadian Geographic).

In total, ICA commissions held 13 pre-conference workshops on Sunday, August 17, 2025. Five special sessions (panel discussions, tutorials) were held, and three technical tours were offered, which included a to visit the City of Vancouver Archives (GIS before GIS: Maps as Records), the 3D Urban Form Monitoring Model for Metro Vancouver (Burnaby), and a Tour of Safe Software – Reimagining Reality with Spatial Computing Augmented Cartography for an Interconnected World (Surrey).

For more details, the scientific program can be accessed from the conference website. Items displayed in the Technical Exhibition (12 vendors from around the globe) included paper maps, digital maps, digital atlases, software, tactile maps, relief maps, and various other cartographic products and offered an impressive display of the variety of cartography products.

Map Exhibitions

About 250 maps and cartographic products from 22 countries and five Affiliated Members were included in the map exhibition (ICE 2025). The second map exhibit

Report from the CCA Delegate to the International Cartographic Association (ICA)

that is traditionally part of the ICC, the Barbara Petchenik Children's Map Competition, showcased 180 maps from 34 countries in four age categories. Links to both the full ICE 2025 Catalogue (PDF) and entries to the Barbara Petchenik Competition can be found on the Exhibitions Page of the ICC 2025 website. All entries from the Barbara Petchenik Children's Map Competition since its inception in 1993 have been archived by Carleton University in Ottawa and can be accessed based on submission year and by age group on their website.

Figure 1. Canadian maps at the ICC2025 Map Exhibition.

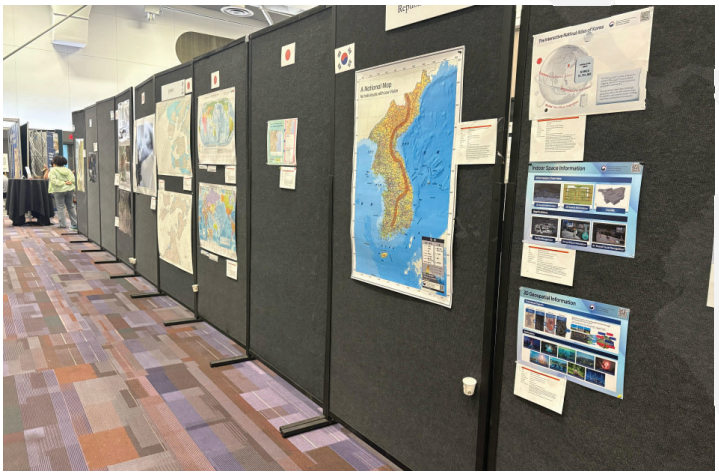


Figure 2. Impressions at the International Map Exhibition.

Figure 3. Impressions at the International Map Exhibition.

A special treat for map lovers was the display of two giant floor maps, made available by Canadian Geographic and the Royal Canadian Geographical Society. Cartographer Chris Brackley provided guided tours on both maps, the 'Indigenous Peoples Atlas of Canada' map and the new 'Biinaagami: Our shared responsibility to the Great Lakes' map. Both maps are impressive in size (8 metres by 11 metres) and allow users a unique way of interaction by walking on them.

Figure 4. Giant floor map 'Biinaagami'.

Report from the CCA Delegate to the International Cartographic Association (ICA)

Social events

No ICC is complete without social events. This conference was no different. In addition to two social gatherings with food and drinks, an Orienteering event was organized by Dawn Mooney (UBC), in cooperation with the Greater Vancouver Orienteering Club (GVOC). Details on this event can be found in Roger Wheate's column in this volume of Cartouche.

Awards

At every ICC, the ICA presents the best maps and cartographic products with an award. At this ICC, awards were handed out in five categories: Maps (paper & digital), Charts, Atlases (paper & digital), Educational Cartographic Products, and Physical Cartographic Products. In addition, there is typically an award given to the 'most popular map or cartographic product' in each category.

Figure 5. ' 'Relief Map of Canada' by Rory McAlpine, Ken Francis, and Peter Morton (NRCan)

This year, the 'Relief Map of Canada' by Rory McAlpine, Ken Francis, and Peter Morton (NRCan) won the Most Popular Map Award. (see Figure 5)

Winners in all categories can be found on the ICC 2025 website. Other awards were awarded to the following maps and cartographic products:

Best Map: Digital Base Map, Switzerland
Honourable Mention: Arctic and Beyond, Norway

Most Popular Map: Relief Map of Canada, Canada

and Doang-Youjiang: Echos of the Rice Fields, China

Best Chart: De Quiberon au Croisic, France
Honourable Mention: Chart of Zhang He's Voyages, China

Most Popular Chart: Chart of Zhang He's Voyages, China and School Map for the Port of Oslo, Norway

Best Atlas: Cartes marines, France

Honourable Mention: The Interactive National Atlas of Korea, Korea

Most Popular Atlas: Atlas of Finance, United Kingdom

Another Canadian to receive an award at this conference was Juliette Bricker, currently a student at Vienna University of Technology, Austria, and a CCA Student Representative. Juliette won the **'Best Student Presentation Award'** for her presentation 'The Qualitative Development and Evaluation of a New User Perspective Map', Congratulations Juliette!

Figure 6. 'Juliette Bricker recieving Best Student Presentation award at ICC 2025.

Report from the CCA Delegate to the International Cartographic Association (ICA)

Most Popular Atlas: Atlas of Finance, United Kingdom

Best Educational Cartographic Product: Illustrated Map of Natural Place Names in Anhui and Related Cultural and Creative Products, China

Most Popular Educational Cartographic Product: 3D Printed Tactile Globe, Korea

Best Physical Cartographic Product: Tactile Maps of Historic Gardens, Poland

Honourable Mention: Luban Lock Globe, China

Most Popular Physical Cartographic Product: Tactile Maps of Historic Gardens, Poland

Canada also saw another winner: : young cartographer Aarnav Rao from Windsor, ON, won first prize by jury in his age group (6–8 years) for his map 'A Typical Day'. Coincidentally, Aarnav and his family were in Vancouver at the time of the conference, and we managed to get a photo of the proud cartographer in front of his map (this was before the results were published, so we didn't know he would win!) Congratulations to all the winners! You made us proud!

Figure 8. Barbara Petchenik Map competition winner (age category 6-8) Aarnav Rao (7) with his map 'A Typical Day'.

Figure 7. 'A Typical Day'.

ICC 2025 Map Gallery

Report from the CCA Delegate to the International Cartographic Association (ICA)

Extraordinary General Assembly and ICC 2027

This year, an Extraordinary General Assembly was held during ICC. Typically, a General Assembly is only held every four years; the last regular General Assembly was held in Cape Town, South Africa in 2023. This year's extraordinary meeting became necessary as Israel withdrew its bid to host ICC 2027 in Tel Aviv due to the current political situation in the Middle East. The Assembly needed to vote for a new host and location for ICC 2027. Luckily, the other contender for ICC 2027, Poland, stepped up and offered to host ICC 2027 in Warsaw, Poland, from July 18–23, 2027. Save the date and keep an eye out for announcements on the upcoming conference.

Local Organizing Committee of ICC 2025

The 'local' organizing committee consisted, in true Canadian fashion, of members from across the country. The following people took on the enormous task of organizing this conference.

- **Conference Director:** Emmanuel Stefanakis, University of Calgary
- **Scientific Program Chair:** Jonathan Li, University of Waterloo
- **Publications Chair:** Mir Abolfazl Mostafavi, Université Laval
- **Cartographic Exhibition & Children's Map Competition Chair:** Julia Siemer, University of Regina
- **Finance Chair:** Saied Pirasteh, Shaoxing University/ University of Waterloo
- **Workshops & Tutorials Chair:** Mohammad Rajabi, British Columbia Institute of Technology
- **Technical Tours Chair:** Suzana Dragicevic, Simon Fraser University
- **Students Chair:** Lanying (Bella) Wang, University of Waterloo
- **ICA EC to LOC Liaison:** Serena Coetzee, UNU-FLORES, Germany
- **Sponsorship & Technical Exhibition Chair:** Emmanuel Stefanakis, University of Calgary
- **Indigenous Chair:** Shandin Pete, University of British Columbia
- **Mapping the Arctic Chair:** Lynn Moorman, Mount Royal University
- **Ocean Mapping Chair:** Ian Church, University of New Brunswick
- **Conference Promotion Chair:** Roger Wheate, University of Northern British Columbia
- **Honorary Chair:** Brian Davies, Beacon Geospatial Ltd., Vancouver
- **Natural Resources Canada to LOC Liaison:** Steve Westley, Canada Centre for Mapping and Earth Observation

ICC 2025 Vancouver Convention Center, Cruise Terminal and Harbour View

Report from the CCA Delegate to the International Cartographic Association (ICA)

Executive Positions currently held by Canadians on ICA Commissions

Commission on Art and Cartography
Chair: Taien Ng-Chan, York University, ON
Vice Chair: Sharon Hayashi, York University, ON
Commission on Geospatial Data Analytics
Chair: Ruisheng Wang, University of Calgary, AB

Current Executive Committee of the ICA

President: Georg Gartner (Vienna University of Technology, AT)
Secretary General and Treasurer: Thomas Schulz (Swiss Federal Statistical Office, CH)
Past President: Tim Trainor (Consultant, US)
Vice Presidents:
Serena Coetzee (United Nations University-FLORES, DE)
Dariusz Dukaczewski (Institute of Geodesy and Cartography, PL)
Amy Griffin (Royal Melbourne Institute of Technology (RMIT) University, AU)
Haosheng Huang (Ghent University, BE)
Alex Kent (Canterbury Christ Church University, UK)
Jiping Liu (Chinese Academy of Surveying and Mapping, CN)
Dušan Petrovič (University of Ljubljana, SI)

Happy Mapping,

Julia Siemer,
Chair of the Canadian National Committee (CNC) on Cartography and
CIG Technical Councillor for Cartography
Associate Professor at the University of Regina,
Dept of Geography & Environmental Studies
julia.siemer@uregina.ca
https://www.icc2025.com

CCA DELEGATE REFLECTIONS
THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)

What has Canada done for the ICA?

Roger Wheate, UNBC

Founding of ICA and CCA: When the International Cartographic Association (ICA) held its 32nd congress in Vancouver, BC, I was invited to give a short presentation highlighting Canada's contribution to the ICA over the 50 years of the CCA 1975-2025. In fact, this started before the ICA was formed in 1959, as its history (see Figure 1) shows the five 'men of the first hour' plotting the start of the ICA in 1956 at the Esselte Applied Cartography Conference (Sweden), including our future first CCA president Janusz Klawe shown in the centre. Dr. Klawe was later elected as ICA vice-president, and was emeritus professor at the University of Alberta by the time the CCA was formed in 1975; but it indicates both the role played by Canada in the foundation of the ICA as well as the role of the ICA inspiring the formation of national associations.

Figure 1. Janusz Klawe shown in the centre and others at Esselte Conference on Applied Cartography (Sweden, 1956).

ICA Newsletter: One of our two co-founders, Bernard Gutsell, further made his mark as one of the founding co-editors of the ICA newsletter 1983-94. During those years, I waited to insert the ICA newsletter from Bernard to include inside our own, so that all CCA members received full ICA mailings and information even if they were unable to attend its biennial meetings.

Figure 2. Dr. Fraser Taylor (1987).

Fraser Taylor: Having served as the first CCA president for two terms (1978-80), Dr. Fraser Taylor (Carleton University) was elected as VP to the ICA (1981-85) and then as President for two four-year terms, 1987-95 (see Figure 2). He greatly increased Canada's role in international cartographic circles and promoted Canadian cartography to the extent that by 1989, Canada was represented on almost all ICA commissions. Dr. Taylor was also credited with advancing the role of the ICA both in Canada and internationally. He first introduced the concept of Cybercartography in his keynote address "Maps and Mapping in the Information Era" at ICC1997, Stockholm. Near the end of his second term as president, he proposed and promoted the ICC1999 in Ottawa, which has been generally regarded as one of the most successful ICA meetings. When we bid for the 2025 congress, I was confident we would win, due to the 'Fraser Taylor' factor.

Orienteering event: Diana Hocking, CCA member / past secretary and keen orienteerer, started the CCA 'almost annual' orienteering event in 1995 and advanced this trend at ICC1999 in Ottawa. Previously, ICA had included sessions on orienteering mapping, most notably from ICA secretary-generals, László Zentai and David Fairburn, but there had been no Orienteering events. Since 1999, one has been held at most congress meetings every two years, and we continued this in ICC2025 in Vancouver, thanks largely to Dawn Mooney, the CCA and the Greater Vancouver Orienteering Club (GVOC). map to include Harbour Green Park just a few hundred metres away for a perfect start setting (see Figure 3).

Figure 3. ICC2025 Orienteering event.

CCA DELEGATE REFLECTIONS
THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)

Roger Wheate, UNBC

For a while, it looked like we might exceed the record 77 entrants set in Ottawa, 1999, but numbers were impacted by rejected visas, international students fearful of travelling outside the USA, and an Air Canada strike at the worst time, as well as some bum knees. The delegates' enthusiasm both at the congress and the orienteering event was infectious; they thanked me throughout the week for the Orienteering event; we should be sure to resurrect it in our future CCA gatherings.

Figure 4. Photo of Vancouver waterfront. (Coal Harbour).

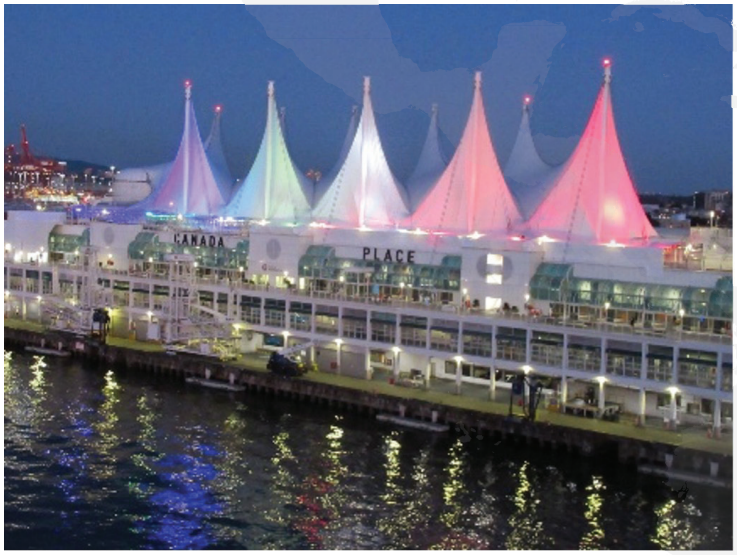


Figure 5. Photo of Canada Place on the Vancouver waterfront in the evening.

ICC 2025 was a huge success thanks to a strong program with local and international keynotes, a spectacular setting (see Figures 4 and 5) and herculean work by the conference director Emmanuel Stefanakis, Exhibition and maps chair Julia Siemer, (both joint CCA /CIG members) along with Trisha Lynch, MCI Vancouver, who all received diplomas for outstanding service to the ICA, from President, Georg Gartner (see Figure 6). The next ICC will be held in Warsaw, Poland, 2027.

Figure 6. Photo of President Georg Gartner (front right) awarding diplomas for outstanding service to the ICA to Emmanuel Stefanakis, Trisha Lynch and Julia Siemer (back left to right).

CCA DELEGATE REFLECTIONS
THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)

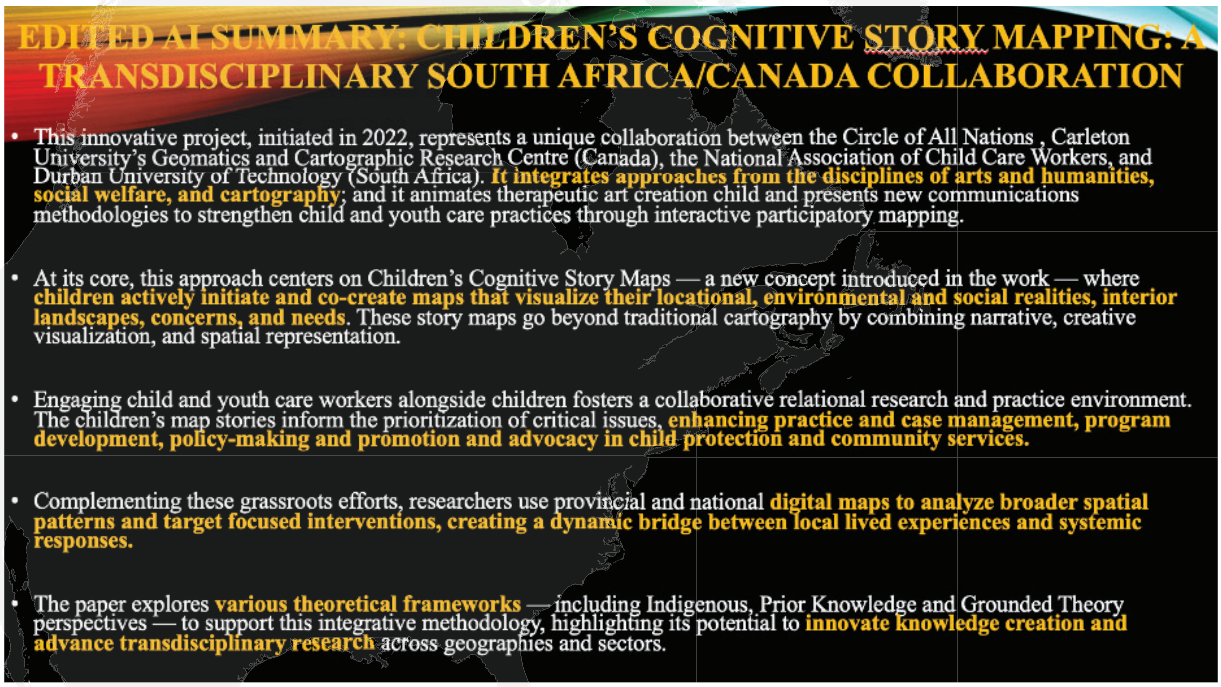
Romola Thumbadoo

I attended ICA's 33rd international conference, ICC2025, in Vancouver, and had the opportunity to participate in the ICA's three-day Participatory Mapping Working Group preconference workshop convened at the University of British Columbia on August 14 to16, 2025 with financial support from the Social Sciences and Humanities Research Council (SSHRC), and as endorsed by Professor Fraser Taylor. The event brought together over 30 scholars, practitioners, and community representatives to exchange knowledge, foster collaborations, and strengthen the foundations of participatory mapping with ICA. The three-day program included keynote presentations, thematic discussions, networking sessions, and field-based learning, with a strong emphasis on building relationships across disciplines and communities. Additional information is available here: ICA webpage. Professor Fraser Taylor's ongoing contributions to the Barbara Petchenik Children's Mapping Competition, which he initiated in 1993, and drew attention to at ICC23, were also shared in two presentations at the preconference workshop on Inclusive Cartography, as part of our work with the ICA's Commission on Cartography and Children, as well as in ICC25's technical sessions program. Here, presentations focussed on different aspects of the evolving Children's *Mapping work in South Africa.* The Inclusive Mapping preconference workshop and the Children's Mapping Competition focussed on the theme Towards Maps for Everyone. (see the Facebook page of the ICA Commission on Cartography and Children for some reflections on the August conference and the competition). Learners from South Africa embraced this work with great interest and passion.

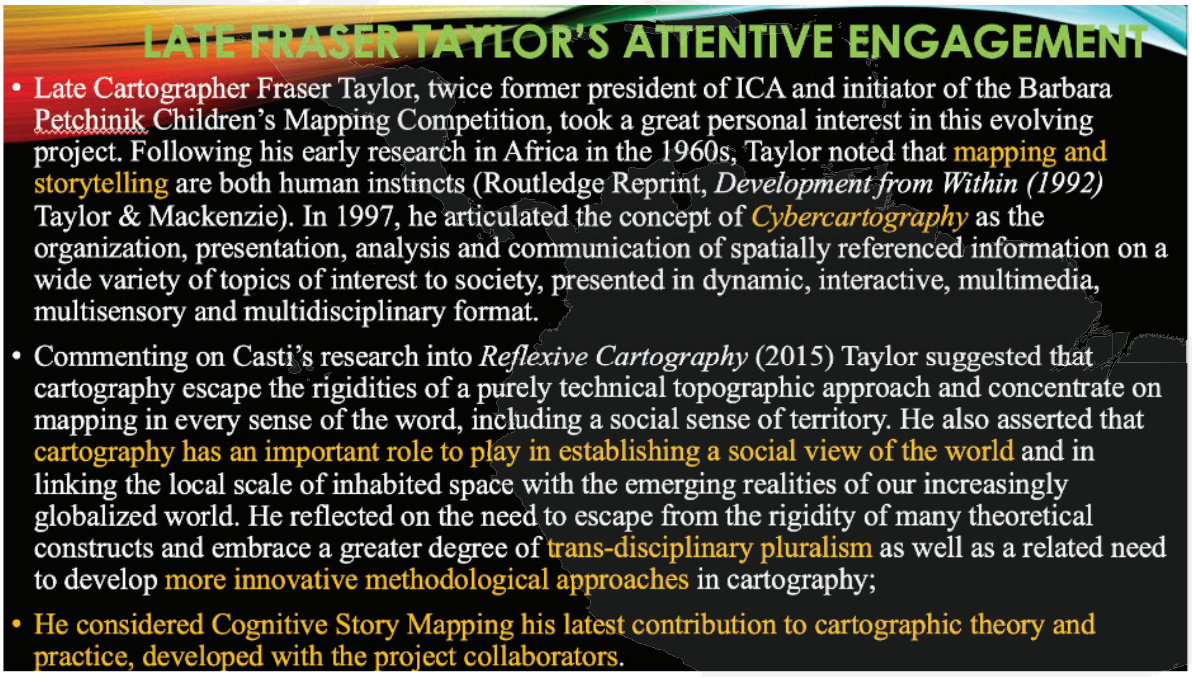

LEARNERS HAVE PRIORITIZED MAPPING CHILD PROTECTION NEEDS

Professor Tayor considered this new work in Cognitive Children's Story Mapping his latest contribution to cartography, after cybercartography, and the paper published by the International Journal of Cartography was the last journal article that he coauthored (see "Children's Cognitive Story Mapping: A Complex South Africa/Canada Transdisciplinary Collaboration).Five of the six maps selected for the 2025 International Conference from South Africa were generated by this project.

CCA DELEGATE REFLECTIONS
THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA)



ICA's President Professor Georg Gartner called the Barbara Petchenik Children's Mapping Competition the jewel in the ICA crown. ICC27 will be hosted in Poland, and its flag went off proudly in a bag from ICC23, hosted in South Africa! With children's cognitive story mapping, cartography is moving in new directions and opening new possibilities for research, knowledge generation and dissemination.



FRASER TAYLOR MEMORIAL NOTE

Professor D.R. Fraser Taylor (1937–2025)

CCA and GCRC

It is with deep sadness that we share the news that Professor D. R. Fraser Taylor passed away on March 22, 2025. As many will know, he had a long and distinguished career at Carleton University. Professor Taylor's family held a small, private ceremony. The Geomatics and Cartographic Research Centre (GCRC) team collaborated with his family and the Carleton University community to host a Memorial Reception on May 16 that honoured Professor Taylor's extraordinary life and career. A cartographer, geographer and research professor of international renown, Professor D. R. Fraser Taylor received many awards in recognition of his lengthy, remarkable and internationally influential research career, the most recent being his appointment as Officer of the Order of Canada, and others being the 3M Environmental Award, the Carl Mannerfelt Gold Award, the Killam Prize for the Social Sciences, and appointment as Fellow of the Royal Society of Canada. He commenced his development from within understanding of social issues as an education officer in Kenya, while at the same time he undertook his own doctoral research, and initiated computer-based data analysis in the sixties. His most recent children's cognitive story mapping work in South Africa in 2025 demonstrates ongoing commitment to link practice and theory in research. He articulated the concept of Cybercartography in 1997, and in 2003, he founded the Geomatics and Cartographic Research Centre at Carleton University. Here, Dr. Taylor and his team developed a robust platform of technology, research, project development and publication to advance the creation of digital atlases that put map creation into the hands of map users and communities. Indigenous communities have engaged actively in this work and have advanced the research with the inclusion of culture, language, place names and history, from its inception, over two decades ago. Professor Taylor served in leadership roles on United Nations strategy teams, and with many academic associations, including the International Cartographic Association (see Dr. Fraser Taylor acknowledgement at https://icaci.org/obituary-d-r-fraser-taylor/) Canadian Cartographic Association, and the Canadian Association of African Studies. He impacted thinking in cartography and geography significantly with his extensive publication history; he also worked tirelessly as general editor for the Elsevier Modern Cartography Series, developing new streams for study, and ensuring the research of countless academics reached other thinkers, nationally and internationally.He reached countless students, researchers, individuals, communities, national governments around the world, the private sector, the United Nations and other global leaders with his innovative and far-reaching initiatives, and with his deep and passionate commitment to research of importance to society. Professor Taylor worked non-stop: working, thinking, strategizing, embracing new ideas, and doing big and small tasks was a way of life for him. He was mindful and respectful of everybody – and humble while he always stood tall. In developing himself, he helped countless others with their own personal and professional growth, and at their own pace. We are sure that many colleagues will be reflecting on his outreach, influence and the massive scope of his lifetime academic research project. His indomitable presence, wisdom, and sense of humour will be profoundly missed. Our deepest condolences to his family and friends and colleagues.

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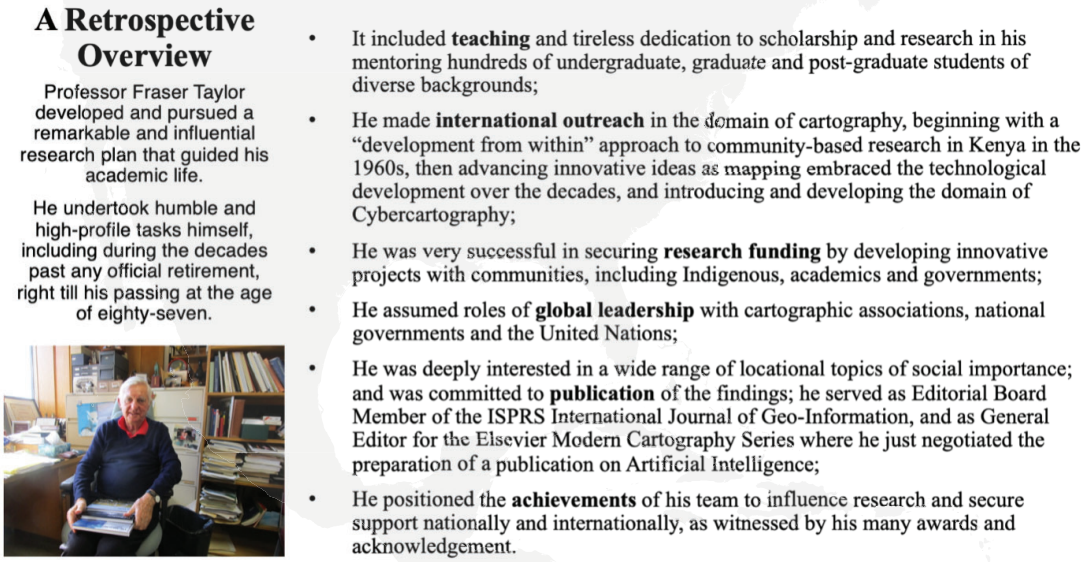
FRASER TAYLOR REFLECTIONS

Romola Thumbadoo

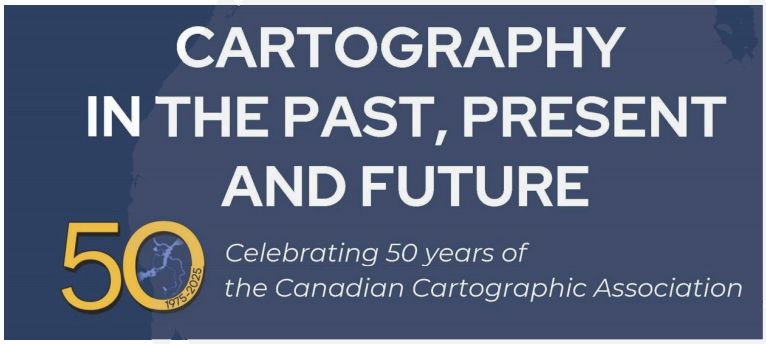
The year 2025 presented academics and researchers the opportunity to participate in three important conferences within the domain of geography and cartography in Canada. On May 20 -23, Carleton University hosted the joint Canadian Cartographic Association (CCA) and the Canadian Association of Geographers (CAG) conference (Confluence 2025); and on August 17 - 23, the biennial conference of the International Cartographic Association (ICA), ICC2025, was hosted in Vancouver at Canada Place. I had the good fortune to attend Confluence and ICC2025, including two pre-conference workshops (ICA's Participatory Mapping Working Group (PMWG) and the Inclusive Mapping workshop held in partnership with the Commission of Cartography and Children and the Barbara Petchenik Children's Mapping Competition). These conferences were preceded by a very sad event for many conference participants. This was the March 22, 2025 passing of the world-renowned cartographer, researcher and professor, Dr. D. R. Fraser Taylor, Director of the Geomatics and Cartographic Research Centre (GCRC) at Carleton University. Professor Taylor played many leadership roles in all three organizations over multiple decades, and facilitated much networking, project development, publication and innovation in cartography across Canada and internationally with his tireless work. He was honoured throughout all the conferences with moments of silence, speeches, and the announcement of a Fraser Taylor Geomatics Award by the Canadian Institute of Geomatics, a co-host of ICC25. Busy till the end, he supported the ICA's Participatory Mapping Working Group's successful application for SSHRC funding for a three-day workshop held at the University of British Columbia, led by Professors John Corbett and its chair, Jirka Pánek. He launched the Barbara Petchenik Children's Map Competition in 1993 and in 2005, was actively engaged in a new advance in this work – our joint Carleton University Children's Cognitive Story Mapping initiative with Circle of All Nations (founder, Indigenous elder William Commanda) and the National Association of Child Care Workers and the Durban University of Technology in South Africa. As General Editor of the Elsevier Modern Cartographic Series, he had also launched two new book publications, one based in Central America, and the other in cyberspace – a book exploring the implications of Artificial Intelligence for cartography. I myself was most fortunate to have Professor Taylor as my thesis and post-doctoral research supervisor for my research into the Circle of All Nations environmental work and legacy of North American Indigenous Elder William Commanda, Algonquin of the Ottawa River Watershed; thereafter, I supported his research and other work over the last eight years of his life, and, indeed, I am grateful to have learned from such a virtuoso. The Retrospective Overview graphic offers a brief overview of his academic priorities. Additional information about Professor Taylor and his work can be accessed at https://gcrc.carleton.ca; for more information about his memorial, please contact me directly (romolavt@gmail.com).



CCA WEBINAR

Yegane Vahidi, Jessica Murdoch and Thomas Herbreteau

The CCA hosted an online webinar titled "Cartography in the Past, Present, and Future" on November 18, 2025, from 7 PM to 8 PM Eastern time. Yegane Vahidi, Jessica Murdoch and Thomas Herbreteau organized the event, Julia Siemer, University of Regina, hosted the Zoom and Marikka Williams, BCIT, moderated the presentations.



Daniel Brendle-Moczuk gave a presentation on a topic related to cartography's past entitled, It Takes a Village: A 'Minute' History of Canadian Cartography to Approximately the 1970s

Abstract: While map makers and cartography have been around for centuries throughout our globe, this presentation will focus on mapping techniques and cartography with (what is now known as) a Canadian lens. This presentation will not directly be about the cartographers, creators, nor makers of maps but about the cartography / map making techniques in itself.

The presentation was divided into three themes:

- Map making by First Peoples who had/have intimate knowledge of the land;
- Map making techniques of Anglo-European explorers, surveyors and cartographers pre-mid-19th century;
- Gradual emergence of 'modern' mid 19th to mid 20th century map making

Thanks to Daniel who provided an excellent overview of the past perspective of Cartography, a huge topic that is incredibly difficult to condense.

Next, Paul Heersink gave a presentation on a topic related to cartography's present entitled, The Evolution of Maps and Data and the Changing Role of Cartographers

Abstract: For much of the history of mapping, the map and the data it displayed were one and the same. One could not exist without the other. The advent of geographic information systems has introduced a fundamental split between the map and the data, enabling geospatial data to exist independently from the map. This separation has allowed geospatial data to evolve for efficient querying, processing and display across different platforms and in different formats, often without a map. Geospatial data is often so rich that the story it can tell is often obscured in the content. This presentation will discuss some of the changes that have occurred in mapping, geospatial data, and cartography over the past 50 years and share some thoughts on the evolving role cartographers need to embrace going forward.

Thanks to Paul for his presentation. It was interesting to consider how Cartographers have been influenced and have arrived in the modern era to create and maintain maps in the present time, and to learn more about your history in the and roles as a part of it.

Finally, Jeff Allen gave a presentation on a topic related to cartography's future entited, Future Projections: Speculating About the (near) Future of Cartography

Abstract: In this short talk, I will share a few thoughts about ongoing developments in cartography and what they might mean for maps and mapmakers going forward. Specifically, I will talk about the following trends:

- Shifts in how and where maps are being read, and how this impacts visual design processes.
- Innovations and limitations in the development of tools for web-cartography.
- Increasing role and risks of using AI to help create maps.

Thanks to Jeff for an insightful presentation. It is cool to see how maps are evolving in the computer age with not only more data that needs to be managed and visualized but more compact designs so that maps can be delivered more effectively on a range of devices. It is interesting to reflect upon the ephemeral nature of digital cartography, including challenges with digital data accuracy in the midst of its volume and the questionable accuracy of AI generated maps along with the possibilities therein.

CCA2026 AGM - SAVE THE DATE

Jessica Murdoch

Membership update

Jamison Cooper-Leavitt

The current membership numbers are below. Ted MacKinnon assisted with interpreting Membee data:

- *Honorary: 1*
- *Regular: 48*
- *Retired: 20*
- *Student: 39*
- *Total: 108*
- *Family members: 1*
- *Institutional members: 3*

Newsletter of the/Bulletin de Canadian Cartographic Association/l'Association canadienne de cartographie

Cartouche is published annually by the Canadian Cartographic Association. Members are welcome to submit articles for publication. Articles and notices submitted for publication are subject to editorial approval. Please address your submissions to the editor. All articles will appear in the language of submission. While every effort is made to ensure accuracy of content, the editor cannot be responsible for errors in compilation, or loss of any item submitted. Opinions expressed in the editorials, submitted articles and letters are not necessarily those of the Canadian Cartographic Association.

Cartouche est publié annuellement par l'Association canadienne de cartographie. Tous les membres peuvent soumettre des articles à l'éditeur du bulletin (voir coordonnées ci-dessus). Les articles et annonces soumis sont sujets à l'approbation de la rédaction. L'éditeur du bulletin ne peut être tenu responsable pour des erreurs de compilation ou la perte d'article. Des efforts particuliers sont déployés pour éviter de tels problèmes. Les opinions exprimées dans le cadre des éditoriaux, des articles et des lettres publiés dans le bulletin, ne reflètent pas nécessairement celles de l'Association canadienne de cartographie.

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