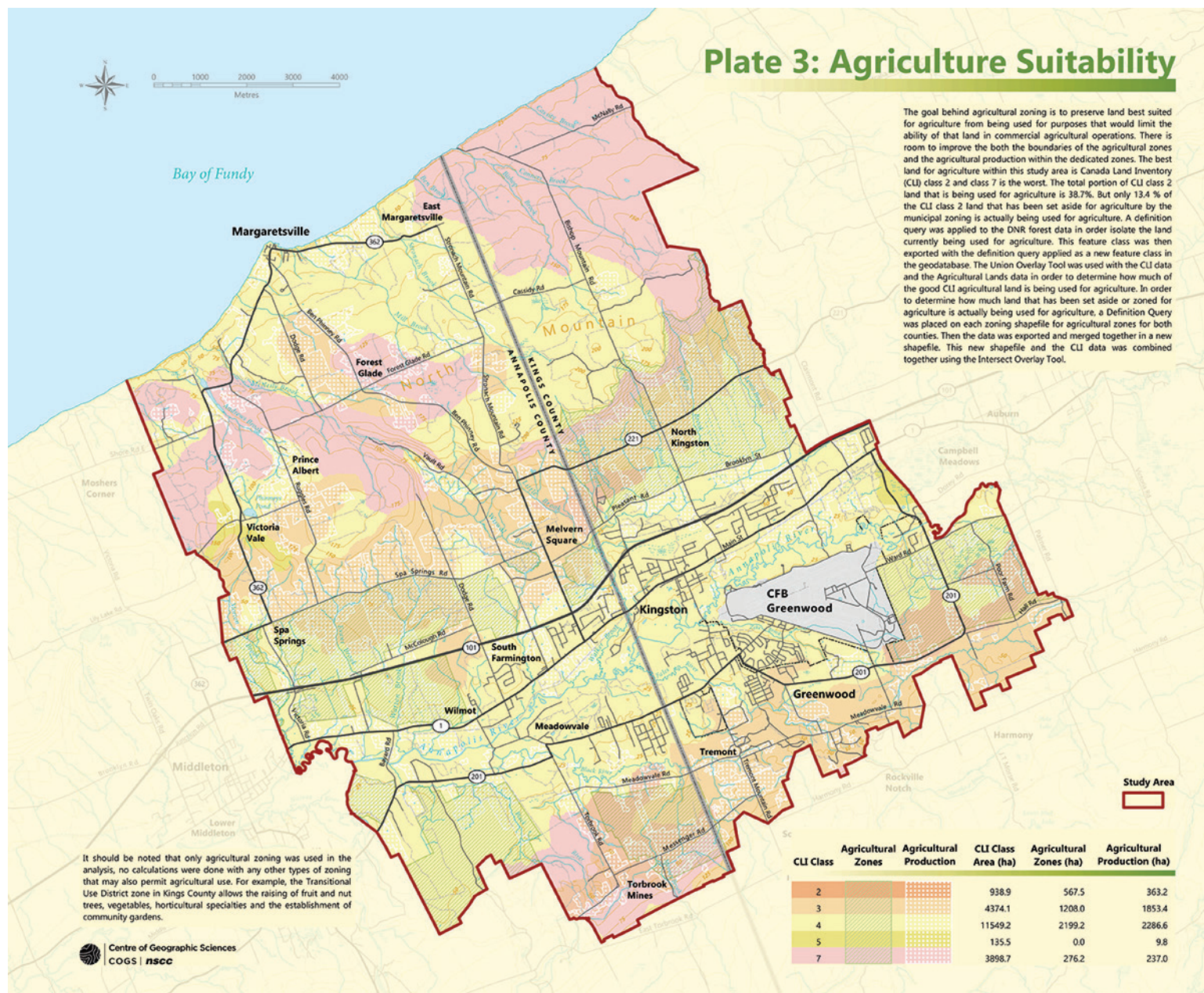


# Cartouche

Number 90, Winter/Spring 2015

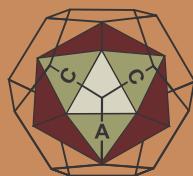
Numéro 90, hiver/printemps 2015



This map by Sylvia Dixon from COGS, is the winner of the President's Prize - College category at the CCA Annual General Meeting held in Charlottetown, PEI last month. The winner of the President's Prize - University category was Jeff Allen from the University of Toronto (see map on last page).

Newsletter of the  
Canadian Cartographic Association

[www.cca-acc.org](http://www.cca-acc.org)



Bulletin de  
l'Association canadienne de cartographie

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## This Issue / Sommaire

### Messages / Messages

President / Président .....	3
Vice President / vice-Président .....	4

### Interest Groups / Groupes d'intérêt

Education / Éducation .....	6
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### Features / Les articles

2-D to 3-D Visualizing Geographic Space Using Multi-media .....	8
Mapping Flood Risk and Flood Damage Estimates .....	10
Mapping the History of Cartouche .....	12
Why I am a Cartographer.....	18
CCA2015, Annual Meeting .....	20

### Other / autre

CCA Position Openings.....	7
New Edition Map of Canada.....	9
President's Prize / Prix du Président.....	23
Carto-Québec Prize / Prix Carto-Québec.....	24
Norman L. Nicholson Scholarship / Bourse Norman L. Nicholson .....	25
Membership Renewal / Renouvellement d'adhésion année .....	26

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"A number of astronauts, and then all of us who saw the photography from space, marveled at how much the Florida peninsula, meandering Mississippi, the islands of Britain, and the boot of Italy resembled the maps everyone had grown up with. We had taken it for granted that maps were faithful reflections of reality; but we were somehow amazed when reality turned out to be true to the maps."

— John Noble Wilford,  
*The Mapmakers*

## The CCA's 40th Anniversary

This year marks the 40th anniversary of the Canadian Cartographic Association. As part of the celebrations, Cartouche offers a look into the past with these two pictures from the 1983 AGM held at the University of Calgary. Can you recognize these cartophiles? It's only been 32 years! Answers can be found on page 19.

Thanks to Alberta Auringer-Wood for these blasts from the past.



**Photo 1.** Hint: There is a strong Newfoundland presence in this picture.



**Photo 2.** Hint: These gentlemen have all served as president of the CCA.

## PRESIDENT'S MESSAGE

**Christopher Storie**  
University of Winnipeg



Welcome to another amazing issue of Cartouche. The CCA executive and the editors of Cartouche want to thank all of you who have contributed to this issue. We have been very successful in soliciting work from a wide range of people and some of that work is featured in this issue. We can't deliver these newsletters without your submissions and we are truly grateful for them. There is a new section in this issue of Cartouche – Why I am a Cartographer or Cartophile. This is a new, and hopefully ongoing series in Cartouche about why our members and readers make and/or love maps. Given we are all cartophiles it may seem quite easy to understand why others love maps as much as we do, however, you may be amazed at what attracts people to our profession and passion. This section is meant to showcase this diversity. For those hearing and reading about this for the first time I encourage to write up a small piece for inclusion in the next issue.

Charlottetown 2015! What an amazing event! What an amazing host city and conference facility! We had the fortune of hosting the 40th anniversary of our association in the birthplace of Canada. Our meeting was held at the Hotel on Pownal, a venue that proved to be absolutely perfect (at least in my opinion) to the nature of our association. It was an intimate, friendly and collegial atmosphere that suited the nature of our attendees – seriously interested in cartography but with a strong social aspect to our interactions. We had the pleasure of having our conference opened by His Honour the Lieutenant Governor of Prince Edward Island The Honourable H Frank Lewis, who also brought along his close friend Lloyd Robertson (yes that one from CTV news). His welcoming remarks and our brief discussion afterwards proved to be a nice way to start our event and also demonstrated the warm friendly and welcoming nature of PEI.

As usual we had a variety of papers, talks, discussion, and rountables. The diversity of these were amazing and my pen was writing furiously as much of what I was hearing, especially from our friends at COGS, was all new to me and of great interest. As I looked around the room many people were deeply engaged. Our keynote speakers were amazing as was our second annual (I hope) PKN night. The talks were fantastic and entertaining. Our social events were well attended and spoke to the collegial nature that is the CCA. We also had very good attendance by students this time and they were also impressed at the quality and level of work being conducted and presented but in some a light and convivial manner – I hope we have some new members for life.

As a result of this amazing event we have found a new student executive member – Alexander (Alex) Chen. He is a graduate student at the University of Toronto but is currently working at the UPEI climate lab on an amazing geovisualization project of PEI and climate change. He comes with great enthusiasm and ideas for attracting the next generation to our association. I would like to extend a warm welcome and thanks to Alex for coming onto the executive and supporting the CCA.

I could continue to write at length about the event but there are other articles in the newsletter that will also give some details of what transpired. All I can say is that I hope to replicate, albeit in the Prairies, the success of the event in Winnipeg in 2016.

All the best,  
Chris

## VICE PRESIDENT'S MESSAGE

**Julia Siemer**

**University of Regina**



While this year's annual meeting was in session in Charlottetown, PEI, I was on a field trip in Berlin, Germany, exploring the city with a group of Geography and History students from the University of Regina. As a result I was unfortunately unable to attend the 40-year anniversary meeting of the CCA. The preliminary program sounded very interesting and from past experience I know that I would have enjoyed the talks, map exhibits and the networking opportunity these meetings invariably provide. However, I have to admit, taking our students to Berlin and exposing them to the rich history and the cultural and geographic environment of the city has been a very good experience as well.

In addition to the more obvious historic and geographic topics, we were able to introduce the students to some of the geospatial data the city of Berlin provides to the public. While German government agencies tend to be more restrictive than Canadian agencies with sharing official geospatial data, the Department of Urban Planning and the Environment of Berlin has turned some of its data into a permanent exhibition of 3D city models, both digital and physical.

The physical models range in scale from 1:500 to 1:2000 and provide an excellent overview of different stages of the re-development of the inner city of Berlin since 1990, mostly of the former East Berlin (Figure 1, next page). I encourage you to visit the exhibition in person (if you happen to be in Berlin in the next future...) or go online to get an impression of the models at [http://www.stadtentwicklung.berlin.de/planen/stadtmodelle/index\\_en.shtml](http://www.stadtentwicklung.berlin.de/planen/stadtmodelle/index_en.shtml).

Apart from the 3D models, the exhibition also includes some paper wall maps of Berlin. Most interesting to our group was a map showing Berlin's building footprints in the 1940s (a so called 'black map') with an overlay of some of Albert Speer's plans for the proposed new Nazi German capital 'Germania'

(Figure 2, next page). Having discussed and seen some models of these plans with our students, it was truly eye-opening to see the outrageous proportions of the Nazi plans for Berlin on this map. Only the overlay could provide us with a real understanding of the enormity of the changes these plans would have meant to Berlin's layout and its citizens.

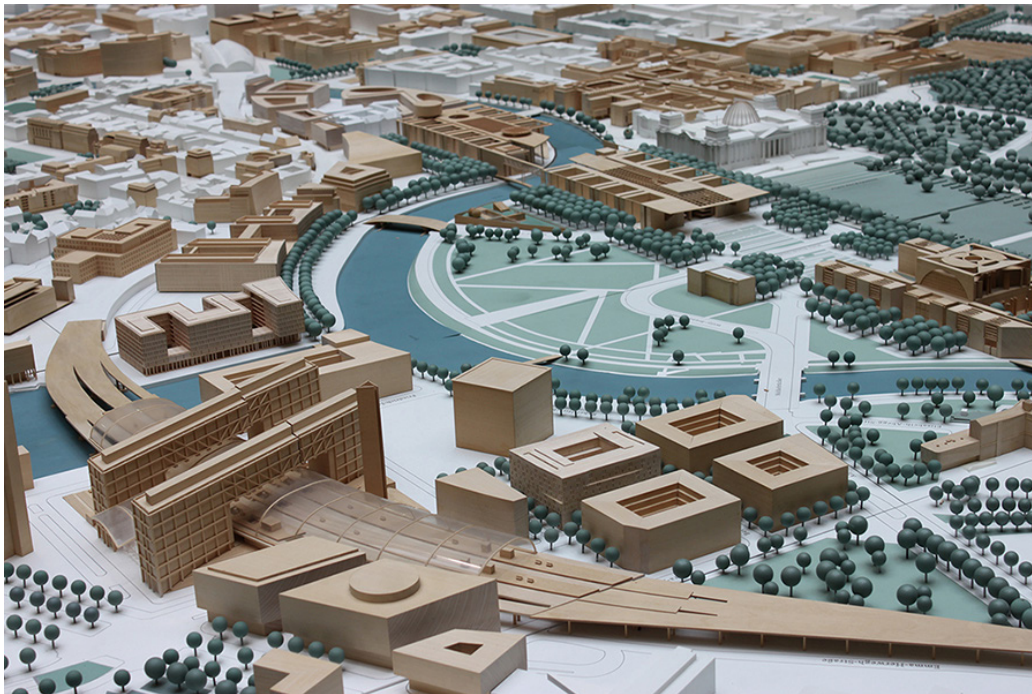
This exhibit is a very powerful example of how fundamental maps and cartographic products in general are in informing the public, laypeople and experts alike, of proposed (urban) planning projects and their potential impacts on the environment.

The maps and models of this exhibition made it very clear to me again how important and essential visualizations of geo data are for communicating past, present or future spatial reality.

Having missed this year's meeting, I am looking forward to see many of you again at the next meeting in Winnipeg in 2016!

*Julia Siemer is the Vice-President of the Canadian Cartographic Association and an Associate Professor of Geography, specializing in Cartography and GIS, at the University of Regina, Saskatchewan.*





**Figure 1:** Photograph of city model of Berlin in 1:500. Pre 1990 buildings are shown in white, finished projects are shown in linden wood with details, proposed projects are shown in linden wood without any details. This photograph shows the new Berlin Central Station in the foreground, the River Spree and the government quarter in the middle and in white the old Reichstag building with a glass dome in the background. The photo is taken from the north-west.



**Figure 2:** Photograph of a 'black map' of Berlin (1940s) with an overlay of Albert Speer's plans for 'Germania' shown in red. The Reichstag building is shown in black, located just south of the River Spree between two eastern wings of the proposed large new building complex (in red) in the top part of the map.

## HISTORY of CARTOGRAPHY INTEREST GROUP

Byron Moldofsky

University of Toronto

# Report from the CCA2015

This year's conference for the Canadian Cartographic Association was thoroughly infused with an appreciation of historical cartography and the use of GIS/mapping in the pursuit of historical research. We began this journey on Wednesday evening, even before the meetings began, with a short tour and presentation at the provincial archives, organized by Jill MacMicken-Wilson, the Provincial Archivist, and presented by John Boylan, Public Services Archivist. We had to walk into the archives carefully, to avoid treading on some super-sized maps of the province that John had to spread out on the floor (the "Lake Map."<sup>1</sup>) There were others scattered around the room, more conventionally, laid out on tables. His talk focussed on their collection, and particularly how the maps they have relate to "The Holland Map," of 1765, the first manuscript survey-map of PEI, by Samuel Holland, which is celebrating its 250th anniversary this year. For the occasion, the original has been restored at its home in the National Archives in London, and is being sent over to Charlottetown to be displayed at the Confederation Centre Art Gallery, starting this past July 5, until next January. See [www.samuelholland250.ca](http://www.samuelholland250.ca) for details. There is a Youtube video of the installation of the map exhibit which is quite inspiring, at: <https://www.youtube.com/watch?v=-G8vZxIHCR4&feature=youtu.be>.

John's talk looked at a number of maps which are in the provincial archives, which build on the foundation of the Holland map. A number of commercial publishers re-used his information in printed versions. Some examples of these can be viewed online at the IslandImagined.ca website - for example the official government map published in 1775 based on Holland's survey: [www.islandimagined.ca/fedora/repository/imagined%3A209251](http://www.islandimagined.ca/fedora/repository/imagined%3A209251).

These became adorned with more and more data over the years, including lot numbers and land-holder information for later periods. Some of the versions we were shown were reminiscent of the historical county-maps and atlases familiar to other Eastern Canadians. For example, a generation later in 1880 we find "Meacham's Historical Atlas of the Province of Prince Edward Island": [www.islandimagined.ca/fedora/repository/imagined%3A209261](http://www.islandimagined.ca/fedora/repository/imagined%3A209261).

Island Imagined is a joint initiative of the Archives and the Robertson Library at UPEI. It contains over 1000 digitized maps and plans from these collections, some of which are georeferenced. Even more impressively, the system on which the site is built, Islandora (a combination of open source Drupal and Fedora components developed at UPEI) is becoming an oft-used standard throughout North America, for making archival collections accessible, especially graphic collections like maps. For more information, see [www.islandimagined.ca/about](http://www.islandimagined.ca/about) and [www.islandora.ca](http://www.islandora.ca).

The next day at the conference proper we were treated to a Keynote address from Dr. Douglas Sobey, "Samuel Holland: His Work and Legacy on Prince Edward Island." Dr. Sobey talked about how Holland's survey and resultant map set many of the patterns of settlement still in evidence on the Island today. Even more interesting were the idiosyncrasies of the coastal survey process to which he provided insight: the three different surveyors assigned to different stretches of the shoreline of PEI each had slightly different training, prac-

<sup>1</sup>Topographical Map of Prince Edward Island, 1863, PEI Archives Acc2831. Usually referred to as the "Lake Map" for surveyor, D.J. Lake.

<sup>2</sup>In the Archives we had also seen the "Field Book by Thomas Wright, 1765, Acc2330, Series G, Subseries 1, G-2". Thomas Wright worked under Surveyor General Samuel Holland on the 1764-65 survey of the Island. This field book is the only remnant of the survey in the collection of the Archives, and was part of the evidence used by Dr. Sobey in his reconstruction of the process.



tices and degrees of conscientiousness.<sup>2</sup> By georeferencing and plotting the map error on Holland's survey map of 1765 and comparing it with other historical maps, Sobey was able to identify these characteristic habits of each surveyor in the quality of their mapped results - a fascinating application of cartometric analysis. He also used the symbolization used on the map to analyse and reconstruct the likely areas of burn-outs from forest fires from earlier in the century (1736-42).

This was only the first of many presentations using what I would call historical GIS (HGIS) techniques to improve our understanding of geographical reality. The conference had two consecutive sessions on Historical GIS and Mapping - you can see the list of presenters and their abstracts in the conference program, downloadable from the CCA Website. Several focused on the Holland Map: Peter Rukavina has developed the WhatsMyLot.com web application, which allows GPS-enabled folks driving around PEI to see which of Holland's "Lots" (comparable to townships) they are traversing. Dr. Jim Thompson talked about Holland's use of celestial navigation, as he and his surveyors sailed or rowed or trekked around the coast taking readings from the stars to establish position (mostly) correctly. In addition to these, Rebecca Bartlett, now in Ottawa but originally from PEI, outlined her experience and methods in researching and creating an animated map display of the rise and fall of rural general stores throughout the Island, as well as historical road development, from 1864-1984. Gordon Campbell, a student from COGS,

explained the challenges of digitizing historical harbour plans and maps to create an effective webmap of the events leading up to and during the 1917 Halifax Explosion disaster. And Daniel Brendle-Moczuk, from Victoria, shared his experience of how showing historical maps on modern Google Map and Google Earth bases can illustrate to today's students the great losses of territory which accompanied drowning valleys in BC for hydroelectric development, in the 1960s and 70s (like Williston Lake and the WAC Bennett dam, 1968.)

These are all admirable projects, but they all also could benefit if there was some way to share resources - data and methods - created to facilitate historical GIS in Canada. To emphasize this, I took the opportunity myself in the last presentation of the morning to re-introduce the idea of a Canadian Historical GIS Partnership. This is something we have discussed in sessions at the last two CCA conferences. A proposal has been put forward to SSHRC for a Partnership Development Grant, by Marcel Fortin at the University of Toronto Library, supported by my department, Geography. About 15 partners from other universities, NGOs and industry have signed on, and we have every indication that this initiative will be successful. So we hope the next 2 years will be spent building some pilot websites and tools to allow historical GIS data and analysis to become easier and more collaborative into the future. If you are interested in these kind of projects, please email me directly and I will put you on our mailing list to keep you informed of further developments.

## CCA Position Openings

The CCA has several openings on our executive, which include:

1. Webmaster (available immediately)
2. Membership Coordinator (available immediately)
3. Cartouche Editor(s) (available starting in January 2016)
4. Mapping Technology and Spatial Data IG (available immediately)
5. Cartography 2.0 (name can be changed) IG (available immediately)

The final position that we are seeking to fill is that of incoming Vice-President. This individual would commence June 2016 after the annual general meeting in Winnipeg. The typical commitment of this individual is 3-years as they would become President and then Past-President. There is precedent for serving 2-years as VP or P which would be discussed and agreed upon by the incoming President and Past-President.

For information on any of these openings you can consult the executive tasks list page on the CCA website or contact Christopher Storie at [president@cca-acc.org](mailto:president@cca-acc.org).

## FEATURE ARTICLE

Margaret Schweitzer

Hamilton Archaeological Consulting

## 2-D to 3-D: Visualizing Geographic Space Using Multi-media

As cartographers, we are used to seeing and understanding maps; they are some of the earliest friends of our childhoods. In decades past, most maps were available in 2-D version only, as displayed in elementary and secondary school classrooms. Today's proliferation of GIS technology allows us to visualize terrain more easily than ever, thanks to advances in applied computer science. However, there are still situations where members of the general public may have only 2-D paper maps to view, such as meetings to inform citizens where a proposed pipeline may be situated in the landscape, for example. Conceptualizing natural terrain can be challenging for some people, leading to frustration and a "tuning out" of the material under review.

We have all been in shopping malls and at airports, where the ubiquitous YOU ARE HERE map is on display. Locating ourselves in environments of rigid walls and floors is not difficult, and knowledge of the local language is not always necessary, as when travelling abroad. It is when we attempt to place ourselves in natural terrain without obvious landmarks that difficulty can arise. In this case, 3-D versions of maps make all the difference. The following illustrates this concept.

Figure 1 shows a portion of the Canadian landscape derived from Canvec geospatial data; layers from the complete file have been deliberately turned off. Lakes, rivers, contours and two man-made feature lines are displayed. Contour lines on a 2-D map indicate the steepness of terrain over a given area, yet what does this really mean to a novice map reader?

For someone who isn't used to viewing terrain in this type of depiction, the lines could be confusing and appear like nothing more than a tangle of spaghetti. Explaining that the closer together the lines are, the steeper the hills, won't be a tremendous help to interpretation. However, if some enhanced visual effects can be added, a better understanding of the landscape is possible. Figure 2 depicts the same mapped area as previous, with a colour ramped DEM.

It is easy to compare the two figures and to see the difference. At the very least, the gradations of colour suggest differences in terrain elevation, which the map legend will decipher. Lastly, Figure 3 illustrates the same terrain again, this time with a hillshade component.



Figure 1. Contour lines on a 2-D map version.

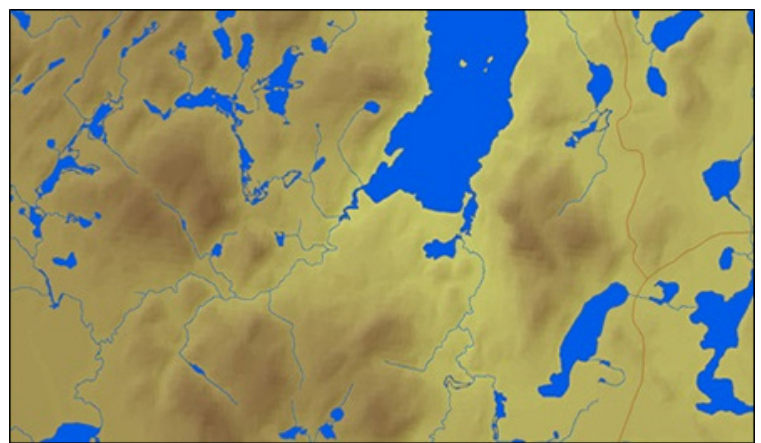


Figure 2: Colour ramped DEM.



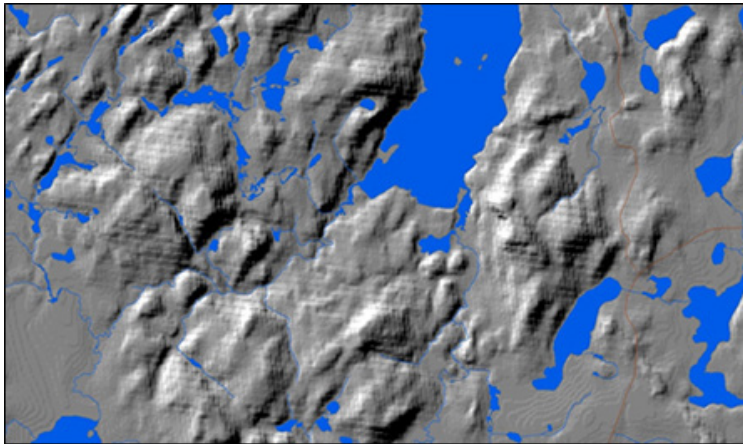


Figure 3: Hillshade layer.

The hillshade effect makes the elevation differences in terrain easiest of all to detect. People with rudimentary map reading skills should be able to visualize the landscape to an adequate degree when this tool is used.

Unfortunately, terrain modelling techniques are not possible to display in every mapping situation that arises, particularly when in the field, and it is still common in some quarters to carry around NTS maps for quick reconnaissance and reference. In remote areas, laptop batteries may be the only thing available to power technology and the limitation that that implies.

By keeping an eye out to who a map's intended audience is, we can use GIS to both simplify and enhance natural terrain interpretation wherever possible.

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## New Edition Map of Canada Unveiled

On November 17, 2014 The Honourable Greg Rickford, Canada's Minister of Natural Resources and Minister for the Federal Economic Development Initiative for Northern Ontario, celebrated Geography Awareness Week by unveiling a new edition of the map of Canada published by the Canada Centre for Mapping and Earth Observation.

This revised map of Canada includes updates such as Canada's new national parks, the extent of sea ice in Canada's Arctic, winter roads in Canada's North, and Inuit place names. This map demonstrates Natural Resources Canada's ongoing commitment to depicting Canada's changing land mass, and territorial waters.

This bilingual map of Canada is accessible online through Canada's Open Data Portal at [www.data.gc.ca](http://www.data.gc.ca) and [www.Geogratis.gc.ca](http://www.Geogratis.gc.ca) in downloadable in .pdf and .jpeg formats. Canadians wanting to purchase paper maps will be able to do so through a network of private sector map dealers across Canada.

#### Quick Facts

- This new edition of the Map of Canada is at a scale of 1:6,000,000.
- This map of Canada shows the North Pole, all national parks and reserves, as well as the 200-mile offshore Exclusive Economic Zone (EEZ).
- Major roads, railways and ferry routes are depicted, with the Trans-Canada Highway clearly represented across Canada from the Atlantic to the Pacific coasts.
- New place names for municipal amalgamations – particularly those with their Inuit designations (e.g. Clyde Inlet to Kangiqtugaapik);
- For the first time, the addition of winter roads in Northern Canada, which clearly demonstrate how Canadians actively access and use our northern frontiers.
- Additional revisions include the use of 2011 population census data; a new indication of the extent of sea ice from Environment Canada; two new national parks: Sable Island National Park Reserve and Naats'ihch'oh National Park Reserve.

## FEATURE ARTICLE

H. McGrath<sup>1</sup>, E. Stefanakis<sup>1</sup>, and M. Nastev<sup>2</sup><sup>1</sup>Department of Geodesy and Geomatics Engineering, University of New Brunswick, Fredericton, NB, Canada<sup>2</sup>Natural Resources Canada, Geological Survey of Canada, Québec, Canada

## Mapping Flood Risk and Flood Damage Estimates

In New Brunswick the chance of flooding due to snow melt, ice jams, and heavy rainstorms (Environment Canada, 2013) is a concern as many residential areas and extensive infrastructure have been developed close to rivers. In Fredericton alone, over 70 floods have been recorded since the 1700s (Public Safety Canada, 2014), with costs exceeding millions of dollars. Increases in frequency and magnitude of storm events have highlighted the importance of measuring community vulnerability to flood hazards. Knowledge of vulnerable regions is important for disaster planning, mitigation and recovery, and preparedness response (Nastev and Todorov, 2013).

The method adapted by Natural Resources Canada (NRCan) to provide the public safety community with tools to adequately undertake rigorous risk assessments was to adapt the Federal Emergency Management Agency (FEMA) Hazus-MH (Hazus) software. Hazus combines science, engineering knowledge, and numerical modelling with GIS to estimate losses resulting from earthquakes, floods, and hurricanes (FEMA, 2010). Through complex computer simulations, flood events may be simulated to identify flood prone areas with vulnerable population and built environment and to quantify the potential impacts to the community. The smallest aggregate geographic unit of measure in Hazus is the dissemination block or a user may run analysis on building specific point data.

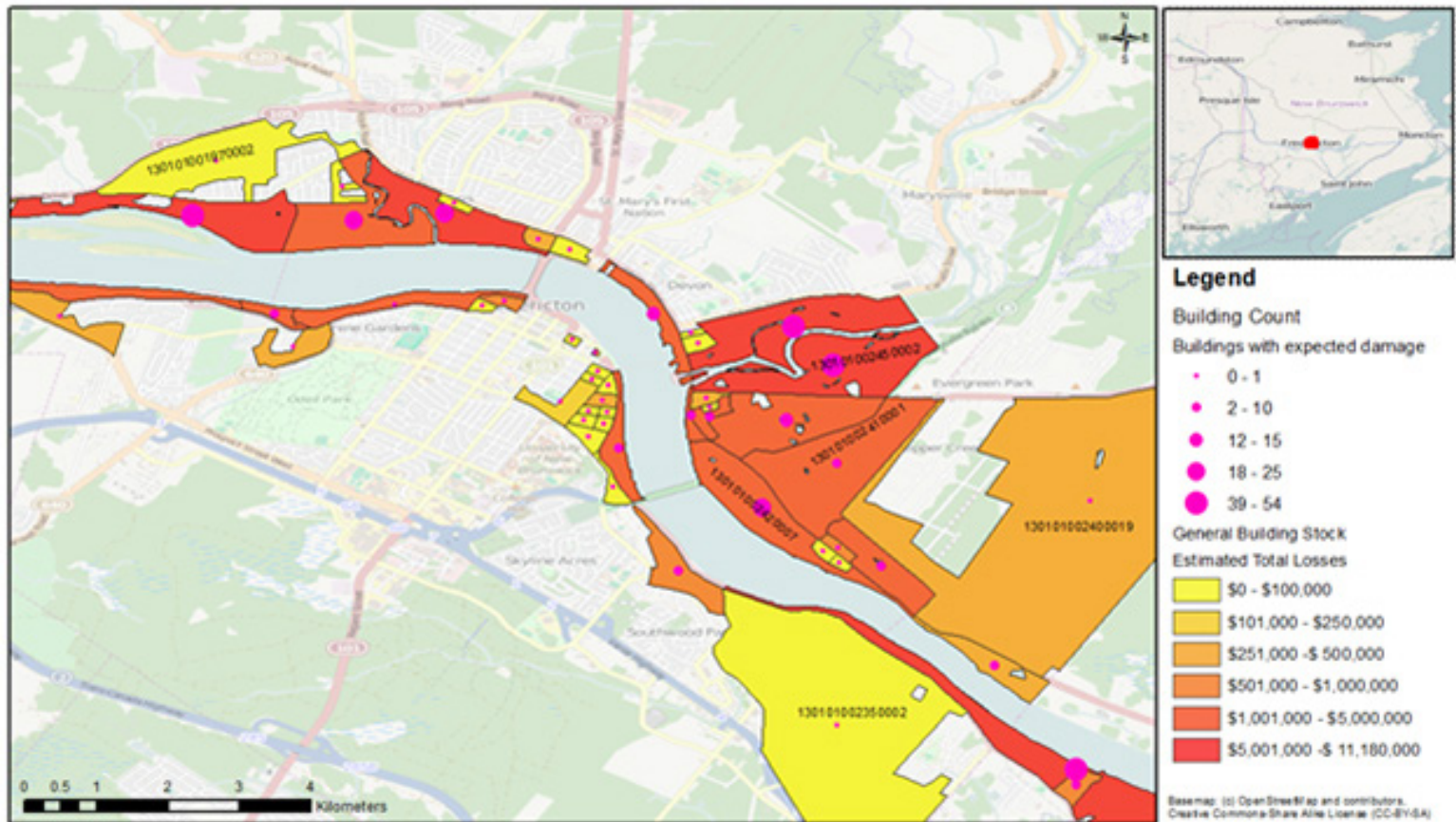
This study looked at the vulnerability of Fredericton, NB, based on the 2008 flood event. The City of Fredericton is the capital of New Brunswick located in the west-central portion of the Atlantic Canada province. The city is split by the St. John River with gently sloping hills found on both the north and south sides. The GIS study area was comprised of 196 square kilometres and 525 Census Dissemination Blocks. The aggregated building data, based on the 2011 Canadian Census, contains over 23,000 households and a population of roughly 53,000. The number of buildings in the study area is

16,234 with a total replacement value of about \$4,800 million dollars. The 2008 flood event recorded the Saint John river level at the Fredericton river gauge to be 8.36 m above sea level (masl) or 1.86 m above the flood stage, making this the second largest on record – the largest being the 1973 flood (8.54 masl).

Once the study area was created in Hazus, the flood hazard was imported as were local data representing essential facilities (e.g., schools, hospitals, fire and police stations). The results of the analysis include: 55 dissemination blocks will experience some level of flooding and 359 buildings will be at least moderately damaged (Figure 1). Of these, 232 buildings are estimated as total loss and will need to be rebuilt. The total economic losses resulting from this scenario is \$147million dollars, of which 64% represent residential occupancy losses. Hazus results indicate 948 households will be displaced due to a flood of this magnitude, which corresponds to a population of 2,844. Temporary shelters are expected to receive an estimate of 2,636 people. Based on building details, including structural (wood, brick, etc.), finishes (drywall, insulation, etc.) and foundations (concrete slab, rebar, etc.) the generated debris is estimated to 33,000 tons which will require 1,284 truckloads to remove.

Using GIS to map the geographic extent and associated exposure and vulnerability data allows GIS specialists, emergency managers and the general public to get a better understanding of the spatial distribution of the potential effects of floods. In Figure 1 we're able to view the Census Dissemination Blocks affected by flood hazard which are coloured from yellow to red indicating increasing estimates of economic losses to the structures. Overlaid on these polygons are point data, varying in size depending on the estimated number of buildings which are expected to incur damage.





**Figure 1.** Estimated damages based on 2008 flood event in Fredericton, NB from Hazus analysis

While Hazus presents a powerful tool for loss estimation and determining areas of vulnerability. It is recommended to run a Hazard analysis based on a historic flood event and compare the results against recorded losses. Depending on the size of the study region, it is suggested to import individual building details to compute loss estimates on this user-defined building specific data. While the aggregated data supplied with Hazus is a great starting point, importing and updating the aggregate datasets with your own, local level data should improve the quality of the results.

This study is part of a larger flood risk analysis research project being undertaken at the University of New Brunswick. This research intends to develop an analytical conceptual framework based on geospatial business intelligence model to perform riverine flood risk analysis via user friendly tools, essentially, at the press of a button. The proposed framework will allow for creation of flood inundation maps, estimates of vulnerability and exposure, and analysis and reporting of spatio-temporal information for non-expert general users and decision makers. It is based on Spatial On-Line Analytical Processing (SOLAP) technology which is based on the

multi-dimensional paradigm (OLAP philosophy) of providing intuitive and rapid methods of interactively exploring and analyzing large volumes of multi-scale spatio-temporal data. Please visit our website for further information: <http://www2.unb.ca/~hmcgrat1/>.

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## FEATURE ARTICLE

Joni Storie and Weldon Hiebert

University of Winnipeg

Mapping the History of  
Cartouche (1991-2014)

The goal of this article was to document images within Cartouche to explore the history of the association's newsletter for the 40th anniversary of the CCA. According to Lindsay, (1988) a newsletter is a regularly circulated publication which is focus on a specific topic or theme written by one or more authors for a group of people who share a common interest. Newsletters are associated with clubs or organizations and are usually part of a membership subscription and available only to paid members. The purpose of the Cartouche newsletter is to communicate with the CCA membership, assure that all members are aware of plans and actions of the organization, to inform members of news that is important or relevant to them and to use the newsletter as a means to get others interested in the CCA.

The CCA Newsletter started with the association in 1975 (Figure 1). The newsletter can be considered the 'social media' of its time since it provided a means to connect and communicate with a membership that spanned the continent and beyond, especially in the years before e-mail and Facebook. In 1991 the CCA newsletter was renamed Cartouche which



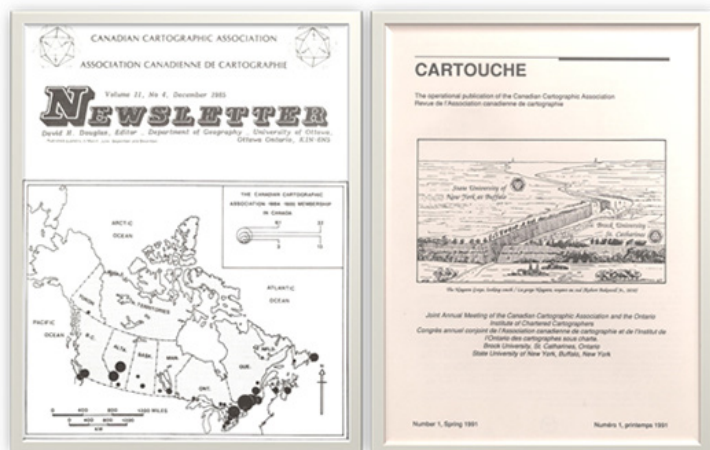
*This article was presented at CCA2015*

is a French word meaning "cartridge" so named by French soldiers after certain decorative Egyptian hieroglyphics that looked like their gun cartridges. From a mapping perspective, Cartouche is the name for the decorative enclosure, common in historical maps, which contain the map's title, legend, and descriptions.

In order to explore the history of Cartouche, we incorporated two research approaches: bibliometrics and geovisualization. These approaches helped us explore the potential influence that the editors had on the style and content of the newsletter; to determine Cartouche's sense of place; and to document how maps are used in the newsletter.

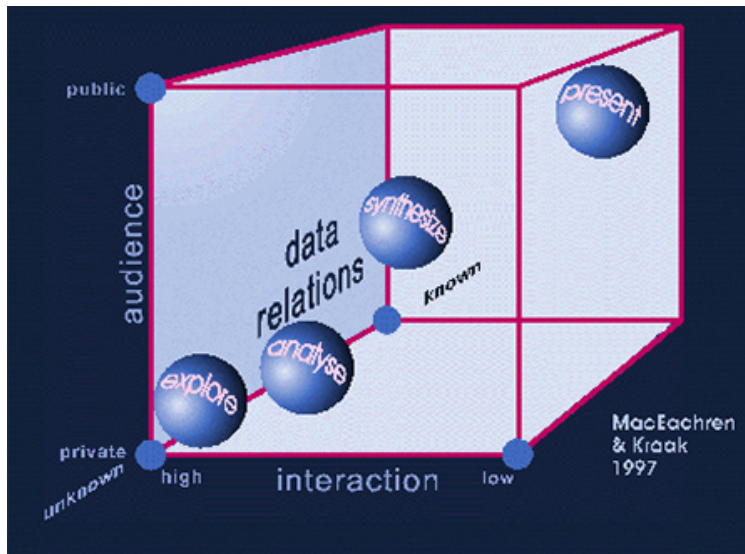
Bibliometrics is a set of methods used to derive insights from existing databases. Most commonly, bibliometrics is used prior to traditional literature reviews of content to quantify variables such as key words, location of study or researchers, year that analysis was conducted, etc. In this study, bibliometrics was used to gain insight into the history of Cartouche from 1991-2014 (89 issues) by quantifying images for (i) the cover and (ii) the internal newsletter. Using the cover of the newsletter, we quantified image type, image category theme, location and text topic. For the internal portion of the newsletter, we quantified the number of pages, number of total images, type and number of image categories.

Nöllenburg (2007) summarized key concepts of geovisualization such as the use of integrated approaches that allow for exploration, analysis, synthesis and presentation (MacKay, 1995) visualized by MacEachren and Kraak (1997) in Figure 2. Geovisualization promotes the construct of knowledge through the transforming of data in a search for patterns and relationships to facilitate thinking, understanding and knowledge (Krackhardt, 1996; MacEachren, 2001). The images were analyzed using bibliometrics and geovisualization tools including maps, temporal profiles, animation and summary graphics.



**Figure 1:** The original CCA Newsletter (left) and the newsletter name change to Cartouche in 1991.





**Figure 2:** The map use cube by MacEachren and Kraak (1997) represents visualization goals with respect to audience, interaction and tasks dimensions to meet the four goals of exploration, analysis, synthesis and presentation.

Cartouche has had eight editors or editorial teams from 1991 to 2014 (Figure 3). All editors have fulfilled their duties ensuring the newsletter remains informative and keeping the membership up-to-date on current cartographic news. Editors have limited influence in the content of the newsletter as submissions are normally determined by the membership, usually executive members and special interest chairs. As is the case for most organizations, the bulk of the newsletter

<b>Upcoming &amp; Review on Conference (30%)</b>		<b>Work shop (3%)</b>
<b>CCA (25%)</b>		<b>TOC (5%)</b> Cartography (3%)
<b>Map Awards (17%)</b>	<b>Themes (8%)</b>	<b>Memorial (7%)</b> Art (1%)

**Figure 4:** Topics of text found on the cover of Cartouche.

input is done by a few members! We thank them all for their efforts above and beyond the call of duty. Editors can and have had influence on the newsletter layout creating their own styles, especially the banner, to ensure Cartouche remains interesting to the association members.

The cover of the newsletter was analyzed based on cover text topics, cover images and location of maps. Figure 4 shows the proportions of each text topic on the cover. Almost one third of the text was devoted to conference information (upcoming or review) and one-quarter was devoted to CCA news. Map awards included ICA Children Maps and the CCA President Map competitions. General application themes include such topics as cartographic datasets, fiction, journalism, and food.

The cover of Cartouche also depicted images, some associated with the text content while many images encapsulated the entire cover (with the exception of the Cartouche banner or logo). The categories of image topics were organized into groups (Figure 5) and the results visually quantified to show preferences of image types in the past (Figure 6).

The three main categories of images on the cover of Cartouche were maps (57%), photography (23%) and clipart/graphics (20%). The maps categories travelled the gambit with historical maps representing the largest contributor (27%). Other maps category contributions were made based on application themes (art, journalism, tourism, urban, transport), cartographic tools, map prizes,



**Figure 3:** The Cartouche banner style changes with changes in editors or editorial teams.

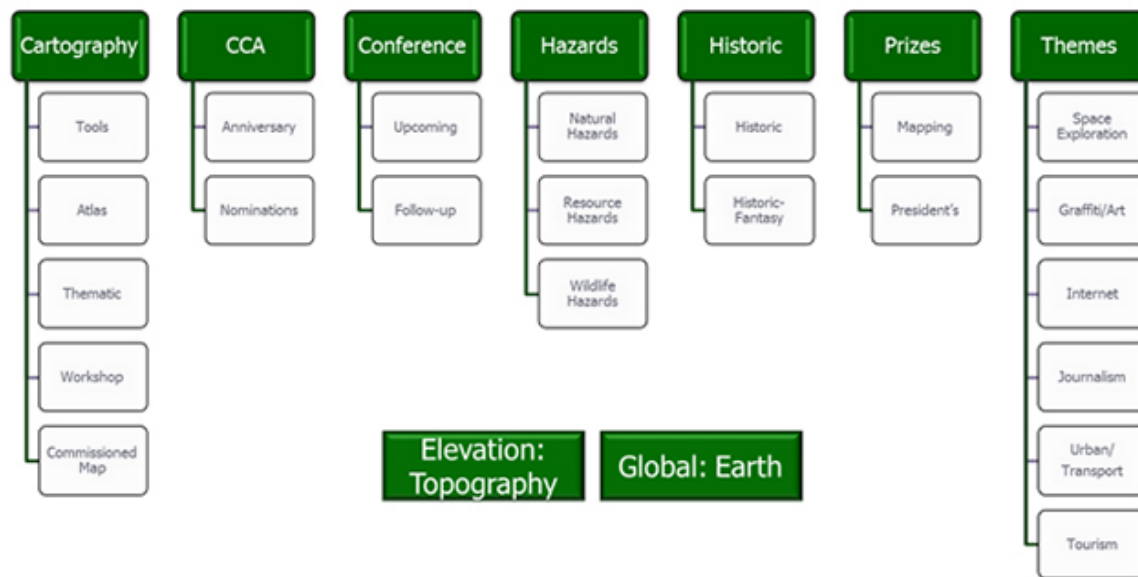


Figure 5: Category organization for images on the cover of Cartouche.

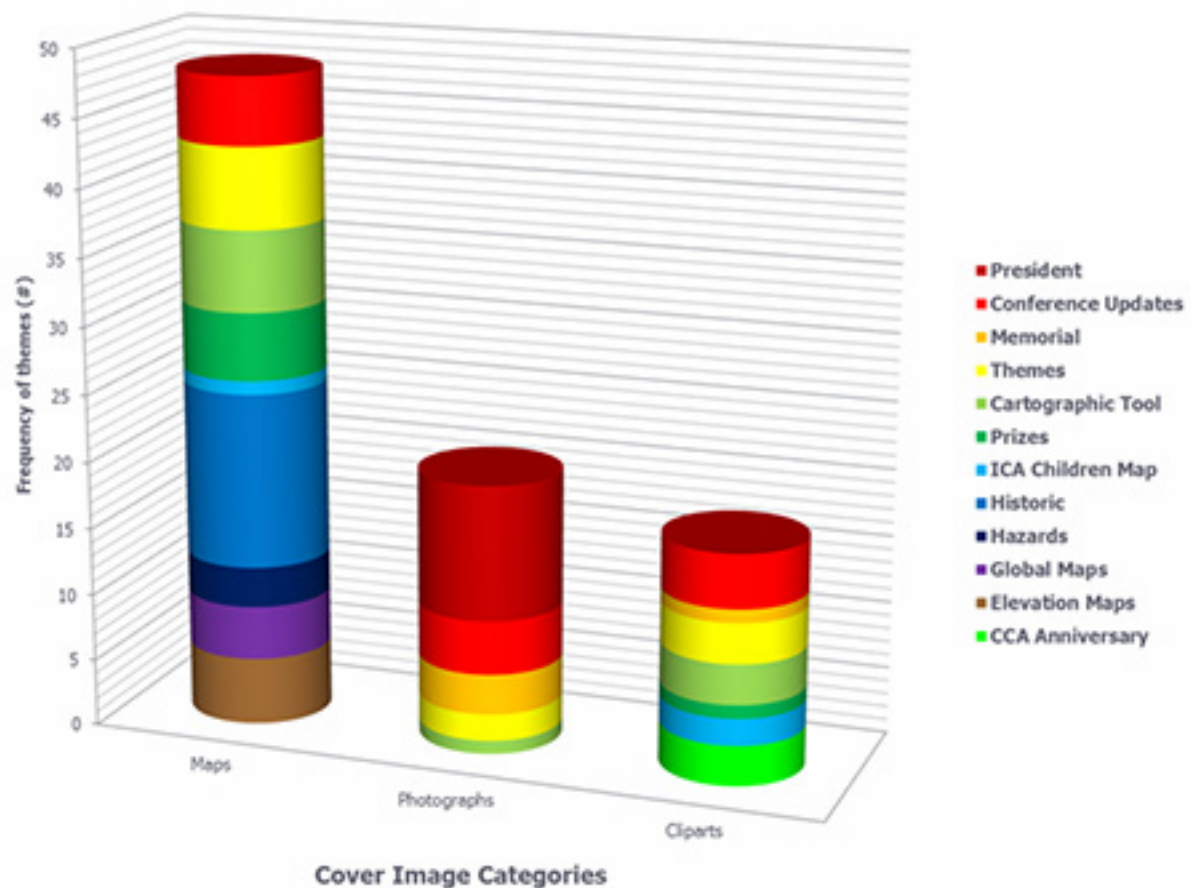


Figure 6: Frequency of themes for images on the cover of Cartouche.



ICA children maps, hazards, the Earth and elevation maps. When photographs were the cover image, 50% of the time they were the president's image associated with a message from the CCA president. When not highlighting the presidential position, 20% of the photographs on the cover were on conference updates (upcoming, past), memorial obituaries (15%), themes or cartographic tools. Clipart or graphic cover images were mostly conference updates (24%) with the remaining categories having equal representation (18%).

An [animation](#) of map locations that appeared on the cover was created to show the sense of place personified by Cartouche. As this temporal sequence shows, a map that contained a Canadian location occurred 62% of the time on the cover of Cartouche; 49% of the Canadian maps represented locations in Ontario and east; 41% were from Manitoba and west; and 10% of the time they represented all of Canada. The next popular map location was all the Earth (21%) followed by North America (6%), Asia (3%), and the remaining 1.5% from Africa, Europe (Miquelon & St Pierre), Middle

East, fantasy Treasure Island and the Moon.

We next explored the images within Cartouche, referred to as 'internal content' to discriminate it from cover content discussed above. Since 1991, and with much gratitude to the Editors, there have been 1,889 pages published in the Cartouche newsletter (Figure 7). Since issue #73 (2009), Cartouche went entirely digital with the membership receiving the newsletter as a PDF via e-mail. The advantages of going digital include no cost for printing and mailing of each issue; full colour without the expense of colour printing; fully interactive options; all the members receive their issue at the same time; no page restrictions as with analog (# of pages needed to be divisible by four); and no need for blank pages to meet the four page criteria. Surprisingly, the number of pages per issue did not rise significantly with the digital newsletter format. On average, the number of pages for the printed issues of Cartouche (#1-72) was 21.59 while the digital version (#73-89) was 24.76 (only a 3 page increase).

The page count varied from issue to issue with a minimum page count of 12, a maximum of 52 and an average of 22.2 pages for all issues published from 1991 to 2014. Over this same time period, there have been 1,459 images that were presented inside the Cartouche newsletter. The number of images varied by issues (minimum = 1; maximum = 64 in 2006) with an average of 17.2 images per issue. As can be seen in Figure 7, images became more prevalent after 2005 (issue #54) with the popularity and affordability of digital cameras. However, the increase in images did not increase the overall page count of Cartouche as evidenced by the peak in image count (64) in 2006 associated with a 32 page count while the maximum number of pages per issue was obtained in 2011 (52 pages with 39 images).

Within Cartouche, almost half the images were photographs with maps a respectable 21% of images (Figures 8 and 9). Photographs existed from the beginning of Cartouche but became more prevalent in the mid to late 1990s (Figure 9). Around 2005 (issue #58) the use of photographs in Cartouche increased significantly; the average number of photographs from issues #1 to #58 was 2.8 compared to 17 images per issue after issue

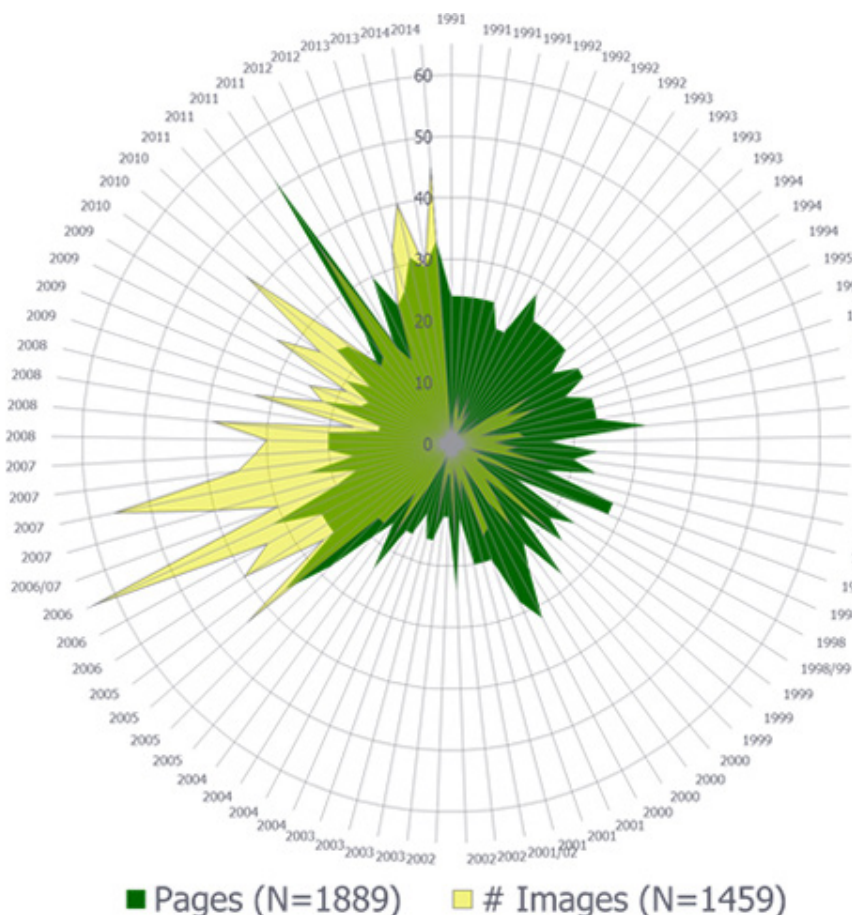


Figure 7: The impact of technology on internal content in Cartouche.



Figure 8: The distribution of internal content image categories in Cartouche.

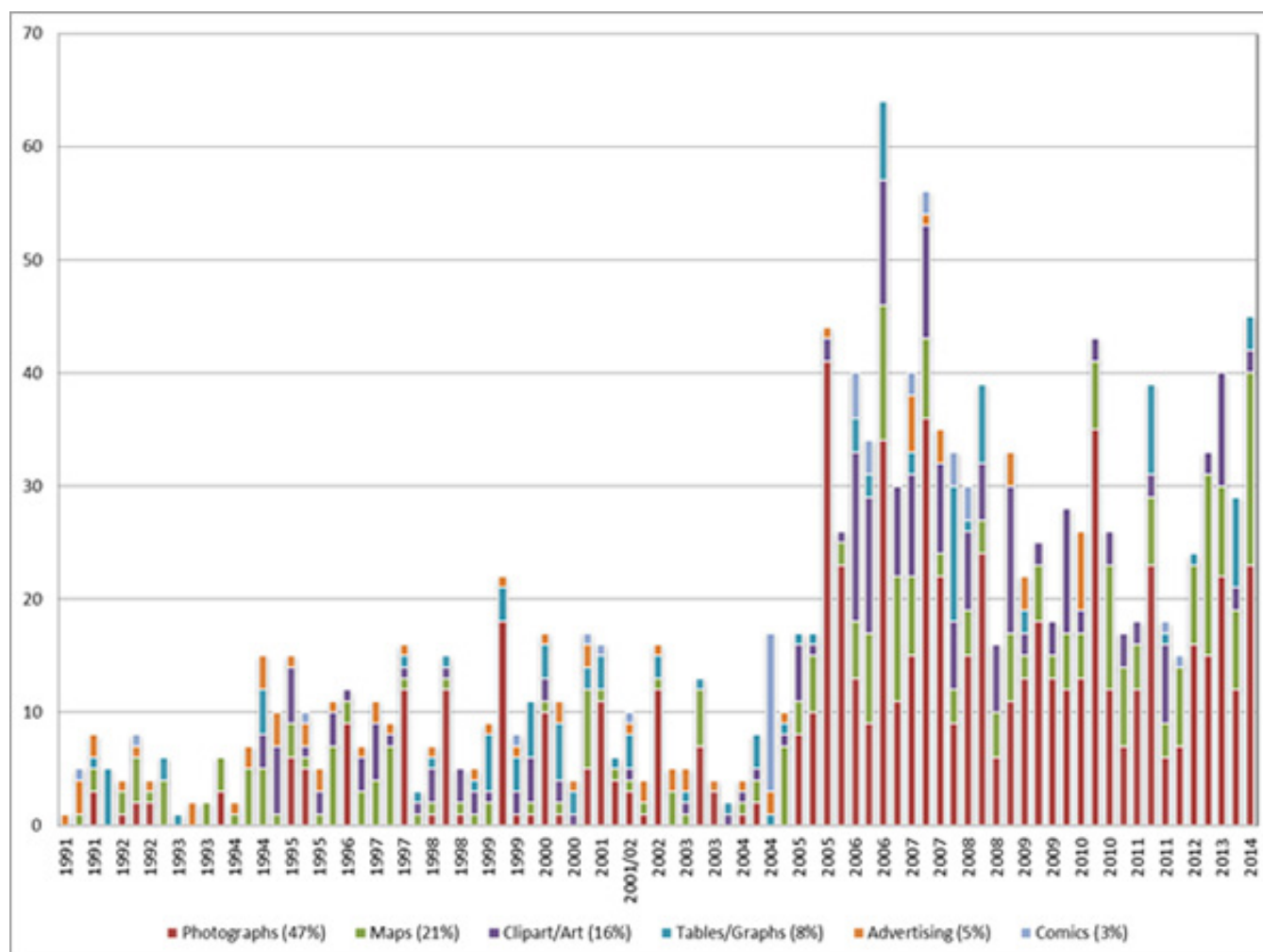


Figure 9: Temporal history of images internal to Cartouche.



#58. This increase can be attributed to advances and ease of use of digital cameras. Prior to digital photography, film needed to be developed, prints made from the negatives and then either half-toned (before computers) or scanned for digital use. Digital cameras removed this process allowing images to be transferred directly to the computer.

The style of Cartouche was greatly influenced by computer technology. The early 1990s was the beginning of the personal computer revolution (yes really!) with PC and Macs becoming accessible, and easier to use. With the personal computer came a variety of graphics software such as PageMaker, InDesign, and Photoshop which quickly replaced drafting tables with digital desktops. The digital desktops design and layout made newsletter publication easier and quicker, allowing editors more time to experiment with different styles as evident in the design and evolution of Cartouche's banner (Figure 3).

The total number of images also increased post-issue #58 with an 8.8 average images per issue (issues # 1-58) and 32 average images per issue (issues # 59-89). Maps have been evident since the beginning and represents 20% of all images for internal content. Clipart appeared on the scene in late 1994 and has made a regular appearance since 2005. Tables and graphs were most evident in the late 1990s and early 2000s but appear regularly in other issues. More advertising images occurred earlier on in Cartouche but has essentially stopped in 2011. Comics or cartoons made the most appearances in 2004 (Gary McManus editor) and were regular contributions in 2006-2008 (Barb Duffin and Lori King, editors).

The results of this analysis show that editors may have influence on the style of Cartouche but technology and membership determined the content with consistent communication of association information to members. There is a sense of place within Cartouche with 62% of the maps on the cover representing Canada but still a sense of global citizenry (21% Earth). Although there are more maps on the cover (57% of the cover images), the internal content images show 21% are maps. The CCA membership is a very social bunch with almost half of the images being photographs showing members at conference, social and orienteering events. The members are also very artistic (clipart and art), analytical (tables/charts), and funny (comics, cartoons).

In addition to being an interesting way to summarize the history of Cartouche and celebrate the CCA 40th, it is hoped that this review will spark a conversation about the future style and content of Cartouche. Most recently, Cartouche

went from a quarterly to semi-annual publication and the organization information is also disseminated by website, Facebook, twitter, and email list server. Information and news can be passed on to the membership instantaneously with these other forms of communication while it is still current. Does this bring forth the question of the newsletter relevance in an age of social media? Should Cartouche be reinvented, for example, to include longer (peer reviewed?) papers that would otherwise not be published elsewhere? For example, a similar format to the early publications of Cartographic Perspectives (NACIS). Or should Cartouche include interest pieces such as Cartouche issue #89 "World Navels" by Rasmus Winther? We hope this review of Cartouche sparks a conversation and encourages the next generations to set an exciting path for CCA communication in the future.

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## FEATURE ARTICLE

Chris Storie

University of Winnipeg

# Why I am a Cartographer or Cartophile

During the 2015 conference in Charlottetown a discussion was started about why people are cartographers, and/or cartophiles. This discussion lead into a request for people to submit to Cartouche a brief summary about where/why/how their love of maps developed, and why for many their choose a career as a cartographer. Part of the reason for this was to understand the nature of people or who are active and participate in CCA events and activities, but to also understand the various directions the CCA can follow to help attract new members and how to best serve our existing membership base. I encourage all our readers to submit your brief writeup for future issues when the call for submissions comes out.

To that end we present the first, in what I hope is a series, of “Why I am a cartographer or cartophile”.



## Heather Smith

I was an artist looking for a good day job. When the thought of cartography came to me I was thrilled. I would be making something, and I probably would never get bored, because I would encounter different subjects and knowledge through my work, and have to keep up with an ever-changing technology. And best of all, there seemed

to be jobs out there! I wasn't sure what GIS was yet, but it sounded like maps to me. What worried me was my low level of computer literacy, and the prospect of a sedentary life

in front of a screen. But I didn't want to make maps by hand either, and decided this might be a fair compromise.

I am very pleased with my career choice. Cartography is one of the best examples of a blend of art and science, design and technology. It requires both creativity and curiosity and is an absorbing process. I have long used maps in my artwork, and to be able to now make them myself feels as empowering as my new cooperative relationship with computers. My next challenge is to combine my art making with my map making, to hopefully create something interesting.



## Jo Ashley

Being from a GIS background I became increasingly frustrated with the fact that I could analyze data, come to a conclusion and knew the results I wanted to convey for a particular problem or findings but didn't necessarily have the tools I needed to convey what I wanted to 'say' in a final product/map. Learning and implementing cartographic

principles and techniques into my GIS projects finally allowed me to tell the stories I've always wanted to tell. Also, coming from a very artistic and talented family I always felt a little like the 'Black Sheep' of the family not having the same level of 'natural' illustration talent as the rest of my relations. However, the progression of cartography into the realm of computers gave me the outlet I needed to unleash my inner creative side that is inherently part of me.





### Claus Rinner

As a boy, I loved drawing maps of imaginary places, preferably pirate islands with hidden coves and lookout mountains. By drawing a map, you are creating, or recreating, a world of your own; what could be more powerful? As a researcher, I am examining the decision support function of maps. Maps play a key role in planning and decision-

making in government and business operations. Yet, we do not fully understand the processes, by which maps ultimately contribute to informed decisions in different contexts. Making maps of imaginary places, be they drawn on scrap paper, made with board games such as Carcassonne, or created in computer games like Minecraft, are one thing. Maps made to advise government agencies, firms, non-profits, or the general public are another beast. We need to be aware of their potential consequences and ensure that mapmakers continue to be professionally trained. The Canadian Cartographic Association (CCA) incorporates the tremendous Canadian expertise in designing, producing, and interpreting maps to the highest scholarly and professional standards. With open data, open-source geographic information systems, and online mapping tools, maps are becoming commonplace. I hope they will retain their special place in children's hearts and all our imagination.



### Weldon Hiebert

As a child I can remember sitting at my desk at school staring with fascination at the map of the world hanging on the wall in front of the class. It was a classic Mercator projection with the Americas at the centre and Asia split in half (through India) at both ends of the map. Not realizing the distortion principles of cylindrical projections

I was impressed by the size of the pink-colored Canada compared to the rest of the world and how Antarctica abruptly ended at the bottom of the map like the edge of a flat world. In later grades the world map was replaced by one of Canada which became my salvation and probably led to my life as a cartophile. In sixth grade one of our assignments was to write an essay and present it to the class. The subject of my essay was about my pet dog. When the teacher called my name I was horrified to discover I had left my essay at home! Fear and panic set in as I slowly walked to the front of the class staring at that map of Canada. Without thinking I faced the class and, off the top of my head, presented an essay on The Rivers of Canada using the map as a visual aid. I do not recall the facts I used for the presentation, but the teacher was so impressed I was chosen to present my essay at the next school assembly.

Maps are more than just places with names. Maps tell stories about the relationship and history of our surroundings and how we interact with it. Organizations such as the CCA are important in helping us understand this map narrative. Being part of the CCA and associating with others who have a love for maps and listening to their "carto-stories" has been a highlight of my career.

Here are the names from the pictures on page 2. If you were able to recognize everyone then give yourself a pat on the back:

Photo 1: (front row) Charlie Conway, David Forrest, Rosemary Ommer  
(back row) Gary McManus, Clifford Wood, Alberta Auringer Wood

Photo 2: (front row) Gerald McGrath, Ray Boyle, David Douglas  
(back row) Michael Coulson, Henry Castner, Janusz Klawe

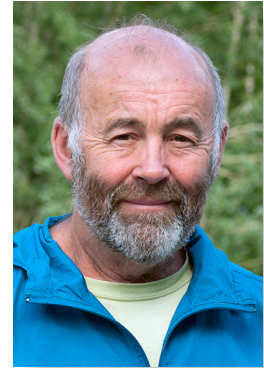
**CCA2015 RECAP****Roger Wheate****University of Northern British Columbia****CCA2015: Annual meeting,  
Charlottetown, PEI, 27-29 May**

The CCA celebrated its 40th anniversary in the birthplace of Canada, following an invitation to come to Charlottetown in conjunction with the 250th anniversary celebrations of Samuel Holland's first map of PEI in 1765. This meeting filled up our nationwide card - we have now danced in every province since our formation in 1975, and first annual meeting in 1976. Now for the territories ....

The pre-conference half-day started with a visit to the UPEI climate change lab and demonstration of their Coastal Impact Visualization Environment (CLIVE) and following bus tour to coastal erosion sites, which we learned are prevalent around the island as a result of the soft underlying sandstone and increasing storm surges associated with global warming. The tour speedily returned to take advantage happy hour at the Hotel on Pownal, which proved to be an outstanding conference facility. We cut short the bevies to visit the PEI provincial archives for an hour and then on to the icebreaker.

The conference proper commenced the next morning, with an official opening by Lieutenant-Governor H. Frank Lewis and his accomplice ex-CTV anchorman Lloyd Robertson; both spoke highly on the importance of maps in today's society. The opening plenary talk by Doug Sobey on Samuel Holland: his work and legacy on Prince Edward Island was extracted from his new book of the same title, now available at <http://samuelholland250.com>. Doug gave an outstanding overview of the value of Holland's historic work, and compared it to current mapping incorporating GIS overlay techniques.

The morning continued with a double session on historical GIS / mapping which took advantage of local participation, incorporating three islander talks: Peter Rukavina described his [whatsmylot.com](http://whatsmylot.com) website, enabling island travelers to establish their location relative to Holland's original lots; Rebecca Bartlett demonstrated a cartographic animation showing PEI's rural general stores over a century, and Jim Thompson



explained Holland's celestial navigation methods in mapping the island. A longer version of Jim's talk as part of the Samuel Holland 250 lecture series can be viewed at: [http://samuelholland250.com/lecture\\_series](http://samuelholland250.com/lecture_series)

The afternoon featured lively sessions on web mapping and teaching cartography/GIS including two student presentations by Yifei Chen (Waterloo) and Heather Smith (COGS); the earlier historical sessions also included a student presentation by Gordon Campbell (COGS).

The evening entertainment was provided in a Pecha Kucha Night with six presenters telling their stories showing 20 slides for 20 seconds each, lubricated by the bar at the back of the room. The success of this medium suggests it will continue for years to come.

The second day (Friday) opened with another outstanding plenary by Martin Gamache (National Geographic) who outlined the research and production behind the Magazine's map division, which is celebrating its centenary this year. The reaction by an audience member that he would immediately get a magazine subscription perfectly sums up the impact of the talk.

Morning sessions contained contributions on cartophilia, Cartographica and the CCA, past present and future, prior to a lunchtime AGM. The afternoon concluded with sessions on GIScience, techniques and geovisualization. The latter involved a formal presentation on CLIVE by student Alex Chen (U.Toronto) and a much appreciated last minute replacement talk by Dan MacDonald, PEI Department of Transportation and Infrastructure Renewal, describing a thematic map project of the island (land use, population density etc..) with posted examples on the walls. He also brought in a floor-covering large scale reproduction of one of the maps developed from Holland's original base map.



The day concluded with a pub evening at PEI Brewing Company, where we enjoyed their fine selection of local ales. The quality was indicated a week after our event, when their Iron Bridge Brown Ale was voted best in Canada. One final event was enjoyed the next morning when many conference goers visited the local renowned Farmers Market before we headed our ways – some back home, others stayed to enjoy the island further. It was an exceptional meeting success strongly spiced by local participation, general anniversary

spirit, excellent service by the Hotel on Pownal, and an interesting program. We were further blessed with the presence of CCA founding and honorary member, Dr. Henry Castner. Thanks go to Chris Storie, Paul Heersink and Claire Gosson for conference organization and to Byron Moldofsky for co-assembling a wonderful program. The contributions of many islanders significantly enhanced the PEI experience, including the staff from the hotel, archives, chamber of commerce and Lt-Governor's office. Special thanks to Peter Rukavina for all his local tips and cartophilic enthusiasm.



Dr. Christopher Storie (centre) with special guests Lloyd Robertson, retired CTV news anchor (left) and PEI Lieutenant Governor The Honourable H. Frank Lewis (right). Photo courtesy of Chris Storie.

**"The map speaks across the barriers of language; it is sometimes claimed as the language of geography."**

The wisdom of Carl Sauer. Photo courtesy of Chris Storie.



Opening remarks from PEI Lieutenant-Governor The Honourable H. Frank Lewis. Photo courtesy of Chris Storie.

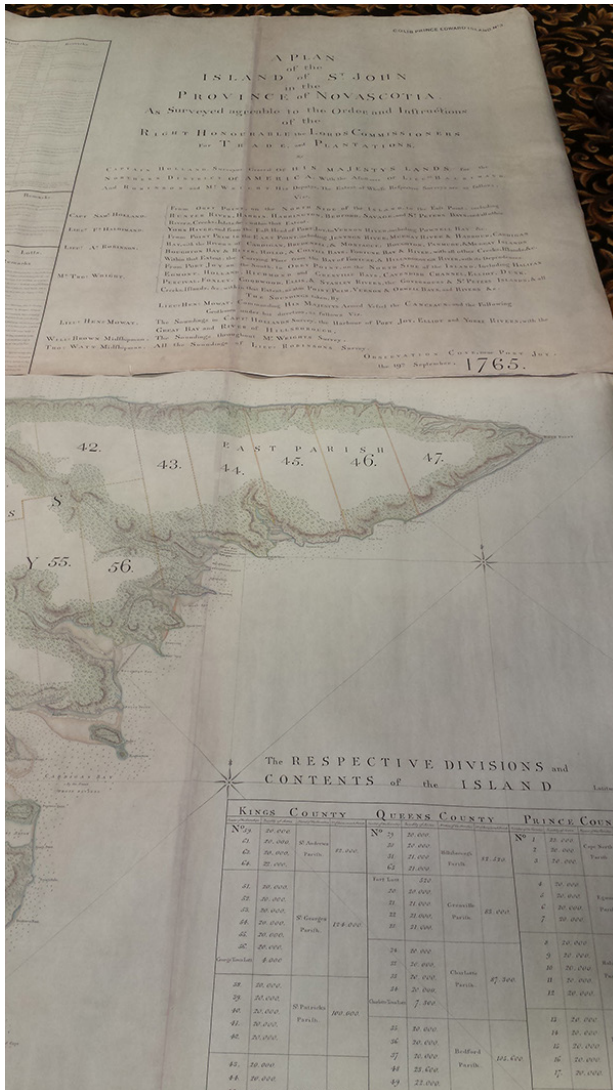


Bus tour of the PEI shoreline showing coastal erosion (inset). Photos courtesy of Chris Storie.





John A. MacDonald and Henry Castner. Photo courtesy of Chris Storie.



A section of Captain Samuel Holland's map of PEI . Photo courtesy of Chris Storie.



Douglas Sobey discussing the life and career of Captain Samuel Holland. Photo courtesy of Chris Storie.



Beer break at the PEI Brewing Company. Photo courtesy of Chris Storie.



## 2016 President's Prize Competition

The CCA President's Prize recognizes excellence in student map design and production and is open to all post-secondary students who have completed and produced a cartographic project in the preceding school year. The 2016 President's Prize Competition will consist of two prizes of \$200, one for entries from college-level or CEGEP students, and one for entries from university level undergraduate students in the following category:

A thematic map on any subject. A thematic map is a map that is meant to communicate a specific single subject matter within a particular geographic area. They are often defined as special purpose maps and can be either quantitative or qualitative in nature. The International Cartographic Association (ICA) defines the thematic map this way: "A map designed to demonstrate particular features or concepts. In conventional use this term excludes topographic maps" (Dent 1999, 8).

### Entry Guidelines:

The cartographic project will consist of a single map. There are no restrictions on size but the project must have been completed and produced during the school year preceding the competition. Each entry must be accompanied by a clear and succinct statement of design objectives that will weigh heavily in the judges' decision. All students enrolled at a Canadian university or college are eligible to submit their maps made in the 2015/16 academic year.

Entries will be judged on the basis of creativity and overall effectiveness in communication as well as excellence in compilation, design, and layout.

Entries for 2016 are invited from all Canadian post-secondary students. All entries should be accompanied by the [official entry form](#) or on the CCA website ([www.cca-acc.org/about-us/awards-prizes-and-scholarships/](http://www.cca-acc.org/about-us/awards-prizes-and-scholarships/)). Deadline for submissions is **May 20, 2016**. Mail submissions to:

CCA President's Prize Competition  
c/o Dr. William Crumplin  
A-250, Arts Building  
Sudbury Campus  
Laurentian University  
935 Ramsey Lake Road  
Sudbury ON P3E 2C6

## Concours pour le Prix du Président 2016

Le Prix du Président de l'ACC reconnaît l'excellence dans la conception et la production cartographiques par des étudiants. Tous les étudiants du niveau postsecondaire qui ont terminé et produit un projet cartographique au cours de l'année scolaire précédente sont admissibles. Le concours pour le Prix du Président 2016 décernera deux prix de 200\$, un pour les soumissions de niveau collégial et un pour celles d'étudiants du premier cycle universitaire, dans la catégorie suivante:

Carte thématique de n'importe quel sujet. Une carte thématique, aussi appelée carte à sujet unique, est une carte qui met l'accent sur un thème spécifique ou unique dans une zone géographique particulière. Elles sont souvent définies comme des cartes à usage spécial et peuvent être soit quantitatives ou qualitatives. L'Association cartographique internationale (ACI) définit une carte thématique comme suit: «Une carte conçue pour démontrer des détails cartographiques ou concepts particuliers. Selon l'usage conventionnel ce terme exclut les cartes topographiques» (Dent 1999, 8).

### Critères d'inscription:

Les projets cartographiques consisteront d'une seule carte. Il n'y a pas de restriction quant à la taille de la carte mais il faut que le projet ait été terminé et produit au cours de l'année scolaire précédant le concours. Chaque soumission devra être accompagnée d'un énoncé court et clair sur les objectifs de la conception de la carte. Cet énoncé sera crucial pour la décision du jury. Tous les étudiants inscrits dans une université ou un collège canadien sont admissibles à présenter leurs cartes faites durant l'année scolaire 2015/16.

Les soumissions seront jugées selon la créativité et la façon dont le message est présenté ainsi que l'excellence de la préparation, la conception et la présentation du projet.

Le Président de l'ACC invite tous les étudiants canadiens de niveau postsecondaire à soumettre leur projet cartographique. Toutes les soumissions doivent être accompagnées d'un [formulaire officiel de participation](#) ou sur le site Web de l'ACC ([www.cca-acc.org/bienvenue/prix-et-bourses/](http://www.cca-acc.org/bienvenue/prix-et-bourses/)). La date limite de soumission est le **20 mai 2016**. Envoyer les soumissions à:

Prix du Président de l'ACC  
a/s Dr. William Crumplin  
A-250, Arts Building  
Sudbury Campus  
Laurentian University  
935 Ramsey Lake Road  
Sudbury ON P3E 2C6

## 2016 Carto-Québec Prize

The CCA is pleased to announce the offering of the Carto-Québec Prize, a special annual competition for the best student-authored cartographic product created in French. The award has been established through a donation from the former Carto-Québec Association to promote and recognize excellence in map design.

The competition is open to all post-secondary students in Canada who have completed and produced a cartographic project in the preceding school year. The Carto-Québec Prize will consist of two awards of \$500, one for entries from college-level or CEGEP students, and one for entries from university-level undergraduate students.

### Entry Guidelines:

Cartographic projects will consist of a map or a map series forming a coherent whole and may be submitted in any finished form (on paper or other medium). Entries submitted in electronic media, whether GIS or internet mapping applications, should not require specialized software for viewing.

There are no restrictions on the size of the map project or subject but the project must have been completed and produced during the school year preceding the competition. All documents must be in French.

Entries will be judged on the basis of creativity and overall effectiveness in communication as well as excellence in compilation, design, and layout.

Entries for 2016 are invited from all Canadian post-secondary students. They should be accompanied by an [official entry form](#) or on the CCA website ([www.cca-acc.org/about-us/awards-prizes-and-scholarships/](http://www.cca-acc.org/about-us/awards-prizes-and-scholarships/)). Deadline for submissions is **May 20, 2016**. Mail submissions to:

Carto-Québec Prize Competition  
c/o Dr. William Crumplin  
A-250, Arts Building  
Sudbury Campus  
Laurentian University  
935 Ramsey Lake Road  
Sudbury ON P3E 2C6

## Concours pour le Prix Carto-Québec 2016

L'ACC a le plaisir d'annoncer le Prix Carto-Québec. Ce concours annuel, ouvert aux étudiants postsecondaires à travers le Canada, sera décerné pour le meilleur produit cartographique créé en français.

Ce prix a été établi grâce à un don de l'ancienne Association Carto-Québec pour promouvoir et reconnaître l'excellence dans la conception des cartes. Le Prix Carto-Québec comprendra deux prix de 500\$, l'un pour les soumissions de niveau collégial et l'autre, pour le niveau du premier cycle universitaire.

### Critères d'inscription:

Les projets cartographiques comprendront une carte ou une série de cartes formant un ensemble cohérent et pourront être soumis en version imprimée ou autre. Les soumissions électroniques, qu'elles comportent des applications SIG ou de l'Internet, ne doivent pas nécessiter de logiciel spécialisé pour les visualiser. Il n'y a aucune restriction concernant la taille ou le sujet de la carte, mais le projet doit avoir été fait au cours de l'année scolaire précédant le concours. Le projet doit être produit en français.

Les soumissions seront jugées selon la créativité et la façon dont le message est présenté, ainsi que l'excellence de la préparation, la conception et la présentation du projet.

Le Président de l'ACC invite tous les étudiants canadiens de niveau postsecondaire à soumettre leur projet cartographique.

Toutes les soumissions doivent être accompagnées d'un [formulaire officiel de participation](#) ou sur le site Web de l'ACC ([www.cca-acc.org/bienvenue/prix-et-bourses/](http://www.cca-acc.org/bienvenue/prix-et-bourses/)). La date limite de soumission est le **20 mai 2016**. Envoyer les soumissions à:

Prix Carto-Québec  
a/s Dr. William Crumplin  
A-250, Arts Building  
Sudbury Campus  
Laurentian University  
935 Ramsey Lake Road  
Sudbury ON P3E 2C6



## Norman Nicholson Scholarship

The purpose of the award is to recognize and encourage exceptional student achievement and ability in any aspect of cartography. The award consists of a certificate and a cheque for \$500.

### Eligibility:

The award shall be made to a student in good standing who is registered full-time in a recognized college or university program. The student must be a Canadian citizen or landed immigrant.

The student should have the following student status: entering the final year of a community college or CEGEP program in cartography, OR entering the final year of an undergraduate honours program with a concentration in cartography, OR a student accepted into or enrolled in a graduate program with a concentration in cartography.

Any student awarded this scholarship is not eligible in any subsequent year. The award is tenable only in the year in which it is granted.

### Application:

A student member who wishes to compete for the award will submit an application consisting of the following:

- An official transcript of all college or university courses completed and grades received.
- Letters of recommendation from two faculty members who are familiar with the student's work and capabilities. Letters of Recommendation are to be sent directly to the Awards Committee.
- A one-page statement from the student regarding plans for continuing education in cartography.

The application will be submitted to the Awards Committee of the Canadian Cartographic Association by March 15th of the year in which the award is to be granted.

Your application and all letters of recommendation should be sent to:

Claire Gosson  
Secretary, Canadian Cartographic Association  
38 Ridgeway Gate  
Ottawa ON K1B 4C3

For more detailed information concerning the Norman Nicholson Scholarship:

<http://cca-acc.org/about-us/awards-prizes-and-scholarships/norman-nicholson-scholarship/>

## Bourse Norman L. Nicholson

*Le but de ce prix est de reconnaître et d'encourager les étudiants qui ont fourni un accomplissement et une compétence exceptionnels dans un aspect de la cartographie. Ce prix consiste en un certificat ainsi que d'une bourse d'études de 500\$.*

### Éligibilité:

*Ce prix sera remis à un étudiant en règle inscrit à temps plein dans un programme collégial ou universitaire reconnu. Cet étudiant devra être citoyen canadien ou résident permanent.*

*Cet étudiant devra être dans l'une des situations suivantes: entrer dans la dernière année d'un programme en cartographie d'un collège communautaire ou CEGEP, OU entrer dans la dernière année d'un programme universitaire de premier cycle spécialisé avec concentration en cartographie, OU un étudiant qui a été accepté ou qui est inscrit dans un programme d'études supérieures avec concentration en cartographie.*

*Tout étudiant qui recevra cette bourse d'études ne pourra être éligible pour une année ultérieure. Ce prix n'est valide que pour l'année de son attribution.*

### Poser sa candidature:

*Un étudiant membre de l'Association qui désire concourir pour cette bourse d'études doit soumettre sa candidature comprenant les éléments suivants:*

- *Un relevé de notes officiel de tous les cours collégiaux ou universitaires complétés dont les notes ont été reçues.*
- *Une lettre de recommandation de deux membres de la faculté qui sont familiers avec le travail et les capacités de l'étudiant. Les deux lettres de recommandations doivent être directement envoyées au Comité du Prix Norman L. Nicholson.*
- *Un document d'une page où l'étudiant exposera ses plans futurs concernant la poursuite de son éducation en cartographie.*

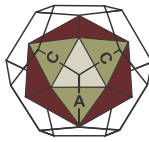
*La demande sera soumise au Comité du Prix Norman L. Nicholson de l'Association canadienne de cartographie au plus tard le 15 mars de l'année de l'attribution du prix.*

*Votre candidature, ainsi que les lettres de recommandation, doivent être envoyées à l'adresse suivante:*

Claire Gosson  
Secrétariat, Association canadienne de cartographie  
38 Ridgeway Gate  
Ottawa ON K1B 4C3

*Pour de plus amples informations concernant la bourse Norman L. Nicholson veuillez consulter la page :*

<http://cca-acc.org/bienvenue/prix-et-bourses/acte-dattribution-du-prix-norman-l-nicholson/>



All fees are in Canadian dollars (no GST). Please note the additional mailing costs for members outside of Canada.

Tous les frais indiqués sont en dollars canadien (TPS non incluse). Veuillez noter qu'un coût postal supplémentaire s'applique pour les membres hors-Canada.

Donations may be made to the Nicholson Scholarship fund.

Nous acceptons les dons pour le fond de la bourse Norman Nicholson.

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**S.V.P. indiquez vos groupes d'intérêt:**

☐ Design and Geovisualization / Cartographie analytique et conception

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☐ History of Cartography / Histoire de la cartographie

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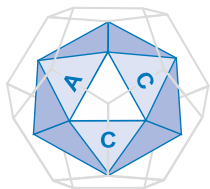
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c/o Paul Heersink, Treasurer  
39 Wales Avenue  
Markham, ON L3P 2C4  
Fax: 416-446-1639  
treasurer@cca-acc.org





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TBA

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