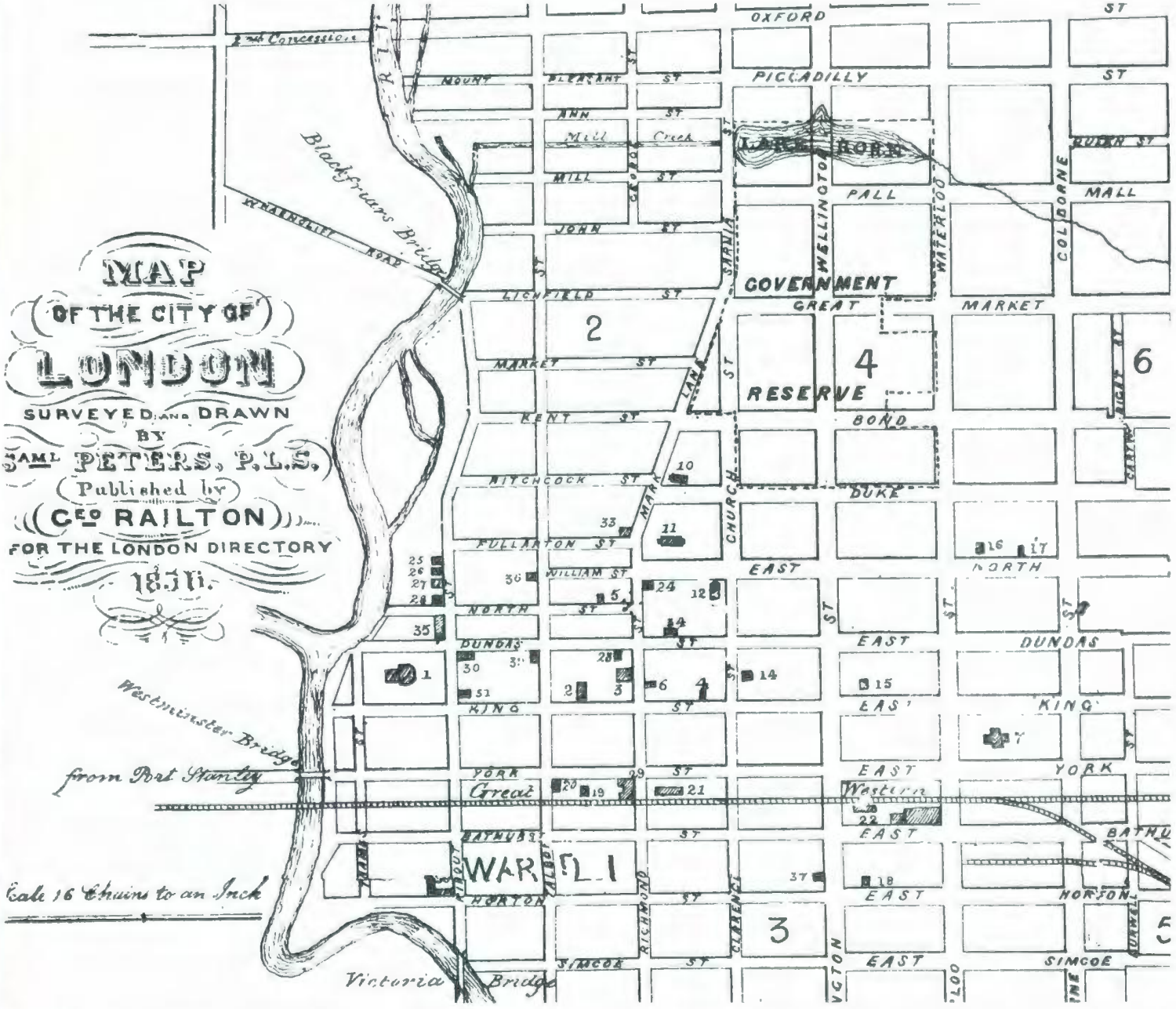
ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

ASSOCIATION DES CARTOTHEQUES et ARCHIVES CARTOGRAPHIQUES
du CANADA



NUMBER 100/FALL 1997 NUMERO 100/ AUTOMNE 1997

ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES/
ASSOCIATION DES CARTOTHEQUES ET ARCHIVES CARTOGRAPHIQUES DU CANADA

MEMBERSHIP in the Association of Canadian Map Libraries and Archives is open to both individuals and institutions having an interest in maps and the aims and objectives of the Association. Membership dues are for the calendar year and are as follows:

Full (Canadian map field)	$35.00
Associate (anyone interested)	$35.00
Institutional	$50.00
Student	$20.00

Members receive three times a year the *ACMLA Bulletin*, the official journal of the Association.

Officers of the Association for 1997/98 are:

Peuvent devenir MEMBRES de l'Association des cartothèques et archives cartographiques du Canada tout individu et toute institutions qui s'intéressent aux cartes ainsi qu'aux objectifs del'Association. La cotisation annuelle est la suivante:

Membres actifs (cartothécaires canadiens à plein temps)	$35.00
Membres associés (tout les intéressées)	$35.00
Institutions	$50.00
Étudiant	$20.00

Le ***Bulletin de l'ACACC*** sera envoye aux membres trois fois par annee.

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Views expressed in the *Bulletin* are those of the contributors and do not necessarily reflect the views of the Association.

The Association of Canadian Map Libraries and Archives gratefully acknowledges the financial support given by the Social Sciences and Humanities Research Council of Canada.

Les opinions exprimées dans le *Bulletin* sont celles des collaborateurs et ne correspondent pas nécessairement à celles de l'Association.

L'Association des cartothèques et archives cartographiques du Canada remercie le Conseil de recherches en sciences humaines du Canada pour son apport financier.

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CONTENTS/MATIERES

ON THE COVER
Map of the City of London
Surveyed and Drawn
by
Samuel Peters, P.L.S.
Published by
CEO RAILTON
for The London Directory, 1856

London, Ontario was the site of the Joint Conference & Annual Meeting of the Canadian Cartographic Association & ACMLA (May 27-30, 1998)

Message de la présidente

Conférence annuelle: Planifiez dès maintenant votre participation à la conférence annuelle mixte de l'ACACC et de l'Association canadienne de cartographie à London, Ontario, du 27 au 30 mai 1998. Surveillez le matériel de la conférence dans votre messagerie électronique et allez visiter le site internet: http://www.geog.uwo.ca/1998 map conference/ overview.html

Nouveau membre: Nous souhaitons la bienvenue à M. Roger Wheate de l'University of Northern British Columbia qui s'est joint à l'Association en tant que membre individuel à l'automne dernier.

Annuaire: Melissa Leitch, notre rédactrice des nouvelles régionales, a pris en charge le nouveau projet d'élaboration de la septième édition de notre Annuaire des collections de cartes au Canada. Cette nouvelle édition incluera la plupart des informations de l'édition précédente en plus des adresses de courrier électronique, des sites internet et des stations de travail. Veuillez contacter Melissa à l'adresse mentionnée en page couverture du Bulletin de l'Association si vous n'avez pas déjà reçu une copie du formulaire de sondage. La date limite était le 10 avril!

Archives Nationales/Bibliothèque Nationale: Le 17 octobre 1997, avait lieu une rencontre informelle entre les personnes suivantes: Grace Welch et Alberta Woods de l'Association (ACACC), Jacques Grimard, Louis Cardinal et Brian Carey des Archives Nationales (AN) ainsi que Ingrid Parent, John Stegenga et David Balatti de la Bibliothèque Nationale (BN). Le but de cet échange était de discuter de la collection des cartes, de son accessibilité et aussi de comprendre les différents problèmes rencontrés. Les activités de collection courantes ont tout d'abord été revisées. Il y a eu ensuite une présentation au sujet du processus de dépôt légal. On nous a également annoncé que les dossiers cartographiques ont commencés à être déversés dans le catalogue "Union" AMICUS. Par la suite, il y a eu une discussion sur le catalogage avant publication (CIP). Nous avons terminé la rencontre en convenant des prochaines étapes à suivre:

1) AN/BN/ACACC devront s'efforcer de garder contact entre eux sur une base régulière, par exemple à chaque fois que l'éxécutif de l'ACACC peut se réunir à Ottawa;
2) l'ACACC prendra en charge la révision de l'étendue des collections de cartes à travers ses membres. Cette revue permettra aux AN de déterminer l'étendue et la portée de leurs activités de collection de cartes, et deviendra la base pour l'exploration de nouveaux modèles de collecte exhaustive;
3) une liste d'éditeurs/producteurs de cartes sera fournie par les AN;
4) l'ACACC distribuera un message à travers CARTA à propos du nouveau produit sur CD-ROM et du dévéloppement du catalogue "Union" et encouragera ses membres à faire une utilisation poussée de ces deux outils bibliographiques lorsqu'ils seront disponibles. David Ballati fournira la documentation appropriée à Alberta Woods aux fins de publication;
5) l'ACACC analysera la logistique de fourniture des données CIP, ou du catalogage avant publication pour les cartes;
6) étant donné que la conférence annuelle conjointe de l'ACACC et de l'Association canadienne de cartographie est un tremplin pour la promotion, Grace Welch en profitera pour rencontrer Cheryl Woods, secrétaire convocateur de la conférence, et discuter des possibilités.

Tous les participants se sont entendus pour dire que cette réunion a été des plus informatives et des plus pratiques. Des détails additionnels ainsi que le procès verbal de la réunion sont disponibles sur demande.

Ressources naturelles Canada: En ce moment, il semble que l'Association des bibliothèques de recherche du Canada (ABRC) a accepté l'offre officielle de RNCan qui nous accorde un escompte éducationnel de 50% sur l'achat de chaque carte topographique numérique. Ceci permettrait une utilisation non-restrictive des données à l'intérieur d'une institution d'enseignement et de recherche (conditions assujeties aux termes de la licence). Il est à souhaiter qu'après la période d'évaluation d'un an, les bibliothèques participantes pourront partager les données parmi toutes les bibliothèques membres de l'ABRC. Un certain nombre de cartes échantillons vont être également fourni pendant cette entente. L'information sur ce sujet nous ait parvenu de Michael Ridley. Les membres de l'opération géomatique dans les bibliothèques canadiennes (OGBC) sont également à étudier d'autres alternatives concernant l'acquisition et l'utilisation des cartes topographiques numériques.

Association Cartographique Internationale (ACI): La 19ème conférence et la 11ème assemblée générale de l'Association Cartographique International (ACI) se tiendront à Ottawa du 14 au 21 août 1999. J'ai été invité à prendre part à l'équipe de revision des communications. Pour m'entourer dans ce projet, j'ai réuni un ensemble de personnes à travers les membres de l'ACACC et l'ACC pour la première revision des manuscrits dans les thèmes suivants: les femmes et la cartographie - Betty Kidd, Cheryl Woods, Carolyn Weiss et Eva Siekierska; les technologies nouvelles en imagerie numérique et en impression de cartes - James Boxall, Michel Fournier et Roger Wheate; l'archivage des produits cartographiques - David Brown, Louis Cardinal et Grace Welch; les bases de données cartographiques: sécurité, droits d'auteur et déontologie -

(Continued on Page 52)

President's Message

Alberta Auringer Wood

Annual Conference

Make your plans now to attend the joint annual meeting of ACMLA and the Canadian Cartographic Association in London, Ont., May 27-30, 1998. Look for conference materials in your mail box soon and view the web pages at

http://www.geo.uwo.ca/1998 map conference/overview.html

New Member

A new individual member, Roger Wheate, from the University of Northern British Columbia, joined ACMLA late last fall. Welcome, Roger!

Directory

Melissa Leitch, our Regional News Editor, has undertaken a new project, compilation of a new edition (seventh) of our ***Directory of Map Collections in Canada***. It will include much of the same information that was in the previous edition, as well as email addresses, web sites and workstations. Contact Melissa at the address on the front pages of the *Bulletin*, if you have not received a copy of the survey form. Deadline is April 10th!

National Archives/National Library

On October 17, 1997, Grace Welch and I met with Jacques Grimard, Louis Cardinal and Brian Carey of the National Archives (NA) and Ingrid Parent, John Stegenga and David Balatti of the National Library (NL) to have an informal information exchange concerning the collection of and access to maps and to provide an opportunity to understand the various issues involved. Current map collecting activities were reviewed. There was a presentation on the legal deposit process. It was announced that cartographic records have begun to be loaded into the AMICUS Union Catalogue.

A discussion of CIP followed. The next steps that were agreed to were 1) NA/NL/ACMLA should endeavor to keep in touch on a regular basis, for example whenever the ACMLA Executive can convene in Ottawa. 2) ACMLA will undertake to review the extent of map collecting among its membership. The review will enable the NA to determine how comprehensive their collecting activity is, and will become the basis for exploring new models of comprehensive collecting. 3) A list of map publishers/producers will be provided by NA. 4) ACMLA will distribute a message about the upcoming CD-ROM and the Union Catalogue developments via their listserv CARTA, encouraging their membership to make full use of these two bibliographic tools when available. David Balatti will provide suitable wording for Alberta Wood to post. 5) ACMLA will look more at the logistics of providing CIP data, or "cataloguing-at-publication" information, for maps. And 6) As the joint meeting of ACMLA and the Canadian Cartographic Association is an opportunity for promotion, Grace Welch will speak to Cheryl Woods, Convener of the meeting, about the possibilities. All participants agreed that this meeting had been very informative and useful. Additional details from the minutes are available upon request.

Natural Resources Canada

At this point in time, it appears that the Canadian Association of Research Libraries (CARL) has accepted the offer by NRCan officials of a 50% educational discount for each electronic topographic map sheet. This would permit unrestricted use of the data within an institution (subject to terms of the license). A review after a year, may result in allowing participating libraries to share data among CARL libraries. A number of sample data sheets will be provided as part of the agreement, as well. This information was provided by Michael Ridley. Members of the GIS in Canadian Libraries Initiative are also looking at other alternatives to this solution.

International Cartographic Association (ICA)

The 19th International Cartographic Association (ICA) Conference and the 11th General Assembly meeting of the ICA will convene in Ottawa, August 14-21, 1999. I have been asked to participate as a member of the papers final review team. As part of this process, I have assembled groups of initial reviewers from the membership of ACMLA and CCA for papers in these themes: Women in Cartography - Betty Kidd, Cheryl Woods, Carolyn Weiss, and Eva Siekierska; New Technologies in Digital Imaging and Cartographic Printing - James Boxall, Michel Fournier, and Roger Wheate; Archiving Cartographic Products - David Brown, Louis Cardinal, and Grace Welch; Security, Copyright and Ethics in Cartographic Database Management - David Brown, Carol Marley, Richard Pinnell, and Pierre Roy. Their willingness to help with this effort is much appreciated. In addition, other ACMLA members in Ottawa are actively involved in

exhibits, program and other committees for the meeting. As ACMLA will be holding its annual conference as part of this meeting, it is useful to have a say in what will take place. Grace Welch is our liaison to the organizing committee for this. There will be a meeting in Ottawa on June 9th to discuss status of planning.

Retired Members

Cathy Moulder is working on wording such that the Bylaw definition of full membership would include retirees. This will go as a notice of motion with the nominations material and will be brought to the annual general meeting.

National Atlas

The ACMLA has been approached about having a representative on a committee that will look at a new edition of the Canadian National Atlas.

Archivist

ACMLA does have an archivist now. Jeffrey Murray has agreed to do it. He was on vacation when I was in Ottawa in October, but encourages those who have materials from past committee or officer work, to send them to him.

Environmental Systems Research Institute (ESRI)

The ESRI letter of Agreement has been signed and sealed and sent to CARL.

Copyright Guide

I responded to a questionnaire regarding the copyright guide, asking that information about maps be included.

Membership Lists

There has been discussion about having the membership lists included in our web pages, as well as being printed in the *Bulletin*. This will be brought to the annual general meeting for discussion. In the meantime, any comments will be appreciated.

Congress of Cartographic Information Specialists Associations (CCISA)

A telephone conference call was held today with the support of the Geography and Map Division of the Library of Congress of myself, Alice Hudson, Ralph Ehrenberg, Christopher Baruth, and Patrick McGlamery. Alice has agreed to serve as Convener. She will contact the groups involved regarding interest in reviving activities.

SSHRC

There has been no response to the letter that Chuck Humphrey sent to SSHRC on behalf of CAPDU and ACMLA about the need for a national data archive. Follow-up on this has begun. The new SSHRC President spoke at Memorial on February 17th, but had no knowledge of the efforts. In other news, SSHRC has decided to extend the term of the current travel grants to scholarly associations for one year, and we will receive the amount of $2,225 for the fiscal year 1998-1999. The "administration" portion of the grant was phased out earlier.

Correspondence

These are some of the letters or emails received or sent.

October 7, 1997 - From Tony O'Connor - CAFICA information for ICA 1999 meeting.

October 12 - The Archivists Association of Quebec - 30th Anniversary meeting.

October 13 - Western Association of Map Libraries - joint 2000 Conference.

October 16 - From Shirley Harmer - re travel and workshop.

November 4 - Shirley Harmer - re travel and workshop.

November 7 - From SSHRC - extension of travel grant for one year.

December 18 - From SSHRC - new Research Development Initiatives.

December 15 - David Woodward - contribution to the History of Cartography Project.

January 16, 1998 - From Debora L. Treu, Univ. of Wisconsin Found. - thank you for donation.

January 19 - From Earls Price - CMO Map Depositories.

January 26 - Canada Post Corporation - in support of a stamp for the 1999 ICA conference.

January 26 - From Linda Zellmer - Joint 2000 Conference with WAML.

January 29 - From Michael Ridley - NRCan-CARL National Topographic Data Base proposal.

February 17 - From Canada Post Corporation - will consider suggestion for 1999 ICA conference.

Comments on any aspect of the association will be appreciated. See you in May!

Alberta Auringer Wood
February 25, 1998

ICA 97, 18th ICA/ International Cartographic Conference, One Woman's Diary

by Alberta Auringer Wood
Memorial University of Newfoundland Libraries
St. John's, Newfoundland, Canada

Sunday, June 22: The International Cartographic Association (ICA) meeting began for most people with registration in the morning at the Scandic Continental Hotel. In the afternoon, Cliff and I went on a tour of Stockholm that began at the Opera House with an hour and a half bus tour. We went by the Vasa Museum, home to a ship built from 1624-1628 that sank ten minutes into her maiden voyage and was preserved because there were no ship worms in the less saline water in the archipelago; Scansen, an open air museum of buildings; an area of embassies; shopping areas of Stüre Plan and Kongsgaten; the City Hall, built in 1923 or 1927 with a decoration of three golden crowns on top representing the union of Sweden, Norway and Denmark; locks that separate the lake from the Baltic Sea; some of the 24,000 islands in the Stockholm Archipelago; and a Cunard ship, the Royal Viking Sun, of which we have a picture taken in St. John's Harbor! We learned that Stockholm was established in 1252 and has a population of 700,000 in the inner area and 1,500,000 in the metropolitan area, with Sweden having 9,000,000 people. The bus trip was followed by a boat tour of an hour, seeing the city from a slightly different angle. In the evening was an opening reception at the Vasa Museum with another tour through some of the same areas on the way. The ship was very, very tall; no wonder it tipped over, especially with extra heavy guns on board, making her top heavy. It is marvellously restored.

Monday, June 23: The conference officially opened at a ceremony in the Stockholm International Fair from 10:00 am to just past noon. The fairgrounds are about a six minute train ride from the Central Station across from the Scandic Continental Hotel where we stayed. Just before the opening, I attended a brief meeting of the Barbara Bartz Petchenik Children's Map Competition Committee where we agreed to operating conditions and when to meet next.

The Opening Ceremony began with entertainment from a folk music group that used Swedish keyed fiddles held like guitars. Dr.Birgitta Ericsson, Vice President of the Swedish Cartographic Society introduced Sture Norberg, President of the society, who gave the welcome. He noted that there were 1,040 delegates, 120 accompanying persons, and 300 Swedish Map days attendees. The Swedish Cartographic Society has 1,900 members and was established in 1908. He announced that Lars Ottoson was to get the Olav Magnus medal for ICA. The Minister of Interior, Jögen Andersson, spoke on Swedish activities in surveying and mapping. Michael Wood, President of the ICA, gave welcomes on its behalf and noted the recharging of batteries effect of such conferences. Lars Rådh, Vice Mayor of Stockholm, also gave a welcome noting that the first map of Stockholm was done in 1620. He mentioned several other maps, as well as that it is bidding for the 2004 Olympics, and is supposed to have relatively clean water and air. They can fish in the harbor and drink water from it! Or, so he said! We heard later that this might not be a good idea. Dr. Carl Mannerfelt, initiator of the ICA, spoke about the events that led up to its formation. He referred to himself as a "cartographic fossil"!

A keynote address on "Maps and Mapping in the Information Age" was given by D. R. Fraser Taylor, Immediate Past President of ICA. This was followed by several brief speeches to open the exhibits. It was noted that the technical exhibit was the largest ever in Sweden with 70 companies from 50 countries. The international map exhibition included 900 different products from 55 countries organized under six theses: topography, hydrography. Geology, cities and towns, atlases and globes, and others. There was also a Swedish cartography exhibit of maps produced from the 17th century up to 1950. After this, we lunched in the exhibit hall, toured the exhibits, spent some time at the ICA 1999 Canada booth, and went to sessions on national and regional atlases, including a virtual one, for the rest of the afternoon. There was supposed to be a meeting of the Commission on the History of Cartography, but no one appeared to chair it. In the evening there was a reception in the exhibits area sponsored by the exhibitors.

Tuesday, June 24: We arrived at the fairgrounds about 8:45 am. When the exhibits opened, I looked at the maps, especially the ones done for the children's competition. Went to a paper by Jacqueline Anderson of

Canada on Quebec school maps skills in which she noted that the students had difficulty in dealing with latitude and longitude. They did best in grade seven and then dropped down again. At 10:00 am, I participated in a meeting of the ICA Awards Committee chaired by Joel Morrison. Olof Hedbom and Arpad Papp-Vary are also on that committee. From 11:00 am to noon, I attended a session on the history of cartography with papers on 16th -17th Century Dutch maps and atlases in the Russian National Library, the Dépôt de Fortifications des Colonies Collection of maps of the Indian Ocean (this collection also contains many maps of North America, including Newfoundland), and Twentieth Century Chinese studies of the history of cartography. We spent some time at the Canadian booth. After lunch of a hot dog from a vendor in front of the fair grounds, we took the train back to the city where we went on a tour of the Vasa Museum. We got additional information about the ship and saw more of it and the exhibits. In the evening, we went out for dinner to a restaurant called Tre Kronor in the Gamla Stan with two British map librarians, Anne Taylor and David Watt.

Wednesday, June 25: First thing in the morning, Cliff and I went for a tour of the Royal Library. We met Gøran Bäärnhielm, the map curator, and another staff member, Carin Lying, who took us on a tour of the exhibit area and the map and atlas stack area. The building was constructed in 1867, but capacity to 2050 is ensure by underground stack areas that were added some years ago. The reading room is of cast iron construction and has three stories of stacks around it with a balcony and decorative painting. In the underground storage area for maps and atlases, there are specially built compact, moveable map cases and cabinets in an area of 13 x 70 meters. The temperature is kept at 17° C., but Gøran would like to have it at 16° C.! There are at least three catalogues for their collections. One from before 1955, on sheets in boxes, three piles to a box and handwritten, another on cards from 1956-1986 and since 1987, they have a computerized one. They do the national bibliography.

For lunch, we went to Gamla Stan, and then to the fairgrounds. The counting of the votes for the Petchenik Competition had begun by that time. In addition to this activity, there were numerous sessions covering topics such as tactile mapping, cognition studies, and dynamic geographic processes. In the evening were "home visits", and we were invited along with several colleagues from the USA, Iceland, UK, Japan, Germany, and Sweden, to the home of Olof Hedbom and his sister, Leonore Forsgren. We ventured to and from by bus, using the pass that came with the conference registration. We met Ulla Ehrenvards who was the map curator at the Royal Library prior to Gøran. We had a lovely evening!

Thursday, June 26: The next morning, the cold that had been threatening for several days had blossomed, and I had nearly lost my voice. We were late going to the fairgrounds, as a result. I missed sessions that I wanted to hear on a digital library for cartographic data and world mapping today, as well as a meeting. In the early afternoon, the Petchenik Children's Map Competition Committee met to count the votes submitted by delegates and make final selections of the winners. After that there were sessions on maps on the Internet, but I was ill and went back to the hotel where I lay down until time to go to the City Hall for a buffet reception. The City Hall was a beautiful building and used for Nobel Prize functions. One room had walls and ceilings of ceramic tile mosaics, much of it being in gold. The buffet was of very interesting sandwiches and desserts.

Friday, June 27: The first part of the morning was spent in packing. Then we went to the fairgrounds by train. We mailed maps and books acquired at the conference. We looked around the exhibit before it closed at noon and helped take the Canadian booth apart. After lunch in a nearby cafeteria with some members of the Canadian delegation - David Carney, Tony O'Connor, Claire Gosson, and Lloyd Bowler - and Chris Board of the UK, we went to the closing ceremony. There was a brass ensemble for entertainment. Sture Norberg presided with Michael Wood, ICA President, giving a summary of activities of the conference. Olof Hedbom presented the awards for the best maps in the International Map Exhibition. In Topographic Maps, it was Catalonia (*Parc Nacional d'Aigüestortes i Estany de Sant Maurici*), in Nautical Charts, New Zealand (*Undersea New Zealand*), for Geological, it was France (*Carte géologique de la France*), in Atlases, it was Switzerland (*Atlas mondial svizzero*), for Town Plans, it was Finland (*Opaskartta-Espoo*), and for Other Maps and Publications, it was Catalonia (*Mapa d'usos del sòl de Catalunya*) and the United States (*The Brilliant Earth*). Marta Syren announced the winners of the Barbara Bartz Petchenik Children's Map competition. The winners were from China, Croatia, Mexico, Poland, Ukraine, South Africa, Australia, and Greece and ranged in age from 10 to 15 years.

Our participation was to accept the ICA flag on behalf of Canada, along with Dave Carney and Tony O'Connor, from our Swedish colleagues and present them with small Canadian gifts. There was a terrific video of Canada and Ottawa, and Dave Carney gave a brief presentation as Chair and Conference Director of the

Canadian Organizing Committee to invite everyone to Ottawa in August 1999. After a musical farewell, we hurried back to the hotel by train and foot. We collected small bags and went to the Central Bus Station across the street from the train station to get the bus to begin the Post-Conference Tour to Finland and Russia. We went by bus to the Silja Line dock where we boarded the Silja Symphony along with numerous other people. The ship was huge! It had two levels for cars and trucks plus eight other decks. We had a cabin on deck nine. The ship left at 6 p.m. which gave us plenty of time to look at the islands of the Stockholm Archipelago, seeing such things as an old Customs station. I attended a meeting of the Awards Committee for an hour in the conference centre on the ship. There was a buffet dinner for both tour groups, one just going to Helsinki and ours going to Russia, as well having a brief tour of Helsinki.

Saturday, June 28: After a buffet breakfast, we arrived in Helsinki at about 8:30 am. There was a time change of one hour. We met our tour-guides from Sweden, Fredrik Zetterqvist from the Royal Institute of Technology in Stockholm and Lennart Bäckström of Swedesurvey in Gavle as we boarded the bus. There were delegates from the USA, Canada, UK, Denmark, Japan, Thailand, South Africa, Switzerland, Hungary, Australia, Colombia, and Malaysia on the tour. We had nearly a three and a half hour bus tour of Helsinki beginning at the terminal that was built for the 1952 Olympic games.

We drove around the downtown seeing the harbor market area; an esplanade with statues; landmark buildings such as their National Archives where the oldest document dates for 1313; Senate Square dating from 1808 with the Cathedral built in 1852 and undergoing repair, the University, the Council of State and municipal offices surrounding it, also including their oldest stone building dating from 1757 before driving through an area of expensive houses and embassies, including those of the USA and the UK. Unusual for our eyes, was a seaside park with a carpet washing area. We were told that the population of Finland is 5,000,000 with 500,000 living in Helsinki which was founded in 1550 by Gustave Vasa of Sweden. They have 72,000 coastal islands. Saw a new cruise ship, Enchantment of the Seas, at the Kvaerner Ship Yard. Also saw the Olympic Stadium with a statue of Parvo Nurmi, holder of nine Olympic medals; the monument to Sibelius; and a zoological museum.

We left the city about noon and stopped at Loviisa (founded in 1745), about 310 km from St. Petersburg, for lunch at the Degerby Gille where we had a fermented drink made from rye flour plus water along with a salad, fried whitefish, boiled potatoes and a few other vegetables.

We arrived at the Finnish border about 4:30 getting to the Russian check-point about ten minutes later. It took over an hour to get through this border check. Much of it was spent waiting on the bus. The border guards were not particularly friendly and used few words, however, it was relatively uneventful. Much of the area we'd gone through from Loviisa was very rural and sparsely settled. At one point after getting into Russia we saw a woman washing clothing in a river and under a large bridge over another river, there were people swimming or wading along the edge. The first Russian town that we encountered was Vyborg which we were told had been founded by Swedes. There were two Viking ships (real or replicas not known) near where we stopped at a bus station in deplorable condition. As we left, we passed a train station that looked in better shape. We arrived at the Hotel Pribaltiyskaya in St. Petersburg about 10:00 p.m. about three hours behind schedule. After turning in our passports and getting our room assignments, we met the rest of the group and had dinner in the Leningrad Room about 10:45 p.m. We were entertained by a jazz band while we ate our salads, bread, ham, a dish of creamed cod with whipped potatoes and mushrooms, and little cream puffs for dessert. It was well past midnight when we got to bed. Though dark, the room had the necessary amenities.

Sunday, June 29: After breakfast of little pancakes and sour cream among other goodies, there was sightseeing with a guide named Galina Ibragimova which included a tour of the city of St. Petersburg stopping to see old red lighthouses across from the Peter and Paul Fortress where curio sellers descended upon us and walking through the Hermitage Museum at a rapid pace for an hour and a half. What a marvellous collection of art works. On our way out, there was a 1707 Russian world map and a "Karta Siviri" of 1696. It was far too little time for such an immense city and important collection.

We returned to the hotel for lunch of salad of cold fish with tomatoes, cucumbers and lettuce followed by chicken noodle soup, breaded veal, fried potatoes, and orange slices for dessert. Then we went to the offices of Aerogeodesia where we found another lunch awaiting us! The director, Viktor Mikerov, and a colleague, spoke to us about the maps that they produced, some of which were on display. The area that they cover is 1.5 million Km^2 and they produce 800,000 maps per year. There are 120 different kinds of maps of scales ranging from 1:10 000 to 1:1 000 000. They use a satellite positioning

system. Eight years ago everything that they did was secret. They are currently working on the border between Estonia and Russia. They do a variety of tourist maps, including ones for mushroom gatherers. They've done a digital map of St. Petersburg, including showing buildings. Another map is one of Karelia, near Finland, in 36 sheets at a scale of 1:25 000. There was liberal toasting with a variety of vodkas, including one flavored with cranberries, and an apple drink. En route to the National Library of Russia, I saw a car with a New Jersey license plate on the front. We had a tour of a temporary exhibit, just for us, I think, of eighteenth and nineteenth century maps of Russia and St. Petersburg. We were met by the woman who gave a paper during the history of cartography session, Ludmilla Kildushevskaya, but the tour was given by someone else with translations by our guide, Galina. There was a catalogue for the exhibit which I purchased.

Next we drove by a street that was 122 meters long with buildings 22 meters high and wide. We also drove by the new National Library building under construction which looked nice, but small. After a brief stop at the Pulkovskaya Hotel, we departed for Novgorod about 6 p.m. via the Moscow highway to begin with. We arrived there about 9:00 p.m after bumpy roads and interesting sights, such as a man raking hay by hand, log houses, women wearing babushkas, hay stacks, traffic circles and some decorative houses. We stayed in a not fully completed Hotel Intourist. We had dinner about 9:30 p.m. of potato salad and bread followed by a hot dish of fish, potatoes and onions with a sweet muffin type of pastry for dessert. The hotel was next to an abandoned casino and a wide river, we discovered while taking an after dinner walk.

Monday, June 30: After a breakfast of bread, rolls, butter, apricot jam and a fried curd pancake, we went on a tour of Novgorod. It is the oldest city in Russia we were told by our new guide, Irena, and was first mentioned in 859. The Volkov River runs through it going from the Baltic to the Black Sea. It was most important in the twelfth to fifteenth centuries. In the seventeenth century it was occupied by Sweden and during World War II by Germany. The population of the city is 200,000 while the metropolitan area is 700,000.

We visited the Kremlin, one of about ten such fortresses in Russia, with this one being the oldest, probably originating in about 900. It has 1 km 400 m of walls and nine towers. Each tower along the Kremlin wall had a church once, but only St. Sophia's (built in 1050) is a functional church now with other remaining buildings serving other purposes including that of the site of international chess matches. One of its doors, a very large one, was said to have come from Sigtuna.

We walked to the commercial side of Novgorod via a bridge over the river. There we saw several more churches of the seven on that side of the river with 43 altogether in Novgorod and over 200 in the whole area. There were three functional ones in the city. Next we went to visit the North-Western International Training Center of Cadastral and Land Information Systems, committee for Land Resources and Land Information Systems of the Russian Federation. The building was not in very good shape with the front door off its hinges and leaning against the wall. Our Swedish guides, Lennart and Frederick, have worked with this group over the past three years. We heard presentations by several people involved with the project. Registration of real estate is a major concern. They are training people from all over Russia. A group photo was taken on the steps as we were leaving. After a lunch at the hotel, we visited the Aerogeodesia office. This building was in a little better shape with painted stairs though the spacing was uneven. They do aerial photography and make maps from 1:50 000 to 1:1 000 000. The equipment was made jointly by them and the Swiss. There was a demonstration of a digital raster map using MapInfo.

After indulging in a liberal spread of cookies, sandwiches, pop, beer, coffee and vodka and acquiring a few maps, we departed for the main administrative building of the province or state. There we were spoken to by the Governor, Mikhail Prusak, with Nikolai R. doing the translations. The young (34 years old) governor told us that they have the same problems as other parts of Russia, but also have benefits such as contracts with foreign countries and investments, including two German factories, one Finnish and one Austrian, the English Cadbury factory in one district, and a French company. They have good relations with Sweden and Swedesurvey for land and forest cadastre. Their capital growth was 121% in 1995-96 while that for Moscow was 79%, mostly thanks to factories and production, including vodka and sausages. The Swiss are building a factory, too.

After this session, I inspected the toilet facilities which were deplorable, though the rest of the building was in better condition than others we had seen previously. We were given some shopping time and then there was a "gala dinner" in the Restaurant Detinets in the Kremlin. The restaurant was in one of the towers and may have been a church at one point as it had a fireplace and on the balcony on the opposite side of the room there was

a pulpit attached. It was an elegant affair using the lovely lacquered wood of the country. We had a salad of grated beets, carrots and pickles with a pointed mound of something (salmon?), red caviar on bread diamonds, rye and white bread, platters of tomatoes, cucumbers and radishes, and smoked salmon with butter. There was a very nice hot course of a crock of chicken, ham, mushrooms and a cream sauce followed by another one of beef stroganov. Dessert was vanilla ice cream with chocolate sprinkles. There were vodka and champagne for toasting before and after, including for one couples' 45th wedding anniversary. In addition, we had mineral water and a nice cranberry drink. There was entertainment by four musicians and two singers who sang or played about a dozen times each, at least. The musicians had a balalaika, pipes, an accordion, and other stringed ones, as well as three of the decorative wooden spoons. Vice-President Kanakubo joined in with the singing at one point, with a very nice voice. It was an very enjoyable evening.

Tuesday, July 1: This morning was an early one. We said our farewells to Frederick as he was staying in Novgorod for an additional two weeks. The bus departed about 7:45, and we had breakfasts in bags en route. We stopped in Chudova at the Land Resources Committee offices. There we heard from the mayor of Chudova and staff of the committee. They were the first to contact foreign investors for a Russian-Swedish joint venture on building materials. The Cadbury plant was due to open on July 18th. This area has the lowest unemployment rate in Russia and salaries are rather high. In our tour we saw an office where cadastral plans were displayed on a computer. Vladimir Lee of the committee took us on a tour of the town. At one point, we had to change our route because of an enormous mud hole in the road. We were told that houses in the area sell for about $12,000 U.S. while three room flats go for about $17,000 U.S. Some examples of salaries were given to us, such as the computer project work worker having been paid 200,000 rubles per month several months ago, but having been raised to 700,000 rubles recently, while at the new Cadbury factory on Bourneville Street, workers were to get 1.2 million rubles per month. After this we continued on our way to St. Petersburg. The road smoothed out after we crossed the St. Petersburg oblast border. There were hundreds of trucks at the edge of the city waiting for loads.

We had lunch at the Hotel Pulkovskaya. The highlight was the dessert of truffles. Afterwards there was some time for shopping or for visiting the World War II museum across the street before we went to the airport. It was pandemonium there. While we mostly had no trouble getting through the exit check and airline check in, it took a considerable amount of time. Lennart discovered that he had Frederick's visa instead of his own, but somehow managed to get through. They must have been switched accidentally in Novgorod. Our flight departed on time and included another lunch. After our arrival in Stockholm, the dispersal of the group took place and goodbyes until the next time were said. A few of us remained in Stockholm for the night getting to enjoy another dinner and walk in the Gamla Stan.

IN MEMORIAM

DOUGLAS LOWELL COLE

On August 18, 1997 Douglas Lowell Cole, professor of history at Simon Fraser University, died suddenly of a heart attack in his North Vancouver home. He was 57.

Douglas was renowned for his study of cultural history in British Columbia. He was among the first academics to write on the history of art, literature, and intellectual thought in early British Columbia society. He also wrote seminal, often highly critical, studies on the impact of European values and institutions on the Native Indian cultures of the Northwest Coast. His ground-breaking book, *Captured Heritage: The scramble for Northwest Coast Artifacts* (1988) and, later, *An Iron Hand Upon the People: The Law Against the Potlatch on the Northwest Coast* (1990) remain exemplary works for their painstaking research, provocative insights, and clarity of exposition.

To honour these outstanding qualities, family, friends and colleagues have established the Douglas Lowell Cole Memorial Entrance Scholarship in Cultural History. Your gift to the scholarship fund will assist new students entering the field of cultural history, and accordingly, help perpetuate the high academic values and integrity embodied by Douglas Cole.

Donations to the Douglas Cole Memorial Scholarship in Cultural History may be mailed to:

Simon Fraser University,
c/o Development Office,
8888 University Drive,
Burnaby, BC, V5A 1S6.

The Canadian Hydrographic Service New Tools and Products

Fred Stephenson

presentation made to the 1997 ACMLA Conference
Saskatoon, Saskatchewan

To many users of traditional Canadian Hydrographic Service (CHS) products it appears that very little has changed over the past quarter century. But in fact there have been significant changes in the way hydrographic data is collected, and in the many steps from data acquisition to product generation. Some users are already aware of these changes and the effects they are having on available hydrographic products, but many are not. The purpose of this article is to provide map librarians, archivists and others with an overview of some of these changes.

In the days before everyone had a computer

In the early 1970's the CHS produced charts, Tide and Current Tables, and Sailing Directions - all products we continue to produce today. Depths were measured using single beam echo sounders and positioning was by sextant or shore based systems such as Decca or Minifix. The sounders were equipped with chart recorders which provided the required bottom 'trace'. Depth information was handscaled from the sounder roles, matched to the position fixes, and hand plotted or 'inked' on the field sheets. The coastline was scaled from aerial photographs. All relevant features were positioned by sextant and/or theodolite and entered onto the field sheet. Computers were available to assist with data processing and data storage, but their use was not nearly as extensive as it is today. At the end of the field season, when the field sheet was completed and checked, the hydrographer provided it to the cartographer for use in chart production. The production of a chart was by traditional methods - mosaicing the various data sources (cut and paste) and hand scribing to produce the negatives required for the printing process.

Over the next ten years the appearance of our charts began to change in response to metrication (changing all of the soundings, clearances and heights from fathoms and feet to metres), bilingualism (providing information on the chart in both official languages), and the change of horizontal datum from NAD 27 to NAD 83.

By the early 1980's computers were becoming more powerful and special ruggedized versions were developed for use in collecting hydrographic data. The computer was also now being used to assist in the production of field sheets and the negatives/autopositives required for chart production. Throughout the 1980's improvements in data collection and processing techniques continued, largely due to continued improvements in computer hardware and software. Of special note in this regard was a computer-aided mapping system developed by the Canadian Hydrographic Service which the University of New Brunswick undertook to further develop and enhance. This GIS software eventually became the Computer Aided Resource Information System (CARIS) and the success of CARIS lead to the formation of Fredericton based Universal Systems Ltd. (USL). CARIS is now marketed by Universal Systems Ltd. world-wide, and it continues to be the cornerstone of the CHS's chart and ENC production program.

A better mousetrap - the Global Positioning System (GPS)

By the end of the decade several important new technologies were beginning to impact on hydrography. The first of these was the Global Positioning System (GPS). The effectiveness of GPS was initially limited by the fact that there was only a partial constellation of operational satellites. Without a full constellation of satellites, positions were only available sporadically for varying periods of time when the geometry of the satellites and the survey vessel was suitable for reliable positioning.

As the satellite constellation slowly developed, the instrument manufacturers and the survey community developed the tools to effectively utilize this technology. Today, a hydrographic survey typically installs a reference station at a known location on shore and continuously measures the position of that station. The difference between the actual and the measured position

is then broadcast to the survey vessel(s), who apply this 'correction' to determine their true position within a few metres. These differential signals are also now available from a network of reference stations operated by the Canadian Coast Guard on the Great Lakes, the St. Lawrence Seaway, and the Pacific and Atlantic coasts.

More data, better data

As mentioned previously, for many years the standard method of collecting depth information was to use single beam echo sounders. Single beam echo sounders are still used for many hydrographic surveys (figure 1; see page 13), but during the past 10 years other techniques have also come into common use in Canada and throughout the world.

- **Multi-transducer systems (sweep systems)**

These systems utilize an array of transducers attached to one or more ship mounted booms which provide total bottom coverage of the area swept by the boom(s). This technology is most commonly used in navigation channels or harbours, and in areas where dredging is planned or has been carried out. These systems operate best when the sea is calm.

- **Multibeam sonars (swath systems)**

A typical multibeam sonar system transmits on a single beam which is 90° to 150° athwartships by 5° along track, and receives on 20 to 50 beams which are 20° along track and 5° athwartships. The result is a cross track profile of 5° by 5° data points (figure 2; see page 14). This process is not as simple as it sounds. In order to obtain accurate depth measurements the vessel's roll, pitch and heave must be accurately measured and corrected for, and the speed of sound at the transducer and throughout the water column must be measured to correct for refraction errors. In addition, the vessel's antenna(s), transducer, and gyro must also be correctly positioned relative to one another or horizontal positioning errors will result.

One characteristic which all of the multibeam systems have in common is the large amount of data collected. Many of the earlier systems produced as much as a megabyte of data per hour and the newer systems such as the Simrad EM3000 are capable of generating more than a Gigabyte of data per day. As D. Wells pointed out in 1991 "By way of comparison, all the characters printed in a set of telephone books covering all of Canada is the equivalent of about two Gigabytes of data." Another comparison of note is that all of the digital data holdings in CHS Pacific Region (exclusive of multibeam) presently require about 12 Gigabytes of storage space.

- **Airborne Lidar Hydrographic Systems**

The first Lidar system used for hydrographic surveys was the Larsen 500 system. The Larsen Airborne Lidar Bathymeter uses a pulsed, infrared/ blue-green laser to measure seafloor depths. Laser pulses are scanned across the flight path of an aircraft (typically a twin otter) and reflected light from the water surface, water column, and seafloor are collected and converted to digital signals by detectors in the aircraft. When the aircraft is flying at an altitude of 500 metres the swath width of the Lidar system is 270 metres and it produces a uniform grid pattern with 35 metres between soundings. Under ideal conditions it can survey up to 70 km^2 per hour and measure water depths of 30-50 metres to an accuracy of less than 0.5 metre. These systems have also been used successfully with airborne multispectral imagery to classify intertidal and nearshore habitat.

- **Towed In-flight Bathymetry System (TIBS)**

The TIBS system is an electromagnetic system. It is towed beneath a helicopter and can 'see' through sea ice or turbid sea water to measure water depths up to 50 metres with an accuracy of 1-2 metres. In the Arctic, the TIBS system has been used to obtain reconnaissance sounding profiles in areas that are ice covered for much of the year. The previous method of using a helicopter to obtain spot soundings on a 1 kilometre grid was very time consuming and expensive, and provided a much less complete picture of the bottom.

- **Bottom classification systems**

Traditionally, bottom type was determined during hydrographic surveys by lowering a bottom grab or a leadline to obtain a small sample of the bottom. This bottom type information appears on hydrographic charts (figure 1; see page 13) and while it may not be very scientifically robust, it provides the most comprehensive catalogue of bottom type information for most areas of Canada. The new bottom classification systems interface to standard echo sounders and classify the bottom acoustically using multiple parameters (e.g., the roughness and hardness of the bottom.) Quester Tangent Ltd., a Canadian manufacturer of bottom classification systems, was recently awarded a major contract for bottom classification along the Baltic Sea coasts of Germany and Holland.

ECDIS and Electronic Navigation Charts

As a result of the Exxon Valdez accident the federal government appointed a Public Review Panel on Tanker Safety and Marine Spill Response Capability. This panel, which was chaired by David Brander-Smith, presented its final report in September 1990.

One of its recommendations was that "In order to reduce the risk of accidents, the Canadian Hydrographic Service ... expedite development of electronic charting technology and the required infrastructure, then introduce regulations requiring the use of electronic charts on all tankers in Canada."

This recommendation helped to propel the Canadian Hydrogaphic Service and Canadian companies such as Offshore Systems International (OSI) and Nautical Data International (NDI) to the forefront of ECDIS development. What is ECDIS and why is it so important to mariners? ECDIS, which stands for Electronic Chart Display and Information System, can help prevent marine disasters by giving mariners all the information they need to avoid possible accidents and to react more quickly when faced with unexpected or difficult situations.

Designed for use in areas where the demands on the navigator are greatest, i.e., the approaches to landfall, narrow straits and channels, inland waterways, and harbours, ECDIS systems can reduce groundings or collisions which could result in the loss of life and cargo, and ecological disasters.

The speed with which an ECDIS system can provide complete, validated navigational information helps navigators make better and more timely decisions and reduces the potential for human error. Consider for a moment how most vessels are navigated at present. In coastal waters, a ship's navigator is continually plotting the ship's position with data from electronic devices such as GPS, loran-C and radar, and confirming the positions with bearings on landmarks, beacons, and buoys. In that procedure lies the paradox - the stream of data is subject to the inescapable human process of acquiring, interpreting, and plotting the information to give timely instructions to the helmsman. If it takes the navigator 60 seconds to fix the ship's position on a paper chart, and the ship is travelling at 15 knots, by the time the navigator looks up from his chart table the charted position is a quarter mile astern. This example becomes even more dramatic if you consider new high speed catamaran ferries presently being built for the BC Ferry Corporation which will travel at 35 knots!

This charting process is one that has been in place for centuries and was the process employed when the Exxon Valdez met with disaster in 1989. To avoid ice, the ship left the main channel for what was to have been a short run in adjacent deep water before returning to the main channel. A fairly straight forward procedure in principle, but someone miscalculated, and by the time it was determined that the ship must turn it was too late and the heavily laden vessel struck Blight Rock. What followed was one of the world's greatest ecological disasters. ECDIS would almost certainly have saved the Exxon Valdez. How? By tracking the vessel's "real time" position and warning her officers both visually and audibly with increasing persistence of the imminent hazard in time to alter course.

The digital representation of the charts used by ECDIS systems are called Electronic Navigation Charts (ENC). From the very start there were two formats of ENC - raster and vector. The raster chart is simply a paper chart which has been scanned into electronic media and georeferenced, much like a document is scanned by a fax machine and transmitted to another machine. If you change the scale of a raster chart all of the features become larger or smaller. If you rotate a raster chart so that the ship's heading is always north up, all of the text and symbols retain their original orientation on the chart, so they also rotate. Vector format by contrast is analogous to a word processing document in which separate portions can be added, deleted or changed. Vector databases are formed by digitizing features as points, lines and polygons, with descriptive information tied to the feature. Like features are associated together for storage in thematic layers. As you change scales, displayed information can be added or deleted so that critical information is always shown without the chart becoming too cluttered. With the vector format it is also possible to link to other information through a relational database.

Most of the national hydrographic offices involved in the early development of ECDIS systems chose to produce ENC's based on the vector format. It is more expensive and much more time consuming to develop ENCs using this format, but the end result is a safer, more robust product.

The first major order for ENCs came from the Canada Steamship Lines who required electronic chart coverage for the Great Lakes and the St. Lawrence Seaway. The demands of navigating in confined channels under the influence of ice and fog are substantial, and prior to ECDIS, vessels were forced to stop until conditions improved. To enable the CHS to meet the expected demand for ENC products while still maintaining its ability to produce the paper charts legislated under the Canada Shipping Act the CHS, in 1993, entered into a partnership with Nautical Data International to market the digital data products produced using the validated digital data of the Canadian Hydrographic Service. The

partnership has been successful and this approach is now being adopted by other national hydrographic agencies.

By necessity, the CHS took a step-wise approach to producing ENCs. The first ENCs were digitized from paper charts using CARIS and issued in NTX format. Three levels of vector format chart were proposed, with level 1 being the most basic, containing only critical depth, shoreline, and navigation information, and level 3 being a full featured ENC. The first ENCs delivered were level 1, but since that time work has continued to produce complete coastal coverage with level 3 ENCs. Currently, most NTX-based ENCs replicate the information found on CHS paper charts with the exception of content such as borders, lattices, topographic information, streets, railroads, compass roses, and title blocks.

ECDIS is designed to be used with GPS. Unfortunately, most of the data used in the compilation of our charts and ENCs was collected prior to GPS and NAD 83. The data, while relatively correct (i.e., how features relate to other nearby features), is not always absolutely correct because the horizontal datums are poorly constrained or their relationship to NAD 83 is unknown. Over the past few years the CHS has devoted considerable effort to identifying significant errors and to determining the reasons for those errors.

While the CHS and many other hydrographic offices throughout the world were working to develop products for use with ECDIS, i.e., to standardize colours, symbols, database formats etc., a number of private companies were working to develop ENCs and ECDIS systems using the raster format. Many of these early initiatives used pirated data, but more recently most of the major manufacturers are now obtaining validated data through companies such as Nautical Data International.

Where the vector format systems appeal mainly to commercial shipping and government agencies the raster format systems, because of their significantly lower costs and reduced computer requirements, appeal to the recreational boater and the commercial fishing industry. NDI actively supports both markets and a complete set of raster format charts for the Pacific coast of Canada is now available for less than $300 (a set of 3 CDs.) There are now some excellent raster based systems on the market which have effectively addressed some of the shortcomings of raster systems. By employing a vector based system as a overlay to the raster chart it is possible to insert buttons which link to notes (e.g., good fishing here) and other information such as tide and current predictions.

In conjunction with the development of International Maritime Organization (IMO) Performance Standards for ECDIS, the International Hydrographic Organization (IHO) has developed technical standards and specifications related to the digital data format, and specifications for the ECDIS content and display. IHO Special Publication 57 (IHO S-57) describes the IHO Transfer Standards for Digital Hydrographic Data. It includes a theoretical model, object catalogue, and ENC Product Specifications. IHO Special Publication 52 (IHO S-52) describes the IHO Specifications for Chart Content and Display of ECDIS (symbols, colours etc.) It includes three appendices related to the means/process for updating, colour and symbol specifications, and a glossary of ECDIS related terms. The current editions of both publications have been "frozen" for four years. This will provide the CHS and other hydrographic organizations the opportunity to work in a stable environment where the tools and procedures needed to efficiently produce ENCs can be developed. The next step in the standardization process will focus on the integration of additional non-chart information like Sailing Directions and List of Lights, and on the on-line processing of dynamic information like current, tide and ice movements.

The CHS is a world leader in the development of seamless vertical datums. Presently, on charts and ENCs vertical datums can be viewed as a series of tiles or plates, each having some spatial coverage and a vertical elevation relative to the Geoid. At the boundaries were these tiles meet or overlap differences in the vertical elevations result in discontinuities in the depth contours. With differential GPS it is now possible to collect data which is referenced both horizontally and vertically to an ellipsoid. All data is referenced to this time invariant surface and is transformed as required to other reference surfaces (e.g., chart datum, Geodetic datum etc.) The transformation models can be changed or refined in response to new datum definitions, changes in sea level etc., but the underlying data set will never need to be changed.

Other Electronic Navigation Chart initiatives are also ongoing. A client/server software application (CIDAS) is being developed for the collaborative production, maintenance, and distribution of electronic charts and other digital hydrographic products in a high-speed wide area network environment. Collaborative production provides the ability for hydrographers, cartographers, digitizers, or quality assurance personnel in geographically separate areas to simultaneously view and interact with the same data base or digital product.

Expert advice from any part of the country can also be obtained, and new data, wherever it is, can be reviewed. Quality control, whether at the digitizing or final chart product level can be resolved collaboratively through the wide band link. CIDAS also has facilities to allow customers to access products over the internet, including browsing inventory, licensing and ordering, and obtaining delivery.

Will that be paper or plastic?

Much of this article has focused on the production and display of Electronic Navigation Charts and the reader could easily be lead to believe that the paper chart is obsolete. Although the paper chart now has to share the marketplace with the digital data sets available on plastic CD, there is still a strong market for paper charts and the CHS continues to explore ways of providing the best possible product to the mariner. Several very successful Pacific coast cruising atlases have been produced in recent years and a series of Small Craft Nautical Maps is presently being produced in partnership with private industry. These maps cover southeast Vancouver Island, including the Gulf Islands, and are intended to be used primarily by kayakers and small recreational boaters.

A series of eleven Western Arctic charts was recently completed, and because of predicted low distribution volumes, they are being produced using print-on-demand technology. As this technology continues to be refined it will probably be used to produce a greater proportion of our paper charts. The client benefits because the chart is always correct to the date of the last Notice to Mariners, and the CHS benefits because it doesn't have to maintain an inventory of low distribution volume charts that will require many years of hand correction, and which may be superseded by New Charts or New Editions before they are even used.

Conclusion

The way in which hydrographic surveys are carried out, the products available to the mariner and other clients, the manner in which those products are produced, and the management of the data have all changed dramatically over the past quarter century. Some of those changes are immediately evident to the user, and others, no less dramatic, are completely transparent. The one thing that hasn't changed is the Canadian Hydrographic Service's commitment to provide high quality products which meet the needs of our users.

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List of figures

Figure 1

Portion of a field sheet from a 1996 survey using single beam echo sounders. The bottom samples of Mary Basin indicate a mud bottom (M). (Shown on page 13)

Figure 2

A typical multibeam sonar system transmits on a single beam and receives on many beams to produce a cross track profile of closely spaced soundings.

(Shown on page 14)

Figure 3

A bottom image produced using multibeam data collected at Delta Port in October 1996. From this angle you are looking from the Strait of Georgia into the dredged basin. The 'ridge' at upper right is shallow water adjacent to the Tsawwassen ferry causeway.

(Shown on page 15)

Figure 1

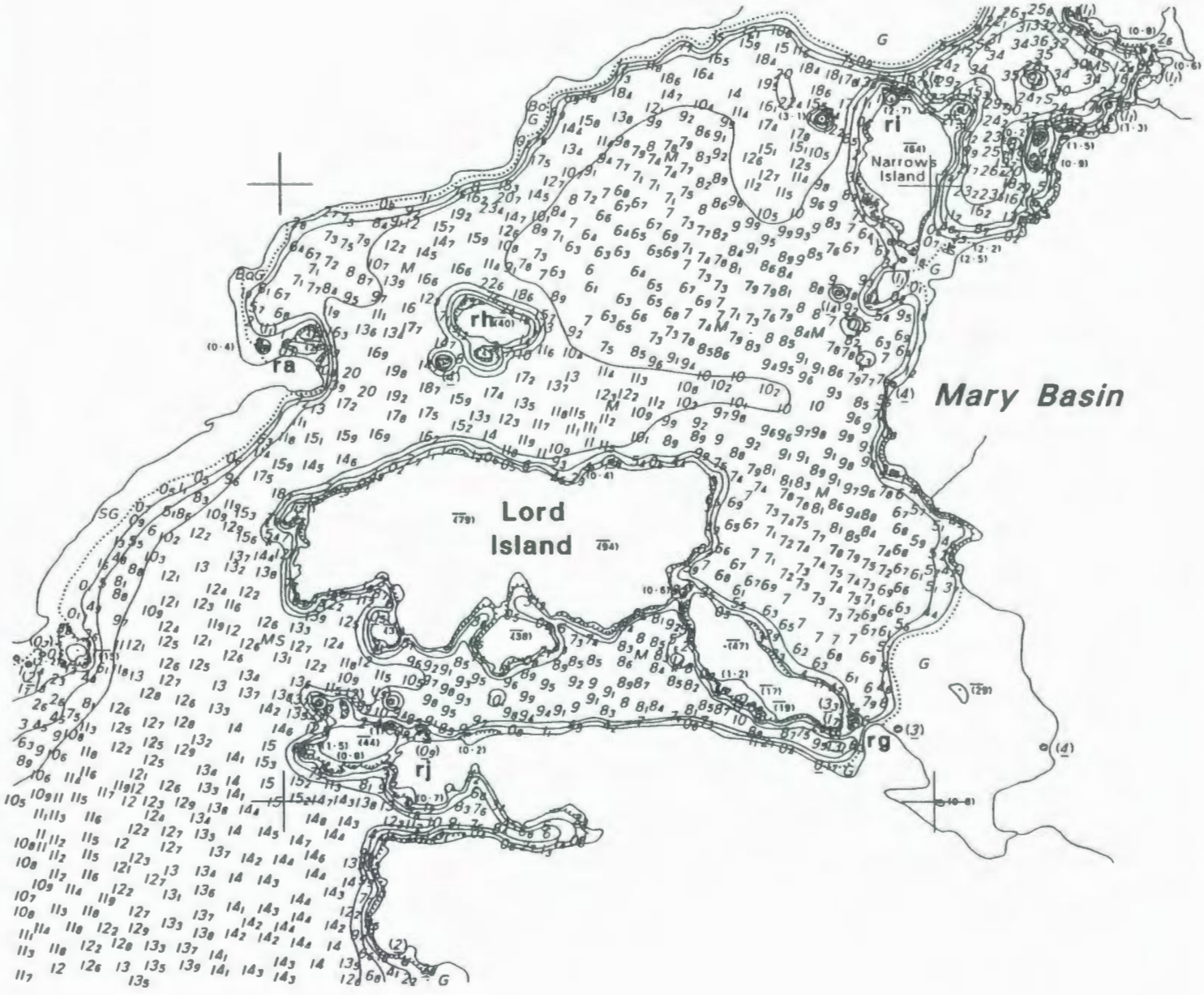


Figure 2

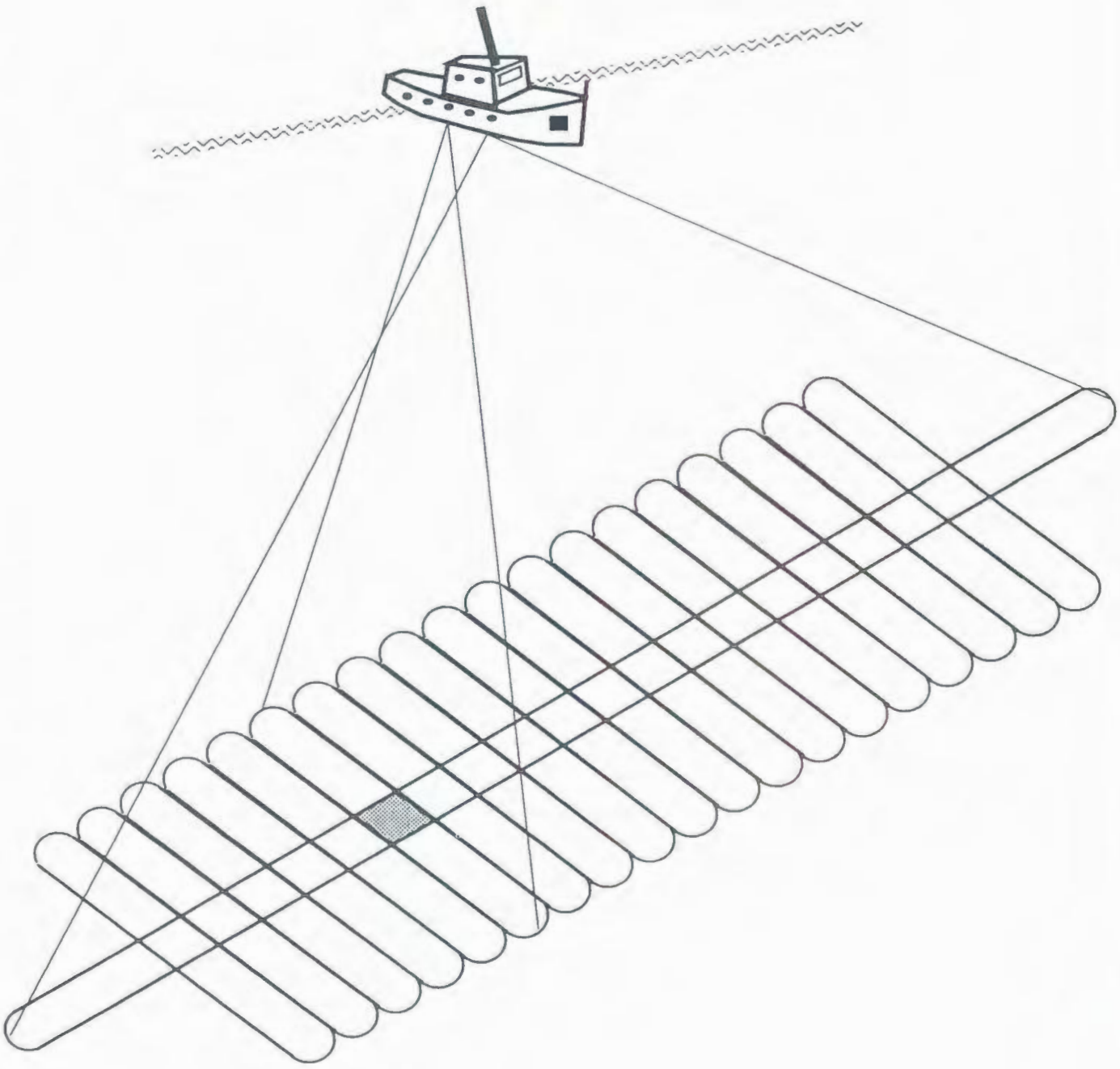
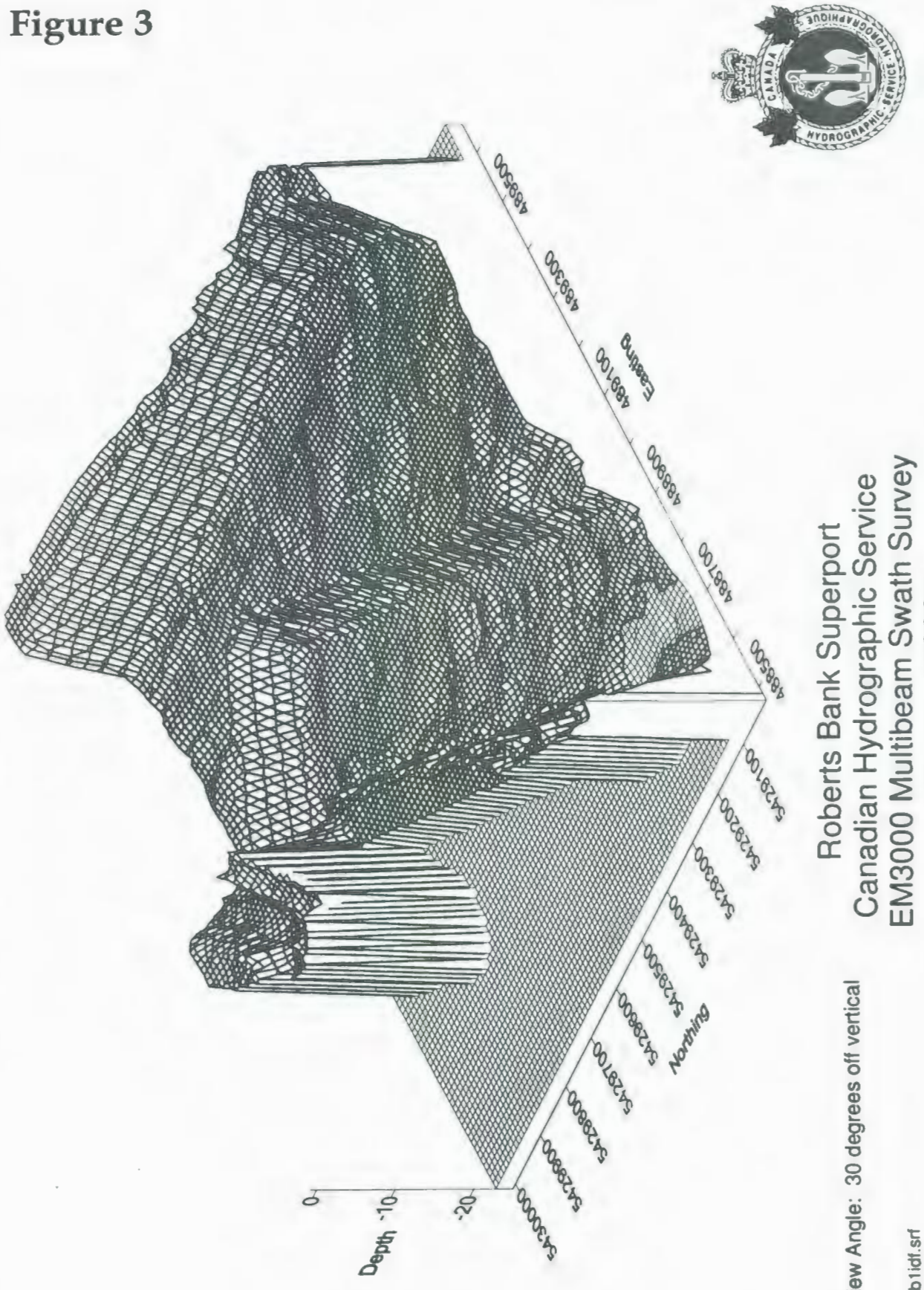


Figure 3


Roberts Bank Superport
Canadian Hydrographic Service
EM3000 Multibeam Swath Survey
October 1996
View Angle: 30 degrees off vertical
Rob1idf.srf
Depth
0
-10
-20
Northing
Easting
5429100
5429200
5429300
5429400
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5429900
5430000
488500
488700
488900
489100
489300
489500

Digitizing Fire Insurance Plans: The City of Saskatoon Archives Experience

Erik Anderson
City Archivist
City of Saskatoon Archives
presentation made to the 1997 ACMLA Conference
Saskatoon, Saskatchewan

For nearly nine decades, the City of Saskatoon's Urban Planning Department has been the sole custodian of three one-of-a-kind fire insurance plans for the years 1911, 1923 and 1958. Because these plans are used almost daily by staff and outside researchers they began to show signs of wear.

In the fall of 1996 Planning officials contacted the City Archives with the goal of having 1:1 scale colour copies made of each plan. The archives agreed to aid the Planning Department with their project for two reasons: we would gain a new and valuable collection for our archives; and we would also ensure the long-term preservation of these important documents.

The Office of the City Clerk, via the City Archives, contributed $7,000.00 towards the project. We also applied to the Canadian Council of Archives Preservation Management Program for additional funding and were granted $5,084.02, thus bringing our project budget total to $12,084.02.

Initially, we planned to have colour (laminated) photocopies made of each plan. We would then encapsulate the original plans in Mylar and transfer them to the City Archives. As it turned out, however, there were a few problems with having colour photocopies made. The three plans are colour-coded in yellow, light brown, light blue, violet, pink and orange.

They are also quite large; the 1911 plan measures 21" (L) x 25" (W), the 1923 plan 21.25" x 25.4 and the 1958 plan 12.75" x 12". Because of the size of the documents, local photocopy vendors told us that we would have to splice several copies together to achieve the desired ratio.

And, then, the colour scheme might be severely skewed. Although these vendors claimed they could do the work for around $9,000.00, they told us repeatedly that they did not want to undertake our project because it would be too time consuming.

As a next step we considered colour photographic reproductions. However the cost of having negatives and 1:1 scale prints created was far beyond our budget (around $20,000.00). It was at this time that digital photography was suggested to us .

Although we were aware of such technology, we thought it to be so far out of our price range that we did not even consider it initially. We were wrong. As it turned out, having digital reproductions made was quite easy and inexpensive.

After removing the original plans from their binders, each page was photographed using a digital camera. (It took about ten days to shoot all 303 pages.) Then each page was printed on high quality gloss paper, laminated and then bound into a new binder. Because the reproductions were printed using a colour plotter, no splicing was needed. This produced better quality reproductions and also saved time.

In the end, we were able to 1:1 scale (laminated) digital reproductions made of each plan for just over $12,000.00. (This included a CD-ROM copy of every page saved in JPG format.) Furthermore, on the advice of our provincial conservator, we decided to forego out plans to encapsulate the original plans, opting instead to box and interleaf them on acid-free buffer paper. This allowed us to remain within our budgetary guidelines.

The Rural Map Directory Company: a locally based early attempt to produce a land ownership map series of Alberta

Ronald Whistance-Smith
(retired map curator, William C. Wonders Map Collection, University of Alberta)

Land ownership (and land occupancy maps) record the names of families on cadastral maps, that is, on maps which show property boundaries. They are therefore, of necessity, medium or large scale maps. In that they record the names of families living at a particular place and at a particular time, older maps of this type are of most interest to genealogists, but local historians, social historians, and at times environmentalists and criminologists might also be expected to make use of these maps (Conzen, 1984). Present day residents of rural property find such maps make interesting decor as well as providing some history of their property. People with a direct connection to the mapped areas also find that such a map makes an interesting addition to their wall hangings.

The idea for this study originated many years ago when the University Map Collection of the University of Alberta (now the William C. Wonders Map Collection), received as a gift from the Provincial Archives of Alberta, their duplicate copies of ten Municipal District land ownership maps produced by Alberta based companies, dating from the pre-1950 period. I asked myself many times over the years "I wonder how many of these were done and how many companies or individuals were involved in this activity. I knew of the Cummins Rural Directory maps, which we then had only on microfilm, but this company was based in Winnipeg, although items have been located naming Regina and Toronto as places of publication. The gift included maps by B. F. Mitchell, C. B. Atkins, and Driscoll & Knight, all with addresses in Edmonton. However, due to the pressure of work I was not able to pursue this interest. We later obtained originals of the Cummins Rural Directories for the three Prairie Provinces, Alberta in a 1923 edition, Saskatchewan (2 vols.) in a 1922 edition, and the 1923 edition of Manitoba. We also acquired a photocopy of an undated Alberta directory from the Alberta Historic Sites Service. I have also seen copies of several Cummins wall maps of parts of Southern Alberta, housed in the Museum of the Highwood in High River, and separate sheets dated 1926.

Then in the summer of 1995, I took relatives visiting from England, to Fort Saskatchewan, and in the museum there, I discovered they were selling blueline prints taken from a land ownership map of that area, tentatively dated ca. 1915 - 1920. The map, by the Rural Map Directory Co. of Edmonton, was surrounded by advertising. The scale was one inch to one mile, and encompassed an area which was three townships square. I had never heard of the company before. When I donated it to the map collection several months later, Sandy Campbell, who had initially replaced me in maps, was preparing a Pathfinder to land ownership maps. She asked if I knew if there were other maps by this company and I could only say "I don't know but will keep my eyes open."

During the following year Lorraine Dubreil of McGill University, and Cheryl Woods, of The University of Western Ontario, asked the cooperation of other map curators/librarians, in inventorying their collections of fire insurance plans, in order that a union list of such plans of Canadian communities, held in Canadian repositories, might be prepared and published. Since no one in the maps area of the University of Alberta Library system had time to do this, I volunteered to do it rather than see our holdings left out of this most valuable research aid. Once I had finished with the University and Provincial Archives holdings, I proceeded on to the City of Edmonton Archives. Here, June Honey, Reference Archivist (now also retired), led me to the only early set of fire insurance plans they held, a two volume set from 1913, with later amendments. When I opened the cover of Volume 2, there, taped to the inside of the cover, was a "Map of Central Alberta" by the Rural Map Directory Co., 10028 101A Ave., Edmonton. On it, two grids clearly indicated that it was an index to two different map series, one of which agreed with the sheet boundary of the land ownership map found at Fort Saskatchewan. (I have yet to locate a map in the other series, which I believe would have been one inch to two miles, since four of the larger scale sheets fit

in to one of the smaller.) When I asked June Honey if it would be possible to get a photocopy of this index map, she said "Yes. We have some of the maps too if you'd like to see them." June said they had been donated along with the fire insurance plans and, although they had been in a separate binder, as they were more fragile than the fire insurance plans, they had been removed and stored in archival folders. On a more recent visit I learned they were donated by Carl R. Cummings of Cummings Agencies, in 1968. I made note of the thirty two sheets they held and when I returned home indicated these on the index.

I was struck by the beauty and clarity of the draughtsmanship on the first sheets I saw. Later I noted that there were obviously by two different persons involved in writing in the names. To some extent the clarity is the result of the scale used, 1:63,360, compared to that of the Cummins Rural Directory sheets at ca. 1:120,000. The lettering of the sheets which first impressed me, does not conform to standard cartographical practice in that names of owners may run at various angles or may be curved, as necessary to fit within the space available. Where a complete section is owned by the same person or persons or company, the first name or initials may be in a curve above and convex to the section number, while the remainder of the name is in the lower half concave to the section number. When I began this work I thought that N. B. Pearce, whose name appears as draughtsman on many of the sheets, had, especially since he is listed in Henderson's Directories as an architectural draughtsman, been responsible for drafting all of the sheets. But as I looked more closely at them, it became clear that those to which he put his name conform to a more rigid style with names in straight lines, albeit at an angle where necessary to fit within the quarter section limits. Some are even entered at ninety degrees to horizontal. The second hand not only was freer fitting the names to the space available, but used a slightly heavier line weight as well. So far I have noticed only three sheets that are dated. Two sheets by Pearce show Jan. 1920, while a third in the second hand, is dated Oct., but the year has been obliterated by a gummed label stuck to the bottom right corner to repair a small tear.

The Rural Map Directory Company

Before I left the City Archives on that first visit, I decided to check Henderson's Directories for the City of Edmonton to see what I could find out about the company. The only edition of the Directory to list the company was 1919. It did reveal that the two principals of the company were R. L. Ghiselin and N. B. Pearce, and its location was given as I indicated above. With no listing before 1919 and none after, I jumped to the conclusion that the company may have existed for only about a year or less. Given the delay between gathering the information for the directory and its publication, its not possible for me to say, without further investigation, when they were incorporated and when they ceased business. I checked the records of the Companies Branch in an effort to find a date of incorporation, but found nothing. Scanning old Edmonton newspapers may also be of use, although the first effort in this area, the Edmonton Bulletin for the first 20 days of October 1919, has not borne fruit.

I wondered if the two were itinerant business men who travelled to an area tried their hand at producing and selling land ownership maps, and then moved on. I checked the city directories from 1914 to 1930 under the two names and found that they were long term residents of Edmonton.

The following table shows, by year, the occupation listed for each of the two men.

Year	Richard L. Ghiselin	Neville B. Pearce
1914	Mays-Ghiselin Realty Co.	clk Land Titles
1915	clk Land Titles	architect at #8 Cristall Block, same address as Cote, Tremblay & Pearson
1917	clk Land Titles	architect at Cote, Tremblay & Pearson
1920	(none listed)	drftsmn, Rural Map Directory Co.
1921	(not listed)	(not listed)
1922	broker	draftsman
1923	farm lands	draftsman [Cote & Pearson]
1924	broker	draftsman ["]
1925	ins. agent, Weber Bros.	draftsman ["]
1926	real estate	draftsman, Cote & Pearson
1927	real estate	draftsman ["]
1928	slsmn, Canada Biscuit	drftsmn & bldg designer ["]
1930	clk, North West Biscuit Co.	emp, Northwestern Utilities

From the above we can see that Richard Ghiselin seemed ready to turn his hand to anything but for some years was involved with real estate matters. We can also see that both men, prior to the launch of the Rural Map Directory Co. were employees of the Land Titles Office. My conclusion at this point is that two young gentlemen saw an opportunity to market information with which

they were or had been in daily contact and which I'm sure they knew had been marketed in other recently settled areas. They formed a company utilizing Ghiselin's salesman's ability and Pearce's drafting talents to create this series of land ownership maps. They were able to create the series or part of it, but were not able to sell enough product to stay in business. They may have come up against competition from the Cummins Map Company which seems to have issued its first set of maps, of Manitoba, in atlas form, in 1918. As yet, I am unsure when the first Cummins' maps of Alberta were offered for sale. The Glenbow Institute Library lists two undated Cummins atlases, one, in two volumes with an estimated date of 1917?, and a three volume atlas dated 1918? No explanation of how these dates were arrived at is available on the microfiche version of the catalogue to that collection.

Many of the sheets proclaim the company to be "Publishers of Peace River Oil Map, Automobile Road Map, Provincial Map", but I have not yet located a copy of any of these maps.

The land ownership maps show, besides the property boundaries and owners names, railways, trails, road allowances, post offices, and registered subdivisions. Where the owner is an absentee, the place of residence of the owner is included, ie. in NW24-52-22-W4th, F. L. Milne[,] Torquay[,] Eng.". Of use to researchers, but not shown, are schools, churches, and cemeteries. However this information is readily available on the Three Mile Sectional maps. The accuracy of land ownership maps is usually quite high although Norman Thrower notes that there were instances in the United States, where the lure of a quick profit led to some shoddy products. Despite the experience Ghiselin and Pearce had in the Land Titles Office, in drafting, and in real estate, each map bears a disclaimer as follows: "The names and locations on this map have been carefully compiled and the Publishers have endeavored to make it accurate, but they cannot guarantee it to be absolutely correct." Again despite their connections to the Land Titles Office, each map also asks that "Any information as to change of ownership of land will be appreciated." The price listed on the map is $1.00. One other statement is "For advertising rates apply to the Publishers."

This last statement brings me to the only versions of these maps seen other than in the City of Edmonton Archives. The first Rural Map Directory Co. map discovered, that found at Fort Saskatchewan, was a version with an advertising surround. It covered an area extending north and east from the City of Edmonton and included Fort Saskatchewan. All advertisers were from Edmonton which I think one would expect. The Provincial Archives of Alberta hold an advertising version of the sheet to the south of this, that is, extending from the city to the south and east. Some, but not all of the advertisers are the same. This is the earliest dated land ownership map series of Alberta which I have so far located. It is possible that there was, as noted above, a Cummins Rural Directory slightly before or slightly after, but as yet we do not have a positive indication of this. The sheet boundaries are determined by townships and ranges, each sheet being three townships square compared with the Cummins Rural Directory sheets which are four townships high by three wide, except in the Peace River area where two sheets conform to Municipal District boundaries. Since I assumed from the outset that the company was so short-lived, I also assumed that only one edition of each map was produced. However, as I compared the sheet with advertising held at the Provincial Archives with the same sheet held by the City Archives, it was easy to see that names had changed, particularly I noted this in close proximity to the City of Edmonton. A detailed, section by section inspection has not yet been done to discern the extent of change. Perhaps that is work for a social or economic historian. From this I conclude that they either maintained a contact in Land Titles, were particularly diligent in checking records, or were successful in getting people to whom they sold maps, to report changes of ownership in their area.

Since the maps are blueline reproductions printed by "The Edmonton Drafting & Supply Co.", I do not believe that any large stock was kept on the premises. This would reduce wastage when a new edition was required. Two anecdotes which relate to this style of production come to mind. When Bob Batchelder and I visited Sam Nickle in the mid 1970s, he told us of the days of the Turner Valley Oil boom in 1936, when he and his brother Carl (of Oil Week fame) would drive out to Turner Valley early in the morning, sell land ownership maps they had made and run off the previous night, record all the changes in ownership of leases or land which had occurred overnight, drive back to Calgary, make new maps and head out again. He told us that in one day they made and sold three editions of the Turner Valley Map. It wasn't worth making more than you could sell since land was changing hands so quickly. When I was preparing this paper I called in at a small mapping company which has been preparing land ownership maps of counties and municipal districts for some years. What I saw was a return to that type of operation except that it is now in an automated environment. The land ownership data base for those municipalities with which

the company has a contract, is in the mapping company's computer, along with the base map files. Changes in land ownership are transferred from the municipalities to the mapping company's computer on a regular basis. No map stock exists. If a request comes for a map, that request is transmitted to the company and the owner simply presses the right button or issues the right commands, and the map, up-to-date, roles off the plotter. This man, Bob Savage, has been in mapping over forty years, having started with the Ordnance Survey of Great Britain, and now has more leisure time than he wants, but must take it sitting next to the computer.

There are many questions still to be answered concerning the Rural Map Directory Co. My research efforts will now be directed to: 1. finding more sheets for Central Alberta; 2. discovering if the company ever created maps for that part of Alberta south of the Central Alberta index sheet (the numbering of the sheets indicates that they did plan to cover the southern portion of the Province also); 3. locating copies of the three other maps listed on the sectional maps; 4. obtaining more information on the company and its principals through archives and newspapers; 5. trying to get enough information on the Cummins Map Co. and their operations in Alberta to establish the date of their earliest efforts here; 6. expanding the research to produce a union list of all landownership maps of Alberta up to ca. 1950 showing their location. 7. obtaining photocopies of such maps held by other than the Provincial Archives and depositing those in that institution.

References

Conzen, Michael P. "Landownership Maps and County Atlases." *Agricultural History*, 1984, Vol. 58(2), 118-122.

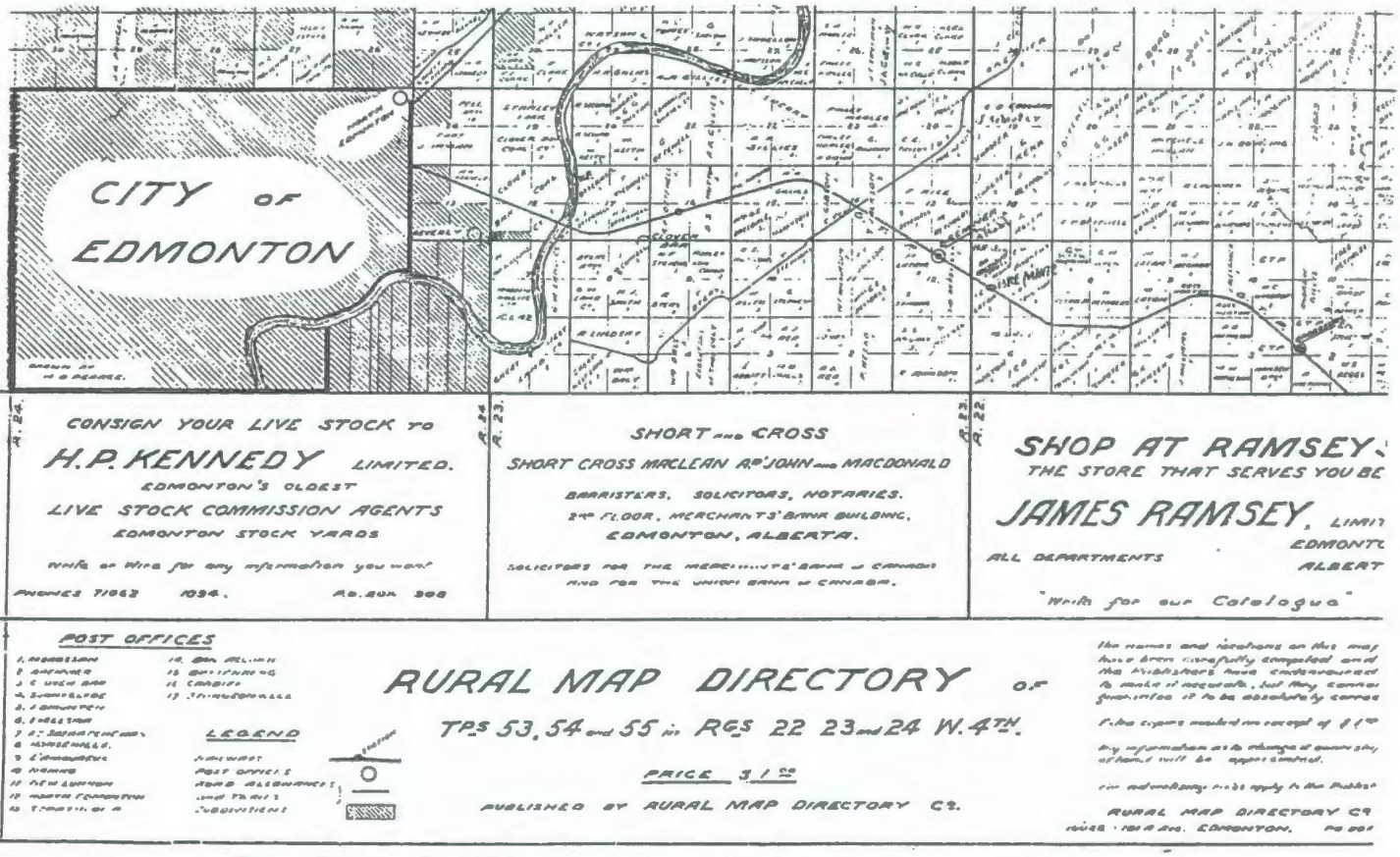
Thrower, Norman J. W. "The County Atlas of the United States." *Surveying and Mapping*, Vol. 21, September, 1961, 365-373.

Figure 1:
Part of the first Rural Map Directory Co. map found; a blueline reproduction with advertising. Signed, N.B. Pearce. Original scale 1:63,360
(See Top - Page 21)

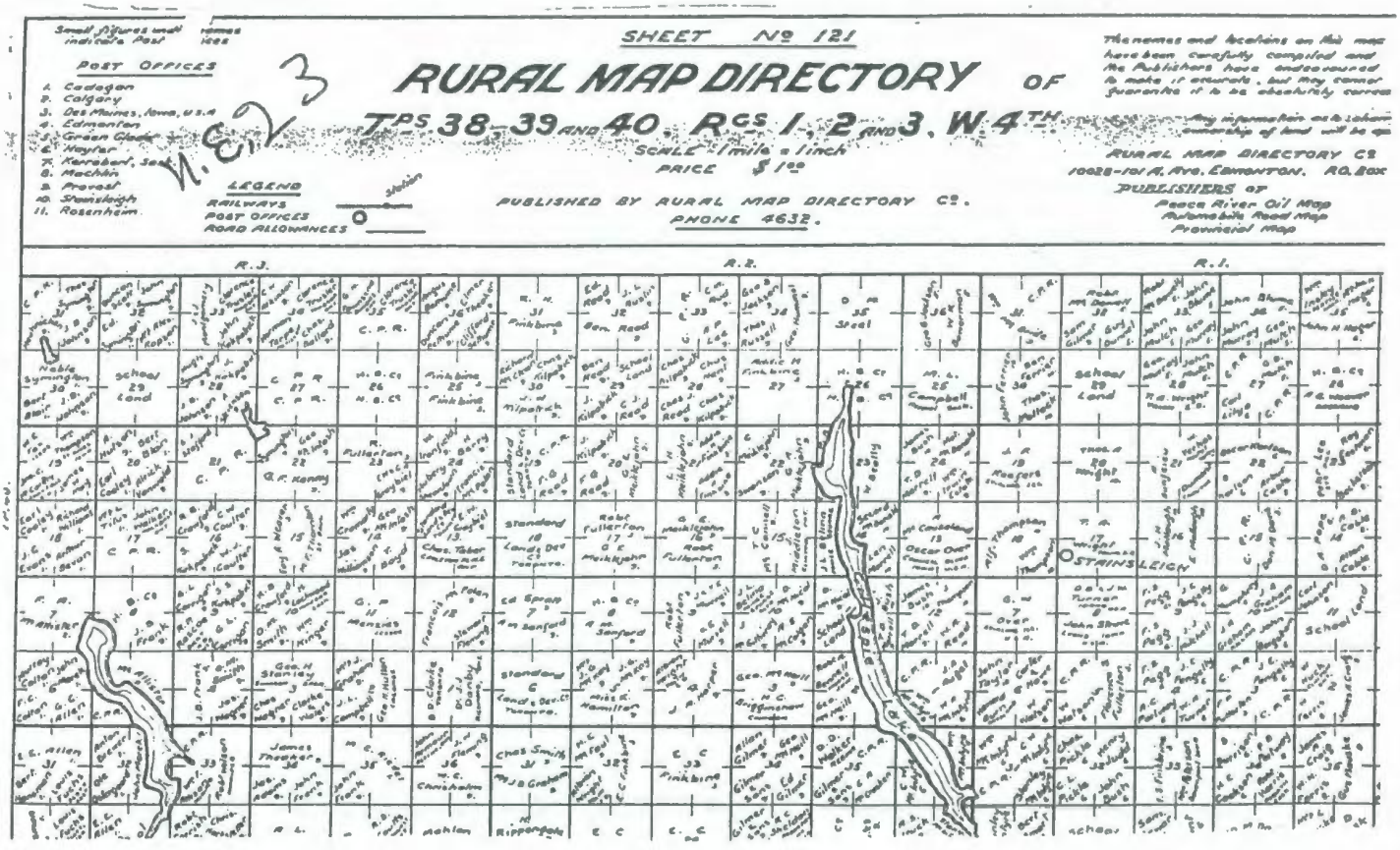
Figure 2:
Part of one of the thirty two sheets of the Rural Map Directory Co. land ownership series found at the City of Edmonton Archives. The writing is in the second hand.
(See Bottom - Page 21)

Figure 3
Index to the Rural Map Directory Co. land ownership map series at 1:63,360 and a probable second planned series encompassing four sheets of the series discussed here.
(See Page 22)

Ronald Whistance-Smith
ACMLA Annual Conference, May 1997
(photo courtesy Alberta Auringer Wood)



Part of the first Rural Map Directory Co. map found; a blueline reproduction with advertising. Signed, N.B. Pearce. Original scale 1:63,360



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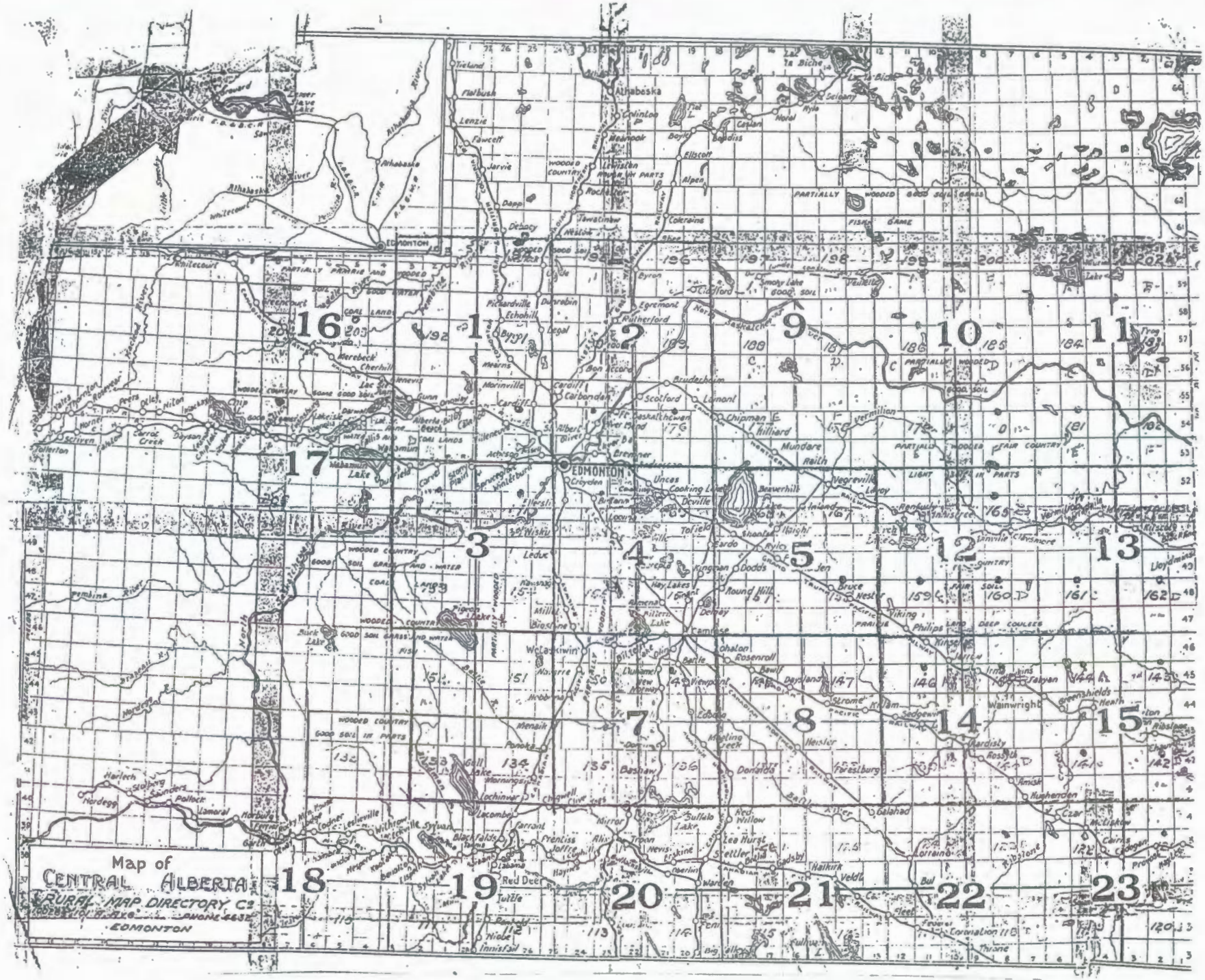

Index to the Rural Map Directory Co. land ownership map series at 1:63,360 and a probable second planned series encompassing four sheets of the series discussed here.

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Exploring and Mapping Asteroids and other Non-Spherical Worlds

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Space exploration has revealed the features of many exotic worlds over the last four decades, and modern explorers of what President Kennedy called 'this new ocean' make maps of their finds as explorers of Earth have done for centuries. Adopting an inclusive definition of the word 'map' - a contentious issue in itself - some 56 worlds in our solar system had been mapped as this article was being prepared late in 1997. Of these, fully half are very far from being spherical. These are the smaller bodies, the asteroids, comet nuclei and small moons of several planets, with an average radius smaller than a few hundred kilometres and insufficient gravity to squeeze themselves into a spherical shape.

Earth, of course, is also not spherical, but its maximum radius is less than 0.5 percent greater than its minimum radius. The bodies I refer to here as non-spherical have a maximum radii at least ten percent larger than their minimum radii. The most extreme case known is the asteroid Ida, whose radii vary between roughly 4 and 30 km. Clearly, objects like these present new and challenging problems to cartographers.

Faced with such a problem, could we be forgiven for seeking to avoid it altogether? Perhaps most of us don't really need maps of these worlds, after all. However, there is a need for maps of asteroids among space scientists and mission planners. For instance, geologists need base maps on which to plot significant features in order to derive a global perspective from many separate observations. In several future missions involving prolonged orbital operations, or landers and roving robots, maps will be essential for planning purposes. So, if maps are needed I have been asked, why not bypass the use of conventional flat maps altogether and create computer generated 3-D virtua-realty models capable of being viewed from any orientation, with photo mosaics, geological maps and the like 'painted' onto the surfaceas desired. This I suggest, is highly desirable (not to mention being a really cool toy), but it is needed as an addition to the cartographer's range of options, not as a replacement for traditional forms. Conventional flat maps will still be needed in many settings including textbooks, atlases and static screen displays.

The basic problems associated with mapping non-spherical worlds are shape determination (geodesy) and map projections. Shapes may be found from stereoscopic image pairs, from the changing outlines of the irregular body as it is viewed from different directions, and even by direct measurement from an orbiting altimeter. The first approach was pioneered in the 1970's by Thomas Duxbury at the Jet Propulsion Laboratory in Pasadena, home of most of NASA'S planetary exploration missions. I devised the second approach in the 1980's at the University of Victoria, because many data sets were unsuited to stereoscopic analysis. The third will be attempted for the first time at an asteroid in 1999. These approaches have been combined into an elegant suite of software with the euphonious name of 'Spud' by Peter Thomas and his colleagues at Cornell University, and are now used with data from all NASA planetary missions to irregularly-shaped worlds.

The map projection problem is more serious, and is not yet fully solved. The first person ever to consider a special map projection for a non-spherical body was Ralph Turner, an American scientific illustrator and model-maker who had helped map the Moon in the Apollo era. He modified Lambert's Azimuthal Equivalent projection to fit an elongated (ellipsoidal) shape for Phobos, a moon of Mars. Lev Bugaevsky, at the Moscow Institute of Engineers for Geodesy, Aerial Photosurveying and Cartography, modified a cylindrical projection to fit an ellipsoidal object for use with the same moon. Many other researchers simply ignored the problem and

plotted features on standard map projections for a sphere, usually cylindrical projections. This resulted in serious distortions, especially on the more elongated objects, a problem Turner's and Bugaevsky's projections partially solved. However, some of these objects have bizarre banana-like, multi lobate of faceted shapes which are not well approximated by ellipsoids. The U.S. Geological Survey, which maps most solar system bodies, has prepared an experimental map of Phobos, one of the moons of Mars, which may be seen in the new NASA Atlas of the Solar System (Greeley, R. and Batson, R.M. eds.; Cambridge University Press, 1997). They projected a shaded relief drawing onto an orthographic projection of the shape model, shown in four separate views to provide global coverage. Six views would have been better, to avoid having some regions visible only obliquely near the edge of the disk. A universal map projection that would work for shapes more irregular than simple ellipsoid is clearly desirable. Unfortunately, that is easier said than done!

My initial approach to this was to modify azimuthal projections by using the local radius, varying across the body, rather than a constant radius, in the mathematical equations for the projections. This has three advantages. It can be used with any of the azimuthal projections, including equal area and conformal versions. It allows grid lines to follow the bulges and hollows of the irregular shape, clearly indicating that shape. Finally, by mapping a body in two opposite sides (equivalent to hemispheres) it allows global coverage in two views rather than four or six, and the outline of each map matches the cross-sectional shape in the plane dividing the two sides. Experience with this soon indicated that distortions occurred near the edges of the maps, and these were minimized by using not the actual shape but the 3-dimensional convex hull of the shape in the map projection. A convex hull is a shape with any hollows filled in, so in effect this approach projects crater floors up to the plane of the crater rim before mapping onto the global projection. This is my current approach to mapping highly irregular objects. It is not ideal because distortions are not eliminated entirely, but so far no better solution has emerged.

The approach described here can be used for a variety of map types. I have prepared shaded relief drawings, photomosaics and geological maps of numerous bodies, and some are illustrated here. Many of my maps can be obtained from the following website:

www.geog.uwo.ca/Stooke.html.

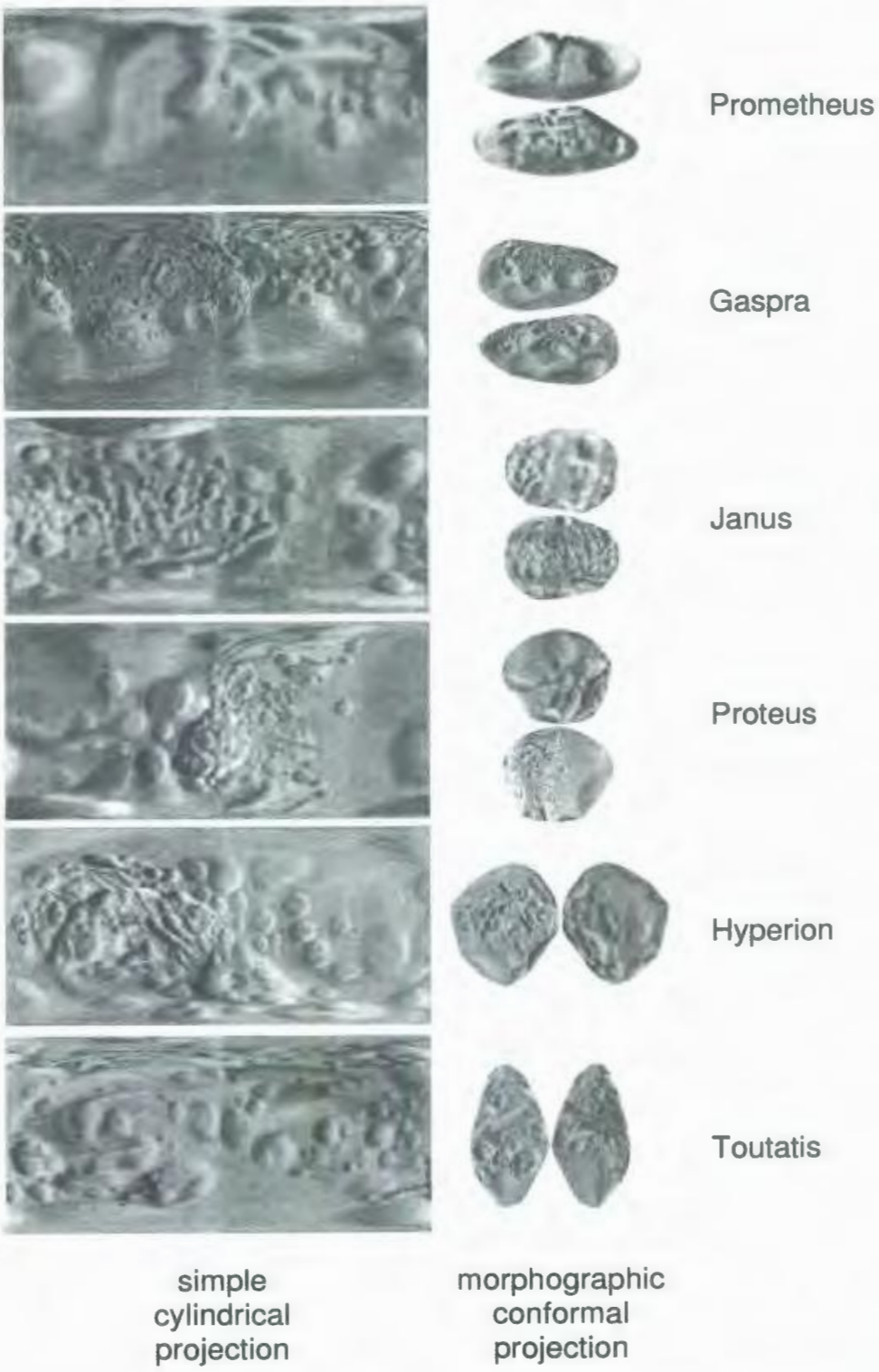
Figure 1 illustrates why a special map projection was needed for these bodies. Six worlds are represented in two projections, Simple Cylindrical (Plat Carree) on the left and my projection on the right. The cylindrical maps, all rectangular, show the locations of surface features relative to each other, but do nothing to indicate where a particular feature is relative to the overall elongated shape of the body. Even worse, they give absolutely no indication of the shape despite the fact that these worlds have very different forms. The other maps indicate clearly where small features are on the overall shape, and also reveal the shape itself. For that reason I call these projections 'Morphographic', or 'shape-drawing'. We can see at once the Prometheus is elongated along its equator (north being at the top in all these maps), Proteus is lumpy but nearly spherical, and Toutatis is elongated along its rotation axis, while Gaspra is wider at one end than at the other.

Figures 2 and 3 show one side of the asteroid Gaspra in more detail. The shaded relief drawing (Figure 2) is based on photographs taken by NASA's Galileo spacecraft as it flew past Gaspra in 1991 on its way to Jupiter. This was the first time any asteroid had been seen close up. The other side was seen as well, but in less detail while the spacecraft was at a greater distance. The relief drawing depicts the surface with uniform illumination from the west. Below it is a photomosaic compiled from the original images. Note that the southern regions of Gaspra are still 'Terra Incognita'. Figure 3 illustrates the topography of Gaspra. The contours represent elevations in kilometers above or below an ellipsoidal datum. Gaspra is only 18 km long, with radii varying between 4 and 10.7 km, a small world indeed. Lastly, below the photomosaic is a geomorphological map, simplified here but providng an interpretation of the nature of the surface of Gaspra. The smooth areas are probably blanketed with material thrown out of small craters formed when meteorites hit the surface. The debris preferentially collects on slopes which face forwards as the asteroid rotates. These maps reveal the surface of an exotic new world, recording discoveries and displaying the results of scientific analysis. Galileo also photographed the asteroid Ida in 1993, and discovered a moon orbiting it. Figure 4 shows a set of photo mosaics of Ida in four different orientation.

NASA is pursuing the exploration of small bodies like Gaspra with a series of small, relatively inexpensive missions over the next decade. The Near Earth Asteroid Rendevous (NEAR) mission has already obtained

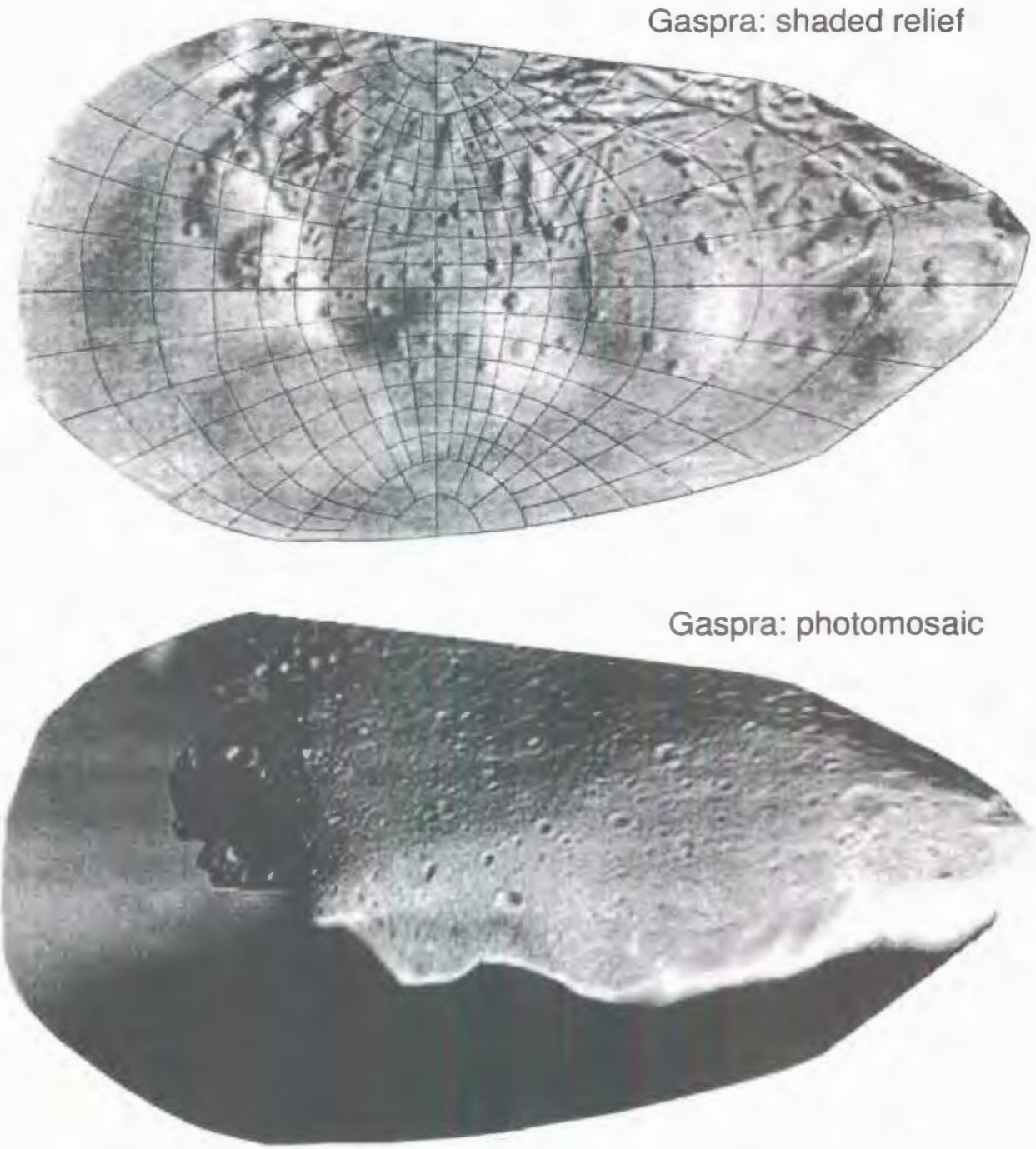
(continued on page 32 - after the illustrations)

Figure 1



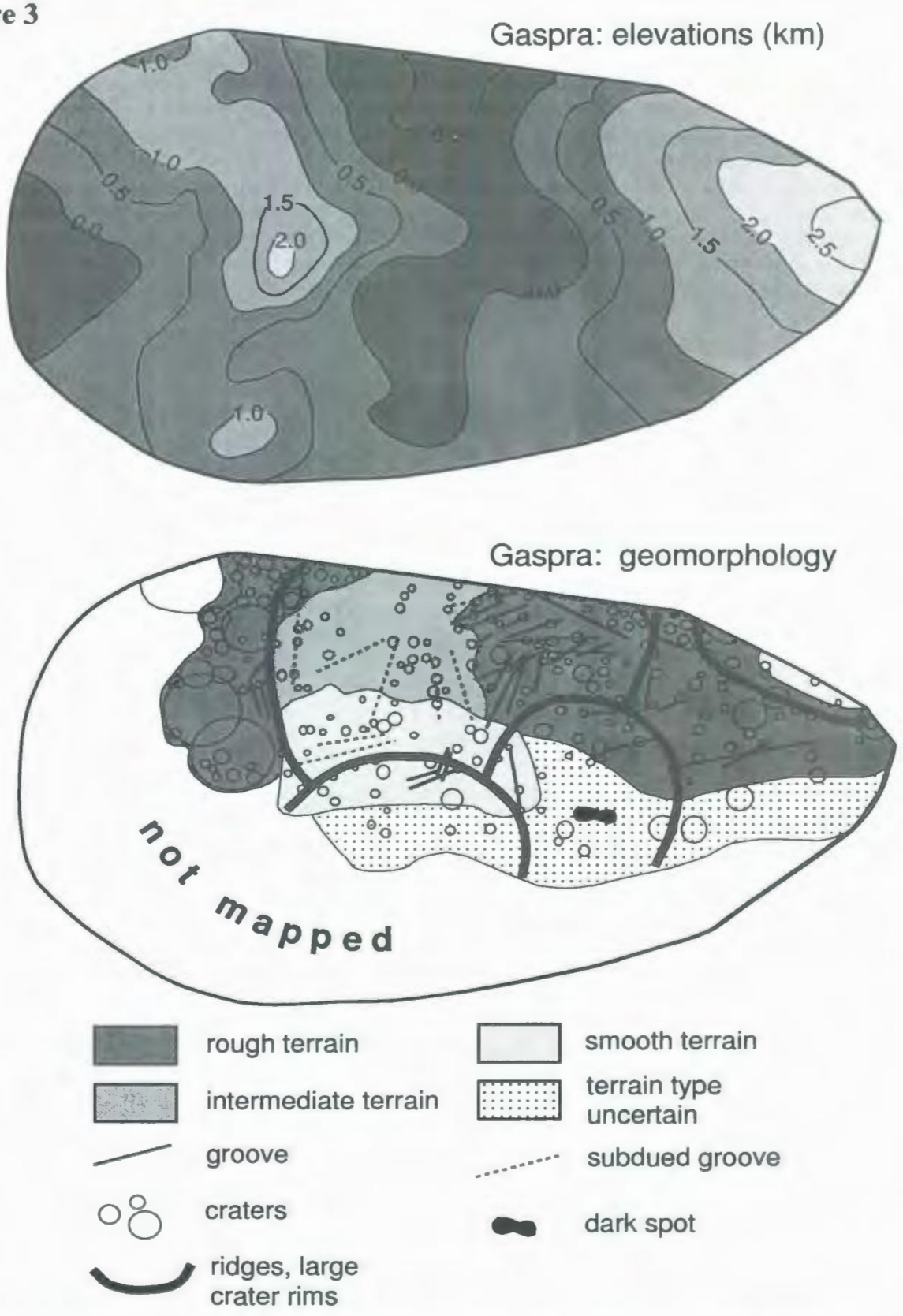
Maps of six small irregularly-shaped worlds. Left: Simple Cylindrical projection. Right: Morphographic Conformal projection. Scales vary considerably (Toutatis is 4 by 2 km, Proteus is 400 km across). From top to bottom the bodies are: Prometheus (moon of Saturn), Gaspra(asteroid), Janus(moon of Saturn) Proteus (moon of Neptune), Hyperion (moon of Saturn) and Toutais (asteroid). Unless otherwise noted, all illustrations are by the author.

Figure 2



The asteroid Gaspra, the first to be visited by a spacecraft. Gaspra is 18km long, and the projection is Morphographic Conformal. Above: shaded relief map with grid. The central longitude is 90°. Below: photomosaic prepared from images taken by the Galileo spacecraft in 1991.

Figure 3

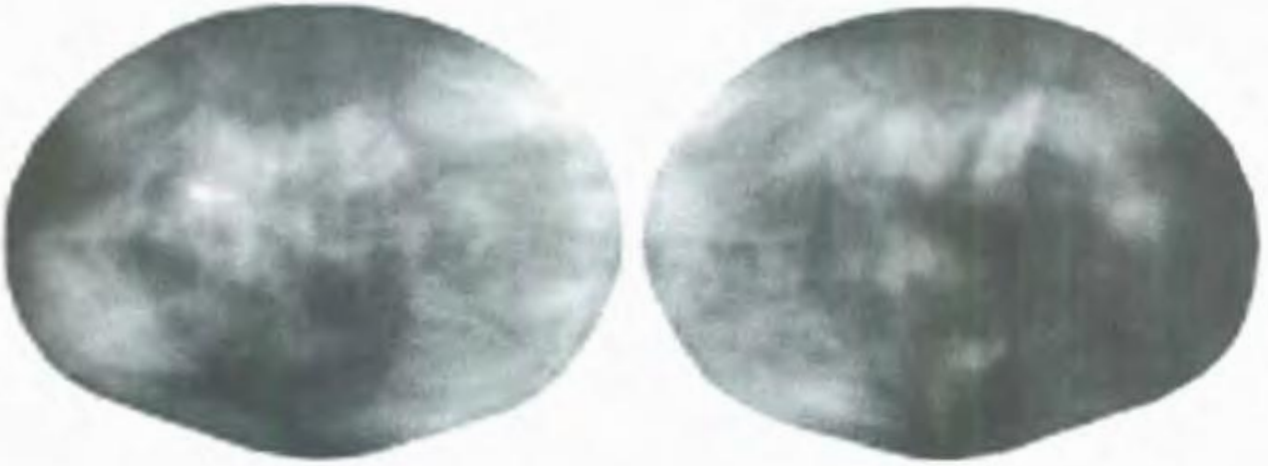


Gaspra. Above: contours of elevation in kilometres, measured relative to an ellipsoidal datum with dimensions of 16 by 9 by 9 km. Below: geomorphology

Figure 4

Four photomosaics of the 50 km long asteroid Ida. The top two views are equatorial, the bottom two views are polar.

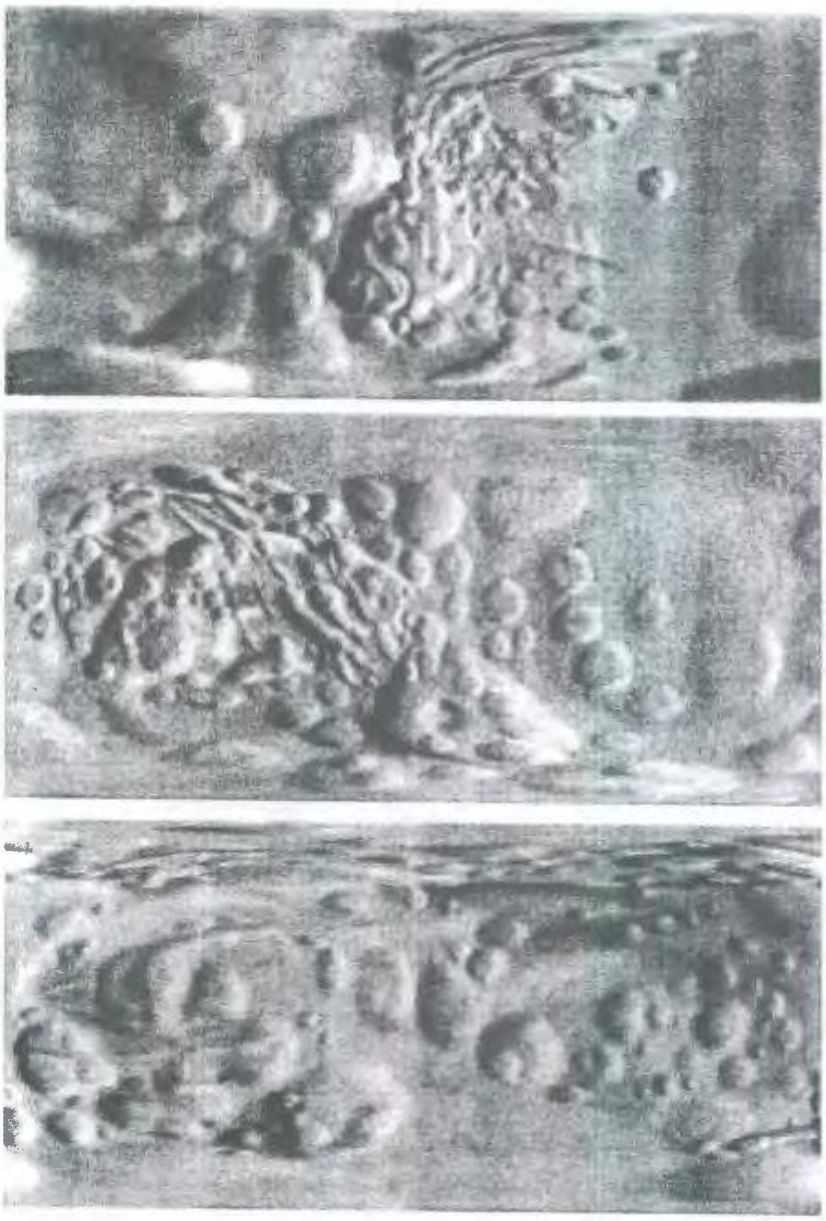
Figure 5



Above: the asteroid Mathilde as seen by the NEAR spacecraft in June 1997, the most recent asteroid to be explored. Mathilde is 60 km across. No maps of Mathilde have been published. Image courtesy of the NEAR/ MSI team and Johns Hopkins University Applied Physics Laboratory. Below: photomosaics of the asteroid Vesta, made from images by the Hubble Space Telescope and a shape model derived by Peter Thomas of Cornell University. Vesta is 550 km across.

(continued from page 26)

images of an asteroid called Mathilde (Figure 5), and will spend most of 1999 orbiting another asteroid, Eros. A mission called Deep Space 1 will fly past an asteroid in 1999 and a comet nucleus in 2000. Contour, the 'Comet Nucleus Tour' spacecraft, will examine three comet nuclei between 2003 and 2008. Other missions are anticipated over the same period. In addition, the U.S. will be joined by other nations in this exploratory endeavour. Japan will attempt to land a spacecraft on an asteroid in 2003 and return samples of it to Earth. An American 'micro-rover' will be carried by that lander and will be driven around on the surface of the asteroid. The European space agency will send a spacecraft past two asteroids and then into orbit around a comet nucleus in 2011. It will land on the icy body to photograph and analyze its surface. Other objects will be observed by the Hubble Space Telescope (Figure 5) and by radar from Earth. From these observations, detailed maps of many small, irregularly shaped worlds will be prepared over the coming decades. Cartography continues to serve exploration.....or is it the other way round?



simple cylindrical projection

morphographic conformal projection

Department of the Interior "Homestead Records" and Township Survey Plans, 1873-1930

D'Arcy Hande
Saskatchewan Archives Board
presented at the 1997 Annual ACMLA Conference, Saskatoon, Saskatchewan May 1997

- Department of the Interior given responsibility for administration of Dominion Lands Act, 1873.

- Jurisdiction over natural resources, including crown lands, retained by federal government upon establishment of Alberta and Saskatchewan in 1905.

- Transfer of Jurisdiction over natural resources negotiated with prairie provinces in 1930.

- Some records transferred to Government of Saskatchewan after 1930. Those now in Saskatchewan Archives include:

* Dominion Lands registers went to Saskatchewan Dept. of Agriculture Lands Branch (now in Regina office collection).

* Files relating to crown lands available for purposes of homesteading, including grazing leases, also went to Department of Agriculture Lands Branch (now in Saskatoon and Regina office collections).

* Files relating to other natural resources (timber, mineral deposits, etc.) went to Saskatchewan Department of Natural Resources (now in Saskatoon office collection).

* Files relating to surveys and mapping also transferred to Saskatchewan Department of Natural Resources, presently Central Survey and Mapping Agency, Saskatchewan Property Management Corporation (some surveyors notebooks have been retained by the Agency, other notebooks and correspondence files have been transferred to our Regina office).

- The "homestead files" for individual parcels of land were transferred directly from federal Dept. of Mines and Resources to Saskatchewan Archives in 1956. These files comprise correspondence and reports relating to the following types of grants:

* Homesteads and second homesteads (allowed at various times under the Act) of quarter-sections of 160 acres.

* Pre-emptions and purchased homesteads (allowed at different times under the Act) of quarter-sections 160 acres

* "Half Breed Scrip" lands, entitled those of mixed Indian/European ancestry, as recognized by the Half Breed Commissions, to a grant of 240 acres. Often this land scrip was assigned to someone else.

* "South African Volunteer Bounty" lands, entitling veterans of the Boer War to a half-section of 320 acres. Often this scrip was assigned to someone else.

* Soldier Settlement lands, entitling veterans of World War I to grants of 160 acres of crown lands, where available.

* School lands sold by the Department of the Interior, the revenue from which was assigned to educational purposes.

* Seed grain liens, recording transactions between settlers who borrowed money from the federal government for the purposes of purchasing seed grain, using their homestead land as security.

* Miscellaneous other grants/sales relating, for example, to the disposition of individual parcels of land formerly attached to Indian reserves, lands on which churches had been built or other "public" sites established prior to homesteading, and small parcels of land created by topography (islands, peninsulas, etc.).

- Township plans based on surveys by Dominion Lands Surveyors are also available from roughly 1880 to1930. Sets of these are available at both offices of Saska-

tchewan. Archives and at National Archives of Canada (who compiled a very helpful guide in 1974; has it been updated?).

- Besides showing physical features like bodies of water and topography, the township plans give written and visual information on vegetation and general types of soil (eg. sandy, loam, etc.).

- Human habitation and other intervention on the original landscape are also recorded on the township survey plans. Features that are most often recorded are:

* Original cart trails, and later railways and other surveyed roadways.

* Fur forts and settlements, such as at Batoche/ St.Laurent and Lebret near Fort Qu'Appelle.

* Homesteads of squatters who settled prior to the survey, showing buildings, cultivation and often associated names.However, contrary to public expectation, there are no maps with the names of all homesteaders recorded on them, much as those might be useful to the modern researcher.

- What types of information are available from these records and how might that information be used? Here is a list of the types of information -- name of homesteaders, origin, notation of naturalization, size of family, previous occupation, record of residence and improvements, livestock; other entries, sometimes relationships to others in district, letters, reports; other documents, birth certificates, etc.

* Several years ago these plans were used by University of Saskatchewan geography faculty and students in a project to do a study of water resources at the time of the original surveys as compared to the modern era. The area of small and large bodies of water, lakes and ponds ("sloughs," to use the prairie vernacular) were measured on contemporary maps and compared to modern maps based on aerial surveys.

* Local history committees spent considerate time perusing homestead files, surveyors' files and notebooks documenting the early days in their communities. Basic information on file about the homesteaders and their agricultural improvements, as well as comments by surveyors of the earliest inhabitants are especially interesting. Correspondence and inspectors' reports on file provide personal insights into community affairs and local economic circumstances.

* Specific historic sites projects like those providing background to the Batoche church and rectory site (north of Saskatoon) and to the Motherwell homestead site (east of Regina) have studied the composition of the local communities vis-a-vis important events associated with the particular site. Parks Canada historian Lyle Dick, as an example, after his research relating to Motherwell homestead, went on to publish an article arguing that the economic status of Motherwell's neighboring farmers often dictated how involved they would/could be in the development of the Territorial/ Sask. Grain Growers' Association.

* Students of block settlements, such as the Metis in the Batoche, St. Laurent, and St. Louis districts, German-Americans at Luseland (SW Sask.) or Mennonites (N of Saskatoon) have uncovered useful information on origins, settlement patterns, and kinship ties within original communities.

* Researchers of Indian treaty entitlement have done extensive research on files relating to alienation of lands from Reserves and then opened for settlement and relating to Europeans or Americans homesteading in the neighborhood to specific reserves.

* In years gone by, researchers have tried to document the extent to which speculators purchased large amounts of Metis land scrip for the purposes of speculation and profit. There are innumerable cases where individual realtors purchased huge amounts of scrip from Metis and transferred title to their own or their companies' names and then shortly afterward sold it to settlers at great profit.

* Now that the 1901 and earlier census returns are open, it would be interesting to revisit the content of the homestead records to research information on family size, national/ethnic origin and community relationships within certain districts and correlate that information with the detailed population and agricultural census certain returns.

* A scientific analysis of the amount and monetary value of improvements to homestead lands in the initial three to five years after settlement is necessary. Has the failure rate or rate of individual homestead development been sufficiently documented to make generalizations on who were the most successful farmers and why they prospered as compared to others? Modern electronic databases will better enable this type of quantification and analysis.

QUÉBEC

Meeting of Québec map librarians
University du Québec à Montréal (UQAM)

May 7, 1997
Pierre Roy
Pierre Lépine

Present: Pierre Roy (map library, UQAM), Karl Gingras (UQAM), Pierre Lépine (map library, Bibliothèque nationale du Québec (BNQ)), Françoise Lange (map library, Université du Québec à Chicoutimi (UQAC)), Cécile Fugulin (map library, Université de Montréal (U de M)), Yves Tessier (map library, Université Laval), Heather Cunningham (McGill University), Carol Marley (map library, McGill), Michel Robert (map library, Hydro Québec), Yves Michaud (map library, Université du Québec à Rimouski (UQAR)), Marie Lefebvre (map library, Université du Québec à Trois-Rivières (UQATR)) and Lise Lessard (map library, Université de Sherbrooke).

Motivated abscence: Christiane Desmarais (National Institute of Scientific Research-Urbanisation (NISR-Urbanisation).

1. Opening of the meeting.

Pierre Roy welcomes all participants and accepts to chair the meeting. Pierre Lépine will act as secretary.

The agenda prepared by Pierre Roy was accepted by all participants.

2. Map libraries in times of budget restraints

What is the situation for map libraries in an era of budget restraints? Each participant presented the situation in their own institution. Most map libraries have problems mainly at the human resources level, because it is difficult to replace those who are leaving (retirement or leave of absence) by personnel having similar qualifications, as well as strong turn over in replacement personnel. This situation forces map librarians to spend a lot of time training personnel who will move on to perform other duties.

A quick glance at all map libraries gives us the following picture:

-Sherbrooke. Strong turn over of replacement personnel. There is an advantage however, the diminution of resources at the Library services has allowed more time for small projects like map cataloguing.

-Chicoutimi. Regular rotation of replacement personnel. The map library has used temporary personnel (in regards to Article 25 of Employment Insurance), for cataloguing of maps. Managing of the map library now represents approximately 50% of Françoise Lange tasks.

-McGill. Personnel leaving is not replaced; Carol Marley will be on sabbatical next year and Heather Cunningham will be working on a temporary basis insuring a certain continuity. The map library is undergoing a major restructuring and will be offering geographic information system laboratory services.

-Hydro Québec. In the past, maps were located in different administrative units, but the diminution in resources has imposed the centralisation of maps at the Geomatic Service. Michel Robert is now the only person managing the maps; however, cartographic material is still in different storage areas. The acquisition budget has gone from $50,000 to $5,000. All map library services internal or external are now subject to user fees, this may help to compensate budget cuts.

-Rimouski. Yves Michaud is the only employee at the map library; this is a very worrysome situation because no-one is being trained to eventually take over.

-Trois-Rivières. Turn over of replacement personnel in the last months. As well, Marie Lefebvre tasks' are contantly increasing and are becoming more diversified. Management of the map library now represents only 50% of her work.

-Bibliothèque nationale du Québec (BNQ). Pierre Lépine indicated that he was tempted by the recent retirement programme, but he has decided to stay on. This program does not allow staff leaving to be replaced, this is creating a lot of uncertainty towards who would take over. The project for the creation of a "grande bibliothèque"

in Montréal actually being studied could help create a new type of map library, with new resources. This "grande bibliothèque" could be a new institution, it is not known yet what would be the links between the new organization and the others (BNQ, UQAM) and more institutions.

-NISR-Urbanisation. In Christiane Desmarais' absence, Pierre Lépine indicated that the map library is not accessible to researchers and students as it was before. Christiane's work includes more and more map library tasks including graphic work.

-UQAM. There is a turn around in personnel, due to cuts in the money spent on salaries. Pierre Roy indicated that he will have to reduce the area by 30% in the next move in about two years. Pierre has decided to steer the map library more towards consultation of electronic documents in order to limit paper documents. In regards to the "grande bibliothèque", he estimates that the map library could eventually be part of it, or it could simply be closer to its users: at this moment it is a sure fact that the map library will have to move in two years from now.

3. Technological changes

3.1: The project for the initiative of democratisation of data of StatsCan (IDD)

At the moment, four map libraries in Québec are involved in the project IDD (UQAM, Trois-Rivières, Laval and McGill) which includes fifty-six canadian universities. These institutions have among other things access to data on a Statistics Canada FTP site , following a location contract; they do not have to buy at an expensive price each of the files. Training sessions are planned in June in Montréal for those responsible for the IDD project.

In Trois-Rivières, the implementation is slow as no promotion has been made yet. Marie has started to extract geographic files.

At Laval, Gaétan Drolet librarian for numerical data and Yves Tessier are working together. Yves considers his involvement as very important in making spatial reference data available. Yves has already started to do research on these types of data and to transfer files to his clients. He thinks that map librarians should also be interested in other geomatic data which could become accessibles besides those at StatsCan, he invites us to follow closely the creation of a québec geomatic data server.

At McGill, Carol already supplies her clients with many files and she is working closely with other people involved in the project.

At UQAM, there is a four members committe for IDD and Pierre Roy is managing the geographic files. He offers the following services: finding of data, transfer of files and technical help to retrieve, decompress and convert files. The work on data is done in the laboratories. Map library users will be able to access the files already researched if they have the authorization through the library Web interface.

3.2 Geomatic in university libraries

Yves Tessier presented us the text on geomatic that he prepared for a presentation on the Working group on access to documentary resources from the «Conférence des Recteurs et des Principaux des universités du Québec (Crépuq).» He first presented a brief historical background on the subject and tried to clarify certain aspects. He then presented what should be map libraries role at different levels: first supply information on the existence of available data, secondly, be able to offer access to the data. Thirdly to get the equipment and expertise to allow data visualization and its manipulation with adequate spatial analysis tools.

Yves considers that first it is necessary to agree on the level of services to be offered. He proposes that universities (concertation) agree between themselves. This could help to ease access to data, the IDD project is a perfect example, and gives us bargaining power. He thinks for example of a better access to Québec's data and negotiations with the "Centre québecois de développement de la Géomatique" where a strategic study on the exchange of data on spatial reference in Québec is being prepared. According to Yves, the situation is perfect to present this project to the Committe responsible for this.

The map librarians most knowledgeable with this question had a discussion. Françoise Lange agrees with Yves, she has been asking and hoping for this "concertation" for six years. Pierre Roy also agrees; he thinks that right now because there is no clear mandate, we are limited in our actions. Carol Marley also agrees and reminds everyone that in Ontario "OCUL" has negotiated with the Ontario government to access numerical data for the maps 1:10,000; however, she does not know if map libraries have started to receive this systematically.

3.3 Internet sites in map libraries.

In Rimouski, the internet site is very popular and because of this, the map library now has a better visibility and larger volume. Yves Michaud wants to keep his site up to date.

Françoise Lange also mentionned that the internet site has also increased the use of the map library and brought different clients.

Pierre Lépine indicated that the Map Collection is presented on the internet site of the BNQ, and with this presentation there are also 20 different maps including fire insurance plans; the BNQ is presently negotiating with the British Library (BL) the numerisation of about 2,000 fire insurance plan boards found exclusively at the BL. Since the BL is asking for royalties to use its boards, their internet access is not likely to be free.

4. Use of numerical spatial data at the UQAM map library

At first, the UQAM map library offered different electronic atlas for consultation on CD-ROM. These atlas were of different value, with very diverse interfaces and needing material and software configurations sometimes quite different. Therefore, most of them have been dropped. Following the CARL/ESRI project, a decision was made to limit the work environment to ArcView and Photoshop, to better use the available resources. Windows NT was seen as the best system because ot its stability and security.

Pierre Roy is aiming at allowing users to be autonomous in research, manipulation and exportation of numerical spatial data.

After reaching an agreement with the Geography department, Karl Gingras a trainee developed an interface with Windows help "modules" guiding users step by step. Also Karl programmed ArcView with Avenue to ease the work of those just starting and to add new functions to automate everyday tasks. Karl also gave us a demo of this project.

5. The BNQ is moving

Pierre Lépine explained that the BNQ project has two phases, one building for the conservation (kind of bunker), and a building to give access to documents (downtown).

The actual building where the map library is located since 1977 answers to the conservation side and it has really been used as a "bunker"; treasury bonds have been printed here, later Loto-Québec tickets were printed in this place. The building has been arranged to temporarily house some collections opened to the public including the map library.

Concerning the accessibility phase, there are talks to build a "grande bibliothèque" a committe has been created to submit a report to the Government in a very short period; however, no information is available on this project at this point, except the fact that information would be available through electronic means.

6. The collective index on plans...:ground use...
(Chritiane Desmarais)

Pierre Lépine handed out a photocopy of Christiane's Index cover page; he indicated that research was not only done at «INRS-URB» and in university libraries but also in organizations like "Gaz-Metropolitain" and even in different municipalities. The index is available through the "BNQ" and was published by them. Pierre Lépine will send documentation containing all the necessary information to map librarians.

7. Last OCUL meeting.

Carol Marley will be reporting by e-mail on the last meeting of the "OCUL" map librarians from Ontario. (Done).

8. Hydro Québec's map library geo-index project

Through this project, Michel Robert wants to allow users to access the indexes of all the maps available in his repository through Internet.

9. Varia

Pierre Lépine indicates that the BNQ keeps only one copy of maps. The additional ones can then be circulated among other map librarians. The extra maps he received through legal deposit are also available.

Pierre Roy has obtained the inventory of fire-insurance plans (for Québec) from Phelps with Lorraine Dubreuil's assistance who is from McGill. In many cases there were multiple copies of the same boards. Pierre allowed the BNQ to complete its collection, through different editions of the same board. He has given the opportunity to other map librarians to complete their own collections as well.

Marie Lefebvre indicated that the Québec Atlas is on Internet as well as the Mauricie regional atlas project; she thinks map librarians should be consulted on their users needs.

Yves Tessier
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LAVAL UNIVERSITY
Laval University Map Library

ORGANIZATION OF A WORKING SUB-COMMITTEE ON GEOMATICS OR SPATIAL REFERENCE NUMERICAL DATA IN QUÉBEC MAP LIBRARIES

for the "Conférence des recteurs et des principaux des universités du Québec (CREPUQ)"

1. Context

Spatial reference numerical data (geomatics data) are becoming an increasing source of information on the territory and are naturally falling in map libraries laps. Whatever form printed or numerical, cartographic documents and access services are the foremost "raison d'être" for map libraries. The emergence of this new electronic documentary service has to be carefully planned and supported in its development.

The Québec universities library directors have acknowledged this fact and decided to act upon this by creating a sub-committe on geomatics or spatial reference numerical data in map libraries.

This sub-committee is under responsibility of the working group on access to documentary resources also coordinating a sub-committee on numerical data (neighbouring sector to geomatics data). The Group on access to resources had recommended the creation of a Sub-group on geomatics, after analysing the situation and recommendations presented in May 1997 by Yves Tessier from Laval University. These different work groups were created by the libraries Sub-committee of the Québec universities rectors and principals conference.

2. Mandate

The sub-committe's mandate on geomatics is as follows: "determine action priorities to develop access to spatial reference numerical data, specifically those in Québec, by the most appropriate means, including sharing available expertise and experiences completed or in progress in Québec's university libraries."

3. Composition

The sub-committe is composed of the following:

Anastassia Khouri, McGill University
Pierre Lépine, Bibliothèque nationale du Québec
Pierre Roy, Université du Québec à Montréal

Yves Tessier, Université Laval, acts as sub-committe chair

Onil Dupuis, CREPUQ, acts as sub-committe secretary

Mr. Dupuis, responsible for research at CREPUQ, helps insure this sub-committee works properly and Ms. Khouri is the liaison with the numerical data Sub-committe.

4. Work Orientation

To begin with, the sub-committee will accomplish the following actions in preparation for mid-term planification of its interventions.

-organize communications between the sub-committe and the community; creation of a list of discussion bringing together map librarians

-inventory of the situation, needs and expectations of the community; a questionnaire is being prepared to get a picture of the actual situation, express your needs and expectations and indicate to us priorities on which the sub-committe should work first; the questionnaire will allow you to inform us on your specific expertise as well as tools developed in your community;

-identification of strategic problems to look into closely; the availability and the means to access Québec's data is already one of the issues to be looked into closely, as well as developments on the Canadian scale.

Yves Tessier, president
Sub-committe on geomatics

New Books and Atlases

Frank Williams

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Note from the editor .....

The Regional News and Book Reviews will be featured in the next issue of the *Bulletin*, Volume 101

19th Internationa Cartographic (ICA) Conference

The 19th International Cartographic Association (ICA) Conference and the 11th General Assembly meeting of the ICA will convene in Ottawa, August 14-21, 1999. This world-class event will be held at the outstanding facilities of the Ottawa Congress Centre and the adjoining hotels. Over 2,000 delegates and 70 member nations will be on hand to participate in the week-long activities that are planned for the largest cartographic exposition in the world.

In recognition of this prestigious event, nine other national and international associations representing over 25,000 members will hold their annual general meeting in conjunction with this gathering. The huge map exhibition that will be open to the public and the exposition trade fair will feature the latest in cartographic products and services from government and industry. We will also provide the forum for leading authorities from around the globe to present papers and conduct comprehensive workshops on a wide array of scientific and technical subjects.

Incorporated in this event will be an extensive social and accompanying-persons program plus the opportunity to participate in the numerous technical tours offered throughout the region.

Final details of this event will undoubtedly be refined as the various activities are confirmed. If you wish, you may request further information, including a newsletter, from the organizing committee. Also an electronic mail bulletin will be sent to those requesting it who have an email address.

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19085 U.S.A.

WAML INFORMATION BULLETIN
c/o Mary Larsgaard
Map & Imagery Lab, Library
University of California
Santa Barbara, CA 93106 U.S.A.

Note from the editor.....

It is with a great deal of saddness that I wish to inform the membership of the following events. On April 30th, 1998, the university administration closed the doors of the Paul E. Vandall Map Library where I worked alone for the past 16 years and declared my position as Map Librarian for the Department of Geography redundant. Faculty in the Department of Geography have chosen to go their separate ways and have been amalgamated with Political Science, Sociology and Earth Sciences. The University still offers a Geography Programme.

I will always cherish the memories of interacting with all of the wonderful professional map librarians and archivists over the years.

I have completed this edition of the *Bulletin* from my home and would like to thank my family for their encouragement and help in completing this task. I especially wish to thank my daughter, Tammy Milks, who so willingly acted as a proof reader for me and my son, Robert Milks, who fielded my messages through his e-mail address.

I would also like to thank the association for writing letters on my behalf and especially to Alberta Auringer Wood and James Boxall for their support which extended above and beyond the role of professional colleagues.

Sincerely,
Rosaline Milks

David Brown, Carol Marley, Richard Pinnell et Pierre Roy. J'apprécie grandement leur bonne volonté et leur aide dans ce projet. De plus, plusieurs autres membres de l'ACACC à Ottawa sont activement impliqués dans la préparation des expositions, la programmation des activités et d'autres comités en vue de la conférence. Puisque l'ACACC aura sa réunion annuelle à l'intérieur de ce congrès, il est important qu'elle ait un mot à dire dans l'organisation des événements. Grace Welch est donc notre liaison avec le comité organisateur de l'ACI. Il y aura une rencontre à Ottawa le 9 juin pour discuter de l'évolution de l'organisation.

Membres à la retraite: Cathy Moulder travaille à la reformulation de la définition des membres telle que stipulée dans l'arrêté de l'Association afin d'inclure les personnes à la retraite. Ceci fera l'objet d'une motion dans la section des nominations lors de la prochaine assemblée générale annuelle.

Atlas National: l'ACACC a été approché pour fournir un représentant sur un comité d'évaluation d'une nouvelle édition de l'Atlas nationale du Canada.

Archiviste: l'ACACC a maintenant un archiviste; il s'agit de Jeffrey Murray. Il était en vacances lorsque je suis allé à Ottawa en octobre dernier, mais il encourage ceux qui ont du matériel des anciennes réunions ou du bureau du directeur à le lui faire parvenir.

ESRI (Environmental Systems Research Institute): La lettre d'entente d'ESRI a été signée,scellée et envoyée à l'ABRC. Guide sur les droits d'auteur: j'ai rempli un questionnaire concernant le guide sur les droits d'auteur, demandant que l'information concernant les cartes y soit inclus.

Liste de membres: Il y a eu certaines discussions à propos d'inclure une liste de membres sur notre site internet et dans notre Bulletin. Cette demande sera discutée lors de l'assemblée générale annuelle. En attendant, les commentaires sont toujours appréciés.

Congrès de "l'Association des spécialistes en information cartographique": j'ai participé aujourd'hui à un appel conférence avec Alice Hudson, Ralph Ehrenberg, Christoper Baruth et Patrick McGlamery. Cet appel a été rendu possible avec la participation de "Geography and Map Division" de la "Library of Congress". Alice Hudson a accepté d'être la porte-parole et contactera les différents groupes impliqués concernant l'intérêt à renouveller les activités.

CRSH: la lettre concernant le besoin de données d'archives nationales envoyée par Chuck Humphrey au CRSH pour le compte de l'ACACC et de CAPDU n'a toujours pas reçu de réponses. Nous allons y donner suite. Le nouveau président du CRSH a donné une allocution à l'Université Memorial le 17 février dernier, mais n'était pas au courant du dossier. Dans un autre ordre d'idée, le CRSH a décidé d'étendre les termes de notre présente entente de bourses de voyage d'associations académiques pour une période d'un an, et nous allons recevoir un montant de 2,225.00 $ pour l'année fiscale 1998-1999. La portion "administrative" de la bourse ayant été supprimée plus tôt.

Courrier: voici quelques unes des lettres et messages électroniques reçus ou envoyés.

7 octobre 1997 - De Tony O'Connor - information de CAFICA pour la conférence de l'ACI en 1999
12 octobre 1997 - l'Association des archivistes du Québec (AAQ) - rencontre 30ème anniversaire
13 octobre 1997 - Western Association of Map Libraries (WAML) - conférence concomitante de l'an 2000
16 octobre 1997 - De Shirley Harmer - sujet: voyage et atelier
4 novembre 1997 - Shirley Harmer - sujet: voyage et atelier
7 novembre - De CRSH - extension de la subvention de voyage pour un an
18 décembre - De CRSH - nouvelles initiatives de recherche et développement
15 décembre - David Woodward - contribution au projet "Histoire de la cartographie"
16 janvier 1998 - De Debora L. Treu, Univ. of Wisconsin Found - merci pour le don
19 janvier - De Earls Price - dépositaire des cartes du Bureau des cartes du Canada (BCC)
26 janvier - De Linda Zellmer - conférence concomitante de l'an 2000 avec WAML
29 janvier - De Michael Ridley - proposition RNCan/ABRC au sujet de la base nationale de données topographiques (BNDT)
17 février - De la Société canadienne des Postes - suggestions demandées pour la conférence de l'ACI en 1999

Vos commentaires et vos questions sur n'importe quel sujet touchant l'ACACC sont toujours les bienvenus.
Au plaisir de vous voir en mai prochain!

Alberta Auringer Wood
25 février 1998

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