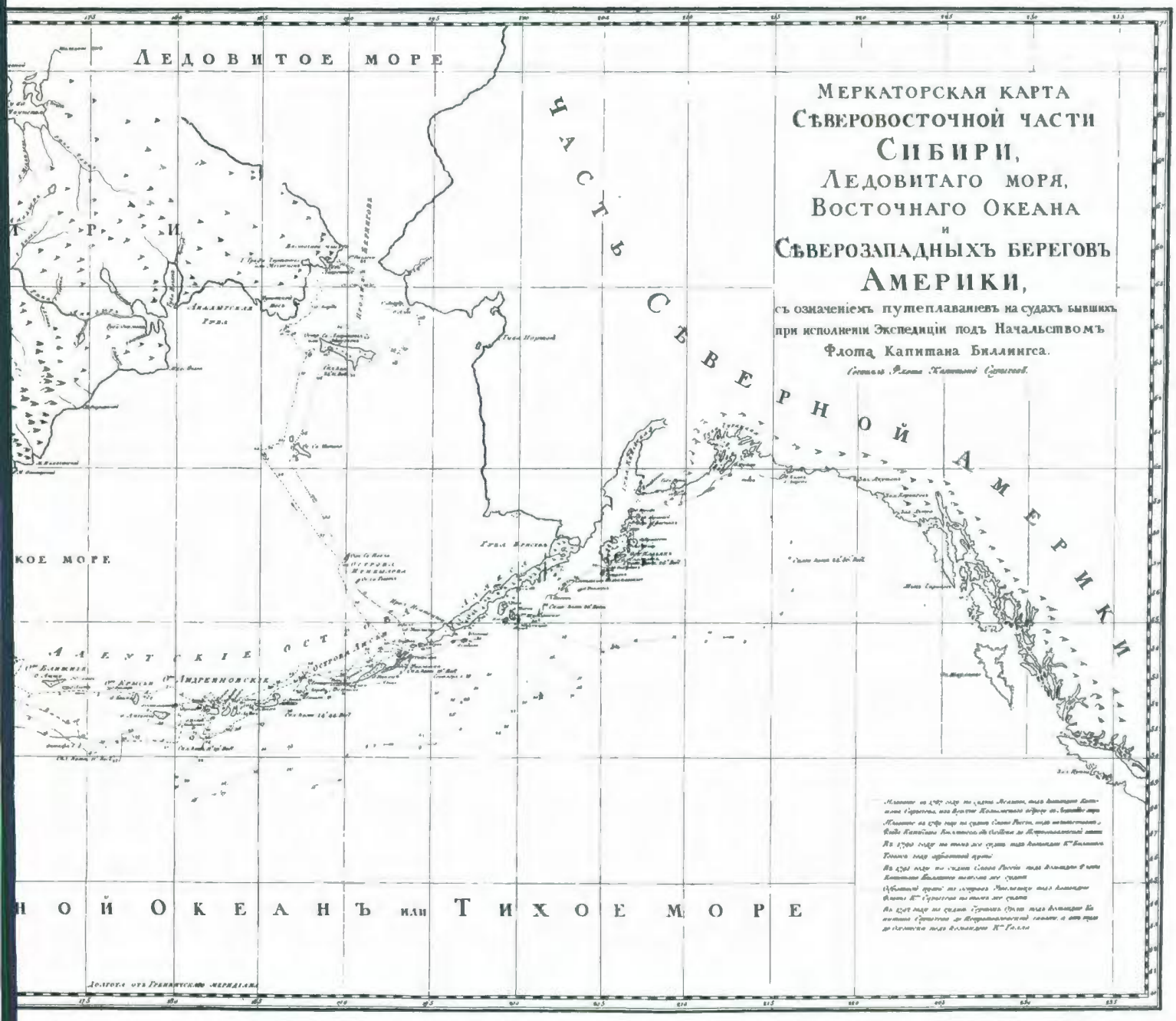
ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

ASSOCIATION des CARTOTHEQUES et ARCHIVES CARTOGRAPHIQUES du CANADA



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

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

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

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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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ON THE COVER...

This map by G.A. Sarychev appeared in *Puteshestvie Flota Kapitana Sarycheva*, St. Petersburg, 1802. Reproduced from an original in the collection of S.A. Sauer, London, Canada as ACML Facsimile Map Series, Map No. 48 (ISSN 0827-8024).

Cette carte par G.A. Sarychev apparut dans *Puteshestvie Flota Kapitana Sarycheva*, Saint-Petersbourg, 1802. Reproduite a partir d'un original de la collection de S.A. Sauer, London, Canada a été reproduite dans la Série de cartes fac-similés de l'ACC, carte no. 48 (ISSN 0827-8024).

SEE PAGE 33 FOR ORDERING AND CATALOGUE DETAILS!

MESSAGE FROM THE PRESIDENT

This is my first issue to present this "message from the President." I am honoured to be able to serve in this capacity and appreciate the help that others have already given to me to begin the year. Thank goodness there are "carry overs" on the Board, such as Cathy Moulder as Past President, to whom I can look to for advice. We shall all try to keep you well informed of activities of the Association through this *Bulletin*, as well as through CARTA (the Canadian "list serve" for map librarians). We can also use help from our members!

In her message in the last issue, Cathy Moulder noted the just past annual conference in Vancouver and thanked those who organized it. I would like to add my thanks to them as well: Tim Ross, Frances Woodward, Poh Chan and Janet Collins. The information on conference activities appears in this issue.

The Board has approved invitations to hold the 1996 annual meeting in Halifax and the 1998 conference in London, Ont. James Boxall is the Convenor for 1996, while Cheryl Woods is the Convenor for 1998. We need a site and Convenor for 1997. **Any Volunteers????**

Another area where a volunteer is needed is to serve as Chair of the Awards Committee. In the last issue of the *Bulletin*, Colleen published the "guidelines" that serve as the terms of reference of the committee. **Would someone be willing to do this?**

Speaking of Colleen, beginning with issue no. 96 for Spring/Summer 1996, we will need a new Editor for the *Bulletin*. Colleen will be stepping down after her agreed to two years of service. **Another volunteer is needed!** The task is an important one, too, since it involves preparation of the primary means of communicating with our members. Please contact Colleen for additional details on what is involved.

There is yet another opportunity for one of our members to contribute to the association by serving as the Reviews Editor of the *Bulletin* . Carol Marley wishes to cease doing this with issue no. 96, Spring/Summer 1996. She has been doing the reviews since June 1992, issue no. 83. **Who would like to take on this very interesting assignment??** You will get to see all the latest publications in the worlds of cartography and map librarianship, including a lot of atlases. Contact Carol or Colleen for additional information.

Yves Tessier is leading a task group to prepare an action plan for GISIG (Geographic Information Systems Interest Group/Groupe d'interet sur les systemes d'information geographique). Other members of the group are Colleen Beard and James Boxall (representing ACMLA), Wendy Watkins and Sharon Neary (representing CAPDU), Ernie Boyko (representing Statistics Canada) and Stefan Palko (Geomatics Canada).

I have been serving as one of the ACMLA representatives on the Canadian National Committee for the International Cartographic Association (ICA) along with Louis Cardinal. Now, I am serving on an advisory committee for the Canadian Bid to hold the ICA meeting in Ottawa in 1999. For this I provided suggestions on a possible theme and topics for sessions. I wrote a letter of invitation to the delegates at the forthcoming 1997 ICA meeting in Barcelona that will go with the bid package. There will be a booth at this meeting and Cheryl Woods has sent some facsimile samples and their catalogue. Bruce Weedmark will send copies of our membership brochure, while Louis Cardinal will provide a few publications for it. This will be an opportunity to inform delegates of our activities.

The papers presented at the Map Library in Transition conference held in Washington, D.C. on October 18 and 19, 1993 have been published in *Cartographic Perspectives* no. 21, Spring 1995. These include a paper by our own Colleen Beard, *The Future of Digital Data in Map Collections: One Perspective,* plus six others. Patrick McGlamery of the University of Connecticut has agreed to take on the mantle of Convenor of the Congress of Cartographic Information Specialists Associations from Christopher Baruth. He is planning to organize a telephone conference call soon to discuss future activities.

The ACMLA Board will meet in November. If you have any items that you wish to bring to the Board for discussion, please do let me or one of the other Board members know. Our names, addresses and phone numbers are on the inside cover of the *Bulletin*.

Alberta Auringer Wood

THE DAY IT RAINED ALL NIGHT IN THE CARTOGRAPHIC VAULT:

Lessons in Disaster Preparedness and Recovery at the National Archives of Canada

Edward H. Dahl, Greg Hill and Mary E. Murphy

PART I

THE FLOOD: Learning Through Total Immersion

Edward H. Dahl

Perhaps no single event related to archives in Canada's history has received such wide and intensive media coverage as did the flood that occurred on the fourth floor of the National Archives of Canada building on July 4th, 1990. Through the medium of television alone, several million Canadians were taken into a place most will never personally see—a rather ordinary low-ceilinged room on the fourth floor of the Archives' main building, at 395 Wellington Street in Ottawa, and there into a small corner of that room enclosed with cinder blocks and a metal door and known as "the vault," where early landmark pieces with a total value of about five million dollars were stored. The local, provincial and national television networks all broadcast reports and film footage taken at the Archives on the 4th and 5th.

The early television, radio and newspaper reports contained numerous errors, though mostly minor given the circumstances (for example, we are not the holders of "the first known map of Canada" —it is in the Museo Naval in Madrid). Much of the same information and misinformation was quickly disseminated; it was clear that the various media were borrowing from each other. These inaccuracies got corrected along the way. We were both articulate and inarticulate and, if we did not always look our best, it is because we went on air without the benefit of make-up staff, and in my case, the first food I saw since lunch that day was in the form of doughnuts someone thought of ordering around 10 p.m. The pressure was, of course, on Dr. Jean-Pierre Wallot, the National Archivist, throughout this period, for this was a matter of going on air live, with no time for a rehearsal. I recall that one of the ways that Dr. Wallot obtained first-hand information later that evening was to station himself next to me while I, in painstaking detail, explained all the events of the evening to the major local newspaper.

Note. A six-minute clip of television news coverage of the flood was shown at this point.

But let's back up a bit just to get the story straight. On July 4th, at 6:20 p.m., as I was leaving my desk for the evening, a security guard on his 6 p.m. lock-up round, announced, a little out of breath: "Mr. Dahl, I think we have a bit of a problem. There's some water leaking into your reference room." I hurried to the room with him, moved some material on the table that was being dripped or splashed on, and ran back to my desk to phone the divisional custodian, Gilles Langelier. Gilles, in the middle of dinner, needed to know the seriousness of the leak. "Est-ce que c'est grave?" he asked (Is it serious?) I said I thought it was, and I think the anxiety in my voice prompted him to say he would set out for the Archives immediately, and would be there in about twenty minutes. (I should explain that I had one of the keys to the vault; the other was stored in a locked case, and only our own staff knew where the key to unlock that case was hidden. In other words, neither the disaster action team members, nor the security staff, would have had access to the vault, had I not still been in the office, before our divisional custodian arrived.) Then I rushed back to the reference room, now to check the vault where hundreds of rare original atlases were shelved, dating from 1490 to 1850, along with some important early manuscript maps, about eight hundred sheets of our disbound copies of *The Atlantic Neptune*, a late-eighteenth-century navigational atlas of the east coast of North America by J.F.W. DesBarres, as well as dozens of other treasures that

required special security and storage. (Figures 1&2)

Although the water was **dripping** into the reference room, in the vault it was more accurately **pouring** down through a crack in the concrete ceiling (Figure 3). The spot it had chosen could not have been worse. Our atlases are classified and stored according the Library of Congress classification system which puts all the Ptolemy atlases first (1005), followed by those of the two great atlas publishers of the late sixteenth century—Abraham Ortelius (1006), and Gerhard Mercator (1007). These are followed by the pre-1800 atlases published by the Blaeu family and others in the "1015" classification. In fact, the classification system ensured that only pre-1800 atlases were affected; the post-1800 atlases were shelved further along, out of harm's way. The water had selected, as a starting point, the top of the cabinets holding these treasures from the first century of the mapping of our country. When I entered the vault, many atlases were already wet, and water was running, as well, onto the map cabinets holding the flat maps, the floor was covered with water, and the humidity in this poorly ventilated space was increasing rapidly.

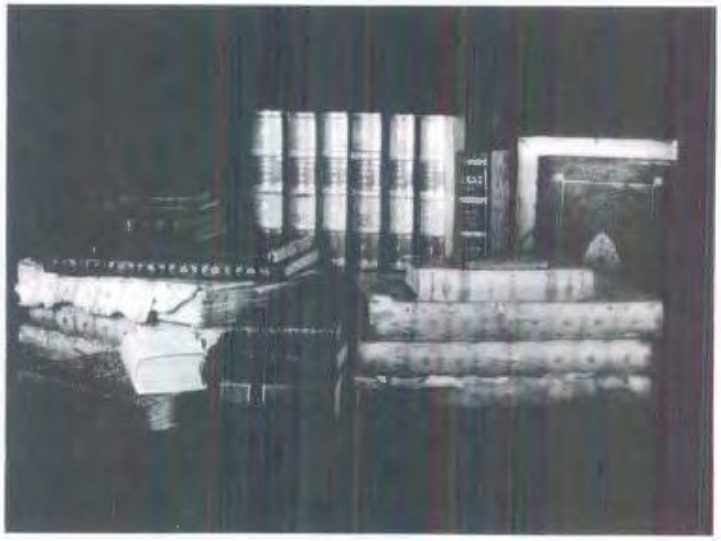


Figure 1: Rare atlases, dated 1490 to 1850, damaged by the flood. (Photo by Maria Bedynski)

Figure 2: A sheet from a disbound copy of The Atlantic Neptune, by J.F.W. DesBarres, stained by dirty water during the flood. (Photo by Marc Forget)

What happened next is reconstructed much like one pieces together what happened at the scene of a horrifying highway accident. Several details stand out clearly; some were added later from reports from others who were there. The on-call person on the Disaster Action Team was telephoned, as were more security guards, the head of security, the division director and other administrators, including the National Archivist, Dr. Wallot. Three security guards and I immediately began ferrying and passing the affected atlases out of the vault. The waxed linoleum floor was dangerously slippery for those of us wearing leather shoes. At one point, when the most severely affected atlases were out, I took a minute to run to the emergency supply cabinet in the next room to get plastic sheeting with which to cover the map cabinets. It was locked, with no crowbar in sight! Since every second counted, I merely cursed while running back to the vault to keep the atlas removal going.

Help began to arrive. Colleagues still in the building heard the commotion, came up and threw themselves into the rescue work. At the peak, there were thirty people present, involved in various ways. Greg Hill's text that follows recounts with much more calmness than I might be able to muster, the events that led up to the flood and what happened during those four hours, then outlines the part of this operation that he and his conservation colleagues took charge of. (And what a relief for me at that moment—to have experienced and knowledgeable people, like medical personnel at an accident, efficiently and without a lot of fanfare, simply taking care of the victims.) The water—thousands of litres—continued to drip, pour and seep into our area for an excruciating and infuriating four hours.

This was the Map Division's worst disaster and one of the worst for the National Archives of Canada. It resulted in untold costs in lost time and in the need for much additional work, along with the more specific conservation work required on the documents affected. It was a time to learn from a real-life rather than a simulated or imagined disaster, and Greg will try to encapsulate the lessons learned; Mary will put the best face possible on this event and draw attention to some of the good things that accompanied the bad, while filling us in on

some of the more specific treatments carried out with the help of one-half million dollars allocated specifically for this operation by the Government of Canada's Treasury Board.

No documents were lost—some permanent damage, certainly. The Archives has some excellent medics. After we had mopped up, their tasks were only beginning. Herewith a big thank you from a curator, perhaps a little more attached to these documents than is often the case, to those conservators whose more than four thousand careful hours over the next two years completed such a marvellous job on an important set of documents of Canada's early cartographic heritage.

Figure 3: Ed Dahl (protected from the "rain" by an umbrella held by Ed Tompkins) removing maps from cabinets in the cartographic vault.
(Photo by John Grace)

PART II

The Flood: A Conservator's Experience

Greg Hill

On June 28th, that is six days prior to July 4th, on floor 4M of the National Archives of Canada's main building, and directly above the affected cartographic vault, a drainage pipe from the building's chiller system developed a blockage. Plumbers effected a temporary repair and went home for dinner. Six days later, sometime during the afternoon, a second blockage occurred in the line, creating pressure which the temporary repair could not withstand, and the pipe burst dumping thousands of litres of water onto the floor. One of the truly remarkable discoveries of the evening was the fact that when the building was constructed, no floor drains were installed on the 4M level, a mechanical level through which many water pipes travel. One of the reasons this site was chosen for the vault was that there were no water pipes actually running **through** it.

The National Archives Contingency Plan, as it was at that time, included an on-call system. Four conservators and four archivists carried beepers on a weekly rotating basis, one conservator and one archivist on at all times, from 4:00 p.m. until 8:00 a.m. weekdays and twenty-four hours a day on weekends. Being a member of the team and being on call that July 4th, my lucky number came up at 6:55 p.m. I was contacted by beeper by the Chief of Security Services requesting my presence on site. Arriving at the archives fifteen minutes later, I found about six people already in the process of removing atlases from the vault and one of the janitorial staff removing water with a wet/dry vacuum.

It was obvious, after a quick assessment of the situation, that more help was required. Two other conservators who were part of the on-call system and who had previous recovery experience were contacted. John Grace and Hubert Leurs both responded immediately. When John arrived he in turn contacted both the operator of the freeze-drying unit and the Chief of Collections Management for the Documentary Art and Photography Division, fearing that the water might find its way into their storage area on the floor below. Colleagues from Exhibition Services were also called: one arrived with the National Archives' freezer truck while the other arranged to retrieve dehumidifiers from the Canadian Centre for Caricature (which is part of the National Archives) located in another building. John Grace also had the

presence of mind to grab a camera to document the event and, after replacing the dead batteries for the flash, was able to proceed.

On the 4th floor, removal of material from the vault continued until all atlases, globes and rolled maps on shelving were moved to areas of the floor that were free from the danger of dripping water (Figure 4).

Figure 4: The area outside the vault several hours after the flood had begun. (Photo by John Grace)

During removal, all water-damaged material was separated into three groups: thoroughly soaked material and wet "coated" or "glossy" papers, partially soaked materials and lightly wetted materials. Two of the conservation staff then took all thoroughly soaked materials and all coated stock materials and placed them in the freeze-dryer. Partially soaked materials were placed in plastic crates and put in the freezer truck, and lightly wetted books were fanned out on table tops for air drying. Space for air drying was found in one of the conservation laboratories and on the third floor where a move was in progress and the space temporarily empty.

More than an hour after the alarm was raised in the National Archives, the National Library salvage operation got underway. Much of their material fell into the partially soaked category and was placed in the freezer truck. Again, thoroughly soaked material was placed in the freeze-dryer while the remaining lightly wetted material was air dried. Efforts were then concentrated on covering cabinets and shelves with plastic sheets in all other affected areas, as well as in potentially threatened areas.

Meanwhile, on floor 4M, different means of disposing of the water were investigated. Vacuum cleaners capable of vacuuming up water were brought in, and although they worked well, there was no place to empty them. It was determined that water could be poured down a ventilator shaft on one side of the building. This was, we thought, a good solution and we were told by building engineers to proceed.

By 9:30 p.m., the plumbers were able to make a break in the line at the spot where the second blockage had occurred which, fortunately (or so we thought at the time), was very close to the ventilator shaft. Unfortunately, we soon discovered that the water being dumped down the shaft was feeding out through vents into stack areas on several floors on the way down. These leaks were caught relatively soon after appearing, and minimal damage resulted. Several hundred volumes belonging to the library of the National Archives were affected, most requiring simple air drying. The flow was then directed to a spot in the shaft that avoided leakage through the vents. Plumbers finally managed to stem the flow at about 10:00 p.m. by cutting out the second blockage and effecting temporary repairs. These did **not** sit for six days before permanent repairs were carried out. Commercial carpet cleaners finally arrived shortly before 10:00 p.m. With great lengths of hose which had been pulled up the stair wells, they sucked up the water from the 4M level floor and deposited it on the street. This operation was completed by approximately 3:00 a.m.

Meanwhile, water was continuing to pour into the fourth floor vault area through the cracks in the ceiling and, although all of the material on open shelving had been removed and the map cabinets had been covered with plastic, it was decided to check all of the drawers for water. Stored in these cabinets were the eighteenth-century DesBarres charts. Upon investigation, many were discovered to be wet at the front of each drawer. The cabinets were emptied immediately and the water-damaged charts taken to the conservation laboratory, where they were interleaved with blotters and lightly weighted under plate glass to keep them flat.

Undamaged material in drawers was moved to a non-threatened area on the fourth floor. At midnight, two other cabinets within the vault were also emptied on the advice of conservation staff because of the high humidity levels, even though the contents were dry.

Between 12:30 and 2:00 a.m., recovery workers roamed throughout the building looking for puddles and listening for drips. Where found, water was vacuumed up, plastic placed over books and documents, and all wet books removed. Soaked materials were taken to the freeze-dryer and lightly wetted books were fanned open and air dried. Altogether, material on three other floors had been affected.

Dehumidifiers and fans were brought to the site and placed in strategic spots, primarily inside the vault and in the study area immediately outside it. By 2:00 a.m., everything that could be done had been done and a security guard was posted to the fourth floor. Guards were instructed to increase the frequency of their rounds and look for leaks, and at this point the majority of the disaster recovery team departed.

PART III

Conservation Treatment of the Damaged Maps and Atlases

Mary E. Murphy

It is fortunate that with the bad there were many good things that resulted from the July 1990 flood at the National Archives of Canada.

The use of new technology, made available through special funding from Treasury Board, made it possible to apply new techniques. Consensus reached as to the treatment of the damaged documents was fostered by an unprecedented level of communication between the archivists and the conservators. In the area of public awareness of our concerns and our work, never before had we been given such an opportunity to share this with so many people through newspapers, radio, and television. The media were invited to continue covering the story as work progressed.

After the flood, a number of items considered to be landmarks in the history of map and atlas production were treated, such as the vellum-bound folio-sized atlases, *Theatrum or Novus Atlas*, published in the Netherlands between 1640 and 1655 by Joan Blaeu, one of the great atlas and map publishers of the seventeenth century. In our laboratory we treated two sets of six folio volumes published by Blaeu. Also treated were the five water-damaged volumes of Ptolemy's *Geographia*, with maps reproduced by copperplate engraving, and three volumes by the Antwerp publisher Abraham Ortelius.

As a first step in identifying the conservation requirements, a chart was drawn up listing the damaged atlases, with a breakdown of the treatment each required and an estimate of the time required to carry it out. The time estimated for the twenty-four atlases was just over three thousand hours. For the maps, nine hundred hours was estimated.

A team of five conservators from the permanent staff was assembled to work full time on the project. To carry out their regular duties for the duration of the project, several conservators were hired on contract.

Detailed condition and recommended treatment reports were prepared for each item. Photographs documenting the water damage (showing stains, tidemarks, colour loss, colour transfer, swelling and cockling, etc.) were taken of all atlases and maps. Photographic documentation also showed damage sustained prior to the flood.

Work was undertaken simultaneously on the atlases and the DesBarres charts from *The Atlantic Neptune*, dated 1775-81. Thirty years ago, these charts had been removed from their original bindings. The forty-eight charts affected by the flood had been cut into sections close to the original joins (and as a result became ninety-six sections). In some cases, the edges with plate marks and imprints had been trimmed so that the sections could fit into uniform-sized boxes to facilitate storage.

Three categories were established for these charts. Categories 1 and 2 were for charts with varying degrees of minimal stains, tears and surface dirt. Category 3 was for the most damaged pieces, often with major water stains, large tears and pieces missing. Backings and old repairs were difficult to remove and a great deal of repair, infilling and reinforcement was necessary.

Washing removed most of the discolouration in the paper, and the tidemarks and stains from the water damage were reduced, greatly improving the appearance. The sections of these large charts were then rejoined by lining with handmade paper, thus restoring the publisher's intent that they be viewed as one large document.

Several months into the conservation treatment, we realized that there would not be enough time to complete the work on all the damaged atlases. In consultation with the curator, Ed Dahl, the atlases were prioritized for treatment.

The 1648 Blaeu atlas titled *Le Theatre du monde* presented a dramatic example of the extent of colour transfer that took place as a result of the atlas becoming wet (Figures 5,6 & 7). Since the colours were all very water soluble, special precautions had to be taken in the treatment of each plate to avoid causing further damage. This volume had been conserved at an earlier date. Its original binding had been replaced with a spring-back binding so that when the book was opened the guarded maps would lie flat.

Figures 5 & 6 : A sheet from the 1648 atlas Le Theatre du Monde by J. Blaeu. Water soluble colours from the cartouche in the lower right had transferred to the lower left of this folded map when it was wet. (Photos by Mary E. Murphy)

Figure 7: The Blaeu map after the staining was removed by a three-stage conservation treatment. (Photo by Mary E. Murphy)

Conservators dismantled the atlas and removed all fifty-eight coloured plates from their guards by means of a steam pencil. One hundred and thirty-six leaves of text without colours were washed, resized and air dried. The conservators were conscious of differing degrees of shrinkage or stretching throughout the treatment, since different methods of treatment were being utilized.

The treatment of the coloured plates proceeded as follows: first the transferred colours were removed by slightly scraping the chalky pigments. Then a .5% solution of methylcellulose was applied by brush in a circular motion to agitate the remaining pigments embedded in the paper fibres. Cotton swabs and blotting paper were used to remove the methylcellulose after the transferred colours had been successfully lifted.

With blotting paper under them, the plates were then placed on a suction table for further cleaning. A 70% alcohol / 30% water solution was sprayed on the verso of each plate so that the sheet would relax and lie flat on the suction table. Suction was turned on and very hot water was brushed onto the stained areas.

The binding style for the Blaeu atlas was carefully researched and it was determined that a vellum binding with a yapp foredge was most appropriate for the period.

A second atlas, the 1788 *General Atlas*, published in London by William Faden, required more than four hundred hours to restore. This atlas required a great deal of repair to each of the forty-seven maps, many of which were large and awkward to handle in the binding. The maps were cracked and torn, with pieces missing, especially along the folds. Past treatment had consisted of adding paper patches to the weakened areas of the map, resulting in the atlas taking on a different and ungainly shape, far from its original appearance.

The maps were removed from the binding in order to perform treatments such as removal of old repairs, washing, deacidification and repair. In order to ensure the preservation of the maps, it was decided not to return the maps to their original bound format. All forty-seven maps from this eighteenth-century atlas are now stored flat in acid free folders in a map cabinet. The old cover, even though it is not the original binding for this atlas, will nonetheless be kept and will be available for examination.

The 1607 and 1608 editions of Mercator's *Atlas Minor* presented a unique opportunity to investigate techniques to reverse a previous treatment (Figure 8). Every page in both of the National Archives of Canada's editions had been laminated with cellulose acetate and tissue during some earlier restoration. The atlases were abnormally thick, and the text and images rendered opaque by this treatment. The flood recovery project gave us an

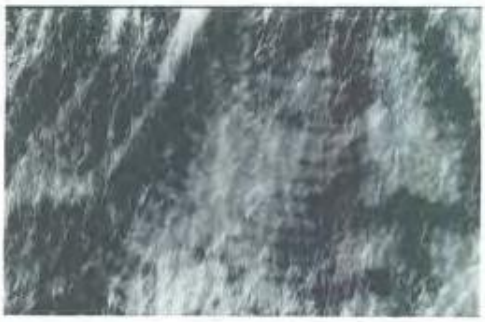
Figure 8: The 1607 and the 1608 editions of Mercator's Atlas Minor. The atlas at the right is shown before treatment; the atlas at the left, after treatment. (Photo by Mary E. Murphy)

opportunity to work on these two volumes which would otherwise not have been candidates for immediate treatment.

Under the cellulose acetate were many cracks and tears, adhesive tapes and paper patches. This lamination process may have been acceptable during the 1950s or 1960s, but today conservators have a wider choice of techniques to use in restoring valuable paper records. Conservators' ethics also dictate that only easily removable,non-damaging procedures and materials be used. Removing the cellulose acetate from the document without causing damage to the inks was performed with patience and delicacy using a specially designed fumehood and the chemicals acetone and dimethyl formamide (Figures 9 & 10). Repairs to each page were done with pulp which evenly fills missing areas without overlapping onto the text. An aesthetically pleasing result was made possible by the use of a new piece of equipment purchased for this project.

Throughout this project the conservators were regularly provided with information on the cartographers' lives, their place in history, the financial value of the maps and atlases and their significance to the collection which placed the items in their historical context and assisted in making decisions about appropriate treatment.

The very thought of unique and priceless archival documents being damaged by water is a horror to both curators and conservators. Yet, the July 1990 flood at the Archives gave the conservators an opportunity to add to their skills and knowledge and to extend the lifespan of many priceless national treasures.



Figures 9 & 10: Photographs of a detail of a map from The Atlas Minor before and after treatment. Figure 9 shows the map image covered by a layer of laminated cellulose acetate and tissue; Figure 10 shows the same area after the layer was removed. (Photos by Mary E. Murphy)

PART IV

The Post Mortem and Contingency Planning at the National Archives of Canada

Greg Hill

On July 11th, a Post Mortem of the flood was held. From this came thirty-two recommendations falling under five headings: Preparedness; Training; Emergency Supplies; Emergency Response; and Followup. The recommendations were presented to the Senior Management Committee of the National Archives with an introduction stating that the most urgent task facing the National Archives was completion of the departmental contingency plan and implementation of the associated training and preparedness measures.

Contingency planning at the National Archives began about a decade ago, going through various committees, task forces and working groups with responsibility shifting from one division to another and finally resting in the hands of Management Services Division. Many of the problems associated with the formulation of a plan stem from the variety and volume of material in the Archives, and the fact that during that time the collections were housed in fifteen different sub-standard buildings around the city. Several years ago, Historical Resources Branch put together an interim contingency plan that still serves as the current reference document. It also identifies the relevant divisional Disaster Action Team members. For ongoing assistance to security personnel, the Accommodation and Conservation Committee of the branch set up the interim Disaster On-Call program mentioned earlier. This has since been disbanded due to financial constraints.

Just prior to the July 1990 flood, outside consultants were hired to advise on the development of a joint contingency plan for both the National Archives and the National Library. In their final report, dated May 1990, they stated: "Our findings show that although there is a consistent perception that the plan should be a priority, the necessary resources and attention have not been placed on the finalization and implementation of the plan." The thirty-two recommendations resulting from the Post Mortem reflect this need to finalize and implement the plan. Since the 1990 flood, the Management Services Branch has completed a joint contingency plan for the National Archives and the National Library, but this plan covers only the main building. It has received approval in principle from the National Librarian, Marianne Scott, and the National Archivist, Jean-Pierre Wallot, and is now under review for eventual senior management approval prior to implementation.

The July 4th disaster provided a good opportunity to evaluate the contingency plan and our ability to implement it. It was not altogether a pleasant revelation. It is generally recognized that contingency planning starts with three basic concerns:

A. **Preparedness**. This includes training, maintenance of supply cabinets and bulk supplies, general awareness programs and building surveillance practices.

B. **Response**. This includes management systems and processes such as definition of roles and responsibilities, internal mechanisms, external contracting for suppliers and updating of procedures.

C. **Recovery**. This includes detailed recovery techniques and collection priorities during the recovery operation.

Our greatest triumph came during the recovery operation. People worked well together, responding quickly and effectively to directions. Threatened material was removed from the site with little or no further damage and all cabinets within the threatened area were protected with plastic. Water-damaged material was sorted for air drying, freezing or freeze-drying and several hundred books were fanned out on available table tops for air drying.

But not everything went that smoothly. Problems arose in getting into emergency supply cabinets, as all were kept locked. The supply of plastic sheeting in the cabinets was inadequate, resulting in time lost to scavenging from other areas. A large supply of dehumidifiers stored across the street was not found until late in the evening. Locating space for air drying material was a problem, as was locating book trucks for transporting material. Also, most recovery workers had no training in handling wet materials and few could recognize what material required freeze-drying as opposed to air drying. One example of the degree of training required was the fact that wet and damp leather bindings were placed directly onto varnished table tops. Needless to say, as they dried they stuck together. The end result was damage to several leather bindings. In spite of all of this, the recovery

operation was deemed a success. On the other hand, the Post Mortem recommendations made it abundantly clear that the prevention and response aspects of the contingency plan were the areas in which we had fallen down. The original thirty-two recommendations have been condensed and included here as an Appendix.

The National Library Post Mortem was held on July 16th, reflecting many of the same concerns as the Archives. The biggest problem for the Library staff was that they were simply not immediately informed about the flood. Security guards assumed the affected area was strictly Archives territory and no one bothered to check the Library stacks on the other side of the partition from the Map Division vault, where all the excitement was. Fortunately, at 7:30 p.m., an hour and fifteen minutes after the alarm was raised in the Archives, a National Library librarian was leaving and overheard security staff talking about the leak. She investigated and immediately sent out the alarm to library disaster action team members. One strong recommendation arising from this situation was that both occupants of the building be informed of any and all disasters happening anywhere space is shared. This was not the first time the Library was not informed when their collections were at risk. Although Marianne Scott, the National Librarian, was interviewed on national television, the National Library overall received very little attention throughout this whole affair, which is very unfortunate. When the National Archives does move from this building, which they will be doing soon, the Library will occupy all those spaces the Archives now finds troublesome.

The initial media coverage was, needless to say, somewhat exaggerated, with claims of thousands of volumes being irreparably damaged. Although the initial reports of the quantity of material damaged and the degree of the damage may have been exaggerated, the monetary value was not. First reports claimed over $500,000.00 worth. In actual fact the final figure was slightly higher. This is an accurate figure of just what this type of disaster costs by including replacement of carpet and some shelving, staff overtime, some conservation equipment required to complete the restoration, and emergency supplies such as more plastic, wet vacuums, dehumidifiers, storage portfolios and containers for collection material.

Although the reporting was somewhat sensationalized, it was not discouraged by the National Archivist, Dr. Wallot. His statements on national television that "this is not an act of God, but rather an act of neglect" and "our history is being lobotomized piece by piece" dramatically underscored the need for a new facility. Within the last five years, there have been between 130 and 140 reported instances of primarily water damage to documents. With these statistics and a variety of environmental studies conducted over the years, the truth is we do need new quarters. As you may know, a new National Archives building is slated to open in late fall 1996 in the town of Gatineau, which is in the National Capital Region.

Although nothing was totally destroyed, and none of the informational value of the material was lost, many items have been greatly devalued due to the loss of colour, loss of vellum bindings, etc., and this is irreparable. Also, conservation time that would have been spent maintaining the collection had to be redirected to the recovery of this material, some of which had already been conserved. As a result, in the fight to preserve the collections, we certainly lost some ground.

It is easy to point the finger in situations like this, but in the final analysis, it is being prepared for any eventuality that counts and being prepared requires commitment in the form of resources and a cooperative effort. To date we have been very, very lucky. The volume of material affected has always been relatively small. How we will cope if hundreds of thousands of books and several thousand linear metres of documents are thoroughly soaked is anybody's guess. In the present situation, undoubtedly much would be lost.

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APPENDIX A

POST-MORTEM RECOMMENDATIONS FOLLOWING THE JULY 4TH, 1990 FLOOD AT THE NATIONAL ARCHIVES OF CANADA

1. Complete and implement the Departmental Contingency Plan.

2. Monitor, verify and inspect all repairs and construction carried out on mechanical systems in the building

3. New equipment and furnishings (e.g., shelving) should be evaluated prior to purchase for their ability to withstand emergency situations.

4. Safety and health training should be required for all emergency response personnel. Concern for human life must be paramount.

5. Emergency response personnel should be given training in general emergency response procedures such as

whom to report to, what the individuals' responsibilities are, etc.

6. Emergency response personnel should be given training in basic handling of damaged and non-damaged collection material to ensure no further damage to the collection.

7. Emergency response personnel and security staff should be given regular tours of all buildings and storage locations to identify high risk areas, locations of drains, power panels, basic mechanical systems, etc.

8. Security staff must be given training in the appropriate response to a disaster, including the location of emergency lists and keys, whom to call, the removal of non-disaster recovery personnel, posts to be manned, etc.

9. Increase general awareness of all Archives and Library staff of disaster preparedness and preventive conservation measures.

10. Emergency supply cabinets must be restocked and updated regularly. They must be clearly identified and sealed to avoid pilfering (preferably with a dated paper seal that could be easily broken for quick access).

11. The location of all emergency supply cabinets must be posted inside each cabinet along with complete floor plans.

12. A central supply depot should be established in each building to house large quantities of supplies as well as large equipment such as water vacuums, dehumidifiers and fans.

13. Roles and responsibilities of all participants must be clearly identified. An overall coordinator of the operation is mandatory and should have the authority to commandeer space, write cheques, etc. The coordinator should be clearly identified by an arm band or hard hat as should all response team members.

14. The coordinator should maintain a log throughout the entire recovery operation and carry a mobile phone.

15. The coordinator must ensure sufficient personnel on site and deploy security staff to strategic spots.

16. Liaison with the National Library must be maintained throughout the entire recovery operation.

17. External contracting for supplies and services (e.g., carpet cleaners) must be renewed and updated on a regular basis.

18. Contact with the fire department, police and other emergency response organizations must be established or re-established on a regular basis. These agencies should be involved in any Departmental disaster training plan.

19. Emergency response procedures, including people to be contacted, must be updated regularly.

20. The media relations officer must be notified immediately to direct all coverage and ensure the presence of a photographer on site.

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GIS AND LIBRARIES: ISSUES AND IMPLICATIONS

Cathy Moulder

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> "The majority of the map library community...has not yet come to terms with how to integrate digital mapping with conventional services and the evidence of the ARL GIS project is not so far very encouraging...Even in this heavily sponsored project, with the aim of accessing only a few datasets with a few pieces of software, results suggest significant difficulties in moving beyond experimental implementation." (Perkins, p.95)

Most of the early literature about geographical information systems (GIS) and libraries is unmitigatedly enthusiastic about the addition of this powerful technology to public services. And quite rightly so, as GIS offers potential access to georeferenced digital information on an unprecedented scale. However, a few recent articles introduce a note of caution into the discussion (eg. Forer (1993); Kollen and Baldwin (1993); Perkins (1994)). GIS is complex and sophisticated—not turnkey technology by any means. This paper will attempt to delineate some issues and concerns, both technical and service-related, which are relevant to the introduction of geographical information systems into library settings.

'GIS is complex and sophisticated—not turnkey technology by any means.'

The librarian's first challenge may be to find ways of describing and explaining GIS to library users and to administrators. There are very few clear and simple explanations, in layman's terms, as to what GIS is. There are numerous descriptions of what it can do, and articles about its use in different disciplines. This is probably a reflection of the way in which geographic information systems themselves were developed. The successful applications came first, and the theory and concepts are only now being developed to support the discipline. But provision of access to GIS in the library implies a very broad potential user group, having computer skills and geographical knowledge in all ranges from none to expert. In a library serving environmental scientists, Rhind describes "a basic lack of understanding of what can and cannot be produced by the GIS and of the exact nature and contents of data sets held in the GIS" (J. Rhind, p.4). In a general academic or public library this problem of basic understanding will be amplified manyfold.

Cost of implementation is a primary concern. The hardware needed to support GIS, even at a minimal starter level, is more expensive than standard library installations. Digital spatial data, unlike normal alphanumeric data, require special graphics capabilities, a math coprocessor, and speed and size beyond any standard-issue library PC. Additional data storage, like a magnetic tape backup system or even a server, may be required to meet storage needs.

The cost of digital data is also a consideration for libraries. The cost of digital map purchase, outside the United States, is prohibitive. Steele (1993) indicates that large scale topographic coverage for just their local area would cost the University of Aberdeen Map Library £181,000, plus an **annual** update charge of £136,000. Canadian topographic maps in digital format currently cost $620 each, or more than $8 million to purchase the 12,922 tiles needed to cover Canada at 1:50,000 scale. Federal and provincial governments are presently embracing cost-recovery policies, in reflection of what Rhind (1992) describes as the international "commoditication" of information.

> "In contrast, the U.S.A. sees the almost free provision of federal government data as an entitlement of the citizen and as a precaution against the garnering of power by cliques through their sole access to information." (D. Rhind, p.28)

The Canadian phase of the ARL GIS Literacy Project took a year longer than expected to organize, because ARL and ESRI had great difficulty getting access to Canadian

spatial data equivalent to that donated for the American phases. U.S. government data, being abundant and cheap by comparison, may eventually fill the void of teaching materials which Canadian libraries are increasingly unable to supply. This lends sad credence to Rhind's conclusion that

> "the international differences in government ethos and legal constraints may...ensure that the variety of uses [of GIS] and the level of experimentation and hence innovation will be greater in the U.S.A."(D. Rhind, p.28)

Associated with data costs are a slew of data licensing requirements. On many kinds of data, there is a license fee for use, which is additional to data purchase. For example, in the case of the Ontario digital topographic maps, the multi-user license fee is either a one-time payment of 10% of the data cost with no updates or an annual fee of 5% of the data cost with any updates available at 50% of the normal cost. Digital data is much more likely to be available for use on a license or non-ownership basis, rather than for outright purchase.

> "In many prominent cases, for instance SPOT image contracts, the data vendor seeks to assert rights over derived products, or they may underscore their rights by leasing rather than selling data. In some cases vendors even seek to place a never ending lease in place, making access to ongoing funding a prerequisite for ongoing access to the data."(Forer, p.15)

'The cost of [Canadian] digital data is also a consideration for libraries. U.S. government data, being abundant and cheap by comparison, may eventually fill the void of teaching materials which Canadian libraries are increasingly unable to supply.'

Worse by far than the cost of licensing, however, are the multitude of confusing restrictions and copyright issues that are also entailed in data acquisition. As an understatement, "typically, copyright statutes lag behind technological developments" (D. Rhind, p.13). And the practical result is a patchwork of contractual and consensual agreements, providing neither consistent nor certain access rights. Different GIS coverages may have different restrictions, as may different categories of library users, making system administration in a library setting very difficult.

Another costly consideration in library implementation of GIS is staff time. Librarians and technical support staff will require training time and funds to learn about GIS and how it works. These are not turnkey systems, no matter what the manufacturers may eventually hope to achieve. Some basic understanding is necessary of computer operating systems, graphic communication and cartographic conventions, even beyond some experience with specific GIS frontends like ArcView 2 or MapInfo. Optimally the librarian should know something about remote access and Internet as well, to facilitate the transfer of data in and out of the system.

> "A cartographic materials librarian must become familiar with telecommunications protocols and operations of hardware and various storage devices. These ***information technologists*** must acquire special training on GIS and related technologies to assume an augmented role."(Wong, p.12; emphasis added)

The level of staff training needed is tied to the intended level of service and of user support, and to the GIS literacy of the library's users. Participants in the first two phases of the ARL GIS Literacy Project report that ArcView users require significant staff assistance in accessing the data and creating a map, ranging up to 4 hours per map (Kollen and Baldwin, p.36; Perkins, p.98).

> "Most people do not know how to use the information in hard copy maps, so why should we expect them to be able to interpret more 'difficult' digital products?" (Perkins, p.98)

The introduction of GIS will be very time consuming in terms of staff intervention and support. Simple user guides and instructions for access will be crucial. Multiple-user bibliographic instruction sessions would be preferable, but only successful for groups with a consistent level of need. New kinds of user support activities might be necessary, for instance requiring users to view a video of instructions or work through an interactive GIS exercise **before** accessing the library terminal. GIS will almost certainly increase user demand for staff assistance in interpreting maps and other outputs. This assistance with both finding and "reading" is already a necessary part of the reference service in a map collection. The complexity of digital data and of GIS makes it almost certain that this type of interpretative assistance will be more frequently needed, again with implications for training at all levels of public service staff. Similarly, the library can anticipate requests for assistance in locating and downloading data from remote Internet sites, and other inquiries as much related to computer operation as to information. If the library provides an access tool like GIS which is capable of analysis and the creation of new information at high speed, then it will be necessary to

reexamine our roles, to assess how much service and how much user support we will, or will be able to, provide.

Another major issue for library consideration is the archiving of superseded information. One of the most significant benefits of GIS in many applications is the ability to reduce the revision cycle on producing accurate location mapping. In libraries, this strength is actually a disadvantage. In a dynamic revision GIS, new spatial data overwrites the old. And yet many library users require access to the older iterations: to identify change over time, to make use of older data like census using appropriate contemporary boundaries, to assess the evolution of ideas. Lai and Gillies (1991) express the library's problem: "Which set of data constitutes the 'original' cartographic material? Which data sets should be retained or discarded?" (p.247). The issues of data ownership previously mentioned, the capacity of storage necessary and the requirement to continue to provide access to data in potentially outdated formats further complicate the library's decisions.

Cataloguing issues are a traditional area of library concern, and digital spatial data will undoubtedly pose further challenges. Bibliographic description is based on ownership and on a fixed format entity. GIS coverages may not fit either of these criteria. "The most important attributes of machine readable mapping may well not even be available as fields in standard MARC format records" (Perkins, p.96). Users will need information about format, technical specifications, the source of the digitizing and its accuracy and date. The generally agreed-upon emphasis in cataloguing GIS data is on describing the database itself, and not the potential results or outputs which are myriad. Still there may be instances when a particular map output is also added to the collection and catalogued, and its provenance must be recorded in some new way. Most collections agree that decisions on what to catalogue need to be made on the local level, based on user need, rather than on international standards.

Finally, there are considerations for library GIS implementation which are of a technical nature. GIS is a very sophisticated technology. It serves two basic functions, inventory and analysis. Libraries are inherently concerned with the inventory-type functions of GIS, as these are in accord with our existing mandates: the storage of information, the provision of access, etc. The analysis functions are most powerful and more complex. These involve the technical operations like overlay analysis, network analysis and surface modelling. There are inherent yet hidden technical issues relevant to lay use of GIS, as for example data error, selection of decision rules in force and method of interpolation. Boolean and relational operators are common in bibliographic search tools; bitwise, combinatorial, logical and trigonometric operators, and the concept of "map algebra" are unknown. These functions require significant training and understanding. To get a sound and meaningful output, a GIS user must start with an understanding of both the data and the process. The output is only as good as the worst input data. High tech cannot change poor logic in analysis, or correct error in input data. In fact, it can multiply them to nonsense with great speed and precision.

And yet a recent video describing three participating libraries in the ARL GIS Literacy Project suggests that full-function GIS is being successfully implemented in both academic and public libraries (ESRI, 1994). It does not explain how the libraries have reached this level of staff and user competence, nor how the complex technical issues involved in "true" analytical GIS are made clear and simple enough to satisfy the needs of library users at all levels.

Lang (1992) has speculated "it will probably be another five years before GIS technology gains widespread use in libraries" (p.882). Forer (1993) anticipates "probably a decade of chaos" (p.16). Judging from recent progress in the field, that interval will make a very significant difference towards the solution of issues perceived today as problems, like unfriendly frontend software, data restrictions, unfinalized metadata standards, and copyright uncertainties. Things in this realm of technology are moving very, very fast. The potential for achieving improved access to geographical information is enormous, and fully worth the considerable effort required to incorporate GIS into the library. This is our future as far as geographic information is concerned, and the library must be equal to, as well as fully aware of, the challenges entailed.

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In the next issue...

Spatial Data in Digital Form: an overview
Mary Larsgaard

The Early Surveys of Niagara
Alun Hughes
(Promised for this issue, but postponed 'til the next)

1996 ACMLA Conference in Halifax, Nova Scotia Preliminary Program

More reviews

The *Regional News* column continues!

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Copy deadline for the *Winter 1995* issue is December 1st.

REPORT OF THE ACMLA/WAML JOINT CONFERENCE

University of British Columbia, Vancouver, B.C. May 9-12, 1995

Reports submitted by:
Alberta Auringer Wood (AAW), University of Newfoundland; Carol Marley (CM), McGill University; James Boxall (JB), Dalhousie University; Helen Clarke (HC), University of Calgary

The opening session began with introductory remarks by the Presidents of ACMLA and WAML, Cathy Moulder, McMaster University, and Kathy Rankin, University of Nevada at Las Vegas. Dr. Maria Klawe, Vice president, Student and Academic Services, University of British Columbia, gave a welcome on behalf of the University.

Keynote speaker: Dr. R. C. (Cole) Harris, Department of Geography, University of British Columbia

Dr. Harris gave an overview of the historical geography of British Columbia in his presentation. Using slides, he noted that the process of colonization and the resulting geographical displacement had huge cartographic ramifications. There was a massive depopulation following the advent of Europeans due to small pox and other diseases. The majority of Europeans came after most of the native people had died, which provided great opportunities and a bonanza for new arrivals, especially in the availability of land. The first encounters were violent and assaults on traders were avenged in a very public manner (public spectacle of power). Gold rushes brought 15-20,000 miners to the Fraser Valley. With the declaration of British Columbia as a crown colony, the establishment of Indian reserves began. Missionaries, such as the Oblates, found an opportunity for undiluted christianity. The huge Red Cedar and Douglas Fir forests were decimated. There were great fishing canneries, but agriculture was somewhat difficult due to lack of suitable land, though there was a bit of a range cattle industry. There was a whole new human geography, including "city hall in a tent". Unlike Eastern Canada, settlement was primarily by middle-class English. It was a very racist society, according to Professor Harris, who cited the 28 to 1 ratio of Chinese men to women at the turn of the century because of a head tax. There were Dukhobor Russians in central British Columbia. There was a quality of bewilderment in dealing with change and different backgrounds. The native people did not entirely disappear, and according to him, the population is growing.

Mapping the First Nations' Lands in the Pacific Northwest

Convenor: Frances Woodward, Special Collections and University Archives, Library, University of British Columbia

Robert Matthew, Shuswap Nation
Robert spoke on the "Challenge of Mapping Cultural Information: Maps of the Shuswap Lands". He said that they want to own their past as well as their future. His definition of nation was a self governing, organized people with a language who have claimed land with a boundary. His nation once had thirty communities, thirteen have totally disappeared, and there are now seventeen cooperating bands. At the moment, he indicated, they have stopped making maps because they could not produce ones telling all the uses of the land. He felt that communicating use and stories, sights and sounds is needed. To achieve this, they are trying to use three dimensional displays and CD-ROMs. In terms of place names, he indicated that they are going back to stories to determine how they were named.

Linda Zellmer, Head, Geology Library, University of Wyoming
Linda spoke on "Another View of Map Preservation: The case of Glyph Maps". She described problems of "collecting" or finding these petroglyphs, as well as preserving them. Getting to know people in the state and locating information in diaries and other reports were means that she suggested. Some were destroyed by seismic activity recently, and there are also problems with vandalism. She estimated that they are from 1100 to 1200 A.D. and pre-date the horse as it is not pictured. She displayed slides of some that she felt were cartographic, indicating knowledge of the plains by natives. She is classifying them as pictorial maps.

The morning session was concluded by Connie Manson of the Washington Division of Geology and Earth Resources in Olympia. Ms. Manson described the operations of her division which has fifteen geologists, three

cartographers and two librarians. Their budget has been cut by about 30% over the last four years. Using hand drawing and other manual techniques, publishing 1:250,000 scale geologic maps of the state is in progress. The SW and NE sheets have been done, SE is in preparation, but $30,000 is needed for printing, while compilation of the NW sheet is proceeding. They are slowly moving into automation, for example, doing liquefaction maps using digital means. They are also working on hazards mapping in Puget Sound where there is evidence of six great earthquakes along the coast area. They have plans to put the bibliography of Washington geology on the Internet and do the index of geologic mapping in ArcInfo and make it available on the Internet. They can only sell publications for the cost of duplication. (AAW)

Environmental Mapping by Non-Governmental Organizations in British Columbia

Carol Marley, Convenor ; James Boxall, Recorder

Speakers: *Ian Parfitt*, Director, Research and Mapping, Western Canada Wilderness Committee, Vancouver, BC
David Leversee, Sierra Club, Victoria, BC
Susanne Rautio, Mapping Project Manager, BC Wild, Vancouver

"Whether in our minds, or printed on paper, maps are powerful talismans that add form to our individual and social reality. They are models of the world—icons if you wish—for what our senses 'see' through the filters of environment, culture, and experience. When the fundamental importance of perceiving real and imagined space is compared to what passes for most mapping today, a huge separation is apparent. In our consumer society, mapping has become an activity primarily reserved for those in power, used to delineate the 'property' of nation states and multinational companies. The making of maps has become dominated by specialists who wield satellites and other complex machinery. The result is that although we have great access to maps, we have also lost the ability ourselves to conceptualize, make and use images of place—skills which our ancestors honed over thousands of years." *Boundaries of Home: Mapping for Local Empowerment* (see Review Section)

Doug Aberley's thoughts were familiar to the panelists who came to share their experiences with using digital data in aid of environmental protection in British Columbia, one of the most active provinces in Canada in the realm of environmental mapping.

Ian Parfitt of the Western Canadian Wilderness Committee acquainted us with WCWC's work in British Columbia, and their international work in South America, under the auspices of WILD. On the BC front, WCWC has been working with the community in Clayquot Sound, emphasizing sustainability in their grass roots approach to safeguarding the environment. (For more information on the organization, see Parfitt's article in ACMLA Bulletin #90, pp.6-8. Alternatively, catch up on their recent activities through the web site, http://www.web.apc.org/bcwild./welcome.html).

One of WCWC's most recent endeavours is the Burke Mountain Project, the end product of which was an attractive map-brochure (see Bulletin #93, p.44 for a review) designed to inform B.C. residents of this magnificent wilderness, so near to greater Vancouver . One of the great frustrations in carrying out the project was the inaccessibility of the Terrain Resource Information Management (TRIM) map series in digital format. The data needed as base information to feed into the GIS was priced at $12,000, no concessions made for a public educational endeavour.

David Leversee, when attempting to map the results of logging on Vancouver Island for the Sierra Club and the Wilderness Society, experienced similar frustration in obtaining large scale forestry information in digital format. To learn more about these activities and associated publications, contact the Sierra Club of British Columbia, 1525 Amelia Street, Victoria BC V8O 2K1.

Susanne Rautio spoke on behalf of BC Wild, created in 1993 to provide a coordinated, strategic approach to securing protected areas in the province. Rautio directs the organization's mapping program which has supplied the imagery and information about wildlife and ecosystems, and the impacts of industrial development, that drives advocacy campaigns to protect ancient forests and wilderness areas in B.C. Among the maps presented by Rautio were GAP analyses of parts of the province, indicating what ecosystems were actually going to be protected by proposed provincial programs. BC Wild, active on a number of fronts, has organized a Conservation Mapping/ GIS Network, to assist the environmental community in becoming technically self-sufficient. More about the organizations' activities can be found in the *BC Wild 1994 Retrospective* (see Appendix 1).

Like our other speakers, Rautio is concerned about the public's lack of access to digital data. Rather than facilitating access to information, the distribution of provincially produced digital data has created two classes of citizens, the moneyed and the have-nots. The situation is such that the government does not want to lose money, nor does it want to be overrun with information requirements from the public for electronic information. The

Carol Marley and guest speakers (seated) lead the Environmental Mapping session. (Photo by James Boxall)

A candid moment for Tim Ross and Cliff Wood, at the banquet. (Photo by Alberta Auringer Wood)

Conservation Mapping/GIS Network is working on overcoming these problems and has drafted an 'Access to Information' Proposed Policy (see Appendix 2). Essentially the Network proposes to share data, at a moderate price, among environmental groups with non-profit status. Rautio points out that at most this would apply to approximately twenty organizations with GIS capability, at the moment. At present the provincial government is not receiving any revenue from the environmental community, so this arrangement should not challenge any existing revenue sources.

Rautio put the question to the audience, "Why should electronic data be more expensive than the paper maps they are designed to replace?" Needless to say, since the audience was comprised chiefly of map librarians and archivists, a heated discussion ensued.

The panel discussion provided an opportunity for those responsible for major university and government map collections to meet with members of environmental groups in B.C. who use GIS and need digital data from various levels of government. Both constituencies are experiencing similar problems. Very likely we can work together to provide government agencies with solutions so that Canadian citizens will have the electronic information they need to take part in public decisions. (CM)

(Notes recorded from James Boxall):
Carol Marley began this interesting session in a unique way; she read from the book, *Boundaries of Home: Mapping for Local Empowerment*. This helped to set the tone for the panel presentation on how environmental NGOs use maps (and especially GIS) in their work to protect the environment of British Columbia. Carol also stated that British Columbia is most likely the most active area for environmental organizations in Canada, later confirmed by Susanne Rautio, who stated that there are over 350 environmental NGOs in BC.

Susanne Rautio (SR), who works with BC Wild as head of their GIS mapping work, began the panel presentations by discussing the BC Wild mapping project and the work that has gone on to date. SR stated that, of the more than 350 NGOs, only five were actively using GIS in their work. Also, the Native Community seems to be further ahead in using GIS than other environmental organizations. SR stated that she is currently part of BC Wild which was organized by the EARTH LIFE organization (actually, it operates more like an 'alliance' of people and there is no 'membership'). Recently, Community Regional Environmental Planning (CORES) has started to meet with success by increasing, through lobbying and education, the amount of protected areas from 6% to 12% of land area. An outgrowth of this effort has been the development of a Conservation GIS Mapping Network which aims to assist those at the grassroots level by providing GIS services and consultation.

SR provided several cases that exemplified how GAP Analysis using GIS can point out weaknesses in the way we protect wilderness. GAP analysis works by combining vertical classifications of bio-geo climatic regions with the horizontal ecoregional classifications; resulting overlaps (with some correct modelling) provide direction as to the areas of concern. Recently, this work led to a startling revelation about the percentage of proposed protected areas on Vancouver Island. It had been suggested that 13% of the land would be protected, but the GAP analysis showed that of that 13%, only 6% was composed of low to mid elevation forest, while the remainder was in Alpine regions. One could have had the impression that a great deal of wildlife and vegetation would be protected whereas, in fact what was being protected was snow and ice (not to say that Alpine areas are not important).

SR finished her presentation by outlining the current "hot potato" issue of access to government digital data. It seems that the price of the digital Terrain Resource Information Maps (TRIM), scale 1:20,000, is $600 per map. BC's forest cover maps, also going digital, cost $250 per sheet, as opposed to less that $5 for the paper product. Through their 'alliances' of environmental NGOs, numerous presentations and reports have been given to the provincial government outlining the need for better i.e. cheaper access to spatial data for NGOs. Companies (usually forest companies on the 'opposite side' of the debate) can afford the data more easily than the NGOs. A very recent proposal suggested that the NGOs should be able to share the TRIM data, for example, for a price in the range of 25 to $50 per sheet, to cover distribution costs. The government would then be spared the trouble of distributing the data.

The next speaker from the panel was David Leversee (DL) who has been working with air photography and remote sensing with the Sierra Club along the West Coast. David raised two very interesting points. First of all, much of what DL has done with NGOs has required the use of older forest cover data (some from the 1950s) which has given a very good base for temporal GIS work. One fact that came out of an analysis of the photoimage data was that the rates of logging along the West Coast are not sustainable. As DL stated, the end result was the production of what he termed the 'Desert Storm Map' for logging. The second point made by DL was that, along with the growing popularity and decreasing expense of GIS,

there is a definite need to make more data (historic and contemporary) available to NGO's and the general public. DL highlighted the need for good metadata and the resulting need for better cooperation and communication between a variety of user groups, including the map libraries community.

Ian Parfitt (IP) was the final panelist to speak. IP works with the Western Canada Wilderness Committee and its international branch, Project Wild in their Vancouver "Shop", which has a book store, map collection, WWW page and provides on site consulting. IP mentioned a number of projects that he has been involved in, including a unique project using data collected from forest canopy research on Vancouver Island. It was amazing to find out that 30 to 60 thousand species are estimated to inhabit the temperate coastal forest canopy zone. IP also mentioned a project that seeks to map wilderness areas. In 1990, a great number of NGO's with a direct interest in using GIS to map the areas met at the East-West Center in Hawaii. Since that time, WCWC has been very busy working on mapping the areas of old growth forest in BC. One major concern that IP mentioned, which seemed to be a general concern of all panelists, was the need for better access to the TRIM data. Unfortunately, the data sets are looked upon as potential revenue sources, and therefore will probably not be distributed at cost, regardless of the purpose or intent of the user, in this case an NGO.

Following the presentations of the panelists there was a long and wide ranging question and answer session. It would be impossible to mention everyone and every question, but some of the general comments and concerns are important to relay here. Because the audience was a mixture of Canadians and Americans there seemed to be a short lived period of confusion about the state of copyright and pricing issues for data produced by governments in Canada. On a state, municipal and/or tribal level, access to spatial data in the United States is not much better than that of Canada. However, with regard to federal data, the United States has much more favourable copyright laws, so much of the concern by NGO's in Canada is not felt as heavily in the US. Part of the resulting input from the panelists at this point did provide a useful direction for all concerned with the more general issue of data liberation. Both the panelists and the audience agreed that there should be more communication and cooperation between the map libraries and archives 'organisations' and the environmental NGO's to seek better access to data and to work towards more favourable copyright legislation.

Finally, what was most striking about the presentation and the discussion was the real-world examples of how GIS (or maps in general, and spatial data specifically) can be very powerful tools in the struggle to protect wilderness and provide for more sustainable environmental management and resource use. Much remains to be done, but with the help of those like Ian, Suzanne, and David, as well as many others, there is clearly a role for all of us to play--and map libraries and archives should be considered more on the 'front lines' (pardon the militaristic metaphors). (JB)

Current Electronic Developments in Map Collections

Colleen Beard, Convenor; Helen Clarke, Recorder

Speakers: *Colleen Beard*, Brock University Map Library
Richard Pinnell, University of Waterloo Map & Design Library
Mary Larsgaard, Map and Imagery Laboratory, University of California, Santa Barbara
Alberta Auringer Wood, Map Library, Memorial University of Newfoundland

While her collection is relatively small Colleen Beard wanted to share her experience with others who have similar collections.

In the last year the Collection has started to provide census data to patrons. A cartographic representation of census data, as in the Metropolitan Atlas series, had never been done for the Niagara region. Colleen began creating such a product independently. However, she soon realized that the hardware and data available in the collection were inadequate. This led to an interest in the potential of census data on CD-ROM, and of the .dbf files. To generate interest in the data and the project, Colleen developed a presentation showing what could be done. This led to the acquisition of a computer workstation.

Colleen has used her workstation to compile a census atlas. She hopes to be able to mount the map files on a web page and have the service in a public area by September.

One lesson she has learned from this project, is the advantage of having people with skill and knowledge, in her case the geography students and graduates, available for consultation and help.

Another recent initiative is a regional effort—the development of the Niagara Peninsula Geographic Data Users Group. The Group's purpose is to eventually form a cooperative effort for data collection and sharing. A major goal is to centralize data, and the Map Library has been suggested as this central access point. Colleen pointed out how important it is to keep in contact with geographic data users on the local level.

Richard Pinnell represents a medium-sized institution. At the University of Waterloo there are many committees examining electronic resources. He is a member of the Internet Resources Committee. This Committee drew members from across the Library system. One outcome of this group was the development of a Library worldwide web home page. This provides a web-based interface to traditional library services like reference, interlibrary loans and the on-line catalog. The significance of the Committee for the Map Library included the development of a home page for cartographic materials (http://www.lib.uwaterloo.ca/discipline/Cartography/cart.html).

Richard has proposed a project to develop a web to MapInfo interface. His involvement with the web has allowed him to develop a variety of skills including, basic Unix, html coding, and common gateway interface scripts.

A second committee Richard has worked on is the Electronic Data Services Task Group that focuses on the access and delivery of electronic data sets. Significance for the Map Library was access to census boundary files via MapInfo, ArcInfo and Dos platforms.

A third committee is the Task group on Electronic Media involved in setting policies and procedures for acquiring electronic resources. Significant for the Map Library is the opportunity to have an active role in creating policies that will accommodate the unique situation of the collection. This has included an emphasis on the issue of licensing agreements and cataloguing procedures.

The Multimedia Task Group is a University wide committee that is working on a general review of current practice and making suggestions for future policies and practices. Significant for the Map Library is the recommendation to support the desktop delivery of images.

One issue Richard has identified is that having collected the hardware and software for the library is not enough. Support and marketing for the products must also be considered.

Richard concluded by discussing some issues and concerns he has. Still unresolved is the question of how much staff, training and support will be needed for electronic materials who will provide these resources. Potential client groups and their needs must be clearly identified. The role of traditional collections should be defined. Coordination with other units within and outside the library must be developed. Networking of software and data needs to be established. In the area of data acquisition, issues of cost, licensing, formats and updating should be resolved. Electronic materials require specific equipment training and instruction spaces. Security, including control of material to fit licensing agreements and security of hardware, needs to be examined.

Mary Larsgaard began by discussing the Alexandria Digital Library project (http://alexandria.sdc.ucsb.edu). The goal of this project is to provide Internet on-line access to spatial data. The site address above will provide information about the project.

Mary then began to discuss the development of the Map and Imagery Laboratory at University of California, Santa Barbara. The lab was twenty-five years in development. It has involved working with faculty and library administration building trust and understanding. A key element of success was the provision of sufficient staffing that has allowed Larry Carver to focus on development of the lab.

Experience with spatial data highlights the importance of cataloguing data products and of distributing cataloguing information. To develop adequate cataloguing records standards and MARC compliance must be worked out for spatial data. Mary also reminded us that even while trying to get control of the cataloguing of spatial data, the need to catalogue traditional maps continues.

Alberta Auringer Wood began with a report on the 32nd Annual Clinic on Library Applications of Data Processing. The theme of the clinic this year was GIS and Libraries. This report has been posted previously on CARTA and printed in the *Bulletin* no.93.

Alberta reported on the GIS CanLib proposal that was being put forward by Yves Tessier at the annual CAPDU (Canadian Association of Public Data Users) meeting in Montreal. She could report that CAPDU had supported Yves proposal.

Alberta also briefly outlined her own collection of spatial data at Memorial University. This includes various CD-ROM products that provide mapping of large areas with limited detail.

Discussion

Linda Newman asked about the effect of making spatial data and mapping software available without promotion? Richard Pinnell replied that promotion was needed if people are to know that the library has the material. Also he is worried about promoting a service when staff may lack skill and experience.

The East vs the West
in a "friendly" game of beach volleyball.
Hummm... who won?!
(Photos by James Boxall)

"The Conference Group"
(Photo by John D. Spittle)

Shirley Harmer asked Colleen if she had any concerns about placing new workstations in a public area. Colleen's concerns included security of hardware and data, and the time staff would need to spend with patrons. These issues are still being examined in her unit.

Alberta Wood noted that the St. Louis Public Library has a public workstation. They use a security password to prevent downloading.

Linda Zelmer pointed out that in the United States libraries are often required to provide access to data. As a result they can most often download federal government data. This is quite different from the Canadian situation. The ability to download information for patron's to take away is an important access consideration. Colleen Beard added that her approach has been to prepare information for people to create and print a hard copy of census maps so they will not need to download the data.

Colleen Beard asked, what is the licensing agreement for cartographic boundary files available through the CARL consortium [since she is not a member]? Richard Pinnell replied that the files could be redistributed to members of the University Community.

Yvonne Wilson asked Richard about training. Richard felt that one question that needed to be addressed was who should be trained other than the map librarian. He does not have the skills presently to feel comfortable training others.

Mary Larsgaard was asked about the impact of external clients on the facility in Santa Barbara. She replied that the workstations are secure because access to Unix workstations is by password only. People sign agreements not to use data for commercial use before entering the Unix platform. Patrons should be informed when they are using copyrighted data. As well, their campus is isolated from urban Santa Barbara, therefore, there are fewer external clients. Much of the hardware and software in the lab was donated on condition that they not be used for commercial purposes.

Linda Zellmer asked if Santa Barbara provides data services to commercial clients. Mary said that they would under a fee for service arrangement where non-copyrighted data is being used even if the hardware was a donation since the commercial client is not using the hardware.

Linda Newman wondered to what degree are clients given help using various products. Alberta Wood said that they helped everybody and would do work for them without a fee. But that the packages they use are quite simple at this point. She isn't sure what they will do when complexity increases. She also noted that patrons don't usually make appointments ahead of time. Richard Pinnell said that the help they give depends on the resource and how easily students can learn to use it for themselves. Staff presently provide service with MapInfo, but that this cannot continue, he is considering workshops for users. Mary Larsgaard said that they used a mixture of models. They have an assistant to help people get started. They try to get software that has tutorials. UCSB lab will be developing a homepage that includes their software guides.

Linda Zellmer asked if we should try to get subject staff in the library to learn products so they can help their own students. Richard Pinnell agreed there was so much work to do now and the sources were so interrelated that no one could expect to work completely independently. He also noted that the library has a role in collecting, cataloguing, and delivering data but that there might be other people on campus who would be better suited to teach people to use data.

Kathryn Womble said that Richard had mentioned that Waterloo had a GIS lab. She wanted to know how people used the lab and what its role was compared to the library's role? Richard said the lab does not acquire data but supports hardware and software. This role can be complimentary to the Library's. Linda Zellmer asked about formats. Richard felt that ARC/Info export format was probably going to be the standard for distribution.

The group was asked about in-house scanning. Mary said that they had three scanners, but that new scanners for map-sized sheets of paper were extremely expensive. Scanning maps does not produce vector data which is most often what is needed. However, scanning can be used for remote sensing imagery. Richard Pinnell replied that they don't have one in their library. They have done some limited work with other scanners on campus to develop images that could be placed on the web. (HC)

Developments Old and New

Convenor: Linda Newman, Mines Library, University of Nevada

The sessions concluded on Friday morning with one paper on a U.S. Forest Service *Forest Atlas of the United States*, 1906-1925. Another report was given on activities of the Visual and Sound Archives Division of the National Archives, whom oversees the National Map Collection. A very interesting report was on bioregionalism and bioregional mapping. The last one was on the work of the second edition of the *Canada Gazetteer Atlas* being done by a Vancouver cartographic firm. (AAW)

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APPENDIX 1

BC WILD 1994 RETROSPECTIVE

Introduction

BC Wild is the principal project of Earthlife Canada Foundation which was incorporated in 1986. Earthlife is not a member-based organization; the following directors are its members: John Broadhead, Ric Careless, Maureen Fraser, Vicky Husband, David LaRoche, Lloyd Manchester, Colleen McCrory, Greg McDade, and president Bill Wareham. Executive Director is Allan McDonell. BC Wild's mission is to protect biodiversity in BC, with particular attention to wilderness systems. The directors work to promote strategies and projects that will help us keep ecosystems, economies and communities healthy in the long term. BC Wild intentionally keeps a low public profile and avoids soliciting funds which might otherwise be available to grassroots groups. Funding is never solicited through direct mail or memberships. BC Wild raises all its operating funds from private foundations.

BC Wild

Originally named Ancient Forests and Wilderness Project (Anfor), BC Wild was created in 1993 to provide a coordinated, strategic approach to securing protected areas in the province. The means of achieving this goal include supporting the work of grassroots groups and individuals, and building resources within the conservation community.

Programs and Personnel

Executive Director Allan McDonell converts the policy decisions of BC Wild's board of directors into results. A long time environmental activist, McDonell brings to his work the discipline and professionalism of 20 years work as a trial lawyer. BC Wild has become an effective resource for the environmental community since Allan assumed the role of executive director in March, 1994. In 1993 and 1994 administrative costs varied between 5 and 6% of BC Wild's operating budget. Jody Holmes is the only full-time administrative staff member. She administers contracts, communicates with board members and funders, and performs the myriad tasks that keep an active organization operating. Accountant Mike Rodgers works part time to oversee budgeting, expenditures, payroll and financial reporting. BC Wild is committed to minimizing overhead costs - there are no reception, clerical or secretarial staff. Receptionist-clerical tasks are shared among all Vancouver-based staff. The office is in a low-rent building and BC Wild uses electronic communications instead of paper wherever possible.

BC Wild's mapping program has supplied the imagery and information about wildlife and ecosystems, and the impacts of industrial development that drives advocacy campaigns to protect ancient forests and wilderness in BC. Public support for protected areas and positive government decisions are impossible without a broad recognition, understanding and appreciation of what is at stake. Under the direction of Susanne Rautio, the mapping program accelerated analysis and production capabilities of the BC environmental community and enabled environmental advocates to take a leading role in generating appreciation of the need for protected areas. This enhanced capability was achieved through the following projects:

Vancouver Island - provided GIS assistance to the conservation community at the CORE table, conducted the GAP Analysis that indicated the CORE decision would only protect 6% of the low to mid elevation forests on the island.

Cariboo-Chilcotin - purchased satellite imagery and created a mosaic of the forest region. Using a mylar overlay showing the logging plans the BC Wild mapping department created slides of the mosaic with the logging plans overlay. This information was distributed within the region. BC Wild mapping provided GIS assistance and facilitated meetings that created the conservation vision on behalf of the Cariboo Conservation Council. The vision showed proposed protected areas and low intensity areas with the resulting GAP Analysis indicating what kinds of ecosystems were going to be protected. An illustrated GAP analysis was created for three ecosections, namely the Cariboo Basin, Fraser River Basin and Chilcotin Plateau.

Lower Mainland - created a conservation vision map for the Lower Mainland showing proposed protected areas and the resultant GAP Analysis and organized a series of meetings to create strategies on how best to achieve representation with proposed protected areas and low intensity areas.

Mainland Coast- provided funding for purchasing satellite imagery for the mainland coast. Most of the information has been interpreted and products can now be produced to show what has been logged since 1954.

Kootenays - provided GIS support to both the East and West Kootenays in producing their conservation visions.

Slocan Valley Landscape Ecology Project - provided funding to Silva Ecosystems to complete the Slocan Valley Landscape Ecology Project (to be released in May, 1995). The project breaks up the Slocan Valley into six planning units and eight theme maps are produced for each planning unit. The most important map shows the proposed protected areas network at a local scale. Analysis will be done to show that the landscape ecology approach is both economically and environmentally feasible in the long term.

GIS PC-based computers in and Victoria - GIS capabilities have been established in the two main business centres and cooperative efforts are underway for other regional GIS centres. BC Wild is also able to arrange for complimentary copies of GIS software for organizations interested in conducting their own GIS projects.

Conservation Mapping/GIS Network -There is a lot of energy, creativity, and resources being put into mapping by individuals associated with the environmental movement throughout British Columbia. As part of BC Wild's mandate in assisting the environmental community in becoming technically self sufficient, the Conservation GIS/Mapping Network was established.

BC Wild dramatically increased communications services and support to the environmental community in 1994. A communications consultant with many years experience in media provided advice to grassroots groups involved with CORE processes, and to groups concerned with the forest practices code. Communications support included: advertising support, creating and supporting media strategies, including writing and producing print and radio advertising, producing news releases and holding press conferences. Monitoring and analysis of news reports and Industry activities continues to be a priority.

It is BC Wild policy to support the initiatives of allied and grassroots groups, and to draw groups together, but sometimes we must step forward to create change. An example is the BC Wild press release issued just before the federal budget announcement in which we highlighted the low stumpage rates and resulting ecological devastation occurring in the Yukon's forests. Within weeks we received news that stumpage rates will be increased this summer from 22 cents per cubic metre to as much as $15 "due to budget fall-out". While this is not as high an increase as we would like to see, boreal forest destruction received increased news coverage and groups in the Yukon have redoubled their efforts to stop raw log exports from their region.

BC Wild is very proud of the quality of research and presentation of a series of publications on value-added wood manufacturing, forest practices, pulpwood agreements and the timber supply analysis in the Cassiar forest district. BC Wild retained forestry specialists to produce this important resource material and used the services of a graphic designer to make publications accessible and attractive to a wider audience than ever before. All BC Wild publications will soon be available on a home page on the world wide web, further increasing access to include the entire wired world. Limited copies of publications are available free of charge.

Uncovering the economic cost of the forest industry in British Columbia is a critical development in the struggle for ecologically sensitive forestry. With funding from BC Wild's economic analysis program, economist Michael Mascall was able to compile research demonstrating that instead of contributing to BC's economy, the forest industry cost taxpayers $900 million in 1991-92. BC Wild also commissioned economic analysis from Grant Copeland, Trevor Jones and Ray Travers whose work discussed transition strategies for the town of Nelson, critiqued methodologies used by Ministry of Forests to determine job impacts on Vancouver Island, and analysis of what constitutes a timber-dependent community, respectively.

Interviewing grassroots activists throughout the province was the nucleus of BC Wild's grassroots outreach project. Staff travelled throughout BC speaking with activists to identify their issues and needs. Their report provided important information that allows BC Wild and others to create links with the people most knowledgeable about local environmental issues. BC Wild provided funding to the BCEN Parks and Wilderness Caucus grassroots fund, which provided numerous small grants to grassroots working on specific protected areas campaigns. BC Wild also gives considerable financial support to BCEN for its annual general meeting.

Inspiring youth to act for the environment was the impetus for the wildly successful Leadership Initiative for Earth (LIFE). Funded through BC Wild's education program, LIFE brought together 500 young people for a weekend conference in April, 1995. Leadership skills and training in running an environmental campaign,

writing press releases, and seminars in forestry and other important subjects helped hundreds of youth focus their energies and begin the work of strengthening the movement. A "wild salmon run" through the streets of Vancouver and a gala evening featuring Dr. Jane Goodall, theatre and music helped make this event inspirational to participants and the public.

Campaigners in the CORE regions received assistance from BC Wild, including training and advice in negotiations at CORE and LRMP tables. BC Wild also gave financial support to Canadian Parks and Wilderness Society for work on Lower Mainland issues.

Because forestry is such a critical issue in British Columbia, BC Wild is co-funding Forest Policy Watch. FPW monitors forest policy and low reform initiatives and provides research, analysis and advice on key topics.

Although mine sites are relatively small, the impact on landscapes and ecosystems of road networks and mine tailings can be massive. The Environmental Mining Council, with financial assistance from BC Wild, is committed to ensuring protected areas are free of industrial development including mining.

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APPENDIX 2

BC CONSERVATION GIS/MAPPING NETWORK 'ACCESS TO INFORMATION' PROPOSED POLICY

To improve the information available for public decisions, governments should provide public access to their electronic data systems on resource use and environmental quality. Governments should seek ways of providing this information so that environmental, economic, and social information can be accessed from the same "menu".

- taken from "An Economic Framework for Sustainability" - Draft by the Round Table

The Public Right to Access Digital Information

Geographic information is a valuable and important resource, familiar to most people in the form of paper maps. In Canada, significant levels of public funds have been used to create accurate and detailed paper maps covering the entire nation at various scales (eg. National Topographic Series—NTS). These maps are sold for less than $10 each, and so are easily accessible to most of the population.

In the past 10 years however, the digital revolution has upset this common information platform. Now, Geographic Information Systems (GIS) use electronic data instead of paper maps, and the power of computing has been applied to mapping. In BC, for instance, government agencies are now embarking on digital projects and abandoning traditional cartography. The problem is that the new datasets which are being produced in this province to serve as base maps (Terrain Resource Information Management—TRIM series) are priced at $600 each. Because of this pricing structure, TRIM is not accessible to the public, and only government and industry (and the consultants that serve them) are able to use them. As a result, the remaining parties, whether it be those involved in land use planning processes or research and development, are at a disadvantage.

There is no clear reason why electronic data should be more expensive than the paper maps they are designed to replace. The cost of creating data is comparable to the cost of creating paper maps, and reproduction costs are actually much lower for data than paper. As data generation is heavily subsidized there are few challenges to the government monopoly, and so this price has not fallen over the last decade even though the cost of computers, software and training—all exposed to market pressure—have fallen dramatically. Indeed, a computer system costing less than $2000 can now make use of this data, whereas back in 1986 when TRIM was launched a system costing $100,000 or more was required.

This scenario can be applied to other digital data sources. BC's forest cover maps, which inventory the province's publicly owned forest resource, are also going digital. The price: $250 per sheet instead of less than $5 for paper Forest Cover maps. While GIS may not be a household phrase, this data pricing policy affects all British Columbians. In an era where kids learn how to use computers in grade 2, and high schools are outfitted

with computer aided design labs (which will soon be used for GIS as well), not even University researchers can afford to purchase TRIM data. Other organizations working for the public good such as search and rescue workers, fighting against time to save lives, can not afford TRIM.

In summary, the concerns shared by environmental non-governmental organizations (ENGOs) regarding the current government pricing structure are as follows:

1) information generated by government agencies is supported by the tax payer and the fundamental principle is that such information ought to be made available to the public without charge;
2) if there is any charge, it should be nominal; and
3) to do so creates two classes of citizens, those who can afford market rates and those who cannot. The latter would therefore be excluded from meaningful participation in public issues, to the prejudice of public participation and feedback to government.

Access to data that does not cost money

Important data that do not have a fee structure attached to them indudes: CORE (Commission on Resources and Environment) data; provincial watershed boundaries; existing protected areas; ecosystem classification boundaries; biophysical habitat mapping; conservation data centre information; and recreational opportunity spectrum (ROS) mapping.

At this time, some of this information is available to those who ask for it, whereas other digital data is not. As information, such as the CORE data, was created by the government for use in planning processes or to make resource related decisions, we believe it should be distributed to anyone who asks for it. By not having access to this or other "free" data, ENGO's are forced to create their own information, which often contributes to the problem as opposed to helping resolve land use conflicts.

We request that any discussions or creation of policy around digital data include both those data sets that cost money or are free.

Role of the Environmental (ENGO) Community

Environmental non-government organizations fillfill a role in society that cannot be duplicated by any other segment. We represent legal entities whose sole responsibility is to encourage the development of programs and initiatives that will protect the environment. We are often asked to participate in government initiated public processes as well as provide an alternative view on the state of the environment to the general public. ENGO's are also the ones who motivate, through public awareness, the shift in society's attitudes towards management practices that enhance or protect the environment.

For these reasons, ENGO's need access to government generated information. Since government data is the one data source that is generally believed to be unbiased, ENGO's prefer to use it and to begin discussions beyond whether data is "accurate" or not.

In our meeting with government representatives in November '94 and April'95, two concerns were raised that will be addressed in this proposal:

1) a method of receiving digital data that will not present a financial burden in terms of staff time in supplying it to ENGO's; and
2) a method that will allow the government to provide ENGO's with digital data that will not compromise the revenue currently being generated by charging for the data.

It was agreed that once these concerns were addressed adequately, an *Access to Information -Memorandum of Understanding* would be prepared and recognized in government policy.

As a solution to these concerns we propose to share digital data amongst ourselves. The environmental community formed the BC Conservation/GIS Network one year ago with a mandate to: *exchange information on current mapping projects; participatc in government committees whose task is to generate technical information; and encourage open access to government information. The goal is "to providc public access gcographic information systems (GIS) capability and databases for conservation-based analysis".*

The Network is therefore set up to share data and would not need to make multiple requests. This would apply to the full range of digital data. We believe that charging for data in the $25 to $50 range per 1:20,000 map sheet would then cover the costs of supplying it in terms of personnel time.

A suggestion brought forward by the Surveys and Resource Mapping Branch would be to give ENGO's an account with LandData BC once it is has been established for use outside the government. Then a group makes a data request, this would be recorded as a contribution made by government to that group.

Who would be covered under this Policy?

Since the environmental community plays a unique role in society—each organization is recognized as a legal entity—we recommend that this policy apply to those groups with non-profit status and are of an environmental nature. There would be a need for an organization to demonstrate its non-profit status with a letter of incorporation. At most, this policy would apply to around 10 to 20 organizations with GIS capability at this time. As the technology develops and more organizations make requests for data, a more precise definition of who this policy would apply to would need to be developed. As Government is currently not receiving any revenue from the environmental community, we do not believe that this will challenge any existing revenue sources.

5/10/95

MINUTES OF THE ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

ANNUAL GENERAL MEETING

Friday, May 12, 1995
University of British Columbia

Recorded by
Shirley Harmer, Secretary, ACMLA

The 30th Annual Business Meeting of the Association of Canadian Map Libraries and Archives was held at the University of British Columbia on May 12, 1995. The meeting was called to order at 2:00 p.m. It was established that a quorum was reached so the meeting could proceed.

1. Minutes of previous Annual General Meeting June 10, 1994 as printed in Bulletin No.92, January 1995. Corrections to the spelling of Frances Woodward and Pierre Lepine. It was **moved** that the minutes be approved with the corrections noted. (James Boxall, Betty Kidd) CARRIED.

2. Approval of the Agenda and New Business
Discussion of what constitutes a quorum was added as agenda item 8a. It was **moved** to approve the agenda as amended. (James Boxall, Frances Woodward) CARRIED.

3. President's Report
Robert Grandmaitre,the First Vice-President, sent regrets that he was unable to attend. The Board met on October 21, 1994.

The President, on behalf of ACMLA, sent forty-four letters to Canadian associations in support of the Congress of Cartographic Information Specialists Associations (CCISA) initiative to raise awareness of map libraries and archives in their brief *The State of Map Libraries*.

The Board has been in the process of reviewing and updating the Rules of Procedure document. When completed, there will be job descriptions for each executive position and terms of reference for all the committees. Thanks were extended to Shirley Harmer for her efforts in revising this document.

The Board reviewed and submitted a quadrennial report on ACMLA's activities for a special issue of *Geomatica*. The revision of the membership brochure is nearly completed. It includes the new objectives and the category of student membership. A draft was prepared by Colleen Beard and Cheryl Woods. The Board has approved $200 for the printing of 1000 copies. A copy will be included in the next mailing of the Bulletin. The Board will ask the membership chair, Bruce Weedmark, to send the brochure to relevant schools and approved $100 for mailing costs. He will be asked for additional suggestions for distributing the brochure.

Student membership - The executive will initiate the process to approve the student membership category into the By-Laws.

ACMLA Resolution - The Board made slight revisions to the resolution proposed at last year's Annual General Meeting. It was then published in Bulletin No.92, January 1995 as part of the President's Report with a call for names of other bodies who should receive it. Cathy wrote covering letters and the Resolution was distributed to politicians and civil servants in the Federal and Ontario governments and relevant associations. There was another call on Carta, particularly to have people in each province target appropriate provincial bodies. Members of Parliament were suggested as potential recipients and more suggestions are welcomed. Cathy will do a suitable covering letter. It was suggested that the letter and the Resolution be done in French.

ARL GIS Literacy Project There will be two sessions for Canadians, one in the East and one in the West. The number of participants per University may be an issue. The President spoke with Charlie Fitzpatrick of ESRI to

learn about the emphasis of the training program. His response was that the emphasis would be on the tools one would use, rather than data. In terms of what skills people should come with, he hopes people will come with knowledge of Windows and enthusiasm. They should leave with tools to explore their own data. National Archives involvement was discussed as they have not been invited to participate.

4. Treasurer's Report
The Treasurer reviewed his report for January 1 - December 31, 1994 which shows the Association in good financial standing.

SOCIAL SCIENCE AND HUMANITIES RESEARCH COUNCIL (SSHRC) COMMITTEE - Tom Nagy
About $2000 was allocated for the travel portion of the SSHRC grant. SSHRC has been pleased with the allocation of travel funding across Canada. As a result of cutbacks, funding has been reduced but we will receive funding, perhaps at a similar level, until 1997. The travel portion should continue after 1997 but not necessarily the administrative portion of the grant.
Number of members bears a direct relationship to the funding received and the Association should also encourage student members.
As per our agreement with SSHRC, in 1995 we will have to get the books audited by a person outside the membership.
It was **moved** that the budget be approved by an auditor and that Pat should seek a candidate.
(Lou Sebert, Barbara Znamirowski) CARRIED.
Thanks were extended to Lou Sebert for his services as auditor.

5. First Vice-President's Report
Cathy Moulder reported for Robert Grandmaitre.

ARCHIVES COMMITTEE - There is, as yet, no archivist but there is a potential candidate.

AWARDS COMMITTEE - (Report in conference packet and *Bulletin #93*) No awards were given this year. A new chair will be needed.

BIBLIOGRAPHIC CONTROL COMMITTEE - (Report distributed at the AGM) [also see *Bulletin #93*] Comments on the report should be given to the First Vice-President or Joan Winearls.

CONFERENCE 1994 - (Report in conference packet) The financial report showed a profit which is due to the generosity of the University of Guelph. Formal thanks were extended to Flora Francis and the planning committee, Richard Pinnell, Colleen Beard and Cathy Moulder.

CONFERENCE 1995 - Formal thanks were extended to Tim Ross and the planning committee, Frances Woodward, Poh Yu Chan and Janet Collins.

CONFERENCE 1996 - Will be held in Halifax. James Boxall spoke about the plans and distributed a preliminary program which includes training workshops. Some members wondered if the length of the program might be an issue in getting funding. He hopes to have an art display in conjunction with the conference. The Canadian Library Association (CLA) will be meeting in Halifax about the same time.

COPYRIGHT COMMITTEE - (Report in conference packet) [also see *Bulletin #93]* Carol Marley mentioned a bibliography of reports of the Committee 1987-1991 which was included in the 1991/92 Committee report. Since this report has not been printed in the Bulletin, it will be published in a future issue. A draft report *Copyright and the Information Highway* was published January 1995 by the Copyright Sub-Committee, Advisory Council, Information Highway Secretariat. There was a claim of copyright on fire insurance plans. The National Archives has sought legal opinion. Nowhere is there a recognition of claim of copyright. The claim is acknowledged but not copyright. Betty Kidd mentioned concern about the wording in the report—this will be looked at again.

LIAISON COMMITTEE - No report or activity. Louis Cardinal has informed members of the structural changes at the National Archives.

MEMBERSHIP COMMITTEE - (Report in conference packet) [also see *Bulletin #93*] Bruce Weedmark has worked on updating the membership list and formal thanks was extended to him. The membership brochure has been updated and is nearly ready for printing.

ASSOCIATION OF CANADIAN ARCHIVES (ACA) ADVOCACY NETWORK - Robert Grandmaître will continue as the ACMLA representative. There were communications by fax but no meeting this year.

6. Second Vice-President's Report
Cheryl Woods will be working on an Internet homepage for ACMLA which could include a list of publications and an order form. She invited suggestions for materials to be included in the page. Including the By-laws was one suggestion.

PUBLICATIONS COMMITTEE and PUBLICATIONS OFFICER - Report is in the conference handout [see *Bulletin #93*].

BULLETIN EDITOR - Report is in the conference handout.

HISTORICAL MAPS COMMITTEE - Report was distributed at the meeting. [also see *Bulletin #93*]

CCISA - Proceedings of the Map Library in Transition conference will be published in *Cartographic Perspectives.*

Canadian National Committee for the International Cartographic Assocation(ICA) - Louis Cardinal and Alberta Auringer Wood act as liaison persons on behalf of ACMLA. The Canadian National Committee is making a bid for the 1999 meeting. Alberta has suggested a session topic relating to cartographic librarianship in the twenty-first century.

7. GIS Can-Lib Proposal
The GIS Can-Lib proposal, which was initiated by Yves Tessier, suggests joining with other affiliated organizations for training, access to and issues of common concern re digital data. Yves presented his proposal to the Canadian Association of Public Data Users (CAPDU) meeting which supported the proposal. Yves is willing to serve as the active person to work on the proposal and to prepare an action plan. It was **moved** that the Association enthusiastically pursue this initiative and that Yves be asked to coordinate our involvement. (Alberta Auringer Wood, James Boxall) CARRIED.

8. Approval of Budget, June 1995 - June 1996.
Changes to the Proposed Budget June 1995 - June 1996 as distributed were gone over by the Treasurer. The honorarium for the Bulletin Editor was not included in the budget and the procedure re giving it was queried. There was mention of getting some quotations for printing the Bulletin in Ottawa as printing costs may be more competitive there. It was **moved** to approve the budget as amended. (James Boxall, David Jones) CARRIED.

8.(a) Discussion of Quorum
Presently quorum is 50 members or 33% of voting members. It was **moved** that quorum be 25% of voting members (Lou Sebert). The motion was withdrawn and the executive was charged with exploring options re other kinds of quorums and the use of proxies.

9. Past President's Report
Richard Pinnell, on behalf of the Nominations and Elections Committee, announced the slate of officers for 1995/96:

President - Alberta Auringer Wood
Past President - Cathy Moulder
First Vice-President - Grace Welch
Second Vice-President - James Boxall
Treasurer - Patrick McIntyre
Secretary - Shirley Harmer

Cathy Moulder, the retiring President, and Robert Grandmaître, the retiring First Vice-President were thanked. Cathy Moulder extended thanks to Robert Grandmaître and Richard Pinnell. Richard was presented with a gift in recognition of his service on the Board.

The meeting was adjourned at 4:00 p.m.

The ACMLA Executive warming up for the main event! *(Photo supplied by Alberta Auringer Wood)*

NEW BOOKS & ATLASES

Bruce Robin

The Admiralty Chart: British Naval Hydrography in the Nineteenth Century. G.S. Ritchie. New ed. Edinburgh: Pentland Press, 1995. 444 p. ISBN 1858212340.

Analytical and Computer Cartography. 2nd ed. Keith Clarke. Eaglewood Cliffs, NJ: Prentice Hall, 1995. 334 p.

Atlas de Honduras y del Mundo : el Nuevo Orden Geografico Mundial y la Naciente Comunidad de Estados Independientes. Edicion y Supervision, José Modesto Canales. Ed. 1995/1996. Tegucigalpa, Honduras: Ediciones Ramses, 1995. 64 p.

Atlas de Monterrey. Gustavo Garza Villareal, coordinador. 1. ed. Monterrey, N.L.: Gobierno del Estado de Neuvo Leon, c1995. 509 p. ISBN 968120607X.

Atlas des agglomérations secondaires de la Gaule belgique et des Germanies. Sous la dir. de Jean-Paul Petit et Michel Mangin. Paris: Editions Errance, 1994. 292 p. ISBN 2877720993.

Atlas économique régional : Provence-Alpes-Côte d'Azur. 4e éd. Marseille: Chambre régionale de commerce et d'industrie Provence Alpes Côte d'Azur Corse, 1995. 73 p.

Atlas historique des circonscriptions électorales françaises. Bernard Gaudillère. Genève: Droz, 1995. 839 p. (Hautes études mediévales et modernes / Ecole pratique des hautes études, Sciences historiques et philologiques). ISBN 2600000658.

Atlas HRW : Québec, Canada, monde. André P. Lamarche. 2e éd. Laval, Québec: Éditions HRW, 1995. 100 p. $43.95 ISBN 0039269663.

Atlas of American History. Robert H. Ferrell and Richard Natkiel. Updated ed. New York: Facts on File, 1995. ISBN 0816034419.

An Atlas of California's Chinese American Communities. Mary Wong and Jonathan Lew. Claremont, Calif.: Rose Institute of State & Local Government,Claremont McKenna College, [1995]. ISBN 1-883638-20-8.

Atlas of Canada. 2nd ed. Westmount, Quebec: Reader's Digest Association (Canada), 1995. ISBN 0888502486.

Atlas of Eastern Europe in the Twentieth Century. R.J. Crampton. London: Routledge, 1995. ISBN 0415066891.

Atlas of Nazi Germany: A Political, Economic, and Social Anatomy of the Third Reich. Michael Freeman. London: Longman, 1995. ISBN 0582239249.

Atlas of the Mammals of Ontario. Jon (Sandy) Dobbyn. Don Mills, Ont.: Federation of Ontario Naturalists, c1994. 120 p.

The Atlas of Westward Expansion. Carl Waldman, ed. New York: Facts on File, 1994. ISBN 0-8160-2660-2.

Atlas of Seattle. Seattle, Wash.: Kroll Map Co., 1995. 160 p.

Atlas of the Mysterious in North America. Rosemary Guiley. New York: Facts on File, 1995. 178 p. ISBN 0816028761.

Atlas of Ukraine. [DOS/Windows] [S.l.]: Ukrainian Institute of Geography "ENTEC2" Ltd., c1994. $100.00 (Contact Ted Murphy at Caribou Ventures Ltd., Winnipeg, Man. tmurphy@caribou.mb.ca.)

Atlaseco de poche : Atlas économique mondial. Ed. 1995. Paris: Editions EOC, 1994. 792 p.

Britannica Atlas. Chicago: Encyclopaedia Britannica, c1995. 199 p. ISBN 0852296096.

The Carnegie Atlas of Galaxies. Allan Sandage and John Bedke. Carnegie Institution of Washington, 1994. 2 vols ; 760 p. ISBN 0-87279-667-1.

China Transportation Atlas. [Leverett, Ma.]: Rector Press, 1994. 100 p. US $45.00 ISBN 0-7605-0615-9.

Chunnel Handbook & Atlas. [Leverett, Ma.]: Rector Press, 1994. 60 p. US $24.95 ISBN 0-7605-0638-8.

Climate Change Atlas: Greenhouse Simulations from the Model Elevation Consortium for Climate Assessment. Ann Henderson-Sellers and Ann-Maree Hansen. Dordrecht ; Boston: Kluwer Academic Publishers, 1995. 159 p. (Atmospheric and Oceanographic Sciences Library; v. 17) ISBN 0792334655.

Collins Atlas of Bird Migrations. Jonathan Elphick, gen. ed. London: Harper-Collins, 1995. 180 p. ISBN 0002200384.

Community Resource Mapping: An Annotated Bibliography. Justine Kent. [Washington, D.C.: International Food Policy Research Institute, 1994] 50 p.

Computer Cartography and GIS. Johnstown, Pa.: Pennsylvania Geographical Society, c1994. 116 p. (*The Pennsylvania Geographer* ; v. 32, no. 1).

The Conservation Atlas of Tropical Forests: The Americas. The World Conservation Union ; Caroline S. Harcourt, *et al.*, eds. New York: Simon & Schuster, c1995. ISBN 0133408868.

Cultural Atlas of Spain and Portugal. Mary Vincent. New York: Facts on File, c1995. ISBN 0816030145.

Diccionari de cartografia. Josep M. Panareda i Clopes, *et al.* Barcelona: Generalitat de Catalunya, Dept. de Cultura, 1994. 221 p. ISBN 8439330669.

Economic Atlas of the World. Chicago: Rand McNally, c1994. 48 p. ISBN 0528177443.

Elements of Spatial Data Quality. Stephen C. Guptill and Joel L. Morrison. Tarrytown, New York: Elsevier Science, 1995. ISBN 0080424325.

The Emergence of Estate Maps: Christ Church, Oxford, c. 1600 to 1840. David H. Fletcher. Oxford: Clarendon Press, 1995. ISBN 0199201781.

Exploration and Mapping of the National Parks. Winnetka, Ill.: Speculum Orbis Press, 1994. 285 p. (Occasional Paper / Map and Geography Round Table of the AI A ; no. 4). ISBN 0932757049.

GIS, Cartography, and the Information Society: An Annotated Bibliography. William L. Dowdy. [Santa Barbara, Calif.?]: National Center for Geographic Information and Analysis, [1994?]

Grand atlas historique : l'histoire du monde en 473 cartes. Sous la direction de Georges Duby. Paris: Larousse, c1995. 340 p. ISBN 2035212154.

Guidebook on Mapping Groundwater Vulnerability. Jaroslav Vrba, Alexander Zoporozec, ed. Hanover: Heise, 1994. 131 p. (International Contributions to Hydrogeology ; v.16) ISBN 3922705979.

How Maps Work: Representation, Visualization, and Design. Alan M. MacEachren. New York: Guilford Press, c1995. 513 p. ISBN 0898625890.

The Integrated Atlas: History and Geography of Canada and the World. Toronto: Harcourt Brace & Company Canada, 1995. ISBN 0774714387.

Japan, a Cartographic Vision: Printed Maps from the Early 16th to the 19th Century. Walter Lutz, ed. Munich: Prestel-Verlag, c1994. 232 p.

Lines of Country: An Atlas of Railway and Waterway History in Canada. Christopher Andreae. Erin, Ont.: Boston Mills Press, 1995. $85.00 ISBN 1550461338.

Mapping Hidden Dimensions of the Urban Scene: Modelling the Cartographic Anatomy and Internal Dynamics of Growing Towns and Cities for Applications in Urban and Regional Planning and in Environmental Analysis. Janos Szego. Stockholm: Swedish Council for Building Research, 1994. 266 p. ISBN 9154056519.

Maps and More: Your Guide to Census Bureau Geography. Rev. Apr. 1994. [Washington, D.C.] : U.S. Dept. of Commerce, Economics and Statistics Administration, Bureau of the Census, 1994. 15 p.

Minnesota Bike Atlas. 4th ed. Dave Erick. Chaska, Minn.: Twin Cities Bicycling Club, c1995. 112 p. ISBN 0964617708.

Rand McNally Atlas of World History. Chicago: Rand McNally, 1995. ISBN 0-528-83780-X.

La representation des donnees géographiques : statistique et cartographie. Michelle Begun, Denise Pumain. Paris: A. Colin, 1994. 192 p. ISBN 2200215398.

The Shape of Texas: Maps as Metaphors. Richard V. Francaviglia. College Station, Texas: Texas A&M University Press, 1995. ISBN 0890966648.

The Tithe Maps of England and Wales: A Cartographic Analysis and County by-County Catalogue. R.J.P. Kain and Richard R. Oliver. New York: Cambridge University Press, 1994. ISBN 0521441919.

The U.S. Outdoor Atlas & Recreation Guide: A State by State Guide to Over 5,000 Wildlife & Outdoor Recreation Areas. Rev. ed. John O. Jones. Houghton Mifflin Company, 1994. US $19.95 ISBN 0-395-66329 6.

The Vinland Map and the Tartar Relation. R.A. Skelton, *et al.* New Haven, Ct.: Yale University Press, 1995. ISBN 0300065205.

Wonders of the Ancient World. National Geographic Atlas of Archaeology. Washington, D.C.: National Geographic, 1994. ISBN 0-87044-982-6.

The World Atlas of Wine. 4th ed. Hugh Johnson. New York: Simon & Schuster Trade, 1994. ISBN 0-671-88674-6.

NEW MAPS

Amy Chan

Water treatment in Switzerland at 1st January = Abwasserreinigung in der Schweiz am l. Januar 1994 = Epuration des eaux en Suisse au ler janvier 1994 . Scale 1:400,000. Bern : Bundesamt für Umwelt, Wald und Landschaft, [1994]

Afrika, fizi na karta. Geodetski zavod Slovenije, kartografski oddelek-1994 ; zasnova in redakcija-Vilikos. Scale 1:20,000,000. 1 cm = 200 km. ; Lambert azimuthal equivalent proj.. [Ljubljana, Slovenia] : Geodetski zavod Slovenije, [1994]

Bartholomew planner's postcode area map of Great Britain and Northern Ireland. Scale 1:792,000. Scale 1:792,000. London : Bartholomew, c1994.

The earth's fractured surface. Scale 1:48,000,000. 1in = 758 miles. Washington D.C. : National Geographic Society, 1995. Verso: Living on the edge.

Ethnic Russians in the newly independent states [former Soviet republics without Russia]. Scale 1:20,500,000. [Washington, D.C. : Central Intelligence Agency, 1994]. "733683 (RO1640) 10-94".

Europa, physikalish = Europe, physique. Scale 1:5,000,000. Bern : Kümmerly + Frey, [1994].

Europa, politisch = Europe, politique. Scale 1:5,000,000. Bern : Kümmerly + Frey, [1994].

Fastmap the world. Scale 1:90,459,000. 1 in. = 1,4277 miles at equator ; Mercator proj. New York, N.Y. : H.M. Gousha, [1994].

Geologische karte des Saalandes. Von der geologischen Landesanstalt des Saarlandes ; geologische Bearbeitung: Dr. Selzer, Dr. Britz, Dr. Muller. Scale 1:50,000. Saarbrucken : Geologisches Landesamt des Saarlandes, 1995.

Geographisch-kartographischer dienst. Europa, politische Übersicht und Auslandsvertretungen der Bundersrepublik Deutschland. Scale 1:17,250,000. [Born?] : Auswärtiges Amt Geographisch-Kartographischer Dienst, [1994].

A guide to your national forests, southern region. Scale 1:3,250,000 ; Albers equal area proj. Atlanta, Ga. : Southern Region, U.S. Dept. Of Agriculture, Forest Service, 1994.

Hungary. Scale [ca. 1:3,350,000] ; Lambert conformal conic proj. [Washington , D.C. : Central Intelligence Agency, 1994]. "802212 (R01145) 11-94"

Hungary :[shaded relief]. Scale [ca. 1:3,350,000] ; Lambert conformal conic proj. [Washington , D.C. : Central Intelligence Agency, 1994]. "802213 (R01145) 11-94".

Die lander der Erde in Flächentreuer Darstellung, Peters-Projektion. Ausg. 1994. Scale [ca. 1:17,750,000] not "1:630,609,475". 1 cm. = 63,030 km. At equator ; Peters proj. Hamburg : Missionshilfe Verleg, [1994]. ISBM 3-921620-48-1.

Map of Labrador : Labrador awaken your heart and soul. Cartographic design and production by Charles M. Conway, Gary E. McManus and Clifford H. Wood. Scale 1:1,343,000. Labrador, Nfld. : Destination Labrador, c1995. (Free)

Newfoundland and Labrador: a traveller's guide to the geology. Cartographic Laboratory, Memorial University of Newfoundland. Scale 1:1,000,000. St. John's, Nfld. : Geological Association of Canada, Publications, Department QE95, c/o Dept. Of Earth Sciences, Memorial University of Newfoundland, c1994. Accompanied by text (92 p.) (Can. $13.00)

Ontario. Cartographic design: Luc Fournier ; cartography: L. Bernad. Scale 1:720,000-1:3,390,000. St-Laurent (QC) : Cartotheque Geo-Montages,1995.

Palau. Scale [ca. 1:3,125,000]. [Washington, D.C. : Central Intelligence Agency, 1995]. "802357 (B00770), 1-95".

Poland, reference map = Polska, mapa przegl dowa. Scale 1:1,000,000. Warszawa ; Wrocaw : Polskie Przedsibiorswo Wydawnicw Kartograficznych im. Eugeniusza Romera, 1994.

Reference map of Oceania : the Pacific islands of Micronesia, Polynesia, Melanesia. Scale 1:17,460,000. [Honolulo] : University of Hawaii Press, 1995.

Serbia. Scale [ca. 1:300,000]. [Washington, D.C. : Central Intelligence Agency, 1995] "73501 (R00450) 3-95".

Russia. Scale [ca. 1:37,500,000] : Lambert conformal conic proj. [Washington, D.C. : Central Intelligence Agency, 1994]. "801995 (R00183) 9-94".

Russia [shaded relief] Scale [ca. 1:37,500,000] : Lambert conformal conic proj. [Washington, D.C. : Central Intelligence Agency, 1994]. "801996 (R00183) 9-94".

Singapore and Malaya. Scales differ. London: Bartholomew, c1994.

Tsui hsin Chung-kou ti t'u = Map of China. 1994-nien ch' an hsin pan fan t'i tzu pan. Scale 1:6,000,000. [Kowloon, Hong Kong : Ching Ying ch'u pan she, [1994].

Turkmenistan. Scale [ca. 1:8,500,000] ; Lambert conformal conic proj. [Washington, D.C. : Central Intelligence Agency, 1994]. "802343 (R01131) 12-94".

Turkmenistan [shaded relief]. Scale [ca. 1:8,500,000] ; Lambert conformal conic proj. [Washington, D.C. : Central Intelligence Agency, 1994]. "80234 (R01131) 12-94".

[World] Scale 1:134,000,000. [Washington, D.C. : Central Intelligence Agency, 1995]. "802354 (R00350) 2-95".

[World] Scale [ca. 1:75,000,000. Washington, D.C.: Central Intelligence Agency, 1995]. "802353 (R00350) 2-95".

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REVIEWS

Carol Marley

FROM MAPS TO METAPHORS: THE PACIFIC WORLD OF GEORGE VANCOUVER. Robin Fisher and Hugh Johnston, eds. Vancouver: UBC Press, 1993. illus., maps, ix, 356 p. $39.95 CAN. ISBN 0-7748-0470-X.

From Maps to Metaphors takes its genesis from the 1992 Vancouver conference on exploration and discovery. The conference was held to observe the bicentennial of George Vancouver's voyage to the Pacific basin. Although his accomplishments were many, Vancouver is probably most noted for his accurate mapping of the west coast of North America. This single achievement eliminated the possibility of a northwest passage and finally laid to rest Europe's quest for a sea route through the interior of the continent.

Readers will not find much in this volume which relates directly to Vancouver's mapping achievements. Rather than focus on his cartographic record, the volume is oriented more towards the complex political interrelationships behind Europe's thrust into the Pacific basin. The thirteen contributors come from a variety of backgrounds: history, archives, anthropology, economics, geography, art history, hydrography, and native studies. In concert, their papers bring a wide array of perspectives to the study of early European exploration. The result is a refreshing look at the world in which Vancouver's cartographic record was created.

Unlike similar historical studies, native perspectives on European intrusions into the region have not been ignored. The effects of European contact with the native cultures of the Pacific are given special consideration in papers by Yvonne Marshall and Anne Salmond. Marshall shows readers how the early explorers became unwitting pawns of the Nootka as they sought to reestablish their position with other native groups along the northwest coast after contact with English and Spanish voyagers. Salmond, on the other hand, shows how the lives of two Maori became unmeasurably changed as a result of European visits to New Zealand.

The volume contains several papers which address, in one way or another, the technological limitations of cartographic records. Alun Davies' study of the time pieces used by Cook and Vancouver during their Pacific voyages, for example, provides some insight into the problems early navigators faced when calculating their longitude. Although the Cook and Vancouver expeditions were equipped with the latest chronometers, both navigators still had to rely heavily on dead reckoning and lunar observation to establish their longitude. Given the technological limitations in which these early explorers operated, Davies' study indirectly makes the accuracy of Vancouver's charts seem all the more incredible.

Techno-political limitations also figured prominently in James Gibson's explanation of Russia's notable absence in the north Pacific. Although Russia s first introduction to the region predates Europe s by more than a century and a half, the Russians were never able to exploit this advantage. Gibson argues that their presence was hindered by a lack of a scientific background, economic incentives, and logistical problems in maintaining Pacific bases. Of course, these limitations also explain why the Russian cartographic record seems slim and why a Russian presence is not more noticeable in English and Spanish charts.

No doubt one of the more interesting papers for map users will be W. Kaye Lamb's history of the journal kept by Archibald Menzies, a protégé of Joseph Banks. As the botanist and surgeon on the Vancouver expedition, Menzies was encouraged by Banks to keep his own record of the voyage. Apparently, both Banks and Menzies despised Vancouver and wanted to discredit his achievements by distributing their own account of the expedition before Vancouver s journal could be published. If adversarial relationships rather than the interests of science can have such an obvious influence on the written record of Vancouver's Pacific expedition, one can not help but wonder how the cartographic record may have also been prejudiced.

As an archivist and map user, I must admit to being somewhat disappointed by the inconsistencies shown among the various authors in their citations. Almost without exception, the textual records—both published and unpublished—are generously acknowledged by all authors throughout the volume. However, non-textual records—

maps, artifacts, sketches, paintings, etc.—are often not cited at all. In his paper on the early theoretical geography of the northwest coast, Glyndwr Williams makes several references to the maps published in Europe as a result of the early voyages by Cook to the region. For example, on page 36 he makes reference to the maps published by P.S. Pallas, Nicolas Buache de Neuville, de Fonte, and Henry Roberts. Unfortunately, he provides no citations to indicate the proper titles of these maps, their dates of publication, the names of their publishers, or the institutions in which these items were consulted. Interestingly, the same page carries three citations to published textual sources. On the other hand, the paper by Victoria Wyatt on the response of northwest coast artists to the European presence has almost one third of its citations dedicated to the art pieces mentioned in the paper, with each citation noting the number of the artifact and the holding museum.

It is very disconcerting to find such inconsistencies in a volume which attempts to be innovative and encourage readers to draw upon a wider range of research materials than the traditional textual records customarily used by historians. Without proper citations, it of course makes it extremely difficult for other researchers to use the same records in subsequent research. It also suggests that the non-textual records are unworthy of a researcher's full attention, which I am sure is not the intent of any of the authors or the volume editors.

In the hands of less skilled editors, such an eclectic coverage of the Pacific explorations might have led to a disjointed study. But on the contrary, *From Maps to Metaphors* offers unique insight into the broader sociocultural endeavours behind Europe's intrusion into the Pacific. To use cartographic records effectively, map users need to understand how these broader issues influenced the creation, use, and preservation of their documents. *From Maps to Metaphors* is a giant step forward in providing some of this context, much of which has been largely lacking until now.

Jeffrey S. Murray
Archivist, National Archives of Canada

BOUNDARIES OF HOME: MAPPING FOR LOCAL EMPOWERMENT. Doug Aberley, ed. Gabriola Island, BC, Philadelphia, PA: New Society Publishers, 1993. $11.95 CAN ISBN 1-55092-207-6.

Sixth in the *New Catalyst Bioregional Series*, the book lives up to its claim, "Whether opposing a clearcut or toxic dump, participating in local planning and zoning, or trying to learn more about your home places, *Boundaries of Home* will help you create, find and use the maps that are right for you." Edited by Doug Aberley, a map maker, bioregionalist and town planner for Hazelton, British Columbia, the book is a step-by-step description of how to use mapping as a tool to create empowering images of one's home place.

In a short introductory essay, Aberley posits that maps are "models of the world...icons...for what our senses 'see' through the filters of environment, culture and experience." He contends that although we have great access to maps, we have lost the ability ourselves to conceptualize, make and use maps of space. Instead, the making of maps has become dominated by specialists. Aberley invites use to imagine what would happen if cartographic information generated for 'exploitation of land and life is redirected to an equally proficient quest for social justice and integration of human cultures with place."

"Just do it," is Aberley's challenge to the reader. The essays included in this collection should encourage exactly that. Aboriginal mapping is put forward by way of inspiration for the mapping of the environment. This is followed by a chapter on mapping home bioregions. Another chapter covers current mapping thought. Within this chapter don't miss Seth Zuckerman's essay, "Four Reasons Why You've Never Seen a Map of the Northern California Bioregions". The heart of the book is Aberley's own chapter, "How to Map your Bioregion: A Primer for Community Activists". The primer shows how to identify external boundaries of a bioregion, suggests ways to describe territory within a bioregion, demonstrates how to isolate historic and current information about the economic base of a bioregion and describes how smaller local regions within bioregions can be identified. A very useful feature is the sources section within each of the themes, such as climate, population, biomes. Under soils the classic, *FAO Soil Map of the World* (1975), is cited in addition to the best recent literature such as the *World Atlas of Desertification* (1992).

The final chapter focuses on access to further cartographic sources. Here a note of caution from the editor. Before rushing out to buy any of these books, maps or journals, Aberley advises checking out your local library, in particular libraries with map collections. Topics covered are the history of cartography, access to cartographic resources, retail map suppliers, national atlases, map design ideas, aboriginal mapping, mapping of North America, cognitive mapping, bioregionalism, ecological mapping, geographic information systems, biodiversity and GAP mapping. Concluding the chapter is a list of "inspirational" sources such as Lou Skoda's images of

British Columbia, Van Sant's geosphere project and the University of Alaska's regional profile series, the prototypical bioregional atlas.

Boundaries of Home is recommended for all types of libraries that claim to be interested in environmental issues.

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MAPMAKERS OF THE SIXTEENTH CENTURY AND THEIR MAPS: BIO-BIBLIOGRAPHIES OF THE CARTOGRAPHERS OF ABRAHAM ORTELIUS, 1570: BASED ON LEO BAGROW'S A. ORTELII CATALOGUS CARTOGRAPHORUM. Robert W. Karrow. Chicago, Published for The Newberry Library by Speculum Orbis Press, 1993. 846p. $110 U.S. plus $6 s&h in U.S., $12 international. ISBN 0-932757-05-7.

This heavy duty tome [well, it does weigh 3.5 lbs.] is dressed in its Sunday best, with its full-color cover, and grand title. However, take off the cover, rest the book on a table, and page through it, and it is not just gloss. This is a serious directory to the cartographic circle surrounding and supporting Abraham Ortelius, the great 16th century cartographer.

Many of us are familiar with the name, if not the work of Ortelius. We have the ubiquitous *Theatrum Orbis Terrarum* facsimiles on the shelf perhaps. If we are lucky we have original maps in the drawers, or an atlas or two with Ortelius' name on the title page. But Ortelius, like any media star today, did not work alone. He got the spotlight, but perhaps he was the lucky one?

Ortelius though, can be credited with generosity of spirit that was unusual among mapmakers, and perhaps most creative people anywhere. He credited his sources. In his *Theatrum Orbis Terrarum* of 1570, Ortelius listed some 80 cartographers of the period and their maps. In the 1930s, Leo Bagrow, creator of *Imago Mundi* and author of *The History of Cartography*, republished and enhanced this list of mapmakers, as a supplement to *Petermanns Geographische Mitteilungen*. Neither of these may be on the shelves of many of our libraries, so as interesting and valuable as Ortelius' list was, it hasn't been accessible to many researchers who might have found it of use.

Bob Karrow, Curator of Maps, Administrative Curator of Special Collections,The Newberry Library, Chicago, makes a valuable contribution to further scholarship, and accessibility, in publishing this serious reworking and updating of the Bagrow list. Here we have not just biography, but cartobibliography—with listings of maps produced by these mapmakers. Karrow states somewhere that the list of known maps by the mapmakers is increased to 500, "drawn, engraved, printed or published" to the end of the 16th century. In his preface Karrow outlines his plan of work and describes the organization of the text. According to my rough count, some 220 libraries and museums are cited as home of the maps described.

Starting with Ortelius, Karrow's book then turns to the alphabetical list of mapmakers from Petrus ab Aggera to Matthias Zundt. Over and over Karrow comments that little is known about particular mapmakers, except for a name on the margin of a map. This is not unusual, as Ronald Vere Tooley commented on this in the introduction to his dictionary of mapmakers—that so often only the slightest of information was known, and often from only one map. Mr. Karrow has worked wonders to create extraordinary biographies of these mapmakers, despite the dearth of quick and easy sources.

Sadly, only a few of the maps described alongside the biographical sketches, are actually illustrated, but many of those have never been reproduced before. However, this is not a map book but a directory. That nice color cover did rather promise more, but I suspect the economics of publishing and the focus of the book precluded more illustrative material.

The sixty page, 2000+ item bibliography [double that of Bagrow] is yet another window on sixteenth century cartography, and the later scholarship that follows it. As one who enjoys puttering through bibliographies, seeking the nuggets that always lurk there, this is a literal goldmine. The exhaustive index is yet another point of access to the sixteenth century cartographic community. One can look under a university name, or a teacher's name, such as Glareanus, and make some quite wonderful, serendipitous linkages. The book is therefore, much more than a directory to mapmakers—it is an open window on the culture of cartography in Europe in the 16th century. Skimming the biographical notes about the mapmakers—all of them, quickly, creates quite an image of the mapmaker at work in Europe, and in the context of other workers. Notes about the work life of fathers, teachers and associates widen the scope, and we see the mapmaker within the learned community.

Mapmakers of the Sixteenth Century and their Maps belongs in every research map collection, in European history collections, and rare book collections. Like Koeman's *Atlantes Neerlandici*, it will lead us to places we did not

intend to go. But isn't that the trouble so often with the printed word.

Alice C. Hudson
Map DivisionNew York Public Library
New York City

AMERICAN PLACES DICTIONARY: A GUIDE TO 45,000 POPULATED PLACES, NATURAL FEATURES, AND OTHER PLACES IN THE UNITED STATES... 4 vols. Frank R. Abate, ed. Detroit: Omnigraphics, 1994. $350 US (set) $100 US (vol.) ISBN 1-55888-747-4 (set).

Omnigraphics has again published a valuable source of American places and their names. Although not as comprehensive as the publisher's 11 volume set, published in 1990, neither is this version as costly ($2000 for the earlier set). If price remains a problem, individual volumes can be purchased from the 1994 set at the very reasonable price of $100. Volume 1 covers the Northeast, Volume 2, the South, Volume 3, the Midwest, and Volume 4, the West, plus the index for all four volumes and the appendices, Indian Reservations, Major U.S. Military Installations, Major U.S. Geographic Features.

Although Volume 4 is the real bargain, each volume contains a foreword, explaining how to use the book, an editor's miscellany, bibliography and individual index for that volume. The front material is most informative and merits a fuller description. The foreword by Kelsie Harder deals with pattern and practices in the naming of American places. His short discussion of names deriving from Amerindian languages is particularly interesting. It should be noted that most of the names' origins were based on Harder's earlier work, *Illustrated Dictionary of Place Names* (1976). The miscellany lists early U.S. capitals, geopolitical peculiarities such as panhandles, the four corners, unusual state symbols and out-of-the-ordinary place names, such as East Loony, MO, Nanty-Glo, PA, Uncertain,TX, Sopchoppy, FL.

The introduction states that the dictionary "provides comprehensive coverage of places throughout the United States that are the subject of frequent inquiry." Included among the 45,000 entries (contrast with *Webster's New Geographical Dictionary* of 47,000 worldwide entries) are states, counties, all legally incorporated places, unincorporated places, American Indian reservations, and major U.S. geographic features, although national parks are omitted. The organization of entries is by state, then by county, the virtue of which is that places in close proximity to each other are brought together in the text.

Other valuable prefatory matter is the section on hierarchy of government in the U.S. Many states do not have counties e.g. in Louisiana parishes provide the equivalent of counties. In Virginia 41 independent cities serve as county equivalents; in addition there are 95 counties. Many places fall within more than one county. At the extreme are cities falling in 5 counties, such as New York, Oklahoma City and Dallas. Then there are boroughs, but their definition varies from state to state. Some states have minor civil divisions; others, particularly in the South and West, have been divided into census county divisions for statistical purposes (these are not normally used or referred to by the resident population). Another statistical entity used by the Census Bureau is the census designated place. CDP's are populated, identifiable by name but not legally incorporated. One state in which they are particularly noticeable is in Hawaii, where there are no legally incorporated places besides the city and county of Honolulu. Did you know that? And there is a lot more to discover while leafing through the volumes.

Turning first to the state entries, each state's seal is shown, followed by a map of county boundaries, the currency of which varies from state to state. Most of these maps would make excellent base maps; coordinates are given. For each state, population comparisons between 1980 and 1990 are given, including rank, area, amount of coastline, elevation (highest and lowest points), capital, largest city and country, housing unit information, distribution of population by race, history, telephone area codes, time zones and names of counties, and an index to all names entered for the state in the dictionary.

The county listing gives county seat, ZIP, population, square mileage of land and water, area code, and name origin. All incorporated political entities are list but there are also a number of unincorporated entries, some with populations of less than 100. One is always curious to check out the home turf, so turning to the entry for Ventura County, California, Piru is listed, lat.34°24'26"N, long. 118°47'55"W, an unincorporated place with a population of 1,157, but Saticoy is not. On the other hand, Channel Islands Beach is included with a population of 3317 and a population density to 8292.5! Contrast this to one of the county's centers of major population growth, Oxnard, population 142,216, density 5828.5. If you want the wide open spaces (by California standards), try Piru with a population density of 428.5, or Ojai, population 7613, density 1730.2. A compromise might be Thousand Oaks, population 104,352, density 2103.9. A typical full entry, Ojai, for example, would include ZIP, lat. long., population, population density, square mileage land and water, elevation, location in relation to nearby landmarks (Santa Barbara, the Sierra Madre Range) and name

origin (from the Chumash Indian tern a'hawa "moon", originally named Nordhoff, name changed 1916).

This multi-volume gazetteer/ place names dictionary is chock full of valuable information, presented in an interesting manner. If you could not afford the 'comprehensive' set in 11 volumes, give serious consideration to this one instead, devoted to place names in the United States. Recommended for university and public libraries alike, especially American public libraries.

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PUBLICATIONS RECEIVED

Carol Marley

COLUMBIA JOURNALS. David Thompson. Edited by Barbara Belyea. Montreal Kingston: McGill-Queens' University Press, 1994. 336 p. $49.95 CAN ISBN 0-7735-0989-5.

Thompson's *Columbia Journals* documents his work in the fur trade in the far west and his exploration of the North Pacific watershed. Belyea's edition spans the period 1800-1811. The journals describe landscapes which have been transformed by settlement and industry. They also are the record upon which Thompson's maps and part of his better known Narrative were based. Belyea has included an illustrated appendix on Thompson's maps, particularly useful because none of these were published during his lifetime. Some of Thompson's information was, however, used in the various editions of the Arrowsmith maps. This is the first major edition of Thompson's journals, and as such it is a source book. Reading through these journals, you will find yourself agreeing with Belyea that "there is much in this text to discover and enjoy."

HYDROELECTRIC DEVELOPMENT AND NATIVE COMMUNITIES OF NORTHERN QUEBEC. 4th ed. Scale 1:4,000,000. (Montreal): Hydro-Quebec, 1994.

The James Bay and Northern Quebec Agreement, signed in 1975 by the Cree, Inuit, the Government of Quebec, the Government of Canada, Hydro-Quebec, James Bay Energy Corporation and James Bay Development Corporation, is touted by some to be the first modern Native claims settlement in Canada. The map divides lands in northern Quebec into three classes. Category I lands, (5,414 square miles) are reserved for the exclusive use and benefit of local Native communities. On Category II lands (60,130 square miles) local Native communities have year-round exclusive fishing, hunting and trapping rights. On Category III lands (346,039 square miles) Natives have year-round harvesting rights. Presumably anyone else can hunt as well, although this is not the focus of the map.

The map was given to attenders of the program on the Cree, sponsored by the Environmental and Resources Management Division, Special Libraries Association Conference, held in Montreal in June 1995. You might want to check your holdings to see if you have this edition (statistics current to December 31, 1993). If not, you may wish to request a copy from Hydro-Quebec.

VENEZUELA. Kevin Healey. Scale 1:1,750,000. Vancouver, B.C.: ITMB Publishing, 1995. 10.95 CAN ISBN 0921-463596.

This is one of Kevin Healey's last maps. The cartographer died in late 1994 in Vancouver. The map is the third travel map of South American countries to be published by the firm, which remains committed to mapping the entire continent at 1:2,000,000, or better, eventually. Joyce says, "We apprentices lack the master's skill so will be proceeding cautiously." Like Healey's other maps of South America, this map is crammed with information. If I were going to Venezuela this is the map I would like to take along on the journey.

ZIMBABWE. Scale 1:1,250,000. Vancouver, B.C.: ITMB Publishing and Budapest: Cartographia, 1995. $10.95 CAN ISBN 0921-464790.

This handsome map is ITMB's first joint venture with Cartographia, a venture that Kevin Healey had a hand in completing. This is also ITMB's first African title. The map is uncluttered, gives a good sense of relief and place names are quite legible. Additional features include an index of names of settlements and an inset of Harare, scale 1:23,000.

BEIJING. Angus Weller. Scale 1:20,000. Vancouver, B.C.: ITMB Publishing, (1995?). $5.95 CAN ISBN: 0921-463685.

SHANGHAI.Angus Weller. Scale 1:20,000. Vancouver, B.C.: ITMB Publishing, (1995?). $5.95 CAN ISBN 0921-463626.

Angus Weller has designed large-scale plans of two of China's major cities. Both are rendered in pleasing colors and are easy to read. The large hotels are clearly demarcated. For the tourist who can't read Chinese characters, this is a particularly helpful feature. It is interesting to find detailed notes on the hardware and software which were used to create the maps. Once again, the Mac (in competent hands) carries the day.

MONGOLIA. Angus Weller. Scale 1:3,000,000. Vancouver, B.C.: ITMB Publishing, (1995). $8.95 CAN ISBN 0921-464472.

Most map collections will have very little on Mongolia, and even less on Mongolia as a tourist destination, so this is an unusual map. The commentary at the bottom of the map catches the flavor of the project. "There are people who thoroughly enjoy Mongolia, because of the numerous challenges of travelling in a country so early in its tourism industry. Others may find the adventure more arduous. Inform yourself before you travel here, get all the books you can and be prepared. BEST OF LUCK" A.W. Turning to more of the cartographer's comments, this time on Travel Inside Mongolia, we read, "Once one masters how to reach the country, getting around becomes a major challenge...roads (as known in the West) are almost non-existent. Without a vehicle, flying is the only effective way to tour the country. Unfortunately, the air transportation facilities...are abominable...Bus transportation is unfortunately non-existent." The next section, Warning Regarding Roads, says, "The lines purporting to show land communication routes within Mongolia MUST be regarded as unverified data. The map appears to indicate that Mongolia has a highly-developed road network. In reality, almost all of the 'roads' shown are rutted tracks across the grassland...As one of the truly undeveloped nations, Mongolia remains a remote and largely inaccessible country."

There is a disclaimer attached to the map to the effect that ITMB specializes in mapping parts of the world that usually lack reliable maps. Researching this map has apparently presented more challenges than normally are expected. The publisher and cartographer have been conscientious in acknowledging the map's lacunae. Don't say you were not warned!

REDISTRIBUTION OF THE EARLY CANADIAN TOPOGRAPHIC MAPS

To obtain copies of the following, contact Heather Stevens at hstevens@archives.ca

Geological Survey of Canada "A" series

Note: For referencing NTS grid system please consult ACMLA publication Occasional Paper Number 1,*Early Canadian Topographic Map Series: The Geological Survey of Canada 1842-1949*. Ottawa, Lorraine Dubreuil, 1988

241A	Digby	1930
242A	Escuminac	1930
243A	Hillsborough	1930
244A	Panache	1930
246A	Key Harbour	1930
247A	Delamere	1930
253A	Bridgetown	1930
402A	Peticodiac (East Half)	1946
403A	Peticodiac (West Half)	1946 2 copies
441A	Rouyn area	1938
468A	Haliburton (East Half)	1938, 1945
469A	Haliburton (West Half)	1938, 1945
470A	Bobcaygeon (East Half)	1945
471A	Bobcaygeon (West Half)	1945
472A	Nipisiguit Lake (East Half)	1938
473A	Nipisiguit Lake (West Half)	1938
474A	Point Wolf	1939
475A	Waterford	1939
476A	Salmon River	1940
480A	Perron-Rousseau (East Half)	1938
481A	Perron-Rousseau (West Half)	1938
484A	Mistawak Lake	1939
485A	Landrienne (East Half)	1938
486A	Landrienne (West Half)	1938
487A	Duverny (East Half)	1938
488A	Duverny (West Half)	1938
495A	Sherbrooke Lake	1939
496A	Springfield	1939
498A	Quyta Lake	1939
499A	Prosperous Lake	1939
500A	Yellowknife Bay	1939
507A	Rolling Dam	1939
509A	Hopewell	1939
510A	West River	1939
511A	Owls Head	1939
512A	Liscomb	1939
513A	Melopseketch	1939
515A	Lake Mulgrave	1939
516A	Upper Musquodoboit	1939
517A	Lochaber	1939
518A	Moose River	1939 2 copies
519A	Ecum Secum	1939
520A	Port Dufferin	1939
521A	Tangier	1939
522A	Ship Harbour	1939
523A	St. Andrews	1939
524A	St. Stephen	1939
540A	Bragg Creek (1:63 360)	1940
540A	Bragg Creek (1:50 000)	1940
541A	Stimson Creek	1939
542A	Pekisko Creek	1939
543A	Rawdon	1940, 1945
544A	Morley	1939
545A	Mechamego Lake	1939
547A	Joliette	1940, 1945
550A	Gale River	1939
552A	Rochebaucourt	1939
582A	Goldfields	1940
583A	Stokely Creek	1940
586A	Verner	1940
589A	Capreol	1940, 1947
591A	Gordon Lake South	1941
598A	Muir Lake	1940
599A	Crackingstone	1941
618A	Gordon Lake	1941
629A	Forget Lake	1941
663A	Nevins Lake	1941
666A	Athapadukow Lake	1941
669A	Moose Mountain	1941
672A	George Creek	1942
677A	Wawa	1942
678A	Lac Charette	1942
679A	Cuvillier	1942
680A	St. Michel	1942, 1946 2 co
681A	Lac au Sorcier	1942
682A	Schyan Lake	1942
683A	McGillivray Lake	1942
684A	Stonecliffe	1942
685A	Clear Lake	1942
686A	Chalk River	1946
700A	Cullin Lake	1942
701A	Point Alexander	1942
702A	Mondonac Lake	1942
706A	Lac Boucher	1942
707A	Wickenden Lake	1942
708A	Lac Livernois	1942 2 copies
814A	Beaver Mines	1943
715A	Saunders	1943
716A	Fall Creek	1943
717A	Marble Mountain	1943

718A	Tay River	1943
719A	Alexo	1943
720A	Langford Creek	1943
721A	Limestone Mountain	1943
722A	Callum Creek	1943
723A	Mikanagan Lake	1943
724A	Dyson Creek	1943
725A	Cowley	1943
726A	Cripple Creek	1943
731A	Londonderry	1943
732A	Bass River	1943
742A	Lac Brehault	1943
743A	Steamboat Rock Lake	1943 2 copies
744A	Cuoq	1944 2 copies
745A	Lac Larouche	1944
746A	Ste. Felicite	1944 2 copies
747A	St. Vianney	1944 2 copies
748A	Harper Lake	1944
749A	Grosses Roches	1943 2 copies
750A	Ward Lake	1944
751A	Lac St. Amour	1943 2 copies
752A	Perch Lake	1944 3 copies
753A	Nishkotea Lake	1944
754A	Lac Joncas	1943 2 copies
755A	Birch Lake	1943 2 copies
756A	Canimit River	1943 2 copies
757A	Shamus	1943 2 copies
758A	Otanabi Lake	1944 2 copies
759A	Lac Marrias	1944 2 copies
760A	Cmatose Lake	1943 2 copies
761A	Cawasachouane	1943 2 copies
762A	Lac Lenotre	1943 2 copies
763A	Lac La Loche	1943 2 copies
764A	River Hebert	1943
765A	Springhill	1943
766A	Gaotanaga Lake	1944 2 copies
767A	Anwatan Lake	1944 2 copies
769A	Lac Marmette	1943 2 copies
770A	Lac Sabourin	1943 2 copies
771A	Antiquois Lake	1943 2 copies
772A	Sauterelle	1943
773A	Cabonga	1943 2 copies
774A	Lac Jean-Pere	1943
775A	Bark Lake	1944
776A	Rowanton	1944
778A	Round Lake	1944
779A	Aylen Lake	1944
780A	Cartier Lake	1944
781A	Grand Lake	1944
785A	Lac Dumoine	1944
786A	Russell Lake	1944
788A	Pincher Creek	1944
789A	St. Guillaume Nord	1944
790A	Mosquic Lake	1944 2 copies
791A	Five Finger Lake	1944
792A	Chinaman Lake	1944
793A	Portage Mountain	1944
794A	Mount Hulcross	1944
795A	Commotion Creek	1944
796A	Lac Charland	1944
797A	Lac Maison-de-Pierre	1944
798A	Glenwoodville	1944
799A	Gap	1944
800A	Cardston	1944
801A	Mountain View	1944
802A	Shinimikas	1944
803A	Dunlevy Creek	1944
804A	L'Ascension	1944 2 copies
805A	Matawin	1944
806A	Lac Franchere	1944
808A	Oxford	1944
812A	Pugwash	1944
813A	Wentworth	1944
814A	Mount Head	1945
815A	Waterton	1945
817A	Malagash	1945
818A	Parrsboro	1945
819A	Turner Valley	1945
821A	Port Greville	1945
822A	Five Islands	1945
826A	Cape Chignecto	1945
837A	Sherridon	1945
839A	Tatamagouche	1945
841A	Naosap Lake	1945
853A	Cranberry Portage	1945
854A	Tatamagouche-River John	1946
857A	File Lake	1945
858A	Batty Lake	1946
863A	Wiley Lake	1946
864A	Lowe Lake	1946
865A	Tramping Lake	1946
869A	Elbow Lake	1946
873A	Blairmore	1946
875A	Iskwasum Lake	1946
877A	Newcastle	1946
879A	Sunwapta	1947
880A	Nose Creek	1946
881A	Moberly Creek	1946
891A	Ross Lake	1946
892A	Herb Lake	1947
893A	Kennetcook	1947
894A	Southesk	1947
897A	Shubenacadie	1947
898A	Tumpline Lake	1946
901A	Burtts Corner	1947 2 copies
902A	Boiestown	1947
903A	Npadogan	1947 2 copies
904A	Athabaska Falls	1947
912A	Effingham	1947
914A	Alberni Inlet	1947
915A	Buttle Lake	1947
916A	Cape Scott	1947
917A	Shushartie	1947
918A	Quatsino	1947
919A	Port McNeill	1947
920A	Minto	1947
921A	Buzz Lake	1947
923A	Donald Flats	1947
924A	Medicine Lake	1948
925A	St. Patrick Lake	1947 2 copies

926A	Campobllo	1948
927A	Grand Manan	1948 2 copies
928A	Barraute	1947
935A	Chalco Lake	1947
936A	Ranji Lake	1947
937A	Prelude Lake	1947 2 copies
939A	Lac Dumoine	1948 2 copies
940A	Grande Prairie	1948
941A	Mistatim	1948
942A	Arborfield	1948
943A	High Prairie	1948
944A	Beaverlodge	1948
945A	Two Lakes	1948
946A	Pierre Greys Lakes	1948
[947A]	Lac Brule [incorrectly shown as 974A]	1948 2 copies
948A	McLennan	1949
949A	Blueberry Mountain	1948
950A	Russell Lake	1948 2 copies
951A	La Motte	1948 2 copies
952A	Pasquia	1948 2 copies
954A	Rycroft	1948 2 copies
955A	Nelson	1948
956A	Sturgeon	1948
957A	Etomami	1949
958A	Buckham Lake	1948
959A	Hearne Lake	1948
960A	Pointe Verte	1948
961A	Watino	1949
967A	Ravendale	1949
972A	Point Escuminac	1948 2 copies
974A	Upsalquitch Forks	1949
975A	Bruce Lake	1948 2 copies
976A	Hampstead	1949
983A	McAdam	1949
984A	Forest City	1948
985A	Fosterville	1948
986A	Tabusintac River	1949
988A	Kedgwick	1949 2 copies
990A	Kiosk	1949 2 copies
991A	Port Radium	1949

Sectional Maps of the West, three miles to one inch (New Style)

10	Port Moody	1913
11	Yale	1913, 1921
14	Pincher Creek (w/wo relief)	1916 (2 maps)
15	Lethbridge	1915, 1941
16	Milk River	1914
17	Cypress (w/wo relief)	1914 (2 maps)
18	Wood Mountain	1916, 1930
19	Willowbunch	1914, 1930
20	Souris	1914, 1917, 1927
21	Turtle Mountain	1916, 1922
22	Dufferin	1913, 1917, 1920
23	Emerson	1913, 1917,1923
24	Lake of the Woods	1912
61	Lytton	1917
64	Porcupine (w/wo relief)	1914 (2 maps)
65	Macleod	1916, 1923, 1941
66	Medicine Hat	1914, 1924, 1947
67	Maple Creek (w/wo relief)	1914 (2 maps), 1925
68	Swift Current	1916, 1924, 1941
69	Moosejaw	1915, 1921
70	Moose Mountain	1915, 1923, 1940
71	Virden	1916, 1923
72	Portage La Prairie	1913, 1919, 1921
73	Winnipeg	1917, 1921
74	Cross Lake	1913, 1926
111	Kamloops	1916
112	Sicmous	1915 (2 maps)
	(second map shows indian and forest reserve boundaries)	
113	Spillimacheen	1914
114	Calgary	1914, 1926, 1955
115	Blackfoot	1915, 1921, 1948
116	Rainy Hills (w/wo relief)	1906, 1914 (2 maps)
117	Red Deer Forks	1912, 1915
118	Ruch Lake	1912, 1914, 1925
119	Regina	1915, 1921, 1940
120	Qu'Appelle	1916, 1925, 1950
121	Riding Mountain	1915, 1919, 1942
122	Manitoba House	1917, 1919
123	Fort Alexander	1914, 1921
124	Oiseau	1915, 1925
162	Seymour	1914
163	Donald	1913, 1925
164	Morley	1915, 1925
165	Rosebud	1913, 1916, 1922 (2 copies)
166	Sounding Creek	1914, 1932
167	Bad Hills	1915
167	Kindersley	1932, 1948
168	The Elbow	1905. 1915, 1923
169	Touchwood	1905, 1914, 1927, 1950
170	Yorkton	1913, 1916, 1926
171	Duck Mountain	1915, 1942 (2 copies)
172	Fairford	1907, 1911, 1914, 1919
173	Washow	1914, 1918
213	Athabaska	1914 (2 maps),1916 (2 copies)
	(second map shows forest reserve boundaries)	
214	Rocky Mountain House	1916
215	Red Deer	1905, 1915, 1922, 1941
216	Sullivan Lake	1905, 1915, 1926
217	Tramping Lake	1905, 1914, 1930, 1945
218	Saskatoon	1905, 1915, 1920, 1927,
219	Humbolt	1905, 1914, 1929
220	Nut Mountain	1916
221	Swan River	1911, 1914, 1919, 1946
222	Waterhen	1914, 1918
223	Berens	1917
262	Yellowhead	1916
263	Jasper	1914, 1918 (2 maps)
	(second map shows forest reserve boundaries)	
264	Brazeau	1913, 1916, 1933,1948
265	Peace Hills	1905, 1914, 1916,1921, (2 copies), 1948
266	Ribstone Creek	1905, 1913, 1916
266	Wainwright	1924
267	Battleford	1905, 1916, 1928

268	Carleton	1908, 1915, 1935, 1948
269	Prince Albert South	1905, 1913, 1916 (2 copies)
270	Pasquia	1915, 1923, 1946
271	Mossy Portage	1914, 1924, 1948
272	Long Point	1916
313	Brule	1913, 1916 (2 copies)
314	St. Ann	1917, 1933
315	Edmonton	1915, 1920, 1928, 1940
316	Vermilion	1914, 1918, 1928
317	Fort Pitt	1914, 1918
318	Shell River	1914
318	Big River	1925
319	Prince Albert North	1918
320	Carrot River	1913, 1916
321	Cedar Lake	1914, 1918
322	Grand Rapids	1916
362	Simonette	1915
363	Berland	1916
364	Fort Assiniboine	1917, 1931, 1948
365	Victoria	1915, 1929, 1948
366	Saddle Lake	1916, 1925
367	Meadow Lake	1914, 1918
368	Green Lake	1914, 1918 (2 maps)
	(second map shows forest reserve boundaries)	
369	Montreal Lake	1914
370	Cumberland	1915
371	Cowan River	1914, 1917
372	Minago	1914, 1924
412	Wapiti	1914, 1918
413	Iosegun	1914, 1917
414	Saulteux	1914, 1922, 1946
415	Tawatinaw	1918, 1948
416	La Biche	1914, 1918 (2 maps)
	(second map shows indian reserve boundaries)	
417	Primrose	1915
418	La Plonge	1914
421	Kississing	1922
422	Wekusko	1914, 1918
423	Sipiwesk	1914
461	Moberly	1913, 1917
462	Dunvegan	1914, 1917, 1928
463	Smoky River	1915, 1922
464	Giroux	1912, 1914, 1918 (2 maps)
	(second map shows indian and forest reserve boundaries)	
464	Pelican	1918
465	Landels	1913, 1917
467	Dillon	1919
473	Partridge Crop	1914, 1923
511	St. John	1913, 1916, 1922
512	Montagneuse	1914, 1918 (2 maps)
	(second map shows indian reserve boundaries)	
513	Heart River	1912, 1914, 1915
513	Shaftiesbury	1920, 1948
514	Atikamil	1915 (2 maps)
	(second map shows indian reserve boundaries)	
515	Wabiskaw	1915 (2 maps)
	(second map shows indian reserve boundaries)	
516	McMurray	1913, 1917 (2 maps), 1919
	(second map shows indian reserve boundaries)	
524	Limestone River	1915
563	Notikewin	1914, 1918, 1947
564	Panny River	1916
565	Birch Hills	1915
566	McKay	1914, 1918
575	Port Nelson	1915
613	Wolverine	1916, 1919
614	Kokiu	1916
615	Waskwei	1916
616	Firebag	1916
663	Mustus	1914, 1918
664	Mikkwa	1914, 1918 (2 maps)
	(second map shows indian reserve boundaries)	
665	Lake Claire	1921
666	Chippewyan	1919
1052	Dawson	1918

In addition, the following bound volumes are available for redistribution:

Manitoba & Saskatchewan

Alberta & British Columbia (2 copies)

WANTED!

The Visual and Sound Archives Division, National Archives of Canada, would appreciate your donation of the following map sheets which are NOT currently held in its collection. If you have copies, please contact:

Heather Stevens
(613) 996-7639 (phone)
(613) 995-6226 (fax)
hstevens@archives.ca (Internet)

SECTIONAL MAP THREE MILES TO ONE INCH, OLD STYLE: [OF WESTERN CANADA]

Sheet	Title	Date
[19]	Riding Mountain Sheet	1895
[20]	Duck Mountain Sheet	1898
46	Prince Albert Sheet	1893
[62]	Battleford Sheet	1894
79	Edmonton Sheet	1891

SECTIONAL MAP THREE MILES TO ONE INCH, NEW STYLE: [OF WESTERN CANADA]

Sheet	Title	Date
15	Lethbridge	1913
21	Turtle Mountain Sheet	1913
113	Spillimaheen Sheet	1910
114	Calgary Sheet	1912
115	Blackfoot Sheet	1912
123	Fort Alexander Sheet	1923
162	Seymour Sheet	1910
165	Rosebud Sheet	1911
173	Washow Sheet	1919
215	Red Deer Sheet	1912
219	Humbolt Sheet	1906
316	Berland Sheet	1916
368	Green Lake Sheet	1948
414	Saulteaux Sheet	1913
415	Tawatinaw Sheet	1913
563	Notikewin Sheet	1945

THE *BULLETIN* BOARD

EXECUTIVE BOARD MEETING

The Fall Board meeting will be held November 18. If you would like any items placed on the agenda for discussion, please contact Alberta Auringer Wood awood@kean.ucs.mun.ca

TOUR ... The Canadian Cartographic Exhibit

from Geomatics Canada's web site: http://www.geocan.nrcan.gc.ca. View full screen images of the maps displayed at the 17th ICA meeting in Barcelona, Spain, Sept. 3-9, 1995. Impressive!

WWW Sites of Interest

Canadian Soil Information System

Found at: http://res.agr.ca/PUB/CANSIS/_overview.html>

The Canadian Soil Information System (CanSIS) of Agriculture and AgriFood Canada is pleased to provide WWW access to documentation about its contents and capabilities, as well as selected GIS datasets from its National Soil DataBase (NSDB).

Of most interest may be Version 1.0 of the Soil Landscapes of Canada, available in ARC/INFO EXPORT format.

The site is still under development, but will include:

* Version 2.1 of the Soil Landscapes of Canada as well as the
* Polygon Attribute Reaggregation System and a marvelous
* hypertext indexing system (for UNIX)

CCRS Home Page

GCNET - provides access to the CCRS Image Inventory, including information about 1.5 millions scenes from LANDSAT MSS &TM, SPOT, NOAA, MOS, SEASAT SAR. Check out the sample images at http://www.ccrs.nrcan.gc.ca/gcnet/

HAC Data Project New URL Address

PLEASE NOTE that the address for the *Historical Atlas of Canada Data Project* has changed **to**: http://www.geog.utoronto.ca **from**: http://esker.geog.utoronto.ca

Introducing Champlain

A global search utility for Canadian Government Information is available at http://info.ic.gc.ca/champlain/champlain.html. This is a WWW based tool for scanning all Canadian government databases for information using keywords. Check it out!

U.S. Bureau of Land Management

New Home page at http://www.blm.gov. Apparently you'll find lots of links to information on GIS and maps.

Bodleian Library Map Room

Now available at the following site: http://rsl.ox.ac.uk/nnj/ (Map Room) or http://www.bodley.ox.ac.uk/boris/ (Bodleian)

The page includes graphics - maps selected from the collection, (including the Gough Map); the Map Room's latest published monthly Accessions List; a listing of all "open access" journals in the Map Room; maps showing how to reach the Library; a general user guide to the collection; and much more, along with pointers to other sites with cartographic information.

CARTO-SoC Society of Cartographers Listserv

CARTO-SoC is a discussion list for all aspects of Cartography - the studyof maps. It is run by the Society of Cartographers, and anyone is welcome to subscribe.

Send a message to:
listproc@sheffield.ac.uk
subscribe: carto-soc [your name]

NAD 83

An information package is available on the North American Datum 83 which includes a free video and several articles. Contact Paul Godin, Information Services, Geodetic Survey Division, Geomatics Canada, 615 Booth St, Ottawa K1A 0E9 613/995-4421 or information@geod.nrcan.gc.ca

NEW Canadian Hydrographic Service newsletter

CHS now produces a newsletter *Contour* , available free. This is where you can get all the latest information on the electronic navigation charts—300 to date. Canadian Hydrographic Service, Dept. of Fisheries and Oceans, Ottawa, Ont. K1A 0E6 This is also available on the net at http://www.chshq.dfo.ca

Natural Resources Canada Restructures

As of August 16, 1995 Geomatics Canada merged with the Geological Survey of Canada to form Earth Sciences—one of the four science-based sectors within NRC. The other three sectors are Canadian Forest Service, Energy, and Minerals & Metals. News of the reorganization came as a result of the Program Review announced in last February's budget. NRC claims that "these moves provide a closer integration of science and technology with policy and program delivery". M.Everall is the Assistant Deputy Minister.

New Edition of...

Canadian Copyright Law 2nd ed., by Lesley Ellen Harris, Whitby, ON: McGraw-Hill Ryerson. 0-07-552547-X $22.99

Who's Who in the History of Cartography

The new and expanded 1995 edition was due to be published in early September. Cost is £24 . (includes post and packing) ISBN 0-906430-15-1
The eighth edition includes:
* over 500 researchers
* telephone and fax numbers, and email addresses
* multiple indexes, allowing easy access to all individuals, their research interests and publications
* a 'What's What' section, with headings such as: literature (general, bibliographical, periodical etc), electronic networks, conferences, research fellowships, audio-visual, globes, map collections, organisations and societies, the market-place - in short
the first 'vade mecum' for the history of cartography

Published for Imago Mundi Ltd by Map Collector Publications Ltd, 48 High Street, Tring, Herts HP23 5BH, UK, to whom all enquiries should be sent.

Children's Map of the World Competition - Barcelona, Spain, 1995 Summary

A total of 230 maps (158 from elementary students and 72 from high school students) were received from 15 schools. The maps presented a wide range of themes which included conservation, pollution, peace and futuristic maps on topics such as "the world in the year 2000". Maps were submitted by students aged from 6 to 15 years of age and the majority had a single author. Entries were received from the following schools in five provinces and one of the territories.

a. Newfoundland - where the three elementary schools of Indian Rive(Springdale),St Patrick's School (St John's) and Truman Eddison Memorial School (Gunner's Cove) together contributed 36 maps.

b. Nova Scotia - with one high school entry submitted by the Windsor Regional High School in Windsor.

c. New Brunswick - who also sent one entry at the high school level from the êcole Cormier in Edmundston.

d. Ontario - where two Thornhill schools ,Thornlea Secondary School and the Thornhill Secondary School, submitted a total of 36 maps.

e. British Columbia - where six schools sent a total of 148 maps. One hundred and nineteen maps at the elementary level were received from four Prince George schools (Southridge Elementary School, Gladstone Elementary School, Sacred Heart School, and College Heights Elementary), Edgehill Elementary School (Powell River) and Murrayville Elementary School (Langley). Sacred Heart, in Prince George, also contributed the 29 maps at the secondary level.

f. Yukon - three maps at the elementary level were received from the Hidden Valley School Whitehorse. Riverdale School, also in Whitehorse, sent four maps at the secondary level.

In Montreal, in late April, a five person committee judged all the entries and selected five maps to represent Canada at an exhibit to be held during the 17th. International Cartographic Conference in Barcelona, Spain, September 3-9. The Canadian winners, in order of age, were:

College Height Elementary School in Prince George "Get Connected" by Taryn Brown (12 years) "Peace in the World" by Desiree Zantolas (11 years) and Shawna Dempsey (12 years)

Thornhill Secondary School
"Our Endangered Species" by Rachael Levine (14 years)

"Ozone Depletion" by Sean Herzog (14 years)

"Immigration in 1988" by Rishi Boodram (15 years)

Each winning author received a certificate and a $25 money order. The prize money came from the Joint Canadian Cartographic Association and Carto=Quebec Congress held in Montreal in 1992. Schools that contributed maps were sent a letter and certificates thanking them for their participation. Where individual classes could be identified, the certificates were produced for each participating class.

At the ICA Barcelona Congress maps from 20 countries (including those described above from Canada) were exhibited. These attracted a lot of attention. After much deliberation, the judging committee selected 10 winners, aged from 5 to 15 years, for submission to UNICEF for consideration as part of a wall sheet for use as an educational and display tool. One winner was selected from each of the five continents: Africa (Republic of South Africa), Australasia (Australia), Asia (Vietnam), North America (United States of America), and South America (Chile). Most of the maps were submitted by 13 European countries, so the five additional winners were selected from this group (Hungary, Poland , Slovak Republic, Spain and the United Kingdom.)

The Barcelona contest was the second Barbara Petchenik Children's Map Competition, the first being held in 1993 in Cologne, Germany. Maps from that contest have been included on a UN CD-ROM called "My City" which was exhibited at the World Summit on Social Development in Copenhagen in March 1995 and at the Women's Summit in Beijing in September 1995. All the finalists from both the competitions are being preserved in the permanent collection of the Carleton University Map Library, Ottawa.

On behalf of the Canadian Organizing Committee I would like to take this opportunity to thank everyone who made the 1995 Canadian competition a reality: teachers, councillors, administrators and the students. It is probable that a similar completion will be held in future years. To ensure continued Canadian participation, please keep your eyes open for information about such a competition in a future newsletter.

Jacqueline Anderson
Chair, Canadian Organizing Committee
Concordia University
Department of Geography

BULLETIN EDITOR POSITIONS AVAILABLE!

After many years of service on the Bulletin staff, the Editor and Reviews Editor will be stepping aside for some new and aspiring talent to join the team.

These positions will be coming available in the New Year.

Anyone interested, or would like more information, should contact the current Editors or any member of the Executive.

The *Bulletin* is the primary publication of ACMLA , and your participation is encouraged and appreciated!

Review Guidelines

The format of the review should consist of the bibliographic citation, the text of the review and the name and institutional affilation (or geographic location) of the reviewer.

Reviews should be typed, double spaced, with ample margins for copy editing.

Please begin the text of the review one-third way down the first page to allow for the bibliographic entry, which will be sent to you with your review copy.

Whenever possible, reviews should be submitted in electronic format on either a 3.5 or 5.25 (double density) disk IBM format. The file should be in Word Perfect 5.1 or ASCII format with name clearly identified. Please send two print-outs, double spaced. Please do not format your text e.g. bold, underline, indent. Please do not sent your review via electronic mail. Typewritten contributions are also acceptable and should be double spaced.

The text should describe the book, atlas, map, or software, in sufficient detail so that the reader can realize scope and pertinent features, but emphasis should be placed on evaluative comments. Keep in mind that many ACMLA Bulletin readers are responsible for map collections and may be using the review as a selection aid. Therefore review items should be judged principally according to their utility for such collections, and in particular, their value for research in geography or cartography. An indication of other readers or institutions to whom the items might appeal is also appropriate.

The length of the review is not fixed but should be dictated by the importance of the item being reviewed. The average length of reviews is 500 words.

Please observe the deadline for the review. If it is impossible to meet it, please notify the Review Editor in advance. If you are unable to complete the review, the item being reviewed must be returned to the Review Editor. The Review Editor will try to notify reviewers within a week of receipt of the review. Once published in the ACMLA Bulletin, two copies of the review will be sent to the publisher. The reviewer will receive a copy of the issue in which his/her review is published in appreciation of his/her contribution.

Editorial Policies Opinions expressed in reviews are those of the author and do not reflect the offical sanction of ACMLA. The Review Editor retains the right to make alterations in reviews submitted. Minor alterations will be made without further communication. If the Review Editor feels that more extensive revisions are in order, or that changes would result in altering the review's content, such revisions will be made only with the knowledge and agreement of the reviewer. Reviews will be published in whichever of Canada's official languages they are submitted, English or French.

Thank you for observing these guidelines. We welcome your recommendations of material to be reviewed in the Bulletin, or your suggestions of other qualified reviewers.

Carol Marley, Review Editor, ACMLA Bulletin, Hitschfield Environmental Earth Sciences Library, McGill University, 805 Sherbrooke Street West, Montreal, QC H3A 2K6. (514) 398-7453 e-mail: marley@felix.geog.mcgill.ca

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Titles/Titres

Explorations in the History of Canadian Mapping: a collection of essays. Edited by Barbara Farrell and Aileen Desbarats. Ottawa, ACMLA, 1988. ISBN 0-9690682-6-3 (paperback/broché) $25

Early Canadian Topographic Map Series: the Geological Survey of Canada, 1842-1949. Lorraine Dubreuil. Ottawa, ACMLA, 1988. (Occasional Paper No.1.) ISBN 0-9690682-8-X $15

Sectional Maps of Western Canada, 1871-1955: an early Canadian topographic map series. Lorraine Dubreuil. Ottawa, ACMLA, 1989. (Occasional Paper No. 2.) ISBN 0-9690682-9-8 $15

Standard Topographical Maps of Canada, 1904-1948. Lorraine Dubreuil. Ottawa, ACMLA, 1991. (Occasional Paper No.3.) ISBN 0-9695062-0-1 $10

Canada's Militia and Defence Maps, 1905-1931. Lorraine Dubreuil. Ottawa, ACMLA. 1992. (Occasional Paper No.4.) ISBN 0-9695062-3-6 $10

Guide for a Small Map Collection. Barbara Farrell, Aileen Desbarats. Ottawa, ACMLA, 1984. 2nd edition. ISBN 0-9690682-39 $8

Directory of Canadian Map Collection =Répertoire des collections canadiennes de cartes. Tim Ross. Ottawa, ACMLA=ACACC, 1992. 6th edition=6e édition. ISSN 0070-5217. $18.00=18$.

Canadian Fire Insurance Plans in Ontario Collections, 1876-1973. Marcel Fortin, Lorraine Dubreuil, and Cheryl Woods. Ottawa, ACMLA, 1995 (Occasional Paper No.5) ISBN 0-9695062-6-0

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Marcel Fortin
Vancouver, British Columbia

Lorraine Dubreuil
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Cheryl A. Woods
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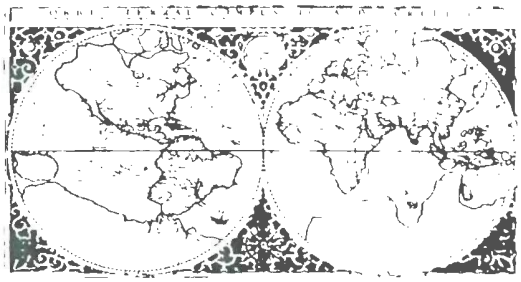

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