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Association of Canadian Map Libraries/
Association des cartothèques canadiennes
c/o National Map Collection
Public Archives of Canada
395 Wellington Street
Ottawa, Ontario
CANADA K1A 0N3

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Association of Canadian Map Libraries/
Association des cartothèques canadiennes
a/s Collection nationale de cartes et plans
Archives publiques du Canada
395, rue Wellington
Ottawa, Ontario
CANADA K1A 0N3

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

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COVER/COUVERTURE: Canada Orientale ..., by Vincenzo Coronelli, published in his Corso geografico universale ..., Venice, 1692-[94]. 46.0 x 61.5 cm. This map, an original of which is in the Centre for Newfoundland Studies, Memorial University Library, St. John's, Newfoundland, has been reproduced as Facsimile Map No. 30 by the ACML and is available from the Association for $2 ($10 hand-coloured).

MICROFILMING OF CARTOGRAPHIC DOCUMENTS[1]

Gilles Langelier
National Map Collection
Public Archives of Canada
Ottawa, Ont.

The use of microforms is well established in libraries and in archival institutions for books, theses, manuscripts and official documents, but seldom for cartographic documents. There are numerous reasons why the miniaturization era did not reach the map collections. The systems developed for books and textual records can hardly be applied to maps. In this paper an attempt will be made to describe the problems encountered when microfilming maps and to evaluate the various formats used for maps with their advantages and limitations. A description of the National Map Collection programme will follow. Finally brief reports about standards and colour microfilming will be included. First, however, we will summarize the reasons for microfilming maps.

Why Microfilm a Collection of Maps?

1. To Better Protect and Preserve the Originals - Handling of original maps is always damaging even if the greatest of care is taken. Large maps suffer the most from being removed from the cabinet and refiled. Inadequate storage cabinets will cause damage if a map is removed. Copying probably causes the most damage, particularly if the photocopying is done in another area.

An example from the National Map Collection can be cited. Conservation reports indicate that 8% of the Collection's holdings are in a state of advanced decomposition. A report prepared in 1975 indicated that close to 20% of the maps were in the categories 'poor' and 'very poor'.

2. To Save Space (Engineering Firms, Industry) - (a) Maps and plans of little value can be disposed of; the negative film only can be kept. (b) Original documents can be kept in a low-cost storage space, leaving the negative in the office for reference.

3. To Facilitate Accessibility and Wider Dissemination - The advantages of having a collection of maps on microfilm are numerous: (a) An incredible number of hours of reference time now spent in removing and refiling maps could be spent on other duties. (b) Researchers could have visual access to the documents without having to go through catalogue cards or finding aids where titles and descriptions are often meaningless. (c) Copies could be easily obtained from negatives. (d) Microforms could be borrowed. (e) Duplicate films could also be obtained. (f) Rare maps could become available in several institutions.

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1. Une version française (et non une traduction) de ce texte est en préparation et sera publiée dans un prochain numéro de la revue Archives. Un exemplaire de cette version sera envoyé à chaque membre francophone de l'Association des cartothèques canadiennes.

Microfilming Maps: Special Problems[2]

Microfilming manuscripts, public records or books does not present any technical problems but the situation is different for maps for various reasons: (a) Maps appear in a wide variety of sizes; standardization of map size is recent and covers only a portion of the cartographic production. (b) Excessive or unlimited sizes are frequent. Often the width is more than 40 in. and the length over 100 in. (c) Some maps have poor lines and poor background contrast. (d) Some maps have very fine lines and worn lines. (e) Characters vary considerably in size on the same map. Decorative symbols were not chosen for their reproducibility. These symbols could make some characters illegible even if the most sophisticated reproduction techniques are used. (f) Some maps are heavily coloured; some can be very faded. There are maps on which boundary lines or shorelines have been hand-coloured. (g) There is a complete range of blueprints, brown-line prints, etc., which have the 'quality' of fading. (h) Some maps have a discoloured map coating. Several county maps are unfortunately in that group. (i) The quality of the paper varies considerably from one map to another. (j) Scale is an important feature on a map and the customer must be able to get back an exact copy without any distortion. (k) Symbols are numerous: symbols for roads, rivers, relief, vegetation, etc. (l) Some maps have been kept rolled for years and cannot be flattened completely, which causes distortion on the image.

The Various Formats Used for Maps

With the exception of 16 mm, all the other formats are suitable for copying maps and drawings. The image size on 16 mm is so small that it is not worth considering for maps. Each format has limitations and advantages.

The 35 mm Format - The most common and most popular format is 35 mm, often preferred to other formats (such as 105 mm, even though 105 mm gives better results). Examples of institutions deciding in favour of 35 mm over 105 mm are numerous although these institutions would have recognized the superior quality of 105 mm. The first recommendation of a report prepared in 1972 by a working group in Great Britain is that "the standard format for the microfilming of maps is the 35 mm frame ...."[3] The reasons for this preference are: (a) 35 mm equipment is far less expensive. (b) Technology is more developed and sophisticated for 35 mm; there is a wide range of cameras, readers and reader-printers. (c) Systems based on 35 mm are consequently more flexible. Most libraries and archives are already equipped with readers and reader-printers and are naturally reluctant to invest in a system that has only one use. (d) Satisfactory quality could be obtained with 35 mm especially in the photographing of maps that contain standard information, e.g., the topographic series. I have seen cases where blow-back from 35 mm could be easily compared to blow-back from 105 mm negative.

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2. For a more complete description of these problems, see Ralph E. Frenbergh, "Photocopying Rare Maps and Atlases," The 1976 Ab Bookman's Yearbook, pp. 32,33.
3. Great Britain, National Reprographic Centre for Documentation, Recommendations of methods of microfilming: maps and plans. Prepared by Public Services Microfilm Liaison Group. September 1972. p. 1.

The limitations of 35 mm are well known: (a) Due to excessive sizes maps must be sectionalized on several images. For example, maps photographed at a reduction of 10x and measuring 25 x 35 in. appear on four images or more. Only maps measuring less than 12.5 x 17.5 in. appear on one image when the same reduction ratio is used. (b) Sectionalizing ends up with additional cost because of slow production if each map has to be manipulated four times or more; maps copied on multiple exposures are not convenient for researchers. Reading and interpretation become difficult and full reproduction on one sheet is difficult. (c) The alternative is to use greater reduction ratio but then there is a loss of legibility in terms of viewing and printing. Full-size blow-back of a m measuring 30 x 40 in. reduced 24x will be of poor quality. "In the micro-reproduction of large maps, 35 mm imagery is simply not adequate for regenerating the material back to full size."[4] (d) Distortion can often be seen on the edges.

The 70 mm Format - This format is seldom used in North America and has been dropped as a standard size by the ISO (International Standard Organisation). It is even abandoned in Great Britain where it was mostly used.[5] In the United States, it has been used by government agencies only. As a result, equipment is not easily available. Nobody should start using it unless he wants a complete isolated system. For these reasons, even if image legibility is excellent, the 70 mm format should not be considered.

The 105 mm Format - This format seems to be the most appropriate for archival or historical map collections even if there is resistance to its use. Feasibility studies conducted by various organizations all came to the same conclusion that the 105 mm format is far superior to the 35 mm format.[6]

However, there are limitations to the 105 mm format: (a) Cost is the major problem. The camera itself costs more than $20 000. The film is also expensive: $28.50 a roll. Roll processing is at least three times more expensive for 105 mm than for 35 mm. If you add to these figures the cost of storage envelopes and cabinets, you must have strong arguments to convince your managers that this format is preferable to the others. (b) Equipment is not easily available. Very few companies manufacture 105 mm cameras. Only Keuffel & Esser (K & E) had a complete range of equipment: camera-projector, processor, reader and reader-printer, but production of the reader-printer was discontinued. The reader has only one lens with fixed magnification of 5x.

The advantages of the 105 mm format are as follows: (a) The low reduction capacity of the camera is of prime importance. The reduction ratios vary from

4. Bill Talbot, Commercial Reprographics Services. Paper presented to the fall meeting of the Western Association of Map Libraries, La Jolla, California, October 7, 1977. p. 6.
5. Great Britain, National Reprographic Centre for Documentation, Recommendations of Methods of Microfilming: Maps and Plans. Prepared by Public Services Microfilm Liaison Group. September 1972. p. 1.
6. Some of these studies resulted in extremely detailed reports: (a) Ray Oman and Charles Taylor, Map Microfilming Feasibility Study, [Washington], National Archives and Records Service. December 1972. [50 p.] (b) Ernest P. Taubes, Map Microfilming Project: Methods and Equipment for a Proposed 105 mm System, [Washington], National Archives and Records Service, Cartographic Archives Division. 1973. 79 p.

a minimum of 4x to a maximum of 11x, which ensures excellent legibility on the reader and ensures the capability of the negative to produce a good quality copy. (b) Image size is 9x larger on 105 mm negative than on 35 mm. (c) Large maps up to 40 x 60 in. can be copied on one exposure at a 10x reduction. It would take 12 exposures to photograph the same size maps on 35 mm. (d) Photographic copies can be obtained from 105 mm negatives, which are capable of producing full-size prints. (e) With large image size, a researcher could rapidly look at several maps before doing a detailed study of a specific one. High reduction on 35 mm does not permit that.

The National Map Collection (NMC) Programme

The NMC programme is planned to cover all aspects of reference services from map-viewing in the research room to the providing of quality prints for publication. It was planned as a conservation measure but shows promise as an excellent dissemination programme.

Conservation - Circulation of originals will be restricted as much as possible and consultation will be done through the reader. Original maps will never be sent for photographing. 105 mm negatives will be used to produce any type of copy.

Diffusion - Diazo copy will be available to institutions or researchers; anyone who wants copies of all maps of Quebec will be able to have them. Contact prints can be produced. Research copy from the reader-printer will also be available on a limited scale and possibly could be produced the same day it is ordered; one reader-printer is now located in the reference room. Regular 8 x 10 in. prints can be prepared from the 105 mm negatives and can be compared favourably to prints from 4 x 5 in. negatives. Photographic enlargements are prepared with good results; they will soon replace the photostatic copies that are currently available. Eventually we may build a self-service microfilm room to permit access to our holdings 7 days a week.

Scale of the Programme - Everything will be included: manuscripts, transcripts, facsimiles, photostats, etc. As a result, the restriction "do not reproduce without permission" is necessary.

Number of Copies - Two exposures of each map are being taken. The first copy is being kept as an archival or security copy. It will be stored in the best environmental conditions in a building other than the Public Archives Building. Since we have been unable as yet to find such an ideal place, the department is considering having a cold storage room built to store not only our 105 mm masters but also the numerous microfilm masters already made for the various divisions within the department. The second master, filed by microfilm number, is to be used only for reproduction. The production of photographic enlargements will be the main purpose of this master. Reader-printer copies will be produced also from this negative. One diazo copy is available in the reference room of the NMC. This diazo copy is filed under our call number system, which ensures the grouping of all maps of one specific region. At present these maps are physically scattered in the Collection. In addition a contact-print of each chip will be processed which will appear on the catalogue card, linking the microfilm programme to our automation programme (this is still in the planning stages).

Storage - The first original is stored in a sealed envelope. The second original will be stored in an acid-free envelope. The diazo will be placed in transparent sleeves.

Density - We are trying to obtain the best density for this type of material, which is between 0.9 and 1.2. Any film which is lower or higher must be redone. During the first month we had to microfilm several maps twice. Obtaining a good density on photocopies has proven to be our greatest problem. Printed maps are the easiest, and in most cases we were successful the first time. We also had trouble with manuscript maps during the first weeks but we are now refilming only 5%. Insurance plans were photographed at an accelerated rate because we were able to meet the standard the first time, since the paper is standard.

Resolution - Our main concern right now is related to the results we are obtaining from our camera (K & E). The resolution is a measure of sharpness of an image, expressed as the number of lines per millimetre discernible in an image. I must say that we are just within the limits of the proposed National Microfilm Association (NMA) (United States) standards although the technicians from K & E were able to obtain excellent resolution readings such as 16 at 5x (in the centre) and 8 at 11x (also in the centre). On the other hand, we had satisfactory results by producing photographic enlargements from 105 mm negatives.

Reduction Ratio - Our initial plan was to work with only three reduction ratios: 5x for maps smaller than 19 x 27 1/2 in., 8x for maps to 31 x 44 in., and 10x for maps to 40 x 55 in. It was planned that maps wider than 40 in. and longer than 55 in. would be microfilmed in sections.

After the first two months of production we have re-examined our plan. Several maps were just too large to be done at 5x; considering that they would be too reduced at 8x we have decided to use the 6x reduction ratio. We will probably use others as well. It will not affect our production rates because our maps are filed by size groups. We are accumulating the ones that are too large and we will microfilm them when there is a sufficient number, making it extremely convenient for the operator who will not have to adjust the camera all the time. We also consider that it is extremely important for the researcher to get the maximum legibility possible.

Headings and Numbering System - (a) Indexing: We had to establish an indexing system that was different from our classification system because we do not have a unique call number (e.g. H2/300-1761). Only a small portion of the collection is classified this way. A large portion is arranged by record group concept and series maps are filed under their own indexing systems. For this reason, we have decided to assign a unique microfilm number to each map, e.g., NMC-00314. This gives the possibility of pre-sorting the maps by size and format and filming several days at the same reduction ratio. It does, however, create additional work. We must note this number in five different places (on the back of the map, on the card catalogue, in the register book and on two closed storage envelopes). (b) Institution Identification: Public Archives Canada - Archives publiques Canada, National Map Collection - Collection nationale de cartes et plans, No reproduction without permission - Reproduction interdite sans permission.

Cost of the Programme - We have recently prepared an estimate of $2.10 for each map sheet (several maps are in sections), which includes the costs of manpower,

film, processing, quality control, storage envelopes, and overhead. We hope this amount will drop when we have more experience and when we microfilm groups of maps and plans that are more homogeneous.

Microfilming Standards

There are not many approved standards for maps. The NMA has formed a committee to prepare standards for cartographic documents. This committee has been working for the last 3 years on a draft entitled "NMA Standards for Cartographic Microforms." This draft covers rules for 35 mm and 105 mm formats amd microfiche (as mentioned previously, the 70 mm format has been dropped as a standard format). The draft covers physical characteristics such as the dimensions and thickness of film and the type of film to be used. It also covers the image size, the reduction ratios, the orientation of maps on copy board, the indexing and the identification of the document and resolution requirements. In addition, a number of optional features are suggested: reduction bar, gray scale, colour scale and resolution chart on each image. The third draft of these standards should be available soon. In the United States, there are also military standards for microfilming cartographic documents on 105 mm. In Canada, detailed standards exist for 35 mm only.[7]

Colour Microfilming

It is often asked why we are not microfilming in colour when on so many maps colours are essential to the interpretation of the maps. There are several reasons for not considering the use of colour microfilm:

Cost - The cost alone could be sufficient to explain why we are not considering colour. Recently Gunn[8] estimated that microfilm colour costs five times more than black and white considering that both a negative and a positive are needed (positive for viewing and negative for printing); for black and white only a negative is required.

Processing - Processing is more critical. You need special expertise and complicated equipment for quality control.

Resolving Power - Resolving power of colour film is far lower than for black and white, which means that good legibility is far more difficult to obtain.

Archival Permanence - This expression cannot be used for colour microfilming. Colour microfilm will fade eventually. However, manufacturers may be able to produce better film in the near future.

Readers - Illumination of most readers is not sufficient for viewing colour microforms. The ultraviolet light of readers and heat are damaging to colour microfilm.

That does not mean that colour microfilming should be eliminated. There are

7. Canada, Canadian Government Specification Board, Standard for: Precision Microfilming of Engineering and Architectural Drawings and Associated Data, Supply and Services Canada, Ottawa, Ont. 1972 [27 p.]
8. Michael J. Gunn, "Document Microphotography in Colour," The British Journal of Photography, 10 February 1978, p. 125.

some projects that have been successful. The University of California (Santa Cruz) filmed their collection of fire insurance plans on 35 mm colour film mounted as slides; however, the type of film used does not permit duplication.[9] The US National Archives have done some tests on colour and plan to use colour where required within their 105 mm programme. They use Eastman Entachrome 50 356. The Canadian Department of National Defence is involved in a project of microfilming their NTS collection in colour on 35 mm. We may eventually look into colour but at a later stage when we have developed sufficient expertise with black and white.

Future Trends

The 105 mm format was first used by industry and mapping agencies. Archival institutions are slowly entering the age of microreproduction of their cartographic documents. So far, three major archival institutions are involved in 105 mm projects. The National Archives in Washington have probably investigated more thoroughly than any other institution the application of microfilm to archival map collections. Since 1972, they have done tests, prepared reports and developed standards. However, they have not yet reached the production phase and only 1500 maps have been microfilmed. They plan to photograph approximately one third of their holdings, which represents approximately 300 000 maps.[10] They will use colour microfilm when necessary.

The Public Archives programme is well under way. It has benefitted a lot from the American experience. More than 20 000 fiche have been produced so far and are currently used in research and for photoduplication purposes. This includes about 10 000 small-size maps (H3 maps in our card catalogue) covering specific places as well as general maps of Canada and the world and about 10 000 sheets of insurance plans dating from 1875 to 1950. A group of oversize maps will be next done. As mentioned previously, our programme is rather ambitious since we are planning to microfilm most of our collection.

The Public Archives are not the first archival institution to implement a microfilm system based on the 105 mm format - the Provincial Archives of British Columbia have already about half of their collection on 105 mm format using equipment already available in another government department. The 35 mm format is also used "with one copy of the 35 mm mounted in an aperture card which prints out at a reduced scale by xerox."[11]

The author of this paper has a "parti-pris" for 105 mm but will mention important projects using other formats. The University of Northern Colorado was successful in producing microfiche of their topographical map collection.[12] Each quadrangle is reduced on a 35 mm frame; eight frames appear on each fiche. These microfiche are available to users of the map library.

9. Stanley D. Stevens, "Color Microfilming of Sanborn Maps for a Local History Collection," Special Libraries Association. Geography and Map Division. Bulletin, No. 82, December 1970, pp. 21-25.
10. Charles Taylor, The Manuscript Map Microfilming Project of the National Archives. Paper presented to the fall meeting of the Western Association of Map Libraries, La Jolla, California, October 7, 1977. p. 7.
11. Letter from Geoff Castle to Betty Kidd, July 19, 1978.
12. Robert B. Markham, "Topographic Maps on Microfiche," Journal of Micrographics, May/June 1978, pp. 315-318.

Other archival institutions and map libraries in Canada are considering the development of systems based on the 105 mm format, which will increase the dissemination of cartographic documentation. However, no one can expect to see one system for maps. The variety of materials and the resources available are determining factors in the selection of formats to be used. Everyone can at least assume that patrons will be directed more and more to the microfilm reader and less often to the original map or plan. To say that mapping agencies will soon start to produce only microforms instead of hard copies is certainly not speculation.

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NATIONAL TOPOGRAPHIC SERIES: IN SEARCH OF MISSING EDITIONS

Serge A. Sauer
Map Curator
University of Western Ontario
London, Ont.

In a paper entitled "Canadian Topographic Time-series and the Redistribution Program" (ACML Bulletin No.25), which was presented at the Eleventh Conference of the Association of Canadian Map Libraries, an attempt has been made to show the importance of having an accurate record of all National Topographic Series (NTS) maps published, and their editions. It was suggested at that time that the importance of the task and the urgency in producing comprehensive inventories for various series were accentuated by the then-announced program of redistribution of some archival NTS material by the National Map Collection (NMC). It has been demonstrated that in one NTS series (1:250 000) numerous sheets were never published in the first edition or, rather, that the earliest maps in that series were identified not as first editions but as second, third or even fourth editions. Lacking this information, map librarians or researchers could search forever for a complete 'time-series' coverage of a certain area, without any prospect of assembling a complete set. Graphic portrayal of this situation, accompanied by a prose commentary, is being prepared for the Bulletin.

The following study is persuing basically the same goal as the investigation mentioned above, except that it looks at the 1:50 000 series. The study was conducted in co-operation with M. Louis Cardinal, Head, Modern Cartography Section, NMC, who thought that it would offer a useful insight into the problem and could serve as a model for similar studies in other parts of Canada. M. Cardinal provided copies of NMC catalogue cards, which exist for all topographic sheets, with entries for editions, years of publication and, occasionally, some interesting notes.

The area of study, selected quite arbitrarily, is NTS block 31G, which has some 120 maps for all editions of the 1:50 000 series. Yet even in this small fraction of the total number of 1:50 000 maps produced thus far, many irregularities were discovered, a fact which ought to be recognized by all central authorities involved in production, storage, preservation and inventorization of Canadian maps (such as Energy, Mines and Resources, Canada; NMC, Public Archives of Canada; and the provincial archives) and by the map librarians in the field.

The greatest confusion is caused by the fact that for 22 out of 32 maps in this block the first edition was considered to be the 1:63 360 map, which preceded

the 1:50 000 series. The matter is further complicated by the existence of not just a single 1:63 360 edition, but of many editions, in some cases as many as 12! One should hasten to add that often it is not clear whether these are indeed different editions, or simply different printings of the same plate. Actually, such situations occur with 1:50 000 maps as well. On the other hand, there are cases where maps were printed and reprinted several years apart, but the edition numbers remained unchanged. There are 1:50 000 maps clearly showing that they were re-compiled from a certain edition of a 1:63 360 series, while there are several later editions of the 1:63 360 map. Does it mean that the 1:50 000 map was not produced from the latest 1 in. = 1 mile map available, or is there a simpler explanation - that the person compiling the map at 1:50 000 scale was not aware of other editions of the 1:63 360 map and has indicated the source-edition number which seemed to be the most reasonable at the time?

The map librarian and the archivist must now sort these things out, in order to produce for their own benefit and the benefit of their clients clear genesis (or shall we say 'roots'?) for each map in their collection. It is a mammoth undertaking, a very massive task if the NMC alone is to be saddled with the whole responsibility for such an inventory. It would be a far easier job if local libraries, those who take pride in claiming expertise in local cartographic coverage, would be willing to commence limited investigations, similar to the one described on these pages, which could then be followed by cumulative, comprehensive summaries produced by the NMC.

The matrix shown in Table 1 presents the year of publication of various editions for each of the 32 (presently 16) sheets of the 1:50 000 series for the 31G block. Problems of one type or another are indicated by numbers in place of years. The following notes, with numbers corresponding to those on the matrix, describe the problems.

1. No first edition. Following statement appears on the second edition of the 1:50 000 map: "Original survey, compilation and reproduction at 1:63,360.... Second edition recompiled, drawn and printed at 1:50,000...." There are at least three editions of this map in 1:63 360 series, latest found is dated 1944.

2. Third edition is not present in the NMC or the University of Western Ontario (UWO) Map Library. Perhaps it does not exist.

3. Sixth edition is not present in the NMC or the UWO Map Library. Perhaps it does not exist.

4. No first edition. The second edition has a statement as in (1) above. There are at least three editions of this map in 1:63 360 series, latest found is dated 1944.

5. No first edition. Second edition has a statement as in (1). There are at least five editions of this map in 1:63 360 series, latest found is dated 1937.

6. There are two fourth editions, one dated 1963, the other 1965.

7. No first edition. Second edition has a statement as in (1). There are at least five editions of this map in 1:63 360 series, latest found is dated 1937.

8. There are two fourth editions, one dated 1963, the other 1965.

Table 1. Dates of publication of various editions of National Topographic Series 1:50 000 Block 31G.

N.T.S. Number	Ed.1	Ed.2	Ed.3	Ed.4	Ed.5	Ed.6	Ed.7	Ed.8	Ed.9
31G1 E	(1)	1951	(2)	1967	1971	(3)	1976		
31G1 W	(4)	1951	1963	1967	1970	1971			
31G2 E	(5)	1952	1959	(6)	1976				
31G2 W	(7)	1952	1959	(8)					
31G3 E	(9)	1951	1968	1976					
31G3 W	(10)	1951	1968						
31G4 E	(11)	(12)	1951	1957	1969	1976			
31G4 W	(13)	(14)	1951	1957					
31G5 E	(15)	1950	(16)	(17)	(18)	1958	1968	1976	
31G5 W	(19)	1950	(20)	(21)	(22)	1958			
31G6 E	(23)	1951	1968	1975	1976				
31G6 W	(24)	1951	1968	1975					
31G7 E	(25)	1952	1968	1975	1976				
31G7 W	(26)	1952							
31G8 E	(27)	1951	1967	1971	1976				
31G8 W	(28)	1951	1967	1971					
31G9 E	(29)	1952	1970	1971	1975	1976			
31G9 W	(30)	1952							
31G10 E	(31)	1953	(32)	1977					
31G10 W	(33)	1953							
31G11 E	(34)	1952	1968	1976					
31G11 W	(35)	1952	1968						
31G12 E	1952	1968	1977						
31G12 W	1952	1968							
31G13 E	1960	1970	1976						
31G13 W	1960								
31G14 E	1960	1970	1976						
31G14 W	1960								
31G15 E	1961	1969	1976						
31G15 W	1961								
31G16 E	1959	1971	1976						
31G16 W	1959								

9. No first edition. Second edition has a statement as in (1). There are at least three editions of this map in 1:63 360 series, latest found is dated 1933.

10. As in (9).

11. No first edition.

12. No second edition. Third edition has the following statement: "Original survey by the A.S.E. R.C.E. 1906. Resurveyed, compiled, drawn and printed by the Army Survey Est. R.C.E. 1934. Third edition partially revised and published at 1:50,000 by the A.S.E. 1951." This statement would seem to suggest the existence of two previous 'editions' at 1:63 360. Actually, there are at least five editions at 1:63 360, latest found is dated 1940.

13. No first edition.

14. As in (12).

15. No first edition. Second edition has the following statement: "Original survey 1910. Resurveyed, compiled, drawn and printed by the Army Survey Est. R.C.E. 1923-24. Partial revision 1948 with Aerial photography by the RCAF. Converted from the second edition of the 1:63,360 map to 1:50,000 by the A.S.E. 1950." It is difficult to guess what constitutes the 'second edition' for 1:63 360 since there are at least 12(!) editions and/or printings, the earliest published in 1908 and the latest in 1948.

16. Third edition not present in NMC or the UWO Map Library.

17. Fourth edition not present in NMC or the UWO Map Library.

18. Fifth edition is identical to the second edition, including the statement quoted for (15).

19. As in (15).

20. As in (16).

21. As in (17).

22. As in (18).

23. No first edition. Second edition has a statement as in (1). There are at least five editions of this map in the 1:63 360 series, latest found is dated 1939.

24. As in (23).

25. No first edition. Second edition has a statement as in (1). There are at least four editions of this map in the 1:63 360 series, latest found is dated 1937.

26. As in (25).

27. No first edition. Second edition has the following statement: "Original

survey by the A.S.E. R.C.E. 1907. Aerial photography by the R.C.A.F. 1944. Recompiled, drawn and printed by the Army Survey Est. R.C.E. 1944-45. Converted from the second edition of the 1:63,360 map to 1:50,000 by the A.S.E. 1951." There are at least seven editions or printings of this map in the 1:63 360 series, latest found is dated 1945.

28. As in (27).

29. No first edition. Second edition has the following statement: "Original survey 1907. Resurveyed, compiled, drawn and printed by the Army Survey Est. R.C.E. 1942. Aerial photography by the RCAF 1940. Converted from the second edition of the 1:63,360 map to 1:50,000 by the A.S.E. 1951." There are at least five editions of this map in the 1:63 360 series, latest found is dated 1950.

30. As in (29).

31. No first edition.

32. There are two fourth editions. One is dated 1975, overprinted over the 1969 map (third edition), and the other, a new edition, is dated 1977.

33. As in (31).

34. No first edition. There are at least three editions of this map in the 1:63 360 series, latest found is dated 1925.

35. As in (34).

Summary of Problems

1. NMC holdings are not complete. In this block at least 12 maps are not shown in NMC records and there are 22 missing first editions, for a total of 34 out of possible 122 (approximately 25%).

2. First editions, and in some cases second editions, are missing as a result of incorrect assignment of edition numbers.

3. The same edition numbers have been assigned to maps produced at different times.

4. Some 1:50 000 maps do not show year of publication. Year of the Magnetic Declination statement is used in these cases as the date of publication and edition.

5. The concepts of 'edition' and 'printing' varied over the years. At times each new printing run, regardless of the content of the map, was considered to be a new 'edition'. In other cases map publishing agencies used the term 'edition' only when map content underwent some changes.

One should bear in mind that other sections of Canadian 1:50 000 coverage may harbour other problems unique to a region or a particular time period.

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A GENERAL TOWN PLAN ACQUISITION POLICY FOR UNIVERSITY MAP COLLECTIONS WITH SPECIAL REFERENCE TO THE UNIVERSITY OF TORONTO MAP LIBRARY: ERRATA

The Bulletin apologizes to Mary Armstrong for the several errors introduced into her article in the last issue (No. 29, p. 1). In particular, please note these corrections:

p. 4, par. 1, ll. 9-13: ...50,000 is 15 or more ($(B+C) \geq 15$), town plans for about 15 of the largest centres should be acquired; if the number of cities over 50,000 is between 5 and 14 ($5 \leq (B+C) \leq 14$), between 5 and 10 town plans of the larger cities should be purchased; and for countries with fewer than 5 cities of more than 50,000 population, ($(B+C) < 5$), about 5 of the largest cities should be...

p. 7, par. 6, l. 4: ...Cape Town, Durban, East London, Johannesburg, Kimberley, Pietermaritsburg, Port Elizabeth, Pretoria and Vereeniging. The South African...

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IMPACT OF DIGITAL MAPPING ON MAP LIBRARIES OF THE YEAR 2000

S. L. Garth, P.Eng.
Burnaby, B.C.

Introduction

Rarely does one get the chance to write a paper that can't be refuted for 22 years. Although it does provide quite a stimulus to the imagination, it also has a complementary drawback - the material can't be verified for 22 years either. It is left to the reader to form an opinion one way or another, bearing in mind that the primary objective of this paper is to provide food for thought.

To begin, digital mapping (or computer-assisted mapping) is essentially the compilation and maintenance of maps with the aid of computer graphics. It is one of several drafting-type applications of computer graphics. The advantages of computer-assisted mapping over conventional map drafting arise from the way in which map data are stored, which gives nearly unlimited flexibility of presentation in terms of scale, area, data content and appearance. In addition, some data structures are designed to store attribute data associated with specific mapped features, enabling the development of complete geo-based information systems.

Computer-assisted mapping is rapidly gaining favour with government mapping agencies, cities and utilities, and a number of Canadian organizations are implementing geo-based information systems to suit their mapping and map-related applications. As the technology matures, more and more mapping will be done in digital form. Cadastral, utility, topographic, thematic and other types of map data are ideally suited. Various graphics techniques for two-dimensional and three-dimensional manipulation of graphic data are becoming more and more sophisticated and widely available.

Computer Graphics Development to Date

The evolution of computer graphics applications in a production sense has taken place over about the last 15 years. Initially, usage was primarily confined to 'batch plotting', i.e., running a computer program to generate coordinate data for fairly specific drawings, graphs, etc., and subsequently producing a graphical representation on an electromechanical plotter. The popularization of minicomputers in the mid-1960's made it possible to economically configure interactive graphics systems, where the user interacts throughout the process of creation and modification of drawings, primarily via a graphics terminal with a typewriter keyboard and cathode ray tube display. Ongoing enhancements and additons to the repertoire of software features of such systems enabled their use for a variety of two- and three-dimensional graphical applications, including drafting electronic circuit layouts, all types of engineering drawing, computer-aided design, and mapping. While most production usage centers around two-dimensional line drawings and maps, there are existing systems quite capable of producing aesthetically pleasing, animated, three-dimensional views of complex shapes, surfaces and solid objects, in full colour, with hidden lines removed, with proper shading and even texturing of objects, with the ability to move the viewpoint and/or the light source, thus creating different perspectives and

and shadow characteristics.

The growth and improvement of computer graphics technology shows no sign of abating. However, there seems to be a widespread feeling that it has 'arrived' and will soon be considered mature. One important manifestation of this maturity is the increasing effort toward the development of industry standards for hardware, software and data structures.

In view of the past and present rate of progress, particularly in the field of computer-assisted mapping, the following predictions are offered:

1. In 10 years, most mapping (particularly in heavily settled areas) will be available in digital form. Therefore, the most current version, or master, will be in digital form.

2. By the year 2000, all maps from government agencies will not only be available in digital form, but they may not be available in hard copy (paper) form except by special request. Access to geographically related data bases full of attribute information will also be generally available in conjunction with mapping.

The above may not apply to historical maps, but they too could be put into digital form by scanning (colours, wrinkles and all) and made available as digital graphics.

How Might This Affect Map Libraries?

Right now many libraries are probably looking at conversion of maps to microfilm. This saves space and should make looking up a map somewhat more efficient. Digital mapping opens up many more options and offers many advantages. It also involves much higher cost if conversion is a do-it-yourself proposition. However, since map libraries get maps from other agencies which actually make them, one has to consider the possibility that the map makers may develop the digital mapping themselves. Therefore, all the map library has to do is acquire the facilities to store and view the maps. The same can be said about microfilm, i.e., perhaps map-making agencies will film their own maps and provide microfilmed mapping to the libraries. This is possible but in view of the rapidly increasing interest in computer-assisted mapping, conversion of maps to digital form will likely predominate, especially in the larger shops, i.e., federal and provincial agencies, larger cities and utilities.

One exciting characteristic of digital maps is that it is possible for all agencies mapping the same features (regardless of scale or other features mapped) in the same area to share a common 'base map' consisting of those features that generally appear on everybody's maps. In other words, a given feature needs only to be mapped once. In actual practice, there are many problems in sharing a common base map (particularly coordination of the agencies involved), but it is the writer's opinion that most of these problems will be solved, and though there will probably always be some duplication of mapping effort, an eventual 'common base mapping' concept will emerge. Many mapped features will be integrated into a common data base from local to federal levels. This means that if a city planner in Moose Jaw and an ecologist in Ottawa both want to look at a particular type of wildlife population map in the same area, they could both access the same physical map data in a given computer system and display that data on their respective computer graphics equipment.

If this kind of scenario is to evolve, then we can anticipate yet another benefit from digital mapping - users of other agencies' mapping (e.g., map libraries) need only have facilities to view maps, with very little capacity for map storage, since the mapping would generally be resident on the map maker's computer system. Other users of that mapping could have access to it via a telecommunications network.

What Would a Map Library of the Future Be Like?

First of all, the most noticeable outward differences would probably be considerably less floor space and very few paper maps to be seen. The number of staff required would be somewhat less than at present, since there would be little physical filing and retrieval of maps and much of the work in looking up specific maps would be automated and/or self-service.

A number of display stations would be available for viewing maps, and these would essentially be computer terminals on a nationwide (possibly worldwide) network. The use of a terminal would be highly tutorial in nature, via English-like commands, possibly with voice data entry. A facility would be provided for generating hard copy plots of maps if desired by the user. All inquiries into the terminal would be conducted in the form of a conversation between the inquirer and the computer, as keyboard commands, speech, or both. Perhaps an inquiry might go something like:

user: MAP VIEW
computer: SPECIFY COUNTRY/COUNTRIES, OR WORLD
user: CANADA
computer: SPECIFY PROVINCE/PROVINCES, OR ALL
user: ALBERTA, B.C.
computer: DO YOU WISH TO STUDY INDEX?
user: YES
computer: GEOGRAPHIC, SUBJECT, OR SOURCE INDEX?
user: WHAT IS A SOURCE INDEX?
computer: THE SOURCE INDEX TABULATES MAPPING AVAILABLE BY SOURCE, I.E., CARTOGRAPHIC AGENCY.
user: SUBJECT
computer: (displays a list of map data available, e.g., topography, wildlife, pipelines, soils, roads, hydrology, land use, assessment, etc.)
user: PROJECTION POLYCONIC
computer: OK
user: GEOGRAPHIC
computer: (displays a gridded map outline of Alberta and B.C. to give a visual geographic index or 'key map')
computer: SPECIFY SHEET(S) TO VIEW, OR ALL, OR DEFINE VIEWING AREA
user: (indicates selected rectangular viewing area by specifying two or more points on screen)
computer: SPECIFY OVERLAYS TO VIEW
user: TOPOG, PHYSICAL, ASSESSMENT, WILDLIFE, LAND USE (MINING, AGRICULTURE, INDUSTRIAL)
computer: PASSWORD NECESSARY FOR ASSESSMENT DATA. LAND USE (INDUSTRIAL) UNAVAILABLE AT PRESENT.
user: DISPLAY
computer: (displays requested combination of map data on screen)
user: PLOT (user wants hard copy to study)

computer: SCALE?
user: 1:100000
computer: (generates desired hard copy plot of data requested)
user: GOODBYE

The preceding is not necessarily realistic, and users with a deeper knowledge of mapping available and/or more selective requests would go through more specific and lengthy procedures. The element of time may also be used, for example, if someone wanted 1969 mapping. Also, any non-confidential attributes of mapped features could be inquired about, and reports generated based on these attributes. A variety of other requests, such as three-dimensional perspectives and sectional views of topography, geologic strata, etc., might also be available.

As more and more geographic data are loaded into such an information system, the benefits to researchers, students and the general public in terms of decision-making and planning would increase steadily. In order to facilitate usage by persons unfamiliar with computers (although by the year 2000 there will be very few such individuals), the level of prompting and tutorial displays, index terms, etc., will probably be far more sophisticated than the preceding hypothetical example. The end result should be a procedure which, for most inquiries, is as easy and natural as dealing with the map librarian.

Summary

This may sound extremely farfetched. Before writing it all off as science fiction, consider that we are looking ahead more than 20 years. In order to achieve a situation such as described above, some significant technological advances and cost reductions have to occur in the following areas: (1) data communications, (2) microcomputer hardware and peripheral devices, (3) computer graphics software, (4) standards for data base integration and (5) computer memories.

With the current rate of progress in microelectronics, fiber optic communications, laser technology, image processing, holography, magnetic bubble memories and other related fields, it seems a fairly safe bet that the required components and capabilities will be available and economical. The real question is whether people will succeed in the implementation of such an integrated system, with all the radical changes it implies?

For the map libraries, the possibility of such developments offers real challenges. For instance, not all mapping agencies will evolve at the same rate. There will be a lengthy period of transition in which some mapping will be predominantly digital while other mapping remains in conventional form. The phasing in of digital techniques in an optimal fashion will require much planning and coordination.

Because of the diverse and comprehensive mapping interests of map libraries and their constant communication with all map-making agencies, the map librarian is in a position to play a critical role in this transition. This role involves improving coordination among mapping agencies, advising on standards and generally taking a global view of the direction in which mapping systems are heading. By definition, this would mean keeping abreast of developments in computer-assisted mapping and related technologies. It certainly appears that the next 20 years will be challenging and exciting ones for those involved in mapping applications.

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COMPUTERS, MICROFORMS AND THE NATIONAL CARTOGRAPHIC INFORMATION CENTER

Nancy Faries
U.S. Geological Survey
Reston, Virginia

In the early 1920's the Map Information Office (MIO) within the U.S. Geological Survey (USGS) (sponsored by the Federal Board of Surveys and Maps) served as an information and sales center for USGS cartographic products and as a referral center for data of other agencies. In 1973, a Federal Mapping Task Force recommended the organization of a governmentwide cartographic information office. In 1974, MIO was superseded by the National Cartographic Information Center (NCIC).

Between 1919 and 1973 mapping techniques changed from the slow collection of drawings and field notes and the engraving of maps on copper plates to the use of airplanes for photography and modern compiling and printing techniques that allow the sorting of different categories of map data on separate film sheets. Now we also have satellite imagery to supplement the aerial photographs.

Coordinating, collecting, organizing and distributing information no longer involve just basic cartographic data. NCIC has to collect information about aerial photographs, satellite imagery, digital data, map separates, geodetic control and, yes, maps. In addition, we have to collect information not only from federal agencies but also from several hundred other sources. To place all the information that comes from the mapping process into a small, easy-to-access file, NCIC is resorting to computers and microforms.

Computer and Microfilm Information Systems

NCIC has used computers since its inception to collect and store a wide array of cartographic information. Microforms, principally microfiche and 35 mm roll microfilm, are the backbone of NCIC's ability to distribute, inexpensively but on a large scale, the information we collect. The systems currently operating are the Aerial Photography Summary Record System, the Cartographic Catalog, and the Map and Chart Information System.

Aerial Photography Summary Record System - NCIC's first information system, the Aerial Photography Summary Record System (APSRS), was built to collect information about available aerial photographs. APSRS stores and recalls, in easy-to-access computer listings and graphics, information about the type and extent of aerial photographs available or photographic projects being planned by different agencies. Paper catalogs that include computer-drawn graphics identify the latest organization to fly photographic missions in any given 7.5-min area, show the scale of the photographs and indicate the approximate exposure date. NCIC also produces sets of microfiche that describe each photographic project in detail, including the type of photography (color, infrared or black-and-white), amount of cloud cover, camera type and exposure date.

Most of the information in the system came from the sponsoring federal agency - we are now collecting data from state and local government mapping agencies and from private companies. APSRS today contains information on about 60% of the known photographic projects. Four catalogs and sets of fiche are needed for complete coverage of the conterminous United States; the catalogs cost $1 each

and the fiche $4. For a relatively minor investment, NCIC will send a user the information necessary to help him plan his aerial photographic projects, tell him what projects are completed and tell him where to get reproductions.

Cartographic Catalog - To distribute information about maps and charts, NCIC designed two computer and microform information systems, the Cartographic Catalog (CC) and the Map and Chart Information System. The CC contains data about groups of cartographic products and research tools, including maps and charts, space imagery, geodetic control, aerial photographs, digital cartographic data, and books, studies and reports on cartographic subjects. It is a master file of information. For example, the 7.5-min 1:24 000 scale topographic quadrangle maps produced by the USGS are indexed as one entry - when completed, this series will consist of over 50 000 maps. The CC can tell you the number of maps in a series, whether the series is complete, who compiled the maps, who distributes them and what information is shown on them. It is text- rather than code-oriented, so it can be used without a key.

There is a companion set of microfiche for the CC. Standard microfiche (105 x 148 mm) store computer printouts of catalog information with one entry or record listed on a printout page - there are 269 pages on each fiche, and there are now 53 microfiche in the set. The map series are indexed alphabetically by state, and within each state by general area.

The CC has a special capability to search the computer data base for specific types of information using such descriptors as roads and highways, historic sites and drainage networks. The data base is displayed on either a printout or on a video screen to indicate whether the cartographic data sought are actually on file. More specific descriptors find a particular type of data, for example, a 1966 map of the Hana coast of Hawaii showing roads and highways and drainage at a scale of 1:16 000 or larger.

The data base is now limited to the information contained in the Library of Congress (LC) machine-readable cataloging system. We add new entries to the LC system and collect whatever other information we can on the state, local and private levels.

Map and Chart Information System - The third NCIC computer-microform data base, the Map and Chart Information System (MCIS), is our most detailed information system. Still in development, MCIS will contain a record describing most multi-use maps or charts produced in the United States. Thirty different descriptors, such as scale, grid, distributing agency, price and geographic area of coverage, can be used to query the computer to find information on a specific map or chart. Data in MCIS will be available as microfiche catalogs, paper copy computer printouts and computer-drawn graphics that will show the areas covered by various maps of a particular region.

Selected map series will be microfilmed in 35 mm roll form for visual reference. MCIS's initial data base contains all published USGS topographic maps and partial records of the holdings of the National Ocean Survey and the Defense Mapping Agency. The topographic quadrangle map series of the Corp of Engineers and the county highway series of the Federal Highway Administration are now being added. As soon as possible, we will add information on other federal, state, local and privately-produced maps and charts.

Microfiche Indexes and Map Separates Microfiche

Apart from the three computer-microfiche information systems, NCIC is using microforms for two other information-storing projects. One system, being developed jointly by the EROS Data Center in South Dakota and NCIC, is an index to Landsat and Skylab imagery and federal mapping and Earth resources photographs. We are using 105 x 148 mm microfiche to record agency photoindex maps, listings of photograph characteristics and topographic reference maps. The micrographic indexes are an easy, inexpensive, manual way for libraries, professional users and the public to find out what photographs are available and to actually see what the photographs or images look like before buying copies of what they can really use.

A second microform set of information is the Map Separates Information System (MSIS). Geological Survey topographic maps comprise up to 21 film masters, each showing only one color or one feature that will be printed on the final map. Copies of master separates are sold by the USGS and are combined by professional users to produce a variety of special-interest maps, ranging from drainage maps to those showing only cultural features. On the microfiche, each map is treated as a complete data set with the different film components listed with various compilation dates.

Map Libraries and NCIC

NCIC is using computer and microform systems to refer people to sources of cartographic data, including map libraries, for map libraries have the resources, the collections and the research capabilities that many map users need. We would like to make greater use of libraries as sources. We need map librarians to send us information about their collection so we want them to participate in the organization of information for the benefit of the greatest number of map users.

In 5 years, NCIC should have information collected about most cartographic data - maps and charts, aerial photographs and satellite images, and digital data produced in the United States. We want to test our systems on library users. Can they find the information they need using our resources? Can our information help map libraries fill gaps in their collections? Is there information a library would like to add to the system? Finally, can we help map libraries educate their users?

Within 5 years we hope to expand from our present 9 state NCIC offices to a comprehensive network of 50 state offices that can answer user questions by referring to our computer data bases. And we hope to be able to respond within 5 days.

Some of our microform sets are available now. Although not complete, they already contain a great deal of information, and they are geared to provide relatively easy computer-based searches without expensive on-line computer terminals. Finally, we at the National Cartographic Information Center are ready to serve you. Contact NCIC at the U.S. Geological Survey, 507 National Center, Reston, Virginia 22092.

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MAPS AND AIR PHOTO DISTRIBUTION - MINIATURIZATION AND COMPUTERIZATION

Gordon Harris
Map and Air Photo Sales Office
Surveys and Mapping Branch
B.C. Ministry of the Environment
Victoria, B.C.

As the title "Map and Air Photo Sales Office" implies, we are not a map library, but are concerned with the acquisition of maps and aerial photography for distribution to those who need this information, and our service is used by other government ministries, private industry and the public. Much of our material is requested by laymen, persons who know they want something but don't know what they need. This, of course, requires a sort of 'twenty questions' approach to determine the best information to offer them, which often involves a search through keys and indexes to find out what is available from all sources. Our indexes range from an atlas of 30 large maps of all years of special project flying through looseleaf binders of large-scale mapping keys to microfilm of air photo indexes. This is a cumbersome and time-consuming system, which will get worse as new material is added to the list; further discussion of this point will follow later in the paper in a review of our present microfilm set-up and what computerization could do for indexing of information.

As a map sales office we get an initial issue of 1000 copies when a new 1:50 000 federal map is produced for British Columbia. We also receive from five to ten thousand copies of each provincial map and we keep stocks of all federal sheets, i.e., parks maps, and everything from 1:250 000 to the International Map of the World 1:1 000 000 series; the storage of these maps requires space.

We keep 50 to 250 ready copies of each map on shelves in the basement below our office from which supplies are drawn for distribution, and these shelves are kept stocked from our warehouse where the bulk stocks of maps are stored on four-tier palettes on shelves up to 20 ft high. This is a fork-lift operation and warehouse space and personnel are rented through the B.C. Building Corporation, which recently took over from the Provincial Government Public Works.

One of our problems is the carrying of adequate stocks of maps to satisfy demands without tying up capital in large numbers of maps that are not popular. This is compounded by shifts in emphasis due to new areas opening up for gas and oil exploration, new coal leases or the herd instinct, which makes everybody looking for a remote area in which to settle choose northwest British Columbia. You'd be surprised at the number of letters we receive from people all over North America wanting to build a log cabin on free land in the wilderness where they can grow their own vegetables, hunt and fish for their meat, and yet have a post office nearby and a school bus at the foot of the road.

Distribution of maps falls into three main categories: (1) counter sales, which are drawn from ready stock kept in shelves in the main office; (2) mail orders, which are packaged and sent out by the shipping clerk from stock kept in our basement storage; and (3) bulk supplies to government agents and retail outlets around the province, who act as sub-offices for sale of our maps. All rely on the pre-acquisition of a catalogue or the relevant key maps from which the order is placed, and our catalogue is given very wide distribution. It contains keys

to all printed maps and keys to the indexes to aerial photography, which must be obtained first to determine what air photos cover any given area. This catalogue and a quarterly up-date showing new mapping and progress in aerial photography are all we supply free of charge. We have no acquisition list, and there is no point in map librarians requesting free issues of our maps.

It is the index maps that the keys in the catalogue refer to that get cumbersome. At the last count we had 676 air photo indexes to block flying alone, and there are two file cabinets full of 30 years of special project flying indexed on 8½ x 14 in. sheets for easy copying. In addition we have about 20 different sources that can be referred to for searching out information on such diverse material as large-scale manuscript maps, the focal length of a camera used in aerial photography or the location of a surveyed district lot.

Much of our index information is subject to constant amendment; therefore there is not much point in going to full miniaturization in such forms as microfilm or, better, microfiche, such as the federal government's excellent microfiche of their map catalogue. We simply don't have the facilities for it in our own organization. However, one miniaturization program we have initiated has proven very successful - the placement of our 676 air photo indexes on 35 mm aperture cards. The aperture card is made from a 105 mm film of the air photo index by a diazo process through a Morgan converter. We go this route because the 105 mm provides a safe storage copy and is large enough to be blown back to full scale if the original mylar ever becomes lost or damaged. We read our 35's on a Xerox 335/Vanguard Realist Reader, which has magnification of 11.5, 24 or 43x. The photo indexes are stored in a tray by National Topographic Map number, and in addition to the approximately 670 indexes we also have all the special project indexes from 1972 to 1977, with about 300 aperture cards for each year.

We are the viewing agent for the National Air Photo Library in Ottawa, and carry their microfiche of federal indexes for British Columbia, Yukon and the Northwest Territories, with coloured indexes on 35 mm microfiche of eight indexes to the fiche. And we have 16 mm aperture cassettes of federal aerial photography for the same areas, to be viewed on a motorized 3M "500" reader.

Air photograph acquisition and distribution is tied closely to map distribution, shares the same office, counter space and staff, but is a different kind of an operation. Because air photos are more site-specific than maps, and are printed on order and have no returnable value, we must take care in their ordering. Unless a customer can quote the numbers of the prints he requires he is sent an index and instructions on ordering re-prints, and the onus is then on the customer to order the correct photograph.

Were our library of air photographs to be complete we would have approximately one and a quarter million prints available for viewing. Unfortunately, over the years attrition has taken its toll of the older rolls, and it is only very recently we have had the opportunity to take inventory with the intention of replacing the missing prints. However, for flying done in 1958 or later our library is in quite good shape, and we now have about 500 000 prints from that year on stored in open slant-topped boxes on shelves in the main office where they are readily accessible for viewing. We now have an Itek printer and can produce good quality prints from the positive originals on a while-you-wait basis.

As an aid to the viewing public we have, in the sales area of our office, atlases

of all the lithographed maps that we stock. To make them readily available for viewing they are stored in open shelves below slant-topped tables where they are easily accessible. They are heavy and awkward to handle but are of value to the many customers who want to study an area before they purchase the maps.

I mentioned earlier that many of our requests are from laymen who know they want something, but don't know what. Now I come to a point where I find myself in the same position. I know what computers could do for our catalogue systems, but I don't know how to go about initiating the program because the amount of information which would have to be fed in is mind-boggling. In aerial photography alone we have imagery going back 40 years, presently keyed on 676 indexes, and approximately 4000 special projects, with camera information, altitude, etc., shown in 32 flight log books. Ideally, these should be programmed to show a read-out by 15 min latitude/longitude National Topographic Number System block of air photo number, scale, year of flying, etc. Tied in to the same read-out should be information on all mapping available at all scales and all types with auxiliary information on things like mosaics, federal flying, mapping available from other branches and ministries, etc.

One day someone is going to have to bite the bullet and make the decision to initiate a program, which, because of the complexity of the material to be recalled, may take 3 years or more to complete. However, as I said earlier the number of catalogue atlases and indexes that have to be checked now is awkward, and it will get worse as more material is added each year. What I envisage is everything we supply programmed into a computer with a remote viewing system set up in the office so we could punch in a request for information and view it immediately on a screen. Now, would that be nice!

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LE SYSTEME CARTOMATIQUE: POSSIBILITIES OF USE AND EVALUATION

Yves Tessier, chef
Cartothèque
Bibliothèque de l'Université Laval
Québec, Qué.

I would like to introduce you to one of the most comprehensive 'automated' map libraries on a microreproduction system.

This unique map library was aimed at the underdeveloped areas of official map librarianship, the "Third World" of our Cartological Society, namely the non-autonomous maps, those maps whose only sin is to need the permanent existence of their umbilical cord, the periodicals, theses, reports, etc. in which they appear. Should these maps be put aside just because they do not fit our standardized world of documentation? What about the information content and the information exclusivity which they can bring to our information activities?

This is why a decade ago we, at l'Université Laval, launched the ambitious project Cartomatique, which was itself based on no less an ambitious technology of the time than the optical selector Miracode by Kodak. This machine permitted automatic retrieval of an image on 16 mm coded microfilm, one image being

retrieved out of 600 within 10s, which was tremendous at that time, as it still is today. Since a map is basically a visual document, and since the ultimate way of meeting cartographic information needs is to supply pertinent documents automatically through a visual image, the optical selector was considered to be one of the most attractive solutions available.

A project was set up to index, microfilm and make available what we have called non-autonomous maps, with priority being given to maps in theses, as they were quite often the most original and the least organized of all cartographic materials. The project was initiated by the Bibliothèque de l'Université Laval and the Département de Géographie, with substantial financial contribution from the National Library of Canada. The project came to an end a year ago, mainly due to budget restrictions.

We now have at hand a 'micro map library' of over 25 000 maps, which does not duplicate at all any existing map library, even that of Laval. Anyone wishing to use it has to forward his request to the Reference Service of the National Library of Canada in Ottawa. This service is entitled to make searches and to supply printouts of references and of documents.

To give you an idea of the content of this documentation system, I refer you to the list of sources indexed by the system. The largest collection of documents represented in the system is that of maps in theses from Canadian universities. There are 12 700 maps in that collection. Twenty-three universities are represented from 7 provinces: 11 from Ontario, 4 from Quebec, 3 from British Columbia, 2 from Alberta, and 1 each from Saskatchewan, Manitoba and Newfoundland. The range of dates covered is around 1950-1975 depending on the institution.

The second largest collection comprises maps in periodicals, 8378 in all. Six periodicals are Canadian, including The Canadian Geographer (731), Cahier de géographie de Québec (689) and Revue canadienne de géographie et Revue de géographie de Montréal (728). There is one American periodical, the Annals of the Association of American geographers (3973). Two are from France: Etudes rurales (411) and Cahiers d'outre-mer (941).

Among miscellaneous collections, one can find: maps in international geographical congress publications from 1871 (1140), a special collection of 367 linguistic maps, and the collection of 2354 ancient maps of the Quebec Seminary, the most important historical collection of its kind in Quebec. For that particular collection, the maps were microfilmed on 35 mm and the bibliographic sheets on 16 mm coded microfilm, thus permitting automatic retrieval of references and acceptable legibility of the ancient maps as reproduced.

The Système Cartomatique offers a tremendous amount of information not likely to be easily available in a different form. The only other system that could be compared with Cartomatique in that respect is the AGS Index to maps in books and periodicals. The system also offers very sophisticated search and retrieval strategies, by areas, subjects and dates. Each of these retrieval features can be combined using boolean logic for complex searches. Once you have formulated your request on the keyboard, the machine scans the cassette and shows automatically the documents pertinent to your request.

Its greatest usefulness will be more for research activities than for current reference purposes. I hope you will benefit by this realization, which is

rather unique in its design and approach. I know of only one similar project, that of the French administration for regional development (Délégation pour l'aménagement du territoire et l'action régionale, DATAR). They have set up on microreproduction a map library of socio-economic facts. It is, however, most likely that you will not hear about Cartomatique any more, since the project has already entered the realm of history of Canadian map librarianship - whether as a mere fact or as a significant break-through in the field, History will decide.

I hesitate to compose the "oraison funèbre" of the Système Cartomatique, but I would like to make a frank evaluation of this venture, as I see it and its usefulness as a lesson for the future, especially as this session invites us to look towards the year 2000. The basic assumption of the project was valid: the physical as well as the intellectual document control over an underdeveloped area of map documentation. The choice of the technology was also valid: a visual retrieval approach to a visual document and an automated retrieval approach to overcome fastidious manual searches. This technology, however, had two limitations: (1) a minor one, regarding legibility problems associated with 16 mm microfilms; however, for the type of document concerned, which was rather simple in its content, the legibility was acceptable after all; and (2) a major one, regarding the possibility of finding Miracode machines in many map libraries. We were conscious of the latter limitation, but we did not take into account, for obvious reasons, the 'oil crisis' situation and the 'zero-growth' way of thinking which occurred much after the glorious launching of the project.

Since the basic assumption (the control of non-autonomous maps) is still valid and since the project has not survived, should we conclude it to be a failure due to unforeseeable circumstances only? The project failed for intrinsic reasons as well. I dare to say that these reasons may affect our activities to a certain extent. I believe indeed that our philosophical approach towards documentation needs reassessment and reorientation. To what extent is it true that libraries, of whatever type, are run for librarians and not for users, as we often hear? The question is crucial. Are we able to rethink our information activities in a zero-growth environment as well as in a definite user-oriented approach?

Regarding the Système Cartomatique, the most important clientele whom we wanted to serve first was the geographers of our geography department. We did not succeed in interesting them enough in using the system, not even for boosting user counts! Did we make a mistake in identifying their information needs? Were the content and the design of the system completely inappropriate?

The second most important clientele was the map librarians. There was publicity but it did not generate enough interest, in our opinion. Are map librarians not interested in a unique map system which could supplement their own map activities?

If an administrator tells you that the number of users of a service is not sufficient to justify the expenses involved, and if you cannot contradict him on that regard, what can you do other than accept his verdict? What can a librarian do without user support? Here comes the 'existential' question! Could we justify our existence? Last week, in Vancouver, the Canadian cartographers asked themselves: "Do we have a public? Do we even have a product?" Do we, map librarians, have a public? Do we, map librarians, have a product? Do we, map librarians, contribute enough to the cartological education of our environment? We ought to, in order to survive at least until the year 2000!

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LONDON etc. ACTUALLY SURVEY'D and A Prospect of LONDON and WESTMINSTER Taken at several Stations to the Southward thereof by William Morgan. Scale 1 in. to 300 ft. Introductory notes by Ralph Hyde. Lympne Castle, Kent, Harry Margary in association with Guildhall Library, London, 1977. Facsimile in 12 sheets with 3 p. text. Price: Loose sheets £8.00, cardboard £12.00, hard-cover-bound £20.00.

Harry Margary, one of the world's foremost authorities on the reproduction of antique maps, has been actively involved in facsimile publishing for the past 10 years. He is retired from the Royal Navy Scientific Service where his interest in accurate representation of detailed information originated. Careful attention to detail is, in fact, the hallmark of Margary's work.

As original maps become scarce and expensive, the facsimile is finding a ready market. Librarians interested in providing maps for scholarly purposes, laymen interested in maps for purely decorative reasons, all can be well served with his fine reproductions. Keeping the potential uses of the maps in mind, Margary believes in producing reproductions that resemble the original as closely as possible and at very affordable prices. In an article written in 1973,[1] Margary outlined in detail factors such as scale, photographic techniques and materials involved in quality reproduction. He makes every attempt to produce facsimiles that are of the highest standard, making sure that they correspond to the original as closely as possible in scale, in number of sheets and in appearance. He believes in full-scale reproduction because the eye can only discriminate detail larger than 0.010 in. at a normal viewing distance of 10 in. The finer details will be lost if the scale is reduced. Because one of the most difficult to control and important aspects in the reproduction process is the actual photographing of the original, he attaches great importance to the quality of the photography. Margary uses his own Hunter Penrose process camera with a 24 x 30 in. format. He applies the photographic techniques that he has developed to ensure that the details of the original appear on the facsimile. He has also developed a special method to enable bound copies of old maps to be copied as if they were flat sheets, thus avoiding distortions. All facsimiles are printed on a high quality matt-surfaced yellowish paper of soft texture that most resembles the characteristics of the old papers. The ink used is off-black in colour, the effect of mixing black inks with sepia. The result achieves a most satisfactory resemblance to the original.

The latest and most ambitious of his projects involves the publication of a series of facsimiles of early plans of London, England. The plans, being published in association with Guildhall Library, are to be issued in five parts: Part I. Ogilby and Morgan - CITY OF LONDON: 1676. IA. Ogilby's "EXPLANATION": 1677. Part II. Morgan - "LONDON &.c. ACTUALLY SURVEY'D..." 1681/2. Part III. STANFORD'S LIBRARY MAP OF LONDON: 1862. Part IV. Collection of maps published between (1553-59) and 1667. IVA. Index to the Agas Map: 1633 (included in Part IV). Part V. Greenwood: 1827, Wyld (CITY OF LONDON): 1840, Wyld (LONDON AND ITS ENVIRONS): 1848/9.

1. H. Margary, "The Facsimile Reproduction of Early Engraved Maps," Society of University Cartographers Bulletin, Vol. 7, No. 2, March 1973, pp. 1-7.

Parts I and II have already been published, while parts III, IV and V are slated for publication in 1979. Each publication will consist of a cover sheet, an introduction by Mr. Ralph Hyde, Keeper of Prints and Maps at the Guildhall Library, and the map sheets themselves. The maps are available in loose sheets, card-bound or hard-cover-bound, and can be kept either as a set or mounted as a single display. This series, along with the John Rocque maps of London (1746), published earlier by Margary, will include almost all the most important maps of London which appeared during the period from the late 16th century to the middle of the 19th century. All the maps are at a large scale and consequently it is possible to trace the development of London through four centuries.

It is to part II of Margary's latest project that this review is primarily directed. The Morgan map continues to exhibit the high standard of reproduction for which Margary has been noted. Fairclough, Librarian in charge of the Map Room at Cambridge University Library, set down a checklist of at least 10 points that he considered important to the assessment of facsimile reproductions.[2] The following discussion centres on the main points Fairclough set down in his paper. The Morgan map reaches a high standard indeed, if it is measured by this checklist

The map depicts London at a time when it was rapidly expanding after the Great Fire and Great Plague of the 1660's. Hyde comments in the introduction that it is the "largest, most decorative and most accurate map of the capital that had ever been compiled." The map is ichnographically (ground plan) drawn for the most part, but churches and other important buildings on the map itself, as well as the 'ornaments' around the map, are shown pictorially. The corners and all empty spaces are filled with these ornaments (large engravings of palaces, churches, government buildings and statues primarily) and dedications to various persons. Hyde comments that in his anxiety to produce a map of universal appeal, Morgan placed much superfluous decoration on it so that the significance of the survey is very nearly lost. Certainly the plan itself is somewhat obscured but the ornaments and dedications may be useful in their own right to the historian, or simply for their decorative appeal. One very useful and beautiful ornament is the large Prospect of LONDON and WESTMINSTER (sections 1-4) as seen across the Thames River from the south bank. This was the first engraved panorama of London from the Thames River that attempted to show every Thames-side building. It is unclear whether Morgan intended the panorama to be placed along the top or bottom of the map since it is enclosed within its own border, and in fact when first on sale, copies were available with or without it. In the introduction it is indicated that the Prospect of LONDON and WESTMINSTER is to be included at the top of the map. In Darlington and Howgego's Printed Maps of London circa 1553-1850[3] it is stated that the only known complete copy of the first edition of the map with the Prospect is located in the Royal Library, Copenhagen, and that the Prospect is to be included along the foot of the map. It is most desirable that a facsimile be made from one original copy only. It was not possible in this case. The original in the London Museum lacked sheet 12. The missing sheet had to be photographed from a copy in the British Library.

The two-page introduction written by Mr. Hyde gives much detailed information into the actual history behind the production of the original map. Biographical

2. R. H. Fairclough,"Original or Facsimile," New Library World, Vol. 73, No. 863, May 1972, pp. 291-294.
3. Ida Darlington and James Howgego, Printed Maps of London circa 1553-1850. London: G. Philip, 1964.

information on the cartographer, bibliographical history of the map and a bibliography of works relating to the map and to the cartographer are contained within the introduction. A diagram is included which indicates how the sheets are to be arranged in order to form a unit. Each map has been clearly numbered to correspond to this diagram following Morgan's original numbering scheme. A minor error occurred on the facsimile: section 6 has mistakenly been numbered section 9. The facsimile is preceded by a modern title page, which includes details of the original and present-day publishers, such as short title, cartographer, the name of the facsimile publisher and the date of publication. An engraving of one of the ornaments (Ogilby presenting the subscription book to Charles II) also appears on the title page.

As a last and minor point: the copy this reviewer received was bound between pink card covers. On a purely personal level this reviewer felt pink was not in keeping with the creams and browns of the map itself.

For the librarian seeking to enrich a collection of historical maps of London for research purposes, or for the collector of decorative maps, Morgan's map offers much. Although it is but one map of a series of early plans of London it certainly can stand alone.

Lorna McIntyre
Map Library
Department of Geography
University of Western Ontario
London, Ont.

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Allin, Janet, comp. Map Sources Directory. Toronto, Office of Library Co-ordination, Council of Ontario Universities, 1978. $10.00. ISBN 0-88799-098-3. (Available from the publisher at 130 St. George St., Suite 8039, Toronto, Ont. M5S 2T4.)

A good map sources directory has been lacking for many years. All of us have felt the need for one, but none of us has had the energy to undertake the exhaustive task of producing one. It is indeed a delight to see that Janet Allin of York University Map Library has taken the initiative and produced such a directory. This reference work is an invaluable tool, not only to those employed directly as map librarians/curators, but also to anyone wishing to obtain a map or map information. Maps and their sources are at best little known. Having devoted almost 20 years to the tender love and care (and acquisition) of maps, the reviewer can, from personal experience, attest to how difficult it sometimes is to ferret out that elusive map. It is equally as difficult once the map has been found to obtain a copy of it. Enter the Map Sources Directory.

This directory by the admission of its compiler has its limitations. It was compiled from sources used solely by York University. One might comment, however, that York University apparently has a very active map acquisitions policy if this directory is the base from which acquisitions are made. A very human trait when scanning a directory such as this one is to look first for the name of your own agency. In this instance the reviewer was denied the pleasure of seeing it. However, it was remembered that an earlier attempt by this reviewer at producing

such a directory was a dream unrealized, partly because it was felt that any such directory should be all-inclusive. This is never possible. Daily changes in names and addresses of agencies, government departments, companies, etc., prevent a directory from being anything other than a snap-shot of information available to the compiler at one particular time. It was extremely pleasing to note that immediately following the concise introduction to the directory forms were included on which to submit corrections or additions to the directory. It would be superfluous to say that the reviewer immediately completed a form and forwarded it as instructed on the form. The looseleaf format of the directory is a very practical one since such a directory must be updated frequently if it is to continue to be useful. The design and layout is pleasing. The type styles selected are extremely legible, and the arrangement of map source addresses in neat columns permits easy use of the directory.

The arrangement of map source addresses under 20 headings or sections within the directory detracts from its easy use, despite the fact that an alphabetical index has been included as Section 21. The division of map sources into perhaps four groupings rather than 20 might have been more practical. These could have been: Government Agencies, Commercial or Private Suppliers, International Organizations, Educational Institutions. For instance, to search out maps produced by the Government of Zambia one must look through three sections of the directory, rather than under a single listing of all government agencies for that country. It could be argued, however, that to categorize some of the listings would present more than a minor challenge.

A very helpful addition to the directory would be a cross-reference system indicating the type of maps produced by each source. The products of some of the map producers are obvious, but not necessarily so with others. For instance, to search for a geological map of Thailand would you contact the Ministry of National Development of Thailand or the Royal Thai Survey Department? The addition of such an index would be an asset to a future revision of the directory. This could be accomplished simply by allocating a code to the major categories of thematic maps (topographic, geological, population, etc.) and listing such a code under each address.

The three sections classified under "Miscellaneous" in the table of contents listing "Journals of Interest to Map Librarians", "Canadian University Map Libraries" and "Canadian University Campus Plans" are an added bonus. Although the directory has a distinctly Canadian flavour it will be equally useful to map librarians, collectors and researchers internationally.

Janet Allin is to be highly commended for undertaking this valuable reference work. No map collection or collector worthy of the name should be without a copy of this directory.

One of the first tasks that readers of this review and recipients of the directory should perform is to photocopy their present map source address file and forward it to Janet Allin so that future updates of the directory will be as complete as we collectively can make it.

Brad Fay
Information Division
Maritime Resource Management Service
Amherst, N.S.

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Hill, Gillian, Cartographical Curiosities. London, British Museum Publications Ltd. for the British Library, 1978. 63 p. ISBN 0-7141-0392-6. £1.50.

A national repository for cartographic material has a particular duty to provide the general public both with the opportunity to view its holdings and with reading material to familiarize it with the scope of its collection. An adherence to these objectives often results in the publication of catalogues of a given cartographic exhibition. These short works should not only serve as a guide to the exhibition but also should provide the reader with a general appreciation of the material on display.

Recently such a booklet by Gillian Hill appeared bearing the title of the map exhibition displayed by the British Library in May 1978. The aim of this exhibition and its catalogue, Cartographical Curiosities, is "to draw attention to some of the more unusual maps in the British Library, whether based on genuine geographical misconceptions or the deliberate whimsy of cartographers." This booklet fulfills its objective admirably.

The informative and very readable text is illustrated with 43 black and white cartographic reproductions, half of the map curiosities on display. A list of maps exhibited, together with their call numbers, is appended to the text. It is unfortunate, however, that a publication of this calibre should have discrepancies in punctuation and capitalization of several map titles in the text and in the appended list. As well, not all the pages have been paginated.

The text discusses the maps on display in terms of their cartographic information, history of production, shape and purpose. The first section is devoted to geographical games, such as cards and puzzles, with a notation about their construction, rules of play and the function they were to fulfill. The following section presents the background of the creation, alteration and re-creation of maps which served as illustrations for works of fiction, such as Thomas More's Utopia and Robert Louis Stevenson's Treasure Island. The third part describes the cartographic myths which were perpetuated even though scientific discoveries testified to their nonexistence and sometimes fabrication. The fifth section dwells on the use of human and animal figures for the creation of certain images espoused by countries in the 19th century, often reflecting the political situation in jest. The final section, "Curiouser and Curiouser," brings together cartographic oddities whose peculiarities excluded them from the other sections, such as maps produced by unusual methods of reproduction and maps dealing with the subject of love and romance.

Cartographical Curiosities will be a pleasure to read or to browse through for both those new to the field of cartography and for those knowledgeable in this area. And for the price of this booklet, £1.50, even at present exchange rates, it is a real bargain.

Nadia Kazymyra-Dzioba
National Map Collection
Public Archives of Canada
Ottawa, Ont.

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Rand McNally and Company. The International Atlas. Chicago, Ill., 1977, © 1969 and 1974. xvi, 312, 222 p. index. L.C. 77-78100. $45.00($US).

The 1977 edition of The International Atlas has as its goal "to produce an atlas of the greatest possible value and interest to a wide range of specialists and laymen." These objectives are well met by the content of the atlas.

The atlas is comprised of five series of maps focusing not on each country of the world, but on economic and geographic regions: (1) the continents and oceans as they would appear from space in natural colours, (2) political maps of the major regions of the world at 1:12 000 000, (3)physical-cultural maps of the more populated areas of the earth, (4) maps at 1:1 000 000 of areas of high density or complex development and (5) maps at 1:300 000 of the world's major urban areas. These series of maps allow the user not only to obtain a physical and cultural overview of each country, but also to study in more detail the critical local areas in terms of population and resource development. The regional maps, along with a series of world thematic maps, "The world scene," on politics, population patterns, religion, natural resources, energy, gross national products, trade and transportation, assist the user in understanding the international influences on each country.

The textual material in the atlas is in French, English, German and Spanish and includes a comprehensive legend to the maps, a glossary and abbreviations of geographical terms, world information tables and an index to place names. Thus the maps are easy to interpret and are supported by useful statistical data. The volume itself is slightly lighter than the 1969 edition as a thinner paper has been used; it is to be hoped that it will stand the test of time as well as the earlier edition.

However, in a period of declining budgets librarians and map curators are really put on the spot in assessing any revised edition of an atlas. The librarian must know how much of the atlas has been revised and up to what date, in order to decide whether or not significant-enough changes have been made since the last edition to justify the purchase of the new edition. Because of the expense and time involved in producing completely revised editions, perhaps editors should consider producing annual supplements to major atlases, or looseleaf editions which can be updated as required.

The foreword to the 1977 edition makes no comment on which maps or types of information have been revised. Some revision is apparent in political boundaries and place names, such as Dahomey which is now Benin. It is assumed that major administrative names and boundaries are up-to-date, to approximately the date of publication or latest copyright date (1974), but in using this volume for reference work, librarians cannot unfortunately be assured that it is an accurate source of information up to any one point in time. There are new entries in the gazetteer with useful cross-references, such as "Dahomey see Benin," and much of the statistical data has been updated to reflect 1970 census information.

The thematic section has been significantly revised, reflecting changing world concerns. Politically related areas, and land and sea territoriality claims are new maps in this edition. Maps on urbanization complement population density maps. The maps on resources are expanded and include energy production and consumption. And these maps are followed by new maps on GNP's and international trade - highly related issues!

The section on major metropolitan areas of the world appears to have been almost forgotten in the revision process. Maps of some of the American cities, such as Chicago, show outward growth of the urban areas, and some cultural details have been revised to show, for example, new runways at Paris and New York airports. However, a comparison of the 1969 and the 1977 atlases would inform the unwary user that there has been virtually no growth in the last 10 years in the world's major metropolitan areas.

Thus, although it might be unreasonable to expect to find the boundary change along the Rouge River for Metro Toronto to appear in the 1977 edition, the maps should depict the increasing urbanization of countries and the urban sprawl of the last 10 years. This section is the only disappointment in an otherwise excellent atlas.

Mary Armstrong
University of Toronto Library
Toronto, Ont.

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International Federation of Library Associations and Institutions. Joint Working Group on the International Standard Bibliographic Description for Cartographic Materials. ISBD(CM): International Standard Bibliographic Description for Cartographic Materials. London: IFLA International Office for UBC, 1977. x, 58 p. ISBN 0-903043-16-5. (Available from Canadian Library Association, 151 Sparks St., Ottawa, Ont.) $15.00.

This publication sets out principles and rules for the bibliographic description of a wide range of cartographic materials, including maps, celestial charts, terrestrial globes, relief models, atlases, aerial photos, architectural plans and related materials. As the internationally recommended standard for the description of such materials in library catalogues and bibliographic lists, ISBD(CM) is but one of a larger group of standards developed over the last several years. As such it has been designed to be compatible with the ISBD's for monographs, serials and nonbook materials and exists within the framework of principles prescribed in the general bibliographic standard ISBD(G). Thus it can be used to describe maps and other such materials to be listed either in general catalogues and bibliographies or in similar lists devoted exclusively to cartographic materials.

ISBD(CM) was designed with three purposes in mind: (1) to make bibliographic records for cartographic materials from different sources interchangeable, (2) to assist in the interpretation of such materials across language barriers and (3) to be an aid in the conversion of bibliographic records into machine-readable form. Described as a 'standard', it is intended that each country wishing to create bibliographic records for such materials develop its own rules within the guidelines set down in ISBD(CM). For use in libraries and information centres in countries such as Canada, the United States, the United Kingdom and Australia, ISBD(CM) forms the basis of rules for description for these materials as prescribed in the Anglo-American Cataloguing Rules, second edition. In this context, by 1981, ISBD(CM) will be incorporated into the MARC format for maps and will be applied to cataloguing copy available through MARC tapes, the National Union Catalog, Canadiana, British National Bibliography, the Australian

National Bibliography, and other similar sources.

Nevertheless, this 'standard' is specific, rather than general, in its nature and detail, and has all the characteristics of a code of rules and could function as such without further reference to additional rules for description. Provision has been made for the description of a specific item in a maximum of detail, with a majority of bibliographic elements being required, and a few elements designated for optional inclusion. The prescribed elements of description have been clearly identified and grouped into precisely described areas of bibliographic description, which include title and statement of responsibility, edition, mathematical data, publication and distribution, physical description, series, notes and standard number areas. Among the optional elements are a General Materials Designation (GMD) to be included as part of the title and statement of responsibility, and the co-ordinates, which would be included in the mathematical data area. There is a prescribed order of bibliographic elements and the areas are separated by the marks of punctuation which are already familiar as a feature of other ISBD's and compatible with them.

For purposes of integration into traditional library catalogues, it is understood that, although the application of ISBD(CM) results in a description which is independent and complete, it will not normally be used alone, but will be preceded by a heading or access point which will act as a filing device. Whether this heading is simply one of a multiplicity of access points, such as the cartographer or an area heading, or a traditional 'main entry' will depend on whether a library wishes to handle these materials by traditional library methods or whether some alternative is used. Libraries may encounter minor problems in interfiling with existing records because of the detailed level of description. Indeed the description may be more detailed than some institutions require, or even desire.

In general, the rules contained in ISBD(CM) are clearly stated and enumerated in the order in which they should be applied. Specific rules are well illustrated by examples and a further aid to their use is an extensive appendix of full records, which will enhance the cataloguer's understanding of the application of ISBD(CM) in practice. Some of these examples describe Canadian and American materials, but for libraries with extensive foreign language collections there are examples in French and Finnish, as well as in non-Roman alphabets such as Chinese and Russian. Nevertheless, at least two features may present some problems in implementation. The first is the use of a general materials designation (GMD) "cartographic materials" for all materials. Such a generic term may not be a useful identifier in a library where there is a substantial collection and it is important to differentiate precisely between maps, globes and other formats. Also, the lack of a detailed index will be a serious limitation in its use as an efficient cataloguing and bibliographic tool.

The importance of ISBD(CM) for bibliographers and cataloguers lies in the fact that it provides a standard form of description for these materials, a format which is expected to be the international standard for the foreseeable future. Moreover, it is a standard which has been based on sound principles, which has evolved with the benefit of the experience and critical analysis which earlier produced the ISBD(M) for monographs. In short, it is an excellent and worthwhile publication. Of considerable interest is the involvement of a number of Canadian experts in the development of the standard, including Hugo Stibbe, National Map Collection, Public Archives of Canada, who acted as Chairman of the Working Group,

Joan Winearls, Map Librarian, University of Toronto Library, who attended meetings as an observer, and a number of other Canadians who contributed comments on the work as it progressed.

Nancy J. Williamson
Faculty of Library Science
University of Tororto
Toronto, Ont.

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Yukon Official Road Map. Scale 1:2 500 000. Prepared for the Department of Tourism, Government of the Yukon Territory by Canadian Cartographics Ltd., Whitehorse, 1976, reprinted 1978. Free

I have a thing about road maps, 'official' or otherwise. I hate them. The small convenient ones obviously designed to fit into the glove compartment of a mini-bike are usually at such a scale that you need a magnifying glass to find a major city. The large detailed ones, which when fully opened could completely fill the front seat of a Cadillac Eldorado, have probably caused more fatal accidents than have impaired drivers.

Another thing I don't like is that all road maps are made to self-destruct after 2 months of glove compartment storage. They don't stand up to ice cream, coffee, moose blood, fish slime or beer. The reverse sides of all road maps are festooned with pictures, symbols, credits and generally useless information. Finally, I still do not know how to fold the wretched things.

The ideal road map would be the European booklet variety with strip maps in accordian fold-up style for each major road. The map would be printed on plasticized paper that would repel most common liquids and semi-solids. It could then be used for numerous purposes other than a map. Think of it. Fold it correctly and you have a coffee cup or a plate for beans. Mold it into a cone and you have a funnel for emergency use on the road. Why you could even use it as a rain hat or with a little glue turn it into a pair of hip waders. Just think of the marvelous things you could do with a road map like that.

"So" you say "What the hell does all of this have to do with reviewing the 1976 Yukon road map?" The answer is - nothing. Except for the fact that here we have another typical, folded, self-destructing, irritating, not too big, not too small, dumb road map. That's not to say it's a bad road map because it isn't. It has all the right information. All the roads are shown, also mountains, rivers, lakes, campgrounds, blah, blah, blah ad nauseum. But i 's the same as every other road map ever produced. The information for the Yukon map came directly off of the 1972 EMR 1:1 000 000 map of the Yukon so there is really little if any new information on either the 1976 or 1978 Yukon road map.

Technically speaking the map is well done with all features, names and roads clearly legible. The distance figures, given in miles and kilometres, are somewhat difficult to decipher. The Carcross-Skagway road is not shown on the map at all. This is likely due to the fact that the compilers did little if any research on new developments. This road, for the benefit of the authors, has been under construction for 4 years and was officially opened this fall.

To tell you the truth, that's about it. Not a remarkable map in any sense. I could comment on the aesthetics or technical merits of the milage grid or index, I suppose. Or I could discuss the neat tourist 'info' on the back such as how to drive the Alaska Highway and still have a car when you are finished, or I could talk about the neat little circle tours for which small maps are printed, but I won't. All in all - typical.

Bill Oppen
Yukon Archives
Whitehorse, Yukon

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ERRATA: Several errors in Ed Dahl's review of The Map Collector in the last issue of the Bulletin (No. 29, pp. 35-36) were not caught in the proof-reading stage. The corrections follow:

p. 35, 1. 2: subs: £17

p. 35, par. 4, 11. 2-3: should read: atlases (Americae Retectio, 1592, Great Britain's Coasting Pilot, 1795 and Korean hand atlases)

p. 35, third last line: £500

p. 36, par. 1: In the three instances where four ellipsis points appear, only three should be present.

p. 36, 1. 14: should be: The Roads of ye South Part

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CONSERVATION COMMITTEE REPORT, 1978-1979

Members: Betty Kidd (Chairman), Public Archives; Lorraine Dubreuil, McGill University; Maurice McCauley, Public Archives; Anwar Qureshi, University of Regina; Ronald Whistance-Smith, University of Alberta.

This Committee has, once again, very little to report for 1978-1979. The most successful activity of this Committee in past years has been the co-ordination of ordering of non-acidic folders. This issue of the Bulletin includes a note requesting those with interest in ordering folders to contact the Committee; if there is sufficient interest, the third joint order will be prepared for the fall of 1979. The Committee was also asked recently to co-ordinate a joint order for large flat storage/shipping boxes; this is currently being investigated.

The correspondence with the Department of Finance concerning the 17.5% duty on acid-free paper products imported from outside Canada has recently been renewed; the Committee will be proposing a resolution on this subject at the 1979 business meeting to be forwarded to the proper authorities.

The Committee would appreciate comments from the general membership on their concerns in this area and/or offers of help from interested members.

Betty Kidd
Public Archives
Ottawa, Ont.

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ANNUAL REPORT OF THE LAYOUTS COMMITTEE, 1979

The Layouts Committee, formed in 1973, had as its main objective the production of folios of floor plans of map libraries in Canada. These folios would serve to inform librarians and library planners about the design and organization of map libraries. The first folio, entitled University Map Libraries in Canada, a folio of selected plans, was produced in 1975 under the direction of Serge A. Sauer, University of Western Ontario.

In the summer of 1977, work was begun on the second folio, entitled Federal, Provincial and Municipal Map Libraries in Canada, a folio of selected plans. The folio will consist of floor plans of the following eight map libraries: Map Collection, Provincial Archives of British Columbia; Map Collection, Provincial Archives of Alberta; Map Library, Geological Survey of Canada; National Map Collection, Public Archives of Canada; Map Room, Metropolitan Toronto Central Library; Département des cartes et plans, Archives nationales du Québec; Département des cartes et plans, Bibliothèque nationale du Québec; and Map Section, Provincial Archives of New Brunswick. Each of the eight map places will consist of a floor plan, general information about the library and a written statement explaining the purpose of the collection, kinds of materials held, emphasis of the collection, etc. The Cartographic Centre at the University of Waterloo is at present completing the plans for photographing. Barring any unforeseen

difficulties drafting and typesetting should be complete by the end of April. I am optimistic that the printing can be completed by the date of the 13th annual conference of ACML.

Lorna McIntyre
Map Library
Department of Geography
University of Western Ontario
London, Ont.

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HISTORICAL MAPS COMMITTEE 1978-1979 REPORT

"...to perpetuate and popularize the Canadian cartographic heritage..."

During the 1978-1979 period, the Committee concentrated on three tasks: (1) production of new maps, (2) expansion of the Committee and (3) organization of the distribution network.

1. In the past year there were three printing runs (fifth, sixth and seventh) with the total production of 21 new maps, bringing the total in the series to 34. At this time the ACML series stands out as the largest set of single-sheet historical reproductions ever published in Canada.

Almost all maps were sponsored by governmental or private institutions. This special feature, combined with the sales through commercial distributors and direct orders, makes this project the most significant income-producer for the Association. The Treasurer's report reflects this situation.

The series is developing geographic breadth of coverage, as well as the historical depth. The statistical summary (Table 1) shows that by now all parts of Canada are represented by one or more maps. Ontario is covered by the greatest number of maps, reflecting the number of sponsors from this province. More than half of all sponsors are located in Ontario. The 18th century stands out as the period of greatest interest to sponsoring institutions. However, other periods are also represented, with 19th century maps emerging as close contenders for first place.

Among sponsors, universities represent the largest group, but it is encouraging to note that a very strong showing is being made by other establishments, public and private, including five provincial archives, three museums and four private firms. In the coming year the Committee will attempt to reach a number of municipal organizations, while continuing to explore the possibilities among other potential sponsors.

2. During 1978-1979 the Committee was expanded and it is now comprised of the following ACML members: Ed Dahl, Barbara Farrell, Tom Nagy (as ACML President), Serge Sauer (Chairman) and Frances Woodward. These members are engaged in the everyday activities of the Committee, such as production and distribution of maps, search for and negotiations with potential sponsors, selection of maps for reprinting and all technical and financial aspects of the project.

Table 1. Statistical summaries of the first 34 facsimile maps produced by the ACML Historical Maps Committee

Classification criterion	Number of maps	Classification criterion	Number of maps
Geographical area (or predominant geographical area)		Sponsoring institution	
		ACML	4
World	1	National Map Collection, PAC	2
Western Hemisphere and North America	5	Universities	13
		Other educational institutions	2
Canada	1	Provincial archives	5
East Coast	6	Museums	3
Quebec	3	Private firms	4
Ontario	11	Private individuals	1
Prairies	2		
West Coast	4	Location of sponsors (other than ACML and NMC)	
Arctic	1		
Date of publication		Newfoundland	2
		N.B.	1
1500's	2	N.S.	1
1600's	7	P.E.I.	1
1700's	14	Quebec	1
1800's	11	Ontario	16
		Manitoba	1
		Alberta	2
		B.C.	3

A number of experts in various fields of Canadian historical cartography were invited to serve as Consultants to the Committee. The Consultant's role is to provide broad guidance and advice in selection of historical periods, authors and individual maps which, in their opinion, deserve to be high on the Committee's list of priorities. It is hoped that Consultants will provide critical comments about material produced, while at the same time serving as good-will ambassadors with the rest of the cartographic community in Canada and abroad. As of April 1979, Betty Kidd, Norman Nicholson, Richard Ruggles, and Coolie Verner were the Consultants of the Historical Maps Committee.

3. The true success of a publishing venture often depends on an efficient distribution network. As the production of facsimile maps grew, it became imperative to create new distribution outlets in addition to the two major 'depots' - in London at the University of Western Ontario Map Library and in Ottawa at the National Map Collection. At the time of writing, three commercial dealers were handling ACML maps: North Star Media Co. (London), Oxbow Books (Toronto) and Maritime Mapping (Halifax). A number of bookstores, museums and smaller commercial outlets also sell ACML maps. The following have purchased at least one hundred copies: Glenbow Museum (Calgary), University of Windsor Bookstore (Windsor), Huronia Historical Parks (Midland), Algoma University College (Sault Ste. Marie) and Keyano College Bookstore (Fort McMurray). Negotiations are in progress with distributors in Europe and the United States. Small quantities of maps have already been purchased as samples by these dealers. Although a

dozen or so outlets represent a good foundation for a sales network, further search for distributors in Canada and abroad is continuing.

Other vignettes, possibly of interest for the membership:

*The Chairman of the Historical Maps Committee is publishing a newsletter in order to convey all current information to Committee members and Consultants, the ACML Executive, and the major distributors of maps.

*Dr. Robert Ewing, Dean of Algoma University College, presented a framed copy of facsimile 18 to the Mayor of Sault Ste. Marie, Ontario. The story was reported in The Sault Star (January 22, 1979).

*Dr. A. Haller, Department of Geography, Algoma University College, appeared twice on local television and explained the significance of the Jesuit map (#18) as the reflection of the exploration of the area in the 17th century.

*Several copies of facsimile 6 were included in a Ph.D. dissertation dealing with urban development of Toronto. The ACML map happened to be the only suitable reproduction of Toronto of that period.

*Reproductions and lists of ACML maps appear in various professional and commercial publications. The Archivist (Public Archives of Canada) printed in its July-August 1978 issue the reproduction of map 13 and the list of the first 13 maps. Chronicle (National Commission for Cartography) has reproduced maps 5 and 17, and has included lists of new maps and information for ordering. Oxbow Books of Toronto has included ACML maps in its catalogues 1 and 2. North Star Media of London has printed a special leaflet listing ACML maps and has distributed it to Canadian libraries and secondary schools.

It is obvious that these 'spin-offs' not only contribute to the success of sales, but also serve to focus attention on cartographic Canadiana - the very purpose promulgated at the formation of the Historical Maps Committee.

Plans for the Coming Year

The Historical Maps Committee hopes to prepare at least two printing runs, with at least ten new maps. The first folio of maps, containing a list of titles, twenty-five maps (1-25), under a special cover, should be available in the near future. The Committee will further expand the distribution network and will try to enlist the co-operation of new sponsors. The Committee is considering the idea of supplementing the publication of reproductions with brief reports about the maps produced, which should benefit the archivist, the map librarian and the more sophisticated collector.

The Committee expresses gratitude to all who have helped in its work and asks the ACML membership and Executive for continuing moral and organizational support.

Serge A. Sauer
University of Western Ontario
London, Ont.

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REPORT OF THE NATIONAL UNION CATALOGUE COMMITTEE 1978-1979

The NUC Committee met in Ottawa in November 1978 to review the Canadian Rules for Cataloguing Maps and to plan for the publication of these rules in early 1980. Due to extreme difficulties with copyrights, it was decided that the only possible course of action was the production of a manual which would interpret the rules as set down in AACR II and which would where necessary expand these rules and/or make additional guidelines for in-depth cataloguing of maps. As the NUC had done exhaustive work on reviewing and interpretation of the AACR chapter on Cartographic Material during its preparation, it was felt that the proposed manual would be invaluable as a tool to all those cataloguing maps following AACR II rules.

There was great interest shown in this project by the Geography and Map Division of the Library of Congress and the British Library and arrangements were made to make the production of the manual a co-operative project. This commitment by the British and the Americans to work together with the Canadian cartographic community, in particular the Public Archives, is in many ways the fulfilment of our ideal, to be instrumental in creating a standard for map cataloguing accepted by the Anglo-American world, if not internationally. Accordingly the three co-operating countries have agreed to prepare separate manuals. These will form the working documents for a meeting of delegates (four from each country) in Ottawa in October 1979. It is their intention to meld these manuals into one and produce one manual representing their collective interpretation of AACR II for cartographic material.

The manual will be published by the Public Archives (National Map Collection) with suitable acknowledgment of the many years of labour contributed by the Association of Canadian Map Libraries through the NUC Committee. This Committee is unusual in that over the years there is scarcely a member of the Association who has not worked in some way for this Committee, some contributing their expertise in cataloguing techniques, some their fine knowledge of the format concerned, or both. If we were to try to name them all, fate decrees someone would be forgotten.

We realize that many are disappointed that some working documents have not appeared sooner to aid you in cataloguing your collections, many in despair have developed their in-house systems, but we feel assured that when this manual is finally published it will be worth waiting for, and will outlive us all.

It must be acknowledged that without the work of Hugo Stibbe and the great co-operation of Betty Kidd of the Public Archives, the work of this Association in producing a manual would have had little hope of fruition.

Kate Donkin
McMaster University
Hamilton, Ont.

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INFORMATION SYSTEMS IN THE NATIONAL MAP COLLECTION: A STATUS REPORT: JANUARY 197
(Presented to a special meeting of the Archives Branch Management Committee on Information Control, January 12, 1979)

Cataloguing or description of the cartographic holdings of the Public Archives has been carried out from the time that the "Map Room" was published in 1907. This is evidenced by the publication in 1912 of the Catalogue of Maps, Plans and Charts in the Map Room of the Dominion Archives; in this catalogue, H. R. Holmden "classified and indexed" some 4106 items.

Several attempts to classify and index the collection were made during the 40 years following Holmden's catalogue - there still exist several card indexes from these attempts. In the 1950 annual report of the Public Archives, there is a reference to the necessity of "recataloguing ... the map collection." It was not, however, for several years that cards were first prepared for the card catalogue. Prior to the initiation of the cataloguing project, an area classification schedule, based primarily on the history, geography and cartography of Canada had to be designed; this schedule, with periodic revisions, is still in use in the National Map Collection. A boxed-style two-sided catalogue card was designed and used from the 1950's to 1968, when a one-sided entry with information in paragraph form was introduced. Colour-coded cross reference cards, i.e., blue for subject, yellow for author and white for area, were used for most of the period; it is apparent, however, that certain cataloguers did not always use cross references. For example, until 1966, there were no subject cross references for maps of Newfoundland and Labrador.

In the late 1960's, developments were taking place which would have profound influence on the development of information control in the Map Division. The formation of the Association of Canadian Map Libraries in 1967 was in large part due to the foresight of several individuals, including Ted Layng. He and others in the division played a key part in the planning and organization of the association. One of the key reasons behind this - and in fact, Kaye Lamb mentioned it in his welcoming remarks to the delegates at the first meeting - was the recognition that a union catalogue or union list of cartographic records in Canada was a necessity and should be a major aim of map curators in the future. The National Union Catalogue of Maps Committee was, I believe, the first standing committee of the new association and NMC staff have been active in this Committee throughout the last decade. In the early years the Committee tried to quickly produce a union catalogue - attempts were made to produce a manual card catalogue, with entries submitted by many collections. Although these attempts proved that co-operation was possible, it was quickly recognized by the Committee that there had to be uniform and detailed cataloguing guidelines and that automation must play a key role in the development of a union catalogue. In the last years, the development of cataloguing guidelines has been the main task of this committee and, because of its close relationship to the NMC, of the Collection as well. A union catalogue, or the National Register of Maps, is one of the stages in the Collection's overall plan for bibliographic information control. To ensure future co-operation from cartographic archives, as well as from the map library community, the NMC held a seminar in April 1978; of course, there were also many other reasons for the seminar.

In the early 1970's, the whole information control package was submitted to senior management for approval. The 1975 divisional EDP Report and Plan is the master plan of the NMC for information control; the plan has been followed - of course,

the dates are wrong since we usually have not received the required man-years or resources and because of external developments. We will continue to follow this plan in the future. There are three phases and seven stages in our plan. In my following remarks, I will refer back to these stages and phases.

The card catalogue, published in 16 volumes by G. K. Hall & Co., Boston, in 1976, resulted from more than 20 years of a progressively refined style of cataloguing and reflects the contributions of numerous individuals. For most of this period, no written guidelines existed for the preparation of descriptive catalogue entries; the first written divisional cataloguing guidelines were compiled in the early part of this decade. The catalogue, as published by G. K. Hall, includes approximately 80 000 cards; the 10 to 15% of the Collection actually described is, for the most part, maps issued in separate sheet form and from atlases and books. Already and despite the prohibitive cost (more than $1000), the published catalogue is being considered as a standard reference for Canadian cartography; there are many problems and errors in the catalogue, but although we recognized the need for a thorough revision, we also recognized that the other 85 to 90% of our holdings were more in need of the limited time available in the Collection for description of materials.

At the time that the contract was signed with G. K. Hall & Co. in 1974, we had hoped to be at the automation stage when the publication became available; thus the 16 volumes would constitute essentially our pre-automation catalogue (and in fact, I stated this in the introduction to the catalogue). Circumstances dictated otherwise - we were without man-years to perform the necessary tasks and there were national and international developments taking place, both in cataloguing standards and in computer applications. In fact, another card catalogue is now growing, admittedly very slowly, in the NMC.

The new card catalogue differs from the previous catalogue in that the guidelines followed are those compiled basically by Hugo Stibbe, in co-operation with the National Union Catalogue of Maps Committee of the Association of Canadian Map Libraries. These guidelines have evolved and are in agreement with the International Standard Bibliographic Description for Cartographic Materials, usually referred to as ISBD(CM); Hugo Stibbe was the chairman of the committee which prepared ISBD(CM). The guidelines are also basically in agreement with the chapter on "Cartographic Materials" in the second edition of the Anglo-American Cataloguing Rules - to which the National Union Catalogue of Maps Committee contributed a copy of their work. AACR II states in the introduction that it is in agreement with ISBD's; however, in the chapter on cartographic materials, there are several variations from ISBD(CM) and here we will follow ISBD(CM), not AACR II.

The publication of the cataloguing manual is scheduled for 1980-1981; the preparation will be finalized in co-operation with the Library of Congress Geography and Map Division. The publication, essentially, will be a manual interpreting the AACR II. With anticipated approval from the Americans and the British, this publication will be used in the Anglo-American map cataloguing community.

The entries being placed in this new card catalogue are basically for separate sheet maps received by the Modern Cartography Section and, in particular, those to be noted in the Bibliographie cartographique internationale, the only international annual listing of current maps. Since these entries, which have a

deadline for submission each year, are to be prepared according to ISBD(CM) and since our guidelines are compatible, certain priorities for cataloguing are being placed on this material. At the same time, we are ensuring that the guidelines can be used for all the materials held by the NMC. A staff member of the Modern Cartography Section was seconded to the Documentation Control Section for a 6 month period commencing September 1978 to prepare the first-level descriptive entries for Canadian series. This requires considerable research since very little has been recorded on the origins and development of Canadian map series. At the same time, Hugo Stibbe undertook an experiment with two small Ontario series to ensure that the guidelines for two-level cataloguing were satisfactory. He prepared two-level cataloguing entries for the Ontario county, district and regional municipality lithograph series at the scale 1:253 440 and 1:250 000. Two-level cataloguing is, of course, very time consuming with a manual system and for this reason, two-level cataloguing in the NMC will await the utilization of computers.

Description of record groups and collections - and since reorganization in 1976, we have certainly used traditional inventories and finding aids for extensive parts of our holdings - is also possible with the cataloguing guidelines available. As with series, two-level cataloguing is necessary. Preliminary work has already proved that this is possible with first-level description and, as with series, we await computer applications to fully utilize two-level description for record groups. From this description, you may realize that although we are not yet at Phase 2 of our plan, we are testing manually prior to actual EDP conversion. While the work in the NMC in the information field has concentrated on preparation and completion of cataloguing standards which agree with national and international standards, we have also been active in other related areas. In 1972, at the annual meeting of the National Union Catalogue of Maps Committee, sponsored by the Public Archives, the Committee members closely examined the then recently published MARC for maps of the Library of Congress. While disagreeing with some of the sections in this American MARC, the decision was made to utilize a MARC format. Since the National Library is the federal agency responsible for development of MARC systems, the NMC has been co-operating with the National Library in this development. At the present time, the second draft of the MARC for cartographic materials communication format is being considered. This is, in effect, Stage 3 of Phase 1 of our master plan.

A joint announcement of the Public Archives and National Library in 1975 noted the co-operation of the two departments in the development of cataloguing rules, machine-readable formats and authority files for use in the processing of maps. Recently the NMC was established as "Library 5" in the National Library authorities system for personal and corporate names used in records; we are now receiving custom-made paper print-out for the names used in NMC records. It was Nick Warman, the CS whom Machine Readable Archives seconded to the National Library, who was responsible for writing the programme modifications necessary to incorporate NMC records.

As archivists from most media have recognized for a long time (see the reports of the Task Force on Information Control), subject is the most difficult of all access points to decide upon. The NMC sent a staff member for Précis training at the University of Maryland this past summer. It appears that Précis is the best available subject retrieval system currently available for the purposes of the NMC. Although we have done some manual testing of Précis - for example, for the materials used in the Video Disc tests - it, too, is especially suited for computer applications. These activities are Stage 1 of Phase 1 of our plan.

Phase 1 of our plan, i.e., "Format Design & Auxiliary Systems Design & Implementation" has been gradually coming together. We in the NMC have been interested in a system for EDP conversion. The Dobis (Dortmunder Bibliothekssystem) on-line information management system has interested us for some time; we have watched closely the Dobis developments in the National Library and the Canada Institute for Scientific and Technical Information (CISTI). These developments have shown that the data base structure is compatible with MARC and bilingual data. (A complete report of these developments is provided in an article "Dobis report and bibliography" in the most recent National Library News.) Several months ago, several staff members attended a demonstration of the Dobis system. Dobis is certainly an acceptable system for the NMC to adopt; knowing that other divisions in the Archives Branch are also interested in the system has benefits - the system will be cost-effective if two or three divisions can share facilities.

Although we speculate from time to time about a system that would recall the image of the map or plan at the same time as the descriptive entry, we have not yet seriously considered this. At the moment, we are producing excellent quality images with our 105 mm microfilm programme. Perhaps it may later be feasible to combine our information control and our microfilm programmes in some way.

At this time, the NMC is embarked upon a progressive program in information control. Where we are heading, within the division and within the community of map collections in Canada, in establishing a union catalogue is quite straightforward in our opinion. However, there is a lot of work involved and too few persons to progress as quickly as is desired.

Betty Kidd
National Map Collection
Public Archives
Ottawa, Ontario

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THE NATIONAL COMMISSION FOR CARTOGRAPHY: REPORT FOR THE PERIOD JUNE 1978 - MAY 1979

At the fall meeting of the NCC, 31st October 1978, the following members were in attendance: N. Anderson, B. Brickman, M. Coulson, B. Cromie, R.N. Drummond, B. Farrell, N. Grant, R. Groot (President), L. Guelke, D. Jupe, A. Kerr, T. Nagy, L.Ottman-Clish, R. Ruggles.

The new membership structure is the one accepted at the Calgary meeting in May 1977 (two members from each participating organization, three members from CIS). A minor modification was suggested - terms of office of delegates should be at the discretion of participating organizations. An executive was elected for a two-year term: R. Groot (President), L. Guelke (1st Vice-president), B. Farrell (2nd Vice-president), B. Brickman (Secretary/Treasurer).

The main activities of the NCC over the past year are summarized below:
Publications - The Chronicle is published with cooperation from the Geography Department of Carleton University. The new editor is Neil Grant, with Barbara Farrell as associate editor. There are four issues per year distributed free to individual members of participating organizations. The format has been redesigned in order to reduce costs per issue and to meet postal requirements. The NCC regards the Chronicle as its foremost method of contact with members of

the cartographic community and an attempt is made to retain quality and currency of information. Comments and contributions are urged; please address them to N. Grant, Editor, c/o Department of Geography, Carleton University, Ottawa, Ont. K1S 5B6.

Regional Activities - The NCC organized a regional seminar to familiarize practicing cartographers with recent developments in cartographic techniques, March 1-2, 1979. The seminar was hosted by Sir Sandford Fleming College, Lindsay, Ontario, and was co-ordinated by David Jupe and Neil Grant. It proved to be a successful and useful meeting, addressing an audience of more than 50 cartographers, most of whom were members of small planning organizations involved in drafting and cartographic activities. Kate Donkin participated on behalf of ACML, presenting a very well received session on the identification, storage and circulation of maps.

National Activities - (1) Education Committee: An education committee of the NCC has been established under the chairmanship of D.R.F. Taylor. The terms of reference of the committee are as follows: (a) to create an inventory of current cartographic education in Canada; (b) to review curricula in view of Canadian requirements for cartographers at various levels, who could be called technicians, technologists and professionals (for lack of better terms at this point); and (c) to identify and propose courses of action to assure that the quantitative and qualitative demands for cartographers in Canada are met. It has been decided by the committee that an appropriate first stage in the achievement of these objectives is an inventory of cartographic education at all institutions of post-secondary education in Canada. To this end, a questionnaire has been circulated and a preliminary report will be made on May 23rd. ACML's member on this committee is Joan Winearls to whom any relevant information concerning cartographic or map librarianship education or courses should be passed.

(2) National Cartographic Day: A second National Cartographic Day will be held at the Royal York Hotel, Toronto, May 23rd, 1979. The topic of panel speakers and discussion groups will be cartographic education. Dr. H. Stibbe, Head, Documentation Control Section, National Map Collection, will present a paper on this occasion dealing with aspects of cartographic education of particular concern to map librarians.

International Activities - (1) ICA Commissions: NCC has supported the appointment of Canadian delegates to the following ICA Commissions. These persons should be regarded as the Canadian resource persons in the areas of specialization mentioned: History of Cartography, R.I. Ruggles; Automated Cartography, N. Anderson; Cartographic Technology, R. Groot (Chairman); Thematic Cartography, J. Letarte; Education in Cartography, D.R.F. Taylor; Oceanic Cartography, A. Kerr; Base Maps for International Thematic Mapping, D. Monahan.

(2) ICA Conference, Maryland, July 1978: An active group of Canadian cartographers was present at this meeting. The official delegation was headed by Mr. R. Groot, President of NCC. An exhibit of recent Canadian maps was prepared for the conference by Neil Grant, Department of Energy, Mines and Resources The exhibit has since been on display at the National Map Collection.

(3) 10th International Cartographic Conference, Japan 1980: Advance preparations are already well in hand for this conference. Those interested in submitting

papers for the conference should contact Dr. L. Guelke, University of Waterloo, chairman of the papers committee. The NCC will join forces with the Canadian Committee for Geography to produce a joint ICA/IGU Canadian cartographic exhibit for this conference. The theme will be recent thematic maps (1976-1980). Anyone who wishes to suggest maps for this exhibit should contact Aileen Desbarats, University of Ottawa Map Library, the ACML representative. A background paper is being prepared to identify issues on which an official Canadian position should be taken at the conference. Suggestions or concerns should be sent to R. Ruggles (Queen's University), R. Groot (EMR) or N. Anderson (Fisheries and Environment Canada).

The report concerning ACML activities made to the October 1978 meeting of the NCC follows. Any concerns which members of ACML have about the NCC and any particular aspects of ACML's work which they would like to see raised with the wider cartographic community should be communicated to me as soon as possible.

B.E. Farrell
Carleton University
Ottawa, Ont.

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ASSOCIATION OF CANADIAN MAP LIBRARIES REPORT TO THE NATIONAL COMMISSION FOR CARTOGRAPHY, 31 OCTOBER 1978

ACML reports the conclusion of an active year, which culminated in its very successful 12th Annual Conference in Victoria in June 1978.

Current membership in the Association is 222.

The publication activities of the Association continue to receive emphasis as a major means of communication with members of the map library community both within and outside Canada. During 1977-1978 the four scheduled issues of the Bulletin were published. The Directory of Canadian Map Collections continues to sell well. More Facsimile Maps were produced, bringing the total to 19. Six more have been planned for publication before the end of 1978 and a set of the 25 will subsequently be made available in portfolio form. Other publications such as the Handbook for Small Map Collections and volume two of the Portfolio of Map Library Plans are in preparation.

A major contribution being made by ACML to the cartographic community lies in the work of its National Union Catalogue Committee. This committee initially devised the Canadian Cataloguing Rules for Maps, and has, for several years, been working in the vanguard of efforts to devise internationally acceptable map cataloguing rules and a corresponding machine readable format. The successful completion of this work is vital to the process of ensuring that maps which have been published are made accessible to those who need to use them. The NUC Committee will hold a full week of working meetings in Ottawa from November 20-24, at which time the publication format for the Canadian Cataloguing Rules, international co-operation, and the Canadian MARC (Machine-Readable Cataloguing) format for maps will be discussed. Information on the outcome of these meetings will be made available at a later date.

Finally it must be stated that ACML has been happy to make an active

contribution to the work of the National Commission for Cartography during the past year, and will continue to give its full support in the year ahead.

B.E. Farrell
Delegate
Association of Canadian Map Libraries

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COMITE DE LA MICROREPRODUCTION

La composition du Comité a été quelque peu changée suite à la démission du président, Yves Tessier. Gilles Langelier le remplacera dans cette fonction. Les autres membres du Comité sont Serge Sauer et Joan Winearls.

Activités 1978-1979 - L'année a surtout été consacrée à la continuation des travaux en cours. Gilles Langelier a préparé un article sur le microfilmage des documents cartographiques incluant une description du programme de la Collection nationale de cartes et plans. Cet article est d'ailleurs publié dans ce numéro-ci du Bulletin.

Le rapport de l'enquête effectuée par Joan Winearls sur la situation de la microreproduction des documents cartographiques dans la région de Toronto a été publié dans le Bulletin no 29 (déc. 1978). Les résultats de l'expérience-pilote concernant l'utilisation de la microreproduction appliquée aux cartes météorologigues ont également été publiés dans le Bulletin no 29.

A la suggestion de Joan Winearls, Gilles Langelier a écrit à la firme britannique EP Microform Ltd. au sujet de leur projet de microfilmer sur 35 mm les cartes manuscrites concernant l'Amérique dans les dépôts d'archives britanniques. Une copie de la correspondance échangée est incluse.

Le projet majeur du Comité demeure "Basic maps of Canada and the Provinces on microreproduction." Ce projet a connu peu de développements. Cependant, les membres du Comité espèrent pouvoir faire progresser ce dossier. D'ailleurs les problèmes pratiques d'un tel projet ont été récemment discutés.

Activités prévues pour 1979-1980 - La majorité des efforts du Comité se porteront sur la réalisation du projet "Basic maps of Canada and the Provinces on microreproduction." Une bibliographie sur le microfilmage des documents cartographiques pourrait être compilée et publiée dans le Bulletin.

Gilles Langelier
National Map Collection
Public Archives
Ottawa, Ont.

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May 26, 1978

Mr. Lesley M. Bloomfield
Editor, EP Microform
The EP Group of Companies
Bradford Road East
Ardsley, Wakefield
West Yorkshire WF3 2JN
England

Dear Mr. Bloomfield:

We are in receipt of your circular announcing the publication of the series "American Manuscript Maps in British Depositories" on 35 mm microfilm.

While we applaud a venture such as this and realize that many map archives and libraries in Canada will be interested in purchasing the set, we are wondering if you considered producing these maps on 105 mm microfilm.

The 105 mm is slowly becoming the accepted standard on the North American continent for the reproduction of maps. The larger format allows the map to be filmed in one piece at a reasonable scale reduction without undue loss of resolution. Enlargements of good quality can be produced from the 105 mm negative which is for some maps rather difficult from 35 mm. The readers now on the market for 105 mm allow the whole map to be viewed at one time on the screen at a good scale. The 105 mm negatives can be arranged with cataloguing data right on the fiche and it allows browsing by the user.

Please find enclosed a copy of an article explaining the microfilm programme of the National Map Collection and some samples of 105 mm negative.

As a member of the Microfilming Committee of the Association of Canadian Map Libraries and as the one responsible for the microfilm programme of the National Map Collection, I would appreciate hearing from you about whether you can also make the set available on 105 mm.

Yours sincerely

Gilles Langelier, Head
External and Internal Services Section
National Map Collection

-oOo-

13th June 1978

Mr. Gilles Langelier,
Head, External and Internal Services Section,
National Map Collection,
Public Archives of Canada,
Archives Branch,
395 Wellington,
Ottawa K1A ON3
Canada.

Dear Mr. Langelier,

Thank you very much for your letter of the 26th May 1978 concerning our proposed microfilm publication of American Manuscript Maps in British repositories.

I agree with you that 105 mm microfilm would, indeed, be a more useful format for the reproduction of maps, but I am afraid we are limited in this project by the photographic equipment which is available. For instance, the first collection of maps which is being filmed at the Public Record Office in London must, under their rules, be filmed by their own cameras rather than one of ours and they are, at the moment, unable to provide 105 mm microfilm. This may also be the case with future collections in this series for which we hope to use several other locations. However, I will certainly investigate the possibility of using this larger format in the future and will let you know if I have any success. I appreciate your interest in our publication and am very grateful to you for your suggestion.

I look forward to hearing further from you in the future.

Yours sincerely,

Lesley M Smith
Editor
EP Microform Ltd.
Academic Publishers of Microfilm and Microfiche
East Ardsley, Wakefield WF3 2JN
Yorkshire, England

-oOo-

COMITE SUR LE DROIT D'AUTEUR

Les activités de ce Comité ont été extrêmement réduites en 1978-1979. Le mémoire préparé en janvier 1978 en réponse à la publication Le droit d'auteur au Canada: Recommandations pour la révision de la loi, Consommation et Corporation Canada, a été expédié au ministère. Ce court mémoire a d'ailleurs éte publié dans le Bulletin no 27 (juin 1978).

Une vérification récente auprès d'un des responsables du ministère, Monsieur Hay, nous a permis d'apprendre que 102 mémoires avaient été soumis en réaction au Rapport Keyes et Brunet, qu'un comité inter-ministériel avait été creé dans le but d'étudier ces mémoires et d'incorporer si possible les demandes contenues dans ces mémoires aux recommandations de Keyes et Brunet. Ce comité inter-ministériel s'est penché sur à peu près la moitié des rapports jusqu'à date. Il est supposé poursuivre ses activités jusqu'à décembre 1979.

Une conférence publique sur le droit d'auteur avait été annoncée mais la date de sa tenue n'a pas été précisée. L'étape finale soit la rédaction d'un nouveau texte de loi semble encore éloignée surtout suite à l'annonce des élections fédérales.

Pour l'instant, le responsable se tiendra à l'affût de tout développement dans l'année qui vient.

Gilles Langelier
Collection nationale de cartes
et plans
Ottawa, Ont.

-oOo-

PUBLICATION REPORT

January 1 to December 31, 1978

A. DISTRIBUTION OF PUBLICATIONS

1. Proceedings of the annual conferences

Year	Sold	Complimentary	Balance
1967	1	-	17
1968		Out of Print	
1969		Out of Print	
1970	1		58
1971	1		20
1972	1		74
1973	2		284
1974	2		266
1975	3		278
1976	1		250

2. Bulletins

Number	Sold	Complimentary	Balance
1	4	-	15
2	3	-	12
3	3	-	12
4	3	-	12
5	3	-	12
6	3	-	12
7	3	-	13
8	3	-	13
9	3	-	17
10	3	-	14
11	3	-	0
12	3	-	8
13	4	-	0
14	3	-	9
15	3	-	82
16	3	-	16
17	2	-	32
18	3	-	18
19	3	-	134
20	3	3	115
21	3	3	166
22	3	3	130
23	5	5	179

2. Bulletins (cont'd)

Number	Sold	Complimentary	Balance
24	4	6	30
25	1	14	124
26	-	26	52
27	-	26	17
28	-	20	140

3. Directory of Canadian Map Collections

Sold	Complimentary	Balance
43	2	320

4. University Map Libraries in Canada: A folio of selected plans.

Sold	Complimentary	Balance
9	1	45

5. Facsimile Maps (Publications Office, Ottawa)

Number	Sold	Sponsor	Complimentary	Balance
1	38	-	1	25
2	41	-	-	125
2 (coloured)	3	-	-	0
3	41	-	3	127
3(coloured)	2	-	-	2
4	49	-	3	182
5	38	-	3	160
5(coloured)	4	-	1	0
6	30	-	1	59
7	24	-	1	67

Number	Sold	Sponsor	Complimentary	Balance
7(coloured)	2	-	-	2
8	21	-	1	63
9	17	-	4	75
10	15	-	10	68
10(coloured)	5	-	-	0
11	30	-	7	52
11(coloured)	2	-	-	1
12	35	-	4	60
13	27	-	4	58
14	12	-	1	187
15	10	-	1	89
15(coloured)	7	-	-	0
16	7	-	1	192
16(coloured)	4	-	-	0
17	8	-	1	191
17(coloured)	5	-	-	0
18	5	-	1	194
18(coloured)	5	-	-	0
19	13	-	1	186

B. FINANCIAL STATEMENT

For the period of January 1, 1978 to December 31, 1978

Balance as of January 1, 1978			$ 335.5
Credit: Sale of publications	$5320.19		
Interest from account	15.41		
Foreign Exchange	50.39		
Bank Error	2.00		
Transfer from Treasurer (postage & handling)	19.88		5,407.8
			$5,743.4
Debit. Transfer to Treasurer	$5704.80		5,704.8
Balance as of December 31, 1978			$ 38.6

Outstanding invoices

1977	8	.....	$ 48.00
1978	40	.....	$600.00

Historical Maps Committee

Inventory, London, December 31, 1978

London Office

Facsimile #	Inventory report on September 1, 1978	Maps received since from ACML - Ottawa	Total reported on:		Maps sold, funds transferred to ACML Treas	Maps withdrawn for coloring	Maps given free to sponsors, reviewers, etc.	Total disposed 1.9 - 31.12.78	Inventory on hand January 1, 1979	
1	19	30	49		39			39	10	
2	22	21	43		18	3	1	22	21	
3	29	20	49		35	3	1	39	10	Please note: Colored maps are not included in numbers shown under "maps sold". Once withdrawn, they are handled as a separate publication. See attached report.
4	24	40	64		28		1	29	35	
5	22	50	72		58	5	2	65	7	
6	229		229		25		1	26	203	
7	219		219		24	2	1	27	192	
8	229		229		15		1	16	213	
9	257		257		37		1	38	219	
10	236		236		17	5	2	24	212	
11	244		244		22	3	1	26	218	
12	221		221		54		2	56	165	
13	241		241		42		1	43	198	
14	200		200		27		3	30	170	
15	300		300		245	5	3	253	47	
16	200		200		40	3	3	46	154	
17	200		200		70	5	3	78	122	
18	200		200		50	5	3	58	142	
19	200		200		42		3	45	155	
			3453		888	39	33	960	2493	

Historical Maps Committee
Map inventory, London, Sept.1,78

London Office

Facsimile ##	Inventory reported on May 31, 1978	Received from NMC May 31 - Sept. 1	Withdrawn for hand colouring	Actual totals	Sold, funds trsnsfer'd to ACML treasurer	Samples to sponsors, dealers, reviewers, etc	Total disposed May 31 - Sept. 1	Inventory on hand, September 1, 1978	New maps received since May 31, 1978	Comments
#1	4	+20		24	4	1	5	19		
2	36		-4	32	9	1	10	22		
3	43		-8	35	5	1	6	29		
4	42			42	18		18	24		
5	18	+20	-5	33	11		11	22		
6	265			265	35	1	36	229		
7	264		-8	256	37		37	219		
8	260			260	31		31	229		
9	286			286	29		29	257		
10	286		-8	278	40	2	42	236		
11	280			280	36		36	244		
12	281			281	59	1	60	221		
13	279			279	38		38	241		
14									200	Of the total run of 500 - 100 to sponsor, 200 to T. Nagy
15									300	100 to sponsor, 100 to T.N.
16									200	100 to sponsor, 200 to T.N.
17									200	100 to sponsor, 200 to T.N.
18									200	100 to sponsor, 200 to T.N.
19									200	100 to sponsor, 200 to T.N.
				2351	352	7	359	1992		

ASSOCIATION OF CANADIAN MAP LIBRARIES
TREASURER'S REPORT
January 1 -- December 31, 1978

Balance as of December 31, 1977		$ 3742.01
Revenue		
Membership 1976	$ 7.50	
1977	$ 82.50	
1978	$2336.63	
1979	$ 40.00	
Publications transferred		
January..$ 312.00		
April....$1163.00		
May.....$ 192.50		
August...$ 6.00		
October..$1300.00		
December.$2731.30	$5704.80	
Conference '78	$ 788.11	
Claim on NSF cheque - National Printers	$ 55.21	
Interest on Bank Account	$ 82.79	
U.S. Exchange	$ 73.89	$ 9171.2
		$11913.24
Expenditures		
Incorporation		
Lawyers fees $724.37		
Annual filing fees $ 30.00	$ 754.37	
IFLA Membership	$ 205.00	
Conference '78	$ 100.00	
Conference '79	$ 340.00	
Bulletin # 26, March		
Typing $ 57.00		
Printing $168.00	$ 225.00	
Bulletin # 27, June		
Postage $163.50		
Printing $280.00		
Typing $ 36.00	$ 479.50	
Bulletin # 28, September		
Typing $128.00		
Printing $515.00	$ 643.00	
Facsimiles		
Printing $1175.00		
Negatives $ 44.50		
Map work $ 131.88		
Photo work $ 19.44	$1370.82	
Travel Expenses		
Executive Meeting Nov. 20	$ 80.00	
Typing		
Invoices/Publication Accounts	$ 96.00	
Telephone	$ 11.16	
Office Supplies	$ 8.17	
Bank Debit Memo U.S. Exchange	$ 2.30	
Freight-CN	$ 12.00	$327.32
Balance as of December 31, 1978		$7585.92

Heather Stevens
Treasurer

NOTE FROM THE CONSERVATION COMMITTEE

Two years ago, the Conservation Committee co-ordinated a joint order for acid-free map folders. A number of collections participated and several have requested that a joint order be co-ordinated in 1979.

At this time, the Committee would like an expression of interest to see if a joint order would be worthwhile at this time. The numbers ordered reduce the price per item but if the total number required is small, there is no advantage to pooling orders. It might be noted that the National Map Collection will not be ordering these folders in 1979. The sizes of folders available are: legal size, 30 x 20 in. folded size (fold on 30 in. dimension); 41 x 31 in. folded size (fold on 41 in. dimension). Acid-free tissue paper on 500 ft rolls is also available.

Please contact the Conservation Committee if you may be interested - do not send orders. The address is ACML Conservation Committee, c/o National Map Collection, Public Archives of Canada, 395 Wellington Street, Ottawa K1A ON3. Or telephone Betty Kidd at (613) 992-0468 or Maurice McCauley at (613) 995-1077.

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CONFERENCES AND SEMINARS

NCC NATIONAL CARTOGRAPHIC DAY: Wednesday, May 23, 1979, Royal York Hotel, Toronto. Theme: Education in Cartography.

Programme. 10:00 a.m. Panel presentations - participants: D. R. F. Taylor, Chairman; C. Koeman, Chairman, ICA Commission on Education; M. Coulson, CCA; R. Groot, NCC; D. Jupe, OICC; J. Winearls, ACML. *** Lunch *** 2:00 p.m. - 3:00 p.m. Small group discussion around issues raised by panel presentations. *** Coffee *** 3:30 p.m. Plenary Session.

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AUTO-CARTO IV - CARTOGRAPHY AND COMPUTING APPLICATIONS IN HEALTH AND ENVIRONMENT: Sheraton Inn & International Conference Center, Reston, Virginia, November 4-8, 1979.

The International Symposium on Computer-Assisted Cartography will be sponsored by the American Congress on Surveying and Mapping and the American Society of Photogrammetry with the cooperation of the U. S. Public Health Service and the U. S. Defense Mapping Agency. The symposium will be held at the Sheraton Inn & Conference Center, November 4-8, 1979. This is the fourth of a series of conferences on automation in cartography (AUTO-CARTO IV) initiated by ACSM. Professor Robert T. Aangeenbrug from the Department of Geography at the University of Kansas is the Conference Chairman. The purpose of the meeting is to promote an international exchange of information about basic methodology,

application problems, and software and hardware in the field of computerized cartography. Panels of experts will develop specific themes with the emphasis on the use of operating and on available technology. Specific time will be devoted to panel and audience interchange. Special seminars will be held each day and will consider the topics listed on the registration form below. Exhibits will include both commercial and noncommercial presentations. Information on obtaining exhibit space will be furnished upon request. Tours will be provided by various U. S. Government agencies.

The registration fee for the Symposium will be $80, which covers meeting attendance, transportation for pre-arranged tours of government agencies, two meals, a conference briefing package and one copy of the Symposium Proceedings. Advanced registration is urged. Additional details regarding the Symposium will be furnished in a subsequent flyer. Schedule: Registration at the Sheraton International Conference Center will be on Sunday, November 4, 1979, 2:00-9:00 p.m. and Monday, November 5, 1979, 8:00-9:00 a.m. Daily program: Monday through Thursday, 8:30 a.m.-5:00 p.m.

Registration Form for
AUTO-CARTO IV--CARTOGRAPHY AND COMPUTING: APPLICATIONS IN HEALTH AND ENVIRONMENT
Sheraton Inn & International Conference Center, Reston, Virginia--Nov. 4-8, 1979.

Please return this form to:
James A. Smith
Conference Management Branch, NCHS
Room 2-12, Center Building
3700 East West Highway
Hyattsville, MD 20782
(301) 436-7122

( ) I plan to attend the Symposium
( ) Attached is my check for $80 for registration. (Make checks payable to AUTO-CARTO IV).

Name (please print) _____ Position _____ Affiliation _____

Address _____ State/Country _____ Zip Code _____

Telephone

I would like to register for the following seminars (identify five choices in order of preference):

( ) Data Base, Large Systems
( ) Data Base, Small Systems
( ) Natural Resource Systems
( ) Digital Terrain Models
( ) Statistical Cartography
( ) Image Processing
( ) Health Planning
( ) Epidemiology
( ) Urban Mapping
( ) Utility Systems
( ) Photogrammetry Computer Mapping
( ) Interactive Cartography, Large Systems
( ) Interactive Cartography, Small Systems
( ) "Cadastral" Mapping

AUTO-CARTO IV

CARTOGRAPHY AND COMPUTING: APPLICATIONS IN HEALTH AND ENVIRONMENT

Sheraton Inn & International Conf. Center
11810 Sunrise Valley Dr.
Reston, VA 22091
(703) 620-9000

GUEST ROOM RESERVATION REQUEST
(Please Print)

Name _____
Address _____
City _____ State _____ Zip ___

Reservation must be received no later than 2 weeks prior to arrival date, and rooms will be held only to 6 p.m. unless prepaid.

ARRIVAL DATE _____ HOUR A.M. P.M.
DEPARTURE DATE _____ HOUR A.M. P.M.
( )Single-$38 ( )Double-$48 ( )Twin-$48

3RD INTERNATIONAL REUNION FOR THE HISTORY OF NAUTICAL SCIENCE AND HYDROGRAPHY: 500 Years of Nautical Science, 1400 - 1900. Monday 24th - Friday 28th September 1979. National Maritime Museum, Greenwich, England.

The National Maritime Museum, Greenwich, is organising this Reunion on behalf of the Founding Council of the International Association for the History of Nautical Science and Hydrography. There will be a plenary session of the Association during the Reunion, at which it is planned to adopt a Constitution and elect the Council and Officers. The official languages of the Reunion will be English, French and Portuguese. Simultaneous translations will not be provided. All participants will be provided on registration with summaries of all papers in English and in the original language. The opening address will be given by Professor Luis de Albuquerque (Portugal), Founding President of the Association, and concluding remarks by Mr. Basil Greenhill, CMG, FSA, Director, National Maritime Museum. Main papers presented by invited speakers will be followed by shorter contributory papers and discussion.

Session 1: The Influence of Weapons on Ship Design (Monday 24th) - Invited speakers: (1) Mr. William A. Baker (U.S.A.), review paper; (2) not yet confirmed.

Session 2: Navigation and Hydrography (Tuesday 25th) - Invited speakers: (1) Captain Teixeira da Mota (Portugal), review paper; (2) Captain Max Justo Guedes (Brazil), A study of some nautical instruments (including two astrolabes) recovered from the *Sacramento* shipwreck (c. 1668) at Bahia; (3) Dr. Ir. C. Koeman (Netherlands), Ship chandlers and the chart trade in the 16th and 17th centuries.

(Wednesday 26th - free day, optional visits.)

Session 3: The Wooden Ship and Sail (Thursday 27th) - Invited speakers: (1) Dr. Alan P. McGowan (U.K.), review paper; (2) Mr. Lars-Ake Kvarning (Sweden), The warship *Wasa* - key to a lost world; (3) Mr. Jean Boudriot (France), The evolution of the frigate in the French Navy 1650-1850.

Session 4: Iron, Steel and Steam (Friday 28th) - Invited speakers: (1) Dr. Ewan Corlett (U.K.), review paper; (2) Dr. Ing. J. W. Doerffer (Poland), Impact of application of iron and steel as structural material in ships upon the development of science and technology in shipbuilding in the 19th century; (3) Dr. Jan Margarethus Dirkzwager (Netherlands), The contribution of Dr Bruno Joannes Tideman (1834-1883) to the development of modern shipbuilding.

The provisional social programme includes guided tours of the Museum; reception with buffet for the opening of a special exhibition, "The Atlantic Neptune - the Charting of Britain's North American Empire 1759-1783; escorted visit by coach to Windsor and Hampton Court (£10 - limited to 50 participants); visit to Portsmouth to see HMS *Victory* and RN Museum (£12), or a visit to Taunton to the Department of the Hydrographer of the Navy to see how a modern chart is made (£18 - limited to 20); Reunion Dinner on board HQS *Wellington*, moored in the River Thames at Victoria Embankment, London (£12 - numbers limited).

The conference fees are £65 (£75 after March 31, 1979) for participating members and £35 for accompanying persons. For more details on the Reunion,

accommodation, travel, etc., and for enrolment form, write to the Conference Officer, The 3rd International Reunion for the History of Nautical Science and Hydrography, National Maritime Museum, Greenwich, London, SE10 9NF, England.

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1980 MEETING OF ACML

Ronald Whistance-Smith, Map Curator, The University of Alberta, proposes that the 1980 meeting be held in Edmonton (tentatively June 26-28) and suggests the following program:

Thursday, June 26	9:00 - 12:00	Historical Cartography of the Prairie Provinces
	1:30 - 4:00	Government Mapping in Saskatchewan and Manitoba
Friday, June 27	9:00 - 12:00	Historical Cartography II
	1:30 - 4:00	Government Mapping in Alberta
Saturday, June 28	9:00 - 12:00	Use of Remote Sensing in Mapping Federal Government Mapping
	1:30 - 4:00	Maps in Libraries Annual Meeting

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4TH NEW ZEALAND MAPKEEPERS CIRCLE SEMINAR HELD FEBRUARY 8-9, 1979

Phil Barton, Map Librarian, Alexander Turnbull Library, Wellington, recently attended the 4th New Zealand Mapkeepers Circle seminar held at the University of Canterbury, Christchurch, February 8-9, 1979. Nineteen mapkeepers, geographers and others attended the seminar, which was organised by the Department of Extension Studies. The following papers were given: The charting of Banks Peninsula prior to 1851, by Dr. P.R. Maling; Provincial map making - a study of the activities of the Wellington Provincial Survey Department, by B.R. Patterson; Local authority maps and plans, by I.B. White; Geological and mapping surveys in the Antarctic, by R.H. Findlay; Geomorphological mapping including the recent development of the "hazard" map, by Professor J.M. Soons; The use of computers in map libraries, by Dr. P.C. Forer; Cartographic archives - the New Zealand situation, by B.R. Patterson.

Some members of the seminar felt that the programme should have been more slanted towards practical mapkeeping but this lack in the programme was made up by some members in the pub afterwards. The university campus is a pleasant one, the food good especially the lunches in the students' union which rated four stars!

The next seminar will be held at the University of Auckland in February 1980.

-oOo-

12 March, 1979

"AN INTRODUCTION TO CARTO-BIBLIOGRAPHICAL DESCRIPTION" is the title of a course to be given by Dr. Coolie Verner at the University of Toronto from May 16-19, 1979. This is the first course in North America on analytical carto-bibliography and will provide an introduction to the procedures employed in research and to the rules for preparing detailed descriptions of early printed maps. This will include a study of the elements that must be included in a description as well as the analysis of changes to a map plate during its use. These factors will be applied to maps printed from woodblocks, copperplates and lithography. Participants will also spend time studying, analyzing and describing specific maps. The cost of the course is $150. and the size of the class is limited to 25 participants. Preference will be given to applicants already working in the field.

For further information, please contact:
The School of Continuing Studies
University of Toronto
158 St. George Street
Toronto, Ontario
M5S 2V8
(416) 978-2400

REF.
Joan Winearls, Map Librarian, University of Toronto
(416) 978-3372

GEOGRAPHY and MAP LIBRARIES SECTION, IFLA: Newsletter No. 8

Dear Colleagues,

I. 1. The IFLA Meeting at Štrbské Pleso, Czechoslovakia, 1978 - The Standing Committee now comprises 10 members and 4 observers as follows: H.J. Aschenborn, State Library, Pretoria, South Africa (observer); Dr. Ulla Ehrensvärd, Kungliga Biblioteket, Stockholm, Sweden; H. Günzel, University Library, Marburg, Bundesrepublik Deutschland; I.R. Kejlbo, Det Køngelige Bibliotek, Copenhagen, Denmark; Anna V. Kozlova, Lenin Library, Moscow, USSR; Leena Miekkevaara, Helsinki University Library, Helsinki, Finland; Mary Murphy, Special Libraries Association, Washington, DC, USA (observer); Mireille Pastoureau, Bibliothèque Nationale, Paris, France (observer); W.C. Roselle, University of Wisconsin, Milwaukee, USA; H.L.P. Stibbe, Public Archives of Canada, Ottawa, Canada; Elena Santiago, Biblioteca Nacional, Madrid, Spain (observer); E.H. van de Waal, Geografisch Instituut, Rijksuniversiteit, Utrecht, Netherlands (Secretary); Helen Wallis, Map Library, British Library, London, UK (Chairman); Lothar Zögner, Staatsbibliothek Preussischer Kulturbesitz, W. Berlin, FRG. N.B. W.W. Ristow retired in April 1978 following his retirement from the office of Chief, Geography and Maps Division, Library of Congress. The Standing Committee at present has a limit of 12 members.

2. Programme at the 44th IFLA Conference, Štrbské Pleso, 27 August to 2 September 1978 - The Open Meetings of the Section at Štrbské Pleso were as follows: On 28 August 1978 Session I comprised a symposium on cartographic documentation in the international field, with special attention to Universal Availability of Publications (UAP), the general theme of the 44th IFLA Conference. The main speaker was E.H. van de Waal (Netherlands). His paper, "Documentational aspects of cartographic materials" will be published in INSPEL. On 30 August 1978 Session II was a discussion meeting on the progress of the working groups in the framework of the Medium Term Programme. These meetings were attended by 17 and 12 persons respectively. Two meetings of the Standing Committee also were held.

II. Project Reports and Programmes

1. World Directory of Map Collections - It was reported that the first edition of the World Directory of Map Collections (1976) was almost sold out. The Standing Committee therefore agreed that work on the second edition should begin immediately in preparation for publication in 1980-1981. For help in distribution of forms, associations of map librarians would be approached as well as national libraries and other institutions.

Working group members are as follows: John Wolter (Washington, DC), Chairman; David Carrington (Washington, DC), Secretary; H. Günzel (Marburg); M. Pastoureau (Paris); L. Miekkevaara (Helsinki).

2. Training of Map Librarians - Future programme was approved as follows: (i) A manual for map librarians in typescript is to be completed by August 1980 for use in a seminar (June 1981), then revised for publication. The SC suggests that a team of three to five contributors should compile the manual and take part as instructors in the seminar (see ii below). If possible the manual should be prepared in both English and French.

(ii) A seminar is to be held on the training of map librarians with special

reference to developing countries. The SC agreed in September 1978 that first choice for the location of this seminar should be Turkey. For various reasons it now proposes that Utrecht should be chosen as the most suitable place. After receiving a detailed proposal and an official letter from the Chairman, Dr. van Wesemael will enquire about the possibility of obtaining a UNESCO subsidy and a contribution from the Participation Programme of UNESCO. The Secretary will contact the Cartographic Department of UNESCO and the Directoraat Technische Hulp. The SC suggests a fortnight's seminar (10 working days) for 25 persons. In addition to the 3-5 organisers, other members of the G & ML Section would be expected to take an active part in this Seminar.

A report in The Globe, No. 9 (1978), "Education for Map Librarians" by H.F. Cornelius, on the training of map librarians should also be noted.

Working group members are as follows: E.H. van de Waal, Helen Wallis, Lothar Zögner. A special Committee will be convened to prepare the manual and help with the seminar. Invitations to serve will be sent out in the near future.

3. Glossary of Cartographic Terms for Map Libraries - Ms A.V. Kozlova (Chairman of the Russian Working Group) reported that a Russian text was in preparation, comprising 385 terms in three sections: (a) general concepts of cartographic science, (b) various kinds of cartographic works, and (c) map elements. Two alphabetical lists in Russian and English would be ready by December 1978. Work on definitions would follow in 1979 and the final version of the vocabulary would be completed by 1979-1980. It was agreed, firstly, that the lists would be sent to the Section Secretary by December 1978; secondly, that liaison should be established with the editors of the Multilingual Dictionary of Technical Terms, published for the International Cartographic Association and now being revised for a secondary edition. As the Geography and Map Libraries Section Glossary would be published (it was hoped) in four languages, English, Russian, French and German, language working parties would be set up in due course.

A working group has not yet been formally set up. Anyone interested in serving on a working group which would deal with the preparation of the glossary in English, French and German should write to the Secretary.

4. UNIMARC - H.L.P. Stibbe (Canada) as Chairman of the ISBD(CM) Working Group reported that the International Standard Bibliographic Description: (Cartographic Materials) had been published in the autumn of 1977. A French translation was being prepared by the Bibliothèque Nationale for publication in 1979. A Russian translation was also planned. As a sequel, the ISBD(CM) Working Group through a sub-committee comprising H.L.P. Stibbe, David Carrington (Washington, DC) and Hans van de Waal (Utrecht) had prepared a manual on the map content designators in UNIMARC, to be published by the UBC Office as a supplement to UNIMARC. Cartographic examples and a manual for use were also in preparation.

5. Liaison activities - The need for liaison activities between IFLA and appropriate cartographic and other organizations was the theme of E.H. van de Waal's professional paper presented on 28 August 1978. Van de Waal reported on various approaches made or to be made, as follows: (a) UNESCO-UNISIST: had now agreed not to include cartographic materials in its programme. Further liaison would ensure the compatibility of the UNISIST Manual. (b) International Cartographic Association: E.H. van de Waal reported that he had

presented a paper at the Maryland meeting of the ICA in August 1978 on the importance of liaison between cartographers and map users, including map librarians. His proposals had been received with great interest, and the matter had been put on the agenda of the ICA Executive Committee. (c) International Geographical Union: The work of the Commission on the History of Geographical Thought (Chairman, Philippe Pinchmel) in preparing bio-bibliographies was considered to be a project of interest to map librarians. (d) Associations of Map Librarians: The Chairman had received approaches from various associations of map librarians. It has been agreed that news be exchanged on a regular basis, and it was hoped that some of the associations would take up membership in IFLA. (e) The International Conference of Archivists and F.I.D.: Liaison here would help to deal with the problem that maps are preserved in archives, as well as libraries, but their curatorship in this setting has received less attention. (f) Other bodies for consideration are the Photogrammetric Association, the Remote Sensing Society and the International Geological Society. It was agreed that the Secretary would act as coordinator of these liaison activities, and information would be included in the Newsletter, which would be circulated on a wider basis.

6. Proposed Working Group on the Physical Planning of Map Libraries - W.C. Roselle (Milwaukee) has accepted charge of a feasibility study on the setting-up of a working group on the physical planning of map libraries and will report at Copenhagen, 1979.

7. Festschrift for W.W. Ristow - All the material for the Festschrift for W.W. Ristow has now been received by the editors, Helen Wallis (London) and Lothar Zögner (West Berlin). Publication will take place in 1979. It was hoped that an official presentation could be arranged in Copenhagen, but Dr. and Mrs. Ristow are not planning to include IFLA in their itinerary. We have therefore suggested that the presentation be made at the International Conference on the History of Cartography at Berlin in September, 1979.

III. Programme for Copenhagen, 1979

The following topics have been chosen as themes for the Geography and Map Libraries Section at the 45th IFLA Meeting to be held at Copenhagen from 27 August to 1 September 1979: (a) Moving a map library, by Mr. Roselle; (b) Planning a new map library building, by Mr. Carrington. The topic "Library legislation and copyright in relation to map libraries," chosen as appropriate to the general theme, "Librarians and the Law," may be considered as a contribution to a session of the Special Libraries Division.

IV. Conference on Special Librarianship

A World-wide Conference on Special Librarianship, in which the IFLA Special Libraries Division and the Japan Special Libraries Association would meet with Special Libraries Association of America at its 70th Annual Conference, will take place from 9 to 14 June 1979, at Honolulu, Hawaii. The Special Libraries Division of IFLA will be holding a session at this meeting, as well as participating in the conference as a whole. The proceedings will also include a cartographic session to be held on the theme, "Pacific cartography and map libraries of the Pacific region."

V. Published Reports

INSPEL - Official organ of the Division for Special Libraries of the International Federation of Library Associations, INSPEL, Vol. 13, Nos. 1/2(1978) includes a report on the G & ML Section's meetings at Brussels, 1977 (pp. 20-33) and L. Zögner's paper "Work of a national map librarian" (pp. 40-45). The report and papers presented at Štrbské Pleso are being sent in for publication in the forthcoming numbers of INSPEL.

Bulletin of the Association of Canadian Map Libraries, No. 28, September 1978, includes Newsletter No. 7.

Reports and Minutes have been sent in for inclusion in the IFLA Annual, and a general report on the Section is being prepared for the IFLA Journal, which will devote half its next number to the Special Libraries Division.

VI. Special Libraries Division of IFLA

(a) Report on Štrbské Pleso: Helen Wallis and E. Hans van de Waal as Chairman and Secretary of the G & ML Section are members of the Co-ordinating Board of the Special Libraries Division of IFLA, and Helen Wallis is Secretary of the Division. The Chairman is D.A. Clarke (UK) and the Treasurer is Ms. M.L. Bruzelius (Copenhagen). The Sections and Round Tables of the Division are as follows: Administrative Libraries Section, Social Science Libraries Section, Science and Technology Libraries Section, Art Librarians Round Table, Music Librarians Round Table, Biological and Medical Sciences Libraries Section, Astronomical and Geophysical Librarians Round Table, and Round Table - Librarians serving Libraries for Judaica and Hebraica. The Open Business Meeting of the Division held on 30 August 1978 included reports from all Sections and Round Tables. Progress reports were also presented by the Chairman at the meetings of the Co-ordinating Board I and II.

(b) Derek Clarke as Chairman represents the SLD on the Professional Board.

(c) The SLD programme at Copenhagen will include an open session organized jointly with the Section on Official Publications, theme: Public access to official information.

VII. Meeting of Officers, November 1978

A special meeting of officers held at Utrecht on 22 November 1978 was attended by Helen Wallis (Chairman), E.H. van de Waal (Secretary) and Lothar Zögner (Treasurer), together with Dr. A.L. van Wesemael, Secretary of the Professional Board. Arrangements for the Seminar were a major topic of discussion. The decisions taken at this meeting are incorporated in this Newsletter. A report is being circulated to members of the SC, with the Newsletter.

VIII. We announce with deepest regret the death of Ann-Mari Mickwitz, on 6 December 1978. Ann-Mari was librarian of the Nordenskiöld Collection at Helsinki University Library until her retirement in 1976, and since then was occupied part-time on the preparation of the catalogue of the Collection, undertaken in collaboration with Leena Miekkevaara. She was a regular attendant of the Geography and Map Libraries Section at IFLA meetings and will be very much missed.

Another sad loss has to be reported, the death on 10 November 1978 of Frank McKenna, Executive Director, Special Libraries Association, and Chairman of the Science and Technology Libraries Section. Untiring in his energies, he was a vital force in the development of the Special Libraries Division over the last 10 years or more and it is difficult to imagine the Division without him. At the time of his death he was at the height of his activities in preparation for the meeting in Hawaii in June 1979.

IX. Members of the Geography and Map Libraries Section and others are invited to send news and comment to the Chairman or the Secretary. It is hoped that by means of this Newsletter we shall keep in touch with a wide circle of colleagues. In particular, the Secretary would be pleased to receive comments and advice concerning the programme for the Seminar. Tentative applications for enlistment both from students and persons willing to co-operate in the instruction are invited. Applications should include a statement whether costs can be met by the individual or by his or her library. We shall try to obtain funds so that we can meet the expenses of several students from developing countries.

The Chairman and Secretary end by sending best wishes to you all for 1979, and hope to see a large number of you at Copenhagen.

Helen Wallis, Chairman
E. Hans van de Waal, Secretary
January 1979

NB For your Diary

9-14 June 1979: World-wide Conference on Special Libraries (Special Libraries Association 70th Annual Conference, with the participation of Japan Special Libraries Association and the IFLA Special Libraries Division), Hilton Hawaiian Village and the Ilikai, Honolulu, Hawaii.

24-31 August 1979: 45th IFLA Conference, Copenhagen, Denmark. 1980: Manila (IFLA Council). 1981: Leipzig (IFLA Council and Conference). 1982: Montreal. 1983: Munich.

Also, the Chairman and Secretary regret that they will not be able to attend the Honolulu conference in June 1979. (The Chairman will be attending the Drake Conference in California - a prior commitment - which is fixed for exactly the same time.) They send their very best wishes and will be preparing a special Newsletter for the meeting. It is hoped that American members of the SC may be able to attend and can represent the G & ML Section. Dr. W.C. Roselle reports that he hopes to do so.

H.W. and E.H.vd W.

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PUBLICATIONS

BIBLIOGRAPHIE CARTOGRAPHIQUE INTERNATIONALE

The National Map Collection learned in mid-January that the Bibliographie cartographique internationale will no longer be published.

This map bibliography had been published in Paris since 1949 by the Centre national de la recherche scientifique (CNRS) in co-operation with UNESCO and the International Geographical Union. Every year the publication provided a list of current maps published in the world; some 30 countries contributed to the bibliography.

It had been known for some time that the publishers were facing problems: lack of money and staff, need to update data processing methods, difficulty in switching to ISBD cataloguing rules. The publication was 3 years late; the last volume published, with information for 1974, appeared in 1976.

There is a possibility that map entries will be included in the Bibliographie géographique internationale in the future. However, this is perhaps not the proper vehicle for cartographic publications. Comments and rumours from map archivists and map librarians suggest that some countries involved in map publication prefer to compile and distribute their own lists. Automated cataloguing and list production would make this exchange of information relatively easy.

The National Map Collection has not as yet decided in what form its annual list of current Canadian maps will appear.

Louis Cardinal
National Map Collection
Public Archives
Ottawa, Ont.

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HOW TO OBTAIN U.S. CENTRAL INTELLIGENCE AGENCY PUBLICATIONS AND MAPS AVAILABLE TO THE PUBLIC

To obtain individual publications or tailored services: National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161; telephone: NTIS Order Desk 703-557-4650. There is a catalogue available. Cost varies with size and number of pages (as of November 1978).

Page Range	Ad Hoc or Demand	Standing Order Category
1-25	$ 4.75	$ 3.80
26-75	6.25	5.00
76-125	9.00	7.20
126-175	12.50	10.00
All Microfiche	3.00	

Subscription and Deposit Account service is offered. Payment may be by American Express, check or money order. Rush handling is available.

To subscribe to all CIA publications: Document Expediting Project (DOCEX), Exchange and Gifts Division, Library of Congress, Washington, D.C. 20540; telephone: 202-426-5650. Annual fee is $225 for subscription service.

Also check your local library: CIA publications are on catalog cards at the Library of Congress and are distributed to Federal Depository Libraries. Hard copy and microfilm service may also be purchased from the Library of Congress' Photoduplication Service, Washington, D.C. 20540; telephone: 202-426-5253.

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NEW ALBERTA MAPS

(Alberta Oil Sands) Vegetation, parts of NTS 74D & E. Scale: 1:50 000. Edmonton. Alberta Oil Sands Environment Research Program (AOSERP). 1978. 9 sheets. Cat. No. D-8. Overlay information prepared by Intera Environmental Consultants. Distributed by Alberta Energy and Natural Resources.

(Alberta Oil Sands) Surficial Geology, parts of NTS 74D & E. Scale: 1:50 000. Edmonton. Alberta Oil Sands Environmental Research Program (AOSERP). 1978. 9 sheets. Cat. No. C-5/13. Overlay information prepared by Intera Environmental Consultants. Distributed by Alberta Energy and Natural Resources.

(Alberta Oil Sands) Soil Inventory, parts of 74D & E. Scale: 1:50 000. Edmonton. Alberta Oil Sands Environmental Research Program (AOSERP). 1978. 16 sheets. Cat. No. J-6. Distributed by Alberta Energy and Natural Resources.

Candidate Natural Areas in Alberta. Scale: ca. 1:1 000 000. Calgary. Acquitaine Company of Canada. 1976. Cat. No. G-75. Prepared in cooperation with Alberta Energy and Natural Resources and Alberta Ecological Survey. Accompanied by keyed list with locations; 9 p.

Hydrogeological map, Medicine Hat, Alberta. NTS 72L. Scale: 1:250 000. Edmonton. Alberta Research Council. 1978. 2 copies. Cat. No. C-5/13 - 72L.

Hydrogeological map, Grande Prairie area, Alberta. NTS 83M. Scale: 1:250 000. Edmonton. Alberta Research Council. 1978. 2 copies. Cat. No. C-5/13 - 83M.

Hydrogeological map, Calgary - Golden, Alberta, NTS 82 N-O. Scale: 1:250 000. Edmonton. Alberta Research Council. 1978. 2 copies. Cat. No. C-5/13 - 82 N-O.

Alberta Land Inventory: Sport Fish Capability. Scale: 1:250 000. Edmonton. Alberta Environment. 1979. 22 sheets, b & w. Cat. No. G-77. For sale by Alberta Energy and Natural Resources Distribution Services.

Alberta Land Inventory: land capabilities for wildlife - waterfowl. Scale: 1:250 000. Edmonton. Alberta Environment. 1979. 13 sheets, b & w. Cat. No. G-78. For sale by Alberta Energy and Natural Resources Distribution Services.

Alberta Land Inventory: land capabilities for wildlife - ungulates. Scale: 1:250 000. Edmonton. Alberta Environment. 1979. 13 sheets, b & w. Cat. No. G-79. For sale by Alberta Energy and Natural Resources Distribution Services.

Alberta Municipalities, 1977. Scale: 1:2 500 000. Edmonton. Alberta Transportation. 1977. Cat. No. F-15.

Alberta, Provincial Electoral Divisions, 1978. Scale: 1:2 500 000. Edmonton. Alberta Transportation. 1978. Cat. No. F-27.

Alberta 1976 Population by enumeration areas within Federal Electoral Districts. Scale: 1:750 000. Edmonton. Alberta Transportation. 1978. 2 sheets. Cat. No. E-11.

Alberta, 1976 population by townships and incorporated places. Scale: 1:750 000. Edmonton. Alberta Transportation. 1978. 2 sheets. Cat. No. E-10.

Castle River area: Biophysical analysis and evaluation of capability. Scale: 1:100 000. Edmonton. Alberta Energy and Natural Resources, Resource Evaluation and Planning District. February 1978. 3 sheets. Cat. No. G-54, Area 36, accompanies ENR Report 64.

Little Smoky area: Biophysical analysis and evaluation of capability. Scale: 1:126 720 and 1:250 000. Edmonton. Alberta Energy and Natural Resources. November 1977. 5 sheets. Cat. No. G-54, area 28. Accompanies ENR Report 60.

Lakeland area: Biophysical analysis and evaluation of capability. Scale: 1:100 000. Edmonton. Alberta Energy and Natural Resources. December 1977. 3 sheets. Cat. No. G-54, area 37. Accompanies ENR Report 63.

Cold Lake: Biophysical analysis and evaluation capability. Scale: 1:126 720 and 1:250 000. Edmonton. Alberta Energy and Natural Resources. September 1977. 5 sheets. Cat. No. G-54, area 29. Accompanies ENR Report 59.

Cold Lake oil sands subregional study. Scale: 1:2 500 000 and 1:1 300 000. Edmonton. Alberta Municipal Affairs. 1978. 16 sheets. Cat. No. G-83.

Municipal District of Spirit River No. 133, Alberta. Scale: 1:63 360. (Spirit River.) M.P. of Spirit River. 1978. Cat. No. G-15. Prepared by Stewart, Weir, Stewart, Watson, Heinrichs & Dixon.

Sturgeon River Basin study. Scale: mostly 1:250 000. Edmonton. Alberta Environment. 1976. 36 sheets. Cat. No. G-85.

Edmonton and vicinity. Scale: 1:34 000. Toronto. Rolph-McNally. 1978. Cat. No. A-125. C. Melnyk Drafting Service, Edmonton.

Edmonton 1977 (traffic flow map). Scale: varies. Edmonton. Planning Department, Transportation Planning Branch. 1978. 3 sheets. Cat. No. P-2, P-10, P-11. Titles: Downtown pedestrian flow; Traffic flow; Transit passenger flow.

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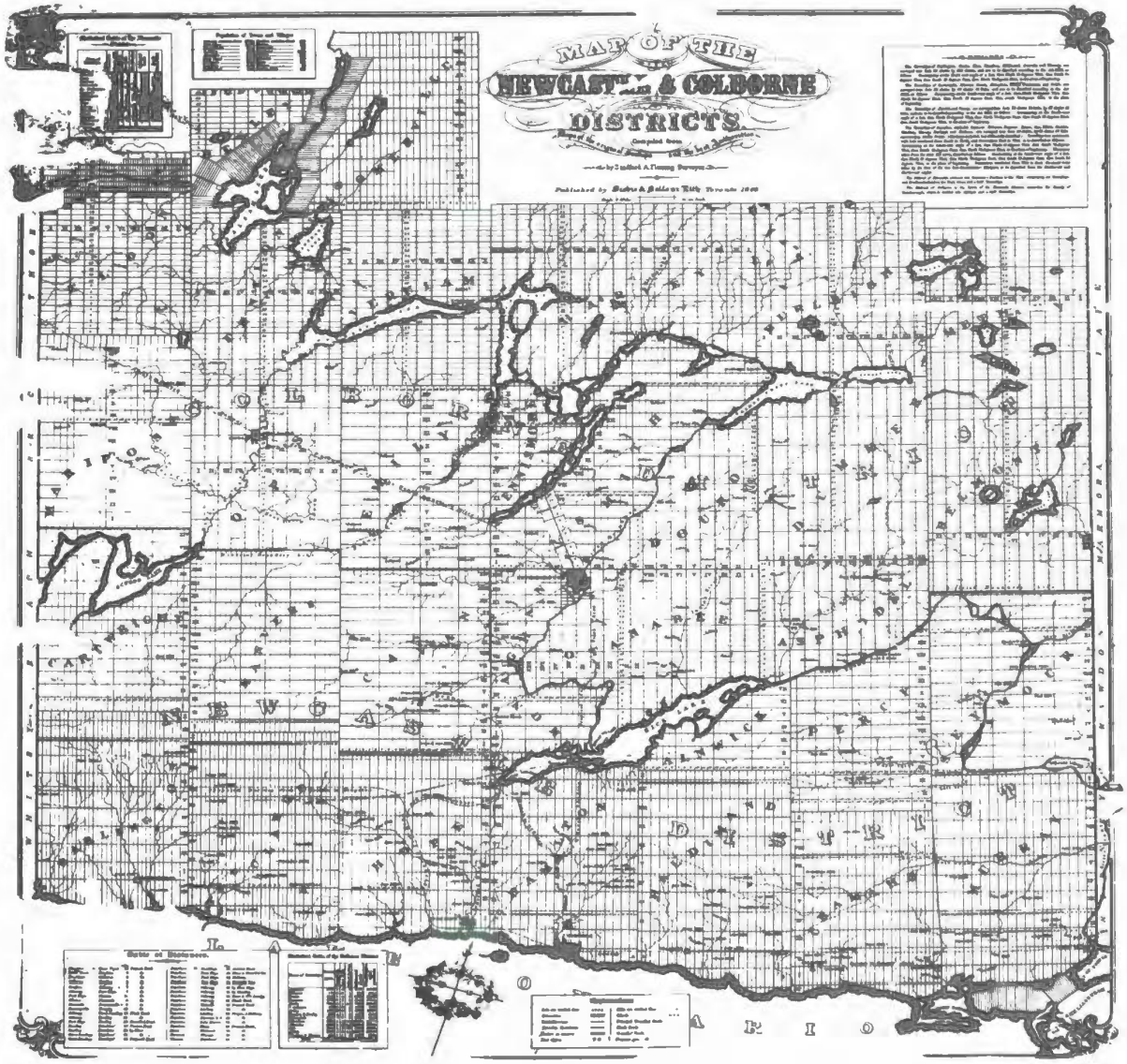
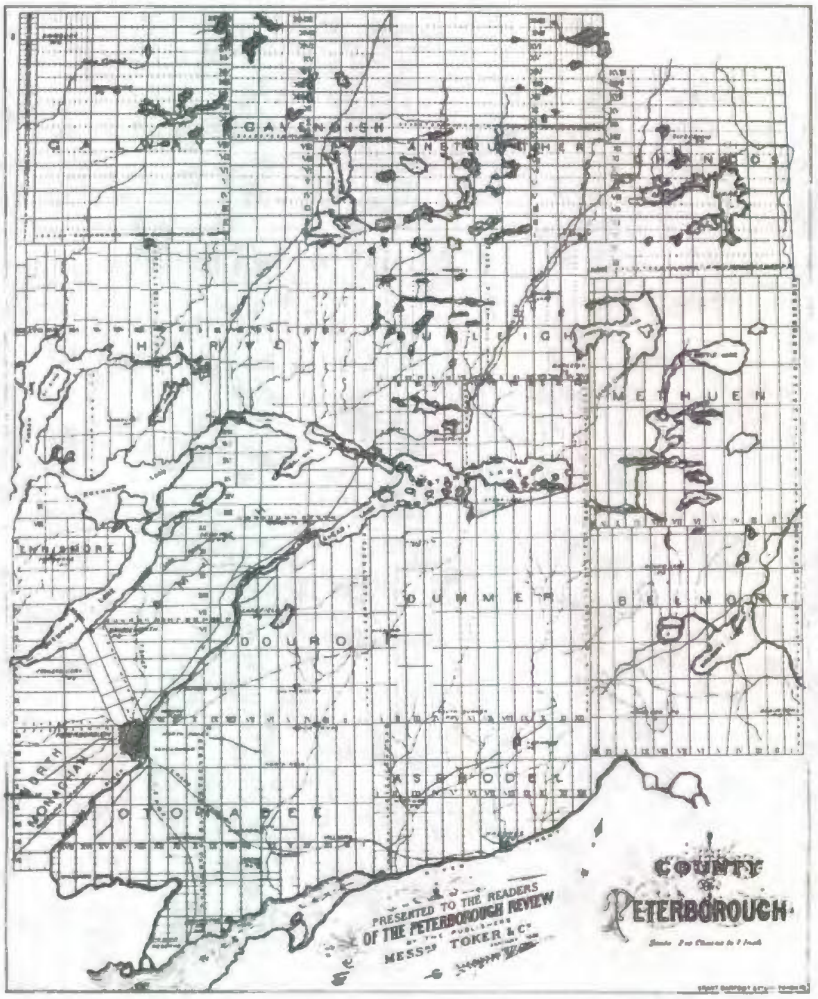
PETERBOROUGH AREA FACSIMILE MAPS BY CANADIAN HERITAGE PUBLICATIONS

Two early maps of the Peterborough, Ontario, area - the rare 1848 map of the Newcastle & Colborne Districts, and an 1882 map of the County of Peterborough - have recently been prepared in facsimile editions of 500 copies each. The numbered facsimiles, printed in brown ink on buff stock (18 in. x 24 in.), may be ordered from Canadian Heritage Publications, P.O. Box 3794, Station C, Ottawa, Ont., Canada K1Y 4J8 at $2.00/copy plus Ontario sales tax (7%) and $0.50 postage and handling.

Both facsimiles have been prepared in the format adopted by the Association of Canadian Map Libraries, including English and French captions providing information on the original maps. Although the 1848 map of the Newcastle & Colborne Districts was reproduced in part by the Peterborough Historical Society in



The 1848 Map of the Newcastle & Colborne Districts reduced from the 18 in. x 24 in. stock size of the facsimile edition by Canadian Heritage Publications.



The 1882 Map of Peterborough County reduced from the 18 in. x 24 in. stock size of the facsimile edition by Canadian Heritage Publications.

compiling the Peterborough Atlas of 1825-1875, a whole band of western townships was omitted and much detail was obscured by reproduction of the varnish coating. The CHP edition, prepared from the same original 1848 map at the PAC, constitutes the first complete facsimile of the Newcastle & Colborne District map whose dilapidated condition necessitated some minor reconstruction of appended 1842 census information. The few minor breaks along the western boundary were left unattended, but the heavy varnish coating was screened out during lithographic reproduction to provide a facsimile with clean, legible cartographical detail. A commentary with the map describes the manner in which each township was surveyed, identifies the counties into which each district was divided and gives the respective number of townships in each county.

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CHRONICLE PUBLICATION DATES AND SUBSCRIPTION RATES

Dates - The following publication dates have been established: January 30th, April 30th, July 30th, and October 30th. Information and cartographic news items should be received, at the latest, by the 15th of the publication months. Important items may be accommodated later, as long as I have ample prior notification indicating a reasonable date the material will arive.

Rates - Individuals and institutions (libraries, university departments, government offices, etc.) who wish to receive Chronicle but are not members of NCC's constituent organizations can subscribe to the publication. Subscription rates are $6.00/year, based on the calendar year (January to January). Anyone wishing to subscribe should forward a cheque, in Canadian funds and payable to 'Carleton University', to the following address:

Neil G. Grant
Department of Geography
Carleton University
Ottawa, Ont.
Canada K1S 5B6

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REVISED INDEX - BOGGS-LEWIS CLASSIFICATION

In the Map and Airphoto (Mackintosh-Corry Hall) Library we have just completed a revised index (area and thematic) to the Boggs-Lewis Classification, which we use for our maps. The index is a 30-page (approximately) two-sided one, arranged so that the area (topographic) and thematic listings may be opened side-by-side to find the two parts of the desired number. Terminology both geographic and topical has been brought up to date from the 1945 SLA manual.

If libraries which use the Boggs-Lewis Classification are interested and would like to send us 'letters of intent' or even firm orders, we'd consider printing a quantity of indexes by offset. Probable cost would be under $5. At the moment we have prepared copies only for our own use; and unless there was sufficient interest (say 20 requests or more) we would hesitate to produce photocopies, since the convenience of the double plastic binder and firm back are particular features of the item.

D.A. Redmond
Geology/Geography Librarian
Douglas Library
Queen's University
Kingston, Ont.

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CALGARY'S FIRST CITY PLAN

During the first decade of the 20th century, the City of Calgary grew rapidly from 4 000 in 1900 to 44 000 in 1911, and it was felt that this growth could

only continue. Many Calgarians wanted this growth to be orderly and felt that a planning scheme should be developed. City Planning Departments were not very common at that time and consulting professionals were available to undertake these tasks.

At that time, the Canadian Commission of Conservation invited Thomas Mawson from England to give a lecture in Ottawa on his concepts of city planning, which were firmly rooted in the current garden city movement. A lecture tour across Canada resulted and Mawson was also asked to undertake planning schemes in various parts of Canada (e.g., Coal Harbour in Vancouver's Stanley Park, Wascana Centre in Regina, and Dalhousie University in Halifax).

Calgary was the only Canadian city to invite Mawson to prepare a comprehensive planning scheme. Mawson's preliminary report was presented to the City in 1914, but the earlier growth euphoria was quickly evaporating as the European disaster's impact was being felt in western Canada. Mawson's grand vision of the future Calgary would not be followed as Calgary's real estate depression did not fully end until the 1950's and new concepts of city planning were in vogue.

This part of Calgary's history recently returned to local headlines when the original maps and drawings accompanying the 1914 presentation were found in a garage. They had been mounted on wall board and this wall board had been used to line the inside walls of a garage. Through the years they had become water-stained and covered in fungus. The Canadian Conservation Institute offered their assistance to restore the maps and drawings. They were recently the subject of a public display to which David Mawson, Thomas Mawson's grandson, was invited, and a series of talks on city planning occurred.

To commemorate the return of these maps and drawings to public view, the City published the following book, which includes many colour illustrations of the maps and drawings from the plan: Calgary, Many Years Hence, by Joyce Morrow. (Available from Fort Calgary Interpretive Centre, 750-9th Ave. S.E., Calgary, Alta. $4.95.)

Also available is a microfilm copy of Thomas Mawson's original report: Calgary, a preliminary scheme for controlling the economic growth of the City. (Available from City Planning Library & Resource Centre, Box 2100, Calgary, Alta. T2P 2M5. $2.00.)

Robert Batchelder
University of Calgary
Calgary, Alta.

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DOS DEPOSITORIES CANCELLED

The following letter was received in December 1978. It is too bad that this has happened but it is to be hoped that many of the depositories will find a place in their budgets to continue the acquisition of these sheets. It would be useful at this time if the ACML were to poll the map libraries in Canada to find out which centres plan to continue the acquisition of new DOS sheets.

14 September 1978

Dear _____,

With this complimentary distribution of DOS maps (No. 2 1978-79) we regret that we have to inform you that increasing costs, not least of postal charges, have forced us to reconsider our policy with regard to the complimentary distribution of maps.

The Directorate is a part of the British Government's Ministry of Overseas Development which is responsible for providing British aid to the lesser developed countries of the world. In this context you will understand that it is not possible to justify expenditure on the complimentary issue of maps to institutions in the more affluent countries. I regret, therefore, that this complimentary issue will be the last that we shall be able to send to your library.

Should you wish to obtain copies of future maps published by the Directorate, they can be purchased through the survey departments in the respective countries or through the Sales Agents, Edward Stanford Ltd, in London. Full details are given in the footnotes of each map. We should find it helpful if you could let us know if you decide to place a regular order for future maps with the Agents.

Copies of Additions Lists which give details of maps published by the Directorate will continue to be available quarterly. But from the beginning of 1979 an annual charge will be made for them, payable in advance. Charges for 1979, inclusive of postage, will be as follows: United Kingdom, £2.00; Overseas (sea mail), £3.00; Overseas (airmail), £4.00.

If you wish to receive Additions Lists during 1979 you should send a cheque or postal order for the appropriate amount to reach the Directorate before 21 December 1978. Please note that your remittance should be sent to the Directorate but made payable to H M Paymaster General.

Yours sincerely

Mrs I Meux
Head of Technical Services
Ministry of Overseas Development
Directorate of Overseas Surveys
Kingston Road Tolworth Surbiton
Surrey England KT5 9NS

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PATTERNS OF CANCER IN ENGLAND AND WALES

"A map showing where the highest incidences of different types of cancer occur throughout England and Wales" is contained in the article 'Cancer Mortality: the regional pattern' by Clair Chilvers and A. Adelstein in Population Trends, 12, 4-9, 1978.

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LITERARY MAP OF CANADA

Hurtig Press advises that due to production difficulties, publication of A Literary Map of Canada by Morris Wolfe and Graham Pilsworth has been postponed to September 1979.

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OOOPS...

In a publication entitled "An Uncertain Future," published by the Council of Ontario Universities as a review of its activities between 1975 and 1978, there is the following note about the Maps Project:

> The MAPS project is at an early stage of development. Its first product in 1976 was a book form union list of atlases, containing some 300,000 entries. Interlibrary loans and an exchange of duplicates have also been initiated. Fourteen of the Ontario universities participate, along with l'Université Laval.

It is obvious that the Council of Ontario Universities is suffering, like most of us, from two-digit inflation. In this case, the number of entries is correct, minus two zeroes. It should read "some 3000" (3193 to be exact).

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NEW PRODUCTS

LANDSAT MOSAICS

A new series of LANDSAT mosaics is being produced by CCRS/NAPL which consists of colour mosaics in band 8 covering provinces in sections. Quebec and Alberta have already been done, British Columbia is being done and coverage will be expanded as each province requests. A listing of the mosaics available for Alberta follows: (EMG)1607, Alberta; 1608, Kootenay River NTS 82; 1609, Athabasca River NTS 83; 1610, Hay River NTS 84; 1611, Southern Alberta; 1612, Central Alberta; 1613, Northern Alberta. Contact prints cost $3.50 each (for 9 x 9 in. print) and enlargements are available and are costed by standard National Airphoto Library price list. Available from National Airphoto Library, 615 Booth Street, Ottawa, Ont. K1A OE9.

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LUDA MAPS ON MICROFICHE

USGS depositories may now have received a set of microfiche comprising the USGS Land Use Data and Analysis (LUDA) maps on open file at NCIC-Western. Each 105 mm fiche contains a reduction of an explanatory text with a planimetric base map and four thematic maps displaying land use, political units, hydrologic units and census county subdivisions for a particular area. Reduction is approximately 24x. Only maps compiled in the Western Region area are available

in microfiche format. This LUDA set will expand as more maps in the series are compiled. A list of currently available maps follows. Copies may be purchased at a cost of $0.50 per fiche through:

National Cartographic Information Center - Western
U.S. Geological Survey
Mail Stop 31
345 Middlefield Road
Menlo Park, CA 94025

NCIC LUDA INVENTORY
FEBRUARY 1979

B = planimetric base
1 = land use and land cover
2 = political units
3 = census county subdivisions
4 = hydrologic units

LAT/LONG	SCALE	TITLE	STATE	SHEETS AVAILABLE	OPEN FILE
320011200	1:250,000	Ajo	AZ	B 1 2 3 4	77-149
370012215	1:24,000	Ano Nuevo	CA	B 1	78-748
310011100	1:100,000	Atascosa	AZ	B 1 2 3 4	77-807
483012200	1:100,000	Bellingham	WA	B 1 2 3 4	77-018
370712207	1:24,000	Big Basin	CA	B 1	78-753
423012300	1:100,000	Canyonville	OR	B 1 2 3 4	77-443
480012400	1:250,000	Cape Flattery	WA	B 1 2 3 4	77-019
360012000	1:100,000	Coalinga	CA	B 1 2 3 4	77-047
480012000	1:250,000	Concrete	WA	B 1 2 3 4	77-021
430012400	1:250,000	Coos Bay	OR	B 1 2 3 4	77-448
430012400	1:100,000	Coos Bay N/4	OR	B 1 2 3 4	77-449
460012400	1:250,000	Copalis Beach	WA	B 1 2 3 4	77-020
423012200	1:100,000	Crater Lake	OR	B 1	77-442
430012200	1:100,000	Diamond Lake	OR	B 1	77-447
370712215	1:24,000	Franklin Point	CA	B 1	78-747
313011000	1:100,000	Ft. Huachuca	AZ	1 2 3 4	77-810
420012400	1:100,000	Gold Beach	OR	B 1	77-451
420012300	1:100,000	Grants Pass	OR	B 1 2 3 4	77-444
372212222	1:24,000	Half Moon Bay	CA	B 1	78-740
373712215	1:24,000	Hunters Point	CA	B 1	78-743
371512215	1:24,000	La Honda	CA	B 1	78-746
330011800	1:250,000	Long Beach	CA	B 1 2 3 4	76-118
340011800	1:250,000	Los Angeles	CA	B 1 2 3 4	76-119
310011200	1:250,000	Lukeville	AZ	B 1 2 3 4	77-070
440012200	1:100,000	McKenzie River	OR	B 1	77-440
420012200	1:100,000	Medford	OR	1 2 3 4	77-441
363012000	1:100,000	Mendota	CA	B 1 2 3 4	76-043
330011000	1:250,000	Mesa	AZ	B 1 2 3 4	76-120
371512207	1:24,000	Mindego Hill	CA	B 1	78-752
373012222	1:24,000	Montara Mountain	CA	B 1	78-739
363012100	1:100,000	Monterey NW	CA	B 1 2 3 4	76-044

LAT/LONG	SCALE	TITLE	STATE	SHEETS AVAILABLE	OPEN FILE	
372212200	1:24,000	Mountain View	CA	B 1	78-755	
373012200	1:24,000	Newark	CA	B 1	78-754	
310011000	1:100,000	Nogales	AZ	B 1 2 3 4	77-808	
443012200	1:100,000	North Santiam River	OR	B 1	77-439	
433012200	1:100,000	Oakridge	OR	B 1 2 3 4	77-446	
372212207	1:24,000	Palo Alto	CA	B 1	78-751	
450011800	1:250,000	Pendleton	OR	B 1 2 3 4	77-805	
330011200	1:250,000	Phoenix	AZ	B 1 2 3 4	76-121	
370712222	1:24,000	Pigeon Point	CA	B 1	78-742	
360012100	1:100,000	Point Sur	CA	B 1 2 3 4	76-046	
480012200	1:100,000	Port Townsend	WA	B 1 2 3 4	77-017	
423012400	1:100,000	Port Orford	OR	B 1	77-450	
373012207	1:24,000	Redwood Point	CA	B 1	78-750	
390011800	1:250,000	Reno	NV	B 1 2 3 4	76-123	
380012000	1:250,000	Sacramento	CA	B 1 2 3 4	77-039	
340011600	1:250,000	San Bernardino	CA	B 1 2 3 4	76-115	
320011600	1:250,000	San Diego	CA	B 1 2 3 4	76-116	
371512222	1:24,000	San Gregorio	CA	B 1	78-741	
373712207	1:24,000	San Leandro	CA	B 1	78-749	
373012215	1:24,000	San Mateo	CA	B 1	78-744	
373712222	1:24,000	San Francisco South	CA	B 1	78-738	
330011600	1:250,000	Santa Ana	CA	B 1 2 3 4	76-114	
330012000	1:250,000	Santa Maria	CA	B 1 2 3 4	76-117	
473012200	1:100,000	Seattle	WA	B 1 2 3 4	77-015	
470012300	1:250,000	Seattle W/2	WA	B 1 2 3 4	77-013	
313011100	1:100,000	Sells	AZ	1 2 3 4	77-809	
423711130	1:24,000	Soda Springs NE	ID	B 1	77-124	Ortho Bas
423711130	1:24,000	Soda Springs NW	ID	B 1	77-125	Ortho Bas
470012200	1:100,000	Tacoma	WA	B 1 2 3 4	77-014	
320011000	1:250,000	Tucson	AZ	B 1 2 3 4	76-122	
480012300	1:250,000	Victoria	WA	B 1 2 3 4	77-016	
372212215	1:24,000	Woodside	CA	B 1	78-745	

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REDISTRIBUTION

CARLETON UNIVERSITY MAP LIBRARY ATLASES FOR EXCHANGE

Nordenskioeld, Nils Adolf Erik, Friherre, 1832-1901. Facsimile atlas to the early history of cartography with reproductions of the most important maps printed in the 15th and 16th centuries. New York: Kraus Reprint Corp., 1961. Reprint of 1889 ed., Stockholm. Folio G1025.N72 1961.

United States. Military Academy, West Point, Dept. of Earth, Space and Graphic Sciences. Atlas of landforms. New York: J. Wiley, 1966, c1965. (5 copies.) Folio G1046.C2U5 1966.

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Lindsay, Donald Gordon. Sea-ice atlas of Arctic Canada, 1961-1968. Ottawa: Energy, Mines and Resources, 1976. Folio G1116.C74L55 1976.

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Marois, Claude. Atlas de l'emploi, ville et île de Montréal. Employment atlas, city and island of Montreal. Montreal: Université du Québec, 1972. Folio G1144.M8G8M3 1972.

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Christiansen, E.A. Physical environment of Saskatoon. Ottawa: National Research Council, 1970. Folio G1164.S3C1C5 1970.

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Première livraison 1965	1, 1a, 3, 10, 11, 24, 31, 36, 36a, 50, 55, 80.
Deuxième livraison 1966	2, 2a, 17, 23, 26, 27, 27a, 37, 44, 54, 54a, 56, 84.
Troisième livraison 1967	12, 14, 16, 25, 28, 28a, 33, 64, 73, 74.
Quatrième livraison 1968	7, 19, 21, 22, 34, 43, 45, 57, 83.
Cinquième livraison 1970	6, 13, 13a, 35, 39, 39a, 42, 66-69.
Sixième livraison 1972	4, 4a, 5, 40, 40a, 58-63, 86.
Septième livraison 1974	9, 32, 38, 38a, 41, 47, 65, 72, 78, 79.

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Atlas of World Resources: The mineral resources of the World. William Van Royen and Oliver Bowles. New York, Prentice Hall, 1952.

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Communist China, 1968 (2 vols.); Gambia, 1968; Ghana, 1967; Malta, 1971; Iceland, 1961; New Caledonia, Wallis & Futuna, 1974; Fiji, Tonga and Nauru, 1974; British Solomon Is., 1974; New Hebrides, 1974; Arabian Peninsula, 1961.

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CANADIAN NTS SHEETS AND USGS TOPOGRAPHIC SHEETS

The Map and Airphoto Division of the University of Calgary Library will soon have available for distribution quantities of duplicate and superseded Canadian NTS sheets and USGS topographic sheets; should anyone be interested in receiving any, please contact us and include want lists if you have one available.

Map and Airphoto Library
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GEOLOGIC ATLAS OF THE U.S.

Map Library, University of Oregon offers many folio numbers of the United States Geological Survey GEOLOGIC ATLAS OF THE U.S. for cost of postage remunerated or

to highest bidder for the greatest total number. We wish to dispense all of these listed below to one or a few dealers/libraries before August 1979. Maps and text pages are good, bindings and covers are fair to fragmented. Folio numbers: 9, 14, 19-28, 32-35, 40, 42, 44-48, 50, 61, 64-70, 72, 74, 75, 79, 82, 84, 85, 87, 88, 90-100, 102-105, 107-110, 113, 115, 117-119, 121-123, 125-128, 132-137, 141, 143, 144, 146, 148, 149, 152, 154, 156, 159, 160, 164, 165, 167-170, 172, 176, 181-187, 191, 192, 195, 196, 198, 209. Reply to:

Edward P. Thatcher
Map Librarian
University of Oregon Library
Eugene, OR 97403

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LISTE DES PLANS D'ASSURANCE/ LIST OF FIRE INSURANCE PLANS

La Collection nationale de cartes et plans a préparé la liste des quelque 1100 plans d'assurances qu'elle a acquis en mars 1978 de la Waterloo Mutual Insurance Company. Ces plans montrent uniquement des villes d'Ontario et plus particulièrement Toronto. La liste compte 18 pages.

Ces plans d'assurance n'apparaissent pas dans Fire Insurance Plans in the National Map Collection/ Plans d'assurance-incendie de la Collection nationale de cartes et plans de Robert J. Hayward publié en 1977. Cependant, étant donné leur importance, la CNCP en a fait photocopier la liste pour distribution gratuite aux institutions et individus qui aimeraient en avoir un exemplaire. Si on est intéressé, prière d'envoyer ses nom et adresse à: Collection nationale de cartes et plans, Archives publiques du Canada, 395, rue Wellington, Ottawa, Ont. K1A ON3 (en indiquant "plans d'assurance" au bas de l'enveloppe).

On remarquera que cette liste n'est pas une publication: il s'agit d'abord d'un instrument de travail à l'usage de la CNCP et doit être considéré comme tel. La CNCP a l'intention de publier éventuellement une nouvelle liste complète de tous ses plans d'assurance.

The National Map Collection has completed the finding aid for the 1100 insurance plans acquired in March 1978 from the Waterloo Mutual Insurance Company. Only localities in Ontario, and particularly Toronto, are shown on these plans. The finding aid has 18 pages.

These insurance plans did not appear in Robert J. Hayward's Fire Insurance Plans in the National Map Collection/ Plans d'assurance-incendie de la Collection nationale de cartes et plans published in 1977. However, because of the importance of the plans, the NMC has prepared photocopies of the finding aid for free distribution to interested institutions and individuals. If you would like to receive a copy, please send your name and address to: National Map Collection, Public Archives of Canada, 395 Wellington Street, Ottawa, Ont. K1A ON3. Please indicate "Insurance Plans" at the bottom of the envelope.

It should be noted that the list is not a publication: it is a finding aid for internal use in the collection and should be considered as such. The NMC is planning to publish a new list of all its insurance plans at some future time.

Louis Cardinal, NMC

Note from the President

A number of developments have occurred since the December issue. Due to a heavy work load and numerous committments Ronald Whistance-Smith has relinquished his post as editor of the Bulletin. The Board of Directors has hired Lois Hardy, an experienced copy editor, to act as publication officer. The Board of Directors is now looking for a member of the association to volunteer his or her time to act as editor of the Bulletin. The editor will be responsible for soliciting and compiling contents for each issue and for maintaining standards set by the Board of Directors. Lois will be responsible for copy editing and providing a product ready for publishing. If we wish to reach higher standards for this publication we need dedication and perseverance from an individual who will obtain articles and papers which are relevant to map librarians in Canada. We welcome suggestions or volunteers from our membership.

Due to several factors, the conference in 1980 which was to be held in Quebec had to be relocated. Fortunately we had an invitation from Ronald Whistance-Smith at the Victoria Conference. When notified about the problems with the Quebec City conference Ron officially extended an invitation for A.C.M.L. to hold its 1980 conference in Edmonton. The Board of Directors wishes to announce that the 1980 A.C.M.L. annual conference will be held in Edmonton.

This issue of the Bulletin is rather large. It contains a number of important articles, notices and the committee reports. Read these carefully, you may wish to comment on them at our business meeting in St. Catharines.

Hope to see you at the conference.

Thomas Nagy
President
A.C.M.L.