

Information Bulletin

Volume 24 Number 3

July 1993



Western Association of Map Libraries

*"... to encourage high standards in every phase of organization
and administration of map libraries..."*

The **Western Association of Map Libraries** is an independent association of persons, educational and business institutions. The Membership has defined, beginning in 1967, its **Principal Region** as follows: the Provinces of **Alberta and British Columbia**, and the States of **Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming**.

Membership in WAML is open to any individual, institution, or business interested in furthering the purpose of the Association, which is "to encourage high standards in every phase of the organization and administration of map libraries." **Send membership checks to the WAML Treasurer at the address shown below.** Make checks payable to "WAML", or the "Western Association of Map Libraries". **All memberships begin July 1.**

WAML and its Information Bulletin operate on a **Membership Year/Volume Year basis, and subscriptions begin July 1 and end on June 30 the following year.** Mid-year joiners subscribers will receive back-issues for that year. Back issues of the **Information Bulletin** are available for \$10.00/vol. or portion thereof from the Business Manager.

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Subscriptions to the Information Bulletin are \$25.00 per volume year. It is issued three times each year: #1 in November, #2 in March, #3 in June. Subscriptions to addresses outside of the United States are \$3.00 additional for postage [U.S. \$]

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Western Association of Map Libraries

Volume 24 Number 3

INFORMATION BULLETIN

July 1993

Table of Contents

Features

300 Years of Japanese Tourism: A Look at the Collection of Edo Maps in the University of British Columbia Library, by Frances M. Woodward	161
The 1991 ARL Cartographic Resources Survey, by Dr. Charles Seavey	175
Cartography - A Brief Account of its Historical Development and Current Status, by Ming-Kan Wong	181
Format Integration and Spatial Data: A Preliminary View, by William E. Studwell and Elaine K. Rast	186

Atlas and Book Reviews, edited by **Greg Armento**

<i>Atlas of South America</i> , reviewed by Bruce E. Bechtol	189
<i>Atlas of Endangered Species</i> , reviewed by Joan Parker	190
<i>Mapping the Next Millenium</i> , reviewed by Dean S. Rugg	191
<i>How to Lie with Maps</i> , reviewed by Linda Newman	191
<i>Mapping the Transmississippi West, 1540-1861: An Index to the Cartobibliography</i> , reviewed by Greg Armento	192
Publications Received, compiled by Greg Armento	193

WAML News

Minutes, Spring 1993 Meeting, San Francisco, CA, by Kathryn Womble , WAML Secretary	155
Attendance List	159
WAML Publications for sale	153
Occasional Paper 14 announcement	152
WAML Memorabilia for sale	152

News & Departments

Art /cARTe	228
Benchmarks	213
Conferences	226
Digital News	219
Editorial Staff	150
Editorship Openings	151
Employment	174
From the Editor	150
New Mapping of Western North America, compiled by Joe Crotts	195
News	217
Periodicals	223
Preservation	224
Remote Sensing News	194
SMYLEs - Something to Make Your Life Easier	
Latitude / Longitude: A Training Guide, by Dale Steele	208
UCSB Imagery Index Forms	209
Utah Cutters, by Ken Rockwell	206
State and Province News	214
Sounding Board	185
Trading Post	185
U.S. Government News	215

FROM THE EXECUTIVE EDITOR

Let's do the bad news first:

Corrections to the March 1993 *IB*

While your Editor retains her conviction that she can do just about any work there is to be done in Libraryland, she certainly can't do it all simultaneously, as is unfortunately evidenced by the number of errors that slipped in to the last *IB*.

1. Let's get the worst over with first - the extract of the article on "Maps and Map Collections of New Zealand" by Brian Marshall; this originally appeared, not in the *Journal* of the New Zealand Map Society, but in the Australian Map Circle's *The Globe*, number 36, 1991. Yes, I've sent profuse and heartfelt apologies to all concerned.

2. On page 119 of the March *IB*, I input the author of *Medieval Maps* as Paul Harley - it is actually Paul Harvey. (Thanks to Ed Dahl for catching this one.)

3. Be sure to double-check the "Conferences" section in this *IB* for the correct time for Jackson Hole; it's FALL, not spring of 1994.

On to the good - effective with the 11/93 issue of the *IB*, articles will be refereed. These will be "blind" readings - that is, author will be blanked out of the manuscript before it is sent to a reviewer. Let me know if you're interested in reviewing articles.

Apologies to the poor souls who patiently listened to me whine about the problems of being acting head of Serials!

Mary

The **Information Bulletin** is published by the **Western Association of Map Libraries**, as its primary tool of communicating with its Membership and Subscribers; however opinions expressed herein do not necessarily reflect an official Association position.

If you have contributions for the *IB*, the Editor will appreciate receiving your material in electronic form. You may send it via E-mail on BITNET or INTERNET to the Executive Editor. You may also send material on magnetic disk, either 3.5 or 5.25 inch, MSDOS format preferred (Word or WordPerfect).

Copy Deadlines are: Issue # 1: September 1st; Issue #2: January 1st; Issue #3: April 1st.

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Editorship Openings

Executive Editor. The July 1994 *Information Bulletin* will be Mary Larsgaard's last as Executive Editor. If you enjoy working with good persons, if you enjoy writing, the position of Executive Editor may be right for you. Think it over; and then get in touch with Mary or any member of the WAML Board (see masthead). First issue would be November of 1994; the term of editorship is negotiable, but five years is suggested.

Milestones Column Editor. If you enjoy people watching, take on the Milestones column of the *Information Bulletin*. Stan Stevens has written this column for longer than many of us have been in map librarianship, and he'd like to step down to concentrate on Santa Cruz history. Let Mary Larsgaard know if you're interested (see masthead for address and so on).

New Mapping of Western North America. Joe Crotts writes "Very regretfully, I must tender my resignation as editor of the New Mapping Column, effective no later than July 1994. I've thoroughly enjoyed it, but feel I may not be able to do proper justice to it as time goes. I've become so involved in administrative functions in the library and faculty senate and related budget, policy, personnel, etc. committees campus-wide, that maps are becoming increasingly a smaller and smaller component in my regimen. It's much to my dismay, but there is nothing I can do short of declaring that I want to "do" maps and docs and that's it for the remainder of my career. Maybe that actually is the way to go, but at this stage in my career, I feel more comfortable in leaving some doors open."

Now available!

WAML Occasional Paper Number 14

Topographic Mapping of Africa, Antarctica, and Eurasia

by

Mary L. Larsgaard

May 1993

\$45

Send check or purchase order to:

Western Association of Map Libraries

c/o Richard E. Soares

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Hawaii (Useful) Memorabilia

You say you couldn't make it to Hawaii? Well, you can still have some of the good things from it - namely the t-shirts (\$10; mainly what is left seems to be M, L, XL, maybe XXL), which have a beautiful map of Hawaii on the front (in color, of course), and a list of all the WAML conferences on the back - and the light-blue plastic tote bag (\$15; about 15" high, 7" wide, 14" long - those are my guesstimates, it's in my other office, full of stuff). Get in touch with Rich Soares (see address above).

Western Association of Map Libraries

Paper Publications

Occasional Papers

- 1973 *Catalogue of Sanborn Atlases at California State University, Northridge* by Gary W. Rees and Mary Hoerber. OP1. LC #73-5773 ISBN 0-939112-01-9 \$4.00
- 1977 *Union List of Sanborn Fire Insurance Maps held by Institutions in the United States and Canada, vol. 2, Montana to Wyoming; Canada and Mexico* by William S. Peterson-Hunt and Evelyn L. Woodruff; *with a Supplement and Corrigenda to Volume I*, by R. Philip Hoehn. OP3. LC#76-2129 Rev. ISBN 0-939112-03-5 \$6.00
- 1978 *Index to Early Twentieth-Century City Plans Appearing in Guidebooks: Baedeker, Muirhead-Blue Guides, Murray, I.J.G.R., etc., Plus Selected Other Works to Provide Worldwide Coverage of over 2,000 Plans to over 1,200 Communities, Found in 74 Guidebooks* by Harold M. Otness. OP4. LC #78-15094 ISBN 0-939112-05-1 \$6.00
- 1978 *The Maps of Fiji: a Selective and Annotated Cartobibliography* by Mason S. Green. OP5. LC #78-24066 ISBN 0-939112-06-X \$4.00
- 1980 *Index to Nineteenth-Century City Plans Appearing in Guidebooks: Baedeker, Murray, Joanne, Black, Appleton, Meyer, Plus Selected Other Works to Provide Coverage of over 1,800 Plans to Nearly 600 Communities, Found in 164 Guidebooks* by Harold M. Otness. OP7. LC # 80-24483 ISBN 0-939112-08-6 \$6.00
- 1981 *Microcartography: Applications for Archives and Libraries* edited by Larry Cruse, with the assistance of Sylvia B. Warren. OP6. LC #81-19718 ISBN 0-939112-07-8 \$20.00
- 1981 *Printed Maps of Utah to 1900; An Annotated Cartobibliography* by Riley Moore Moffat. OP8. LC #81459 ISBN 0-939112-09-4 \$10.00
- 1984 *Nevada Directory of Maps and Aerial Photo Resources* by Mary B. Ansari and Linda P. Newman. OP11. ISBN 0-939112-13-2 \$15.00
- 1986 *Map Index to Topographic Quadrangles of the United States, 1882-1940* by Riley Moore Moffat. OP10. LC #84-21984 ISBN 0-939112-12-4 \$32.50
- 1990 *Cartobibliography of Separately Published U.S. Geological Survey Special Maps and River Surveys*, by Peter L. Stark. OP12 LC #89-14684 ISBN 0-939112-15-9 (hard cover) \$40.00
- 1993 *Topographic Mapping of Africa, Antarctica and Eurasia* by Mary Larsgaard. OP14. LC# 92-39327 ISBN 0-939112-29-9 (hard cover) \$45.00

Forthcoming

Index to the Information Bulletin (Volumes 1-20, 1969-1989) of the Western Association of Map Libraries by Frances M. Woodward. OP13. ISBN 0-939112-17-5 (microfiche) 0-939112-18-3 (paper cover) Price Not Set

Send Check (payable to WAML) or Purchase Order to: **Western Association of Map Libraries**

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Western Association of Map Libraries

Microform Publications

Occasional Papers

- 1976 *Union List of Sanborn Fire Insurance Maps Held by Institutions in the United States and Canada, vol. 1, Alabama to Missouri* by R. Philip Hoehn. OP2 LC #76-6129 ISBN 0-939112-16-7 \$4.00
- 1983 *Index to the Information Bulletin (Volumes 1-10, 1969-1979) of the Western Association of Map Libraries* by Frances M. Woodward. OP9. LC #834880 ISBN 0-939112-10-8 \$5.00

Information Bulletin

- Western Association of Map Libraries *Information Bulletin* v.1-20. 99 fiche. ISBN 0-939112-20-5 \$40.00

Microform Sets

- Spezialkarte der Osterreichisch-Ungarischen Monarchie* [Austro-Hungarian Empire], 1873-1889. 1:75,000.
Complete set of all editions. ISBN 0-939112-25-6. 3665 fiche. \$1,200.00
First editions only. 1037 fiche. \$300.00
- Maps and Charts of North America and the Caribbean, 1750-1789*. Phase I, Titles 3-1551. 335 fiche \$110.00
- Maps and Charts of North America and the Caribbean 1750-1789*. Phase II, Titles 156-271. 380 fiche \$125.00
- [Poland] Wojskowy Instytut Geograficzny. 1:100,000. 193-. 53 fiche \$500.00
- Reichsamt fur Landesaufnahme. *Karte des Deutschen Reiches*. [Germany]. 1:100,000. Berlin, 186?-194?
4,100 fiche. \$1,500.00
- Cassini & Carte de France, French Revolutionary Era Surveys*. 214 fiche \$85.00
- US. Navy Nautical Charts of Melanesia*. 1917-1975. 251 fiche \$100.00
- Pacific Basin Map Exhibit of the Library of Congress*. 83 fiche \$30.00
- Bernice Bishop Museum Air Photos of Melanesia*. ca. 64,000 photos on 70 reels of 35mm film \$35/roll
- Gazetteer of the World, or Dictionary of Geographical Knowledge*. 7 vols. London: Fullarton, 1859.
1990 fiche edition. 79 fiche ISBN 0-939112-19-1 \$30.00
- Gazetteer to AMS 1:25,000-Maps of West Germany*. 3 vol. 1959, 1990 ed. 36 fiche. ISBN 0-939112-23-X \$15.00
- USGS GNIS Gazetteers:**
- California* (17 fiche) ISBN 0-939112-21-3 \$10.00
- Nevada* (5 fiche). ISBN 0-939112-22-1 \$5.00
- Ward Maps of United States Cities* (Pre-1900). LC 1975. WAML 1990 ed. 321 fiche ISBN 0-939112-24-8 \$100.00

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Minutes Western Association of Map Libraries 1993 Spring Meeting

May 12-14, 1993

San Francisco State University

Recorded by
Kathryn Womble
WAML Secretary

Executive Board Meeting May 13, 1993

President O'Donnell called the meeting to order at 9:10 a.m. In attendance were:

Jim O'Donnell - President
Michael Noga - past President,
Publications Advisory Committee
Geoscience Subcommittee Chair,
& Nominating Committee Chair
Sylvia Bender-Lamb - Vice
President/President-Elect
Kathryn Womble - Secretary
Herb Fox - Treasurer
Richard Soares - Business Manager
Mary Larsgaard - *IB* Editor
Dale Steele - *IB* Production Editor
Greg Armento - *IB* Review Editor
Muriel Strickland - Publications
Advisory Committee Chair
Larry Cruse - Publications Advisory
Committee Microforms Subcom-
mittee Chair
Katherine Rankin - Membership/
Hospitality Committee Chair
Dorothy McGarry - Lifetime
member
Stan Stevens - Lifetime member,
OP Production Manager
J.K. Herro - Liaison to Congress of
Cartographic Information Specialist
Organizations

LaVonne Jacobsen welcomed the Board to San Francisco State and reported that 52 people had pre-registered for the San Francisco meeting.

The Board voted to send \$100 to the Rails-to-Trails Conservancy in memory of John Schroeder.

Treasurer Herb Fox passed out WAML's financial statement from July 1, 1992 to May 4, 1993. WAML has \$20,019.23 in checking and savings accounts and 216 total members. He suggested that with all of the expenses for projects we are discussing, we should always keep enough in the treasury to cover 2 issues of the *IB* (about \$3,000).

The costs for OP 14 during this period totalled \$712. Herb will work with Stan Stevens to come up with a sales price.

Herb also distributed a financial statement from the Hawaii meeting. Total expenses exceeded costs by \$80.36, according to the statement presented by BYU. This does not include WAML monies paid for anniversary tote bags, t-shirts and dinner for a guest speaker.

As an aside, Herb noted that the

WAML conference manual needs updating.

Stan Stevens reported about incorporation for WAML. John Stevens has recommended that because of recent tax changes, WAML not pursue incorporation.

Rich Soares, Business Manager, submitted a report. He noted that WAML has lost some *Information Bulletin* subscriptions. He requested that a letter be sent to the membership and/or published in the *IB* reminding WAML members not to put their personal copies of the *IB* into their libraries, as WAML depends on those institutional subscriptions for income. Jim O'Donnell will compose a letter.

UMI Books on Demand is providing Occasional Paper #2 for \$0.15/page. WAML gets about 10% of each sale.

Rich said we need a fiche advertisement in the *IB* and possibly in the Special Library Association Geography and Map Division's *Bulletin* and American Library Association Map and Geography Round Table's *Meridian*. It would also be useful for someone to publish reviews of the fiche products. Mary added that we



Phil Hoehn, Charlotte Derksen and Peter Stark hold a panel discussion at the San Francisco meeting on policies regarding non-affiliated users of map libraries.

the articles and use other specialists when necessary. Mary's editorship of the *IB* ends with the July 1994 issue; no successor has been named yet. Mary suggested the possibility of splitting out the "news" editor function from the articles/features editor as a way of lessening the load on one person.

IB Production Manager Dale Steele submitted a request through the Publications Advisory Committee to purchase a Macintosh computer and desktop

could look into buying or trading advertising space with these publications for selected products.

It was suggested that the lists of fiche and occasional papers for sale be published on the inside back cover of alternate issues of the *IB* and the page be reformatted to become an order form. Rich will send updated lists of products to Dale Steele for inclusion in the *IB*.

Stan Stevens reported that he will soon have an advertisement ready for OP 14. The publication is currently at the printer's. A price needs to be set for OP 14. A preliminary figure, not including shipping costs, is \$45.

Rich noted that there are some problems with the creation of the UTM grid overlays. He is continuing to work on this project.

Rich will soon have all the tote bags and t-shirts from the Hawaii meeting. WAML is selling them for \$15/tote

and \$10/t-shirt. (T-shirt sizes are M,L,XL,XXL). Linda Newman reported that of the 102 bags produced, 53 were given out to registered participants of the 25th anniversary meeting in Hawaii. One bag has been sold. Rich will keep the remaining bags for sale at future meetings and through the *IB*.

IB Editor Mary Larsgaard reported that the *IB* publishing schedule has been changed from November, March, JUNE to November, March, JULY. This will space the issues out more evenly. The next issue should come out about the 3rd week of July.

Larry Cruse brought up the idea of refereeing articles in the *IB*. After some discussion, the Board decided the *IB* will become a refereed journal beginning with the November 1993 issue. Mary will put a notice in the July 1993 issue to that effect. Mary will line up a core of people to referee

publishing software for use in producing the *IB*. Preliminary figures indicate this might cost between \$5,000 and \$6,000. He and several others are checking for the best prices. Dale committed to a 5-year term as *IB* production manager from the time he received the new equipment.

Larry Cruse discussed the purchase of master silver fiche from the Library of Congress for a 1:100,000 Russian map set from the 19th-early 20th century. 1,700 fiche cover all of European Russia, probably not Asian Russia. WAML might have to sell 15-20 sets to break even. The Board decided to delay the decision to purchase this fiche master until the Salt Lake City meeting. Stan suggested advertising this item as a proposed fiche product to see what kind of response we got.

Jim O'Donnell reported that

WAML received \$3.00 from CARL Uncover for a photocopy of an article in the *IB* by Jenny Marie Johnson.

Michael Noga reported that the Nominating Committee was still putting together a slate of candidates for vice president/president elect and secretary. Herb Fox has resigned as treasurer effective June 30, 1993; the Board will appoint a replacement.

Michael also reported that the Publications Advisory Committee Geoscience Subcommittee is working on a quad-based index to California geologic maps. They are using AskSam software and plan to publish it on floppy and paper.

Membership/Hospitality Committee Chair Kathy Rankin reported that the Committee sent out a letter to about 30 members that had not renewed WAML membership with a survey, a brochure and a cover letter. Membership is down by 5 this year.

The Committee also proposed to mail a letter to MAGERT members residing in WAML's principal region who are not WAML members. This includes 56 individuals and 16 institutional members. The Board endorsed the proposal.

Stan Stevens showed a draft of the new membership brochure and requested final comments by May 31. The final brochure will be available in June or July. Stan will produce it.

J.K. Herro reported on the activities of the Congress of Cartographic Information Specialists Associations (CCISA). The results of a

survey put out through MAPS-L about a year ago show that about 90% of map collections surveyed in college and university libraries have digital cartographic data in their collections. CD-ROM is the most common medium for this data. IBM 286 or 386 PC's are the most common computers in these collections. Most libraries were receiving this data through the depository program and most were receiving no training for use of the products. J.K. will supply a copy of the survey results on request.

J.K. further reported that Pat McGlamery had drafted a "to whom it may concern" letter regarding the severe changes suffered by the University of Arizona Map Collection due to reorganization of the institution's libraries. He distributed copies of the draft for comment. Jim O'Donnell will sign the letter on behalf of WAML.

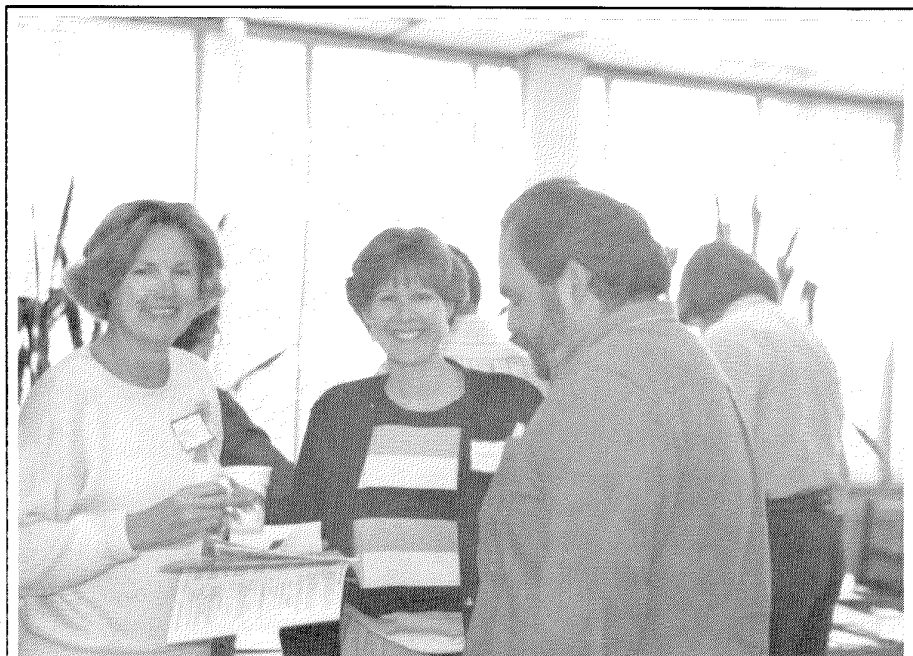
There is a meeting planned at the Library of Congress October 18, 19 and 20, 1993, to discuss major areas of interest to the cartographic information community. This meeting will bring together members of CCISA, CUAC (the Cartographic Users Advisory Council) and the Library of Congress Geography and Map Division staff to discuss their common interests. There will be discussion about the Federal Geographic Data Committee and small group discussions of issues facing the cartographic information community.

Future WAML meetings are planned for:

Sept. 15-18, 1993 at Salt Lake City, UT. Wendy Hassibe will host.

Meetings probably will be held in the federal buildings.

Spring 1994 at Riverside, CA, Barbara Haner, host.



Linda Newman, Kathryn Womble, and Jim O'Donnell share a break in a paper session at the San Francisco meeting.

Fall 1994 at Jackson Hole, WY.

Linda Zellmer, host

May 9-13, 1995 at Vancouver, B.C.

Tim Ross, host. (This will be a joint meeting with ACMLA.)

Fall 1995 at Las Vegas, NV. Kathy Rankin, host.

Spring 1996 at Sacramento, CA.

Sylvia Bender-Lamb, host.

Jim O'Donnell noted that we should check with Phil Hoehn on his status as WAML archivist since Phil has retired from his position at UC-Berkeley.

Phil was to be presented with a WAML life membership at the San Francisco meeting.

WAML received a request for purchase of its mailing list from the Miami University Management Development Program. The Board decided to sell the mailing list for \$150, for a one-time use only and not for reproduction or database use.

The Board meeting was adjourned at noon.

Business Meeting

May 13, 1993

President Jim O'Donnell called the Business Meeting to order at 1:35 p.m. Attendees introduced themselves by name and affiliation.

Secretary Kathryn Womble gave the minutes of the Executive Board meeting. Herb Fox gave the treasurer's report and Rich Soares, business manager, told the group he had WAML Hawaii t-shirts and tote bags for sale, as well as WAML publications.

John Stevens recommended (after several years of investigating the benefits of incorporation) WAML should not proceed with incorporation. WAML is presently organized as an organized association under California

law and is a nonprofit organization with a tax exempt number. This is the currently the best status for WAML.

It was announced that Mary Larsgaard will be ending her 5-year editorship of the *IB* with the July 1994 issue. A replacement for this position is currently being sought.

Kathy Rankin reported on the activities of the Membership/Hospitality Committee. (See Board meeting minutes.)

Michael Noga said the slate of candidates would be: Greg Armento, California State University, Long Beach and Katherine Rankin, University of Nevada, Las Vegas for vice president/president elect and Carol La Russa, University of California, Davis and Kathryn Womble, University of Washington for secretary.

He also reported that the Geoscience Subcommittee is working on a California geologic map index using 7 contributors. They are currently working out the database structure for inputting data.

Jim O'Donnell mentioned future WAML meeting sites (see Board Meeting minutes) and said the field trip in Salt Lake City would be to the Great Salt Lake with an exploration based on the Stansbury maps.

Linda Zellmer discussed housing options for the Jackson Hole meeting and asked for a show of hands indicating interest in each option.

Barbara Haner will host the meeting in Riverside, CA, March 31-April 1, 1994. This will probably include a San Andreas Fault field trip on April 2 and perhaps a visit to ESRI in Redlands.

J.K. Herro discussed a draft letter by Pat McGlamery that addressed the University of Arizona Map Collection reorganization. He said it's a letter that

could be used to help educate administrators in other libraries as well. He also talked about the CCISA, CUAC meeting in October 1993 and invited anyone to attend. (See discussion of letter and meeting in Board Meeting minutes).

It was noted that San Diego State University's collection has essentially been closed. The materials are accessible by request.

Greg Armento gave a liaison report for MAGERT activities. New Orleans is the location for the upcoming Annual Conference. MAGERT programs will include Statistics in Map Libraries by Charlie Seavey, GIS Applications in Libraries, and Providing Bibliographic Control of Spatial Data by Chris Kollen. Contact person is Patrick McGlamery.

Nancy Blair reported as liaison to GIS. The next meeting is in Boston, October 25-28, 1993. Abstracts are due by July 7; preregistration is due by September 24. For abstract forms, call 303-447-8850; for registration and program information, call 303-447-2020 or 1-800-472-1988. The meeting's title is "Charging into the Future," and will focus on geology and health. Contact Connie Wick at Harvard University's Kummel Library for more information.

The 1992 annual meeting of GIS was in Cincinnati, OH, October 26-29. Proceedings went to publisher in April or May. A union list of geologic field trip guidebooks of North America is to be published this year (Dorothy McGarry and Richard Spohn, co-editors). Also to be published is the GIS Directory of Geoscience Libraries, Connie Manson, chair. Work meetings covered topics of serial cancellations and consolidations.

The International Conference of Geoscience Information will be held in Prague in June 1994. The business meeting was adjourned a 2:10 p.m. to begin Sounding Board.

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San Francisco State University
May 13-14, 1993**

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300 Years of Japanese Tourism: A Look at the Collection of Edo Maps in the University of British Columbia Library

by

Frances M. Woodward

Historical Maps and Cartographic Archives
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University of British Columbia Library

Paper presented at the Western Association of Map Libraries Fall Conference held at Brigham Young University, Laie, Hawaii, 5 November 1992.

Japanese Travellers and Maps

"Wherever you go these days, you find swarms of Japanese tourists with their cameras."

One frequently hears remarks such as this, especially from visitors to popular locations such as Golden Gate, or Green Gables, or your favourite national park. In the past twenty or so years, the Japanese travel industry abroad has grown along with the nation's economy. The Japanese tourist may be a relatively recent phenomenon in North America, Europe, and the rest of the world, but it is merely the extension of tradition over three hundred years old.

By the time Engelbert Kaempfer (1651-1716), the German physician to the Dutch trade mission, visited the sights of Kyoto on April 18, 1691, the tourist industry of the imperial capital had developed to the point of printing tourist guides for walking tours, listing the most beautiful and interesting sights in the city, such as the best cherry blossoms, rocks, bridges, etc.

The Dutch traders were confined to Deshima Island in Nagasaki Harbour except for a prescribed visit under guard each year to pay their respects to the shogun in Edo. On the return journey they were given a tour of the notable sights of Kyoto, including Chion'in temple (described by Kaempfer as the most magnificent monastery in Japan), Yasaka pagoda, Kiyomizu Temple, the immense Buddha of Hokoji, and the multi-armed gilded statues of Sanjusangendo Temple. The Dutch merchants kept official diaries, but Kaempfer illustrated his.

Originally the travellers were visiting temples and other sacred places. The guide maps showed the pilgrims where the shrines and other holy sights were located. Like the Christian pilgrims with their relics, the Japanese liked to take home some souvenir to prove they had made the journey.

These souvenirs became known as 'miyage', "souvenir from a trip," as from Ise Shrine. The original meaning of the word was "shrine container" for the rice served at the shrine, but now it is used for any special product of a region brought home as a souvenir. Eventually the sights were accepted as worth seeing for themselves, with no reference to any religious significance.

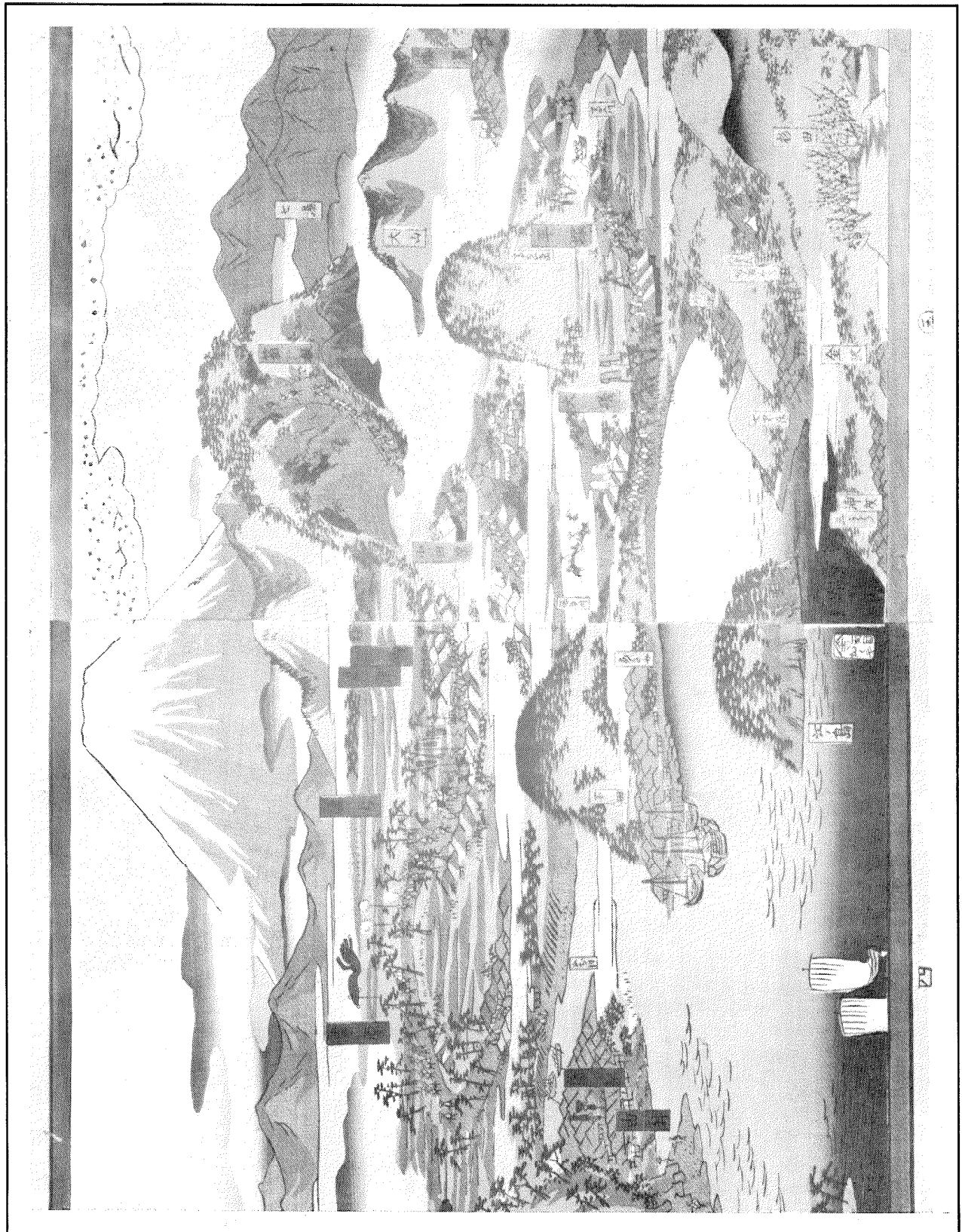
In addition to the pilgrimage, there were the regular journeys the daimyo or feudal lords were required to make between their domains and the capital, Edo. This involved a large procession of soldiers and other retainers.

Various kinds of maps and guide-books developed.

Japanese Tourist Maps

Maps were required for a number of purposes. The Tokugawa shogunate, as with all governments, needed maps of the country for administrative purposes. The 'metsuke' or "watchers" needed maps to travel about surveying the activities of the daimyo and lesser officials. A law enacted in 1634 required the daimyo to spend half their time in Edo and half on their fiefs, with their wives and children remaining in Edo as hostages. Some of the daimyo spent alternate years in Edo, others with fiefs closer to Edo would alternate every six months. The daimyo needed maps to make their regular journeys to and from Edo. In addition to the official travellers, there were pilgrims, traders, and other civilians.

Highways were developed with regular stages and networks of inns



and post houses. Roads were built and marked by pines along their edges. Barriers were established to control traffic and to prevent the smuggling of arms into Edo and hostages out. Forging places were marked and bridges built. Many of the maps and guidebooks give distances, list the inns and their rates, and list tolls and ferry fares.

Japanese maps were generally folded to a small size, which would make them easy to carry. Some were rolled like scrolls. When used, the map was generally spread out on the floor, with one or more users seated around it. The features and writing are meant to be read from four different directions. Some of the long route maps are designed to be read from the centre, as though the reader were in the middle of the road or river.

Road Maps

Tokaido Michiyuki No Zu (Itinerary Map of the Tokaido Highway) (Beans [1666.22]), measuring 131 x 59 cm., is an example of a map one of the metsuke or daimyo might have used. This is a hand-coloured woodcut map published in about 1654, the oldest extant itinerary map of Japan. The map is oriented west, with Kyoto at the top and Edo at the bottom.

Another hand-coloured woodcut map with the same title [Beans 1667.2, 54 x 32 cm.], probably a later edition of the 1654 map, was pub-

Photo Opposite

Tokaido Gojusantsugi Ichiran (Panoramic View of Fifty-three Stations of the Tokaido Highway) by Hiroshige, ca. 1839/1851. Sheets 3-4 of 10 sheets with Mt. Fuji in the background.

lished in Shijo Nakamachi [street], Kyoto, in Kanbun 7 [1667]. Text along the right side of this map gives inn rates and other information of interest to travellers, including transportation fees.

This is a 'mandala shiki' or mandala style of map in which the true geography is distorted, rising to a point, creating a more artistic panorama which fits the sheet of paper.

Another style of maps resemble the Peutinger Table, and its modern equivalent, the automobile-association strip map. A fine example of this is the *Tokaido Bungen No Zu* (Measured Map of the Tokaido Highway) (Beans 1690.3).

This is a black and white woodcut by the famous artist, Hishikawa Moronobu (ca. 1618-1694), considered the father of Japanese woodblock art. With him, the woodblock print became an independent work of art, rather than just an illustration. He was the first to design single sheet prints. His prints and book illustrations are in black and white only.

The surveyor and editor was Ochikochi Doin, who also published the map at his shop, Hangiya Shichirobei, in Edo in Genroku 3 [1690]. The map, on the scale of 1:12 000, is in five sheets, with a total measurement of 28 x 3536 cm.

The first sheet, or volume, shows the road from Edo to Odawara, the second from Odawara to Fuchu, the third from Fuchu to Yoshida, the fourth from Yoshida to Kameyama, and the fifth from Kameyama to Kyoto. This is apparently the second printing of the first edition, as there is no inscription of the rates between each post-town. Each volume is composed of a number of printed sheets of paper pasted together and folded, the length of the

volumes varying between twenty-four and twenty-nine folds. This style of map is called 'orihon' or accordion folded.

Like many of the artists and map-makers, Moronobu includes people and animals on his maps, from a solitary pedestrian to a full daimyo procession.

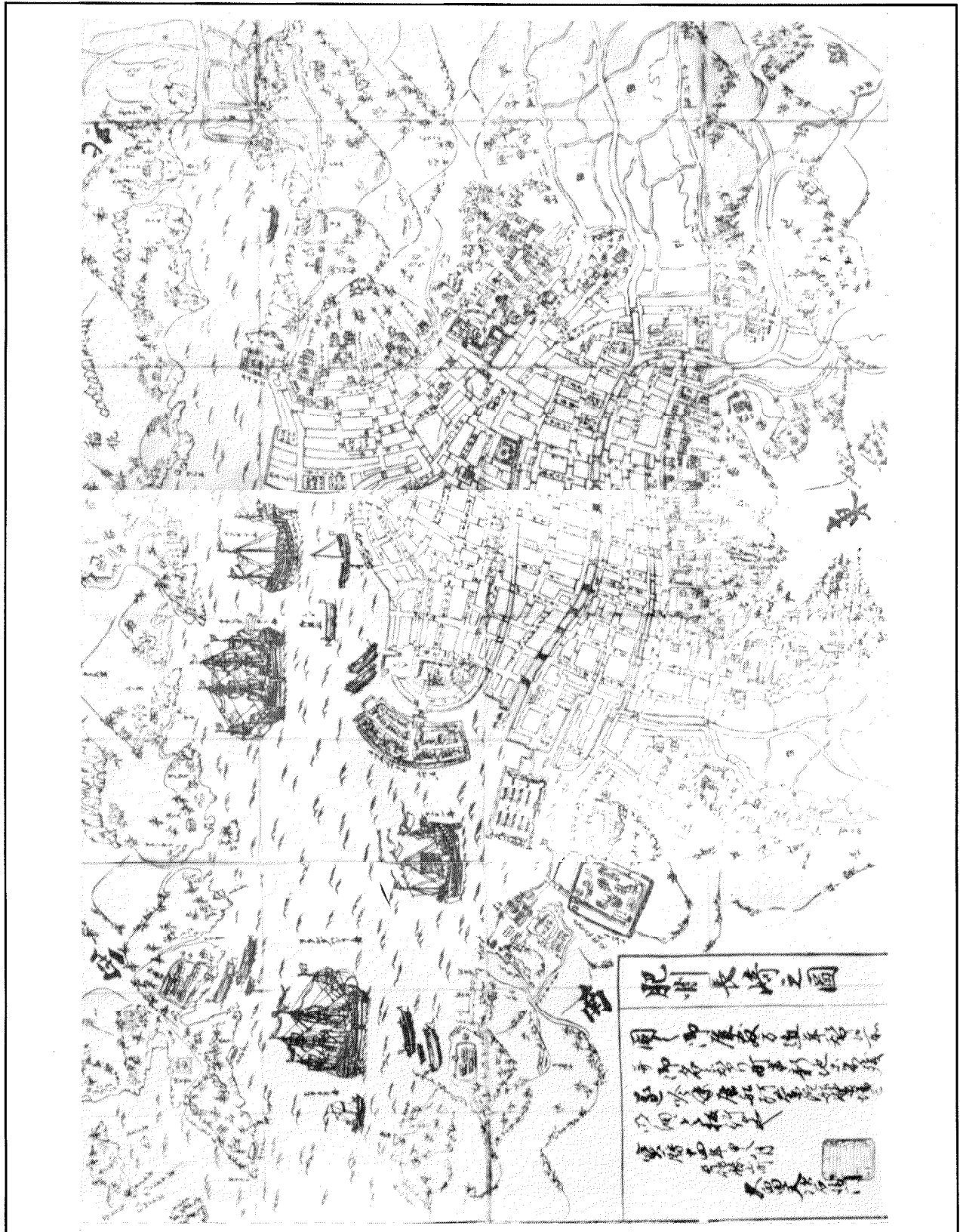
Next we have a pair of maps published in Kyoto in the 1720s by Nishida Katsubei, with a preface by Mimura Genseki. *Tokaido Saiken Zu* is a "Detailed Map of the Tokaido Highway", and *Saikairiku Saiken Zu* is a "Detailed Map of the Sea and Land of the Western District" (Beans [1716.1]).

Each map is in two accordion-folded sheets (height 35 cm.; length 497 cm., 251 cm., 336 cm., and 510 cm.). The second map shows the sea route from the southern tip of Kyushu to Edo. The maps are hand-coloured.

Tokaido Bungen Ezu or "Measured Map of the Tokaido Highway" (Beans 1752.3) was edited by Soyo and published in Edo in Horeki 2 (1752) by Yorozyua Seibei. It is another uncoloured woodcut, on the scale of 1:36,000, 13 x 101 cm. long, folded into a slipcase, 17 x 10 x 3 cm.

This small guidebook/map has two pages of introduction and a table of tides preceding the map and seven pages at the end which include a table of distances, transportation fees and agents. This map is actually a revised and reduced version of Morinobu's map of 1690.

This style of map is known as 'emaki shiki' (picture scroll style). One of the most difficult barriers on the road from Osaka to Edo was the Oi River, a stretch of very rough water. An illustration from this



guidebook shows travellers trying to cross this river.

A number of other noted woodblock artists made maps as well. The artists used a number of names and variations of names over the years.

Kuwagata Shoshin (1764-1824), also known as Keisai among other names, made an attractive mandala map of the Tokaido, *Shinkoku Kaisei Tokaido Saiken Oezu* (Newly Engraved and Revised Detailed Map of the Tokaido Highway) (Beans [1810.8]), which was edited by Shotai Kinsui, and published in Edo by a group of publishers (Sanoya Ichigoro, Izumiya Hanbei, and Izumoji Manjiro) about 1830. There is no title on this map. A manuscript title has been pasted onto the cover (also on reproduction in *Old Maps in Japan*, p. 38). The text across the top of this map lists products and souvenirs for each region. Kuwagata made his name with a panoramic view of Edo, the first of its kind.

The popular artist, Ando Hiroshige (1797-1858), is famous for his scenes of places in Edo and along the Tokaido, but little attention has been paid to his maps. In 1832 Hiroshige made a trip along the Tokaido, and the following year he produced his famous *Tokaido Gojusan Tsugi* (Fifty-three Stations on the Tokaido). He gradually gave up figure prints for landscapes based on his many trips throughout Japan. There are about 8,000 known examples of his work, including single sheets, prints in series, sketches and paintings.

Photo Opposite
Hishu Nagasaki No Zu (Map of Nagasaki, Hizen Province) by Ohata Bunjiemon, 1764.

Tokaido Gojusan Tsugi Ichiran (Panoramic View of Fifty-Three Stations of the Tokaido Highway) (Beans [1854.4]) is an attractive map in ten panels, with a total measurement of 37 x 242 cm., which was published in Edo in 1839 or 1851. The end panels are drawn to resemble an unrolled 'makimono' (scroll). Panels two to nine are numbered from right to left, with Kyoto on the tenth. A daimyo's procession is seen travelling along the road. More than any other printmaker, Hiroshige is responsible for the Westerner's view of "quaint Japan."

Tokaido Meisho Zue (Panoramic View of Noted Places Along the Tokaido), a panorama by the artist Utagawa Kunitora (fl. early 19th C.) or Yoshitora, was published in Edo by Daikin of Tsukiji in November 1864. Kunitora's work consists almost entirely of landscapes in 'oban yoko-e' (horizontal, about 25 by X centimetres) format. This colour woodcut, which consists of twelve oban panels joined for a total measurement of 37 x 290 cm., depicts a daimyo procession travelling along the highway. The daimyo himself is shown being carried across the Oi River by his retainers. The map is oriented to the northwest, with Kyoto in the upper left, and Edo in the lower right.

Cities

In addition to the Tokaido and the other highways, there are maps and guides for cities, regions, and the country as a whole, as well as to areas outside Japan.

Edo Zukan Komoku (Outline Plan of Edo) (Beans 1689.1.1-3) edited by the artist Ishikawa Ryusen, was published in Edo by Sagamiya Tahei in 1689. This hand-coloured woodcut measures

127 x 136 cm., with an inset "Plan of Kameido" (*Kameido No Zu*) 26 x 35 cm.

It is accompanied by a guidebook which contains "classified ads" for specialists in calligraphy, acupuncture, medicines, etc. Also listed are names of places where special foods, such as eels, cakes, etc., and other products are available. Some of the plans of Edo have the note "revised monthly" or even "revised weekly."

Although Edo was the seat of government, the Tokugawa Shogunate, Kyoto remained the traditional capital, the residence of the Imperial Court. This was the city the foreign delegations toured. *Shinpan Heian Jo Tozai Nanboku Machi Narabini Rakugai No Zu* (Newly Published Plan of Kyoto and Suburbs) (Beans 1654.1) was published in Kyoto by Muan in May 1654. This map appears to be unique.

Another of the cities is Nagasaki, where the Dutch and Chinese traders were confined to island compounds in the harbour. *Kaisei Nagasaki Zu* (Revised Map of Nagasaki) (Beans 1745.1), edited by Hassendo, was published in Kyoto by Hayashi Jizaemon in 1745, and measures 51 x 113 cm. The title is taken from the cover which is missing the first two characters.

Hishu Nagasaki No Zu (Map of Nagasaki, Hizen Province) (Beans 1764.1), published in Nagasaki by Ohata Bunjiemon in 1764, is considered by Boxer to be the rarest of all Nagasaki maps (Boxer, p.77). It is a hand-coloured woodcut measuring 61 x 89 cm.

The Dutch compound is on the fan-shaped island of Dejima or Deshima. The island was constructed by the

Tokugawa shogunate between 1634 and 1636.

Yokohama was a small port which did not really develop until after Commodore Perry's squadron met the Imperial commissioners there March 8, 1854. Sadahide made a plan of Yokohama which went through several editions, showing the rapid growth of the recently opened port.

Gokaiko Yokohama No Zenzu (Panoramic View of the Open Port of Yokohama) (Beans 1859.1) was engraved by Sugita Kinsuke and Asukura Tetsugoro, and published in Edo at the shop of Maruya Tokuzo. This coloured woodcut, measuring 62 x 181 cm., shows steamships of various nations in Yokohama harbour after its opening to foreign trade, as viewed "from Kayasu village."

A revised edition, titled *Zoho Saikoku Yokohama No Zenzu* (Panorama of the Open Port of Yokohama) but with the date unchanged, was published probably in 1865, as it shows some iron works which were built in that year.

The map has a cover title: *Gokaiko Yokohama Oezu*. Sixteen large foreign ships are seen in the foreground, with several other foreign and many Japanese ships nearby. Unlike the earlier edition, some of the ships' hulls resemble blocks of masonry.

Takehara Kazuyuki published *Yokohama Onkaichi Meisai No Zu* (Detailed Map of the Developed Port of Yokohama) (Beans 1859.3) in 1859, showing the central part of the city on a larger scale. This coloured woodcut measures 34 x 46 cm.

Other Regions

Saiken Nagasaki Dochu Hitori Annai No Zu (Detailed Self-Guide to

Nagasaki) (Beans 1831.2) by Ikeda Toritei was published jointly by several publishers in Kyoto, Edo, Osaka and Nagoya in 1831.

This coloured woodcut measures 27 x 40 cm., and is printed on both sides of the sheet. It shows the road from Kyoto to Osaka (Saikoku-kaido) and from Koyasan to Nagasaki (Nagasaki-kaido), gives the distances between the towns, and the fares and freight charges. A map such as this was not only a useful item, but a souvenir in itself.

There were also guides to the river and sea routes. *Okawa Benran* (Handbook of the Big River) (Beans 1843.4) by the artist Takashima Shunsho went through several editions. This revision of the 1839 edition was published in Kyoto by Takehara Yoshihei and in Osaka by Akamatsu Kuhei in September 1843.

This accordion-folded map measures 19 x 383 cm. The title on the attached cover reads: *Joriku Hikkei Okawa Benran* (Handbook of the Big River, Indispensable to Carry on Board). This map shows roads, towns and provinces between Kyoto and Osaka, and has introductory and concluding texts with distances, rates, etc.

Japan

Nihon Kaizan Choriku Zu (Map of Sea, Mountain, Tide and Land of Japan) (Beans 1691.2) by the prolific editor and artist, Ishikawa Ryusen of Edo, was published by Sagamiya Tahei in 1691. This is one of the many guide or road maps of Japan. It is a hand-coloured woodcut measuring 82 x 171 cm. and has two small volvelles at the lower left. The top volvelle shows the length of day and night in twenty-four seasons of the year, and the lower one

shows the waxing and waning of the moon, and the ebb and flow of the tide.

Dai Nihon Dochu Saiken Ezu (Detailed Itinerary Map of Great Japan) (Beans 1849.3) was published in Kyoto by Hiranoya Mohei and Daimonjiya Senzo, and in Edo by Yoshidaya Bunzaburo in the spring of 1849, and measures 34 x 131 cm. Castles are shown in yellow, noted places in red, post towns in white, and provinces in black squares. Black lozenges in Kinki region are temples, which are numbered along the route. This map could be used by pilgrims en route to Ise Shrine.

Pilgrimage Destinations

Another popular destination for pilgrims was Mount Fuji. *Fuji Ryodo Ichiran No Zu Fugaku Dochu Ichiran* (Panoramic View of Two Ways to Climb Mount Fuji and Panoramic View of Routes to Mt. Fuji) (Beans [1855.4]) by the artist Hashimoto Sadahide (1807-1873), engraved by Komakichi, was published in Edo in 1859 by Moriji. This coloured woodcut is actually two triptychs joined to show two routes. It measures 72 x 71 cm. It also shows places to stay along the routes.

Fujisan No Zu (Beans [1848.28]), another guide to Mt. Fuji by Sadahide, was edited by Sawaguchi Seio and published in June 1848. This large coloured woodcut, measuring 92 x 97 cm., not only shows the trails around the mountain, but also has flaps attached which, when raised, show pilgrims sheltering in the caves.

Nikko Oyama Ezu (Map of Mount Nikko) (Addenda ca.1850, cf. Beans [1850.9]) is a coloured manuscript guide, ca.1850, to Nikko Shrine,

measuring 70 x 72 cm.

One of Hiroshige's views along the Tokaido (*Tokaido Gojusan Tsugi-no Uchi*, no. 7) shows Fujisawa Yugyoji in about 1832. This view shows worshippers approaching the Benten Shrine on the Island of Inoshima. This colour woodcut measures 23 x 36 cm. There is also a triptych version.

Beyond Japan

Kaisei Zoho Dochu Kotei Meisai (Revised and Enlarged Details of Itineraries) (Beans 1850.11-12), by Yamazaki Kyusaku was published in Edo by Izumiya Ichibei in the autumn of 1850.

This coloured woodcut map measures 16 x 414 cm., with a total measurement including text of 18 x 605 cm. The cover title reads: *Kaisei Zoho Dai Nihon Koku Junro Meisaki Taisei* (Revised and Enlarged Details of Itineraries of Great Japan), while the map itself bears the title: *Dai Nihon Yochi Shisho Zenzu* (General Map of Japan). This is a Heiko Choku Sen Shiki or diagram type of map. In addition to roads in Japan, it covers Korea and Karafuto or Sakhalin Island.

Panoramic Maps

Panoramic maps were very popular. Unlike sixteenth-century Europe and nineteenth-century America where panoramic maps were generally used for cities, in Japan they were widely used for roads, regions and even countries.

Nihon Meisho No E (Panoramic View of the Noted Places of Japan) (Beans [1818.4]) is an attractive coloured woodcut, measuring 42 x 56 cm., by the artist Kuwagata Shoshin or Kuwagata Keisai (1764-1824)

published in Edo sometime before 1820.

The well-known artist Hokusai (Katsushika Tamekazu, 1760-1849) made a lovely Panoramic View of China [*Tokoku Zenzu*] (Beans 1840.1) which was engraved by Egawa Sentaro and published in Edo by Seiundo in 1840. It is a coloured woodcut, 43 x 55 cm. This map shows the famous places in China, and is the beginnings of imagining travel to them.

Oshu Shiogama Matsushima No Ryakuzu (Panoramic View of Shiogama and Matsushima Bays) (Beans [1835.3]), 41 x 55 cm., is a bird's-eye view by Hokusai, circa 1840, of Shiogama and Matsushima Bays in Mutsu Province, which would make an attractive souvenir for any traveller.

An earlier bird's-eye view by Hokusai is *Sobo Kairiku Shokei Kiran* (Panoramic View of Scenic Spots on Sea and Land) (Beans [1820.3], measuring 39 x 53 cm.) in southern Shimosa, western Kazusa and Awa, and eastern Sagami provinces at the head of Edo Bay, circa 1820.

The World

Despite the official policy of isolation, the Japanese people were interested in the world and people beyond their borders. One of the oldest maps in Beans' collection was a world map with an accompanying plate depicting peoples of the world, including Europe and the Americas.

Sekai Bankoku To Nihon Yori Kaijo Risu Ojo Jinbutsu Zu (Map of All the Countries of the World and Pictures of the Peoples, Showing the Capital and Distances from Japan) (Beans [1850.3]) was published in Nagasaki by Eijudo in the late Edo period. It is a coloured woodcut map of the world (after

Sekisui), measuring 32 x 45 cm., which includes illustrations of the peoples of the twelve countries of the world.

Collections at UBC

The University of British Columbia Library has a large collection of early Japanese maps of the Tokugawa or Edo period, 1615-1867. The nucleus of the collection was acquired in 1965 from George H. Beans of the Philadelphia Seed Company.

Beans began his collection in the early 1930s and continued over the years, publishing his *A List of Japanese Maps of the Tokugawa Era* in 1952, on his own Tall Tree Library Press in Jenkintown, Pennsylvania.

The *List* included maps known from other sources as well as his own collection. Beans continued collecting until 1963, when the third supplement to his *List* was published.

As Japanese maps were becoming more difficult to obtain, and he had begun collecting in other areas, Beans decided to dispose of his Tokugawa collection. With the aid of a group of Friends, UBC Library was able to acquire this magnificent collection.

The transfer of Beans' collection to Vancouver was announced in *Imago Mundi* (v. 18, 1964, p.90), stating that "it is the [University's] intention to continue to develop it along the lines originally set out" by Mr. Beans in the introduction to his *List*.

The collection has been enhanced considerably during the intervening years, and now contains many maps not in the original *List* and its supplements. In 1986 a small collection (including a few Meiji maps) was acquired from George Bonn of Honolulu.



UBC's collection of Tokugawa maps is now one of the largest outside Japan. The collection is composed primarily of commercially-produced maps and guide books of interest to Japanese travellers in the Edo period.

Through the generosity of the Japan Foundation, Professor Kazutaka Unno was able to come to the University for about ten weeks in 1984 to assess the research value of the collection, and to assist in recataloguing the collection for a new computer catalogue. He has since published a collection of essays, *Chizu No Shiwa* (1985), and several articles based on his research on this map collection, mostly in the journal, *Kochizu Kenkyu/Antique Maps*.

A number of other people have written essays and papers in English based on research on these maps, plus a Master of Arts thesis, *The Redhaired in Japan: Dutch Influence on Japanese Cartography (1640-1853)* by Elisabeth Maria Jacobs (UBC 1985).

Acknowledgements

I would like to take this opportunity to thank Professor Kazutaka Unno for his very knowledgeable assistance. Without his help, any attempt to recatalogue UBC's Japanese map collection would have been very difficult.

In fact, without his help, there might not have been a collection to recatalogue. Professor Unno was one of the people who assisted George Beans with the acquisition of his maps, and who provided much of the information for the *List* and its

Photo Opposite
Tokoku Zenzu (Panoramic View of China) by Hokusai, 1840.

supplements.

I would also like to thank Tsuneharu Gonnami, our Japanese reference librarian, who both romanized and translated the post-Beans acquisitions for me, and Tamako Copithorne who assisted in the selection of maps for this paper, and provided notes on the slides.

Glossary

Words relating to Japanese cartography in the Edo period.

Annai

guide

Chizu

plan (Zu=map); used before & after Tokugawa period, but never during it

Choko

engraver

Chokusen

straight

Dai

large, big (e.g. Dai Nihon)

Dochu

journey, trip, travelling

Dochuki

guide book; traveller's handbook

Emaki

picture roll/scroll (E=picture; Maki=roll, scroll)

Ezo

Early name given to the islands north of Honshu. In Tokugawa times, the island of Hokkaido was called Eastern Ezo; Sakhalin or Karafuto was called either Northern or Upper Ezo, and the Kuriles, sometimes called Chishima, were considered an extension of Eastern Ezo.

Ezu

map (Zu=map); used during Tokugawa period; now used only for old maps, i.e. of Tokugawa period

Fujisan

Maps associated with the sacred mountain.

Funai

Central part of Edo; the earliest plans of the city were confined to this area.

Gako

artist

Gazu

depict; draw (also: Zuga)

Gempan

original edition

Genzu

original map

Gojusan

The 53 stations of the Tokaido.

Gokaido

Five Great Roads (including Tokaido)

Go-kinai

The five provinces nearest Kyoto.

Hayami

quick look; at a glance; visualized

Heiko

parallel (e.g. Heiko Chokusen Shiki=parallel straight type=parallel type)

Hensha

editor; compiler

Hikko

copyist

Hitori

self-guide; indivisual, alone, "oneperson"

Hozen

preserve

Ichiran

have a look at; see at a glance

Itsukushima

Island southwest of Honshu; one of the three landscapes considered the most beautiful in Japan; Shrine considered one of the "Three sights of Japan."

Kaisei revised	Nagasaki-kaido Nagasaki Road	Sei make
Kiso-kaido see Nakasendo	Nakasendo One of the five main highways, it followed an inland route from Edo to Kyoto. Also called Kiso-kaido.	Sen engraving
Ko artisan	Narabini and; as well as; in addition to	Seto-naikai Inland Sea
Ko revised	Nihonkai Japan or Western Sea	Sha person
Kogo Teisei revised	Nikko-kaido One of the five main highways, it ran from Edo to Nikko.	Shi description
Koku a country, a province	O (honorific) quality (e.g. great, honourable)	Shiki style, type
Kosei revised; revision	O (size) large, big (e.g. Oedo; but Dai Nihon)	Sho various
Kosha reviser	Orihon accordion folded	Shokoku various countries, e.g. provinces (Koku=a country, a province; Sho=various)
Koshu-kaido One of the five main highways of Tokugawa Japan, running from Edo to Shintoshuwa.	Oshokaido One of the five main highways, it ran between Edo and Aomori at the north end of Honshu.	Shozu drawn
Kotei revised; revision	Roku describe	Shukuzu reduced map
Koyasan Mountain in Kii province famous for its numerous temples.	Rotei itinerary	Shusha editor
Ku shrine (e.g. Ise shrines: Geku=outer shrine; Naiku=inner shrine)	Ryosen 2 engravers (Ryo=two; Sen=engraving)	Shushasuru copy (verb)
Maki roll, scroll	Saikaido Western-sea circuit. Nine provinces.	Teisei correction, revision, amendment
Mandala distorted panorama rising to point	Saikairikudo Water route between Osaka and Nagasaki via the Inland Sea.	Tokaido One of the five main highways of Tokugawa Japan, running eastward along the coast from Osaka and Kyoto to Edo.
Matsushima Group of more than eight hundred tiny islands in Matsushima Bay; one of the three landscapes considered the most beautiful in Japan.	Saiken detailed	Tozando The eastern-mountain circuit; eight provinces.
Meiro maze, labyrinth	Sakusha author, maker	Yaku translated
Meisho a place of interest; a noted place; a tourist spot; sight (to see)	Sanindo The mountain-back circuit; eight provinces.	Yochi land, lot, site (depends on context)
Mosha copy		Zenran total, entire
		Zenzu a complete map

- Zoshu
enlarged
- Zotei
revised and enlarged
- Zu
map
- Zuga
depict, draw (also Gazu)
- Zukai
an illustration, a diagram
- Zukei
figure, shape, landform (e.g. Zukei Hozen Shiki=landform preserve style=ordinary map)
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Employment

These positions close before publication of this *IB*; they are included here as a matter of record.

CURATOR, AMERICAN GEOGRAPHICAL SOCIETY COLLECTION.

Position available July 1, 1993. The Golda Meir Library, University of Wisconsin-Milwaukee, invites applications and nominations for the position of Curator of the AGSC.

Duties: Responsible for the senior management and administration of all operations. Formulation of goals and policies; budget preparation; supervision of 5.5 professionals and 2.5 support staff; collection management; preservation and restoration; teaching and lecturing; development of outreach program; liaison with the AGS in New York City and UWM Schools and Colleges; and management of the active publication program. The Curator reports to the Library Director and also works closely with the Associate Director.

Qualifications: Required - MLS from an ALA-accredited program; Master's degree or above in geography or a closely related subject; knowledge of cartography; minimum of 5 years successful senior managerial experience in a special or academic library; ability to provide strong leadership,

promote scholarship and guide professional activities; ability to communicate effectively, including teaching, delivery of lectures, seminars, and presentations; ability to work collegially with faculty staff, and scholars; knowledge of and experience with rare materials including restoration/preservation techniques; commitment to the principles and goals of affirmative action and equal opportunity. Preferred: Professional leadership at the national level in geography and map collections; knowledge of 2 or more major European languages; accomplishments as a researcher and scholar; demonstrated ability to general external support for library programs.

Appointments/benefits: Administrative appointment with academic staff back-up. Generous vacation and fringe benefits.

Salary: \$47,100+, competitive and depending upon qualifications and experience.

Application: UW-Milwaukee and the Golda Meir Library strongly encourage women and minorities to apply. Please send letter of application or nomination, resume, name/address/telephone number of 3 references, and transcripts to Elcsc Colvin, Personnel Librarian, U of WI-Milwaukee, Golda Meir Library, POB 604, Milwaukee WI 53201. All applications must be postmarked by April 16, 1993.

LIBRARIAN, MAP DIVISION, NEW YORK PUBLIC LIBRARY

Responsibilities include reference service, microcomputer applications, and supervision of support staff. Announced in *NY Times*, January 10, 1993.

The 1991 ARL Cartographic Resources Survey

by

Dr. Charles Seavey
University of Arizona

NOTE: This paper was presented at WAML in Chico in April of 1992; Mary L. Larsgaard read the paper for Charley.

For reasons which will become clear, this is very much still a work in progress. No final conclusions about anything should be drawn from what follows.

The question of measuring and evaluating various parts of library services or collections is something that has been on my mind for a long time. At its simplest level it arose, as ideas often do, at a party.

I was just beginning to figure out my dissertation topic, and was describing, after several beers, to one of my fellow students that I was going to look at the quality of public library service in Wisconsin in 1970 and 1980 and see if anything had changed. "Oh yeh," sez she, "how are you going to measure quality?"

Good question. After a lot of thought I came up with something that seemed reasonable to me, and the committee bought it, and now I am Mapdom's emissary to library education.

The measures that I applied to public libraries in Wisconsin, are based on something the Public Library Association came up with in 1982 called Output Measures for Public Libraries. The idea is that instead of

simply counting books, or circulation, you count them in relationship to the population the library is serving. Thus circulation per capita, or holdings per capita, become the critical measures instead of raw counts.

The concept of measuring, or evaluating the library in the context of its user population can, and is, now being applied to all types of libraries and specific collections and services within individual libraries. I published a think piece about output measures for documents collections in *Government Publications Review* in 1991. At the 1990 Denver WAML this audience was patient enough to listen to my first cut at trying to apply the same ideas to map collections. Part of that presentation wound up in *College and Research Libraries* in January of 1992, and other parts showed up at the ACRL conference in Salt Lake City in April of 1992.

At the heart of evaluation systems, based on the ideas in Output Measures, is the requirement for good numbers upon which to figure the various ratios. Libraries have long been collectors of statistics of all kinds: number of materials in the collection, number of employees, amount of money spent, circulation, etc.

When I started all this for map collections, my assumption was that we had pretty good data as well. Because I wanted something flashy to hang the

ideas on, and because I have long felt that the statistics collected and reported by the Association of Research Libraries (ARL) are not particularly useful as evaluation data, I elected to pick on the map collections of the ARL to measure and evaluate.

The original paper I wanted to write was much more ambitious than what has emerged. It would have been full of multiple regressions, analysis of variance, and all the statistical whiz-bang stuff that tenure committees love to see.

I used as a source of data both editions of the MAGERT *Guide to U.S. Map Resources*. The editor, Dave Cobb, warned me that a lot of the data in the *Guide* were pretty shaky. In my naivete I figure the ARL libraries would be no problem. WRONG.

In the end I had to scale way back on what I was trying to do because the data simply wouldn't stand up to the kind of stuff I wanted to do with it. Too many collection sizes ending in 4 and 5 zeroes, too many peculiar FTE counts, too many map collections which either don't circulate maps or don't record the data if they do, too many collections (including Harvard) who didn't know, or couldn't figure out, how many square feet their collection occupied.... well, you get the idea. The Denver WAML paper,

the *C&RL* article, and the Salt Lake City paper, while useful for what they are, are all based on what I describe to my research methods classes as "squishy data."

Ok, I figured, I don't much like Cobb's data, I'd better get some of my own. Hence the great 1991 ARL Cartographic Resources Survey was born. The survey is based on the one in the *Guide*, but with more explanations, and spaces to indicate whether the data were actual counts, or estimates. The idea was to start asking the ARL collections, every year, for the kind of data I wanted, and eventually I would get it.

I ran the survey instrument by the Cartographic Statistics Task Force of MAGERT at the Midwinter meeting in San Antonio, and, as the ultimate arbiter of things in Mapdom, I gave a copy to Mary Larsgaard. She suggested changing the survey from a calendar year basis to a fiscal year basis; since I was going to start asking for budget data eventually, why not just start with FY's instead of shifting gears down the line.

The ninety or so U.S. libraries of the ARL have 158 map collections among them. 158 surveys were mailed out in February 1991, with a due date of March 31, 1992. To date, after some cajoling, I have received 88 returns, for a response rate of a little over 55%. Needless to say, this is somewhat of a disappointment, as I really did not want to get into follow-up letters and all that. Those of you who haven't filled it out may slink quietly from the room and go feel guilty someplace.

I will be doing follow-up queries very shortly in an attempt to get this thing back on track. My feeling is that if we can get one or two surveys completed, it will become second nature for the map collections to start

filling them out every year, as well as collect more useful data.

So, what follows is based on very incomplete returns. For that reason, I won't try ranking all the ARL collections, but will restrict the paper to some discussion of what I've found out about doing surveys, some of the horror stories from the returns, and a look at some data collected from the WAML principal region- which, after all, contains 2 of the top 5 map collections in the country.

Things I've learned about doing surveys.

Remember that a lot of people, mostly experienced map librarians, had looked at this survey before I unleashed it. But, no matter how unambiguous you think a question is, it is going to be mis-interpreted. Question 3, for instance, asks for the square footage devoted to the entire map collection. A number of respondents have dutifully figured out the square footage occupied by the map cabinets, and left out the rest.

Another interpretation question is really my fault. Despite a nice explanation of how to calculate FTE employees in Question 14, I used the unfortunate phrase "devoted solely to working with maps?" in the question. Understandably a number of people took this to mean that they shouldn't count people who only worked part time in the map collection, and part time elsewhere in the library. That question will be re-phrased the next time around.

Another question that got lost because of editorial sloppiness was Question 16 where I ask if the answers to Question 11 are based on estimates or actual count. The question should have referred to Question 15, which related to size of the collection, rather than Question 11 which had to do with circulation. Ooops.

Before the next round of surveys goes out next fall, the lessons we've learned from this one will be incorporated into the new instrument. My teaching assistant, who has been doing the actual data entry, is working on new wording for the problems mentioned above, as well as others which can be better explained or clarified.

Horror Stories from the Front

And I really wish I didn't have some of these.

One response to Question 3, on square footage, solemnly replied that their collection had "24 feet of maps and 15 feet of atlases."

Question 8: How many hours a week is the collection open for public use? Answer: "The same number of hours as the rest of the library."

An alarming number of people don't seem to understand the relationship between the term "large scale," and the numerical statement thereof. Question 24 asks: Of the total map count, what percentage are large scale (> 1:500,000) quadrangle based maps? One reply: "We don't have a lot of large scale maps, mostly just USGS topo sheets."

That's the worst answer to the question, but there are a number of others which make it clear that "large scale" means big numbers in the RF (e.g.: 1:1,000,000 is large scale). The mistake may have been using the > (greater than) sign, or it may be that a lot of non-full time mapfolk simply don't understand what they are dealing with. When we get all the surveys in I'm going to break out the responses on this question and see if there is a systematic problem. My assumption is that it will be the part-timers, or those in small specialized

collections, who don't know the difference.

In terms of actual data collection, a sizeable proportion of the respondents don't bother to collect circulation statistics, or seem to know how many people use their collections every month. In a time when libraries are facing increasing fiscal pressures, and maps are regarded with some suspicion anyway, not knowing who your users are, or even how many of them there are, seems suicidal to me.

The WAML Principal Region

Now we are getting down to the part where everyone wakes up, because names might be named. Given the overall poor response rate, names will not be named, and instead we'll try for a snapshot of the ARL libraries in the principal region, or most of it.

The response rate, by state, for the principal region is shown in the following table.

Response Rate, by State WAML Principal Region	
Arizona	100%
California	54%
Colorado	100%
Hawaii	100%
New Mexico	100%
Oregon	100%
Utah	33%
You know who you are!	

In California 10 out of 22 collections surveyed have not responded, and in Utah 2 out of the 3 have not responded. The overall response rate for the region is a little over 36%, largely because of the great numbers of collections and poor response rate from California. Remember that the response rate nationwide is 55%. The rest of the data presented here are based on the five states, for which there are complete data.

The following table represents the average ARL cartographic collection in the WAML principal region.

Average Collections WAML Principal Region 100% Data	
Maps	142,265
Air Photos	89,663
Images	83,716
Atlases	1,308
Globes	8
Serials	17
Microforms	8,032
Computer tapes	175
Books	608

There has been some debate about the differentiation between air photos and remotely sensed images. Some folks argue that air photos, by definition, are remotely sensed images. Others argue there is a difference.

There is also a good deal of discussion about computer materials. Because I based the survey on the *Guide*, tapes are the only format mentioned, and that is clearly inadequate. A myriad of other digital formats were mentioned on the returned surveys. Either I'm going to have to expand the survey instrument considerably to cover all the possibilities, or I'm going to have to abandon the category altogether.

The Collection Activity table presents some simple descriptive statistics for normal map collection activities.

Average Collection Activity WAML Principal Region	
Hours Open	50 per week
Circulation	4,334 per year (87.5% of the collections circulate maps)
Ref Q's	341 per month
Maps refiled	867 per month
Maps added	6,306 (fy 1991)

The collections in the principal region represented here appear to circulate a good deal more than do collections nationwide. This is an "eyeball the data" opinion, nothing firm as yet. If I had to generalize I'd guess that as one moves from East to West in the country, collections are more apt to circulate than not, and that other usage indicators will be higher in the west. Nationwide not all collections either keep track of, or report, the statistics on this table.

The next two tables are simply bits of interesting data I picked out of the material for the 8 collections being looked at.

Other Collection Data I WAML Principal Region	
Avg. Maps added (fy '91)	6,306
Avg. Sq. Feet	2585
69% of the collections are at scales greater than 1:500,000	
2 collections are open access	
1 collection is closed access	
5 collections are partially open	
Other Collection Data II WAML Principal Region	
62.5% use OCLC for cataloging	
75% use LC Classification for maps	
5 collections use card catalogs	
3 are on OPAC's	
2 collections have cataloging records integrated into the main catalog	
3 collections are partially integrated	

When we have complete, and reliable, data in these categories, comparisons by region, or amongst individual institutions, will be a lot more realistic than is now possible.

The figure of 69% of the holdings at scales greater than 1:500,000 is still open to some question— at least one of the eight returns didn't seem to be too sure on the topic. I keep hammering on this because of my argument in

the *C&RL* article that map collections contain more unique information than do other portions of the library. Each large scale map is a unique piece of information—there is no Marxist, or deconstructionist, interpretation of the same data. The referees and the editor at *C&RL* weren't real sure about the argument.

There are a lot of mixed messages in the area of cataloging and classification. I included some definitions of each in the survey, because in looking at the data in the *Guide* it seemed to me that there is a good deal of confusion as to what is exactly meant by the two. (Cobb agrees with this, and the next *Guide* survey will be more specific).

People refer to "Dewey cataloging," or "Sudoc cataloging," when they mean classification. Perhaps it is because I come out of the documents world, where we use Sudoc classification mated with AACR II cataloging, or since we classified the maps at New Mexico but did not catalog them, that this appears to be an issue. It will be really interesting to investigate patterns of usage after more collections integrate their cataloging records into the library's main catalog. There is anecdotal evidence from the documents world that usage skyrockets when records are integrated.

As an illustration of the type of measures that I'd like to be able to use to evaluate all map collections, consider the table on holdings per 1000 population.

Holdings per 1,000 Population by State

WAML Principal Region	
Hawaii	135 Maps
New Mexico	117 Maps
Arizona	111 Maps
Oregon	86 Maps
Colorado	48 Maps

When collections are evaluated in terms of their user populations the results are sometimes different from what conventional wisdom would dictate. I've used total state population for this, which is unrealistic in some senses, but does give an indication of how things can change. The University of Oregon is the largest collection represented here, but it is the only ARL collection in the state. Hawaii has the smallest collection, but also has a far smaller population.

It can be argued that in terms of collection in relationship to population, Hawaii is doing a better job than is Oregon. The picture would doubtless change if I were using university population instead of state population, but the concept remains the same. Placing holdings, or circulation figures, in per capita terms often shows us relationships that are often not visible when simple counts are used. It is this sort of measure which we should eventually be using in evaluating our collections.

Conclusion

The 1991 ARL Cartographic Materials Survey is, regrettably, still very much a work in progress. Because we, as a profession, need baseline data, I'll be aggressively pursuing non-respondents (including Harvard) very shortly. Because of some of the mistakes and shortcomings of the instrument I'll probably not report the results of this survey beyond some general observations on MAPS-L, or perhaps in *baseline*. The survey will be refined from what we've learned from this one, and a fresh survey, asking for FY 1992 data will go out in the fall of this year.

Because of the low return rate so far I'm probably going to round up some help in various parts of the country to do follow-up work with the non-

respondents. The fall survey will also include the Canadian ARL collections (with a Canadian coordinator), and I'll start asking for budget data at the same time.

As I get educated on how to do surveys, I hope that the ARL mapkeepers will become educated in collecting the kind of data requested in the survey. Nothing asked in the survey is particularly outrageous. I was collecting most of the data asked for at Northern Iowa 18 years ago long before libraries started feeling budget crunches, or the word "accountability" was mentioned.

Most of the data requested is straightforward material that any collection manager should be already collecting. It is somewhat alarming that that does not seem to be the case. I've long felt, as I suspect that most people in this room do, that map librarians are a brighter bunch than "ordinary" librarians, and we can show the rest of them how to do it right. The goal of the survey is to produce data that we can use to devise an evaluation system which tells us a lot more about us, and our interaction with our user population, than we currently know. So, sharpen up your pencils and start counting things....

Many thanks for your patience, and apologies for not being here. Only the fact that someone else is paying me real money to be at their conference kept me away. WAML is always a lively and informed audience, and I don't have to worry about being so "academic" that it gets boring. I appreciate feedback, but remember that the reader here present didn't write the thing, so make sure you don't pick on her.

ARL Cartographic Resources Collections Survey FY 1990-1991

1. Collection name:
 Address:
 Telephone number:
 Fax number:
 E-mail code:
 Responsible person:

Questions relating to facilities:

3. What is the square footage of floor space occupied by the map collection?
 4. How many conventional five-drawer flat file map cabinets do you have?
 5. How many five-drawer flat file map cabinets in a compact-shelving arrangement?
 6. How many vertical map cabinets do you have?
 7. How many vertical files do you have?
 4-drawer: _____ 5-drawer: _____

Questions relating to usage:

8. How many hours a week is the collection open for public use?
 9. Do maps circulate from your collection?
 10. Do all maps circulate or are there limitations? Yes No
 There are limitations by: date: ___ format ___ type of user: ___
 11. What is the annual circulation rate for:
 Maps: _____ Books: _____ Aerial photos: _____ Imagery: _____ Other: _____
 12. How many reference questions are answered per month in the collection?
 13. How many maps are refilled per month?

Questions relating to personnel:

14. How many FTE's are employed in the collection and devoted solely to working with maps?
 FTE is arrived at by taking the total number of hours worked, and dividing by the hours in the normal work week at your institution. For example, the collection employs students for 75 hours a week. The normal work week is 40 hours. $75/40 = 1.875$, so the collection has 1.875 FTE students. If the normal work week were 37.5 hours, then the calculation would be $75/37.5 = 2$ FTE.
 Full Time _____ Part Time _____
 Professional: _____
 Support Staff: _____
 Students: _____

Questions relating to collection size and growth:

15. Please indicate the size of your map collection as of the fiscal year ending June 30, 1991.
 Maps: _____ Serial titles received: _____
 Air photos: _____ Microforms: _____
 Remotely sensed images: _____ Computer tapes: _____
 Atlases: _____ Other books: _____
 Globes: _____
 16. Are the answers to question 11 based on:
 a. actual count ___ b. estimates ___
 17. How many map sheets were added to the collection during FY 1990-1991?
 a. actual count ___ b. estimate ___
 18. How many map sheets were discarded from the collection during FY 1990-1991?
 a. actual count ___ b. estimated ___
 19. How many aerial photos were added to the collection during FY 1990-1991?
 a. actual count ___ b. estimate ___
 20. How many aerial photos were discarded from the collection during FY 1990-1991?
 a. actual count ___ b. estimate ___

- 21. How many remotely sensed images were added to the collection during FY 1990-1991?
a. actual count ___ b. estimate ___
- 22. How many remotely sensed images were discarded from the collection during FY 1990-1991?
a. actual count ___ b. estimate ___
- 23. Number of maps estimated in storage and currently unavailable for use?
- 24. Of the total map count, what percentage are large-scale (.1:500,000) quadrangle-based maps?

Questions relating to access to the collection:

- 25. Is your map collection cataloged? That is, are there surrogate records both describing and providing access to the map collection? Yes: ___ No: ___ Partially: ___ If partially, what percentage is cataloged?
- 26. Is your collection classified? That is, do you use a call-number system to organize the shelf arrangement of your maps? Yes ___ No ___ Partially ___
- 27. If classified, which of the following systems do you use, and if mixed, in what percentages?
Library of Congress: ___ Dewey: ___ American Geographical Society: ___
Superintendent of Documents: ___ Other (Please explain):
- 28. What cataloging utility do you use for cataloging maps?
OCLC: ___ RLIN: ___ WLN: ___ Other: ___ None: (please explain)
- 29. In what format is your catalog? Check all that apply.
Card: ___ OPAC: ___ COM: ___ Computer printout: ___ Other (please explain):
- 30. Are your cataloging records integrated into the library's main catalog? Yes: ___ No: ___ Partially?
- 31. Is your collection open-stack? That is, do patrons retrieve their own maps?
Completely: ___ Closed stack: ___ Partially open ___

Changes in the 1991-1992 survey, which went out in November of 1992:

- Questions 3-7 were renumbered (correctly!) to questions 2-6.
- Question 9 (now numbered 8) became: Do all maps circulate from your collection?
- Question 10 (now numbered 9) became: If the answer to question 8 is NO, are the limitations by:
Date of map: Format of map: Type of user:
- Question 14, on FTE, became Questions 13 and 14, and a table:

Employment status	Number of individuals	Total number of hours worked per week by all the individuals in column B
Professional - full time		
Professional - part time		
Support staff - full time		
Support staff - part time		
Students - full time		
Students - part time		

- 14. What is the standard full-time work week, in hours, at your institution? ___ hours

Question 15 had added to it the definition for remote-sensing images from *Cartographic Materials: A Manual of Interpretation for AACR2*. Therefore questions 20 and 21 were removed.

Question 24 (now 22) became: Of the total map count, what percentage are quadrangle-based maps at a scale greater than 1:500,000? Large-scale, for example is 1:24,000; smaller scale is 1:500,000.

Questions relating to access to the collection were removed, and Questions relating to budget were added:

23. What was the materials budget for your collection for 1991-1992? Do not include money from grants, endowments (unless it is a regular line), gifts, or other non-standard lines.

24. If you can separate your materials budget out by format, how much was spent for:

Maps:

Monographs (including atlases):

Remote-sensing imagery:

Digital data:

25. Do you have acquisitions funds that are NOT part of the normal budget process, such as endowment funds, gifts, grants, etc.? If so, what were your expenditures from these sources in 1991-1992?

Cartography - A Brief Account of its Historical Development and Current Status

by

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Abstract

The field of cartography is a wide one. Like many other disciplines, cartography has gone through transitional periods of fame and uncertainty. This paper describes the historical development of cartography and briefly accounts for possible impacts of design and innovative techniques in map making.

Cartography - Definitions

Cartography was defined in 1973 by the Cartographic Commission of the International Cartographic Association (ICA) to mean:

"The art, science and technology of making maps, together with their study as scientific documents and works of art. In this context maps may be regarded as including all types of maps, plans, charts, and sections, three-dimensional models and globes representing the Earth or any celestial body at any scale." [1]

In 1950, the terms "cartographer" and "map maker" were synonymous and used interchangeably; in 1975, they became distinct. Why? Because maps were viewed as a storage medium for spatial data, and there was an increased concern for the map as a medium of "effective" communication of spatial information.

The main purpose in the 1950s was simply to make a map to show locations and directions; by the 1970s,

there was an increased emphasis and an outburst of literature on cartographic communication and design, cognition, and visualization [2, 3, 4]. This trend has prompted cartographers to be more sensitive to the capabilities of their perceived map readers as the psychology of the map reader sets upper and lower bounds on the cartographer's freedom of design [5, 6].

As a result of considerable technological change, the 1980s were an era of automated mapping [7]. Computer-assisted mapping systems were developed, primarily imitating conventional cartographic processing. Nonetheless, automation has warranted a new definition for cartography. In 1989, Christopher Board proposed a new definition for cartography:

"... the organization and communication of geographically related information in either graphic or digital form. It can include all stages from data acquisition to presentation and use."

and an independent definition for the

map as:

"... a holistic representation and intellectual abstraction of geographical reality, intended to be communicated for a purpose or purposes, transferring relevant geographical data into an end-product which is visual, digital or tactile." [8]

The 1990s appear to continue along the digital trend, governed by the geographic information system (GIS) technology and using the global positioning system (GPS) to assist in accurate determination of locational coordinates. It also appears that there is an increased interest in integrated or multi-media systems which support various visualization techniques simultaneously [9, 10, 11].

Historical Development of Cartography

A. General Cartography

No one knows when the first cartographer prepared the first map, which was probably a crude represen-

tation of locations drawn in soft earth or sand, or scratched on a rock.

Perhaps the oldest authentic map that survives today is a clay tablet nearly 5000 years old showing mountains, water bodies, and other geographic features in Mesopotamia [12].

It is known that by the time of Aristotle (384-322 B.C.), the Earth was recognized as being spherical from evidence such as differences in the altitudes of stars at different places. Among the great influences affecting Western, medieval and Renaissance cartography were:

a) estimates of the size of the Earth made by the ancient scholars Eratosthenes (ca. 276-195 B.C.) and Posidonius (ca. 130-50 B.C.) from angular observations on the sun and stars in the eastern Mediterranean area;

b) writings of Claudius Ptolemy (ca. 90-160 A.D.) in a treatise on cartography, including descriptions on how maps should be made, and directions for dealing with the problem of presenting the spherical surface of the Earth on a flat sheet. It is through Ptolemy's direction that map projections - studies on representations of a curved surface (the globe) onto flat surfaces (maps) and deformation or distortion problems associated with each method of representation - were later developed.

Medieval cartography was dominated by the 'T-in-O' maps, designed with the Mediterranean as the upright part of the 'T', the Don and Nile rivers as the crosspiece, and the whole inside a circular 'O' ocean [13]. These maps reflected the threefold division of the Earth among Shem, Ham, and Japheth - the sons of Noah - on the then "known world".

Two advances in cartography after the Dark Ages of the Medieval period are:

a) the contributions of Idrisi (1099-1164 A.D.), an Arab scholar at the court of King Roger of Sicily, on cartographic processes;

b) quite accurate sailing charts called portolan charts, prototypes of our modern nautical charts for navigation, resulting from the growth of interest in faraway places.

A rapid advance of cartography occurred soon after 1450, upon the invention of printing and engraving, which made possible the reproduction of maps in numerous copies.

"Modern" cartography owes a great deal to the development of lithography (a method of oil printing which makes possible the easy and inexpensive duplication of drawings), the invention of photography, the development of color printing, the rise in the technique of statistics, the development of the airplane, and the rise of professional scholarly societies.

Two important categories of maps are evident:

(a) the preparation of a variety of general maps used for basic reference and operational purposes, including topographic maps of the land, hydrographic charts, and aeronautical charts; and

(b) the preparation of an even larger variety of maps used for general reference and communicative purposes, including thematic maps of all kinds (such as atlas maps or road maps) and statistical maps (mapping of processed data using one of the following mapping techniques - isoline; choropleth; vertical bar; three-dimensional; dot distribution; proportional symbol; etc.) [14].

The first category of maps use data obtained by field survey or by interpretation from air-photographs or high altitude imagery. These maps are meant to be true representations of the Earth. Complex electronic and photogrammetric instruments and remote sensing are an integral part of this sort of cartography.

The second category of maps is mainly concerned with the communication of general information and with the effective graphic delineation of relationships, generalizations, and geographical concepts. The subject matter may be drawn from history, economics, urban planning, rural sociology, engineering, and many other areas of physical and social sciences. There is the concern for a properly designed, clear, legible, graphic communication to assist in the understanding and interpretation of the social and physical complex on the Earth's surface, not directly observable from photographs or satellite images.

B. Organizational and Institutional Developments

There were few professional societies for cartographers before 1950. Scholarly publications on cartographic communications often appeared in the journal[s] of geographical societies. Cartographers did not have independent professional meetings, but rather met in geographic symposiums. Cartography was viewed then as one, somewhat less intellectual, component of the broad field of geography. Some geographical journals even established quotas for the number of cartographic contributions.

The need for cartographic products

(such as maps and charts) during and after the Second World War increased the visibility of cartographers, who became increasingly dissatisfied with being perceived as merely a lesser element of geography. They felt the need for professional organizations with cartography and cartographic views as their major concern. A substantial increase in cartographic journals and societies occurred after 1950. Cartographic societies were established worldwide, in Europe, Asia, South America, North America, Australia, and New Zealand.

The establishment of professional societies has been very active since the mid-1950s. There are nearly thirty societies around the world, and more than forty journals are published. Beginning in the 1970s, various conferences have been held with specific emphasis on cartography and automated-mapping systems.

Because cartographers share common interests with surveyors, photogrammetrists, and planners, some societies have included these interests. For example, the American Congress on Surveying and Mapping (ACSM) in the United States encompasses both surveyors and cartographers. The American Society of Photogrammetry and Remote Sensing (ASPRS) has members consisting of photogrammetrists, remote sensing specialists, and cartographers.

Cartography is represented at the international level by the International Cartographic Association (ICA) and the International Society of Photogrammetry and Remote Sensing (ISPRS), organizations in which countries, not individuals, hold membership. Planners have included cartographers in organizations such as

Automated Mapping and Facilities Management (AM/FM) and the Urban and Regional Information Systems Association (URISA).

The role of cartography in institutions of higher education developed considerably after 1950. It was also realized around this time in the United States that the training of a map librarian should occur before and not after an individual had become a map librarian [15].

Cartography courses prior to the Second World War were few in number, and were offered mainly as 'technical' or 'practical' training courses for geography students. After the War, the number of institutions offering cartographic courses in the United States grew from 29 in 1948-49 to 264 in 1972-73 [16].

There was also steady growth in the numbers of higher degrees granted in cartography and number of cartography courses in the same period. In recent years, cartography has regained popularity in the academic domain, given the present emphasis on geographic information systems processing.

The Field of Cartography at Present

Mapmaking is a very old activity, but the great technical advances in the processes of mapmaking, the growing need for education and research in cartography, and the importance of maps as documents, analytical tools, and communicative devices have all caused cartography to become a broad and diverse field, with applications in almost any discipline. Probably the most profound changes in the broad field of cartography occurring at present are a result of continuing

development of techniques associated with automation and computer applications [17].

The first successful attempt to produce graphics from computers, reported in the early 1950s, used the now-standard computer output device or the line printer. By the late 1960s, the SYMAP program, written by Howard T. Fisher and developed at the Laboratory for Computer Graphics and Spatial Analysis at Harvard University, was used by more than a hundred sites, of which universities form the majority.

It was not until the 1970s that central and local government planning staffs in the United States experimented with automated mapping [18]. The hardware (consisting of computers and peripheral equipment) and mapping software (dedicated mapping programs for accomplishing particular mapping tasks) have revolutionized conventional cartographic procedures. More importantly, they have introduced the concept of interactive mapping, which allows the user to compile maps tailored to an individual's needs and to design criteria from map data stored in digital form.

Today, maps come not only in paper form; computer technologies permit electronic storage of maps and map data in digital format on disks (magnetic, compact, or video), magnetic tape, microform, or tape cassette [19, 20]. The computer permits cartographic representations of digital maps using varied mapping techniques, and does so with great speed and precision. The map user can now cycle back and forth between design, analysis and interpretation during the process of gaining environ-

mental understanding.

Maps can no longer be thought of as being instantaneous pictures or static time slices by definition, but must begin to include time as a prime factor. Integrated systems of automated data acquisition and mapping make information display possible in time frameworks never before achievable, and thus open mapping activity to include phenomena which are short-lived by nature when compared to the span of the traditional mapping processes.

The profound potential of computer technology is probably yet to be fully discovered, as evolutionary changes are now occurring in methodology, technology, and institutional structures. In all likelihood, the cartographer's current attitudes and methodologies will be expanded and altered. The recent trend has indicated three obvious areas of importance in automated cartography:

- (a) image analysis and processing;
- (b) global positioning systems (GPS) surveying; and
- (c) geographic information systems (GIS) modeling.

An image analysis and processing system is uniquely set up to handle raster/gridded data, such as LANDSAT. The system facilitates the analyses of surface or subsurface spatial features of non-statistical nature (e.g., land uses, vegetation coverage, ground water distribution, etc., as opposed to demographic, socio-economic or census statistics) through its imaging capability (using different spectral bands) of Earth observation satellites. These imaging systems yield image data of an extensive coverage in a short amount of time, although the image resolu-

tion is still well below that of aerial photographs required for detailed mapping tasks.

Global positioning system (GPS) is primarily a surveying and mapping tool that provides accurate measurements for positions on the Earth's surface. Coordinate data, including elevation, thus obtained are automatically recorded in the computer and then plotted for visual verification. Unlike conventional surveying techniques, GPS not only provides speedy capture of locational and elevation data but permits such data to be collected in remote and previously inaccessible areas.

Both image processing systems and GPS are means of supplying digital map data that form the basis for map compilation and cartographic modeling. A geographic information system provides an integrated environment for the modeling of geographic phenomena for planning and management purposes. This system permits raster/gridded and vector/polygonal data formats, with comprehensive mapping and analytical tools, all in a spatial data management environment. The system can also handle a combination of statistical data not visible or interpretable from an image processing system or LANDSAT sources.

Concluding Remarks

With an increased tendency to record spatial data in digital form, continuing advancement of computing devices, and the prevailing development of cartographic information processing principles, it is not difficult to envision widespread installation of automated cartographic systems in the future. But the primary force behind this revolution in cartography is technological

innovation. Unless the technology, which profoundly affects the cartographic profession, is addressed in parallel with a reformation of cartographic theory and knowledge for the computerized setting, the change will be superficial and may give rise to significant problems in implementation.

Cartography and maps are inseparable. As maps have to undergo an altered state, from printed/tangible to digital/paperless databases in a computerized setting, so must the cartographic discipline be redefined and its concepts reevaluated. As Taylor cautioned:

"The need for cartography's traditional product - the paper map - will continue, but this market is unlikely to grow at a rapid rate, and if cartography is to flourish then the paper map will have to be supplemented and complemented by new products, and the topics to which cartography is applied must be expanded. This will require imagination and initiative by cartographers. This is primarily a human not a technological problem." [21]

It has been observed that sophisticated computerized systems may aid in the production, compilation, and revision of maps. There is the necessity in the communication between the systems analysts (computer technologists) and the cartographers (mapping technologists) of knowing each other's fields. Otherwise, cartographic design may be limited by technicalities - on the one hand, cartographers may not be able to employ computerized mapping systems to their full capacity while, on the other hand, systems analysts may

lack the subject specialty knowledge to implement functional systems [22]. The outcome would be a map that looks nice but communicates very little, or even distorts information.

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Sounding Board

•Ron Whistance-Smith (see address at Alberta Editor, *IB* masthead) needs copies of ONCs E15, E16, and E17. Please let him know if you have some extras (403/492-4760).

•Rich Soares (see address on *IB* masthead) is looking for the address of a map dealer, Herman Bender.

•A few months back, Ron asked your Editor about finding GEOGRAPHICAL centers of population, and in a cowardly fashion, I referred him to the USGS (1-800-USA-MAPS). Well ... no luck on that yet, but the Bureau of the Census is indeed working on a report, *Centers of Population for States and Counties, 1950-1990*.

-If you need the plastic UTM aid to be used with USGS topos to get UTM coordinates, try Forestry Suppliers, Inc. (1-800-647-5368; stock number 47917; \$4.60). You may be able to get a paper one from USGS.

Trading Post

•Claren Kidd (Youngblood Geology Library, 100 E. Boyd, R-220, University of Oklahoma, Norman OK 73019-0628; email ua2431@okumvsa) needs various 15' USGS topos of Arkansas, Colorado, Kansas, New Mexico, Missouri, Oklahoma, and Texas (lots of this last state). If you have some duplicates for these states, do get in touch with her.

•If you can use superseded copies of any of the NUC-Cartographic Materials in microfiche (any part except the Register!), let your Editor know.

Format Integration and Spatial Data: A Preliminary View

by

William E. Studwell and Elaine K. Rast

In a way, format integration is both an old topic and a new one. When USMARC was first being developed back in the late 1960s and early 1970s, there were discussions about having just a single bibliographic format rather than the various special formats which were appearing about then.

But judging from the number of years that has elapsed, between the time the concept was first proposed to the present time, it was fortunate that the progress of online bibliographic data was not closely tied to the concept. For even if it had been decided that USMARC would not be put into operation until a single all-purpose format was developed — therefore necessitating the highest priority for the development of the single format — one suspects that the achievement of the single format still would have taken far too long.

From all signs, format integration is now close to realization, and more and more literature about it is appearing (1). Although format integration may appear to be a complex concept, the fundamental principle is rather simple: all materials cataloged should use just one format and one set of data. That is, books, serials, maps, sound recordings, video recordings, microforms, computer files, etc., should all appear in the data base in a single format, as "one size fits all."

The delays in implementing a single format have been due to the painfully

slow decisionmaking about the details of what should or shouldn't be included in the single format data. Considering all the different data elements which are part of the various formats, it would seem that the compromise of a single format would be extremely complex and overly detailed. Yet the reality of format integration is not that complicated.

Two examples of monographic map records taken from the OCLC data base (OCLC 13495618 and OCLC 23652476) are given below. Under format integration, the only change to this particular example would be to the fixed fields. At this time the exact order and form of the fixed fields is still uncertain, but as of late 1992 the significant or substantial differences between the present fixed fields and the projected fixed fields for both these example are:

1. the field now designated "Base" will no longer be used. Instead, there will be separate fields for "Projection" and "Prime meridian."
2. the fields now designated "Type" and "RecG" will no longer be used. Instead, there will be one combined field, "Cartographic material type."
3. the field now designated "Form" will be redesignated "Special format characteristics."

Even if the item cataloged were a serial map, spatial data in a computer

file, a globe, or any other variation of spatial data, the fixed fields would be exactly the same, though what was inserted into the fields would of course vary. Altogether, the effect of changes in the fixed fields will be minimal and mostly cosmetic.

The fact that the examples cited above only had changes in the fixed fields does not mean that the only changes mandated by the single format are to the fixed-field area. Since "only one validation table will be needed instead of one for each format" (2), format integration will result in the elimination and consolidation of some other fields.

For example, field 315, which is currently used to record frequency for map serials and computer file serials, will be eliminated in favor of fields 310 and 321, which are currently used for the same function in general serials. In addition, "many specialized 5XX note fields have also been made obsolete based on new criteria" (3).

The effect of such changes is small, for although some technical designations will change, the actual functions will remain more or less the same. These changes outside of the fixed field area will only occur in a small minority of cataloging records. For most records, the only differences will be in the fixed fields.

It would require a very lengthy article to cover all of the details

relating to format integration (4).

Since some of the points have not yet been settled upon and since in reality all most persons need to know is the effect on the cataloging and retrieving of materials, the general pattern suggested by the information given above, plus the summary statement given below, should go far toward understanding format integration:

Format integration affects a small percentage of records. It will not mean major changes for most catalogers or OPAC users. It will, however, significantly reduce the complexity of processing MARC bibliographic records in automated systems and simplify the maintenance

of the format itself. It will also allow encoding of data elements for additional features of complex materials (5).

Just as the introduction of MARC caused a fair amount of uncertainty and confusion about a generation ago, the introduction of format integration in the near future will cause a degree of misapprehension and misunderstanding. MARC has well demonstrated its tremendous value to online data bases, and the necessary follow-up step of format integration should also be quite beneficial to the library community. We will all experience some bumps and potholes on the way to full implementation, but the result will be well worth the trip.

Notes

1. For example, see "Special Section: Format Integration," *Information Technology and Libraries* 9:155-178 (June 1990). Note that some of the data in these papers is already obsolete.
2. Oros, Susan. 1992. "A Format Integration Primer." *ALCTS Newsletter* 3:43.
3. Ibid.
- 4 For an official 1992 version of format integration, see: *Format Integration and Its Effect on the USMARC Bibliographic Format*. 1992. Washington: Library of Congress.

OCLC: 13495618	Rec Stat: n		
Entered: 19860425	Replaced: 19860425	Used: 19890826	
Type: e	Bib lvl: m	Source: d	Lang: eng
RecG: a	Enc lvl: 1	Govt pub: f	Ctry: dcu
Relief:	Mod rec:	Base: ca^	Form:
Desc: a	Indx: 1	Dat tp: s	Dates: 1982,
1 040	xxx a xxx		
2 007	a b j d c e a f n g z		
3 034 3	a b 5000000		
4 052	3701		
5 090	G3701.N4 1982 b . R62		
6 090	b		
7 049	xxxx		
8 100 1	Roberts, Walter.		
9 245 10	Rural electric service areas h m ap / c prepared by Walter Roberts.		
10 255	Scale 1:5,000,000 ; h Albers equal area proj.		
11 260	Washington, D.C. : b National Rural Electric Cooperative Association, c 1982.		
12 300	1 map : b c ol. ; c 59 x 94 cm.		
13 500	Cover title: United States map of rural electric service areas.		
14 500	Shows rural electric distribution systems and those with generating equipment, power supply cooperatives, and federations of power supply cooperatives; indexed.		
15 500	Includes inset of Alaska (1:10,000,000)		
16 500	Index to rural electric systems (repeated in accompanying key) on verso.		
17 650 0	Electric power systems z United States x Maps.		
18 710 20	National Rural Electric Cooperative Association. w In		
19 740 01	United States map of rural electric service areas.		

[EDITOR'S NOTE: My basic editorial nature reared its ugly head, and I made a few slight changes in this record, so it's no longer as the inputting library entered it; I've therefore removed the inputting library's initials from 040, so you won't blame them for my mistakes!]

OCLC 23652476	Rec stat: n		
Entered: 19910220	Replaced 19910427	Used: 19930210	
Type: e	Bib lvl: m	source:	Lang: eng
RecG: a	Enc lvl: 7	Govt pub:	Ctry: mnu
Relief: b	Mod rec:	Base: cc^	Form:
Desc: a	Indx: 0	Dat typ: s	Dates: 1989,
1 010		91-682568/MAPS	
2 040		DLC ≠c DLC	
3 007		a ≠b j ≠d c ≠e a ≠f n ≠g z ≠h n	
4 017		VA 398-399 ≠b U.S. Copyright Office	
5 034 1		a ≠b 5780000	
6 050 00		G3701.P6 1989 ≠b .B3 MLC	
7 052		3701	
8 090		3701	
9 049		xxxx	
10 100		Bailey, Dean.	
11 245 00		Air travelers' reference map of the United States / ≠c by Dean Bailey ; designed and produced by Don Pirius and Gregory Chu at the Cartography Lab., Dept. of Geography, Univ. of Minnesota.	
12 255		Scale 1:5,780,000 ; ≠b Lambert conformal conic proj.	
13 260		[Minnesota?] : ≠b Airmaps, ≠c c1989.	
14 300		1 map : ≠b col. ; ≠c 54 x 81 cm.	
15 500		Also shows selected airport locations with Federal Aviation Agency codes.	
16 500		Includes insets of Alaska and Hawaii, airport codes and names for selected cities, and list of abbreviations.	
17 500		Descriptive list of states, with state outlines, list of national parks by type, map quiz, and 2 air distance tables.	
18 650 0		Air travel ≠z United States ≠x Maps.	
19 650 0		Airports ≠z United States ≠x Maps.	
20 651 0		United States ≠x Distances, Etc. ≠x Maps.	

Atlas and Book Reviews

edited by

Greg Armento

University Library

California State University, Long Beach

Brawer, Moshe. 1991. *Atlas of South America*. New York: Simon and Schuster. 144p. LC: 90-675175 ISBN: 0-13-050642-7. \$65. Order From: Simon & Schuster, Academic Reference Division, 15 Columbus Circle, New York, NY 10023. Telephone (212) 373-7349.

The *Atlas of South America* was intended to serve as a single volume general reference work on the southernmost continent of the New World. The atlas is a hardback edition in 8 3/8" by 11 1/2" format; it consists of more than 100 two-color maps, tables, and charts accompanied by written text and an annotated bibliography (the latter being one of the stronger selling points of this particular atlas.)

There is no preface or introduction to the content and format of the atlas other than the brief statement included on the inside front of the dust cover. Clearly, however, the atlas is divided into two parts.

Part I (The Continent) presents a generalized overview of the entire continent in a slim 27 pages. This section examines the character of the physical environment, the Amazon Basin, the Amazon Forest, the Andes, geology, climate, flora and fauna, mineral resources, population, and the

region's human history.

Part II (The Countries) is made up of 95 pages with a more specific focus on "in-depth looks" (publisher's emphasis) at the individual countries and the Falkland Islands. Chapters on the individual countries follow a common format that includes sections covering: physical environments and natural regions, climate, economy, agriculture, industry and minerals, history government and politics, and a thumbnail sketch of each nation's capital.

Analyzing the table of contents and indices of any atlas vis-a-vis the text is a useful exercise to check for potential utility of a work to the reader. In the *Atlas of South America* subheadings within the text proper can not be easily found by utilizing the table of contents, e.g., "Physical Environment" in Part I (The Continent) section does not appear in the table of contents, whereas the rest of the subheadings do.

Also, while there is an "Index of Place Names" and an "Index of Persons" in the atlas, quite oddly there is no index to provide quick access to a particular map or graphic. From the reader's point of view, isn't an index of map or figures important to an atlas?

Further, there is the question of organization itself: why is Part II of the

atlas (The Countries) organized as it is rather than into some sort of commonly accepted subregional grouping of countries, e.g., the Andean Nations, the ABC Countries, or even alphabetized for ease in locating country information in the publication!

In practice, the "two-color" maps, tables, and graphs in this atlas actually employ a more complex variety of difficult to read shading patterns in black, green, gray, and white. Specifically, many of the maps of the content are almost unreadable as countries and regions appear in lightly outlined fade-out gray overlain with black or green shading to portray a particular set of phenomena, e.g., the atmospheric pressure maps for South America in the "Climate" section.

Further exacerbating the problem, in some sections graphic interpretation is hampered by mislabeling and poor editing, e.g., the graphic on "Urbanization" under "Population" in Part I has dates "1970" and "1960" switched in position on the legend thereby changing the meaning of all the country graphs below. Also, if one is to believe this urbanization graph, the reader must accept that there was NO (that is zero) urban population in Uruguay in 1950!

Another example of a map legend problem is in the "Climatic Regions and Ocean Currents" map in the "Climate" section of Part I, i.e., some precipitation designators for the humid mesothermal climates appear on the map but not on the legend; specific types of desert designators (hot cool foggy) appear on the map but not on the legend; and ocean currents appear on the legend in black, whereas they are shown in green on the map. Given such problems—and this is only a sampling—a major failing of this atlas is a visual presentation of graphics so poor as to beg effective interpretation.

Omissions are always a problem for atlas authors and this atlas is no exception. In Part I of the atlas (The Continent) it would have been appropriate to have included the following additional maps in the physical section: surficial geology; soils; and potential natural hazards.

It also would have been appropriate to note that the vegetation map was NOT an actual vegetation map but a POTENTIAL natural vegetation map assuming no human interference. A current land use map (actual use of environments?) would have been useful in the "History" section of Part I.

And finally, the author should check the boundaries of the various colonial administrative units and attempt to clarify the confusion posed by his "Colonial South America 16th to 18th Centuries" map. The United Republic of Colombia noted on the map labeled, "The Formation of States in South America," is the same as "Gran Colombia" in the text... stay with the text. Lastly, there is the question of Antarctica, hinted at in a couple of

places in the text but never really addressed head-on. As South America is currently a major intellectual stronghold for the study of geopolitics, shouldn't the issues raised by boundary disputes in Antarctica be directly faced in the atlas?

Some additional observations are also pertinent. While I love the beauty and variety of postage stamps, is it really effective use of limited space to show a picture of a stamp (not in true color by the way) if you might more appropriately employ a high quality photograph to illustrate a point? And terms are misused, e.g., the *Tierra Helada* (frozen lands) and the *Paramos* (zone of alpine pastures) are not the same thing... and, *llano* is "plam," not "prairie."

The map scale utilized is not consistent for the capital cities, e.g., Cayenne is 1:15,000, Paramaribo is 1:35,000, Brasilia and Rio De Janeiro are 1:250,000, while still others are at 1:25,000 and 1:50,000. Finally, there is little relationship between the excellent annotated bibliography and the list of sources... how come?

It is this reviewer's strong sense that Latin Americanists will not be overly impressed with Brawer's *Atlas of South America*. Given the author's choice of actual coverage of readily available data, the organization of the material, the quality of the maps and graphics presented, and the price of the atlas, it is not likely that this work will find its way on to the required materials list of many college-level Latin American or South American courses. Moreover, while cartographers and geographers may find value in this atlas as an example of "what not to do" with their research and publication, librarians

contemplating purchase of this atlas for their collections as a general reference on South America should do so with the caveat that its weaknesses far outweigh any strengths.

Bruce E. Bechtol
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California State University,
Chico

Burton, John A. ed. 1991.
Atlas of Endangered Species.
New York: Macmillan Publishing.
256p. LC: 91-12611 ISBN: 0-02-
897081-0. \$90. Order From:
Macmillan Publishing Company, 866
Third Avenue, New York, NY 10022.
Telephone (800) 257-5755.

This work meets the definition of an atlas only in that it is a collection of plates illustrating a topic. Cartographic material is limited. Two maps outline biomes and climatic regions of the world. The remaining world maps serve to dramatically illustrate the global nature of our planet's environmental problems.

The "Natural Disasters" map pinpoints regions of drought conditions, floods, storms, earthquakes and volcanic eruptions during the 1980s. Areas with acid rain, hazardous waste production and sea pollution during the 1980s are shown on the "Pollution" map. Population density and annual population growth through 1990 are also provided in a world map format.

The heart of this book is its series of chapters covering the seven biogeographic regions of the world, including sections on "Habitat and Plants", "Wildlife," and "Species in Focus" for that region. At the beginning of each chapter is a relief map for the area.

All sections are handsomely illustrated with photographs and drawings.

Distribution maps are also included for some species.

The final section of this book is entitled "Conservation in Action" and discusses national parks found in each region. The most interesting world maps are also found in this section. One shows, by color, the percentage of area classified as protected in 1989. Selected World Heritage sites are also marked. Countries participating in CITES (Convention on International Trade in Endangered Species), RAMSAR (Convention on Wetlands of International Importance Especially as Waterfowl Habitat), BONN (Convention on the Conservation of Migratory Species) and ITTO (International Tropical Timber Organization) are shown on the final map. Endangered mammals, birds, reptiles, and amphibians are listed in the back of the publication.

This is a borderline coffee table book. While the presentation is stylish and informative and the authors of the individual sections are leading authorities, the pages are glossy with a minimum of two or three illustrations per page. I'm certain the *Atlas of Endangered Species* is and will continue to appear in the collections of many academic libraries; however, I think a more fitting home would be the shelves of high school and public libraries.

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Hall, Stephen S. 1992. *Mapping the Next Millennium: The Discovery of New Geographies*. New York: Random House. 477p. LC: 91-52667 ISBN: 0-394-57635-7. \$30. Order from: Random House, 400 Hahn Rd., Westminster, MD 21157. Telephone (800) 726-0600.

This is an interesting book and yet it is difficult to review. Stephen Hall has broken new ground in pointing out the many new ways in which the map is being now used to look at 1) planetary landscapes such as the earth from satellites, ocean floors, the earth's core, and climatic change; 2) animate landscapes such as parts of the human body; 3) atomic and mathematical landscapes like pi or non-random order; and 4) astronomical landscapes such as galaxies.

The common thrust here is technological advances in plotting spatial patterns of scientific phenomena that we are not accustomed to viewing in this way. Without background in the various fields covered, however, it is difficult to evaluate the significance of these discoveries. This reviewer admits that the book certainly makes a person think about common spatial characteristics of these phenomena.

The author is perfectly aware of the fact that he is challenging cartography's traditional focus on mapping only terrestrial phenomena. However, he feels that now "the urge to map animates every quadrant of the modern scientific enterprise."

As a traditional geographer, I admit to some doubt about such an easy change in terminology. Hall's focus is clear in his chapters on planetary landscapes which deal with technological progress in portraying the earth, e.g., remote sensing. However, the

other sections refer to spatial surveying of the body, mathematical numbers, and solar galaxies, which seem farther removed from the traditional tasks of cartography. Yet the subtitle of the book is "The Discovery of New Geographies." Geography is defined as earth description: are these spatial surveys or maps of new geographies? Are the maps shown in *Mapping the Next Millennium* maps? It is true that they show spatial distributions and even relationships but might they also be called diagrams? In many cases, these maps/diagrams are so small in the book that the details are difficult to make out. Perhaps this reviewer is getting picky because there is certainly much in the book to admire and recommend.

The best chapter, at least for a traditional reviewer like this, is the conclusion entitled "Elephants for Want of Towns" in which the author comes back to the subject of traditional maps. Here he points out the fallibilities of maps—e.g., how they can perpetuate fiction such as an exploration route like the Northwest Passage. Sometimes maps also lack data and thus are filled with "elephants for want of towns." Maps also have served as means of geopolitical exploitation to justify imperial expansion.

Perhaps a major point of the book, however, is Hall's feeling that maps reflect the conflict between technology and humanism: increasing sophistication in a map requires attention to the consequences and values behind the map—for example, the current disagreements between the Northern "have" countries and the Southern "have-nots." This conflict seems more relevant to traditional

cartography than to Hall's broadened one but he appears to apply it to all of this maps.

Mapping the Next Millennium is a stimulating book describing how diverse phenomena relating to the earth, body, mathematics, and universe have common ground in their portrayal in space. Whether these are new geographies, however, is difficult to say unless some definitions are changed and accepted.

Dean S. Rugg
Professor Emeritus
University of Nebraska-
Lincoln

Monmonier, Mark. 1991. *How to Lie With Maps*. Chicago: University of Chicago Press. 176p. LC:90-40687 ISBN: 0-226-53414-6. \$27.50, \$12.50 paper. Order from: University of Chicago Press, 11030 S. Langley Ave., Chicago, IL 60628. Telephone (800) 621-2736.

The world is round; maps, typically paper maps, are flat; therefore, maps must lie. Thus distortion is necessary and unavoidable. But the method and purpose of the distortion must be recognized not only by cartographers but by the general, trusting public.

Professor Monmonier's work seeks to explain the nature and method of these necessary distortions and to point out the more insidious uses of unnecessary ones. He seeks "to promote a healthy skepticism" and to encourage a more informed use of maps.

In basic reviews of the nature and methods of cartography, he points out techniques, used and abused, in creating maps and displaying information spatially. Visual perception is the nature of a map. Understanding how

it can be manipulated is a must. A map can only display a limited amount of information; Monmonier writes, "small scale maps have a smaller capacity for truth than large-scale maps."

Some methods distort more maliciously than others and it is important to recognize this. Bias is always present in depicting a selected amount of information, be it cultural, political or commercial. But the intent behind the 'lie' can be constructive or manipulative.

The book contains fascinating chapters on the use of maps to spread political propaganda, to assist unscrupulous developers, and for other unsavory disinformation purposes. Certainly the chapter on census mapping is sufficiently detailed as to be a very useful guide, even as a text. Monmonier's work is particularly timely and relevant in discussing the nature of software 'lies' and the pitfalls of GIS systems which may be used to manipulate 'official data.' A worthwhile bibliography is included. The book's appendix serves to review the issue of latitude and longitude.

If anything negative might be said of this well-written and concise volume, it might be in the author's examples of cartography for commercial uses. For example, he considers the airline 'hub-and-spoke' map (p.62) a 'lie' because it fails to reveal inconvenient connections. I think he was stretching the point here. The 'hub-and-spoke' map was a simple depiction of a system and was not intended to be an airline timetable.

Nor can I see great fault with the restaurant map (p.68); a map displaying locations does not 'lie' in stating "widespread local acceptance" as he implies it does. I think the 'lie' in this

context is much too subtle to fault the company. But these are minor faults. If Professor Monmonier had not had such a passion for his subject, resulting no doubt from years of observing abuses in commercial mapping, he probably would not have been inspired to write this very useful book.

This volume is very relevant for all cartography classes and for students of business and political science.

Linda Newman
Mines & Map Librarian
University of Nevada, Reno

Seavey, Charles A. 1992. *Mapping the Transmississippi West, 1540-1861: An Index to the Cartobibliography*.

Winnetka, IL: Speculum Orbis Press for the Map and Geography Roundtable of the American Library Association. (Occasional Paper No. 3). 210p. ISBN: 0-932757-03. \$35. Order from: Kathryn Womble, Map Collection, Suzallo Library, FM-25, University of Washington, Seattle, WA 98195.

Researchers familiar with Carl I. Wheat's monumental (a term frequently used in association with this five-volume cartobibliography) *Mapping the Transmississippi West* [San Francisco: Institute of Historical Cartography, 1957-1963, now out of print], will be obliged to Professor Seavey for completing this greatly improved index to Wheat's work.

Wheat's publication is considered a core cartobibliography for the study of the mapping of the United States. However Wheat only included a limited "Alphabetical Index" of authors at the end of his work. Thus researchers had no access to its

contents by area or subject. Seavey's *Index* not only provides this, but also includes an expanded listing of personal and corporate names found in Wheat's cartobibliography. As Norman J.W. Thrower says in his foreword, "With this aid the reader will find Wheat's work both more useful and enjoyable." (p.vi)

The index begins with a brief background essay on the development of Wheat's cartobibliography, its importance in cartographic research and its limitations. Then Seavey describes his own reasons for compiling this *Index* and concludes the introductory matter with a methodological description of its construction and organization.

Roughly half of the book comprises an "Index by Area, Personal and Corporate Name, Subject, and Wheat's Chapter Headings." The big enhancement here is that we now have access by area, by subject, and by a greater selection of personal and corporate names. It should be noted however, that Seavey's *Index* does not cover Wheat's text; it is limited to the contents of his cartobibliography. And as Professor Thrower writes, the cartobibliography "accounts for about a quarter to a third of the bulk of the volumes..." (Foreword, p.vi).

A second section comprises an "Alphabetical Title List" which is essentially a list of titles as Wheat transcribed them. The book concludes with a 16 page "Wheat Number Index" which consolidates Wheat's own indexing at the back of each volume.

Libraries which own Wheat's *Mapping of the Transmissippi West* would obviously do well to purchase the *Index to the Cartobibliography*,

and to quote Professor Thrower once more, "Even those libraries and individuals not fortunate enough to possess a set of Wheat's volumes will find the index valuable for indicating the contents of a great cartographic monument for future use." (Foreword, p.vii)

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Publications Received

Alonso de Santa Cruz. 1992. *Book of Longitudes*. [Translated by J. Blankson.] Bisbee, AZ: Terrenate Research. 181p. ISBN 0-938497-05-9. \$25. Order From: Terrenate Research, P.O. Box 5112, Bisbee, AZ 85603. Telephone (602) 432-2135.

This is an English translation of Santa Cruz' text written ca. 1550-1556. Santa Cruz was, among other things, a cosmographer in the *Casa de Contratacion* under Carlos V of Spain. According to the translator's preface, the author was "apparently the first to take a scientific approach to the problem of longitude by gathering data, devising, and then experimenting with a marine chart utilizing magnetic variation for finding the longitude" (p. iii).

Some of the chapter titles include: Chapter 1) "The first method the ancients had, and many moderns now use...;" Chapter 3) The third method...by the eclipses of the sun and moon...;" Chapter 6 "The sixth method...by means of different types of clocks....;" Chapter 11) "Another method... the ninetieth degree of the moon, and the distances of the sun and ascendant degree..."

The second half of the book is an analysis and critique of Ptolemy's *Geography*. Translator Blankston has

compiled 45 pages of appendices, notes, bibliographic data and concludes the work with a modern index to Santa Cruz's work. The three appendices are entitled "16th Century Spanish Meteorology," "The Prime Meridian," and "The Mariners' Compass." This somewhat obtuse work may be of interest to those collecting in the historical aspects of navigation, cartography, and Age of Exploration.

Jacob, Christian. 1992. *L'Empire des Cartes: Approche Theorique de la Cartographie a Travers L'Histoire*. Paris: Albin Michel. 537p. ISBN: 2-226-06083-9. 250 franc. Order From: Editions Albin Michel S.A., 22, rue Huyghens, 75014 Paris, France. Telephone 42.79.10.00.

By all appearances, this is a weighty and scholarly work. Normally it would deserve a full review by its own merits. However, because it is entirely in French, its appeal to the core region of WAML will necessarily be limited. Thus it is described in this section of the review column.

My French language sources tell me the title translates into "The Empire of Maps: Thematic Approaches to Cartography Throughout History." The author has written or edited several other books on the history of geography, two being: *La Description de la Terre Habitee de Denys d'Alexandrie ou la Lecon de Geographie* (Paris: Albin Michel, 1990); and *Geographie et Ethnographie en Grece Ancienne* (Paris: Armand Colin, 1991).

L'Empire Des Cartes is comprised

of four lengthy chapters: Chapter 1) Qu'est-ce qu'une carte? (What is a map?); Chapter 2) Graphisme, geometrie et figuration (Graphics, geometry, and representation); Chapter 3) Carte et ecriture (The writing on the map); and Chapter 4) L'Image cartographique: L'ceil et la memoire (Cartographic image: eye & memory).

The book's tenor appears to be philosophical and profound. It is illustrated with seventeen color and black & white plates. Chapters are heavily footnoted and conclude with extensive bibliographies which cite numerous British and American authorities, as well as French scholars. An index completes the book.

Moffat, Riley. 1992. *Population History of Eastern U.S. Cities and Towns, 1790-1870*. Metuchen, NJ: Scarecrow Press. 227p. LC:92-6364 ISBN: 0-8108-2553-8. \$42.50 Order from: Scarecrow Press, 52 Liberty St., Box 4167, Metuchen, NJ 08840. Telephone (800) 537-7107.

For the production of this hardcover book, the author pored over myriad statistical sources and brought together, for the researcher's convenience, the early urban population history of the eastern half of the nation. The states covered span from Louisiana and Minnesota in the West, to the east coast.

Mr. Moffat's two page introduction provides the user with the work's research methodology, limits, and parameters. In its 226 pages of statistical tables, this publication fills a gap in previous statistical compendiums. It enables researchers to trace the population history of approxi-

mately 7,000 communities, both before and after incorporation, and over a span of 80 years.

Moffat's introduction also serves as a useful overview for the history of urban census gathering in the first American century. A bibliography of early census sources is provided as is a listing of early national gazetteers. Where state gazetteers were used for population estimates, they were listed at the end of that state's table. State and the cities within them are listed alphabetically. Highly recommended for academic and large public libraries.

Newman, Linda P. 1992. *Mackay School of Mines Thesis List 1908-1991*. Reno, Nevada School of Mines and Geology, University of Nevada, Reno. (Nevada School of Mines and Geology Special Publication L-10). 44p. \$8 Order From: Nevada Bureau of Mines & Geology, Mail Stop 178, University of Nevada, Reno, NV 89557. Telephone (702) 784-6691.

Linda Newman has created an extensive bibliography of geoscience theses and dissertations which were completed at the Mackay School of Mines. 606 entries are listed alphabetically by author. Entries also include title, year, and terminal degree of the candidate along with the University Microfilms International order number. The work concludes with two indexes: "Thesis List by Degrees Conferred," and, "Subject Index with List Numbers." This last index allows access by geographic area or by topic. Inside the front cover are instructions on how to order—or interlibrary loan, Mackay theses. Collections with an interest in the physical geography of Nevada and the Great Basin will find this booklet useful.

Remote Sensing News

- Launch of Landsat 6 has been delayed: a summer launch is planned.

- Posted nearly everywhere your Editor looked on the Internet was NASA's "Request for Ideas for Applications of Remote-Sensing Databases via the Internet." For information: fax to Ernie Lucier, c/o RSDWG, NASA HQ, 202/358-3098; email rsdwg@orion.ossa.hq.nasa.gov

- From *Landsat Data Users Notes*, volume 7, number 4, winter 1992, p. 5 - an atlas of Venezuela, made from Landsat data - no plans for sale, but if interested, get in touch with: Gustavo Ruiz, Fundacion Instituto de Ingenieria, Apartado 40.200, Caracas 1040-4A, VENEZUELA.

- Like to have a Landsat "photomap" of Scotland? Get in touch with Map Appeal Inc., POB 63006, Oakville, Ontario. L6L 6N4. CANADA.

- If you'd like to "browse" through Landsat imagery and make sure that the 10% cloud cover is not over exactly the area you need (and if you have a few spare shekels), get in touch with Core Software Technology, 1-818/796-9155.

- SPOT Image Corporation has announced the new "SPOT Album" program, which allows clients to order any worldwide SPOT imagery acquired from 1986 to 1989. The imagery will be delivered on CD-ROMs, for \$2,450 a scene (SPOT Image Corp. 1897 Preston White Drive, Reston VA 22091-4368).

New Mapping of Western North America

compiled by

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Rept. No.

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0-92-02 Bogus Bench Quadrangle
0-92-05 Cedar Mountain Quadrangle
0-92-06 Cow Lakes Quadrangle
0-92-07 Downey Canyon Quadrangle
0-92-08 Hooker Creek Quadrangle
0-92-09 Jordan Craters South Quadrangle
0-02-10 McCain Creek Quadrangle
0-92-11 Mustang Butte Quadrangle
0-92-12 Rockville Quadrangle
0-92-13 Sacramento Butte Quadrangle
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Something to Make Your Life Easier

Utah Cutters

by

Ken Rockwell

University of Utah

The following is an update to LC's list of Geographic cutters. Many of them I submitted to the LC Geography & Map Division last year. When I wrote to them, I noted that the Dec. 1990 MAGERT base line suggested that a new edition of the fiche set might be forthcoming; but Pam Rau, the LC overseer for my region, said there are no plans to do this. SO, others who are responsible for setting up cutters for their states should be encouraged to publish updates in WAML in the manner of Phil Hoehn's model article in v.23:3 (June 1992).

The list of Utah regions below includes a few current wilderness study areas on Bureau of Land Management lands. Many more parcels are under study, but at present the resolution of their status is on hold due to political disagreements among the Utah congressional delegation. I therefore chose a few of the areas which are on the "short list" of areas officially recommended for wilderness status, and will update this list as decisions are made.

G4342 (Utah regions):

A2 Abajo Mountains
 A685 Ashdown Gorge Wilderness
 B46 Beaver River
 B48 Behind the Rocks Wilderness Study Area
 B55 Bingham Mining District
 B6 Book Cliffs
 B65 Boulder Mountains
 B68 Box-Death Hollow Wilderness
 C4 Cataract Canyon Wilderness
 C46 Cedar Mountains
 C5 Circle Cliffs
 C65 Confusion Range
 C86 Cummings Mesa
 D3 Dark Canyon Wilderness
 D44 Deep Creek Mountains
 D46 Desert Peak Wilderness
 D48 Dirty Devil River
 D8 Duchesne River
 E8 Escalante Canyon
 F48 Fish Springs Range
 F7 Fremont River
 G66 Grand Gulch Primitive Area
 H4 Henry Mountains
 H53 High Uintas Wilderness *
 L2 La Sal Mountains
 L6 Locomotive Springs National Wildlife Refuge
 L66 Lone Peak Wilderness
 M64 Monte Cristo Range
 M667 Mount Ellen-Blue Hills Wilderness Study Area
 M67 Mount Naomi Wilderness
 M672 Mount Nebo Wilderness

M674 Mount Olympus Wilderness
 O6 Oquirrh Mountains
 O7 Orange Cliffs
 P3 Pahvant Range
 P4 Parunuweap Canyon
 P5 Pine Valley
 P53 Pine Valley Mountain Wilderness
 R2 Raft River Mountains
 S2 San Francisco Mountains
 S7 Stansbury Mountains
 S77 Straight Cliffs
 T3 Tabby Mountain State Forest
 T57 Tintic Mining District
 T9 Twin Peaks Wilderness
 U8 Utah Launch Complex, White Sands Missile Range
 V5 Virgin River (UT-AZ-NV)
 W2 Wah Wah Mountains
 W4 Weber River
 W44 Wellsville Mountain Wilderness
 W46 Wendover Bombing and Gunnery Range
 W5 Westwater Canyon Wilderness Study Area
 * H53 is an existing cutter for "High Uintas Primitive Area", which has since attained official wilderness status.

In addition to the above areas, there are about 50 wilderness study areas on Bureau of Land Management land. Some of these will eventually become official wilderness areas, but at present the progress has been slow due to political disagreement within the Utah congressional delegation. I'll add an update to the list after official action has been taken.

G4344 (Utah cities and towns):	G3:2P5	Pickelville**	R3	Redmond
A15 Abraham	G45	Glendale	R52	Richville
A16 Adamsville	H13	Hamlin Valley	R65	Rockville
A3 Altonah	H17	Hatch	S46	Scipio
A6 Aneth	H34	Henefer	S48	Sevier
A7 Arcadia	H35	Henrieville	S54	Snowville
A75 Aspen Grove	H36	Herriman	S55	Snyderville
A85 Austin	H38	Hiawatha	S84	Sterling
A9 Avon	I2	Ibapah	S85	Stockton
B25 Ballard	I4	Indian Village	S87	Sugarville
B28 Bear River City	I5	Indianola	T2	Tabiona
B44 Benson	J4	Jensen	T25	Talmage
B48 Beryl	J45	Jeremy Ranch	T4	Teasdale
B54 Big Water	J5	Jericho	T48	Thistle
B64 Bluffdale	J6	Joseph	T5	Tintic
B67 Bothwell	K25	Kanosh	T75	Trenton
B75 Brian Head	L12	La Sal	T8	Tropic
B85 Brighton	L15	Lake Shore	V67	Virgin
B9 Burrville	L17	Lakeside	W2	Wales
C24 Castle Valley	L15	Lakeview	W23	Wallsburg
C32 Cedar Fort	L49	Levan	W58	West Haven
C44 Chester	L55	Liberty	W58:2K3	Kanesville ***
C45 Circleville	L85	Lucin	W58:2W5	Wilson ***
C48 Clawson	L88	Lyman	W615	West Point
C63 Cleveland	M15	Maeser	W624	West Warren
C65 Clinton	M25	Mammoth	W64	Westwater
C78 Copperton	M36	Mayfield	W75	Woodland
C83 Cornish	M37	Meadow	W76	Woodland Hills
D4 Deweyville	M38	Mendon	W78	Woodruff
D5 Dividend	M44	Midway	Y6	Yost
D85 Dutch John	M52	Mills	Z3	Zane
E14:2C6 Columbia *	M57	Minersville		
E14:2D6 Dragerton (replaces D6)*	M64	Mona	*	The towns of Columbia and Dragerton incorporated as East Carbon City, which is already on the fiche list.
E52 Elberta	M95	Myton	**	Pickelville was annexed by Garden City.
E62 Elwood	N2	Naples	***	Wilson and Kanesville incorporated in 1991 as West Haven.
E64 Emery	N45	New Harmony		
E66 Enoch	N47	Newcastle		
E85 Etna	N49	Newton		
F18 Fairfield	O18	Oak City		
F35 Farr West	O5	Ophir		
F37 Fayette	O65	Orderville		
F75 Freedom	O8	Ouray	[To get in touch with Ken - (801)	
F77 Fremont	P25	Paradise	581-7265; krockwel@utahlib.bitnet]	
	P27	Paragonah		

Something to Make Your Life Easier

Location grids - Latitude and Longitude

A Training Aid for Students

by

Dale Steele

Read the article on latitude and longitude from the *Encyclopedia Americana*. This article explains key concepts about the grid.

The following are key points to remember: Parallels of latitude run east-to-west. They are numbered from 0° - 90° north and south. The Equator is 0°; the North Pole 90° North, the South Pole 90° South. Parallels are evenly spaced from each other, but grow smaller as they go from the equator (25,000 miles long) to the poles (parallel theoretically has no length).

Meridians of longitude run north-to-south. They are numbered from 0° - 180° east and west. The prime meridian (0°) runs through Greenwich, England. The line at 180° runs through the Pacific Ocean.

Meridians converge at the Poles, so the distance between them varies from about 69 miles at the Equator to nothing at the North and South poles. All meridians are the same length.

1° = 60' (one degree = 60 minutes)

1' = 60" (one minute = 60 seconds)

How to determine a place's latitude and longitude

If a patron asks for a place's latitude or longitude, try to find it in a printed source. If you can't, then help the patron do the calculations. You should not calculate latitude and longitude for the patron. The work and responsibility for accuracy should rest with him.

These instructions explain how to

calculate a point's longitude using Cathedral Rock on the Copperosity Hills 7.5' quad as an example. You use the same procedures for determining latitude.

The U.S.G.S. prints latitude and longitude lines across its 1:500,000 and 1:1,000,000 state maps. Complete coordinates are given in the margins at each line. On larger scale maps, the Survey shows latitude and longitude by tic marks at regular intervals along the margin and crosses where the lines intersect. Complete coordinates are given at each corner. Incremental coordinates are given along the margins.

1) Locate the two longitude lines closest to the point which are labelled on the map. There should be one on each side. For example, on the Copperosity Hills quad, find the '+' in Sec. 21, T.10S. R.2E. and the one due west from it on the Indian reservation. Also find the '+'s due north of them (in Sec. 4 & on the reservation). Photocopy the map and draw lines through the '+'s to make a quadrilateral.

2) Find the longitude of the two lines. On the Copperosity Hills quad, the lower right hand corner has a longitude of 112°07'30"W. 16 cm away is 112°10'00". 16 cm beyond that is 112°12'30".

The latter two coordinates are directly below the two you marked. Their coordinates are therefore 112°10'00"W and 112°12'30"W.

3) Measure the distance between the two longitude lines of a line that runs

east-west through the point. Lay a ruler marked in millimeters across Cathedral Rock, keeping it parallel to the horizontal crossbars of the '+'s as best you can. It should be about 16.3 cm.

4) Measure the distance from the rightmost longitude line to the point. While you measure the distance between meridians, also measure the distance to Cathedral Rock from the righthand line. It should be about 5 cm.

5) Determine the grid distance between the two longitude lines. The distance is the difference between 112°10'00" and 112°12'30", or 2.5'. It is easier to use seconds in your calculations and reduce them to minutes than to use fractions of minutes, so multiply 2.5' by 60 seconds/minute = 150 seconds.

6) Use the formula $dp/dm=mp/mm$ where dp = distance to point; dm = distance between meridians; mm = distance in seconds between meridians and mp = distance in seconds between the point and line from which it was measured. Add (or subtract, as appropriate) the calculated grid distance from the known meridian. For the example, the formula is set up as: $5/16.3 = x/150$, which yields the following: $x = (5*150)/16.3 = 46.01$, which means that Cathedral Rock is 46.01 seconds west of 112°10'00". Cathedral Rock's calculated longitude is therefore 112°10'46"W. (The National Gazetteer has it at 112°10'47"W).

Something to Make Your Life Easier

UCSB Map Room

Imagery Index Record

AREA _____ DATE FLOWN _____
 _____ SCALE OF INDEX 1: _____
 _____ FILED BY _____
 (see Map Room indexes for exact coverage) SPECIAL INDEX LOCATION: _____

FLIGHT I.D. _____

INDEX: PHOTO MOSAIC _____ FLIGHT LINE _____ SPOT INDEX _____
 SINGLE PHOTO _____ OTHER _____

IMAGES HELD BY MAP ROOM _____

FORMAT OF PHOTOGRAPHIC IMAGES:

SIZE _____ ENLARGEMENT _____
 VERTICAL _____ OBLIQUE: HIGH _____ LOW _____ OTHER _____
 FILM TYPE _____ PRINT _____ POS. TRANS. _____ NEGATIVE _____
 B/W _____ B/W I.R. _____ COLOR _____ COLOR I.R. _____ OTHER _____
 PICTORIAL _____ STEREO _____
 SCALE OF IMAGE AT FLIGHT LINE _____
 GENERATION _____ NOISE _____

FLIGHT ORIENTATION _____

SENSOR: CAMERA SYSTEM _____ LENS FOCAL LENGTH _____
 SCANNER SYSTEM _____

PLATFORM: I.D. _____ ALTITUDE _____

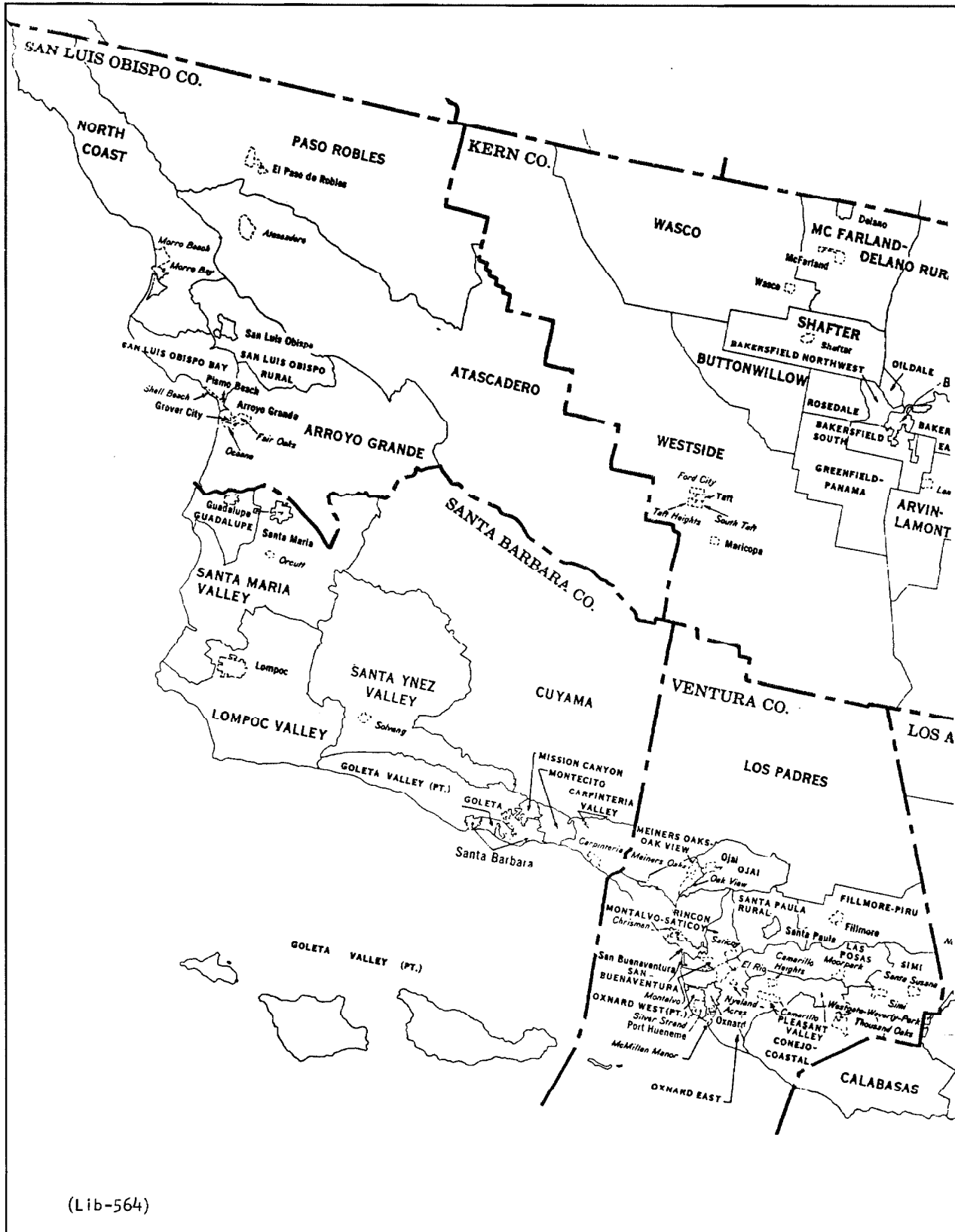
CONTRACTOR _____

FLOWN BY _____

ACQUIRED FROM _____ RECEIVED _____

SUPPLEMENTAL DATA _____

ORDER NO. _____



Something to Make Your Life Easier

Imagery Record

AREA _____ DATE FLOWN _____

SCALE AT LINE OF FLIGHT 1: _____ 1: _____ 1: _____
a b c

FLIGHT I.D. _____

FILED BY _____ IN CATALOGUE FILED BY _____ IN COLLECTION

INDEX: MOSAIC _____ FLIGHT LINE _____ SPOT INDEX _____ OTHER _____

INDEX SCALE 1: _____ SPECIAL LOCATION: IMAGERY _____

INDEX _____

IMAGERY

SIZE _____ ENLARGEMENT _____ REDUCTION _____

VERTICAL _____ OBLIQUE: HIGH _____ LOW _____ RECTIFIED _____

OVERLAP _____ % SIDELAP _____ %

FILM TYPE _____ UV _____ B/W _____ B/W IR _____ COLOR _____ COLOR IR _____

SPECTRAL RANGE (S) _____

PRINT _____ POS. TRANS. _____ NEGATIVE _____

RESOLVING POWER & CONTRAST RATIO 1.6:1 _____ 1000:1 _____ LINE PAIRS PER MM _____

THERMAL IR _____ SPECTRAL RANGE(S) _____

MICROWAVE (TYPE & SPECTRAL RANGE) _____ POLARIZATION _____

FILTER(S) I.D.: TYPE(S) _____

GENERATION HELD BY LIBRARY _____ LEVELING SCALE PRESENT _____

COMPUTER COMPATIBLE TAPES: ANALOG _____ DIGITAL _____

NUMBER OF TRACTS _____ BITS PER IN. _____ TAPE WIDTH _____

TYPE OF TAPE: MAGNETIC _____ DISK _____ OTHER _____

SENSOR: CAMERA (TYPE & I.D.) _____ LENS FOCAL LENGTH _____

SCANNER (TYPE & I.D.) _____ DETECTOR SPECTRAL RANGES _____

RESEAU MARKS

EXPOSURE MARKS: DENSITY _____ HUE _____ BRIGHTNESS _____

COLOR SATURATION _____ NOISE _____

GRAY SCALE WEDGE AVAILABLE _____ DENSITY-STEP WEDGE AVAILABLE _____

FLIGHT CLOCK SET FOR: G.M.T. _____ P.S.T. _____ OTHER _____

GENERAL SUBJECTIVE QUALITY _____

PLATFORM I.D. _____ DIRECTIONAL OREINTATION OF PLATFORM _____

SUN ANGLE TO PLATFORM _____ DEG. AZIMUTH _____ DEG. ELEVATION

ALTITUDE(S) (a) _____ (b) _____ (c) _____

FRAME NO.(S) (a) _____ (b) _____ (c) _____

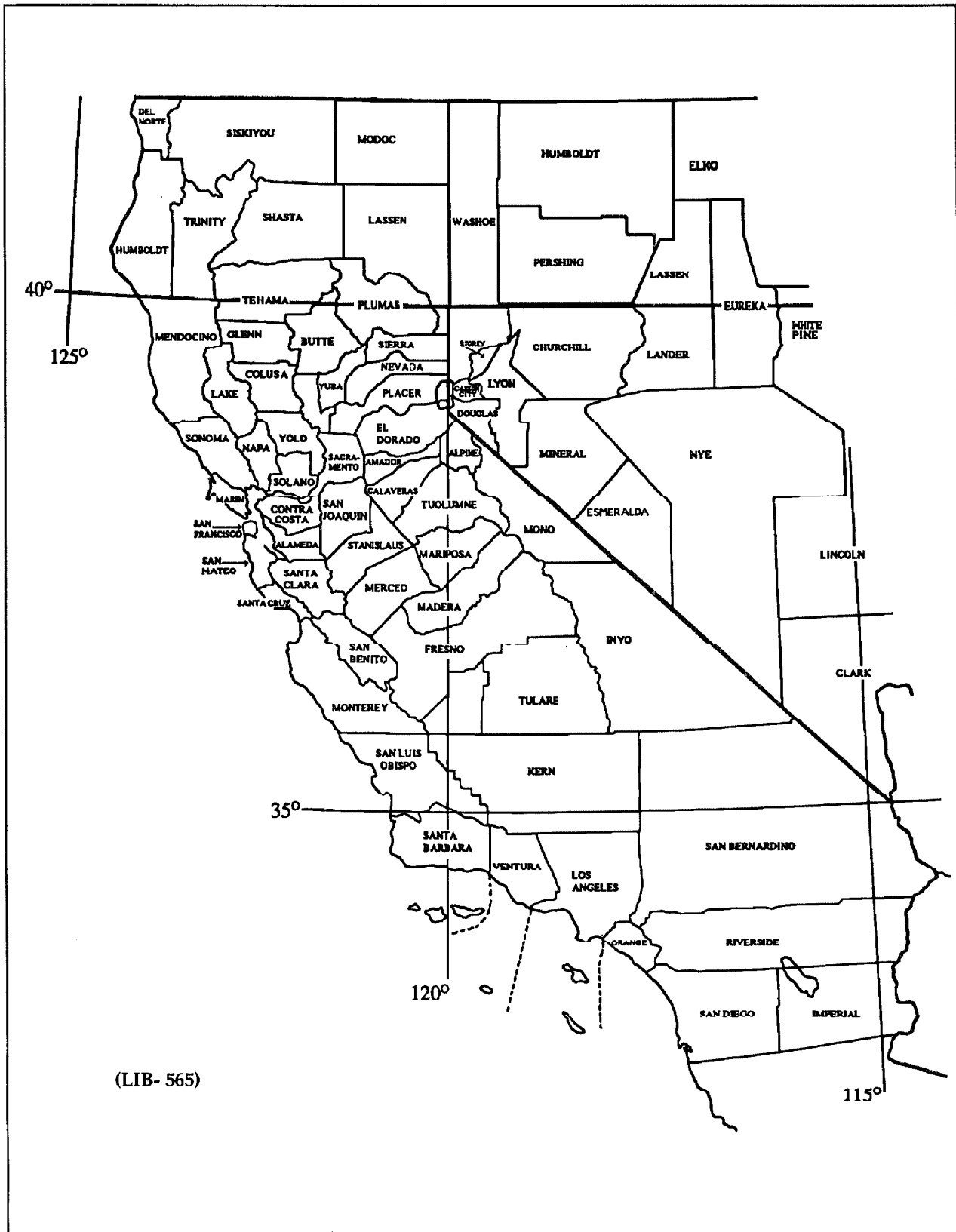
CONTRACTOR OR REQUESTOR _____

FLOWN BY: _____

ACQUIRED FROM: _____ RECEIVED: _____

SUPPLEMENTAL INFORMATION: _____

_____ ORDER NUMBER _____



(LIB- 565)

Benchmarks !

News about individuals in
Map Librarianship
compiled by
Stanley D. Stevens

Note: Some items are not news; however, since this column has not appeared for a few issues, I include these items in the hope you will find them interesting.

•**Philip Hoehn**, Map Librarian of The Bancroft Library and the General Library at the University of California at Berkeley, took advantage of the University's voluntary early retirement plan on October 31, 1992.

The plan permits early retirees a temporary appointment at no more than 49% (with no benefits since they are part of the retirement package). Phil has continued on this basis since December 1, 1992.

Consolidation of branch libraries at UC Berkeley also affected the Map Room and the Earth Sciences Library. The latter was moved to the General Library, with reference books in an area adjacent to the Map Room; the ESL staff, maps, microforms, reference services, locked cage and reserve materials are all located in the Map Room.

•**Philip Hoehn**, has been awarded WAML's highest award, Life Membership. The citation was announced at the 25th Anniversary Meeting, Hawaii, on Nov. 3, 1992, and was presented at the May 13-14, 1993, meeting of WAML in San Francisco.

•**Julia Gelfand**, former President of WAML, University of California, Irvine, is the recipient of a 1992-93 Fulbright Professional Librarian Award. She is in London, England, at the Imperial College of Science,

Technology and Medicine, and the Science Museum Libraries. She is studying the economics of scientific publishing, and cooperative - collaborative collection development in the sciences.

•**Muriel Strickland**, San Diego State University, has retired.

•**Herb Fox**, WAML Treasurer, Fresno State University, has retired.

•**Betty D. Fathers**, Map Curator-Superintendent of the Map Section, Bodleian Library, University of Oxford, has retired, July 31, 1992.

Nick Millea, from the University of Sussex, succeeds her.

•**David Woodward** and the late **J. Brian Harley** jointly received the 1992 IMCoS-Tooley Award. This Award is presented annually to the individual(s) who, in the opinion of the Selection Committee, has been responsible for the cartographic contribution of great merit and wide interest to map collectors world-wide.

Presentation of the Award to **David Woodward**, Editor and Project Director, History of Cartography Project, University of Wisconsin-Madison, and to the late **Brian Harley**, co-editor and director, University of Wisconsin-Milwaukee, recognizes their outstanding achievement in undertaking the first comprehensive history of cartography from prehistory to the present. Volume One of *The History of Cartography: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* was published by the University of Chicago Press in 1987. Volume Two, Book I, *Cartography in the Traditional Islamic and South Asian Societies*, was published in 1992. Volume Two, Book II, *Cartography in the Traditional East and South-east Asian Societies* is in press

and is due during 1993. This six volume work constitutes one of the major cartographic publications of the 20th century.

•**Gary Fitzpatrick** was appointed as Geographic Information Systems Specialist at the Geography and Map Division, The Library of Congress, effective Aug. 23, 1992.

The acquisition, evaluation, and demonstration of GIS data will support the delivery of spatial data to members of Congress, scholars, and the public. Gary will also provide instruction and training in GIS.

He has been at LC G&MD over a period of 23 years and has held successively responsible positions, including the Division's deputy representative to the Federal Geographic Data Committee.

His published works include *The Early Mapping of Hawai'i*. He is currently the Vice-President of the Washington Map Society.

•Obituary — **Barbara Bartz Petchenik**, prolific author and active member of the cartographic community, died of cancer in Chicago, Illinois, on June 7, 1992. She was 52. She co-authored *The Nature of Maps* with Arthur H. Robinson and wrote more than fifty articles, reviews, and essays, focusing on map design, education, cognitive psychology and human factors

•Obituary — **Eugene D. Derdeyn**, an artist and mapmaker, died Feb., 1993, at 64. He was an animator and film producer at Encyclopedia Britannica Films before founding Perspecto Map Company in 1967.

David A. Cobb, Map Librarian at Harvard, said of Derdeyn: "He was a map innovator and communicator and opened up the work of mapping to a

more human consciousness rather than the usual mechanical approach to cartography. He produced sweeping aerial views which allowed for a more natural understanding of a geographical area."

His maps have been displayed throughout the United States and the University of Illinois Map and Geography Library has a collection of his works.

•**J. B. Post**, Free Library of Philadelphia, was appointed Head, General Information Department, February 1, 1993. This took effect as the library's departments were restructured in a major cost-saving move. The Print & Picture Department, of which he was Head, became a Collection and assigned to the Art Department.

•**HelenJane Armstrong**, Map Librarian, Map & Imagery Library at the University of Florida in Gainesville, is the 1993 recipient of the American Library Association (ALA) Map and Geography Round Table (MAGERT) Honors Award.

The award, a framed certificate, recognizes outstanding achievement and major contributions to map librarianship and the MAGERT.

"HelenJane Armstrong has been a map librarian for almost thirty years," said Jim Walsh, chair of the MAGERT Honors Committee. "During this time, she has been in the forefront of map librarianship at the state, regional and national levels. Her knowledge and experience of collection development, cataloging and reference services in map librarianship have made her an expert in the field."

"HelenJane's talents are many and diverse. She has made a mark on the

profession of map librarianship and has set an example for all to follow and achieve."

Armstrong has been chair (1978-79) or a member of all Special Libraries Association Geography and Map Division (SLA G&MD) committees at some time during her 27-year membership. She is past president (1981-82) and member of the Special Libraries Association, Florida Chapter; a member of the Association of American Geographers, South Eastern Division; chair of the Committee on Southern Map Libraries (COSMAL); co-founder and member of the MAGERT Research Libraries Acquisition Group, and a member of the MAGERT Statistics Committee.

She has written articles and made presentations on a variety of topics such as computer cartography, historical geography, remote-sensing imagery, specialized map storage and the Government Printing Office depository program.

Armstrong has a B.A. in geography/history/geology from Carroll College in Waukesha, Illinois, an M.A. in library science from the University of Oklahoma, Norman, and a Ph.D. in geography from Oregon State University, Corvallis.

The award was presented on Saturday, June 26, 1993, at the MAGERT Honors Reception, during the annual meeting, New Orleans.

State/Province News Arizona

•The *Arizona Republic* has published a guide to spring desert wildflowers in bloom, available by fax; to charge maps to VISA or Mastercard, 800/277-4066. To charge to your phone, 900/786-6636.

•The Arizona Geographic Information Council has a *Newsletter* (#6 is March 1993); AGIC, 1616 West Adams, Phoenix AZ 85007.

•The 1992 legislative district maps for Arizona are available at either the Secretary of State's office for \$12, or at Wide World of Maps for \$16.

•*Pimeria* for September-December 1992 (volume 23, numbers 4 & 5) has as its feature article "Arizona's caves;" Jack D. Mount, Editor, Map Collection, University Library, University of Arizona, Tucson AZ 85721.

•The Arizona ARC/INFO User Group Newsletter has an appropriate name, judging from your Editor's experiences in dealing with spatial data in digital form - it's *AARGH!*

California

•The San Francisco office of the California Division of Mines and Geology has moved to China Basin Landing, 185 Berry Street, Suite 3600, San Francisco 94107; 415/904-7707.

•The CA Division of Mines and Geology has less than 100 copies left of its OFR 92-03, for \$15; get yours now, unless you have the patience to wait for the "final" version.

•There is a new ILLUSTRATION index (IL) on MELVYL for limiting a search by type of illustrations that appear in an article - for example:
FIND XS BRAZIL AND IL
MAP, PHOTO

Colorado

•The 1993 edition of the *Resource Directory* of the Colorado Geographic Information Coordinating Committee (GICC) is now available. Write to the chair of the Committee for a copy - Harvey R. Atchison, Division of Transportation Development,

Colorado Dept. of Transportation,
4201 E. Arkansas Avenue, Denver CO
80226.

Wyoming

•At present, the State of Wyoming has one part-time person in the State Engineer's office in charge of providing comments on geographic names proposed for Wyoming. That person is proposing a committee, to spread the work out a bit. Linda Zellmer (Geology Library, Box 3006, University Station, University of Wyoming, Laramie WY 82071-3006) would be interested in hearing from you if your state government has a policy or committee regarding the proposal of geographic names.

•Wyoming is participating in the Sesquicentennial of the Oregon Trail, with a series of exhibits and talks across the state. Fort Laramie also has a display of maps and views of the Oregon Trail, which includes a complete set of the Preuss maps of the Trail. The Wyoming Division of Tourism has published a self-guided tour of the Trail, titled, "Wagons Across Wyoming: Oregon Trail, 150 Years."

•Linda has put together an equipment list for her collection - includes workstations, printers, and so on. Get in touch with her if you'd like a copy of the list.

News - U.S. Government

Board on Geographic Names, Domestic Names Committee

•At the 528th meeting, January 14, 1993, DC, the Committee dealt with

some fascinating stuff, some of which is: the update to the FIPS55 file was to be complete by the end of January; a free-lance writer had visited the office and conducted an interview for an article regarding derogatory and pejorative names (might appear in March issue of *Conde Nast Travel* magazine); all GNIS coding and input of data backlog was completed, and all contracts on schedule and within budgets; requests for contracts for Montana, California, Illinois, Wisconsin, Iowa, and Michigan are to be submitted during this fiscal year; a list was submitted of the most frequently occurring street names from the Census TIGER file.

•Some highlights from the 530th meeting: staff responded to a request from USGS and produced a map indicating the distribution of topographic maps with directional terms in the name, to be used in planning sessions to determine the naming convention of new 1:12,000-scale digital quarter-quads (there are almost 6,000 1:24K-scale maps with directional terms in the name, which could lead to confusion if a similar naming convention is employed for 1:12K-scale maps); the CA and Montana contracts were to be delayed about one month, at the request of a potential offerer; approximately 1/3 of the entries in the DC gazetteer have historical notes or name-origin info.

Bureau of Reclamation

•Tidbit from Friday afternoon meeting at WAML in San Francisco - all of this agency's archives are kept in Denver, instead of being distributed to the regional National Archives centers throughout the U.S.

Bureau of the Census

•The Bureau is developing a new product, TIGER/SDTS, a collection of TIGER data encoded with the new SDTS, which became FIPS (Federal Information Processing Standard)173 last July.

•As you probably have noticed, a complete set of paper census-tract maps for the 1990 Census will be available to depository libraries. CD-ROM discs containing map images of the tract maps will be available sometime in 1993.

Central Intelligence Agency

•CIA has put out *The Former Yugoslavia: A Map Folio*. Dale Steele's library got it through Doc Ex; he says it's very good indeed.

Coast and Geodetic Survey

•The Aeronautical Charting Division is continuing to revise its charts in preparation for the addition of the new Denver International Airport. Approximately 40 major airways and routes are being added, realigned, or deleted from the charts; the new airport will affect approximately 100 intersections/fixes and airway crossing, and 2 new Airport Surveillance Radars (ASR) will be established, as well as new Minimum Safe Altitude Warning System (MSAW) digital terrain maps.

Federal Geographic Data Committee

•If you haven't seen a copy of the January 1993 *Manual of Federal Geographic Data Products*, you're missing something very good indeed.

Get your copy from: Manual Requests, Federal Geographic Data Committee Secretariat, USGS, 590 National Center, Reston VA 22092; fax 703/648-5755; Internet: gdc@usgs.gov

Geological Survey

•The USGS Pike and Thelin geomorphological map of the US has been reprinted. The press in Reston was overhauled and rebuilt in 1992, so an even better product than before is expected.

•Sometime between summer and fall of this year, USGS will have available CDs of APSRS, GNIS, and Cartographic Catalog (?your Editor's notes got a little messy at this last title). Cost will be \$57.

•There is yet another proposal to abandon the 15'-topo series; since this happens to be Dallas Peck's favorite series, it may be a while. Also, there are 400,000 of these still in stock at the warehouse.

•Georef will do document-delivery of USGS Open-file reports; of course, you pay for the speed, but if you need it fast, this is a good option. Talk to Charlotte Derksen at the Branner Earth Science Library, Stanford, if you'd like to hear how well she thinks it worked.

•USGS has Spatial Data Transfer Standard (SDTS) test data (TIGER and DLG) available - USGS, SDTS/FIPS 173 Task Force, MS 526, Reston VA 22092. Copies of the publication outlining the FIPS 173 standard are available for \$47.50 (\$44.50 plus \$3 shipping) from: NITS, Computer Products Office, 5285 Port Royal Road, Springfield VA 22161 (703/487-4600). Order as FIPSPUB 173; it's in 3 parts.

FIPS 173 and related docs are available in electronic form via anonymous FTP on the Internet at no cost to user except Ma Bell's charges. Internet address: isdres.eri.usgs.gov (130.11.48.2). User name: anonymous. After connecting: `cd usgs.sdts`. The `readme.doc` file will have info on the files contained in this directory, as well as info on other documents related to SDTS.

The first National Mapping Division Geodata product to be made available in SDTS will be DLG-3. A production system is being developed to produce these upon demand; the first will be for 1:24K data, and should be available by late summer; the user guide will be available late this summer also. 1:100K-data versions should be available shortly following. See *Cartography and Geographic Information Systems* (volume 19, no. 5, December 1992), special issue on "Implementing the Spatial Data Transfer Standard," for more information.

•The Geologic Division of USGS has a Data General AViiON 6220 server that functions as a repository for on-line publications. Connect to the server (greenwood.cr.usgs.gov; 136.177.23.40) via anonymous ftp to download files. As of 1/1/93 there were 9 files, including a digital geologic map of Colorado, and an interactive Macintosh display of petroleum exploration in the United States.

•Photos from the spring 1992 NAPP (National Aerial Photography Program) are now available for sale: EROS Data Center, Sioux Falls SD 57198. Standard price for single image is \$6.00. Indexes are available on fiche.

•A limited number of a North American vegetation-index maps (along with short descriptive brochure) are available from Ron Meyer, Sioux Falls ESIC, EROS Data Center, Sioux Falls SD 57198.

Library of Congress

•The Librarian of Congress has sent a letter to the President of the Association of American Geographers concerning the negative effects of LC's budget cuts (see *AAG Newsletter*, volume 28, number 4, p. 6).

•The LC catalog is available on line, free. To get there, use telnet command: `telnet locis.loc.gov`. No login or password is needed.

National Aeronautics and Space Administration

•Land surface climatology data is now on CD; it's from the First International Satellite Land Surface Climatology Project Field Experiment (ISLSCP FIFE). The data were collected on and around the Konza Prairie Research natural Area, near Manhattan, Kansas. For further info on this series: James McManus, Goddard DAAC/Land FIFE User Support Office; 301/286-3135; mcmamus@pldsg3.gsfc.nasa.gov

National Geodetic Survey

•The National Geodetic Information Center will be moving to a new location about June 18, 1993. Beginning on or about June 7, the Center will stop distributing information, until they're settled in their new place. (No, no address yet on that.)

National Geophysical Data Center

•NGDC is developing an improved, research-quality global terrain model, to be called Terrain Base. It will provide complete coverage of land elevation and ocean depth values for the entire Earth (no sign in the writcup about from what scale map the info is taken from).

National Oceanic and Atmospheric Administration

•To look at some of the data sets offered by the NOAA Paleoclimatology Program, on the Internet, type at prompt:

ftp ngdc1.ngdc.noaa.gov

Login name: anonymous. Password: your email address.

Smithsonian Institution

•Dr. Thomas E. Lovejoy (SI) and Dr. Peter Raven (Missouri Botanical Garden) have been recruited to help set up a national biological survey to map the country's ecosystems and biological diversity.

The Cartographic Users Advisory Council

transmitted by
Linda Newman

WAML representative to CUAC

The Cartographic Users Advisory Council (CUAC) is an organization made up of twelve representatives from six national and regional library organizations dedicated to cartographic interests: the Map and Geography Round Table and the Government Documents Round Table of the American Library Association;

the Geoscience Information Society; the Geography and Map Division of the Special Libraries Association; the North American Cartographic Information Society; and the Western Association of Map Libraries. CUAC and the various organizations it represents work on behalf of public, academic, and special libraries as well as the commercial interests represented by the membership.

CUAC was formed to provide a unified effort enhance the distribution and knowledge of the cartographic products of U.S. government agencies. The unique nature of cartographic requires special attention.

CUAC endeavors to improve public access to these materials through a more thorough understanding of agency products and publishing policies to heighten awareness by agencies of the value of their cartographic products to the public. CUAC encourages agencies to include their published cartographic materials in the Depository Library program and to provide specific indexes and acquisition tools for public use.

CUAC functions in an advocacy capacity as liaison between the U.S. agencies producing cartographic products and CUAC's constituency. CUAC's representatives meet in Washington, D.C. annually with most of these agencies. Each representative establishes and reaffirms contact with one or more agencies. These contacts are continued through-out the year by phone and mail. Questions are directed to CUAC from each organization as a group or individually and responses and reports are made back to each organization formally and through MAPS-L.

Initial encouragement to form CUAC came from the U.S. Geological Survey, the Defense Mapping Agency, and the Government Printing Office, which saw the benefits of unified representation.

Other agencies such as Bureau of Land Management, NOAA/National Ocean Service, State Department, Forest Service, Census Bureau, Library of Congress, and CIA have been contacted and usually provide a status report on the progress being made toward more complete participation in the depository program.

Federal agencies have no direct obligation to work with CUAC, but most do so eagerly and accept CUAC as an extension of their public constituency.

CUAC is an independent body with its own Constitution and it is responsible to its constituency. Representatives to CUAC are appointed for three-year terms.

NEWS Australia

•The fourth edition of *Map Collections in Australia: A Directory* (1991; ISBN 0642104832) is available for \$A25 from Sales and Distribution, National Library of Australia, Canberra ACT 2600 AUSTRALIA. Prepayment required, check made out to the National Library of Australia.

Canada

•The Library of the Geological Survey of Canada has been consolidated with the National GEOSCAN Centre, and the merger named the Canadian Geoscience Information

Centre, as evidenced by the cover of the January-March 1993 *Map Library Accessions*, and by an accompanying flier, announcing April 1, 1993, as the beginning date. A CGIC Open House was to be held on June 4, 1993, the mark the official opening.

The Centre is soliciting funds to preserve the 600 or so items in the Logan collection (Sir William Logan, the Survey's founder in 1842); the AAPG contributed startup funds of \$5,000 - you may send yours to Canadian Geological Foundation, Attn: Dr. H.C. Morris, Imperial Metals Corporation, Suite 800, 601 West Hastings Street, Vancouver, BC V6B 5A6 (charitable exemption number: 0346064-230). For more information about the Logan Legacy Fund: Marielle Doyon, Chief, Library Services, Geological Survey of Canada, 601 Booth, Ottawa K1A 0E8.

•Ed Dahl (Cartographic and Audio-visual Archives Division, National Archives of Canada) now can be reached directly on the Internet. His address is: ad504@freenet.carleton.ca

•Now available - *Directory of Canadian Map Collections*, 6th ed, by Tim Ross. \$18 from Association of Canadian Map Libraries and Archives, c/o Cartographic and Audio-Visual Archives Division, National Archives of Canada, Room 1016, 344 Wellington Street, Ottawa K1A 0N3.

Great Britain:

•The British Library has purchased the papers of the 17th-century economist and virtuoso, Sir William Petty (1623-1687). Map librarians are most familiar with his name because of his role in the "Down Survey" of Ireland, 1655-59, and also for his *Hiberniae Delineatio*, the first

printed atlas of Irish provincial and county maps.

Germany

•New postal codes will come in to effect on July 1 (5 digits instead of the old 4-digit codes).

New Zealand

•Now available - *Directory of New Zealand Map Collections*; NZD \$12.00, from W.H. Cutts, Map Library, Dept. of Geography, University of Canterbury, Private Bag, Christchurch, New Zealand. *New Zealand Map Series 1, Listing of Sheets Published*; revised 8/92; NZD \$10.00, also available from the obviously very active W.H. Cutts.

•*Map Making and Map Keeping in New Zealand: A Review and Bibliography*, by Brian Marshall. Auckland University Library *Bibliographical Bulletin 18* (ISSN 0067-0499). Available from: University of Auckland Library, Private Bag 92019, Auckland, New Zealand.

United States:

•Two geographers are assembling an atlas of refugees and other displaced peoples, May 1945-end of 1992; tentative publication date 1 April 1994. For further information: Martin S.

Kenzer, College of Liberal Arts, Florida Atlantic University, 2912 College Avenue, Davie FL 33314

•*Maritime Claims and Marine Scientific Research Jurisdiction*: color world map, Robinson projection; accompanied by 214-p monograph. \$10; Woods Hole Oceanographic Institution, Sea Grant Office, Clark 260, Woods Hole, Mass. 02543.

•Paul Pugliese, Chief of Cartography for *Time* magazine, and Graphics Director Joe Lertola have developed a

computer program to produce maps for *Time's* pages. Mr. Pugliese designed the maps for the U.S. Holocaust Memorial Museum.

•Many congratulations to the History of Cartography Project; the Professional/Scholarly Publishing Division of the Association of American Publishers has presented the R.R. Hawkins Award for 1992 to the University of Chicago Press for *The History of Cartography, Volume 2, Book 1: Cartography in the Traditional Islamic and South Asian Societies*, edited by J.B. Harley and David Woodward. This award is given annually for the Outstanding Professional, Reference or Scholarly Work of the Year. Member publishers submit books in 20 subject categories; a panel of judges selects a winner for each category. (The *IB* will have a review of this volume in its November issue).

•Erwin Raisz (1893-1968) would have celebrated his 100th birthday on March 1, 1993. Jeanne Yeshilian of Raisz Landform Maps, Jamaica Plain, Massachusetts, will present a paper on April 7, at the meeting of the Association of American Geographers in Atlanta.

•The Wisconsin State Cartographer's Office has a soil mapping guide scheduled to be printed in April. State Cartographer's Office, University of Wisconsin-Madison, Room 160, Science Hall, 550 N. Park Street, Madison WI 53706-1404 (be sure to include the street address, since the University recently received a notice from the post office that mail will no longer be delivered to an individual department UNLESS a street address is given).

•The new Wisconsin state highway

map is now available; Map and Publication Sales Office, 3617 Piersdorff Street, Madison WI 53704. It's free; the wall-sized version (3'x4') is \$6 plus sales tax.

- Columbia Funmaps Company, 118 East 28th Street, New York 10016 has as a slogan, "mapping the gay and lesbian world."

- Available from the International Map Industry Association (previously the International Map Dealers Association), its Directory; first copy is FREE to educational institutions, \$25 to all others. IMIA, POB 1789, Kankakee IL 60901.

- Steve Mullins is looking into possibly publishing a gazetteer of Mexico. You might let him know if you're interested. (5378 Rosalind Ave., El Cerrito CA 94530; 415/233-3055)

- Radiation contamination maps of Russia, Ukraine, Belarus (1:500,000), 42 maps, \$395, from Four One Company, Ltd, 523 Hamilton Road, London, Ontario, Canada N5Z 1S3.

Digital News

- Digital terrain data for the surface of the Earth: digital land and sea floor elevations are assembled from uniformly gridded data bases in an x, y, z worldwide gridded data set with a grid spacing of five arc minutes of latitude by five arc minutes of longitude. The complete data base is 9,331,200 grid values on magnetic tape. Data values are given as 16-bit integers. The data base contains 2,160 blocks, starting at the North Pole of the Earth and going south. Available on mag tape or floppy. For further info: Mr. G. H. Hamilton, POB 5381,

Virginia Beach VA 23455 (email, 3326954@mcimail.com).

- "Drive is on for autos that monitor traffic; car computers, radio messages being tested," says page 1 of section B, the *Phoenix Gazette*, January 20, 1993.

- From Page T3, January 24, *Arizona Republic*: "5 atlases put credibility on the line;" notes that the "use of innovative computer programs has reduced up to 60 percent the distortion in shape and relative size of land masses."

- There's also a snippet, "Computers map out trip data," that mentions a system of city maps for pc users - Personal Travel Technologies, Mineola NY - 1-800/345-8501. Or how about CityMap, 1301 Carolina Street, Greensboro NC 27401 (800/759-7666) - "the intelligent road atlas for the U.S.," \$49.95 per city, with over 150 from which to choose.

- Microform Review*, fall 1992 (21/4) has several articles on longevity of color microfilm (Cibachrome's good for ca. 300 years) and digitizing from microfilm.

- Take a look at *Mapping Awareness & GIS in Europe*; it's a good periodical. Miles Arnold Limited, High Winds, Cassington, Oxford, OX8 1DL, England; 70 pounds/year to educational institutions.

- New listserve for persons interested in Virtual World Interfaces and their application to GIS - to subscribe to VIGIS-L, send command: subscribe vigis-l yourname

to: listserv@uwavm.bitnet

- Take a look also at the Canadian Inter-Agency Committee on Geomatics' *Federal Geomatics Bulletin* (vol. 4, no. 2 is winter 1993); address seems to be Editor, *Federal Geomatics Bulletin*, Surveys, Mapping and Remote Sensing Sector, 615 Booth

Street, Ottawa, K1A 0E9.

- Information related to water and the environment: databases available online and on CD-ROM (IHP-IV Projects M-2.1 and M-2.2), Paris, International Hydrological Programme, 1992. 136 p. Free from The Director, Division of Water Sciences, UNESCO, Place de Fontenoy, 75700 PARIS.

- TigerSoftware, 800 Douglas Entrance, Executive Tower, 7th Floor, Coral Gables FL 33134 - an interesting catalog of software, including a fair amount of spatial data in digital form.

- The British Ordnance Survey has announced Address-Point, a digital dataset that provides for 25 million addresses in Great Britain: the correct Royal Mail address; the OS National Grid Reference to a resolution of better than 1 meter, and a unique, permanent OS Address-Point Reference (OSAPR).

- Duane Marble is the honcho for the GIS Master Bibliography project. Downloading by anonymous FTP is available from BASTET.SBS.OHIO-STATE.EDU

- Change to directory "biblio;" subdirectories are "gis, refer," "gis.pc," and "gis.mac." More info? 614/292-2250; dmarble@magnus.acs.ohio-state.edu

- If you're interested in GIS, you might want to get a subscription to *ARC News*, a quarterly publication from Environmental Systems Research Institute, Inc., 380 New York Street, Redlands CA 92373. Although of course its focus is ESRI's software, *ARC/INFO*, a considerable amount of general info on GIS does appear.

And in digital applications to atlas publishing we have.....

The Hammond Digital Cartographic Database

What it is:

The Hammond Digital Cartographic Database (HDCD) is a comprehensive database of the entire world, suitable for generating maps at a wide variety of scales, projections and designs, for a broad range of applications in many different languages and media.

The research underlying this database has been performed in-house by Hammond's highly experienced staff of cartographic professionals. Building on nearly a century of experience in the map-making business, Hammond has transformed map-making from a mechanical to a fully automated process.

Starting in 1987, Hammond began the development of the HDCD with the purchase of a computer mapping system, then dedicated over 300,000 hours of effort comprised of data research, selection, verification, digitization, and feature segmentation using a unique, proprietary coding system.

Along the way, Hammond added substantial additional hardware to the HDCD, as well as significant custom-developed software programs, to permit maximum flexibility in manipulating and displaying data.

The results are a truly innovative system that Hammond believes far exceeds anything else available in the world as a high-quality cartographic production tool, structured for both print and electronic delivery.

Database Description

The database is in a seamless, integrated format that supports a nominal scale of 1:3,000,000 for the entire world. More populated areas are covered in greater detail, including 1:500,000 to 1:750,000 for the eastern U.S., and 1:1,000,000 for the Western U.S. and Europe.

Select metropolitan areas are being developed at even larger scales. (Specific areas can be added at greater detail based on customer need.) A map of the complete database, laid out flat, would cover an area of approximately three football fields.

There are no maps in the system. Since the data is seamless, and stored by latitude/longitude coordinates, any portion of the world may be drawn in any projection. Data is uniform and contiguous across state and international boundaries. Drainage networks, political divisions, populated places and elevation data exceed detail levels found in most commercial world atlases.

Data is stored in two linked formats: linear and textual. The linework includes coastlines, political boundaries, rivers, elevation contours and transportation networks. Text includes names for all cities, towns and political divisions with population statistics.

The text database also contains physical features such as rivers, lakes, reservoirs, point elevations, mountain ranges, deserts, plateaus, etc. Naming for both political and physical features includes local name form, U.S. Board on Geographical Names (BGN) conventional name, historic name, generic name, and will soon be translated into other languages for international publishing applications.

The graphics are organized into over 1,000 different map feature codes. These include rivers, roads, canals, lakes, bays, islands, railroads, and so forth. Lines are coded in several ways; for example, a portion of the Rio Grande River reflects multiple coding as a national boundary, a state boundary, a county boundary, a national park boundary, and a river. Features such as rivers have special codes to indicate their width; e.g., tributaries have a different feature code than the main river. This enables maps drawn at different scales to show widely different levels of detail.

The database is entirely object-oriented, meaning all of the linework and point locations are computationally linked with their labels. Therefore, a line segment can be clicked on and the computer identifies its name and associated data.

Custom-Mapping Software

Hammond has engineered a series of proprietary software programs to allow this data to be handled with maximum flexibility for product development purposes. Hammond has pioneered the creation of a computerized type placement program (pat. pending) which places names on maps in a matter of minutes - a mere fraction of the time required by laborious manual placement. This program facilitates type placement in translated products which may require variant spacing of names on a map.

Hammond has also created a unique scaling program, allowing a computer operator to reduce line data to 1/200th of its original resolution without losing its cartographic integrity, producing the same results as lines

generated by an experienced cartographer. In addition, Hammond developed a new projections package yielding the most accurate map projections ever made.

All of these programs perform in a manner which meet the precise and exacting standards expected of a world-class cartographic firm. All were developed by world-renowned physicist, Dr. Mitchell J. Feigenbaum, famous for his work on chaos theory and fractal geometry.

Database Product Options

The HDCD is output-independent. Graphic output can be directed to CRT displays, pen and ink plotters, laser writers, color ink jet printers, high resolution film recorders or magnetic media. It can also be transmitted via modem or satellite downlink.

The HDCD is also design-independent. Because linework is stored as geometry and names are stored as text, they can be converted to any symbology (solid, dashed, color, or font) at output. Areas can be filled with any color scheme. This enables map collections to be prepared with a specific design style and editorial content based on each unique product. Thus the final map product is the result of the selection criteria; the map's focus ("window" on the world), scale, projection, levels of detail and graphic design for all features are strictly product-driven. For example, a map published in a printed atlas may require the display of many names in a small type size, whereas an extract for a CD-ROM or video may display the same area but with fewer names in a larger type size.

Existing automatic selection criteria facilitate this selection based on

variables such as population, political importance, or elevation above average local terrain. The automatic type placement and scaling programs ensure that the names are correctly positioned on the map and that all linework is appropriately drawn for that scale.

Dr. Feigenbaum and Hammond's New Optimal Conformal Projection

Mathematical physicist Mitchell J. Feigenbaum, 48, has long regarded nature to be more predictable than we would like to think.

When nature's ordered systems - macro or micro - disintegrate into chaos, according to Dr. Feigenbaum (Chairman of the Physics Department at Rockefeller University in New York and a 1985 MacArthur Foundation "genius" award winner) they do so at a predetermined rate. Thus, according to Dr. Feigenbaum, "air currents stirred up in Singapore by a butterfly may eventually develop into a major snow storm over Denver."

Three years ago, his trailblazing work in furthering the non-linear science of chaos dynamics led *Life* magazine to proclaim him one of Five Original Thinkers Who Changed the Way We View the World."

"[Feigenbaum's] notion of predictable possibilities in dynamics that have traditionally been considered erratic," wrote the editors, "has shaken up meteorologists, economists and even those charged with keeping L.A.'s freeways moving."

With the publication this fall of the *Hammond Atlas of the World* (ISBN 0-8437-1175-2, Hammond Inc., Maplewood, NJ), for which he served as Chief Technical Consultant, Dr. Feigenbaum's constituency will be

enlarged to include cartographers.

Dr. Feigenbaum has created several break-through software programs for Hammond that have been crucial to the development of what the company believes to be the most advanced computerized cartographic production system in the world.

Overlaid against all the sophisticated production technology is a new projection, engineered by Dr. Feigenbaum, called "Hammond's Optimal Conformal," which creates the most accurate maps of continents and large land masses that the world has yet seen," claims publishing executive Kathleen D. Hammond. All of the continent maps in the forthcoming *Hammond Atlas of the World* have been created using this new projection.

While the public hears of him mainly through his theoretical research, the scientific community knows Dr. Feigenbaum better as one of the world's leading exponents of fractal geometry. Fractals are geometric patterns that are repeated in ever smaller scales to produce irregular shapes and surfaces. Applied to computerized cartography, fractal geometry can measure such topographic qualities as coastlines, rivers, mountain ranges - features that often lack clearcut dimensions.

Dr. Feigenbaum has applied fractals to the development of a scaling program which has allowed Hammond to use a single database to create maps of widely different scales for the *Hammond Atlas of the World*. "The program enables the cartographer to put less detail into smaller maps while preserving the overall integrity of the geographic data," says Dr. Feigenbaum.

Long aware of his extra-curricular fascination with maps, four years ago Ms. Hammond inveigled Dr. Feigenbaum, an old friend from Cornell University days, into becoming an adviser to the family-owned New Jersey-based map company, of which she is Chief Operating Officer. At the time, she little realized how deeply Feigenbaum would immerse himself in the project, and how critical his input would be in shaping the final system.

As Feigenbaum reconstructs events leading up to what he now laughingly refers to as the "penultimate corporate seduction," five years ago "the company had bought a powerful CAD/CAM computer system that promised to take them right into the 21st century. Only the bundled software that came with the package left something to be desired," he continued - namely the ability to create maps for which no templates existed. "They thought at first that all they had to do," Dr. Feigenbaum explained "was scan their existing mapwork and run it through the system."

"Over time, we realized that all that would do," adds Kathy Hammond, "is perpetuate the errors that are inherent in manually drawn maps. We saw that what we needed was a system comprised of raw data, not 'bit' maps or individual map pictures. To achieve this we were going to have to start from scratch, to create an enormous, flexible database that would allow us to create maps of all types, of any part of the globe, in any scale or projection we desired."

Ms. Hammond concluded by saying that, "after five years building such a system, we can now easily meet the

needs of our diverse consumer base with the capability to produce maps of all kinds."

The Hammonds were looking to do something radically different from what had been done before, and Dr. Feigenbaum was sufficiently unorthodox in this thinking to help them do it.

They'd come to the right man. Dr. Feigenbaum, who dismisses the NASA "Big Blue Marble" view of planet earth as a visual cliché, had long been intrigued by the idea of applying his mathematical abilities to the science of cartography. He points out that the Earth's true dimensions have never been captured by map-makers, and for very good reason: "The surface of the earth is close to spherical, while a map by its very nature is precisely planar," Dr. Feigenbaum explained. "All problems of drawing maps flow from this incompatibility of geometries."

Dr. Feigenbaum set out over the next four years to devise, develop and perfect for Hammond a number of highly sophisticated proprietary computer programs, aimed to make the new *Hammond Atlas of the World* the most innovative and up-to-date book of its kind on the market today.

As its name implies, Hammond's Optimal Conformal presents the optimal view of an area by reducing to a minimum shifts in scale over an entire region. It is not a single projection, but rather chooses the ideal projection for each area, based on its unique shape. In most cases, this revolutionary projection will cut in half the amount of distortion found in all previously published maps of large landmasses such as continents, where the distortion is most apparent.

To appreciate why this could be a major breakthrough requires an

understanding of the map-maker's age-old dilemma. To project the Earth's curved surface onto a flat plane, cartographers have created various mathematically-derived renderings of the globe's true size and shape, called "map projections". All are intrinsically flawed, some more so than others. All the cartographer can do is to reduce the distortion to within reasonable bounds.

The trouble is not only that some land masses appear deformed but that actual distances end up distorted, often seriously so, with the best previous projection for the continents probably being the Lambert Azimuthal Equal Area.

"But should you happen to be a pilot/navigator flying between Caracas, Venezuela and Rio Grande, Argentina, and fuel up based on what a Lambert Azimuthal map posits as the distance between the two cities," Ms. Hammond points out, "you'll probably crash-land in the shark-infested South Atlantic-not just chaos but catastrophe," because the actual distance is roughly 4,443 miles while on a Lambert Azimuthal map it shrinks to 4,316 miles. Hammond's Optimal Conformal projection puts the mileage at 4,429 miles - an improvement of over 100 miles.

Dr. Feigenbaum also developed an innovative computerized Type Placement program [patent pending] that automatically positions all place names and other point features horizontally along the graticules (the grid of parallels and meridians), a major visual improvement over all other atlases of this complexity.

Placing names the old-fashioned way used to be a painstakingly detailed job that could take weeks of

hand labor, and might still leave the atlas user reeling from place names going every direction but backwards. Hammond's new type placement program reduces those weeks of labor to a matter of mere minutes.

A member of the National Academy of Sciences and Fellow of both the American Physical Society and Los Alamos National Laboratory, Dr. Feigenbaum is a native of New York City. He graduated top of his class at the City College of New York's School of Engineering (B.E.E. 64), earning his Ph.D. in Physics from the Massachusetts Institute of Technology in 1970. That same year he joined the faculty of Cornell University as a research associate. From 1972 to 1974 he held a similar post at Virginia Polytechnic Institute, thereafter moving to Los Alamos, New Mexico.

He came east early in 1978 as a Visiting Member of the Institute for Advanced Study in Princeton, N.J., returning to Los Alamos where he would remain until 1982, when he rejoined the Cornell faculty as a professor in the Department of Physics and Laboratory of Atomic & Solid State Physics. In 1984, the same year he won a coveted MacArthur Foundation Award, he became a Visiting Professor at Rockefeller University for the Fall semester, and two years later was named Toyota Professor, effective January 1987.

Author of some twenty published articles that have helped shape the current research in chaotic dynamics, Dr. Feigenbaum is also a much sought-after speaker. He has participated in more than 30 international symposia and 200-plus university seminars and colloquia and has lectured at the University of Chicago,

Case Western, Yale and New York University. Married to Swedish artist Gunilla Mallory-Jones, Dr.

Feigenbaum serves on the editorial boards of at least four scholarly journals.

Among his many honors, he has received the 1987 Dickson Prize from Carnegie-Mellon University, the 1986 Wolf Foundation Prize in Physics and the 1982 E.O. Lawrence Memorial Award from the U.S. Department of Energy.

Periodicals

Miscellaneous articles:

•"New world business," by John Powers, *Boston Sunday Globe* (2/21/93; pp. 16-19+); article looks at changes of world's political face and how these changes have affected atlas and map makers.

•"Follow me .. I am the earth in the palm of your hand,' more than a guide to place or a definition of boundary, maps present information selectively, shaping our view of the world," *Smithsonian* 2/93, pp. 112+. See also "The power of maps : the authoritative appearance of modern maps belies their inherent biases ...," by Denis Wood, *Scientific American*, Map 1993, pp. 88-93.

•"Digital topographic mapping from space," by John S. MacDonald, pp. 6-12; *Proceedings of the International Conference and Workshop on Analytical Instrumentation*, November 2-6, 1987; Falls Church VA: American Society for Photogrammetry and Remote Sensing, 1988. ISBN 0-944426-09-3.

•"Analysis of state and provincial atlas reviews," by Diana Hocking and C. Peter Keller, *Professional Geographer* 45(1):73-83.

•Association of Canadian Map

Libraries and Archives -

Bulletin 85, December 1992

"Training student assistants for reference service in a map library," Cathy Moulder

"Some thoughts on the transliteration and transcription of geographical names," Lou Sebert

Bulletin 86, March 1993:

"Exploring the Internet for digital map data," Colleen Beard

"OCUL Map Group Survey: Cartographic Software and Data Profile," Barbara M. Znamirovski

"Politique de developpement des collections de documents électroniques de la cartotheque de l'Universite du Quebec a Montreal," Pierre Roy

"Mapping the referendum," Peter Paul
•Australian Map Circle *Newsletter* 61, Jan. 1993:

- news and notes; the National Executive has mainly moved from Melbourne; President, Maura O'Connor, Vice President, Margaret Eva, secretary, Annette Sugden, business manager, Rob Bartlett (the latter still in Melbourne); new editor of the *Globe* is Bill Stinson; newsletter editor is Peter Dunbar.

•*Cartographic Perspectives*, number 14, winter 1993:

"The impact of the implementation of the North American datum of 1983 (NAD 83) on aeronautical navigation in the United States," by Ronald M. Bolton

"Maritime boundaries on National ocean Service charts," by Charles E. Harrington

News, notes, reviews

•Checklist of Illinois State Library's complete holding of Illinois County land ownership maps and atlases, December 1992; available free from Arlyn Sherwood at the Illinois State Library.

•*The Globe*, special issue, number 37, 1992:

And a very special issue it is! "Unfolding Australia," proceedings of the joint meeting of the International Map Collectors' Society and the Australian Map Circle, Sydney, Australia, 17-21 November 1991. Well worth getting a copy, if your library doesn't subscribe; send to Editor, Bill Stinson, Audiovisual Dept., Macquarie University Library, Macquarie University, North Ryde, NSW 2109, AUSTRALIA.

•*NEMO Newsletter*, #8, January 1992:

- news and notes; highlights of UN Cartographic Conference for the Americas

#9, March 1993: news and notes; "Children's atlases: a selected bibliography," compiled by Cy Behroozi

#10, April 1993: news and notes; "NCGIA at the University of Maine"

For more info on this newsletter: NEMO, c/o Nancy Kandoian, Map Division, Room 117, New York Public Library, 5th Ave. & 42nd Street, New York 10018.

•Special Libraries Association, Geography and Map Division *Bulletin* no. 171, March 1993:

- "The Calumet region of Indiana (Lake, Porter, & LaPorte Counties): a selected carto-bibliography," by Elmer B. Hess

- news, features

Preservation

•From publications by NEDCC "Which Envelope? Selecting Storage Enclosures for Photographs" by Gary Albright, Photographic Conservator, Northeast Documentation Center (NEDCC)

(This article is reprinted in slightly edited form from *Picturescope*, Vol.

31, No. 4 (Winter 1985, 111-113, with the generous permission of the editorial board and the author.)

Storage enclosures for photographic prints and negatives are available in a variety of materials and formats. To choose the proper enclosure requires a knowledge of the alternatives. This article reviews the options, discussing the advantages, disadvantages, and special pre-cautions for each.

Paper Materials

Paper enclosures are opaque, protecting the object from light. However, this makes viewing difficult, requiring the removal of the object from the enclosure before it can be looked at. This increases the handling and subsequent abrasion and fingerprinting of the image.

Paper enclosures are porous, protecting the object from accumulation of moisture and detrimental gases. This is especially important for cellulose nitrate and early safety film negatives where gases generated by the deterioration of the support material are harmful to the photograph.

Paper enclosures are generally less expensive than plastic enclosures.

Paper enclosures are easy to write on.

Paper enclosures are available in buffered and non-buffered stock, both of archival quality. Direct contact of buffered paper with photographic emulsions is presently being questioned. Buffered storage enclosures are not recommended for color images, cyanotypes, or albumen prints. They are recommended for cellulose nitrate and early safety film negatives, brittle prints, and prints on acidic mounts.

Research has yet to be conducted to determine the effect of buffering agents on many photographic processes.

However, if the environment in which the images are stored has a low relative humidity (below 50%), then buffered materials should present few, if any, problems.

Seed Paper Envelopes

An envelope is an enclosure with one end open; it may or may not have a protective top flap. With paper envelopes the seam should be located at the sides and across the bottom. The adhesive should be non-acidic and unreactive with silver. A thumb cut is not recommended, as it invites the placement of the finger on the photograph during its removal from the enclosure. A top flap may be desirable in order to prevent dust from entering the envelope and causing abrasion of the image. When storing photographs in seamed envelopes, the photograph should be inserted with the emulsion away from the seam.

Seamless Paper Envelopes.

The seamless envelope does not have any adhesive. The envelope is formed with three or four flaps attached to the back which fold over to produce a pocket. The fourth flap, if present, leaves the envelope without any opening, protecting the object within from dust and dirt. The construction of these envelopes encourages the user to place the object on a flat surface in order to open them. This can be an advantage for brittle or fragile items such as glass plate negatives.

Peer Folders

A folder is a sheet of paper which is folded in half. They are closed only on one side and therefore must be kept in a properly fitted box in order to effectively hold the image. If used for

vertical storage in files, the photograph stored inside must be well supported to prevent sagging or curling. Folders are simple to make and are most useful for large or mounted items.

Plastic Materials

Plastic enclosures have the great advantage of allowing an image to be viewed without removing it from the enclosure. This greatly reduces the chance of abrading, scratching, or fingerprinting the photograph.

Plastic enclosures seal the object from the atmosphere. Since most chemical deterioration is catalysed by the presence of moisture and sulphides in the air, such protection will prolong the life of the image.

Plastic enclosures can trap moisture and cause ferrotyping (sticking with resultant shiny areas) of the image.

Plastic enclosures with matte or frosted surfaces should be avoided since they can be abrasive and may scratch the emulsion.

Plastic enclosures can be very difficult to write on. Plastic enclosures can be flimsy and may require additional support, such as archival quality Bristol board. On this board can be recorded any information which should accompany the image.

Plastic enclosures of archival quality may be made of polyester, poly-propylene, triacetate, and polyethylene. These plastics are chemically stable and have a neutral pH.

POLYESTER is the most inert and rigid of the four. It generates static electricity that can attract dust, and it is expensive. Polyester enclosures should be either DuPont's Mylar D or ICI Melinex -516.

POLYPROPYLENE is as rigid and strong as polyester when in sleeve format, but it is almost as soft as polyethylene when it is used for ring binder storage pages.

TRIACETATE (Kodak transparent sleeves) is softer than polyester, more easily scratched, less dimensionally stable, and not as strong a support.

POLYETHYLENE is the softest, most easily scratched, and the least rigid of the four plastics.

Plastic enclosures made from POLYVINYL CHLORIDE (PVC) are unacceptable for archival photographic storage. This plastic is not chemically stable and will cause deterioration of a photograph over a period of time.

•FYI - from MAPS-L (2/24/93) - a tightly packed standard (large) 5-drawer, metal map case weighs about 550 pounds; that makes close to 1,700 pounds when stacked three high.

•Free from 3M Optical Recording. 3M Center Bldg. 223-5N-01, St. Paul MN 55144-1000, *Plain talk: CD-ROM lifetime and why you don't have to worry about 3M discs* (they figure about 100 years).

•"Electronic Technologies: New Options for Preservation" will be held as a preconference to ALA on Thursday, June 14, 1993.

•If you need true "archival-quality" boxes, you need to look for material described as "lig-free" (apparently a misnomer) or "low lignin," "buffered" (often pH about 8.5) and "alkaline reserve" (about 2% or 3%). Do NOT store in buffered enclosures: hand-colored material; blueprints; cyanotypes. For these items, use "pH neutral" (about 7.0) storage materials or stable plastics (from Conservation DistList; consdist@lindy.stanford.edu).

•Also from the Conservation DistList: there was recently a discussion on deacidification prior to encapsulation. Apparently there is some LC research that shows unalkalized/unbuffered materials backed with a sheet of buffered paper can be expected to age at the same rate as unencapsulated material would age. This of course does not take account of how rapidly unencapsulated items get torn or edge-ripped.

•Also from an NEDCC publication: Treatment of Oversized Maps

The Northeast Document Conservation Center (NEDCC) treats maps of all sizes and shapes but the treatment of very large wall maps is a specialty. A spacious workshop and a staff experienced in handling large sheet materials allows NEDCC to treat many oversized objects each year. Since treatment of paper often involves washing, several large stainless steel sinks facilitate this work. The largest sinks are free standing and capable of holding materials up to six by eight feet. Larger objects can be washed in sections or in a specially constructed wooden structure lined with plastic sheeting.

Oversized wall maps often come to NEDCC rolled. They are usually varnished and mounted on linen backings. Wooden rods are often still attached at the top and bottom. The maps tend to be in poor condition, dark, brittle, and cracked from exposure, neglect, and tight rolling.

A typical treatment for such a map involves removal of the varnish with organic solvents and washing the map in a large sink. All inks and colors are

always carefully tested beforehand for sensitivity to water and solvents. During washing the old linen is removed. The map is then backed with Japanese paper and if large, is given a second backing of washed linen. When dry, the backings are trimmed. Large wall maps are often encapsulated in polyester film. A wooden molding can be attached to the top edge and a dowel to the bottom if the original style was a rolled wall map. The polyester film bears the weight of the dowel. Whenever possible the original wooden rods are used. If these do not exist or are in poor condition, moldings in the style of the period are provided. Often the original finials can be applied to the new bottom dowel. The map can be hung as it was originally with wooden members. Polyester encapsulation is not historically accurate, of course, but is necessary to protect the map from airborne hazards and probing fingers. It also minimizes potential warping of the map due to fluctuating relative humidity. Framing is an alternative but is far more expensive, especially for large maps. Framing has one great advantage: it allows the use of ultraviolet filtering plexiglass, which screens out the most harmful components of light.

Once treated and encapsulated, NEDCC recommends that wall maps should not be rolled. They should be displayed in as subdued a light as possible in an area with no direct or indirect daylight. As with all paper artifacts, the environment should be cool and dry with little fluctuation of temperature and relative humidity.

The Northeast Document Conservation Center is a nonprofit regional conservation center specializing in the

treatment of paper-based materials including maps, photographs, books, architectural drawings, posters, documents, wallpaper, and art on paper. Its purpose is to provide the highest quality conservation services and to serve as a source for advice and training for individuals and institutions that hold paper-based collections. The Center provides consulting services and performs surveys of preservation needs. It also performs paper conservation, book binding, preservation microfilming, and duplication of photographic negatives. NEDCC is located at 100 Brickstone Square, Andover, Massachusetts 01810.

Conferences

Are you hosting a forthcoming conference? Please let your *IB* Editor know your plans (no matter how preliminary), so that prospective attendees will be able to plan well ahead.

- August 19-20, 1993 First Annual Arizona Geographic Information Council (AGIC) GIS Conference, "MAGIC '93." Sessions on GIS management, applications of GIS, and an intro to GIS concepts. For more info: MAGIC Conference, AZ Geographic Information Council, 1616 West Adams Street, Phoenix AZ 85007.

- September 15-18, 1993 WAML in Salt Lake City; host, Wendy Hassibe

- October 18-20, 1993 Congress of Cartographic Information Specialist Associations (CCISA)/CUAC/LC all seem to be getting together in DC.

- October 20-23, 1993 "Cartography in a Changing World," Thirteenth Annual Meeting of the North Ameri-

can Cartographic Information Society, Silver Spring MD. Info: Charles E. Harrington, 10904 Kingstead Road, Damascus MD 20872; 301/443-8360.

- October 24-28, 1993 Geoscience Information Society, Boston; GSA's theme is "Charging into the Future;" GIS will have a symposium on "Finding and Communicating Geoscience Information on 10/26, 8am-noon. There will be a GeoRef Workshop, a Digital-Database Forum, and an interactive INTERNET demo; registrants for GIS are welcome to attend the Geological Society of America sessions. For info: Connie Wick, GIS Vice-President, Kummel Library, Harvard University, 24 Oxford Street, Cambridge MA 02138 (617-495-0791).

- October 31-November 4, 1993 GIS/LIS Annual Conference and Exposition, Minneapolis. GIS/LIS'93, 5410 Grosvenor Lane, Suite 100, Bethesda MD 20814-2122.

- January 31-February 1994 Second Thematic Conference on Remote Sensing for Marine and Coastal Environments, "Needs, Solutions, and Applications." ERIM/Marine Environment Conference, POB 134001, Ann Arbor MI 48113-4001

- March 31-April 2, 1994 WAML at Riverside CA; hotel, probably Mission Inn; possible field trip to ESRI; possible field trip to San Andreas Fault area. Info: Barbara Haner, Physical Sciences Library, University of California, POB 5900, Riverside CA 92517; 909/787-3511.

- Fall 1994 WAML at Jackson Hole WY; tentative plans include staying in Grand Teton (range of room prices: \$25-\$94). Field trip: Yellowstone National Park, probably leaving

Friday night and coming back to Jackson on Sunday - accommodations at Old Faithful. Linda Zelmer, Geology Library, University of Wyoming, Laramie (see IB masthead)

•Fall 1994 Gesocience Information Society, Society; tentative topic, "Changing Gateways; the Impact of Technology on Transfer of Information." For information: Barbara Haner (see WAML meeting for Spring 1994 for address; obviously a VERY busy person!)

•May 9-13, 1995 WAML meets with ACMLA at Vancouver; Tim Ross, University of British Columbia

•Fall, 1995 WAML in Las Vegas; tentative plans for post-conference field raft trip down the Colorado River. For info: Kathy Rankin, Library, University of Nevada, Las Vegas.

•October 2-5, 1995 Joint IMCoS/ California Map Society meeting, San Francisco; theme - "Alaska to Panama - the Mapping of the Interior of Western North America." First 2 days, map fair, reception, map auction; papers and visit to UC Berkeley and the Bancroft, Stanford or USGS and concluding banquets the second 2 days; optional post-conference tours (possibilities: wine country; Yosemite; southern California)

•Spring, 1996 WAML meeting at Sacramento. Info: Sylvia Bender-Lamb, California Division of Mines and Geology, Sacramento.



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ART/cARTE

•From *The New Yorker* of the week of May 3, a note on Guillermo Kuitca, a young Argentine artist whose works are on display through June 12 at Spereone Westwater (142 Greene Street); his artworks are based on road maps and other graphic works, such as an astrological chart and a family genealogy.

•If you attended ALA Midwinter in Denver this January, AND if you stayed at the Warwick, you may have seen a large planter in a handkerchief-sized park across the street from that hotel - it's shaped like the United States.

•In the Los Angeles Times Calendar for Sunday, February 7, on p. 23 there is a map of the U.S., with "Silent Pictures Maratta," at the top, and underneath that the map's title, "National Ego Distribution Map." The legend notes that one dot equals 10,000 hyperextended egos. Surprise! the two major dot clusters are in Los Angeles and New York.

•Pomegranate Artbooks (POB 808022, Petaluma CA 94975) has for sale *The art of cartography: a book of postcards from the Huntington Library*, 30 reproductions, ISBN 0-87654-944-X, , catalog no. A595, for \$8.95; they also have a *Masters of cartography* address book, ISBN 0-87654-428-6, catalog no. A528, for \$16.95. Pomegranate has 3 other beautiful catalogs you might like to look at - blank notes catalog, book-marks catalog, and museum notes & postcards catalog.

•What on Earth (2451 Enterprise East Parkway, Twinsburg OH 44087)

has a very colorful rare map on its 100% cotton t-shirt (V239T, \$22.95); with that, the sweatshirt with the western hemisphere on the front and the eastern on the back (R233S, \$24.95), the jacquard cotton throw of "Planet Earth (G1374, \$44.95), the 27" diameter inflatable globe with dinosaurs scattered about on it (G1513, \$29.95), and the art-supplies box (G1425, \$24.95) with an old-world map on the cover, you could have maps all over the place.

•If you prefer to send your business Rand McNally's direction, how about the vinyl, old-world-map set of 4 cosmetic cases (30030-\$, \$15.95), folding purse (30031-\$, \$49.95), glass color globe paperweight (86723-\$, 2.5" diameter, \$110), sterling silver continent pins with attached wildlife charms (each \$55), silk double-hemisphere scarf (86761-R, 36" square, \$68), globe bookends (86663-\$, \$36.95), art-supplies case (different old-world map, 30129-R, \$29.95), or desk lamp with illuminated globe as base (30134-C, \$99.95)? Or, for the high-priced end - Chambers (POB 7841, San Francisco 94120-7841), how about a celestial-chart screen, for a paltry \$795.00 (72-652974; no gift wrap available)?

•From *The Spectator*, 14 July 1990, p. 33, a cartoon by someone whose last name is Thompson shows 2 19th-century soldiers, mounted on horses, with cannon balls shooting into the air around them. They're consulting a map, and one is saying to the other, "There's nothing on this map about cannons to the right of us or cannons to the left of us."

•From *American Demographics*, May 1993, an article on "A Better

America," which features a map of the U.S. with all the panhandles removed, and states variously renamed - Montana, ND,SD, and WY become the state of Jackelope.

•From *Forbes*, March 29, 1993, p. 30: a correction from the Norfolk (Va.) Virginian-Pilot - "The map of Europe, Northern Africa and the Arab nations published in Monday's editions contained the following errors: Libya was labeled as the Ukraine; Bulgaria and Romania were transposed; Bosnia-Herzegovina was identified as Bosnia; Montenegro should have been identified as a separate state bordering Serbia; Cyprus and the West Bank were not labeled; Andorra, a country between France and Spain, was not labeled; the Crimean Peninsula appeared twice on the Black Sea; Kuwait was not identified by name, instead the initials of the Knight-Rider News Service were in its place." Just a few trivial errors...

•Jeffrey Kowal (Cartographic Designer Prints of California, POB 163562, Sacramento CA 95816) has a new map - *Cathedral California* - and another issue of his *Newsletter* (volume 3, number 1, 1993) out. The New England Fine Art Institute, sponsors of the juried show, "State of the Art '93," noted favorably two invited submissions, *Sacramento* and *Sacramento - Study Number Six*, which will appear in the May 28-30 Boston Exhibition. Friend of CDP and patron of the arts Charles Proudfoot (Sacramento) is underwriting the expenses involved in exhibiting.

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