



# CALAFIA

THE JOURNAL OF THE CALIFORNIA MAP SOCIETY

APRIL 2021



Portion, Map of  
Tenochtitlan, 1524 (p. 20)



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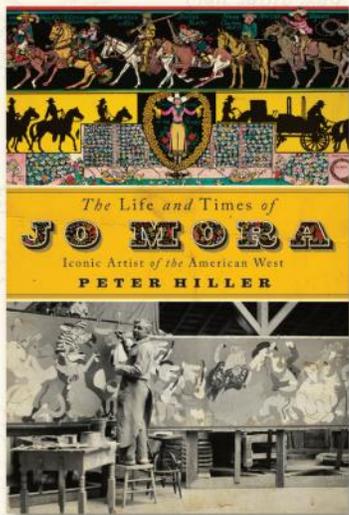
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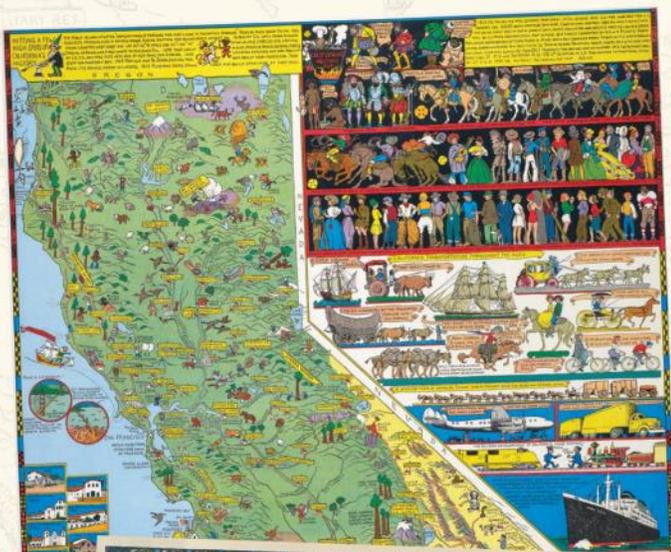
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## SPRING MEETING — ZOOM SESSIONS MAY 1 & MAY 15, 2021 Our 89th Regional Meeting!

A registration link for each day's event is available on the CMS Home Page.

### May 1<sup>st</sup> Schedule

**9:00am - Welcome**, Ron Gibbs, [CMS](#) President and Tom Paper, CMS Vice President

**9:15am - Benjamin Grant**, Founder of [Overview](#), on How We Change The Earth.  
*Presentation followed by Q&A.*

**10:00am - Daniel Crouch**, Co-Founder of [Daniel Crouch Rare Books](#), on Contagious Cartography, A Panorama of Pandemics & Plagues. *Presentation followed by Q&A.*

**10:45am – Break**

**11:00am – Steve Hanon**, President of [New York Map Society](#), on Maps of Spain in the Age of Discovery. *Presentation followed by Q&A.*

### May 15<sup>th</sup> Schedule

**9:00am - Welcome**, Ron Gibbs, CMS President and Tom Paper, CMS Vice President

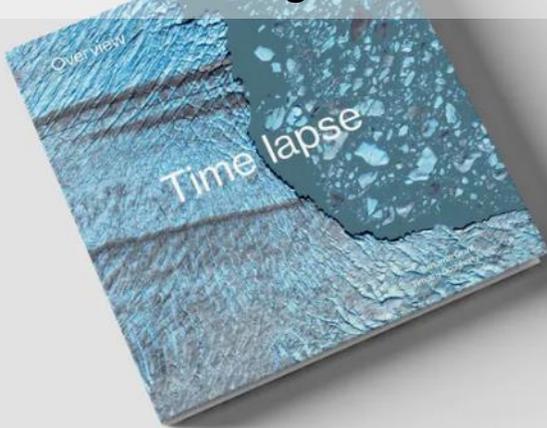
**9:15am – Jim Schein**, Founder of [Schein & Schein](#), and Tom Paper, Founder of [The Digital Gallery](#), on The Cartographic History of San Francisco. *Presentation followed by Q&A.*

**10:00am – Courtney Spikes**, Historian and [CMS](#) Vice President, on The History and Cartography of Waterloo. *Presentation followed by Q&A.*

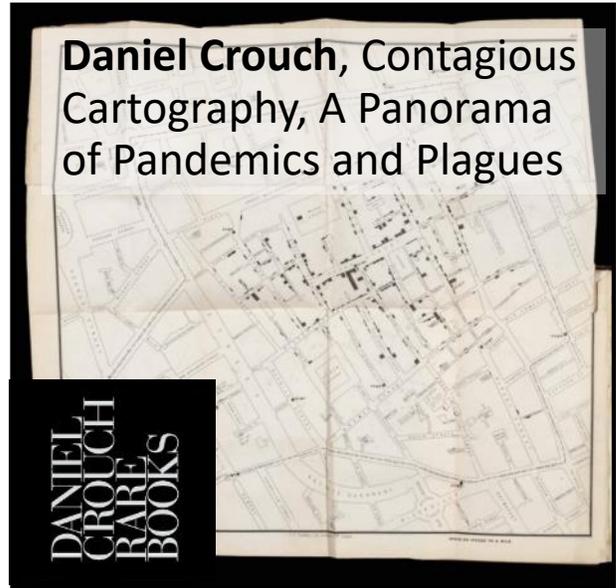
**10:45am – Break**

**11:00am – Susan Schulten**, American Historian and [Professor at University of Denver](#), on How Maps Made America. *Presentation followed by Q&A.*

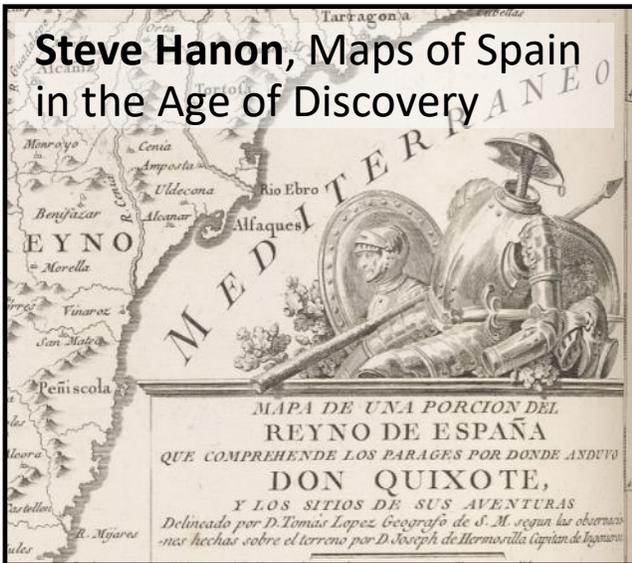
**Benjamin Grant, Overview,  
How We Change The Earth**



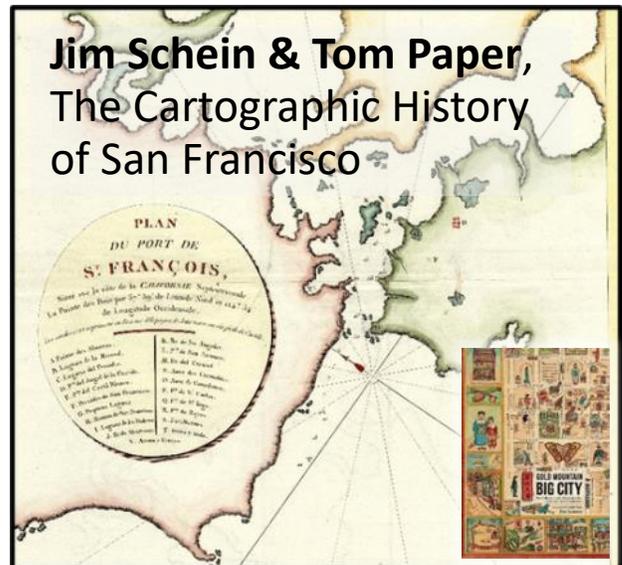
**Daniel Crouch, Contagious  
Cartography, A Panorama  
of Pandemics and Plagues**



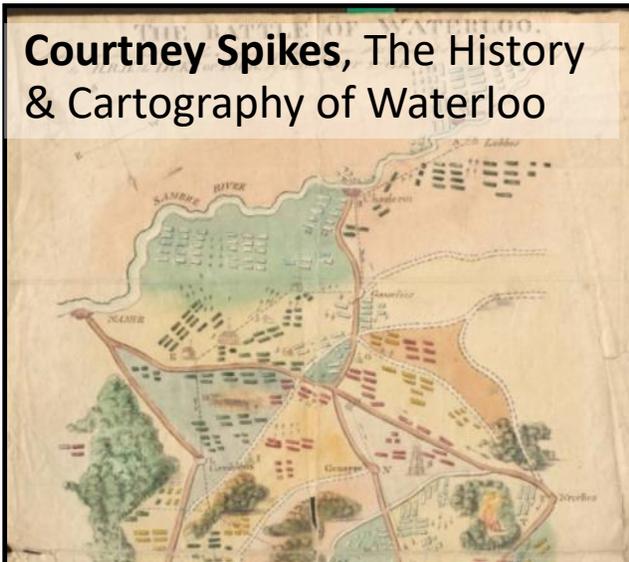
**Steve Hanon, Maps of Spain  
in the Age of Discovery**



**Jim Schein & Tom Paper,  
The Cartographic History  
of San Francisco**



**Courtney Spikes, The History  
& Cartography of Waterloo**



**Susan Schulten, How Maps  
Made America**



## PRESIDENT'S LETTER

RONALD S. GIBBS, MD  
CMS PRESIDENT

**D**ear Society Members and Friends,  
I am writing in mid-January 2021, with the world remaining in the grip of the COVID-19 pandemic, but there is renewed hope based upon the spectacular progress in vaccine development. Although the pandemic has affected our society's program format, we have responded with continued resourcefulness, resilience, and innovation. The virtual programs of our regional meetings and of Bay Area Map Group (BAM) and Greater Los Angeles Mappers (GLAM) have been superb and have broadened our reach. With virtual meetings hosted regularly by our VP for Northern California, Tom Paper, we have enjoyed a large and even international audience. I want to extend special thanks to Tom, Courtney Spikes (VP, Southern California), Nagin Cox, and Mike Schembri for arranging our regional and BAM, and GLAM meetings. At the January BAM meeting, which was attended by over 80 members and guests, Mike and Tom introduced the Breakout Rooms, which provided a new level of interaction.

This past year, after decades of leadership in BAM, Len Rothman (also a former President) passed off the baton, and we thank him for his leadership, organization, and vision. I also want to express my deepest appreciation to the other CMS officers who have put forth great effort during these difficult times: John Fleming, Treasurer; Ken Habeeb, Secretary; Fred DeJarlais, VP Membership; Juliet Rothman, VP Publications; David Kalifon, VP IT; and Jon Jablonski, Immediate Past President.

One of our goals for this year is to expand membership, and a terrific idea has been to gift a membership to a family member or friend. I've jumped right in on this and have gifted six memberships, and a number of other society members have been equally enthusiastic about this mechanism for growing our society. A larger membership is important to support our mission, and, in particular, the publication of our excellent journal, *Calafia*. With programs now virtual and with a virtual overlay planned for our future live meetings, the benefits of membership become immediately available to friends outside the major California metropolitan areas. Please give renewed thought to gifting a membership.

This year of nearly unimaginable stresses has been made even more difficult by the loss of three dedicated society members: Norman Thrower, Founding Member and First President; George Piness, who hosted many BAM meetings; and long-time member Douglas Burrell. We also regret the passing of TJ Cruzada, a key member of the Rumsey Map Center team.

I also wish to add a personal note of remembrance about the passing of a map colleague from afar. Dr. Seymour

Schwartz, the internationally prominent surgeon and cartographic scholar, died last August. Sy's medical career was entirely at The University of Rochester, where he served as Chair of the Department of Surgery from 1987 to 1998. His seminal textbook, "Principles of Surgery," has been a bible for generations of physicians. He and his wife, Dr. Ruth Schwartz had a world-class collection of maps, focusing on early America. Sy authored several magnificent map books, including "The Mapping of America" (with Ralph Ehrenberg of the National Archives and the Library of Congress), "The French and Indian War 1754-1763: The Imperial Struggle for North America", "This Land is Your Land: The Geographic Evolution of the United States", "Putting America on the Map: The Story of the Most Important Graphic Document in the History of the United States", and "The Mismapping of America." Because I had the honor of knowing both Sy and Ruth, I wanted to pay homage to their great legacy in both the medical and the map worlds.

I wish all good health and safety and hope that we can reconvene with live meetings before the year's end.

Best wishes,  
Ronald S. Gibbs, MD

## EDITOR'S NOTE

JULIET ROTHMAN  
CALAFIA EDITOR

**S**o many changes and challenges for our Map Society with COVID and the associated limitations on meetings and contacts! Our leadership has been very creative in developing new systems and pathways that have enabled us not only to maintain, but actually to expand the reach and the potential of our organization. Our pages in this Spring edition will illuminate the various ways in which the Society has addressed these changes.

Our meetings are now virtual. This has enabled both members and non-members to attend from all over the country and, indeed, all over the world, both extending the Society's reach and enabling the development of productive and congenial relationships over a broad range of topics, distances, and interests. Semi-annual meetings, and BAM and GLAM meetings, previously alternating between northern and southern California, can now be held in both areas simultaneously, and the new GLAM Gals group can include members from all areas as well. As you will see, virtual meetings have also enabled many fascinating presentations and discussions, with presenters often speaking from a distance or even

*continued at EDITOR, page 5*

from out of state. A future challenge: what to do when restrictions are lifted—we may not want to return fully to the “old” system and give up all these “new” advantages!

Our theme for the Fall, 2020 edition was city maps. Because the subject generated so much enthusiasm from both readers and article writers, we have extended the theme into this issue as well. David Kalifon shares his insights on maps of the famed Aztec city of Tenochitlan, destroyed by the Spanish in 1521, Louise Ratliffe her wonderful personal collection of Baedeker city guides, with a focus on Paris, and Fred Auda describes the development of Daniel Burnham’s city plan for San Francisco. Carol Spack’s enthusiasm for the subject extended far beyond our current issue: her article, Hiding in Plain Sight, explores map features often missed by viewers, though clearly present on maps. Here, she focuses on the city map of Ellsworth, Maine, but will continue her exploration in future issues, presenting city maps of Paris, a plat in Georgia, Seattle, Butte, and Boston.

Christopher Tyler introduces the first of his two-part article on the complex and fascinating history of the naming of America, and Karen Zukor shares her insights into map conservation. Leonard and I, bored in the early days of COVID confinement, explored the mapping of the Magnetic Pole, and share our learning here. We will also be meeting three of our newer members: Mike Schembri, who has assumed leadership of the BAM group, is featured in the Meet our Member article, Austin Arensberg shares his interesting and unusual choices in My Favorite Map, while Courtney Spikes’ Apps for Maps features new member Emily Yang’s experiences in working on cataloguing her collection with an app called AirTable. Our publisher, Fred DeJarlais, will also challenge us to identify maps on manhole covers, a truly interesting and unusual cartographic venue!

As always, we warmly welcome your ideas and your thoughts, as well as articles exploring your own special interests in the Journal. We hope you will enjoy this new edition.

*Juliet Rothman, Editor*

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## CMS EDUCATION FUND

The California Map Society Education Fund was established in 2014 by the Society to sponsor an annual lecture by a noted author or other expert in the field of cartography. Lectures are held at the David Rumsey Map Center at Stanford University, which co-sponsors the program. The lecture is then held at one or more venues in Southern California. The Fund provides transportation, accommodations, and an honorarium for the speaker. In addition, the Fund supports a short-term Rumsey Map Center fellowship in cartography for a student from any university in the state of California at the Center. This issue of Calafia features an excerpt from the essay written by **Arman Kassam**, the 2020 award winner. As part of our contribution to cartographic education, our regional conferences also often include student presentations, supported by prizes for the presenters generated from CMS general funds.

The Education Fund has been successful in achieving its financial goals for our first five-year term. **The Board of Directors has authorized an extension of the program for another five-year term.** We encourage past contributors to extend their generosity and help us to continue this worthy program. We hope that members who have yet to contribute to the Fund will make a financial commitment to the program.

Sponsors of the Education Fund include:

### Gold

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Nick Kanas  
Leonard Rothman

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Wally Jansen	Bill Warren
Barbara Keck	Amy Worth
Vincent Mazzucchi	

The Society is grateful for our contributor’s support of this important program. Please consider adding your name to this very special list by making a donation to the Fund!

# CMS FALL MEETING

## OCT 10 & OCT 24, 2020

JULIET ROTHMAN, FRED DEJARLAIS

### Session One—October 10

Incoming CMS president Ron Gibbs welcomed members and guests to the first of two virtual sessions of the annual Southern California CMS conference. He extended a warm thank you to the organizers of the Fall conference, Courtney Spikes, SoCal VP, Nagin Cox, GLAM coordinator, and CMS Immediate Past President, Jon Jablonski. Ron additionally expressed his gratitude to Tom Paper, NoCal VP, who provided Zoom hosting and map display technology through his Digital Gallery application.

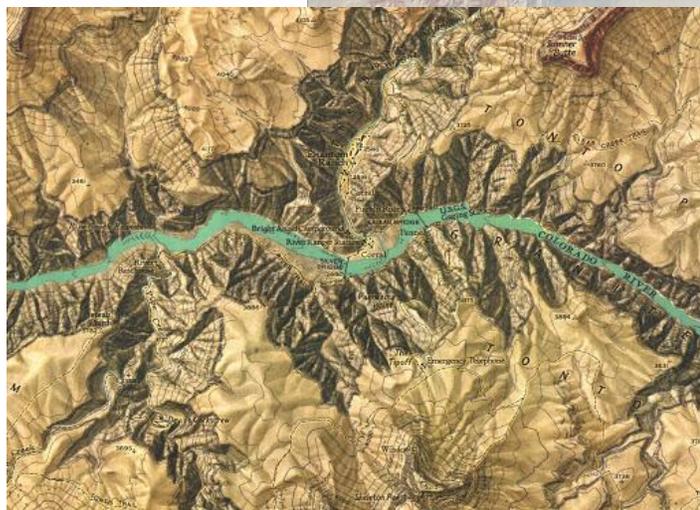
The first presenter for the day's program was **Matthew Toro**, Director of Maps, Imagery, and Geospatial Services, Arizona State University Library. His topic was *Rescaling Geography: Grand Canyon Exploratory and Topographic Mapping 1777 – 1978*. Matthew



**Figure 1.** (above) Image courtesy of Matthew Toro

**Figure 2.** (right) Matthew Toro's own work.

**Figure 3.** (bottom) Detail from Bradford Washburn's map of the Grand Canyon. (National Geographic Soc.)



illustrated the massive scale of the Grand Canyon (*Fig. 1*) and contended that no one could truly know the canyon because of its size. The best we can do is to use the science and art of cartography. He illustrated the problem of mapping the canyon with a series of historical maps depicting the various attempts made by explorers and cartographers over the last couple of centuries to accurately describe the Grand Canyon. In the 1960s, notable cartographer Bradford Washburn bemoaned the lack of detail on USGS maps of the Grand Canyon and set out, with funding from the National Geographic Society, to map the canyon with field and aerial surveys. These herculean efforts resulted in the publication of an iconic map (*Fig. 3*) published by the Society in 1978.

Further along in his talk, Matthew illustrated the historic process made by the Spanish and later explorers to depict this unique terrain, and presented a sample of his own recent mapping of the Grand Canyon. (*Fig. 2*)

In a departure from a typical map presentation, the meeting organizers brought together six presidents of US map societies with the object of discussing the challenges that our societies face today, particularly during the pandemic. The panelists included:

- Lena Denis**, President, Boston Map Society
- Eliane Dotson**, President, Washington Map Society
- Ron Gibbs**, President, California Map Society
- Stephen Hanon**, New York Map Society
- Brenda McClurkin**, President, Texas Map Society
- Angel Abbud-Madrid**, President, Rocky Mountain Map Society

Moderator and CMS member Nagin Cox introduced the panelists and asked each society president to briefly discuss their roles.

After the introductory remarks, Nagin asked the panelists to respond to two questions: 1) What have been the challenges you and your society has faced during this pandemic year, and 2) How has your society responded to membership issues: sustainability, retention, changing demographics, etc. There was general agreement that although much was lost when in-person meetings were canceled, virtual meetings presented opportunities to reach a broader audience, both here and abroad. Additionally, collaboration

between societies in the production of programs has greatly increased the number of map talks available every month. Responses to membership issues touched on efforts to attract a younger demographic, the use of social media and the need to find members who will take leadership roles in the various societies.

After a mid-day break, **Kenneth Field**, Principal Cartographic Product Engineer at ESRI and author, *Cartography* (2018), returns us to the Grand Canyon with an at times ghoulish talk entitled *Mapping Death in the Grand Canyon*. Kenneth's cartographic efforts document how dangerous the Canyon is to visitors who fail to take proper precautions. (*Fig. 4, next page*) He noted that over 770 people died in mishaps at the Grand Canyon since the first river exploration by John Wesley Powell and his crew in 1869.

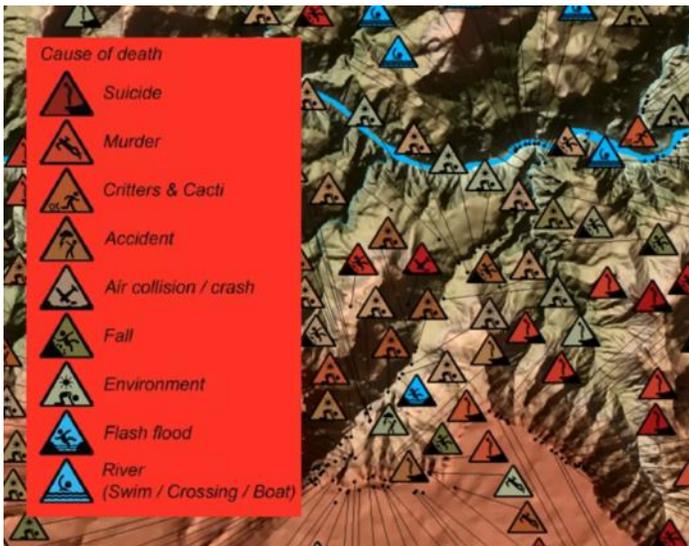


Figure 4. Detail of Kenneth Field's 'Death in Grand Canyon' (Screen shot image from video talk)

A business meeting followed the presentation with reports from John Fleming, Treasurer, Fred DeJarlais, VP for Membership (including a report on the map journal, *Calafia*), and from David Kalifon (website).

### Session Two—October 24

Session Two of the Fall California Map Society's meeting, which was virtual on Zoom, began with a warm welcome from President Ron Gibbs, past President Jon Jablonski, and Southern Vice President Courtney Spikes. As with previous meetings, attendees were from a much wider area than in-person meetings and included

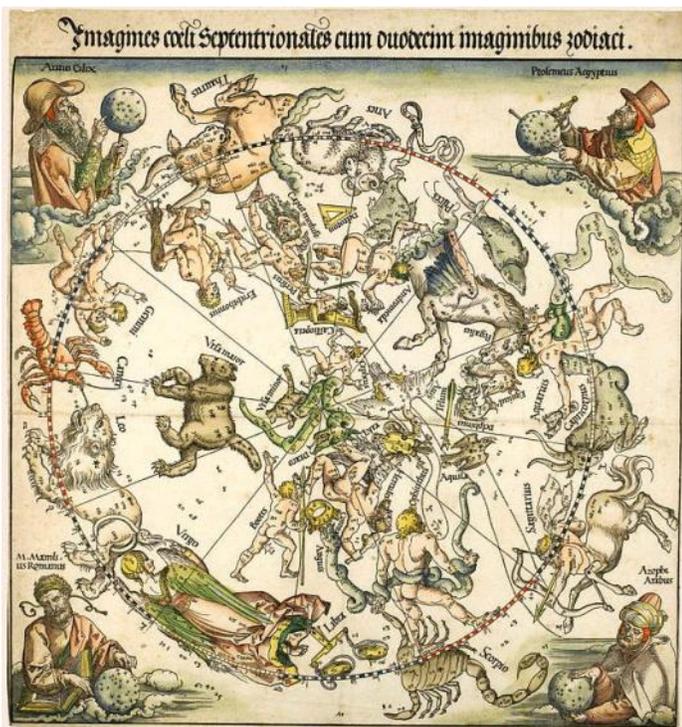


Figure 5. Albrecht Dürer, *The Celestial Map- Northern Hemisphere, 1515* (Woodcut), Screen shot from presentation

participants from Massachusetts, Rhode Island, Mexico, and Alaska.

The first presenter, CMS member **Nick Kanas**, shared some interesting artistic celestial maps from a chapter added to the latest edition of his book, *Star Maps: History, Artistry, and Cartography*, which explores the way in which celestial maps became art. This process began with the earliest artistic celestial map, a 17,000-year-old cave painting in Lescaux which featured Orion's Belt, the Pleiades, and the Hyades. This was followed by the statue of the Farnese Atlas, currently located in a museum in Naples, which featured 43 of the 48 constellations and is the oldest known celestial map.

After the fall of Rome, celestial maps were not generally accurate, except for some Islamic maps, until the period of the Renaissance, when Greek astronomical maps were combined with newly developed observation methods, such as the telescope, enabling the creating of more accurate maps. These included the engraving above a painting in the Book of Hours, Durer's 1515 celestial map of the Zodiac (Fig. 5, lower left) with astronomers at the corners, Solarius' 1660 atlas with its beautiful artistic images of putti and clouds,



Figure 6. Lucien Boucher, *Air France Double Hemisphere Celestial, 1953* (Screen shot image from video talk)

frontispieces of atlases which were designed artistically to encourage purchasers, and paintings of astronomers and their tools.

Nick also shared some 20<sup>th</sup>-century pictorial maps (Fig. 6) where the detailed images of the constellations had all but disappeared – they were not needed due to photography and all of the technological developments of the time. Pictorial maps are designed to convey a message rather than to portray accurate information as previous celestial maps had attempted to do. Some employed art deco imagery, while others advertised and promoted specific products and events, with celestial mapping serving only as a background. Current pictorial maps often feature imaginary, artistic images, some of which are clearly fantasy, as well as some abstract images.

The next presenter, **Ryan Mattke**, is the Co-Director of the Mapping Prejudice Project and Head of the Map Library at the University of Minnesota. His presentation focused on the city of Minneapolis, (Fig. 7, next page) explored mapping prejudice through the mapping of racial covenants through time. Minneapolis, he shared, has "the highest racial disparity in the country" – a condition which "can't continue." With the death of George Floyd,



**Figure 7.** Portion of South Minneapolis showing properties with restrictive covenants. (Screen shot image from video talk)

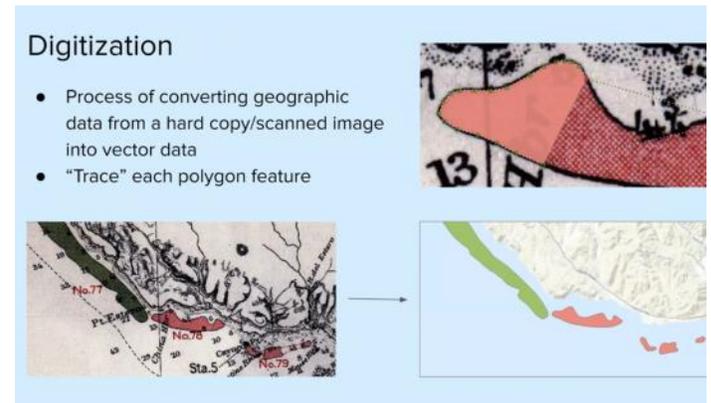
25 million Americans joined in protest, clearly an indication of a need for change and activism. Minnesota's African-American community "suffers more poverty, more violence, a lack of housing, and a lower rate of high school graduation."

Ryan attributes this clear disadvantage to racial covenants in housing. He showed an illustration of covenants that restricted sales to "Chinese, Japanese, Moorish, Turkish, Negro, Mongolian, and African" people, to "no persons of any race other than Aryan," "or to only persons of Caucasian race". His project mapped the racial covenants of 24,000 parcels of land in Hennepin County. Mapping these over time demonstrated that the covenants spread over a wider area over the years. Covenants were enforced by the judicial system: not following the covenants was a "violation of contract".

The first covenants appeared in 1910 and covered only a few blocks of the city. In 1913, an "Ethics Manual" was introduced, which stated that it was unethical to introduce people into a neighborhood that would lower real estate values and thus affect current homeowners. By 1940, people of color were living in only a few Minneapolis neighborhoods. The actual number of people of color had not increased over time, but the areas of the city where they lived had decreased markedly. Freeway construction over certain neighborhoods was used to clear our areas. Covenants were put in place before new neighborhoods were developed, reserving them for whites. 98% of FHA loans were granted to white applicants – a process that continues to affect racial disparities across generations. A 1930's redlining map clearly illustrates areas where loans would or would not be granted. Today, Ryan shares, 75% of Minneapolis residents own homes, while only 23% of residents of color own homes. Covenants continue to exist in property records in perpetuity. However, they are no longer enforceable and are now illegal. However, in a city which is 53% white, the areas with covenants in deeds are 79% white.

Mapping began using a process of optical character recognition via computer to indicate possible racial covenant language in deeds. Then, a crowdsourcing method was used to locate volunteers, who were asked to carefully read each deed word for word and extract the needed data. The data were then entered into a spatial database. Clear, brightly colored maps of specific areas of the city and of the city as a whole over time clearly demonstrated the lasting effects of covenants on housing. Further information and maps may be found at <http://mappingprejudice.umn.edu>.

The final presentation focused on analyzing both the areas and the features of coastal kelp beds along the Pacific. **Courtney Scarborough**, Deputy Director of NCEAS, and her student, **Nisha Nagota**, shared their work on kelp bed mapping from 1912 to the current time. It was extremely interesting to note that as humans



**Figure 8.** Diagram showing process of converting conventional mapped data to GIS format. (Screen shot image from video talk)

migrated along the land bridge from Asia to the Americas, they actually traveled along what Courtney described as "the Kelp Forest Highway"! Kelp, she shared, has similar characteristics in different locations, so that humans were able to use their original systems of gathering and utilizing kelp all during the process of migration. Kelp forests support a diversity of ecosystem which are beneficial to humans.

There has been much research on the quantity and quality of other species along the Pacific coast, but very little on kelp. However, in 1915 the US government became interested because kelp is a source of potash, which is used for fertilizer, and also can be used for ammunition. Sixty maps of kelp beds along the coast were created, each covering a different specific area. The maps noted the locations of the kelp beds and also the density, which varied.

These maps were used in a georeferencing process, which assigned "real-world" coordinates to the maps. Georeferencing can be done using either maps or aerial images, and Nisha showed this process. This is then followed by the process of digitization, which converts geographic data from a hard copy to vector data. (Fig. 8) Each polygon feature can be traced, thus enabling data to be attached to a vector polygon. Currently, this process is enabling the comparison of the original data to current kelp maps. This comparison illustrated a dramatic decrease in kelp forests in California, especially in southern California. The project recommends further analysis of the 1912 to 1989 maps to determine further information on changes, especially to determine current trends. They noted that sea urchins are currently eating the kelp and that abalone is dying off in such quantities that harvesting is now closed. The current poor condition of kelp in some areas of the coast is affecting abalone survival.

This very interesting conference has been recorded and is available on the Society's website. The Spring CMS Meeting is scheduled for May 1, 2021, and will be held at the San Francisco Public Library, in person (if possible) and with a virtual overlay.

# FROM A CONSERVATOR'S PERSPECTIVE

KAREN ZUKOR

Every map, whether drawn, painted, or printed, reveals information about its time and maker. Astrological, cosmological, geological, and celestial maps all teach us something about the cartographer's desire to understand a part of the world. Portolan charts aid the navigator. Religious and thematic maps try to sway or proclaim the ascendancy or primacy of a belief. Cartography, even when produced as a commercial enterprise, can display a great amount of curiosity about the universe. Antique maps in particular, remain the material I most like to study and conserve, as each offers me entrance to a realm unknown before.

Antique maps present a unique set of problems to someone tasked with repairing them. Since they are valued for their age, rarity, and information, these aspects are taken into decision-making regarding their care. Maps are also often artworks in themselves, examples of fine printing and design. Considering how many components they may represent, the challenge becomes balancing interests and expectations; what the conservator hopes to attain in terms of physical and chemical stability and what the owner hopes to retain but improve. These are issues best discussed between the owner/client and the person responsible for the repair.

The questions a conservator might ask include the following:

- what is the goal of a conservation treatment
- can a map be carefully cleaned of dirt and stains without losing the toning that comes with age
- is it possible to flatten out distortions in a map without diminishing printers' creases or a platemark
- can old repairs be safely taken off so a better mend is possible
- is the hand coloring susceptible to moisture and prone to 'bleed' or 'sink' if wet treatment is called for
- is there a varnish layer that needs to be removed because it obscures information and reduces clarity
- should a paper guard on the verso remain untouched even though the map can't be easily flattened while it stays in place
- are all later notations to be preserved if they contain information, even if incorrect
- and most importantly, can a conservation treatment add years to a map's life

While the various aspects of a map play into its treatment, the most important from a conservation perspective is the paper itself. Referred to as the primary support, the condition



Figure. 1 Diego Garcia Conde: *Plano General de la Ciudad de Mexico* 1793 (detail). Collection of Bancroft Library, U.C. Berkeley. Image courtesy of 42-Line, Oakland

of the paper determines how much or how little a map can be treated. The quality of the printing impression and the amount and strength of the hand-coloring certainly contribute to determining the map's value, but if the paper itself is weak, those aspects are jeopardized. When a map is brought into the



Figure. 2 Diego Garcia Conde: *Plano General de la Ciudad de Mexico* 1793 (detail). Collection of Bancroft Library, U.C. Berkeley. Image courtesy of 42-Line, Oakland

studio, we may admire its design, but our primary focus is always the paper that carries the information. The initial examination and assessment addresses what the piece might need—or not. While we are trying to determine how much improvement is possible, we are also thinking of what is easy to address and what could be risky.



**Figure 3** Michel-Etienne Turgot: *Plan de la Ville de Paris*, 1739 (Portion of Plate 11, one of 20 engravings). Image courtesy of the author.



**Figure 4** Diego Garcia Conde: *Plano General de la Ciudad de Mexico* 1793 (detail). Collection of Bancroft Library, U.C. Berkeley. Image courtesy of 42-Line, Oakland

A collector may be most concerned with disfiguring stains or overall discoloration from age. There may also be obvious tears, creases, or crunches in the paper support. The conservator is focused on whether those problems can be addressed sufficiently without further damaging the map or losing any original applied color. Our approach is to determine what treatments will provide the best results with minimal intervention. After testing all the inks and colors for solubility, the map is documented with photographs to establish its condition before treatment. We usually begin by removing old repairs and adhesives, particularly if done with pressure-sensitive tapes or glues that cause considerable damage to the paper. Most 'repair' tapes age poorly and become intractable over time. Mending tears and splits with more archival quality materials\* will prevent them from lengthening and discolor-

ing. Our repairs are done with Japanese tissues and starch paste adhesives, time-honored materials that are strong enough to hold a tear together but minimal in appearance. They are also reversible, capable of being removed at a later date without further damaging the paper beneath.

*\*Archival is a term that refers to a material that ages well, does not become discolored or inflexible with time, and which is reversible—removable without causing damage to the paper.*

Reducing some of the acidity in the paper itself (acidity being the most responsible for cellulose deterioration), will definitely improve a map's longevity and flexibility. Acid degradation is often seen as darkening or embrittlement in paper. Reducing it is a process that often involves some degree of wet cleaning and is only undertaken when the paper support will improve in stability by doing so. Surface dirt and stains are different kinds of problems and while they are both visually jarring, they also represent damage to the paper itself. Stains, no matter what their origin, can darken over time and become more difficult to remove. Under a microscope, dirt is seen as abrasive, disturbing and weakening paper fibers. Surface soil can additionally obscure important information; in Fig. 5, a small detail from William Smith's Geological Map of Great Britain revealed, when cleaned, the cartographer's signature and the notation A6, a reference to his numbering of maps. In 2015 the Geological Society in London was delighted to see the map's identification number, not knowing if it still existed. Remarkably, the colors in the chart that indicate the different strata are the same colors used by geologists today.

While the client might want a map to look better and last longer, the processes to achieve both ends are the same; by removing some of the ravages of time and poor handling, an antique map will look better and definitely be 'healthier.' The term 'stabilize' is often used by collectors who want to make sure that an item will not worsen over time. The answer to whether that is possible is a decided 'maybe.' Aging cannot be stopped altogether. If we can remove damaging additions such as tapes, adhesives, unsightly fills, acidic mounts, and matting materials, the map will have a much better chance at longevity. Additionally, if the map can be 'alkalized' (treated with an alkaline compound so as to leave the sheet better able to withstand an acidic environment), deterioration will be slowed. But it is just as important if not more so that the map then be housed archivally.

This means placing the map in good quality mats (100% cotton fiber), acid-free folders or Solander boxes. Fortunately, these materials are much more readily available now than they were years ago. All these types of 'housing' provide a degree of stability by limiting exposure to environmental changes. Museum environmental standards are not easily maintained in a



**Figure. 5** William Smith: *Geological Map of England and Wales, with part of Scotland*, 1815. Image courtesy of the author.

private collection, but such paper-based artifacts should, at the very least, be protected from fluctuations in temperature and humidity.

While most of our work on antique maps consists of those which have long been separated from a bound atlas, we do occasionally receive a complete volume that needs repair throughout. Since the book will require disbinding to address individual maps, how can we ensure those maps stay together? In the past, we have taken two paths to see that an atlas remains intact—either we return the repaired maps to its original cover ourselves or give the finished pages to a trusted professional who will do the rebind.

This may entail repairing the original cover so that it can provide sufficient support and protection. If too deteriorated, a new binding can be fabricated that is sympathetic to the original. It is important to make sure the former is retained. A clamshell box that incorporates both the old cover and the rebound book is a common solution, since saving every element of the original is part of our mandate.

And as a final note to collectors, I would rather work on a deteriorated 16th-century map than one from the late 19th century. The older the map, usually the higher quality of the paper. Papers made before the mid 19th C. will undoubtedly be made from better materials; cotton, linen, or hemp fibers. Such pure cellulose papers have better aging properties, hold up to treatment well, and produce better results. And handmade papers have more character. It was with the introduction of machine-made sheets in the early 1800s that paper quality started to diminish, and by mid-century, the addition of wood pulp fibers became prevalent. That ushered in a new age of paper which does not age well and has no place in the making of maps if they are to last. Older is better. I'd like to think that applies to conservators as well.

**Karen Zukor** has been a paper conservator in private practice for almost forty years. Her work encompasses a full range of work on paper, from the 15th-century up to contemporary pieces. She has been responsible for many collections - including fine art, archival material, maps, historical currency, and rare books, both in private hands and institutions. The studio is involved in both conservation and preservation treatments; she and her staff not only repair damaged items but provide information in extending the life of an object. Karen has also trained both pre- and post-program conservation interns for over twenty years, and she lectures widely to the general public. Zukor Art Conservation is in Oakland, CA.


  
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# THE CHECKERED HISTORY OF THE NAMING OF AMERICA: EARLY 16<sup>TH</sup> CENTURY FORAYS

CHRISTOPHER TYLER

*This two-part article traces the cartographic use of the name AMERICA in relation to the two continents of the Western Hemisphere since the name was first introduced early in the 16th century. It has had a checkered history since its introduction; it was not applied to the northern continent all at for the following three decades and was only sporadically adopted for the southern continent during this period, as delineated in this first installment of the article.*

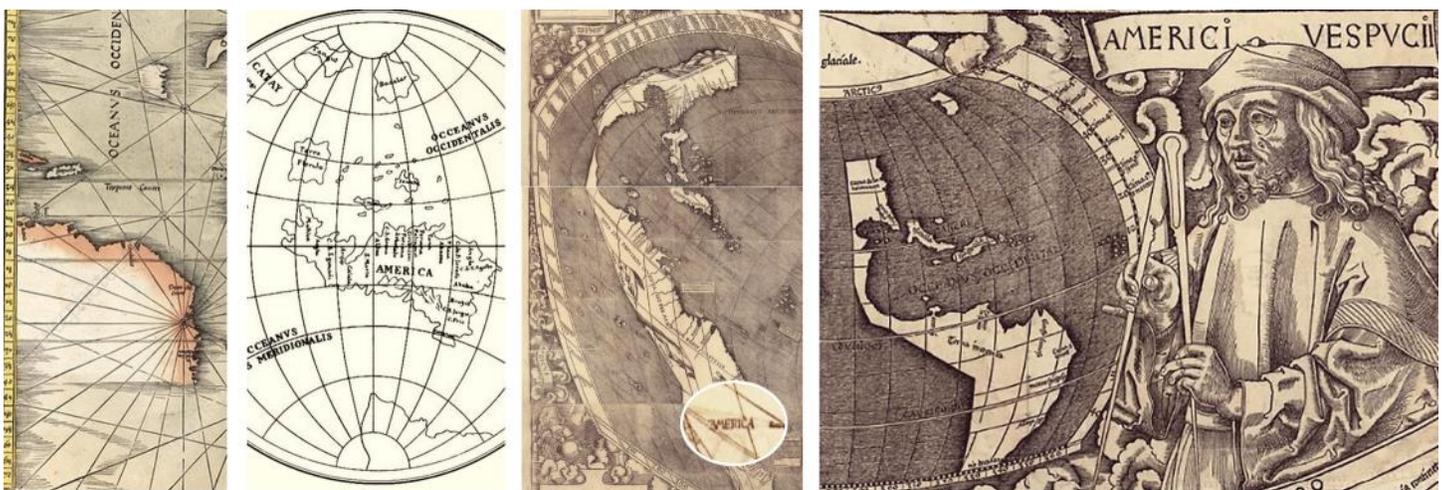
## Initial Naming of the Americas

As is well known, the first use of the name *AMERICA* is understood to have been on the Waldseemüller planisphere of 1507, where it is a designation for the partially-mapped South American continent, honoring its reported exploration by Italian explorer and navigator, Amerigo Vespucci, who, based in Cadiz as an agent for the Medici, and had written a letter in 1503 describing his discovery of the lands of South America to the ruler of Florence, Piero Soderini. However, the North American landmass was not known at the time (*Fig. 1*), and the use of the name *AMERICA* has had a checkered history since then. Indeed, it was not applied to the northern continent until thirty years later and soon dropped out of regular use even for the southern continent.

In tracing the name's origin, a key map to consider is the world map of Leonardo da Vinci, which was also one of the

very earliest maps to use the name *AMERICA* (*see Fig. 1*). It has traditionally been assigned a date of 1514, on the strength of its mention of *Terra Florida* for the peninsula reportedly discovered in 1513, but this dating was shown to be inconsistent with other aspects of its cartography (Tyler, 2019). An example is that the extent of the Caribbean region is rudimentary compared with that of Waldseemüller (1507, published in St-Dié-des-Vosges, France, which was widely copied and distributed throughout Europe at the time (Missinne, 2015). This comparison implies that da Vinci's map would have been drawn on the basis of earlier explorations, such as those of Amerigo Vespucci published in Florence in 1504, consistent with Missinne's analysis. *Fig. 1* compares the use of the name *AMERICA* on these maps. Waldseemüller does not use the name in his early map of 1505, places it at the tail of the southern continent in his 1507 mappamundi, and (remarkably) even avoids using it in the very inset that honors Vespucci for his discovery of the continent (*see Fig. 1, right panel*), where South America is designated *Terra Incognita*.

Moreover, in the main 1507 map, Waldseemüller inscribes the words *TOTA ESTA PROVINCIA INVENTA EST PER MANDATUM REGIS CASTELLE* ("The whole of this discovered region is under the command of the King of Castile") in the South American continent, in a font that marks it as in competition with the designation of *AMERICA*, raising the question of whether the latter name was really intended for the continent as a whole. Da Vinci, by contrast, places the name squarely in the center in the South American continent



**Figure 1.** Comparison of the American regions of the maps of Waldseemüller (1505), da Vinci (~1505), and Waldseemüller (1507, detail from his main map, with the toponym expanded, and inset with portrait of Vespucci). The latter maps show land abutting the islands of Cuba and Hispaniola that is most convincingly identified with the configuration of the Yucatan in Central America rather than the North American continent. Moreover, this was well before the discovery of Florida.

(Fig. 1, prior page), leaving no doubt that it was intended as the full continental designation.

In terms of dating, the rudimentary mapping of Europe in da Vinci's world map (not shown here) is also inconsistent with his detailed treatment of the countries in a separate map of Europe that is also found among his papers, which is dated to 1515, suggesting a gap of many years between the two maps. The implication is that da Vinci's world map would have been dated before Waldseemüller's, to about 1505, soon after the Florentine publication of Vespucci's voyages to South America, supporting the idea that da Vinci's map was the first one in history use the name *AMERICA*.

TABLE 1

Cartographer	Date	Names for America	
		South	North
de la Cosa	1500	*	*
Reinel			
King-Hamy	1503	*	
Cantino	1503	*	
P. Reinel	~1504		*
Caveri	1504-6	*	
da Vinci	~1505	AMERICA	
Waldseemüller	?1505	*	
Waldseemüller	1507	AMERICA	TERRA ULTIMA INCOGNITA
Ruysch	1507-8	TERRA SANCTAE-CRUCIS MUNDUS NOVUS	*
Rosselli	1508	TERRA S. CRUCIS SIVE MUNDUS NOVUS	
Glareanus	1510	Terra America	
Sylvanus	1511	TERRA SANTAE CRUCIS	regalis domis
Maggiolo	1511	TERRA DE ANTILIA DE RECE	
Contarini-Rosselli	1511	TERRA CRUCIS	
Glareanus	1513	AMERICA	
Waldseemüller	1516	TERRA NOVA	TERRA DE CUBA, ASIE PARTIS
J. Reinel	1519	BRASILL	*
Coppo	1520	Mondo Nuovo	
Pirckheimer	1522	America	
Fries	1522	America	Ulterio terra incognita
Apianus	1524	AMERICA	Baccallearum
Vespuche	1524	TERRA FERMA	*
Ribeiro/Castiglione	1525	*	*
Vespuche	1526	*	Tierra nueva de Ayllon
Toreno [Salviati]	1526	*	*
Monachus	1527	AMERICA	
Thorne	1527	Tera firma	Tera Florida
Maggiolo	1527	Terra nova	Francesca
Coppo	1528	MUNDUS NOVUS	
Ribeiro	1529	MUNDUS NOVUS	TIERRA DE AYLLON, ETC
Verrazzano	1529	*	*
Apianus	1530	AMERICA	
Maggiolo	1531	*	Terra de Francesca
Fine	1531	AMERICA	
Münster	1532	AMERICA TERRA NOVA	Terra de Cuba
Holbein	1533	?AMERICA	
Fine	1536	AMERICA	

### Slow adoption of the name *AMERICA*

In either case, it took a while for the name *AMERICA* to come into regular use for the South American continent,

switching among various designations (Table 1), including some version of *TERRA SANCTAE CRUCIS* on both German and Italian maps up to 1520. This designation was based on the *Liber Secretorum Fidelium Crucis super Terrae Sanctae* (1306), a manuscript book by Marino Sanuto intended to stimulate the reconquest of the Holy Land, probably due to resistance to the attribution to someone other than Columbus, led by his son Ferdinand (Lester, 2009). The progressively growing northern continent was, however, left unnamed except for some local regions (such as *Terra Florida*, originating with the da Vinci map). The succession of names for the North and South American continents is listed in Table 1 for all identifiable maps of the period. Asterisks indicate where the continent was mapped but unnamed, with the color fill highlighting uses of some version of the name *AMERICA*.<sup>1</sup>

Over the three decades after 1507, the name *AMERICA* returned for the southern continent, alternating with some version of *TERRA SANCTAE CRUCIS*, *MUNDUS NOVUS* or *BRASIL* (Table 1), while North America still remained unnamed except for outlier designations such as *Baccallearum*, *Terra de los Ingres*, *Terra de Cuba*, or *FRANCESCA*, which were evidently intended as regional names for the parts of the eastern seaboard rather than for the whole continent. In summary, the name *AMERICA* was used only inconsistently for



Figure 2. The scattered lands of the Americas (unnamed), from the Kunstmuseum IV planisphere held in Munich, a later transcription of the Reinel map of 1519.

the South American continent in this period, while the progressively increasing mapped territory of the northern continent remained essentially unnamed.



**Figure 3.** A portion of the 1524 polar stereographic map of Juan Vespuche, showing the rudimentary knowledge of the North American continent even by this late date, represented only by the extreme tips of Florida and of Newfoundland.

### Naming of the North American Lands

The first published map to name any part of North America, as distinct from the Yucatan peninsula in Central America, is the one known as the Kunstmann IV planisphere, dating to 1519 (Fig. 2). This map has been attributed to Portuguese cartographer Jorge Reinel (Paullin, 1932) but is more likely from the hand of his father, Pedro, since the son was only aged 17 in 1519. It is the first map to show both the Yucatan peninsula and a promontory further north corresponding to Florida, labeled *TERRA BIMINI* after the mythical island in that location. (It is interesting that this map does not use the name *Florida* despite dating to five years after its supposed naming by Ponce de Leon in 1514.) It also has two further patches of the North American continent labeled *BACALHAO* and *DO LAVRADOR*, corresponding to the regions of Nova Scotia and Labrador that appear on many previous maps. In the history of the cartography of North America, Reinel's 1519 map stands out as the first to unambiguously distinguish the Florida region of North America from the Yucatan of Central America, although it does not use the name *AMERICA* for either landmass.

Juan Vespuche (born Giovanni Vespucci in 1486) was a nephew of Amerigo Vespucci's who became a Royal Pilot for the Spanish government, in charge of the exploration and mapping of the Western discoveries. His 1524 map (Fig. 3) shows the tip of Florida labeled *TERRA FLORITA* with its keys appropriately placed just above Cuba, but the rest of Florida and the whole of North America is absent except for a small region of Newfoundland, labeled *TERRA DEL*

*BACHAGLIAI* ('Land of Codfish'), with only a small gap between these two fragments.

For several decades after 1505-7, when the name *AMERICA* had been used for the South American continent by both Leonardo da Vinci and Martin Waldseemüller as described above, the name of the northern continent remained in flux (see Table 1, prior page). In addition to the versions of the name *Florida*, subsequent maps gave a variety of names to the progressively extending stretch of North American coastline, such as *TERRA ULTERI INCOGNITA* (Waldseemüller, 1507), *TERRA DE CUBA*, *ASIE PARTIS* (Waldseemüller, 1516), *Tierra nueva de Ayllon* (Vespuche, 1526), *TIERRA DE AYLLON* (Ribeiro, 1529), *FRANCESCA* (Verrazzano, 1524), *Terra de Francesca* (Maggiolo, 1531) and *TERRA INCOGNITA* (Sebastian Caboto, 1544). It is particularly noteworthy that even Amerigo Vespucci's nephew, Juan Vespuche, avoids the use of the term *AMERICA* for either the South or the North American continents in both his 1524 and 1526 world maps (Figs. 3 & 4), despite the notable expansion of knowledge of the northern coastline by the second version.



**Figure 4.** The Americas, from the World Map by Juan Vespuche (1526, Hispanic Society, NY).

### Conclusion

This analysis shows that the widely disseminated naming of *AMERICA* on Waldseemüller's *mappamundi* of 1507 had only a sporadic influence on the cartography of the following three decades, with no cartographers extending its use to the expanding delineation of the North American continent during this period. The gradual adoption of the name over the succeeding centuries will be addressed in the conclusion of this two-part article in a later issue of *Calafia*.

## Endnotes

<sup>1</sup>Note that Missinne (2015) gives a more complete list for the narrow period 1509-15, but the breakdown is similar to that of Table 1, with 23 maps using some version of the name *AMERICA* only for the southern continent, and 18 maps not using it at all.

<sup>2</sup>The Paris Quirini Globe of 1515-1528 does use the name *America* for a strip of land corresponding to Central America, in addition to South America, but labels the land further to the north of the strip *Terra incognita*.

<sup>3</sup>The few earlier maps to show land in this region, by Juan de la Cosa (1500), Pedro Reinel (1504), Francesco Rosselli (1506, 1508), Johan Ruysch (1507-8) and Vesconte de Maggiolo (1511) do not show the Yucatan *per se* and do not clearly distinguish it from the East Asian landmass, in several cases specifically connecting it with the rest of Asia.

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## MAPPING HERE & THERE: MEETINGS AND EXHIBITS OF INTEREST TO MEMBERS

This edition of Calafia introduces two changes to our *Mapping Here and There* feature. Due to space considerations, *Mapping Here and There* will now focus primarily on map meetings and events in the United States. For a global perspective, readers will be directed to John Docktor's excellent website.

In addition, the coronavirus pandemic has affected meeting plans locally, nationally, and globally, with many societies and venues adopting a virtual meeting format or canceling meetings entirely until future guidelines are developed. We are only able to include the information derived from their various websites by the time of our publication.

For a more current status update, readers are encouraged to consult venues and websites directly. We will return to our regular format for meeting and event descriptions as soon as it is possible for us to do so.

A Full Calendar of Meetings and Events Worldwide is available on **John Docktor's** website at: [www.docktor.com](http://www.docktor.com)

## "THE MAP MENTORS" A NEW CMS PROGRAM

**A**re you an atlas collector starting to look at wall maps? Have you been having a hard time scratching your acquisitive itch during the pandemic? Are you just starting out and trying to figure out where to find the best deals?

Map Mentors is the Society's informal matchmaking service to help you.

As a librarian, my institution and professional organizations were there to help me learn about vendors and auction houses. How to properly raid other universities' collections as they downsize. And how to wait for a year for the price of that expensive new electronic product to come down. A couple years ago, a member pointed out to the Society that the equivalent does not exist for the amateur collector. Hence, Map Mentors.

If you would like a Map Mentor, the Society is happy to connect you with a more experienced collector whose interests align with yours. Simply contact Jon Jablonski ([jonjab@ucsb.edu](mailto:jonjab@ucsb.edu)) and he will get you started.

# WHERE IS THE MAGNETIC POLE? AN EXPLORATION OF MERCATOR'S 1569 MAP

JULIET AND LEONARD ROTHMAN

Juliet loves learning about the Arctic and the Antarctic. In reading Robert McGhee's book *The Last Imaginary Place, A Human History of the Arctic World*, she was intrigued by his reference to the map by Gerhard Mercator which was carried on the ship *Gabriel* during Martin Frobisher's adventures in searching for gold mines in the Arctic. The author notes that at that time, there was little understanding of the reason that the Arctic regions "attracted the needle of the magnetic compass."<sup>1</sup> McGhee continues, "On Mercator's map, the attraction of the compass was explained by an immense conical mountain of iron protruding from the Arctic Sea, while at the North Pole itself stood another mountain so tall that at its summit the sun remained visible throughout the winter."<sup>2</sup>

Intrigued, she turned to Leonard, who carefully searched for this rock on a copy of the 1569 Mercator map in his cartography and atlas reference collection. Mercator's famous world map, *Nova et Aucta Orbis terrae descriptio ad usum navigantium emendate accomodata*—a planisphere composed of 21

sheets (other sources note 18 sheets<sup>3</sup>), survives to the present day in only three examples.<sup>4</sup> To explore this map in detail, and the special points of interest, which will be discussed here, please visit the website <https://mercator.tass.com/mercator-map>.

## Mercator's 1569 World Map

Mercator engraved the original copper plates and printed the original map's sheets of the three currently existing copies made from the original plates. One, the "Basel Map," is reputed to be the cleanest and is currently in the Offentliche Bibliothek der Universitat, in Basel (*Fig. 1*). This map was reproduced by William Kreucken in 1992 and again in 2011 to be used for study. The "Paris Map" is held in the Bibliotheque Nationale in Paris. However, this rendition is uncolored, borderless, and in poor condition. The third currently extant version, the "Rotterdam Map," is held in the Maritiem Museum in Rotterdam. This third map was actually constructed by Mercator himself around 1569 for a friend, but it is in atlas form, cut and assembled from copies of his original wall map. For a period of time, there was an additional, fourth copy, the "Breslau Map," which was destroyed in a 1945 fire. Fortunately, a facsimile of the "Breslau Map," produced in the 1930s, exists. In addition to these three, a single sheet produced from

Mercator's original map, showing the North Atlantic, also exists and is held in the British Library.<sup>5</sup>

A further attempt was made to reconstruct the Mercator's original map in 2012, but this could only be done as a composite from the three extant copies noted above. The composite copy, a colored rendition, essentially reconstructed primarily from the Basel map, is currently maintained in the Archives of the Brussels Map Circle.<sup>6</sup>

The *History of Cartography* includes a photograph of the "Basel Map."

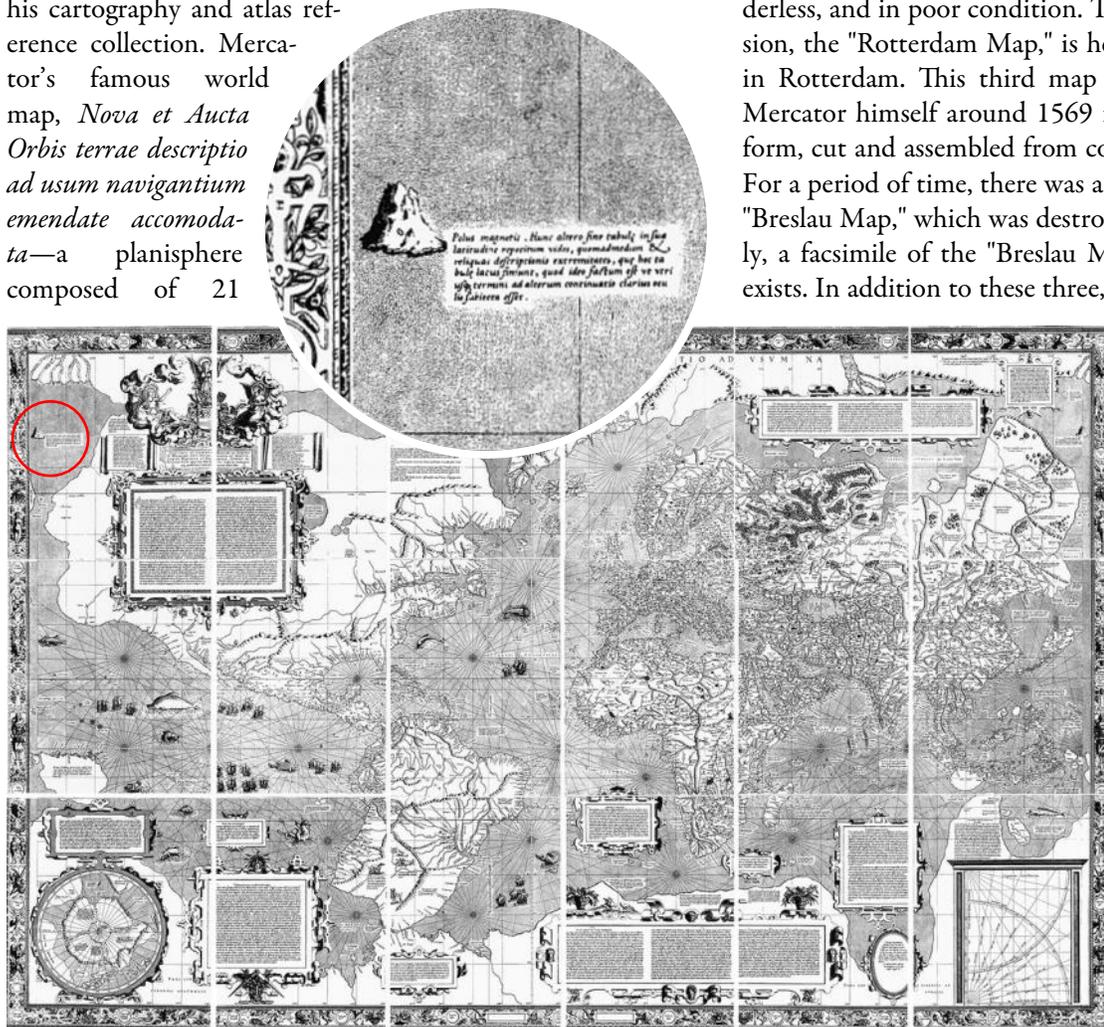
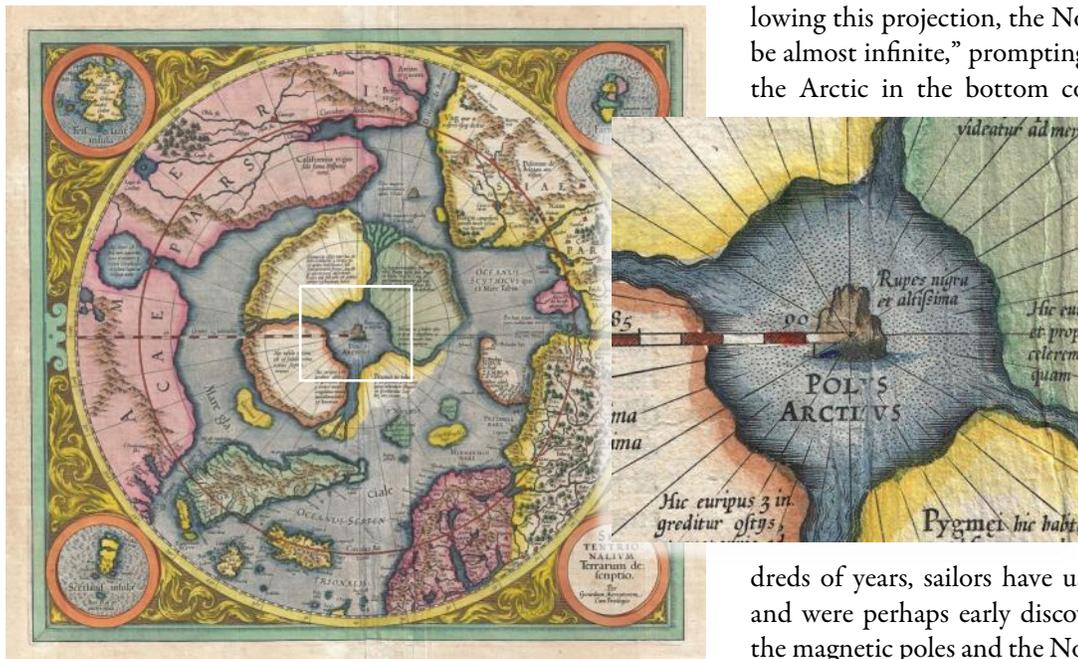


Figure 1. Gerardus Mercator, *World Map Composite*, 1569. Image courtesy of Wikimedia Commons. See also Figure 3 detail, page 19.



**Figure 2.** Gerardus Mercator, and Jodocus Hondius, *Map of the Arctic (First Map of the North Pole)*, 1606. Image courtesy of Wikimedia Commons.

And, sure enough, there is a pyramid-shaped black rock in the top, left-hand corner standing all by itself<sup>7</sup>, so tiny in the huge book that the accompanying description was illegible, and a clearer copy had to be enlarged in order to be able to read it. The rock itself actually appears three times on the map. Mercator had located the magnetic pole at the very center of the Arctic, surrounded by four land masses on the larger world map, on sheet 6. To present the area more clearly, he had drawn a smaller map of the Arctic region itself in the lower left-hand corner of his map, on sheet 13. (*Fig. 3, page 19*) To highlight the magnetic pole further, he had apparently decided to also present it alone, with some information and a description, on sheet 1, at the top left-hand corner of his map, with its accompanying legend (*see Inset for Fig. 1, prior page*).

The legend is titled “Polus Magnetis” and a translation reads:

*“Magnetic Pole, Ye see it repeated at the other end of the chart in the proper latitude as also the other extremities of the representation, which terminate at this side of the chart: this was done in order that the continuity of each of the two end with the other shall more clearly be set before your eyes.”*<sup>8</sup>

Gerhard Mercator’s name is best known for the Mercator projection, which adapts the curved lines of a globe, transforming them into straight lines for use on flat maps to assist sailors in plotting their courses. Of course, Mercator projections then stretch the surfaces of both the far north and the far south, making those areas disproportionately larger. Fol-

lowing this projection, the North Pole becomes “so large as to be almost infinite,” prompting Mercator to include an inset of the Arctic in the bottom corner of his world map, which “geographical historians consider ... to be the first true map of the Arctic.”<sup>9</sup>

### Magnetism and Navigation

Our earth is a magnet. Although scientists continue to explore magnetic processes, awareness of the currents flowing between the magnetic poles and the positional movement of these poles has long been known. For hun-

dreds of years, sailors have used compasses to aid navigation and were perhaps early discoverers of the difference between the magnetic poles and the North and South Poles.<sup>10</sup>

The source of information from which Mercator drew in developing his map of the Arctic region is considered to be *Inventio Fortunata*, or *Fortunate Discoveries* thought to be written around 1364 by Nicholas of Lynne, a friar from Oxford. The book describes Nicholas’ own 1360 trip north, using an astrolabe to provide the needed guidance for navigation. It states that:

*“under the Arctic Pole is a magnetic rock 33 miles in circumference... surrounded by islands and depths into which the ocean flowed and was regurgitated.”*<sup>11</sup>

In the book’s descriptions, this huge, black rock was located exactly at the North Pole, which was noted as *Rupus Nigra et Altissima*, Black, Very High Cliff. *Rupus Nigra*’s presence at the North Pole was widely accepted, and it was considered to be magnetic, so that all the compasses would point to that direction as North.<sup>12</sup>

Who was Nicholas of Lynne? And how did he develop knowledge of the *Rupus Nigra*? His book no longer exists. The first known reference to it appears on a 1508 map by Johannes Ruysch, which describes a “high magnetic rock under the Arctic Pole (a mountain in the vicinity of Thule in Greenland well-known to the medieval Icelanders, who had by the 14<sup>th</sup> century noticed the deviation of the compass).”<sup>13</sup> References to Nicholas’ work were also noted by James Cnoyden of Bois-le-Duc, Richard Hakluyt, John Dee, and Peter Heylyn. Nicholas is described as traveling north with companions to explore the polar regions, then leaving them and venturing alone, using his “magical arts,” and recording his travels during his first, and five other solitary expeditions into the arctic regions, although some later authors question whether he could have ventured to these region alone.<sup>14</sup>

## Blending Science and Belief

Mercator was very aware of sailors' reports of differences between the North indicated by the needle of their compass and the North Pole itself. He also recognized the vital role of magnetism in guiding sailors and explorers, especially in the northern areas of the world. He determined to resolve this confusion by "situating the magnetic North Pole on the Earth" and leaving the "geographic North Pole in the heavens."<sup>15</sup>

His resolution to this problem was developed in an era during which the issue of the origin of magnetism—heavenly or earthly—was a very hotly debated one. Most of the general population situated the origin of early magnetism in the heavens, while the sciences were developing an alternative theory of earthbound magnetism. In support of their views, scientists had suggested the existence of rocky, magnetic islands, generally locating them in the polar regions. Their views were upheld by the direct observations and reports of mariners as they watched the swings of their compass needles under sail.<sup>16</sup>

A major study of *Rupus Nigra*, magnetism, and Mercator, was written by Giorgio Mangani and presented at a conference in honor of Mercator's 500<sup>th</sup> birthday in Essen, Germany. Mangani presents a fascinating exploration of Mercator's beliefs and the thoughts underlying his conception of the world, which he then utilized in the development of his maps. Mangani suggests that Mercator was influenced during his training by Minorite friars and that, in addition to his interests in the sciences that would be useful in navigation, Mercator was also strongly influenced by his beliefs in astrology, alchemy, cabala, free will, theories of creation, and the concept of *harmonia mundi*. He had himself portrayed as "the man of the magnetic pole."<sup>17</sup>

Mangani supports the view noted above—that although magnetic declination was already known to sailors, scholars of the period thought that it was not earthbound, and originated in the heavens, and notes that Mercator engraved the magnetic pole on his maps using trigonometric calculations, clearly alluding to *Inventio Fortunatae* as the source of his information. Melding the physical sciences with the occult sciences, he followed his interests in esoteric studies and white magic under Franciscus Monarchus, a court astrologer. In these occult sciences, magnetism was "the principle of anima mundi and the universal attraction of things." Mercator was interested in "studying the mysteries of nature."<sup>18</sup>

*"When I saw that Moses' version of the Genesis of the world did not fit sufficiently in many ways with Aristotle and the rest of the philosophers, I began to have doubts about the truth of all philosophers and started to investigate the secrets of nature.*

Gerardus Mercator<sup>19</sup>

Both a practical scientist and a man interested in cosmology, Mercator wanted to locate the magnetic pole so that he could use it to determine the prime meridian, developing his cartography from physics rather than other sources. Terrestrial magnetism, for Mercator, was central, as it was the point at which religious beliefs, astrology, alchemy, and physics could come together. He did not often write these thoughts, however, as he was living in a country where the Spanish Inquisition was active.<sup>20</sup> Mercator was especially cautious as he had actually spent seven months in prison, accused of heresy. No evidence was found, and he was released as "a good Roman Catholic"<sup>21</sup>

The concepts from these different fields of knowledge came together for Mercator in the aforementioned work of Nicholas of Lynne. While Mercator did his own calculations, and amended them, and grounded them in the physical sciences to locate the magnetic pole, he used the images of Nicholas of Lynne to describe it, with its high, glistening, black rock standing firmly "at the heart of Polus Arcticus."<sup>22</sup> Placing the magnetic island on his map near 75N, 73E, he created a specific location for the magnetic North. Later theorists and writers in the field of magnetism, publishing in the early 1700s, followed his ideas.<sup>23</sup>

Interestingly, Mercator never traveled by sea. He never explored or directly viewed the oceans and land masses that appear on his maps. Yet, his work in the development of a specific location for the magnetic pole, and the delineation of the prime meridian that followed, have been foundational to the development of our modern understanding of our physical world.

Mercator was, truly, a man of his time, a time when religion, cosmology, alchemy, astrology, physics, and the natural sciences were all struggling for dominance and searching for a way to relate and conjoin with each other in the search for new knowledge, and in the exploration and expansion of an understanding of the world which still has a strong influence on life today. His quote seems still so true:

*"When I was engaged in it, having applied the considerations of the natural and geometric sciences, I liked, little by little, not only the description of the earth, but also the structure of the whole machinery of the world, whose numerous elements are not known by anyone to date."*

Gerardus Mercator<sup>24</sup>

## Endnotes

<sup>1</sup> McGhee, M. (2005) *The Last Imaginary Place, A Human History of the Arctic World* Chicago: University of Chicago Press, p. 157)

<sup>2</sup> Ibid

<sup>3</sup> <https://mercator.tass.com/mercator-map>. Accessed 5/9/2020

<sup>4</sup> Goss, J. (1993) *The Mapmaker's Art: And Illustrated History of Cartography*. Chicago: Rand McNally Publishers, p. 95

<sup>5</sup> *Mercator 1569 World Map*, [https://upload.wikimedia.org/wikipedia/commons/4/42/Mercator\\_1569\\_world\\_map\\_sheet\\_01.png](https://upload.wikimedia.org/wikipedia/commons/4/42/Mercator_1569_world_map_sheet_01.png) Sheet 1. Accessed 4/27/2020.

<sup>6</sup> Brussels Map Circle (Sept. 2012) *Brussels Map Circle Newsletter*. No 44: 20-22

<sup>7</sup> Woodward, D., Ed. (2007) *The History of Cartography, Vol. 3, Part 1, Cartography in the European Renaissance*. Chicago and London: University of Chicago Press, p. 377

<sup>8</sup> *Mercator 1569 World Map*, Wikipedia

<sup>9</sup> Goss, *The Mapmaker's Art*, p. 95

<sup>10</sup> National Geographic Resource Library, "Magnetism" <https://www.nationalgeographic.org/encyclopedia/magnetism/> Accessed 5/8/2020

<sup>11</sup> Goss, *The Mapmaker's Art*, p. 95

<sup>12</sup> Giaimo, C. (2017) "The Mysteries of the First-Ever Map of the North Pole" *Atlas Obscura* (Feb. 2017)

<sup>13</sup> Oleson, T.J. (2003) *Dictionary of Canadian Biography*, vol. 1. Toronto: University of Toronto, accessed 4/29,2020 at [http://www.biographi.ca/en/bio/nicholas\\_of\\_lynne\\_1E.html](http://www.biographi.ca/en/bio/nicholas_of_lynne_1E.html)

<sup>14</sup> Ibid

<sup>15</sup> Shirley, R.W. (1987) *The Mapping of the World: Early Printed World Maps 1472-1700* London: The Holland Press, Publishers.

<sup>16</sup> "The Study of Earth's Magnetism (1269-1950)" A Foundation by Peregrinus and subsequent development of geomagnetism and paleomagnetism. <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2006RG000198>, 2.3:8- 2.3.19, downloaded 2/8/2020)

<sup>17</sup> Mangani, G. *Rupe Nigra: Mercator and Magentism*. Univer-sita Politecnica delle Marche, Ancona, Italy.

[www.academia.edu/34402950/rupe\\_nigra\\_mercator\\_and\\_magnetism](http://www.academia.edu/34402950/rupe_nigra_mercator_and_magnetism). Accessed 4/29/2020, p. 1

<sup>18</sup> Ibid, p. 2-5

<sup>19</sup> [https://www.goodreads.com/author/quotes/641831.Gerardus\\_Mercator](https://www.goodreads.com/author/quotes/641831.Gerardus_Mercator). Accessed 5/8/2020)

<sup>20</sup> Magnani, G., p. 11-12

<sup>21</sup> <https://www.vox.com/2015/3/5/8151303/gerardus-mercator-maps> downloaded 5/8/2020)

<sup>22</sup> Magnani, p. 13

<sup>23</sup> Wiley Online Library, "AGU, Advancing Earth and Space," 2.5:23, Accessed 5/8/2020).

<sup>24</sup> [https://wikiquote.org/wiki/Gerardus\\_Mercator](https://wikiquote.org/wiki/Gerardus_Mercator)

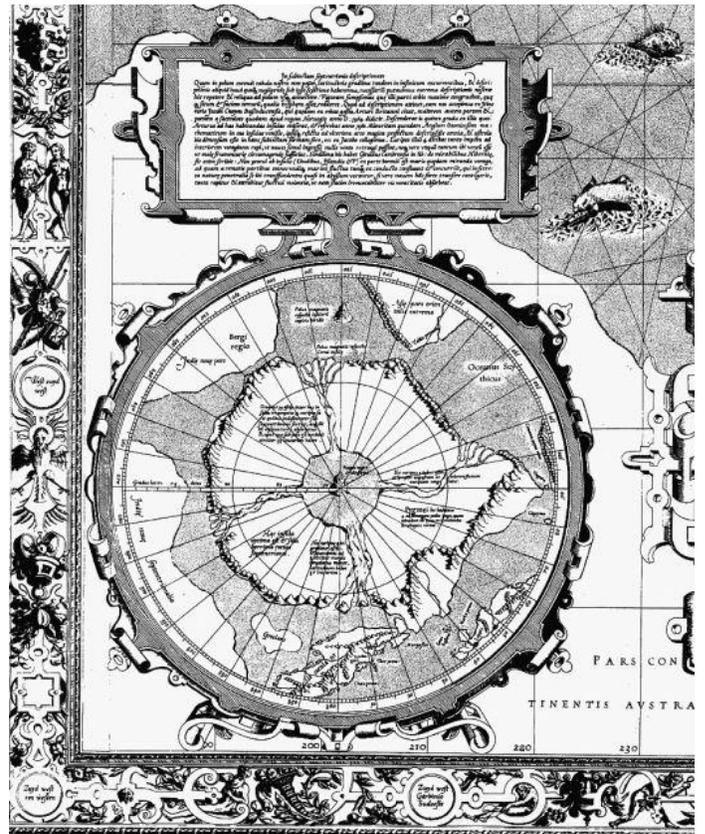


Figure 3. Detail (sheet 13, lower left). Gerardus Mercator, *World Map Composite*, 1569. Image courtesy of Wikimedia Commons.



Figure 4. Willem Blaeuw, *Map of the Arctic* 1672. Note that the large islands shown on the Mercator and the Mercator/Hondius maps are no longer shown. Image courtesy of Science PhotoLibrary.

# HIDING IN PLAIN SIGHT

CAROL SPACK

PART ONE OF A FOUR-PART SERIES

## Introduction

There are many ways to read a map. One of my favorites is to discover something in the map that was not necessarily drawn as a principal feature or intended as the subject of the map itself but which, in fact, once identified, reveals another major theme of the map. This element might be the map publication date, or an image, or an unlabeled feature or a fragment of text. This revealed theme might arise from the map itself as if the map were a kind of hologram that, when tipped to its side, shows a competing image. This essay is about how in reading a map, we might look for such clues, and in particular, how we might do so where the subject matter of a map is a city or town or urbanization itself.

This essay is an exercise about critical reading. In keeping with the theme of this edition of the *Calafia Journal*, for this four-part essay series, I have chosen different kinds of town or city maps (American) published or authored in the 19th and 20th c. that I have studied in the past few years.<sup>2</sup> My research into each of these maps began with a focus on each work's art, symbolism, geography, author, and explicit themes. The discovery in each instance was that hiding in "plain sight" was at least one feature of each map that also revealed an unanticipated story. Looking at an antique or contemporary map for camouflaged themes intrigues me for a variety of reasons. One reason is that it provides motivation to read a map deeply. Another reason is that looking for complexity in the art of each map sharpens one's eye for discerning persisting themes of American thought and culture. This kind of critical thinking eschews formulas or ideology and permits the creative pleasure of wondering why. An antique or historic map thus revealed becomes as contemporary as the ideas it embodies.

We will examine a mid-19th c. Maine town wall map, an early 19th c. manuscript surveyor's plan of land in Georgia, a WWII era American Red Cross map of Paris for U.S. servicemen and women, a 1940 Seattle urban transit route map, an early 20th c. Montana and environs mining town map and a 1926 Boston Planning Board zoning map. I will suggest topics revealed by a close reading of each of these maps. In some cases, these are urban planning or land use issues. In one example, the topic is the integrity of surveying itself and the role of land recording systems. One example also gives rise to consideration of a map's format as an independent element of meaning. Hiding in plain sight are additional topics that were and continue to be major American themes. That is not to say it was the intent of each map's author to showcase such themes—although it might have been.

The six maps<sup>1</sup> in this four-part essay series are:

- (1) **Map of the Town of Ellsworth Hancock Co. Maine from Actual Survey by D.S. Osborn**, E.M. Woodford, publ., Philadelphia, 1855
- (2) **Georgia. Daniel Sturges, Surveyor General of Georgia** (manuscript)  
*Certified Survey Plan dated April 21, 1808*, Milledgeville, Georgia
- (3) **American Red Cross Map of Paris**.  
Blondel La Rougery, Paris 1945
- (4) **Seattle Transit System Operation as of May 12 1940**.  
[Seattle, Washington]
- (5) **Map of the Mining Claims Butte and Vicinity Montana**  
Compiled and Published by Harper, Macdonald & Co.  
Butte, Silver Bow County Montana 1907
- (6) **Map of the City of Boston Massachusetts**  
Published by The City Planning Board November, 1926.  
[Boston, Massachusetts]

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- (1) **Map of the Town of Ellsworth Hancock Co. Maine from Actual Survey by D.S. Osborn (1855)**

E.M. Woodford's rare, large scale illustrated 1855 wall map of Ellsworth, the county seat of Hancock County, Maine, captures Ellsworth as a thriving town near the height of its industrial strength in shipbuilding and manufacturing. Osborn's survey and the accompanying pictorial vignettes together present the civic and geographic character of the town fifty-five years after its founding. Hancock County, a rural but resource-rich region, poured its resources into Ellsworth as the county seat both for local consumption and for export. Remarkably, in 1855 there are yet no railroads in Hancock County, and much of this commerce was conducted under sail or by wagon.<sup>2</sup>

The **Map of Ellsworth, 1855** (Fig.1, next page) is a work of geography, history and art, the map's urban features illustrated with finely drawn architectural vignettes, local scenery and decorative lettering in E.M. Woodford's aesthetic style. These pictorial vignettes dominate the top half of the map, showing scenes of daily life, one church, main street, the homes of prominent citizens. A business directory visually anchors one corner of the map. The lithographer uses the texture of his stone for subtle shading in the landscape scenes. The large scale vignettes show certain Ellsworth buildings that exist today. The town map and inset village map locate and identify homes, businesses, churches, schools, factories, and other structures on the map. Most of these are labeled with owners' names. Some are not. Complete and less formal roads



Figure 1. Osborn, D.S. 1855. "Map of the town of Ellsworth, Hancock Co., Maine, From actual Survey by D.S. Osborn" Image courtesy of Osher Map Library and Smith Center for Cartographic Education, University of Southern Maine. <https://oshermaps.org/map/54257.0001>.



See Detail,  
page 23

are shown in solid or hatch marked lines, another town plan device.

The Ellsworth town plan is also a traditional New England mid-19th century plan of a river town. The **Map of Ellsworth, 1855**, shows a town that grew up along both banks of the Union River, a major watercourse with an outlet to the seacoast. The town center to the west includes town and county government, law, estates, and a Baptist church. The essential town functions reach beyond town and state boundaries via the Union River. On the east side of the Union River is Main Street, School Street, the location of a school (public) and private schools, a Congregational church, and business establishments. Much is within walking distance. Settlement becomes less dense on the town's eastern periphery and roads less formal. Industry is concentrated in Falls Village, where water power from the waterfall is available. The town plan at its outskirts dissolves to open blocks of land.

The 1855 Ellsworth business directories reveal a myriad of trades, all characteristic of a thriving mid-19th c. American seaport region. The list includes merchants and fishing outfitters, including C.E. Jarvis & Co., Mrs. Parker's Millinery, R.H. Bridgham the physician and surgeon. The Collector of Customs, Inspector of Customs and Postmaster, Town Clerk, and Sheriff are named. Relative to the other Hancock County towns, Ellsworth has both the largest professional population and a list of merchants and skilled tradesmen and women. Ellsworth was the county commercial center and offered the services of a watchmaker, the druggists and apothecaries, master shipbuilders, land surveyors, the Telegraph Operator, the Ellsworth Gas and Light Company, painters and glaziers, insurance agencies, and dry goods and groceries. The 1855 Ellsworth business directory highlights Maine's major industries, lumbering, shipbuilding, and businesses serving a prospering clientele.

There are no population statistics on this map. The absence of population statistics presents a question hiding in plain sight. How can we understand the manpower required to staff the factories at Falls Village, build and crew the ships and support the thriving local economy? Without map population statistics, the cause and effect on Ellsworth in 1855 of a rapidly growing mid-19th c. American population must be inferred. Other research also sheds light on this topic and is hiding in plain sight on the map.

The years 1854-55, when the map was surveyed and published, were the brief period of the Know Nothing movement in Maine. Between these dates, Ellsworth was the setting for a notorious political event called the "Ellsworth Outrage" carried in national newspapers. The local Know-Nothing party found its local voice in the *Ellsworth Herald*, edited by William Cheney and later titled the *Ellsworth American*, whom some suggested fomented the controversy

to save his failing newspaper. In Ellsworth, the small Know-Nothing party went by the name the "Cast Iron Band" that had an anti-immigrant platform. Other Maine newspapers, within and beyond Ellsworth and the body of Ellsworth residents denounced the Cast Iron Band and rejected its anti-immigrant posture. The Know Nothing Party arose in the context of rapidly rising immigration to Maine which by 1850, had reached approximately 100,000 new immigrants primarily from Ireland, and some French Canadians bringing a large, new population of Catholics to Maine towns.

In this time of rapid social change, Catholic Jesuit priest Father John Bapst moved to Ellsworth to establish a Catholic church, and a Catholic church is shown (Fig. 2, next page) on the **Map of Ellsworth, 1855** far from the downtown, located on High Street, between Elm and Deane Streets the sole structure in this large tract on the town outskirts. Even the streets defining this tract are shown with hatch marks. Father Bapst was one of a small number of Catholic priests in Maine, and his story is told in detail by the dissertation noted below upon which these comments are based<sup>3</sup>. Father Bapst also oversaw a new Catholic school connected to the church to teach congregants' children who had been expelled from the Ellsworth public school for being unwilling to read from the Protestant King James Bible as it violated their church teachings. The Catholic church school teacher was a lay town resident. Father Bapst joined with one congregant in mounting a legal challenge to the Ellsworth School Board requirement that school attendance was mandatory, that the curriculum required study of the King James Bible, and students who refused to read from this bible would be expelled. Father Bapst did not prevail in *Donahue v. Richards*, the Maine Supreme Court holding that the School Board was within its proper authority. The 1820 Maine Constitution guaranteed free exercise of religion<sup>4</sup>. Here is a mid-19th c. example of American constitutional history and of the frequent gulf between a state constitution's grant of the right of free exercise of religion, and the mechanism of its exercise.

Violence against Father Bapst before the court case had once threatened his life and next reached a horrific peak when he was abducted by a group from the Cast Iron Band, taken to the town piers, tarred and feathered, and rode out of town attached to an iron rail. Col. Charles Jarvis, a town leader, and friend of Father Pabst, came to his rescue as he had previously. The Ellsworth wall map shows the Col. Jarvis house and several Jarvis named buildings. After being attacked and brief respite at Col. Jarvis' home, Father Pabst left Ellsworth and moved to Bangor to recover. He then settled in Boston, Massachusetts, and worked with others to establish Boston College located in Newton and Boston, Massachusetts.

The map's publisher would have been aware of this political incident given its national profile, albeit brief and now largely unknown. Is there anything on this map that explicitly

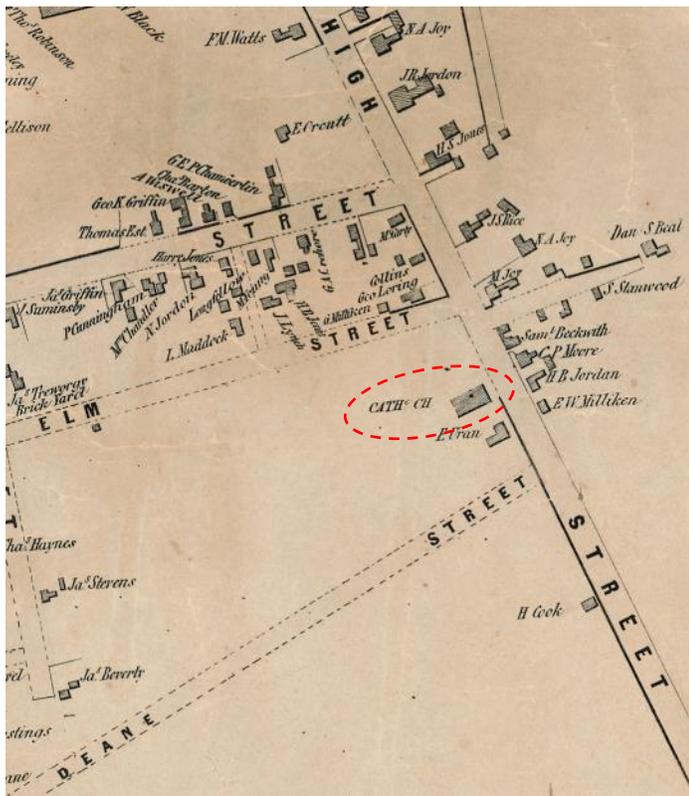


Figure 2. Detail: Map of the Town of Ellsworth

reveals the story? Hiding in plain sight is the one church building outside of the town center and at its outskirts where little else has yet been built. The outlying church building is labeled "CATH CH" and has no cemetery. There is no pictorial vignette on the map of the Catholic church. While we know from town history that there was a church school building, its location on the map is not labeled. It might have been nearby on High Street. We can locate on the map the route of father Bapst's abductors, the town piers where he was tarred and feathered, and Col. Jarvis' home.

I did not initially understand that hiding in plain sight on the Ellsworth wall map was a new community of Irish Catholic immigrants to America. Nor did I immediately appreciate that this map's date, 1855 was a political flashpoint in mid-19th century America, a time of unprecedented new immigration to American cities and therefore a clue to a theme in the map. How else were the factories staffed at Falls Village, the ships built to meet the demands of a national economy and the town plan itself expanded. The aesthetic Ellsworth town map is an American paper tapestry and a portrait of Ellsworth in metamorphosis: a town map that is equally pictorial vignettes of one church, fine homes, two large 19th c. professional blocks on its Main Street and a steam mill, and there at its unbuilt outskirts one curious Catholic church.

## Conclusion

We have examined the first map in this series of six 19th and 20th c. town and city maps, each of a different type and each accompanied by an essay that discusses questions hiding in plain sight raised by that map. The remaining five city and town map essays will appear in the next three issues of *Calafia*. These six essays are to be read as one article.

Art and the language of 19th and 20th c. maps have many dimensions of meaning not by chance but because language, letters, colors, materials, and art are that rich and act as prisms of meaning. The impetus for this article is to share my pleasure closely reading American 18th, 19th or 20th c. maps for many kinds of meaning to discover hiding in plain sight the themes, issues and debates that endure.

## Endnotes

<sup>1</sup> For full map particulars and, in some cases, an extensive essay on each of the maps discussed here, please read further at [www.spackantiquemaps.com](http://www.spackantiquemaps.com).

<sup>2</sup> Please consult the Original Antique Maps catalog for a description of Henry Walling's **Topographical Map of Hancock County, Maine 1860**. <https://www.spackantiquemaps.com/inventory/map-town-ellsworth-hancock-co-maine-1855-0>

<sup>3</sup> See, "Father John Bapst and the Know-Nothing Movement in Maine," Anatole O. Baillargeon, O.M.I., Thesis presented to Faculty of Arts of Ottawa University for the degree of Master of Arts, Bar Harbor, Maine 1950. In the Library of Univ. Ottawa.

<sup>4</sup> [Maine Constitution. 1820 - viewcontent.cgi](http://www.maine.gov/legis/const/1820-viewcontent.cgi)

Carol Spack brings a lifelong love of writing to her activities as collector and dealer in Americana and antique maps. She understands antique maps as art, as history and as ongoing discourse. Her life experience in art, law and land use planning drew her to the theme of this issue of *Calafia*.



# EARLY PRINTED MAPS OF TENOCHTITLAN: THE GREAT AZTEC CAPITAL DESTROYED BY THE SPANISH CONQUISTADORS

DAVID KALIFON, MD, JD

*In order, most potent Sire, to convey to your Majesty a just conception of the great extent of this noble city of Tenochtitlan, and of the many rare and wonderful objects it contains, ... it would require the labor of many accomplished writers, and much time for the completion of the task. ... I am fully aware that the account will appear so wonderful as to be deemed scarcely worthy of credit; since even when we who have seen these things with our own eyes, are yet so amazed as to be unable to comprehend their reality.*

*Hernán Cortés, Second Letter to Charles V, 1519*



**Figure 1.** Presentation copy of Cortes' Second Letter to Charles V, showing (l. To r.) Arms of Emperor Charles V; 1524 woodblock of Gulf of Mexico; and 1524 woodblock of Tenochtitlan. From Austrian National Library. Photo by author.

The conquistador Hernán Cortés entered the Aztec capital of Tenochtitlan (now Mexico City) in 1519. He and his troops were awed by the grandeur of a city larger than most in contemporary Spain but still unknown to Europeans. In his second letter to the Spanish sovereign Charles V, dated 30 October 1519 (“2<sup>nd</sup> Letter”), Cortez included a manuscript map of Tenochtitlan. In 1524, a woodcut version of the manuscript map was published in Nuremberg along with a Latin translation of the second letter; this was the first printed map of Tenochtitlan. Because the city was razed by the Spaniards in 1521, years before the Nuremberg map was printed, all other early printed maps of Tenochtitlan are derivatives and variants. This article identifies some sites in (and missing from) the 1524 Nuremberg map, comments on many of the sites, and reproduces several other early maps of Tenochtitlan.

## CORTEZ'S LETTERS & THE ORIGIN OF THE MAP OF TENOCHTITLAN

From 1519 to 1526, Cortés wrote five lengthy letters (in Spanish) to Emperor Charles V describing and self-servingly justifying his journey of conquest.

Cortés' 2<sup>nd</sup> Letter included descriptions of Tenochtitlan and the surrounding Valley of Mexico and was accompanied by manuscript maps of Tenochtitlan and the Gulf of Mexico. It is not known whether a European or indigene prepared the Tenochtitlan map, though BE Mundy has argued that the circular shape of the city and other iconography suggests the map had an indigenous antecedent.

The 2<sup>nd</sup> Letter was printed in Spanish and sold to the public beginning in 1522. It was translated into Latin and published in Nuremberg in 1524. Woodcut versions of the manuscript maps of Tenochtitlan and the Gulf of Mexico were printed for the first time and issued with this 1524 Latin translation. (*Fig. 1*)

Because the original manuscript map of Tenochtitlan is lost, one cannot determine what errors or omissions the carver might have made when cutting the woodblock for the Nuremberg printed map.

## THE VALLEY OF MEXICO

By tradition Tenochtitlan was founded in 1345 on an island in Lake Texcoco, one of five interconnected lakes in the Valley of Mexico. (*Fig. 2, next page*) The lakes were fed by fresh water from surrounding mountains. Because the lakes lacked outflow, as their water evaporated, residual minerals and salts turned the lakes brackish.

Cortés described the Valley in detail in his 2<sup>nd</sup> Letter:

*This Province [i.e., the valley] is in the form of a circle, surrounded on all sides by lofty and rugged mountains; its level surface comprises an area of about seventy leagues in circumference, including two [sic] lakes, that overspread nearly the whole valley ... . [A] range of highlands divides them [the lakes] from one another, with the exception of a narrow strait ... . This strait is a bow-shot wide, and connects the two lakes ...*

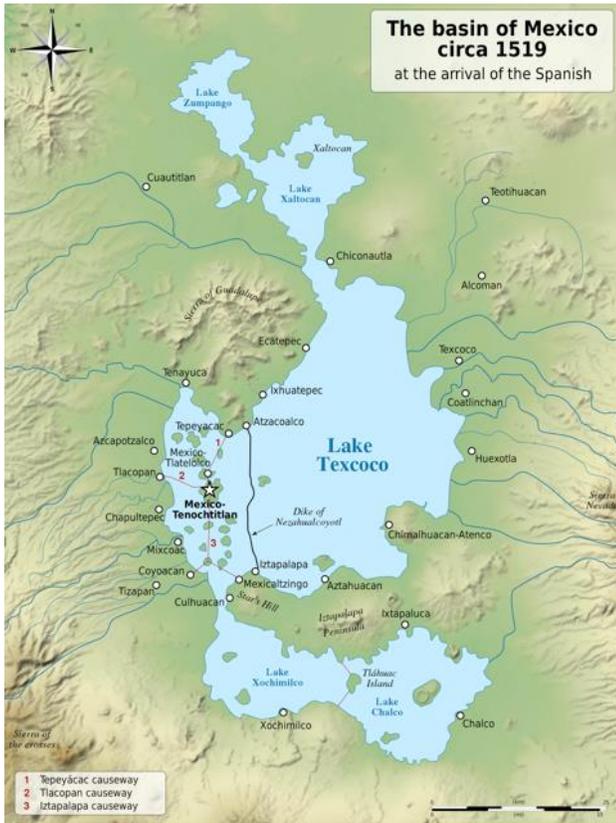


Figure 2. The Valley of Mexico, c.1519. [https://commons.wikimedia.org/wiki/File:Basin\\_of\\_Mexico\\_1519\\_map-en.svg#file](https://commons.wikimedia.org/wiki/File:Basin_of_Mexico_1519_map-en.svg#file).

### FEATURES OF THE 1524 NUREMBERG MAP OF TENOCHTITLAN

Most of the features listed on this and following pages are labeled in Fig. 3 and Fig. 4 on this page.

**Aqueducts.** Tenochtitlan had at least two aqueducts supplying fresh water from sources west of Lake Texcoco.

**Causeways & Bridges.** The 2nd Letter described the size of the causeways and the importance of the timbered bridges to the city's defense:

*[O]n many of these bridges ten horses can go abreast. Foreseeing that if the inhabitants of this city should prove treacherous, they would possess great advantages from the manner in which the city is constructed, since by removing the bridges at the entrances, and abandoning the place, they could leave us to perish by famine without our being able to reach the main land ...*

**Chinampas.** A chinampa is an artificial island created by piling up a lake's fertile bottom soil until it emerges above water level. In Tenochtitlan, wooden stakes defined the perimeters of these islands, creating canals between them. A significant portion of the city comprised chinampas.

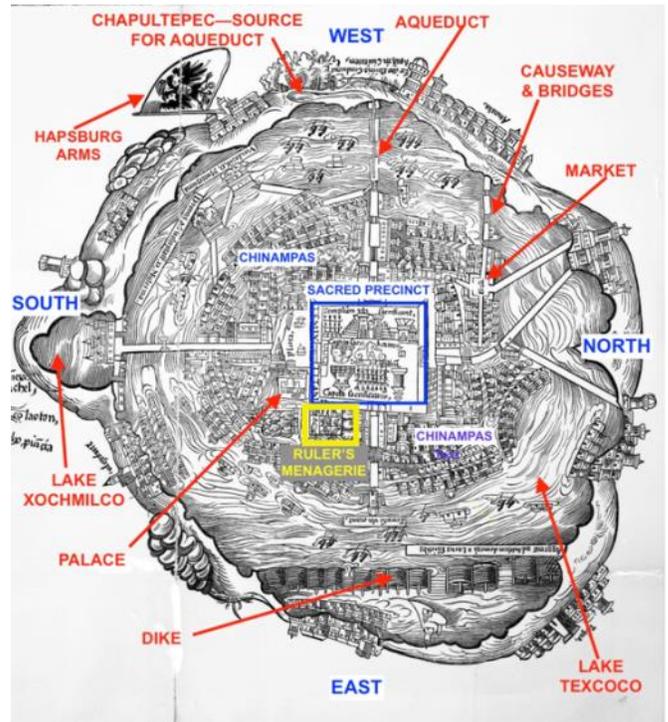


Figure 3. Map of Tenochtitlan from Cortes' Second Letter. New York Public Library, <https://digitalcollections.nypl.org/items/86436d7e-d8e8-2db4-e040-e00a18060199>. Annotations by author.

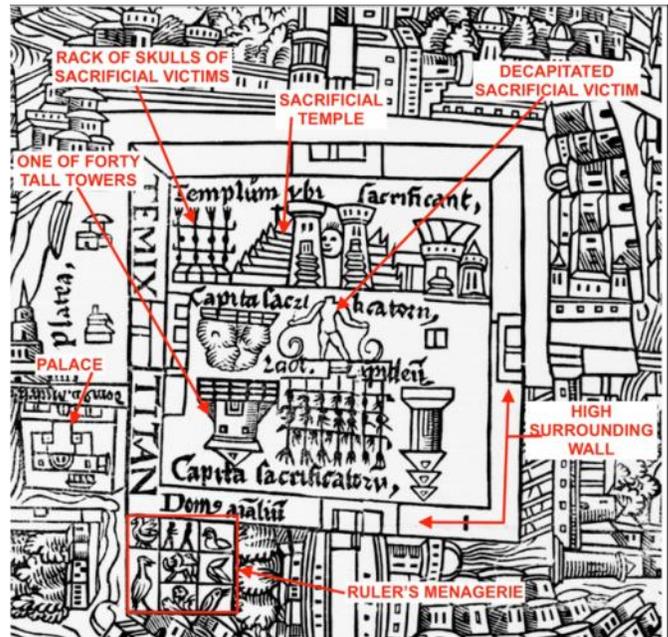


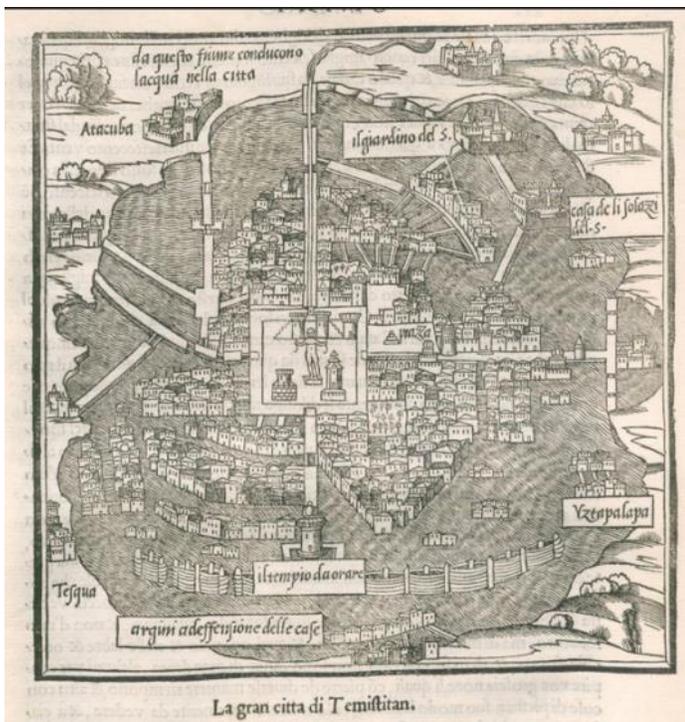
Figure 4. Enlargement of Sacred Precinct from fig. 3, Map of Tenochtitlan from Cortes' Second Letter. From New York Public Library, <https://digitalcollections.nypl.org/items/86436d7e-d8e8-2db4-e040-e00a18060199>. Annotations by author.

**Circular Shape of Tenochtitlan.** The actual city of Tenochtitlan was not circular. However, in the indigenous mythology it was portrayed as circular.

*Dike.* The dike on the Nuremberg map looks more like a woven fish weir than the typical Aztec rock and earth barrier. The dike protected the city from flooding by rising lake water. The dike also may have preferentially retained around Tenochtitlan the fresh water flowing into Lake Texcoco from the streams on the western bank of the lake. Regardless, the dike had to be impervious to water. Without the original manuscript map, one cannot know whether the drafter erred when drawing the dike on the manuscript map or the Nuremberg woodblock carver misinterpreted the manuscript.

*Hapsburg Flag.* Charles V was a Hapsburg. He became King of Spain in 1516 and Holy Roman Emperor in 1519.

*Houses.* In his 2nd Letter Cortés wrote, “There are in the city many large and beautiful houses ... . All these houses have very large and very good rooms and also very pleasant gardens of various sorts of flowers both on the upper and lower floors.”



**Figure 5.** B. Bordone, “La gran citte di Temistitan”, 1534. [https://www.wikiwand.com/en/Benedetto\\_Bordone](https://www.wikiwand.com/en/Benedetto_Bordone).

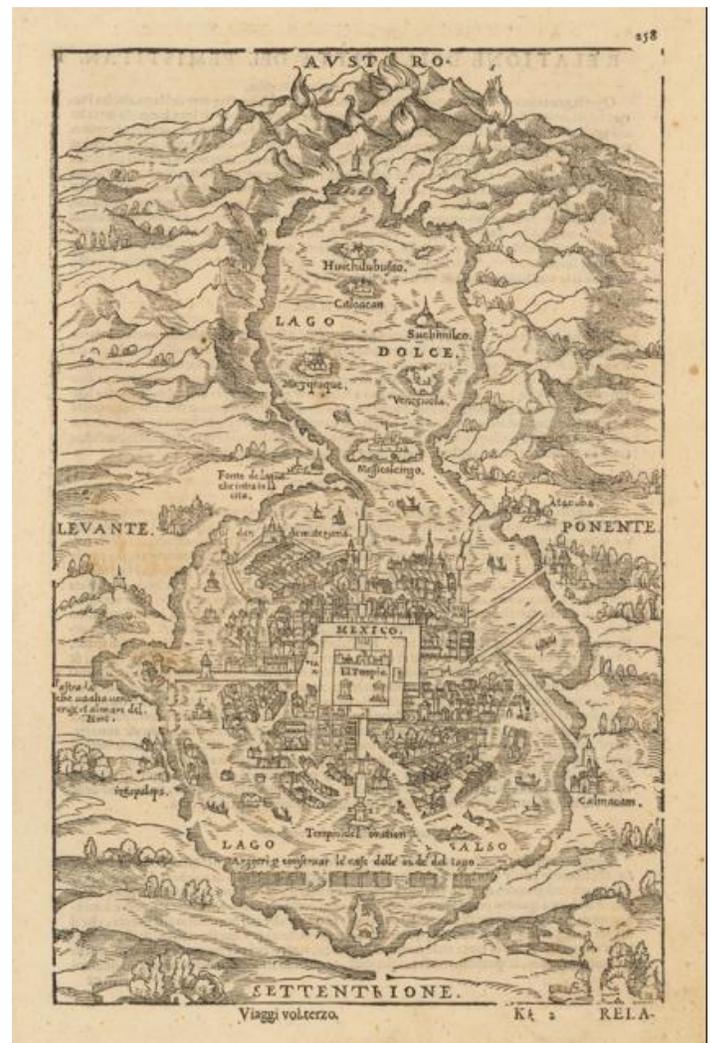
*Markets.* In his 2nd Letter, Cortés described Tenochtitlan’s markets:

*This city has many public squares, in which are situated the markets and other places for buying and selling. There is one square twice as large as that of the city of Salamanca, surrounded by porticoes, where are daily assembled more than sixty thousand souls, engaged in buying, and selling; and where are found all kinds of merchandise that the world affords, ... .*

*North.* Though not indicated on the map, North must be to the right, because the dike was built east of the city. (Compare fig. 2.)

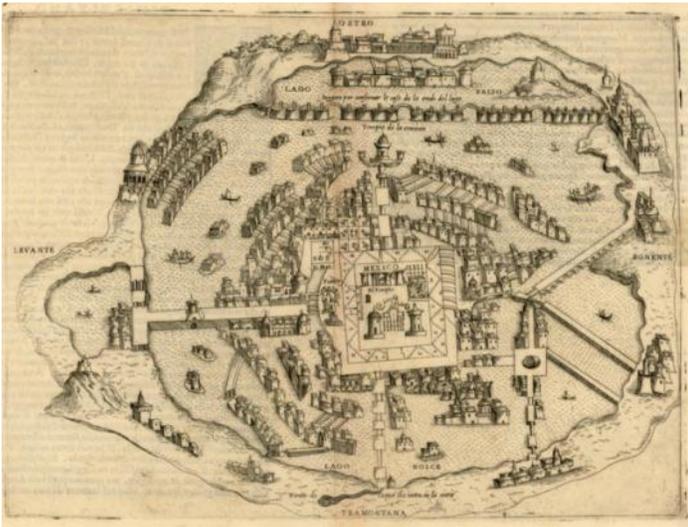
*Number of Lakes.* There were five lakes in the Valley of Mexico. Except perhaps for a truncated nub of Lake Xochimilco, only Lake Texcoco is shown and it is the wrong shape. (Compare fig. 2.) Might Cortés have been unaware of the other lakes? As noted above, in his 2nd Letter, Cortés wrote that two lakes overspread nearly the whole valley.

*Sacred Precinct.* The sacred precinct included temples for sacrifice (*templum ubi sacrificant*) and racks of skulls of sacrifi-

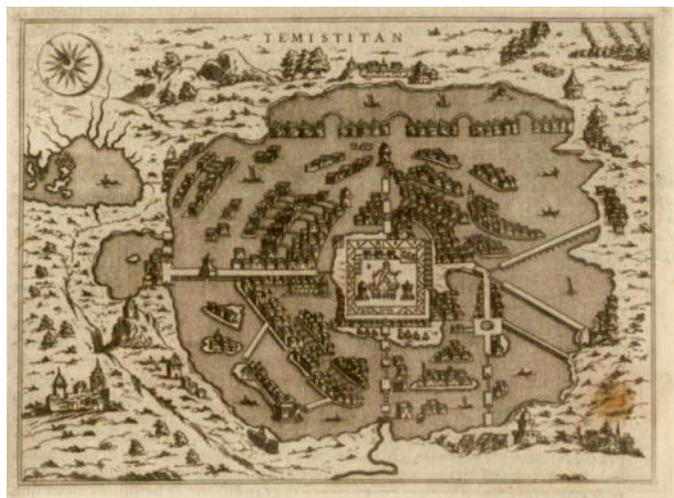


**Figure 6.** G.B. Ramusio, untitled map of Tenochtitlan, 1600 ed. <https://www.raremaps.com/gallery/detail/49533ba/untitled-map-of-mexico-city-ramusio>

cial victims (*capita sacrificatoru[m]*). Nearby are palaces and the Aztec emperor’s zoo (*Dom[us] a[n]jialui[m]*). There were as many as 40 tall towers in the precinct, the most important of which, according to the 2<sup>nd</sup> Letter, is higher than that of the cathedral of Seville.



**Figure 7.** B. Zaltieri, untitled map of Tenochtitlan, 1569. <https://exhibits.stanford.edu/ruderman/catalog/pb340jn3484>. The Barry Lawrence Ruderman Map Collection, Stanford.



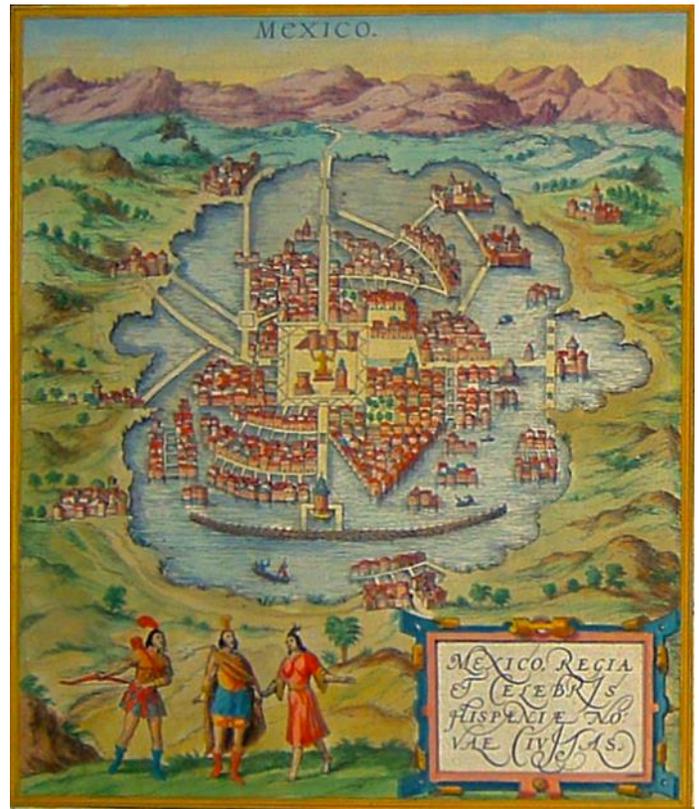
**Figure 8.** Porcacchi, “Temistitan”, 1572. <https://exhibits.stanford.edu/ruderman/catalog/st856wd1652>. The Barry Lawrence Ruderman Map Collection, Stanford.

*Streets.* Cortés wrote in the 2nd Letter: “[I]ts streets, I speak of the principal ones, are very wide and straight; some of these, and all the inferior ones, are half land and half water, and are navigated by canoes.”

*Size & Color.* The printed map of Tenochtitlan is approximately 31 cm in diameter. Except for a few originally colored examples, the map was issued uncolored.

### DEMISE OF TENOCHTITLAN

The relationship between the Aztecs and the Spanish-indigenous people’s alliance deteriorated from 1519 to 1521. After a vicious existential struggle, the conquistadors and their allies defeated the Aztec empire and razed Tenochtitlan utterly. The Spanish founded Mexico City on the ruins,



**Figure 9.** G. Braun & F. Hogenberg, “Mexico” from the single sheet “Mexico. & Cusco regni Peru in novo orbis capti.”, 1<sup>st</sup> ed. 1572. Author’s collection.

building the new city’s central square, cathedral and government buildings over Tenochtitlan’s sacred precinct.

### SOME OTHER EARLY MAPS OF TENOCHTITLAN

Some of the more important other early maps of Tenochtitlan are listed below with comments. All were created after Tenochtitlan was razed, so their primary sources would have been—for the earlier maps—the 1524 Nuremberg map and the 2<sup>nd</sup> Letter and—for the later maps—perhaps also the eyewitness accounts of Tenochtitlan published after the mid-16<sup>th</sup> century. The most important of these accounts are cited below as “Recommended Additional Reading”.

*Benedetto Bordone, “La gran citte di Temistitan”, 1<sup>st</sup> ed. 1528. (Fig. 5, prior page)* This is the first map of Tenochtitlan following the 1524 Nuremberg version and is clearly based on the latter. Note that the sacred precinct of the Aztecs has been replaced by a Christian version: The building at the top of the precinct (i.e., the west side) may be the beginning of the cathedral, the person in the center with outstretched arms almost appears crucified, and the towers at the bottom of the precinct (i.e. the east side) have a European appearance and may represent Spanish government buildings. Temistitan is another name for Tenochtitlan.

# KARL BAEDEKER AND HIS HANDBOOKS FOR TRAVELLERS

LOUISE M. RATLIFF

*Giovanni Battista Ramusio, untitled map of Tenochtitlan, 1<sup>st</sup> ed. 1556. (Fig. 6, p. 26)* Ramusio adopts the 1524 Nuremberg image of Tenochtitlan but replaces the Aztec sacred precinct with a Christian version that lacks Bordone's possible reference to a crucifixion. Ramusio's Valley of Mexico follows Cortés' written description in the 2<sup>nd</sup> Letter: lofty and rugged mountains surrounding two lakes connected by a narrow strait that is a bow-shot wide. (*Vide supra.*)

*Bolognino Zaltieri, untitled map of Tenochtitlan, 1<sup>st</sup> ed. 1569. (Fig. 7, prior page)* This map appeared in G Ballino's Italian atlas of important cities and fortresses. The Christian version of the Aztec sacred precinct retains skull racks (though without skulls).

*Tomaso Porcacchi, "Temistitan", 1<sup>st</sup> ed. 1572. (Fig. 8, prior page)* This is a much-simplified variant of the 1524 Nuremberg map with a Christianized sacred precinct.

*Georg Braun & Frans Hogenberg, "Mexico & Cusco regni Peru in nove orbo caput," 1<sup>st</sup> ed. 1576. (Fig. 9, prior page)* Like Ramusio's map, this portrays a more expansive valley; however, there is but a single lake. Like Bordone's map, the Christian version of the sacred precinct includes a possible reference to the crucifixion.

## CONCLUSION

Only one European-style map was made of Tenochtitlan before the city's destruction: the now-lost manuscript map that spawned the woodblock Tenochtitlan map printed in Nuremberg in 1524. Some features of this printed map are inconsistent with Cortés' descriptions in the 2<sup>nd</sup> Letter. The few maps of Tenochtitlan published during the remainder of the century must all descend from the 2<sup>nd</sup> Letter and its accompanying map of the fallen Aztec Capital.

## References

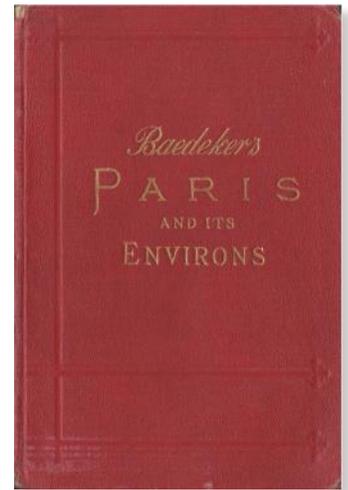
- A.R. Pagden (transl. & ed.), *Hernán Cortés Letters from Mexico*, New York, Grossman Publishers, 1971.
- Barbara E. Mundy, "Mapping the Aztec Capital: The 1524 Nuremberg map of Tenochtitlan, Its Sources and Meanings." *Imago Mundi*, vol. 50 (1998), pp. 11-33.
- Wikipedia, "Valley of Mexico", sections 1.4 (Aztec Empire) & 2.1 (Old Lake System), [https://en.wikipedia.org/wiki/Valley\\_of\\_Mexico](https://en.wikipedia.org/wiki/Valley_of_Mexico).

## Recommended Additional Reading

- 1 Bartolome de la Casas, *A Short Account of the Destruction of the Indies*, England, Penguin Classics, 2004. Las Casas was a Dominican friar who wrote this bitter complaint about the Spanish abuses of the native peoples. Written in 1542, this book was first published in 1552.

*continued at TENOCHTITLAN, page 39*

Travelers today have a wide variety of guidebooks to choose among: Fodor's, Lonely Planet, Rough Guides, and many others, but in the nineteenth century the age of the travel handbooks was just beginning. After the Napoleonic Wars in the early 1800s in Europe, the economy began to improve, the middle class began to form, and, with the advent of steam power, ordinary people began to travel widely. Who, then, would describe the interesting places to visit, how to get there, and where to stay? In England, it may have been John Murray or Thomas Cook, but in Germany, the Verlag Karl Baedeker rose to meet the demands of travelers.



## A Brief History

Karl Baedeker was born in 1801 in Essen, Germany, to a literary family of printers, booksellers and publishers. At age 16, he left home to study the book-trade profession, and never looked back. In 1827, he opened his own bookseller business in Koblenz, and, in 1828, he bought out Friedrich Röhling, whose bookseller business inventory included travel guides of Koblenz, as well as J.A. Klein's *Rheinreise* (Rhine travel), a book that was selling very well at that time.

Six years later, in 1835, Baedeker published new French and German versions of *Rheinreise*, which then became the first guidebook actually published by his firm. With this book, which was both modeled after and copied from John Murray III's Handbooks from England, and supplemented with his own personal observations of the Rhine region, Baedeker began a series of publications that have become synonymous with quality, timeliness, scrupulous attention to detail, and practical recommendations.

From those early beginnings, the Baedeker tradition of including minute details, accuracy, first-hand observations of everything described in the guides, and descriptions of every possible inn, café, monument, roadway, and point of interest, continued well into the 20<sup>th</sup> century. Through economic turbulence, war, fierce competition with other publishers, and travelers' increasing thirst for information about far-flung

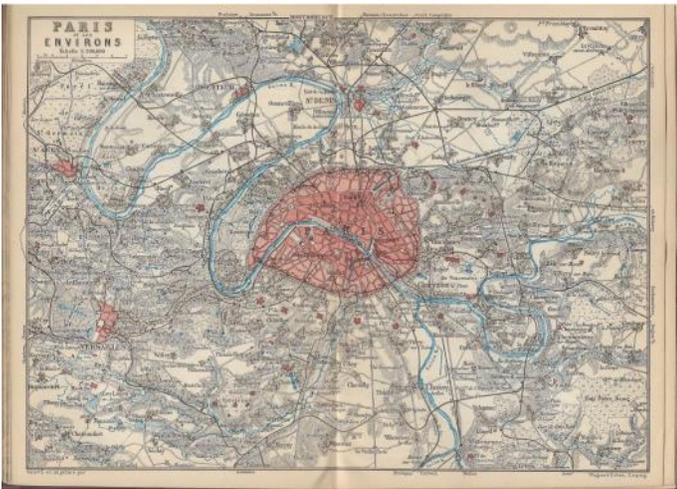


Figure 1. Paris et ses Environs. 1888

countries, the Baedeker family continued to publish their highly regarded travel guides. Eva Baedeker was the last family member to take part in running the Baedeker publishing house. She sold the company to Langenscheidt in 1984, before she died, and today the Baedeker name appears on guidebooks published by Mairdumont, located in Ostfildern, near Stuttgart.

One anecdote attests to Karl's insistence on personally verifying every fact in his guides. In 1847, a scholar named Gisbert von Vincke was climbing the stairs of Milan cathed-

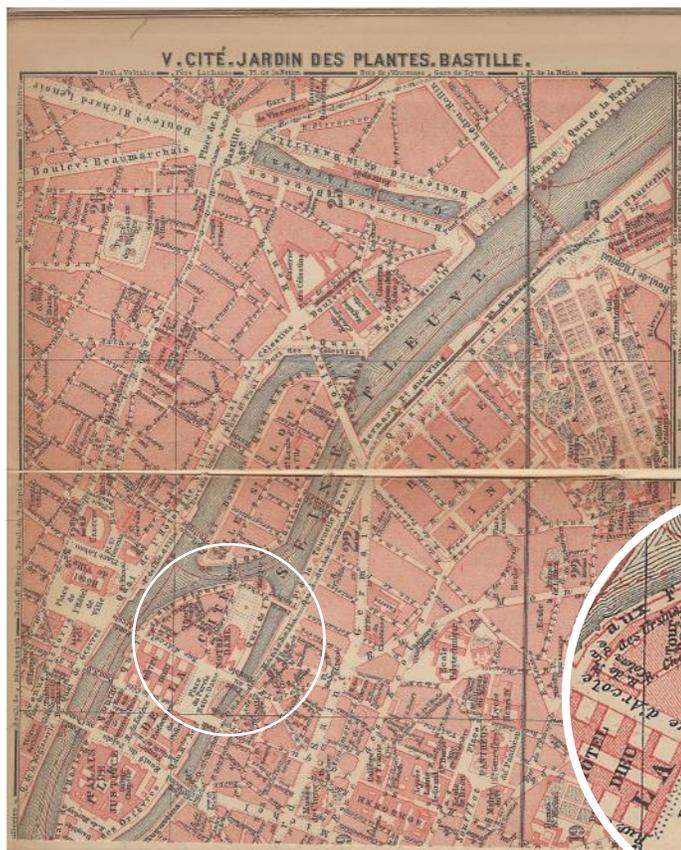


Figure 2. V. Cité. Jardin des Plantes. Bastille. 1904

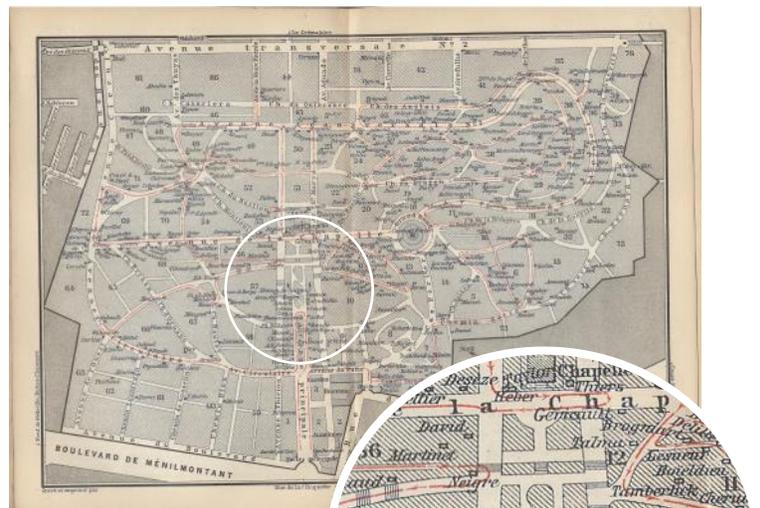


Figure 3. Cimetière du Père Lachaise. 1888



them hard to replace.<sup>2</sup> According to author Herbert Warren Wind, these maps were a primary reason Baedeker's Handbooks were so popular. "By and large, it was the sheer technical skill of the staff at Wagner &

dral. In front of him, breathing heavily, was a "cheerful compatriot with mutton chop whiskers and a pronounced limp." The two men met up later at dinner, and von Vincke asked the "cheerful compatriot", who was actually Baedeker, why he had placed a coin on every 20<sup>th</sup> step on their way up. Reportedly Baedeker told him, "I picked up the coins on the descent in order to check the number of stairs. There is no room for inaccuracy in these matters."<sup>1</sup>

An outstanding feature of the Handbooks was the inclusion of numerous maps and plans, created for Baedeker by the firm of H. Wagner & E. Debes beginning in 1872. Wagner's father, Eduard, had actually begun producing maps for Baedeker in 1839, but, by 1873, Eduard had passed the company to his son, Heinrich, who subsequently partnered with Ernst Debes, a highly respected cartographer. Debes had trained under August Petermann, a famous cartographer, who, in 1854, had become the director of the Geographical Institute of Justus Perthes in Gotha. The Wagner & Debes firm published school atlases and wall maps, a *Handatlas*, and many other small maps, in addition to the city maps and illustrations they produced for Baedeker. Their maps were etched directly on stone plates, rather than copper, which made

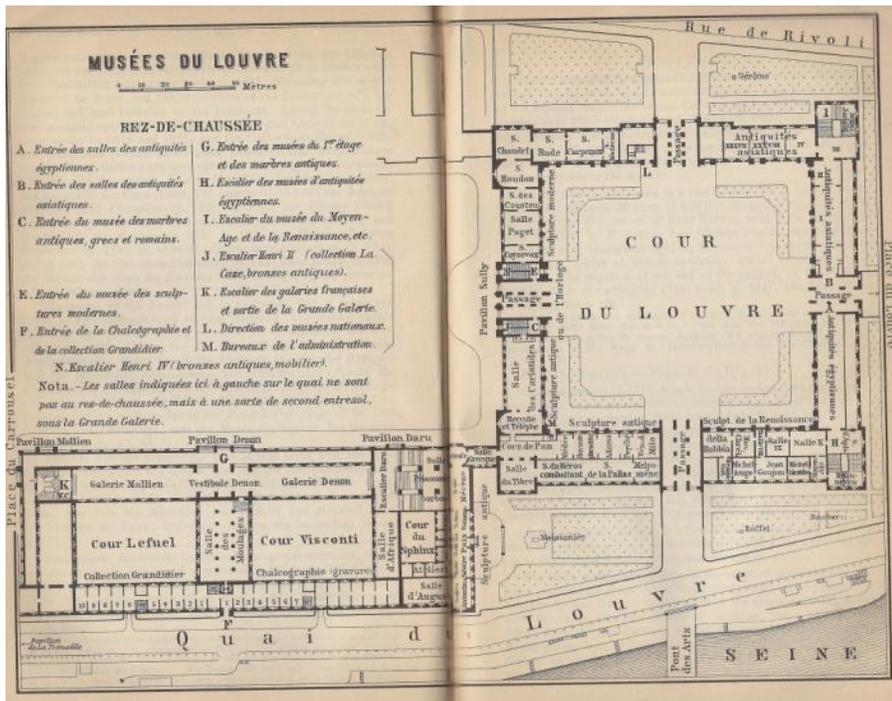


Figure 4. Musées du Louvre. Rez-de-Chausée. (Ground floor) 1913

Debes that kept the Baedeker Handbooks well ahead of their rivals in this particular aspect of publishing.”<sup>3</sup>

### Paris and Environs Handbook for Travellers

One of my favorite Baedeker handbooks is the English-language *Paris and Environs, with Routes from London to Paris: A Handbook for Travellers*, of which I own three editions – 1888, 1904, and 1913. Paris was one of few cities that had its own handbook before 1950, along with London, Athens, and Berlin. In the Preface, Baedeker writes, “The chief object of the Handbook for Paris ... is to render the traveller as nearly as possible independent of the services of guides,

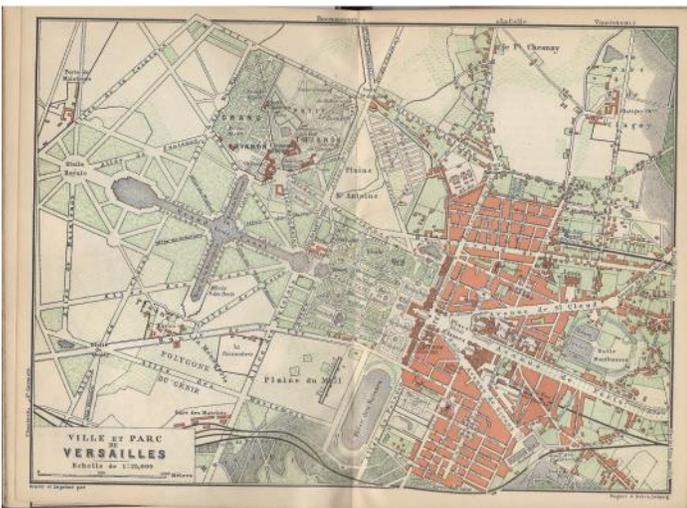


Figure 5. Ville et Parc du Versailles. 1888.

comissionnaires, and innkeepers, and to enable him to employ his time and his money to the best advantage.”<sup>4</sup>

The 1888 edition contains 9 maps and 30 plans; by 1913 there are 14 maps and 42 plans. Unfortunately, over time some of the most useful maps have become separated from the handbooks, since they were inserted at the ends of the volumes, and designed to be removed from the book for the traveler’s use and convenience. In my 1904 edition, the maps are still present, but the paper is so brittle that it has broken into its folded segments, and I cannot scan an entire map. However, each volume also has a smaller-scale map showing the “environs.” (Fig. 1, prior page)

Here, from a larger-scale 1904 map is a segment titled “V. Cité. Jardin des Plantes. Bastille.” (Fig. 2, prior page) You can see La Place de la Bastille just underneath the title word Cité. Down near the center of this

map segment is the Ile St. Louis, and below that is the location of Notre Dame on the Ile de la Cité. A well-equipped traveler would most certainly have brought along a suitable magnifying glass.

An amusing story recounts Karl’s first visit to the Père Lachaise Cemetery.

*An avowed Francophobe, Baedeker delayed his visit to Paris until 1855. After observing street children singing ‘Sur le Pont d’Avignon’, transcribing the notation, and making a few allusions to his beloved Schiller, he made straight for Père-Lachaise cemetery, which he awarded two stars in his Handbook. He was appalled to find that there was no accurate ground plan of the cemetery, so he spent two days traipsing over the 110 acres, creating a map while rapping out learned asides on the resting places of Molière, Chopin, and the 12th-century theologian Pierre Abélard.*<sup>5</sup>

Note the 1888 route through the cemetery in this map. (Fig. 3, prior page) Baedeker begins his tour by writing, “We follow the route indicated on the plan by means of arrows. Hurried visitors may omit the parts described in small type.” In later editions he omitted the arrows, perhaps because there were too many “hurried visitors.”

Did you ever wonder what was on display in the Louvre in 1913? In his 1913 guide Baedeker devotes 90 pages to a comprehensive list of every object in every room and gallery of every museum. For example, in the Musée des Antiquités

Egyptiennes (*on the extreme right of Fig. 4*), the Salle Henri-Quatre, he notes, contains the Sphinxes. "The large *Sphinx* in pink granite at the entrance is in better preservation but less interesting than its fellow at the other end of the room."<sup>6</sup> Unfortunately there are no illustrations of said Sphinxes.

The various environs (surroundings) of Paris through which Baedeker guides our motor tour include Versailles, St. Cloud, St. Denis, Argenteuil, and Fontainebleau, ending up in Chantilly. In Versailles, (*Fig. 5*) he provides us with a precise and detailed map of the park in which each feature, monument, plaza, and allée is named. He also includes a detailed floor plan of the Palais of the Cours Royale and all of the galleries.

It has been great fun perusing these old Paris Handbooks, and I encourage you to find your own copies, because that is the only way to appreciate the sheer genius and technical perfection of the Baedeker Handbooks for Travellers.

### Endnotes

<sup>1</sup> Abebooks: Essential Knowledge, Baedeker Guides," Abebooks, accessed January 24, 2021, <http://www.abebooks.co.uk/docs/Community/Featured/RBR/baedekers.shtml>.

<sup>2</sup> Herbert Warren Wind, "Profiles: The House of Baedeker," *New Yorker*, September 22, 1975, <https://archives.newyorker.com/newyorker/1975-09-22/flipebook/042/>.

<sup>3</sup> Karl Baedeker, *Paris and Environs, with Routes from London to Paris: Handbook for Travellers.*, 9th rev. ed. (Leipzig: Karl Baedeker, 1888). p. v

<sup>4</sup> "Baedeker Guides."

<sup>5</sup> Karl Baedeker, *Paris and Environs: With Routes from London to Paris: Handbook for Travellers*, 18th rev. ed. (Leipzig;

<sup>6</sup> New York: Karl Baedeker; Charles Scribner's Sons, 1913). pp. 106-107.

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Wikimedia Commons. "Category: Wagner & Debs." [https://commons.wikimedia.org/wiki/Category:Wagner\\_%26\\_Debes](https://commons.wikimedia.org/wiki/Category:Wagner_%26_Debes).

Wind, Herbert Warren. "Profiles: The House of Baedeker." *New Yorker*, September 22, 1975.

**Louise Ratliff** is a retired academic librarian who cataloged maps for twelve years at UCLA. She does not collect maps herself, but has touched thousands of maps from all around the world. Why collect them when she could see over 70,000 maps in the Young Research Library! She is especially interested in maps which show locations where her ancestors lived in America in the 18th and 19th centuries. The Baedeker guides that she owns have been stored away for decades, and now she has a greater appreciation for the map work in them.

# THE BURNHAM PLAN FOR SAN FRANCISCO

FRED AUDA

In the 50-year period between the end of the Civil War and the start of World War I, the United States experienced one of the most dramatic periods of change in the Nation's brief history, one that would, in a short time, have a global impact.

Called America's second industrial revolution and christened the Gilded Age<sup>1</sup> by Mark Twain, the 1880s saw America emerge from a century of isolationism, enter a period of expansion, develop a world-class navy, and acquire six new territories, including the Philippines and Puerto Rico.

The enormous treasury generated by the gold rush, followed by the even more economically impactful Comstock Lode's silver rush of the late 1860s, required infrastructure on a grand scale. The completion of the transcontinental railroad and the telegraph, in 1869, led to industrial standardization in the exploding economies of steel, glass, coal, mining, lumber and military ordinance, rendering an international competitive advantage to the United States, which even surpassed England in industrialization. As American wages rose higher than those in Europe, millions of European immigrants arrived.

Simultaneously, the railroad industry "invented" modern management, which was followed by the robber barons, the rise of labor unions, sensational and exaggerated newspaper reporting, the dramatic expansion of the pacific trade, two major panics, in 1873 and 1893, the first March on Washington, the City Beautiful Movement, and, finally, a new national identity.

While economic and cultural development stagnated in the East and the Southern economy remained devastated after the Civil War, in the West, immigration and the railroads enabled the rapid growth of large-scale agribusiness, ranching, and mining.

These major contrasts brought about the Progressive era, with its goals of ending the trusts, monopolies, and gross wealth disparities and the election of a new kind of leader. Theodore Roosevelt was elected as the country's youngest and first reform President.

## *The City Beautiful Movement*

While America entered the world community as an industrial leader, it simultaneously evolved academically and became the intellectual peer of European universities as a birthing place for the "new" sciences of astronomy, geology, and archeology. In architecture, the new steel technology inspired a grand scale of soaring construction, and The Chicago School became an international inspiration for the modern high rise.

Beginning in 1893, over 75 cities created "Improvement Societies" to embrace the utopian ideas of the City Beautiful Movement, which embodied beautification and "... artistic municipal betterments; to stimulate civic pride ..." and social order<sup>2</sup>.

Using the language of the Beaux-Arts style, the movement's members created axial floor plans leading to green spaces and panoramic vistas of axial hub-and-spoke transportation plans.

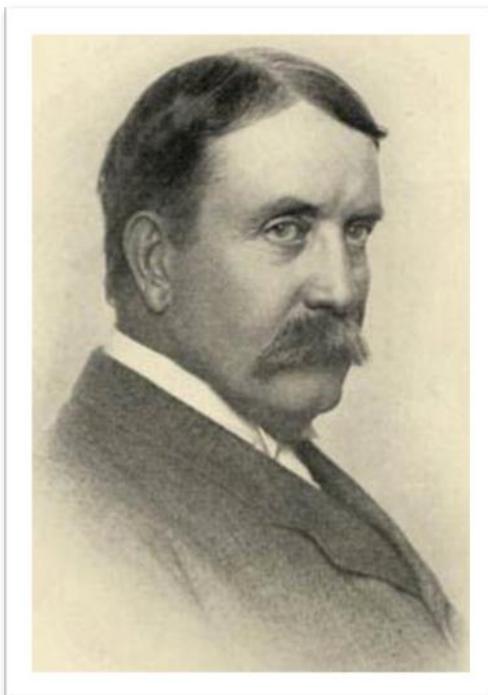
The two premier landscape architects leading this movement were Frederick Law Olmsted and, later, Daniel Burnham. Together, they headed the commission established to update L'Enfant's original 1791 Plan for Washington, D.C., and designed the National Mall as it exists today.<sup>3,4</sup> Burnham was then commissioned to produce city plans for Manila, Cleveland, and The

Columbian Exposition, in the process receiving much international recognition.

In 1904 former Mayor James Phelan organized the Association for the Improvement and Adornment of San Francisco and invited Burnham to visit the city. The Mayor's vision was to transform San Francisco into the "Paris of the Pacific"<sup>5</sup>.

Burnham toured San Francisco and seeing its rugged landscapes, was reminded of the hill towns of Italy and Greece. He "... accepted the task, giving his services gratuitously, the association paying the expenses" and "... the work began on September 20, 1904."<sup>6</sup>

Burnham presented his plan (*Fig. 1, next page*) to the city government in September 1905, and the Board of Supervisors printed 3,000 copies for distribution. Burnham suggests, "... we must not forget what San Francisco has become in fifty



**Daniel Burnham**

1846-1912

*"Make no little plans ..."*



Figure 1. *The Burnham Plan for San Francisco, 1905*

years ... embracing ... the next fifty years"<sup>7</sup>. It will be "... the work of a generation ..."<sup>8</sup>; "... of monumental character ..." "to ... strengthen the public sense of the dignity and responsibility of citizenship"<sup>9</sup>,

In "THE GENERAL THEORY OF THE CITY"<sup>10</sup> the plan called for the current grid to be overlain with the construction of grand concentric boulevards.

To address the challenges of the landscape, Burnham suggested a "GENERAL TREATMENT OF THE HILLS"<sup>11</sup> "to overcome this difficulty of moving from center to center"<sup>12</sup>, he proposed "Encircling Contoured Roadways varying in height with each hill ..."<sup>13</sup>. Connecting these roadways, he drew a perimeter boulevard and "To this embracing highway all streets lead."<sup>14</sup>

Existing parks were integrated into Burnham's plan, and were linked with a garland of lakes "in a Park chain (orig sp.)"<sup>15</sup> extending to the Great Highway and south to connect to El Camino Real.

He placed the Civic Center at Market at Van Ness with an inner circle, "the center of circulation", which "should exclude vehicles"<sup>16</sup>. Beyond this was a "The Perimeter of Distribution"<sup>17</sup> and under "... the main diagonal arteries ... an underground service of (rail) cars ...", "in the form of two loop lines ..."<sup>18</sup>

Capitalizing on the east-west length of Golden Gate Park, he planned an extension of the Panhandle to Civic Center so that it would be possible to walk from Civic Center to the ocean without leaving parklands, an idea he borrowed from the previous Parks Director, William Hammond Hall.

To link Civic Center to the south, his plan called for a "City Gateway" via the "great artery ... Mission Boulevard, two hundred and ten feet wide ..."<sup>19</sup> through the Bernal Cut, connecting to El Camino Real.

Referencing "the stadium at Delphi, overlooking the Gulf of Corinth and the theatre of Dionysos, at the base of the Acropolis,"<sup>20</sup> an enormous Olympic-scaled "U" shaped public

venue, the Amphitheater/Stadium, (Fig. 2) was proposed, which would fill both Cole Valley and the Upper Haight.



Figure 2. *The Amphitheater/Stadium* (p. 163)

Telegraph Hill, the historic site of San Francisco's first direct means of communication with the Nation, was to be surrounded by a contoured boulevard, terraced to make it impassable in order "to help reform the street system" and make it "more habitable."<sup>21</sup> (Fig. 3)

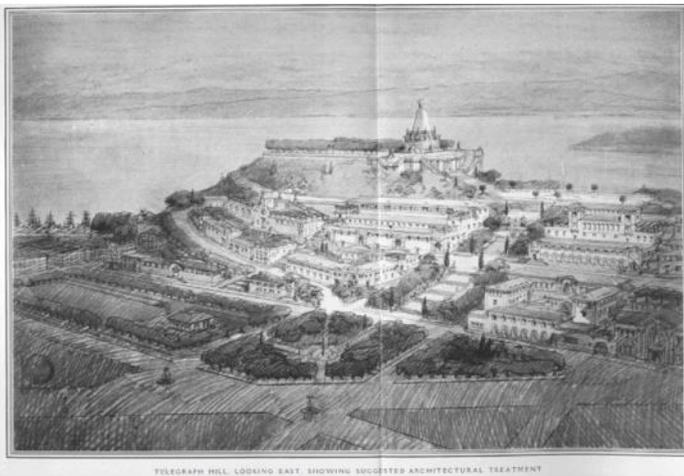


Figure 3. *Telegraph Hill* (pp. 123-132)

As the most prominent elevation in the city, Twin Peaks received a 300' statue of "San Francisco", overlooking a grand parkway which stretched from there to Lake Merced and the Pacific. (Fig. 4)

At the 600' level, it was to have a contoured boulevard, an Academy, A Neoclassical Library and "... some few of the greatest works of art. It would consist of courts, terraces, and colonnaded shelters", "... in the manner of the great Poecile of the Villa Hadrian."<sup>22</sup>

A centralized system was drawn up to distribute water, via colossal cascades, on both sides of Twin Peaks. One flowed west along the current path of Clarendon Avenue, feeding the new Sutro Reservoir and ending at Laguna Honda. The other

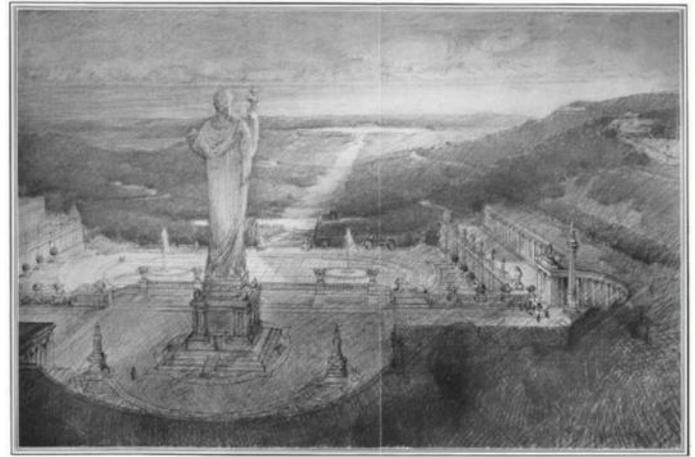


Figure 4. *The Athenaem, showing vista to the sea.* (p. 169)

was to cascade east, along a monumental staircase, and into a grand square at Market and Castro Streets.

On "the southeast slope of Twin Peaks ..." an Academy was to be built "... to be used for "independent study or collaboration," "... in various branches of intellectual and artistic pursuits."<sup>23</sup>

For the Embarcadero and entire eastern shore, the Plan offered a chain of finger piers, enclosed by a sea wall that would extend to San Mateo and "triple ... wharfage."<sup>24</sup>

Seven months after Burnham presented his plan, the Great Quake and fire of April 18, 1906, struck the city, and most of the 3,000 copies of the plan, which had been stored in the basement of City Hall, were burned. "Only a few volumes, which had been distributed to members of the sponsoring committee, survived."<sup>25</sup>

The earthquake and fire destroyed any hopes of implementing most of the elements of the City Beautiful in San Francisco's future design, but the plan for Civic Center was not lost upon the civic leaders. The then-recently-built City Hall had shed its cladding, revealing the fraud perpetrated by the contractors, who had used inferior materials in its construction. Its site was moved from Burnham's original location, at Larkin and Market, to its current one, thus resulting in San Francisco's having the country's largest collection of monumental Beaux-Arts Civic Buildings outside of Washington, D.C.

Additionally, the main north/south transit was implemented as Park Presidio and Sunset Boulevards as they exist today.

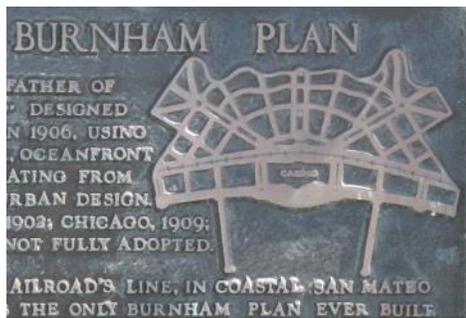
In retrospect, had the Plan been implemented, the city would have been over one-third parks, "at a cost \$50,000,000 in 1904 dollars."<sup>26</sup>

Its contemporary public works budget would be hard to imagine.

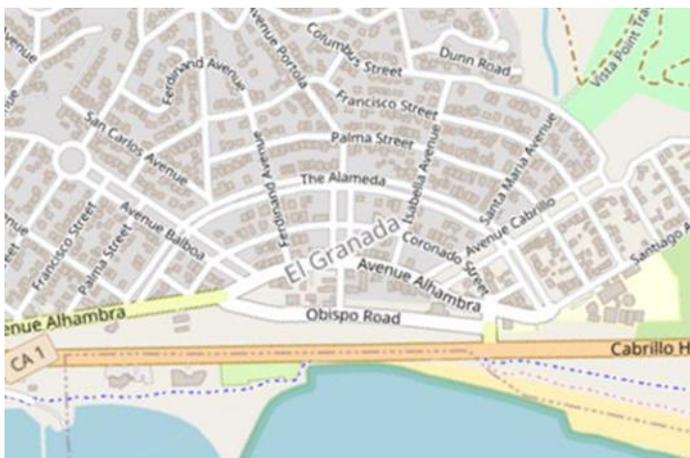
**Postscript**

Although Daniel Burnham’s architectural output includes a prodigious number of notable buildings in the United States, his city plans, though influential, were never fully realized. Though modest in concept compared to his monumental efforts for Chicago and San Francisco, the unincorporated town of Granada (now El Granada), San Mateo County, CA, comes closest to a completed plan (Fig. 5-6).

**Figure 5.** (Right) Detail of historic plaque at El Granada.



**Figure 6.** (Below) Current town development. Courtesy of Openstreetmaps.com



Fred DeJarlais contributed the Postscript for this article.

**Endnotes**

- <sup>1</sup> *The Gilded Age: A Tale of Today*, Twain, Mark and Warner, Charles Dudley, 1873.
- <sup>2</sup> <https://www.britannica.com/biography/Daniel-Burnham>
- <sup>3</sup> <http://fredericklawolmsted.com/>
- <sup>4</sup> Robert Freestone, *The Internationalization of the City Beautiful*, International Planning Studies, vol. 2. Pg 7.
- <sup>5</sup> *Daniel Burnham’s Twin Peaks Vision* <https://www.outsidelands.org/burnham-plan.php>
- <sup>6</sup> Daniel H. Burnham and Edward H. Bennett, *Report on a Plan for San Francisco*, San Francisco, Sunset Press, 1905 p. 8
- <sup>7-24</sup> Ibid, various pages.
- <sup>25</sup> SF Chronicle. *SF’s lost opportunity to be reborn as ‘Paris’, with hills.* Gary Kamiya Oct. 27, 2017
- <sup>26</sup> *Daniel Burnham’s Twin Peaks Vision* <https://www.outsidelands.org/burnham-plan.php>

**CARTO-QUIZ**

**Manhole from what city?**

**Hints**



Land rush



Great Lakes



Needle



Japan

**Note:** Some identifying text has been obscured on these images

# APPS FOR MAPS: AIRTABLE

COURTNEY SPIKES

Map enthusiasts around the world have crafted different ways to organize and catalog both their virtual and tangible collections. Whether they are archival-framed or rolled into tubes, displayed in your home, or tucked in a drawer, we often seek ways to organize and track our map collections, no matter how small or large. For many of us, our favorite maps are also experienced online, and there are numerous ways that CMS members have maintained their physical and digital collections over time.

For example, Thomas Paper has shared his website, The Digital Gallery for CMS events, and several CMS members have created unique map exhibits that allow part of their personal collections to be curated and available to a broader audience, including Len Rothman's *Ortelius and the Holy Land*, Ron Gibbs's *George Washington, and the American Revolution*, and Richard Breiman's *Captain Cook* to name a few. This offers a terrific outlet for portions of a collection, but what about our everyday cataloging needs and management of our personal maps, both digital and fabricated?

One of our newest CMS members, Emily Yang, was kind enough to share with me how she developed an effective system for her virtual map collection. Following her interests, Emily initially used the readily available apps at her fingertips, such as Apple Notes, to cut and paste links to maps and then organize them under headers defined by location, such as country or region. She also explored the Pinterest app, which was helpful for casting a wide net in her map searches, but found it limited how you could view your selected images. As the number of maps in her digital collection increased, so, too, did her desire to add more robust notes that were easily searchable. This prompted a switch to Google Drive with separate folders for images and Google Notes for her remarks. However, this system lacked the immediacy of seeing all of her maps at once and easily accessing the relevant notes.

Emily explained that she wanted a place where she could readily view her maps and store more data on each one. One goal was to discern more patterns throughout her collection, perhaps to locate different maps by the same photographer, and to be able to sort and filter (Fig. 1) her collection per her interests. She found the right balance of visual and textual access by using a free version of the application Airtable (airtable.com). *Airtable* works with web, desktop, iOS, and Android apps. The free features on Airtable include an unlimited number of *bases* for each account. The developer defines a *base* as a collection of tables containing *records* (like rows on a spreadsheet), with each *record* representing individual objects, ideas, people, or images that you collect or track.

In preparation for this article, I started to set up my own map collection on Airtable and found that it is very easy to use! Depending on how many items you have, you can organize your physical and digital collections into different *bases*,

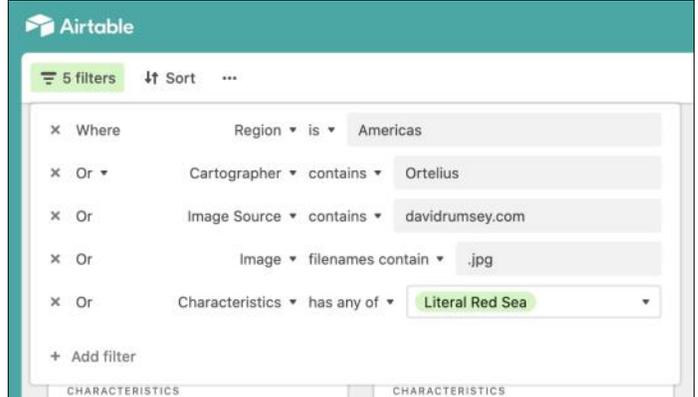


Figure 1. Customized Filter View

with each map having its own *record*. A free account has unlimited *bases*, and each *base* allows 1,200 *records* with up to 2GB of attachments per *base*. So, if you group your collection effectively into different *bases*, you should be able to house an unlimited number of *records* (map images/data) across your account. I have a combination of physical and digital maps that were quickly organized into different *bases* separated by specific time periods, with plenty of room to grow.

Some key facets for Emily were the ability to easily search her collection, use effective sorting filters, as well as to toggle between different views. With Airtable, you can choose *Gallery View* (Fig. 2) to feature your images, with titles, notes, or keywords below. Next, you can switch to *Grid View* (Fig. 3, next page) for an Excel-style spreadsheet list of your items. Airtable also offers *Kanban View* that allows you

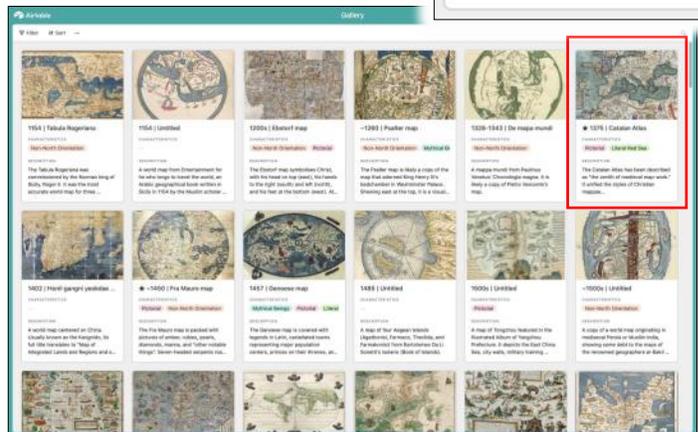


Figure 2. Gallery View, with inset.

ID	Title	Description	Characteristic	Image Source	Region	New Content	Image
1000	1800 Luck Report	A map of the southern...	Geographical	Historical Image	USA	1800	
1001	1804 Ohio Territory	The first land map...	Geographical	Historical Image	USA	1804	
1002	1805 The English Map	A map of the United States...	Geographical	Historical Image	United States	1805	
1003	1808 Imperial Handbook	A world map published in...	Geographical	Historical Image	World	1808	
1004	1809 1809 - China	A map of the land of the...	Geographical	Historical Image	China	1809	
1005	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	
1006	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	
1007	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	
1008	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	
1009	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	
1010	1810 1810 - The East	A map of the East...	Geographical	Historical Image	Asia	1810	

Figure 3. Grid View in AirTable

to customize a hierarchy or priority for your items. This feature, along with the *Calendar View* (Fig. 4), is particularly helpful for projects and workflow.

As you can see in the images provided by Emily, there are many ways to tailor your spreadsheet so that your records/images are easily managed. You can continue to add customized categories and information over time as your collection evolves. Emily particularly recommends the carousel feature where you can hover your cursor over a map, and it will scroll

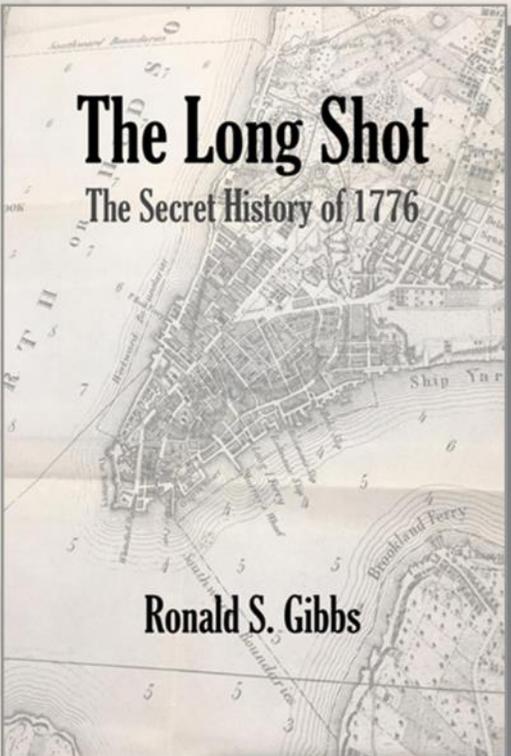
through the images you have grouped within that particular *record*. From any of the app views, simply click on a *record* to add or delete information, images, web links, or searchable keywords.

I would like to personally thank Emily for her time and generosity in sharing her map cataloging system with our CMS membership. And I hope that she will consider presenting her collection of Red Sea maps at a future CMS event!

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
	7	8	9	10	11	12
	13	14	15	16	17	18
	19	20	21	22	23	24
	25	26	27	28	29	30
	31					

Figure 4. Calendar View in AirTable

★★★★★ 5 out of 5



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# MY FAVORITE MAP

## AUSTIN ARENSBERG

When I moved to San Francisco and began collecting maps five years ago, I started trying to find maps made by local mapmakers of the places I'd lived in Asia, including China, Thailand, Singapore, and Korea, during the first half of my career. At a California Map Society meeting a few years ago, I was talking to a member about my interests, and he recommended I read Thomas Suarez's fantastic "Early Mapping of Southeast Asia." I had lived in Thailand for seven years and was naturally drawn to the book's vivid depiction and historical analysis of map-making. The book outlines the many wars between the Burmese and Thais, often fought on elephants in the beautiful and often dangerous tiger-filled jungles and landscapes that have been transformed, in modern Thailand, into more pastoral rice paddies.

There is very little record of maps in the region, and the humid and hot environmental conditions made any media prone to decay and maps difficult to store. Interestingly, this environmental consideration is also cited as a reason that books and reading were not common until the 19<sup>th</sup> century in Thailand in Marcel Barang's extensive prologue to his book "The 20 Best Novels in Thailand." To account for these constraints, people at the time used the best available technology and etched their maps using iron styluses on palm leaves, typically measuring up to 60cm long and 6 cm wide. As Suarez describes in his book, "The leaf would first be rubbed with a sooty substance and then wiped clean, leaving a black imprint on the rubbed areas of the yellowish leaf."<sup>1</sup> "The leaves could be rolled up and carried without concern for their getting wet, which in the torrential downpours of the rainy season...must have been a common occurrence."<sup>1</sup> Because the leaves could be wiped clean, it was not immediately obvious to others that there were scour marks that could be used later with soot to illuminate the map details. If the messenger holding the map were in danger and needed to ensure the map was destroyed, simply throwing it on the ground would do the trick as it would blend in with the local flora. No one has ever seen these maps as they were lost to history, but their ingenuity and practicality fascinated me.

∞

I moved to San Francisco five years ago, like many others before me, to pursue a career in technology. I describe my job as a Venture Capitalist as a bit like a journalist trying to piece together what is happening today in order to inform the path we may be taking in the future. What that translates to in a very practical sense is that I sit in my living room, surrounded by old framed maps on the walls, and stare at a computer screen, taking Zoom calls with founders and technologists,

asking questions, and working to build great businesses.

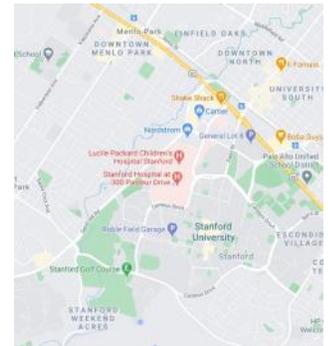
It seems silly in some ways that I have these maps as vestiges of another era on my walls. I enjoy their patina, provenance, and artistic quality, sure, but they are as useful to me as a framed floppy disk. They neither inform my daily life nor provide any practical benefit. In fact, the map I most love to use is, unsurprisingly, *Google*

*Maps*. My iPhone informs me that I use Google Maps on average four minutes a day: logging my movements, saving pins of my favorite coffee shops in the city, and helping me avoid traffic.

Unfortunately, I can't frame my Google Map. It sits on a spinning disk inside a windowless, cold datacenter somewhere in the world unknown to me. Despite the mystery of its location, the map holds deeply personal information well beyond the contours of my city. The map commingles with my broader personal identity, with emails to my loved ones, and with the exhaustive data of modern life: cookies of the websites I visit, marketing profiles on my propensity to buy particular brands of almond milk, and my preferences for streaming Italian mafia TV series.

The power and potential of this mapping technology aren't lost on me. Over the past five years, I've invested in multiple startups using location data. One map startup I backed was founded by one of the creators of Facebook's feed. The app created a log based on a phone's tracking that stitched together photos stored on the phone and pinned them to the location they were taken to create a persistent life journal. Another startup I invested in created high-definition 3D maps for autonomous cars using pulsed lasers shot out of spinning sensors on top of cars that drove around cities 24 hours a day. These startups and mapping tools used unlimited stores of data, tracking, and analytics to create valuable products.

These new mapping technologies and the businesses underpinning them were largely driven by cheaper data storage costs, which were enabled by advancements from large centralized technology companies like Google and Facebook that catalyzed ad markets and created entirely new industries. As these companies have amalgamated massive stores of our data and assumed power over the past 15 years, the beginning of a backlash is emerging. New privacy laws, like GDPR in Europe and CCPA here in California have been passed, and consumer advocates are calling for new regulations as the threat of antitrust regulation looms on the horizon. These large businesses and the centralized and concentrated nature of the



Google Map in the Vicinity of Stanford University

technological architectures upon which they are based are so ubiquitous and critical to our life's operations that it seems foolhardy to imagine a radical change anytime soon. But as the famed futurist and fiction writer William Gibson wrote, "The future is already here—it's just not very evenly distributed."<sup>2</sup> Every week I see new startups building on new encryption techniques, blockchain ledgers, and radically different technology architectures to build privacy-first tools to enable the utility we enjoy today without the pernicious surveillance and abuse of power we often face. The cracks, while small, are beginning to show.

∞

Sitting at my computer, looking out the window at Sutro Tower in San Francisco, can feel a long way from the mountainous jungles of Thailand. What did those map makers have in common with us today? Their most important maps often detailed war plans and keeping them private often meant life or death. Our maps today are just one part of our entire digital life and our most prized secrets, from the passwords to our bank to the baby photos of our children.

We use passcodes, thumbprints, and Face ID to protect our assets, while they simply washed palm leaves with water to hide their precious data. Last week, Facebook updated their privacy policy, allowing tracking and storing of user's messages. Signal, a competing company and app that offers allows users' messages to disappear after sending, became the #1 app on Apple's App Store. Ephemerality is a new utility.

∞

Records matter. History matters. One day I'd love to have my saved map locations on Google Maps shared with my children. I'd love for them to see the places I visited and to imagine my experiences. I am not sure, however, that I want them to know the exact minute I visited those places, what I bought, and for what price. . More data simply makes archiving that much more difficult. Go and ask the archivists at the Internet Archive who spend \$20M a year archiving the web, or the Rumsey Center at Stanford carefully taking care of thousands of maps in climate-controlled rooms.

Years ago I took my parents to visit Wat Pho, the Temple of the Reclining Buddha in Bangkok. Built by King Rama I over 200 years ago upon the founding of Bangkok, the 46-meter long golden Buddha resides inside a vaulted ceiling temple with intricate murals painted on the walls. The temple is a must-see stop in Bangkok, and thousands visit each day shuffling shoeless in a single line, silently around the Buddha. Towards the beautiful, intricate mother-of-pearl inlaid feet of the Buddha, I saw a woman sitting on a stool facing the muralled wall, roped off with a small placard saying, "Caution, painting in progress." As I got closer, I saw that she had a fine-haired brush in one hand and a palette in the other, and, to

my surprise, she was painting directly onto the wall. I later learned that she worked for the Department of Fine Art in the Ministry of Culture. Her full-time job was re-painting sections of the mural that were decaying, chipping, and fading. I immediately thought of the Sistine Chapel restoration—a 20-year long project costing millions that preserved the original paint from Michelangelo. In Thailand, the loss of the original mural was never a concern—teaching and preserving the technique of mural painting was.

I don't have a framed palm leaf map in my living room. I don't have a framed copy of my cherished Google Map. As consumer privacy laws are being written today to allow for the "right to be forgotten" and new startups are forming to enable the ethical use of our data - what will we have to pass on as a record of our lives? What is lost? What is gained?

### Endnotes

<sup>1</sup> Thomas Suarez, *Early Mapping of Southeast Asia: The Epic Story of Seafarers, Adventurers, and Cartographers Who First Mapped the Regions Between China and India*, Periplus Editions; 1st edition, 2012, chapter 2, page 62.

<sup>2</sup> Gibson is reported to have first said this in an interview on *Fresh Air*, NPR, 31 August 1993. [https://en.wikiquote.org/wiki/William\\_Gibson](https://en.wikiquote.org/wiki/William_Gibson)

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*TENOCHTITLAN, continued from page 28*

2 Bernal Diaz del Castillo, *The Discovery and Conquest of Mexico, 1517-1521*; New York; Farrar, Straus, and Cudahy, 1956. Diaz wrote this book in 1568, more than four decades after the events; it was first published in 1632. Diaz and Cortés wrote the only two European eyewitness accounts of the conquest of the Aztecs.

3 Fray Bernardino de Sahagun, *General History of the Things of New Spain, Book 12—The Conquest of Mexico*; Santa Fe, New Mexico; The School of American Research and The University of Utah, 1975. More famously known as the *Florentine Codex*, this book was first published in 1569 and provides the view of indigenous people of the destruction of the Aztec empire. The book provides an English translation of the original Nahuatl and includes notes and illustrations.

**David Kalifon** retired from practicing emergency medicine then health care law to pursue all those interests and activities he had long postponed. He was President of the California Map Society from 2003 to 2005 and now serves as its Vice-President for Information Technology. David has a modest collection of maps from the 15th through the 21st centuries exemplifying map making techniques, projections, styles, geographic discoveries, and map makers. He has a particular interest in the history and maps of London, Paris and New York City.

# MEET OUR MEMBER MIKE SCHEMBRI

INTERVIEWED BY  
JULIET ROTHMAN

Mike Schembri is one of the newer members of our Society. He was born and raised in Glendale, in the greater Los Angeles area, and attended UC Davis, majoring in both psychology and computer sciences. He loves the social sciences, healthcare, and managing data with computer programs and systems. He remained at UC Davis for eight years after graduation, working at the Medical Center with a project that was analyzing the success rates of hospitals and procedures using the SAS program, a system of statistical analysis especially good for research.

In 2000, Mike accepted a position at UCSF as a systems data analyst. He is really enjoying his work there, finding it "very invigorating" and interesting. He has been involved in a number of studies. One of his recent projects has been the development of a national registry of 1,000 women pregnant during COVID to research the potential effects of the pandemic on their pregnancy and infants. The first report of this research has already been published, and, thus far, no increased risks have been found. The study is continuing.

Mike sees himself as a visual learner and has always enjoyed maps. Although these were not the focus of his studies, while at UCD, he enjoyed doing geographical calculations using GIS systems. In the fall of 2019, he saw some ads and information about the San Francisco Map Fair, and since he liked maps, he decided to attend. He was immediately taken with the warmth and friendliness of everyone at the fair. He enjoyed the speakers, and all the vendors, but, above all, loved the strong sense of community and relationship he saw among attendees and vendors alike, and decided right then to become involved!

His primary interest has been and continues to be computer-generated maps and GIS systems. He's especially interested in exploring and expanding the uses to which computer-generated GIS maps can be applied and noted that, for example, these can map out climate change accurately into the future. He says that it's especially important that these GIS resources are open source so that everyone can use them. While years ago utilizing this data was complex and therefore accessible only to those trained in the applications, today's GIS should be easy and accessible to everyone. Mike gets a great deal of pleasure in using GIS - and finds it "amazing" as a tool



for conveying a huge amount of information simply on one map.

The historical aspect of maps is of especial interest to Mike as well. He views maps as holding a great deal of fascinating historical information, such as how people envisioned their world, what their interests were, and the state of knowledge at the time the maps were made.

Mike shares three special stories: In the 1980s, when he first started driving, in Los Angeles, he did not know all the routes and directions. As a teenager, maps gave him that freedom, the freedom to wander or to go wherever he wanted. He used the Thomas Bros. maps to find his way because their grid system made the vastness of LA accessible. He described them as a later version of AAA's Triptiks. His second story is that of coming to San Francisco as a gay man in the 1990s. There were maps in the resource guides he used to travel that indicated safe ways to explore as a gay person. His third story: he carries a "Bona Fide" card from AAA in his wallet that says he has been a member for 70 years, since 1945, even though he was not born until 1968! This was originally his father's membership, and he was able to transfer the years of membership to himself and continue their membership!

Mike has graciously offered to become the new coordinator of the BAM group and is very enthusiastic about his new role. He says that he has found the BAM members to be an "amazing group," very engaged, with both "interesting backgrounds" and "interesting conversations." He says it is a privilege to be working with the group. In future, he hopes to experiment with both in-person and digital formats for meetings or some combination of the two systems.

We congratulate and warmly welcome Mike to his new position!

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we are passionate about all phases of cartography in its broadest sense. we are fascinated by the potential of remote sensing, GIS, and the possibilities of digital mapping. we see the art and history embodied in antique maps, understanding their continuing place in our lives and the excitement and world's part of the fun of creating old maps. we have never felt so delight in the various forms that maps have taken over the centuries.

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Close-up, Ortelius, "Peutingar Map" (1626)

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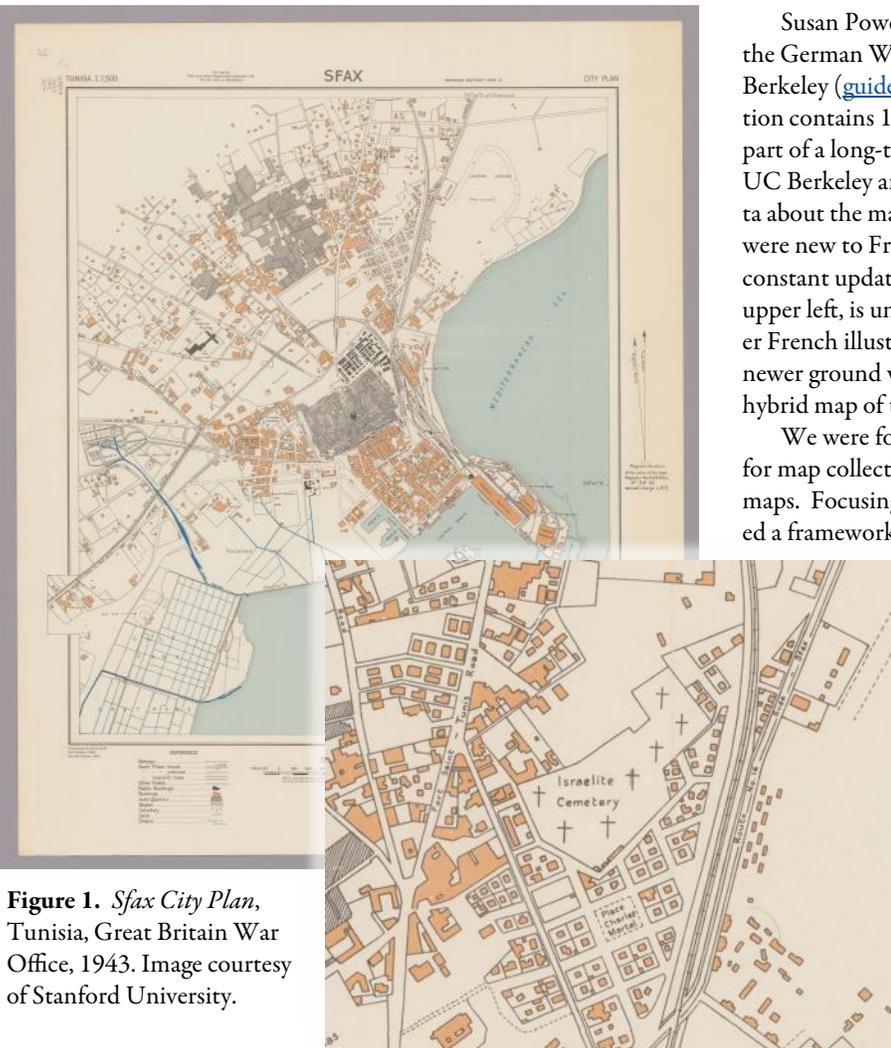
# BAM MEETING RECAP

## JANUARY 16, 2021

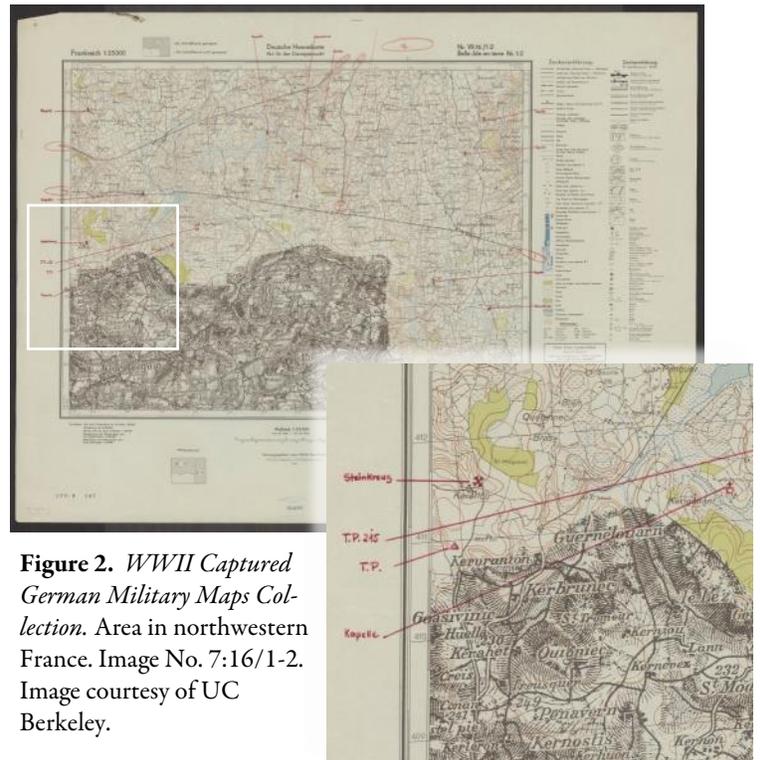
### JULIET ROTHMAN & MIKE SCHEMBRE

In January, we kicked off 2021 with a lively Bay Area Map group meeting where we used zoom breakout rooms to revive some of the spontaneity and cross-talk of in-person meetings. After presenters gave short focused presentations, participants broke out into smaller groups with speakers of their choice for invigorating discussions.

We saw presentations on two incredible resources for army maps. Julie Sweetkind-Singer shared the Army Service City Plans collection hosted by Stanford University ([exhibits.stanford.edu/ams-city-plans](https://exhibits.stanford.edu/ams-city-plans)). The large collection contains maps from 1942-1948 covering North Africa, Far East Asia, and Europe. These World War II maps supported the war effort in reconnaissance, tactical planning, ground operations and battle. Some maps include cultural reference details, such as the Jewish settlements in North Africa. Julie also noted the role the libraries played at the start of the war effort by sending maps to Washington to fill in information about areas where there was limited geographic knowledge.



**Figure 1.** *Sfax City Plan*, Tunisia, Great Britain War Office, 1943. Image courtesy of Stanford University.



**Figure 2.** *WWII Captured German Military Maps Collection*. Area in northwestern France. Image No. 7:16/1-2. Image courtesy of UC Berkeley.

Susan Powell presented the German World War II Captured Maps Collection hosted at UC Berkeley ([guides.lib.berkeley.edu/germancapturedmaps](https://guides.lib.berkeley.edu/germancapturedmaps)). This collection contains 10,000 maps captured from enemy militaries and is part of a long-term effort to digitize 21,000 maps in the combined UC Berkeley and Riverside collection. The site contains rich metadata about the maps, including source materials. Because the Germans were new to France, their maps of the area were in a state of almost constant updating. One curious map, labelled “Frankreich” in the upper left, is uniquely “mid-update,” containing elements of the older French illustrative mapping style in the lower-left, as well as the newer ground which was based on aerial photography, resulting in a hybrid map of the two styles.

We were fortunate to have Eliane Dotson share her insider tips for map collectors, with 4 key steps to confirming the authenticity of maps. Focusing on intaglio (copper or steel plate) maps, she provided a framework to help collectors do their homework. She covered checking the authenticity of the platemark, evaluating the engraving, ascertaining the quality of the paper, using the centerfold to confirm the authenticity of a map, as well as finding resources to do research.

Two wonderful talks vividly brought historical events to life through beautifully illustrated maps. Ron Gibbs narrated the events in New England leading up to American Revolution using three maps of Boston from 1775. He animated movements of the British army and American militia after the “shots heard round the world” at Lexington and Concord. He described the Americans holding defensive lines at the Battle of Bunker Hill with a map that includes illustrations of the bombardment from British ships before the Americans



**Figure 3.** Charles Smith. *A plan of the action at Breeds Hill, on the 17th of June 1775: between the American forces and the British troops: erroneously called Bunkers Hill, 1797.* Image courtesy of the Norman B. Leventhal Map Center Collection.

were forced to retreat. Finally, he illustrated "Evacuation Day," when George Washington took command, strategically fortified Dorchester Hill, and forced the British to evacuate Boston.

Ken Habeeb shared his rich collection of Africa maps (Fig. 4) from the 17<sup>th</sup> and 18<sup>th</sup> centuries, reflecting the exploration and colonization of the continent. Initial efforts focused on novel trade routes to Asia with Catalan and Portuguese mapping of the coast-



**Figure 4.** Jodoco Hondio, *Nova Africae Tabula*, circa 1610. Image courtesy of Ken Habeeb.

line in the 15<sup>th</sup> century, including a beautifully detailed map of the Island of Ischia. He continued with the mapping of Mauritania and the evolution of the Atlantic slave trade, including a modern-day, detailed illustration of the scale and destination of the slave movement from the African coasts to the Americas. Only over time was the interior of the continent explored, the first maps coming from the Venetians, including Giacomo Gastaldi's remarkably accurate map in the 16<sup>th</sup> century.

I gave a demonstration of using ArcGIS online and the Living Atlas to create vivid data-driven maps. The Living Atlas has a rich collection of map data sources from climate change to Covid. In my example, I pulled census data from the American Community Survey to map out internet access (or lack thereof) at the census tract level and combined that with a layer of median household income to look at the association between the two metrics.

The meeting was capped with a thought-provoking presentation by Susan Schulten as she described the historical genesis of the term and practice of "Gerrymandering"—manipulating district lines to expand political power. She started in 1810, in Essex County, Boston, where a Federalist newspaper satirized the galling use of district lines to create an outlandishly shaped republican district, looking like a creature with claws and a dragonhead (Fig. 5). Apparently, the name for the shape had first been suggested at a dinner party where



**Figure 5.** The "Gerry-Mander" creature depicted in a Federalist newspaper. Sheetshot from presentation.

the shape was dubbed not a salamander, but a "Gerrymander" after the Republican governor, Elbridge Gerry, under whom the redistricting took place. The practice has not only continued but greatly accelerated with "cracking" to fracture the African American districts to dilute the political impact of their vote. She closed with the hope seen in groups like Tuft University's MGGG Redistricting Lab, which is trying to promote access to the ballot through a fairer mathematical based redistricting system.

Each of the presentations is available on The Digital Gallery website (<https://thedigitalgallery.org/exhibits/117>), with links to videos of the presentations in the curated text window for each presenter.

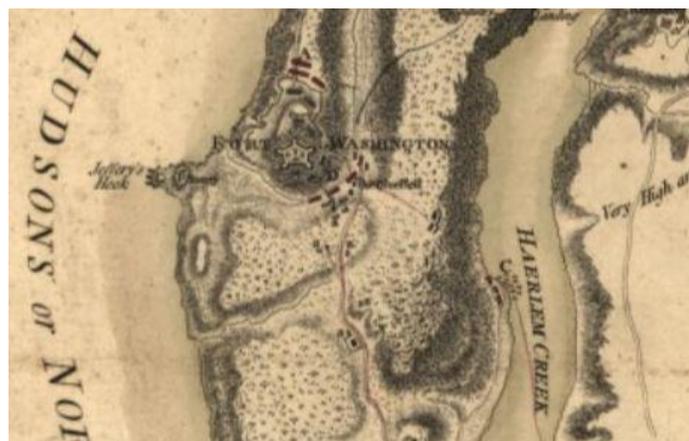
# GLAM MEETING RECAP

## DECEMBER 12, 2020

### COURTNEY SPIKES

The Greater Los Angeles Mappers (GLAM) hosted their final Zoom meeting of 2020 on Saturday, December 12th from 10:30AM – 12:00PM with Courtney Spikes and Nagin Cox co-hosting the group. CMS members were invited to bring their favorite cup of cocoa or coffee to celebrate the end of 2020. In keeping with the style and format of our in-person meetings pre-pandemic, GLAM encouraged members to bring a treasured map, map-related item, holiday decoration, news article, or even a story to share with our friendly community of map-lovers. As folks joined the Zoom, people signed up to present. Eight CMS members shared their items with the more than thirty attendees who joined us online.

First up was CMS President Ronald Gibbs, who offered a deep dive into one of his maps about the American's early

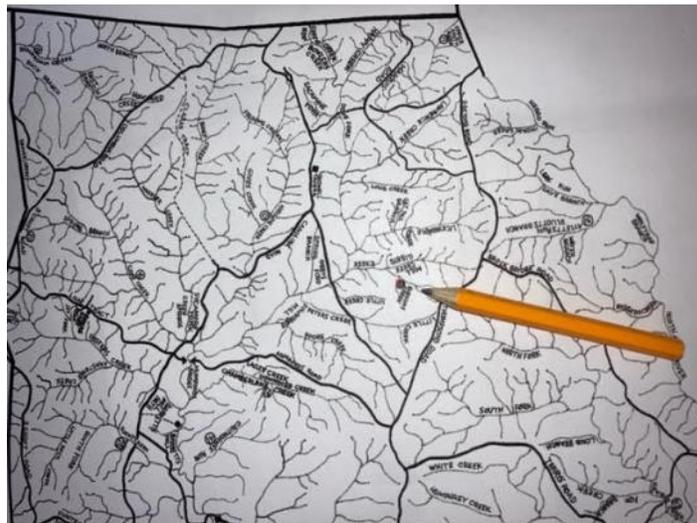


**Figure 1.** Detail from *A topographical map of the northn. part of New York Island, exhibiting the plan of Fort Washington*, London, W. Faden, 1777. Library of Congress, Geography and Map Division.

defeat at Fort Washington in November 1776. General Washington's 2500 soldiers surrendered to an overwhelming force of over eight thousand combined British and Hessian troops who approached from the North and South in a decisive pincer movement. Ron revealed the rich topographical detail of royalist William Faden's map (*Fig. 1*), published on March 1st, 1777, who, after the war, was given a royal appointment by King George III.

Ron shared a second map by Captain Thomas Davies of the Royal Artillery who drew the color sketch from what is now the Bronx, offering a view looking south along Harlem Creek (River). This map is a wonderful depiction of what the island looked like 250 years ago.

Next, Louise Ratliff shared her journey into some family history research she has conducted recently. Leaning into her



**Figure 2.** *Louisa County Virginia Around 1800*. Created by Ransome B. True for the Louisa County Historical Society.

husband's heritage, she discovered ancestors living around Gibson's Mill Creek during the 1750s. With few documents available, Louise ventured into maps to see what might be revealed and struck gold with a highly detailed 1755 map of Virginia and Maryland by Fry and Jefferson. From there she contacted the Louisa County Historical Society, who kindly sent her a link to a geo-referenced map, which allowed Louise to pinpoint the exact location of Gibson Creek. (*Fig. 2*) One of the Ratliff's was a member of Captain Spotswood's Regulars, and Louise identified a route, running next to the Gibson land, as Spotswood trail! This helped Louise confirm that these Gibsons were most likely part of her husband's family lineage from the area.

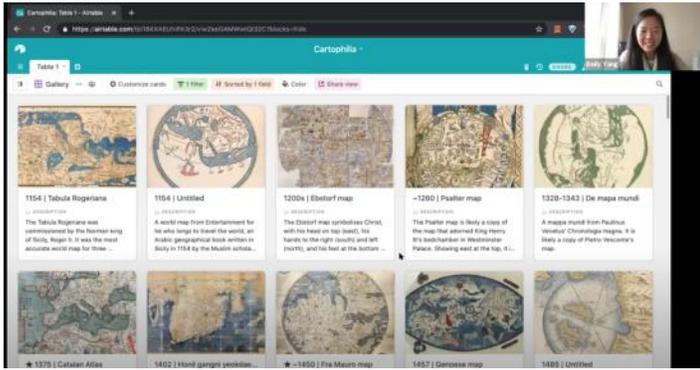
Steve Hicks then shared his story of finding an antique store in Rome when he was there with his son for the installation of Pope Francis. The shop was full of "disposable roman stones and architectural drawings," and this was the only map in the shop! It turns out the map (*Fig. 3*) is from a 1596 atlas



**Figure 3.** *Typus Orbis Terrarum Ad Imitationem Universalis Gerhardi Mercatoris*, Matthias Quad, Cologne, J. Bussemacher, 1596.

by Dutch-German engraver Matthias Quad (1577-1613), published by Johann Bussemacher. The map is derived from Mercator's planispheric map of 1569, and the beautiful colors outline both known and mythical elements of the era. Steve went on to share the good news that his son and daughter-in-law recently gave birth to his first grandson, Boyer. Congratulations!

Our next presenter Emily Yang, a recent Economics graduate of the University of Pennsylvania, dialed in from the East coast to share how she uses Airtable (Fig. 4) to organize her



**Figure 4.** CMS Member Emily Yang demonstrating the Airtable application.

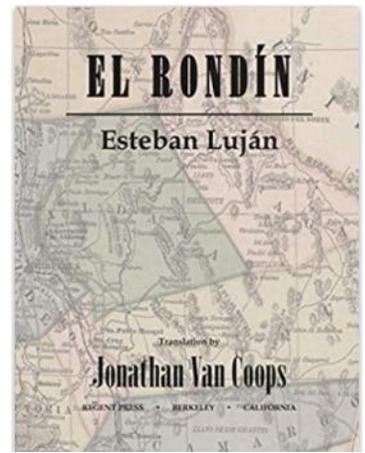
map collection. Emily toured the group through her account, where she zoomed in on individual maps and explained how she organizes her images and data with the app. When asked about her favorites, Emily revealed that she is particularly interested in maps that have a literal Red Sea depicted on them. For example, she showed the group a digital, modern repro-



**Figure 5.** Hereford Mappa Mundi, displayed at the Hereford Cathedral, England.

duction of the 1375 Catalan Atlas (Fig. 5) in which the Red Sea is actually colored red, not blue like the other bodies of water on the map. Those attending gave Emily a warm and hearty welcome to the group!

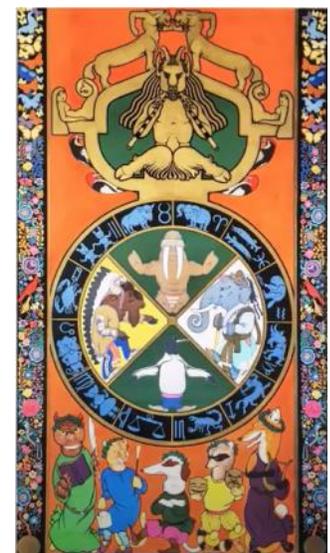
Moving from one of our newest members to one of our most long-standing ones, cartographer Jonathan Van Coops who has been a member of CMS since 1978! Jonathan talked about how his great-grandfather, Esteban Luján, grew up around the Rio Grande in northern Mexico. Esteban wrote an important book about the early days of the Mexican Revolution: *El Rondín: Campaigns of Colonel Toribio Ortega and Colonel José de la Cruz Sánchez in the Revolution of 1912*. Originally only one hundred copies were published, some with squirrel-skin covers. Jonathan was given a photocopy from his mother, who turned 100 this November.



Jonathan spent many years transcribing and translating the book as a tribute to his family and chose to share this important story. He also created a detailed, thematic map for this new edition of his great-grandfather's book (available at bookshop.org). Jonathan promotes the creation and use of "maps as a form of visual communication" and hopes the next generation will continue that tradition. He is currently working on a map for cycling in and around the Bay area.

Next, we had a delightful holiday treat from Larry Boerio. Larry found an animated Season's Greetings message from 1966 that was shown on CBS at the time. A man walks up to a tree, filled with birds, carrying a large saw in his right hand. Surprisingly, instead of cutting down the tree, the man flips up the saw to his shoulder, pulls out a bow, and starts playing *God Rest Ye Merry Gentlemen*, to which the birds join in as well! The group enjoyed it immensely.

Nick Kanas followed with a bright and colorful 1936 Jo Mora painting, *The Celebration of Pan*. This large pictorial mural, (Fig. 6) painted on masonite, was commissioned by San Francisco's Drake Hotel for their Aesop's fables-themed restaurant. The hotel is gone, but the Mora paintings were saved. This one depicts Pan at the top, with Egyptian influences, presiding over the universe below him,



**Figure 6.** Nick Kanas, *Star Maps: History, Artistry, and Cartography*, 3rd ed., UK: Praxis Publishing, 446.

represented by the zodiac encircling the earth. At the bottom of the rectangular painting, Mora included five anthropomorphized animals to signify the different liberal arts.

Nick invited Peter Hiller, Curator of the Jo Mora Trust ([jomoratrust.com](http://jomoratrust.com)), to chime in. Peter encouraged our group to visit the Trotter Gallery ([trottergalleries.com](http://trottergalleries.com)) to see seven of Mora's original works in all of their detailed vibrancy. Louise also recommended two first-edition books by Jo Mora: *Trail Dust and Saddle Leather* (1946) and *Californios* (1949). Nick expressed his appreciation for Peter's authoritative, forthcoming biography, *The Life and Times of Jo Mora: Iconic Artist of the American West*, available for pre-sale on [bookshop.org](http://bookshop.org). [Publisher: see advertisement at the front of this journal]

We closed out our festive and dynamic end-of-year gathering with the founder of GLAM and GLAM Gals, Nagin Cox. Nagin shared something truly unique and useful – a constellation globe she bought at the Griffith Observatory. It is about



**Figure 7.** Nagin Cox's Constellation Globe, found at the Griffith Observatory in Los Angeles.

seven inches in diameter, made of transparent blue plastic with white dots and lines indicating the major constellations in the night sky. (Fig. 7) Nagin described how she and her husband typically go star-gazing whenever there is a new moon. Her globe allows her to easily look through the ball and match up with the stars in the sky; no internet connection needed!

### GLAM Gals

GLAM Gals is a new group that Nagin started in 2020 that connects virtually for 30-45 minutes on the second Monday of each month. These meetings are open to all of the women in CMS and are designed to be a welcoming, casual opportunity to share ideas and talk about maps that you might be considering to present at one of the larger CMS meetings in the future. It is a lovely way to meet new people, mentor one another, and learn more about CMS in a smaller setting. Please reach out to Nagin or Courtney if you'd like to be sent the Zoom link for an upcoming GLAM Gals meeting.

## MAPPAEMUNDI AS SELF-PORTRAIT: DEFERENCE AND DISSIDENCE IN THE WORLDS OF GUAMAN POMA AND URBANO MONTE STUDENT ESSAY AWARD



Guaman Poma



Urbano Monte

### —Abstract—

**Arman Kassam**, an undergraduate at Stanford University and the winner of the 2020 California Map Society/David Rumsey Map Center Student Essay competition, discusses the fascinating intersections between two different amateur cartographers on separate ends of the early 16th-century Spanish Empire. The stories of Urbano Monte, a Milanese nobleman engaged in a personal project concerning universal knowledge, and Guaman Poma, a Quechua nobleman who subversively asserted his right to territory in the *Nueva Corónica*, intertwine in unexpected ways. Both came from noble lineages, lived in territories recently brought under Habsburg control, and cared deeply about humanist erudition. Importantly, both also found in the world map a useful medium for their projects of political power and erudition. Rather than merely showing the differences of their interests, these amateur world maps reflect back on their authors as self-portraits, testaments to individuals finding themselves in an ever-globalizing world.

Space constraints prevent us from reproducing Arman Kassam's complete paper in the journal. However, after publication of the journal we will post his complete paper on our website.

Arman gave a well-received virtual talk in October 2020 hosted by the Rumsey Center and co-sponsored by the California Map Society. It can be viewed on YouTube: [https://youtu.be/KaTYP8Y\\_fck](https://youtu.be/KaTYP8Y_fck)

**Arman Kassam** is a junior at Stanford, majoring in History and prospectively minoring in Iranian Studies. He is passionate about a handful of things: cartography, *The Lord of the Rings*, traditional Gujarati dance, and *Avatar: The Last Airbender*. He currently lives in Durham, North Carolina with his parents and - to his utter delight - his two dogs, Storm and Smokey.

Note: Images courtesy of Arman Kassam (screenshots). The abstract is borrowed in part from the Rumsey Center Newsletter.

# RUMSEY CENTER NEWS

FRED DEJARLAIS\*

Andrea Renner, joined the Rumsey Map Center last year as their new Assistant Rare Map Librarian.

Ms. Renner comes from the world of museums; her last stint was as an Associate Curator of History at the Oakland Museum of California. Before that, she was the Curator of Exhibitions at the Fairfield Museum and History Center in Fairfield, Connecticut. Prior to that, she was an Andrew W. Mellon fellow at the Museum of the City of New York. Andrea holds a Bachelor's degree from UC-Berkeley, a Masters in the History of Art at the University of Delaware, and a Ph.D. from Columbia University.



Andrea brings with her a love of maps, expertise in urban studies, and an eye for combining the aesthetic with the intellectual, along with project management skills necessary to bring exhibitions and other projects to fruition. Her role at the Center, where she works three-fourth time, is to oversee the exhibitions program, support the teaching and research functions of the Center as well as provide additional support to our other programming, including our map-related conferences. In her short time thus far with the Center, which we operated from our living rooms at home, Andrea has supported classes and workshops, authored an on-going Maps in Focus in our monthly newsletter (see this one on Armchair Travels) and created two 'storymaps' and a blogpost on Mapping Slavery and Emancipation using materials from the Center's collections.

The Rumsey Center last spring was the first map center to pivot to online programming as a response to the pandemic. The staff, led by their Head and Curator, G. Salim Mohammed, produced a series of impressive cartographic presentations, and conducted several workshops, symposiums, and exhibitions. A sampling of these programs follows:

1 Mar 2020

Peter Hiller, Jo Mora  
Trust Collection Curator,  
discussed Jo Mora's creative versatility—talents which included map illustrations, paintings, sculptures, printmaking and writing.



8 May 2020

Chet Van Duzer analyses the differences between two important world maps Martin Waldseemüller created in 1507 and 1516, noting that the cartographer abandoned almost all of the sources he used in creating his 1507 map, to prepare his 1516 map.



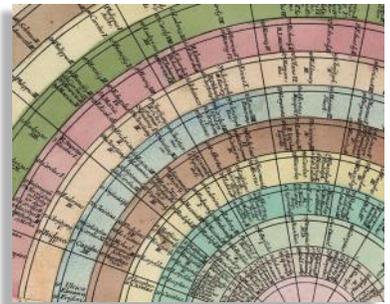
15 May 2020

Lauren Killingsworth's talk explored the deeply political nature of disease maps, focusing on an imperial initiative to map epidemic disease in late nineteenth-century colonial India.



25 Sep 2020

Award-winning data storyteller RJ Andrews opened his curated virtual exhibition, featuring charts, maps, and other graphic representations that helped expand our collective sense of reality.



22 Jan 2021

"Time in Maps: From the Age of Discovery to our Digital Era," book launch. Edited by Stanford's Kären Wigen and Caroline Winterer, featuring a foreword by Abby Smith Rumsey.



More info: Rumsey Center Newsletter archive [HERE](#).

\*Andrea Renner bio adapted from Rumsey Center web post dated 25 Jun 2020. Text and images obtained from various Rumsey Center newsletters posted in the link above.

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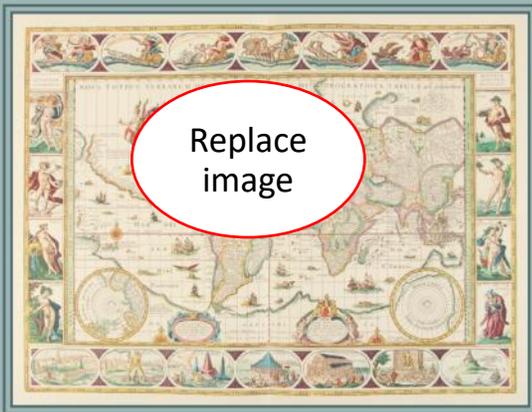
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## Benefits to Membership in the California Map Society

- Twice-yearly regional Zoom meetings (next meeting info in this issue of *Calafia*).
- Multiple smaller Zoom meetings of our Bay Area Map group (BAM) and our newly formed Greater Los Angeles Mappers group (GLAM).
- Virtual map fairs, co-sponsored with *Collectable Events*.
- An agreement with the Washington (DC) Map Society that allows our members to view online presentations by WMS and other map societies across the US.
- Our continuing relationship with the David Rumsey Map Center at Stanford University brings us notable presentations from prominent cartographic experts in the field.
- We promote a socially inviting place in which to share your interest in history, exploration, and all things cartographic, including online sharing with a Facebook group and Groups.io.
- And, we continue to produce *Calafia*, the Journal of CMS, mailed twice a year to all our members—a publication that brings to the reader a wide range of mapping articles and news, from contributors both here and abroad.

Any questions you may have on membership or the Society in general can be addressed to me at: [fred.dejarlais@gmail.com](mailto:fred.dejarlais@gmail.com)

*Fred DeJarlais, Publisher  
Vice President for Membership*

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# NORMAN J.W. THROWER

## THE COMPLEAT CARTOGRAPHER

JUDITH TYNER

On September 2, 2020 the California Map Society lost a founding member and major influence on the Society. Norman J.W. Throwing, the first president of the Society passed away a month short of his 101<sup>st</sup> birthday. In 2019 the Society honored Norman with papers and comments for his 100<sup>th</sup> birthday. Here I look at his remarkable career as a cartographer and cartographic historian. He was unusual among many cartographic historians in that he not only wrote about maps and their history, he once made them.

Today, most people think of Norman as strictly a historian of cartography and note his publications on the subject, such as articles on Edmund Halley and Sir Francis Drake and especially his book *Maps and Civilization: Cartography in Culture and Society*, now in its third edition. This book has become a classic in history of cartography and is unusual because it traces cartography from maps on stone to GIS. However, he was also conversant with such 'modern' techniques as animated cartography, having written the earliest article on the subject in 1959, and remote sensing, which he taught for many years at UCLA.

Norman was born October 23, 1919 in Crowthorne, England. From an early age he was interested in art and attended art school in Reading University. He won many prizes for his work, but his artistic career was interrupted by WWII when he was conscripted into the British Army. After his basic training, he was sent to India to fight in the Burma Campaign, but while on the way to Burma, he took an examination for training in the Survey of India in mapping. He passed the exam and was transferred to the Engineers, the British Army unit responsible for cartography. After nine months of training, he was assigned as a cartographer to the Army General Staff in Delhi where topographic maps based on aerial photography were produced.

In 1946, when the war was over, he returned to England where he got a position in London with the Directorate of Colonial Surveys (later named the Directorate of Overseas Surveys). The mapping there was done by aerial imaging and remote

sensing. He worked on photogrammetric surveys of Gambia and Jamaica. In London he met his wife-to-be, Betty who was an officer in the United States Army Nurse Corps. After they married in England in 1947, they moved to the United States and he began work as a cartographer at the Virginia Geographical Institute at the University of Virginia. At the Institute he was able to meet and work with a number of prominent cartographers of the time including Armin K. Lobeck and Richard Edes Harrison. He enrolled in the geography department at the University and obtained his honors BA degree in geography and was elected to Phi Beta Kappa. He wrote his BA thesis on block diagrams. At UVA he took classes from Erwin Raisz, one of the best-known cartographers of the

time and who Norman considered his greatest influence while there. Norman and Betty then moved to Madison Wisconsin, where he did his PhD in geography with Arthur Robinson, who was then a rising young professor, and did a PhD minor in the history of Science in 1958. His dissertation was on cadastral mapping and was later published by the Association of American Geographers as *Original Survey and Land Subdivi-*

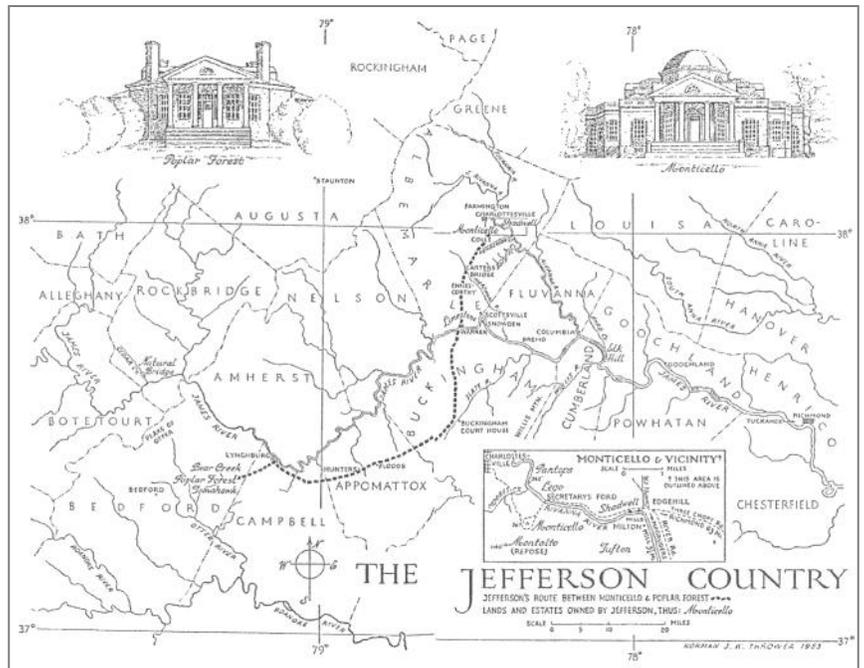
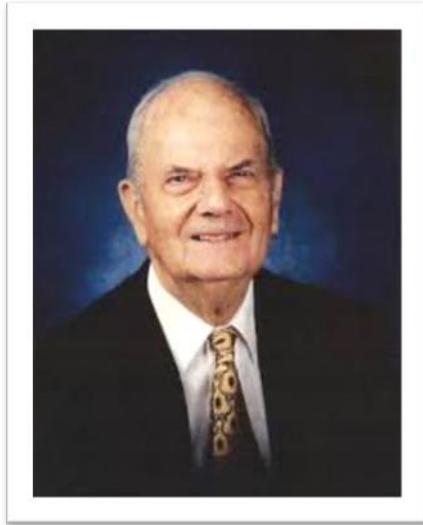
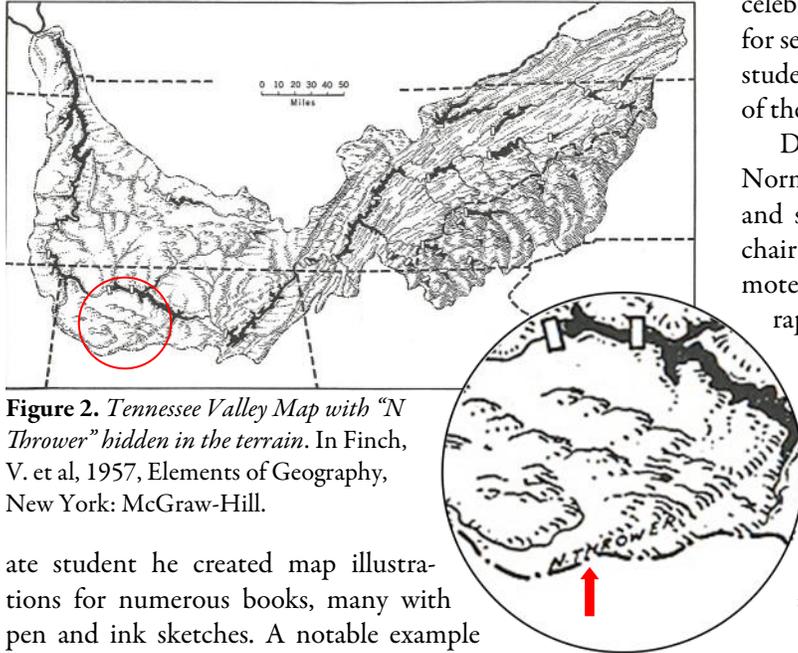


Figure 1. *Jefferson Country*, courtesy of Norman J.W. Throwing.

sion (1966). He was hired before completing his degree, by the geography department at UCLA in 1957 and remained there until his 'retirement' in 1990. His teaching responsibilities focused on air photo interpretation and remote sensing, cartographic design, and history of cartography.

Although Norman's best-known academic contributions were in history of cartography, he was involved in modern cartography. His photogrammetric training with the British Army, his cartographic skills and his artistic abilities combined to make him "the complete cartographer.") As a gradu-



**Figure 2.** Tennessee Valley Map with "N Thrower" hidden in the terrain. In Finch, V. et al, 1957, *Elements of Geography*, New York: McGraw-Hill.

ate student he created map illustrations for numerous books, many with pen and ink sketches. A notable example was his map of "Jefferson Country" (Fig. 1, prior page) with its drawing of Montecello. For a terrain map that was published in a textbook (Fig. 2), he knew he would receive no credit and couldn't put his name or initials on it so he cleverly worked his name into the hachures. In later editions of the book he is credited in the caption. During the 1960s he was named the map editor for the *Annals of the Association of American Geographers* where he edited and authored map inserts. One of the best known was his map *Cyprus: A Landform Study* (1960). He wrote about relief representation and the use of satellites in *Satellite Photography as a Geographic Tool for Land Use Mapping of the Southwestern U.S.* (1970); with Arthur Robinson he wrote and illustrated two articles on a new method of terrain representation using parallel inclined planes. He also edited modern atlases including *Man's Domain: A Thematic Atlas of the World* that went through 3 editions. Of the more than 200 items in his bibliography Norman considered his most important scholarly work his 2 volume *The Three Voyages of Edmond Halley in the Paramour, 1698-1701*. Of course, *Maps and Civilization* gave him the greatest visibility.

From 1975 to 1990 he was involved in a variety of special projects. He was appointed by Governor Ronald Reagan as

president of the California branch of the commission formed jointly with Britain to celebrate the 400<sup>th</sup> anniversary of Sir Francis Drake's circumnavigation of the world (1975-81). As part of the celebration, he met Queen Elizabeth II and Prime Minister Edward Heath. He was made the head of the Columbus quincenary program (1989-1992) where he met with Queen Sophia of Spain and received an award from King Juan Carlos I for his service. Possibly one of his favorite positions was being the director of the William Andrews Clark Memorial Library (1981-87). For these projects he was able to bring celebrated scholars of cartography and history to the campus for seminars and colloquia. These also allowed UCLA graduate students and post doc fellows to meet and interact with some of the best-known men and women in the field.

During his tenure at the UCLA Geography Department, Norman supervised numerous masters and doctoral students and served on the committees of many others. He was the chair of ten doctoral students who wrote dissertations on Remote Sensing, Terrain Representation, Persuasive Cartography, Orthophoto maps, Television News Maps, and Schoolbook Maps. If there hadn't been a mandatory retirement age at UCLA there probably would have been more. His students describe him as invariably supportive and truly interested in their work. Commonly his good humor and pleasant demeanor are mentioned in addition to his wide range of knowledge. It has been said that he could always ask the right question to spark a student's thinking.

In 1979, Norman presided as first president of the California Map Society and also presented a paper, "The Cartography of Sir Francis Drake's Famous Voyage (1577-1580), the first of about 10 papers he gave to the Society. He also authored two of the Society's Occasional Papers, both somewhat autobiographical.

Norman retired in 1990, at age 71, but that didn't slow him down. Six years later he received the Constantine Panunzio Award for being the most productive emeritus professor among the entire University of California system. And in 1998 the Association of American Geographers presented him with the lifetime achievement award.

Norman Thrower was truly a gentleman and a scholar and his passing marks the end of an era in cartography.

#### Sources

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- Tyner, Judith. "A Day with Norman Thrower", *Cartographic Perspectives*, number 55, fall 2006, pp 1-9

### George Piness 1926-2020

George was born in Los Angeles in 1926. He attended MIT, but, as World War II was raging, was drafted, and served in the Navy from 1944 to 1946. He returned to MIT and completed his studies, obtaining degrees in both business and mechanical engineering. He met his beloved lifelong partner, Edee, at a party while he was at MIT and she was a freshman at Wellesley.

Upon graduation, George and Edee moved back to California, to Claremont, and George began his career as International Vice President with two companies, Wayne Manufacturing and the Bobrick Company. He traveled the world until his retirement in 1992, when the couple moved to north to Marin County. He was an avid sailor, and often sailed in SF Bay.

George's interest in maps was stimulated by his business travels and by touring the world. He loved traveling! A business associate, originally from Tehran but exiled to London due to the Iranian revolution, introduced him to IMCOS. They went to IMCOS meetings in London, and to the London Map Fair, and then to the Miami Map Fair, where they became "faithful attendees," Edee says. George enjoyed collecting maps of all the places he visited, while Edee, whose studies were focused on SE Asia, supplemented his focus with hers: maps of Britain, India, and Burma. The Pinesses collected maps together, and soon joined the California Map Society and the BAM group locally. They were devoted participants, and often hosted BAM group meetings at their home.

George passed away on December 8, 2020. He is survived by his devoted wife of 70 years, Edith Lamm, by his children, Peter, Thomas, and Jane, and four granddaughters.



*Photo by Ken Friedman*

### Douglas L. Burrill 1944 - 2020

Doug Burrill died peacefully at home in San Francisco, of pancreatic cancer, with his immediate family present. Doug was born in Boston, MA. He was adopted by Cecil and Virginia Burrill and grew up, along with his older sister, Judy, in Chappaqua, NY. He graduated from Horace Greeley High School in 1962. He attended Cornell University, where he was a member of the



Beta Theta Pi fraternity, and graduated with a BA in Economics in 1967. He then moved to Seattle, to attend his parents' alma mater, the University of Washington, earning an MBA in 1969. That fall, he moved to San Francisco and began his career with Chevron Shipping Company. Nearly a decade later, he reunited with his college sweetheart, Nancy Mulford, and they married in June 1979. Doug was a 50-year resident of San Francisco's Telegraph Hill, Marina, and Richmond districts, where he and Nancy raised their daughters, Cecily and Julie.

After 30 years at Chevron, Doug retired and volunteered with several local organizations, including the Point Bonita Lighthouse in the Marin Headlands, Friends of the San Francisco Maritime Museum Library, and California Academy of Sciences, and he was a long-time member of the California Map Society. He and Nancy enjoyed traveling, particularly to national parks. Doug was a lifelong sports fan, relishing "the thrill of victory and the agony of defeat," from local high schools to the Giants and 49ers. He was a history buff, a philatelist, a numismatist, and a cartophile. He possessed a wry and generous wit, and he was a fount of esoteric trivia. He was also a much-loved husband, father, uncle, godfather, and friend.

Doug was predeceased by his parents and sister. He is survived by his wife and daughters, as well as several generations of nieces, nephews, and cousins.

### TJ Cruzada

TJ Cruzada, known, loved, and respected by so many of our members, passed away suddenly last August. He was the Rumsey Map Center's Services Supervisor, and was always so helpful to all our CMS members in locating resources, answering questions, and organizing so many interesting and informative events at the Center. For many of us, he was the smiling, gracious host who always greeted our arrival so warmly.

TJ was Circulation Supervisor at Stanford's Engineering Library for four years, and the Microforms Stacks Manager in Media/Microtext for two years before assuming his role at the Rumsey in 2016. He led the Center's outstanding virtual reality program, taught classes, led tours, organized conferences and supported the collection there.

He leaves behind a devoted wife and two young children, as well as a father he treasured. He will surely be missed and remembered by our CMS family.



*Photo courtesy of the David Rumsey Map Center*

# CARTO-QUIZ

## Answers



### WASHINGTON MAP SOCIETY

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Duluth, MN



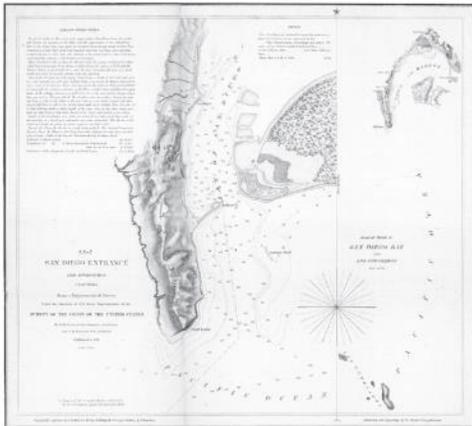
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[tom@websterpacific.com](mailto:tom@websterpacific.com)

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VP for Membership, Fred DeJarlais  
[fred.dejarlais@gmail.com](mailto:fred.dejarlais@gmail.com)

VP for Publications, Juliet Rothman  
[rothman@berkeley.edu](mailto:rothman@berkeley.edu)

VP for Information Technology,  
David Kalifon  
[david@californiamapsociety.org](mailto:david@californiamapsociety.org)

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## CMS: WHO WE ARE

The California Map Society was founded in 1978 and became a non-profit corporation in 1987. We are a 501(C)(3) organization. Our purpose is to educate, preserve and disseminate information relating to historical and contemporary cartography, primarily that of California, both for our members and for the general public.

We do this by:

(a) holding conferences twice a year, one in the spring in Northern California and one in the fall in Southern California;

(b) sponsoring the annual California Map Society Graduate Student Paper presented at Stanford University and in Southern California;

(c) sponsoring the California Map Society Lecture Series at Stanford Libraries and in two Southern California locations;

(d) sponsoring a college student paper competition each year in Northern and Southern California;

(e) creating and maintaining a website that disseminates information worldwide about the Society, cartography and related matters;

(f) educating the public through occasional publications and media presentations;

(g) supporting advancement in map production, utilization and preservation; and,

(h) encouraging research and teaching in the field of cartography.

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