



CALAFIA

THE JOURNAL OF THE CALIFORNIA MAP SOCIETY

MARCH 2019



Myths, Maps & Men: Merrill Lynch Salutes the Year of the Moon, Michael Ramus, 1969 (p. 43)



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CALAFIA

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SPRING MEETING, APRIL 13, 2019 DAVID RUMSEY MAP CENTER, STANFORD UNIVERSITY

37° 25' 37"N, 122° 10' 05"W or gave.atoms.token*

Saturday, April 21, 2018, 8:30 am to 5:00 pm

David Rumsey Map Center , Bing Wing, Cecil H. Green Library
 557 Escondido Mall, Stanford, CA 94305-6063

Our 85th Regional Meeting!

Our Spring Meeting will include a fascinating array of topics covering the 18th through the 21st centuries and will be held in the incredible Rumsey Map Center, opened in April 2016. Don't miss this wonderful cartographic day!

The Rumsey is a new collections-based resource designed to provide access to cartographic information in all forms, from paper to digital. It has a large collection of rare atlases and interactive tools. Named for its leading donors, David and Abby Rumsey, the combined holdings include some 150,000 maps and other digital surrogates. It will be a perfect setting for our meeting. Please note: no food and beverages (other than bottled water) are permitted in the Rumsey due to the fragile nature of the collection. There are several parking lots within a short walk, and parking is free on Saturdays.

The morning will begin at 9:30 A.M. with coffee, tea and pastries in Room 121A, Tierney Room, SS Resource Center, Green Library. First floor.

At 10:00 A.M., we will convene in the Rumsey Map Center for welcomes by **G. Salim Mohammed**, Head and Curator, Rumsey Map Center and by CMS Northern California Vice President **Ron Gibbs** and President **Susan Caughey**.

Our first speaker will be **Nick Kanas, MD** whose topic is *Pictorial Maps*.

Unlike more traditional maps, which stress accuracy and detail, pictorial maps focus on symbolism and artistry. Images and text give a sense of the place being depicted; the size of landmarks and text may vary for emphasis. Nick will discuss and show examples of both terrestrial and celestial pictorial maps. Nick Kanas, M.D., is Professor Emeritus (Psychiatry) at the University of California, San Francisco, is a Fellow of the Royal Astronomical Society, and was Northern Vice-President of the California Map Society. He has conducted NASA-funded research, has been an amateur astronomer for nearly 60 years, and has collected antiquarian celestial maps, books, and prints for over 35 years. He has given a number of talks on celestial cartography to amateur and professional groups, and published two books on the subject: *Star Maps: History, Artistry, and Cartography*, soon to be in its 3rd edition, and *Solar System Maps: From Antiquity to the Space Age*.

Our second speaker will be **Robert Augustyn**, a well-known cartography author, collector and partner in Martayan Lan Gallery in New York City. His topic is *The Under- and Over-Mapping of New York City: Lessons from an Exhibition*.

In this lecture, Bob will discuss larger patterns in the cartographic history of New York City and their meanings, gleaned from assembling an exhibition currently being held at Martayan Lan Gal-

(*) www.what3words.com. Location is the North entrance to the Green Library

lery in New York City. Bob was educated at the University of Connecticut (BA, 1970) and Rutgers University (MA, 1975) and taught writing and literature at Rutgers, Queens College, and Northeastern. In 1978 he entered the antique map trade and in 1991, formed a partnership with Martayan Lan Gallery in New York City. He co-authored with Paul Cohen *Manhattan in Maps* (1997). Bob has also written several articles, over 50 map catalogues, and curated a number of exhibitions. He lives in Westport, CT.

Our first speaker of the afternoon, **Greg Miller**, will address "*Cold War Cartography: How the Soviet Military Secretly Mapped the Entire World.*"

During the Cold War, the Soviet military secretly launched one of the most ambitious mapping programs ever undertaken. These maps have only recently come to light in the West, and they provide a fascinating look at how American and European cities looked through the eyes of our Cold War adversaries. The Soviet city maps include details like the width and load-bearing capacity of bridges, the construction materials used in buildings, and the products made at individual factories—data that would be difficult to know without eyes on the ground. For anyone who lived through the Cold War, these maps may bring back memories of those paranoid days of mutually assured destruction. Greg Miller is a science journalist and co-author of *All Over the Map* (National Geographic, 2018). Greg has been a staff writer at *Wired* and *Science*, and, in addition to cartography, he writes about neuroscience and other areas of biological and behavioral science. He has been a co-author with Betsy Mason, a CMS member a speaker. Greg earned a Ph.D. in neuroscience from Stanford and graduated from the science writing program at the University of California, Santa Cruz. He lives in Portland, Oregon.

Stace Maples and Hannah Binzen Wild will make a novel presentation, entitled *It Takes a Village to Find a Village: Finding Remote Populations with Remote Sensing*.

The Nyangatom of Ethiopia are nomadic pastoralists and are among East Africa's poorest and most marginalized populations. Thus, they are also among the least likely to have representation in data used to plan health interventions. Stace Maples and Hannah Wild will discuss how, using a novel imagery analysis, the Stanford Geospatial Center designed and executed a reconnaissance project to locate their settlements ahead of the first randomized public health survey conducted to assess their healthcare needs. Stace Maples is the Geospatial Manager at the Stanford Geospatial Center at Branner Earth Sciences Library. He has been helping researchers leverage location data for over 20 years in fields ranging from archaeology to epidemiology. Hannah Wild is an MD candidate at Stanford University School of Medicine. Her research focuses on the health of nomadic populations and more broadly on the intersection of health, armed

conflict, and culture. Prior to beginning medical school, she received a post-graduate fellowship from Harvard University to conduct fieldwork with the Nyangatom.

Leonard Rothman, M.D. will present "*The Story and the Maps of the California Gold Rush.*"

The California Gold Rush, while not the first or last in the United States, was a very important national and international event. Gold has been treasured worldwide for thousands of years. The history of California gold, its locations, and the chronology of its discoveries, will be presented as an introduction to events of the Gold Rush itself. Although literature about this period is extensive, knowledge of the people and events has significantly faded from memory over time. The



Globe display at the David Rumsey Map Center

story will be freshly retold and will include many visual examples, based on the author's research, on-site visits and conversations. The author recognizes, and is profoundly appreciative of his spouse, Juliet, for her editorial and photographic expertise which enabled this presentation. Dr. Rothman, a graduate of Tufts Medical School, was formerly on the faculty of The Mount Sinai (NY) and Johns Hopkins (Baltimore) Medical Schools. He was also Chief of Obstetrics and Gynecology at the Anne Arundel Medical Center in Annapolis, Maryland, and has been recognized as an expert on cancer in pregnancy. He has studied and collected maps

for over 50 years and has a significant collection of antique Holy Land maps, antique globes, maps on neckties, and books on maps. He has frequently exhibited his maps and lectured and written essays about them for the Journals of the Washington DC and California Map Societies. He is a steering committee member of the Phillips Society of the U.S. Library of Congress, a former President of the California Map Society, and a Founding Friend of the David Rumsey Map Center of Stanford University.

The last lecture will be by **Edward Lanfranco, Ph.D.**, on *Mao on the Map-Quotes, Calligraphy and Images: 1958-1988*.

What did it mean when Chairman Mao was explicitly represented on a Chinese map? This presentation offers analyses and narratives focused on cartographic objects with imprints of Mao Zedong originally published between the onset of China's catastrophic Great Leap Forward in the late 1950s, and completing the first decade of the country's successful Reform and Opening Movement thirty years later. Dr. Lanfranco developed a consciousness of cartography while working under Phil Hoehn, as a student library employee, and at the Map Room at UC Berkeley, (1985-1988). While living in Beijing from 1988 to 2009, he was able to indulge a passion for collecting maps, atlases and globes, embarking on a career trajectory that began as a Mandarin language student, and ended by serving as the Bureau Chief for United Press International. See also Dr. Lanfranco's article on China's Great Leap Forward in this issue of Calafia.

PRESIDENT'S
LETTER
MARCH 2019

SUSAN CAUGHEY
CMS PRESIDENT



EDITOR'S NOTE

With each new edition of *Calafia*, I am always impressed with both the quality and variety of the articles our authors have submitted, and the new Spring 2019 edition surely demonstrates a broad and excellent spectrum!

The April 13 meeting at the Rumsey Center at Stanford will be my last meeting as president of CMS. The last two years has been my second turn as being president, one I've enjoyed very much.

Prior to being president the first time (2007-2009) I had served as Vice President for Southern California for four years. Vice Presidents are responsible for the two annual meetings, one in the North and the other in the South. I was lucky during that time to plan meetings at the Getty Museum and The Huntington Library, two wonderful venues that are no longer available to us because of their high cost. I also planned meetings at the Mission San Buenaventura school and the Clark Library of UCLA. Three of those venues were made possible because of personal relationships former Board presidents (Bill Warren and Norman Thrower) had with those institutions. Unfortunately as years have gone by and personnel change many of those personal relationships no long exist.

We've always strived to find interesting venues for our meetings, in the hope that they will draw larger attendance. That goal is becoming increasingly difficult, as museums and libraries are forced to view their meeting rooms as profit centers. The Map Society is most fortunate in having a special relationship with Stanford University and the David Rumsey Map Center that allows us to have our Northern California meeting there every other year.

The last two years have seen a greatly expanded *Calafia*, thanks to the very hard work of Juliet Rothman and Fred DeJarlais, and all the contributors. We've had great meetings at Stanford, the Chabot Space & Science Center and the Los Angeles Harbor Museum. We've been able to expand our membership and thanks to new member Nagin Cox the BAM group now has a Southern California counterpart, referred to as GLAM (Greater Los Angeles Area Map group). Along with the Rumsey Map Center we've hosted exceptional guest lecturers, including Imre Demhardt, Paul Cohen and Richard Brown. It's been an exciting time.

I'm looking forward to seeing many of you at the Rumsey Map Center on April 13.

We are fortunate to feature four different books in this edition: Wes Brown's review of *A History of America in 100 Maps*, by Susan Schulten, Betsy Mason's excerpt from her book, *All Over the Map*, and Judith Tyner's interesting commentary on the biography of an atlas. Nick Kanas's My Favorite Map article also features a map of the moon from his book, *Star Maps: History, Artistry, and Cartography*.

We travel outside of our United States to explore Michael Jennings' article on the Nicaraguan Canal, Ed Lanfranco's article on maps of China's "Great Leap Forward", and Fred Auda's creative "55 Degrees of Latitude" map. We come back home to explore the large model of San Francisco created by WPA workers during the depression with Gray Brechin, and learn about Tom Pierce's History in Your Hands project, featuring maps to be used in teaching history in schools.

For our antique map aficionados, we share Eliane Dotson's wonderful article on What to Look for in Old Maps, as well as Lina Pukstaite's informative piece on conserving our treasures. Our members with interests in modern applications of maps will enjoy this edition's Apps for Maps, which features David Rumsey's description of the technology used at the Rumsey Map Center, and Henri Lese's article on Mapping Continental Drift over large spans of time.

Closer to home, we learn about the exciting first meeting of GLAM, southern California's new map group, hosted by Nagin Cox, as well as as well as some details of her life and special interests. We share details of the semi-annual fall meeting of our northern California group, BAM at the home of Edee and George Piness, we meet CMS member Richard Breiman, and we explore the details of our upcoming Spring Northern California meeting, organized by Ron Gibbs. We share two special events: the San Francisco Map Fair, in an article my Marianne Hinckle, as well as an article on our fall CMS meeting at the LA Maritime Museum.

As always, we are grateful for all the contributions and support of our members, and welcome their articles and special insights into this very fascinating field of cartography, which we all love.

Happy reading!

Juliet Rothman, Editor

California Map Society
Northern California Spring Conference
Rumsey Map Center, Green Library, Stanford University ///gave.atoms.appear*
Saturday, April 13, 2019

Agenda

9:30 -10:00am **Morning hospitality.** Room 121A, Tierney Room, SS Resource Center, Green Library. First floor.

10:00-10:15am **Welcome.** G. Salim Mohammed, Head and Curator, Rumsey Map Center; President Susan Caughey and Vice President Ron Gibbs.

10:15-11:00am **Nick Kanas, MD, *Pictorial Maps, both Terrestrial and Celestial.*** Pictorial maps focus on symbols and artistry rather than accuracy and detail in traditional maps.

Nick Kanas is a former CMS Vice President for Northern California, Professor Emeritus (Psychiatry) at UC, San Francisco, a Fellow of the Royal Astronomical Society and the author of *Star Maps: History, Artistry, and Cartography*, soon to be in its 3rd edition, and *Solar System Maps: From Antiquity to the Space Age*.

11:00-11:45am **Robert Augustyn, *The Under- and Over-Mapping of New York City: Lessons from an Exhibition.*** Augustyn will discuss large patterns in the cartographic history of New York City and their meanings.

Robert Augustyn, a senior partner in the rare book and mapseller firm Martayan Lan, Inc., New York City. He is the co-author with Paul Cohen of *Manhattan in Maps* (1997).

11:45-1:00pm **Box lunch** in Room 121A, then afterwards, opportunity to explore Rumsey Map Center

1:00-1:45pm **Greg Miller, *Cold War Cartography: How the Soviet Military Secretly Mapped the Entire World During the Cold War.*** These maps provide a fascinating look at how American and European cities looked through the eyes of our Cold War adversaries.

Greg Miller is a science journalist and co-author with Betsy Mason (who spoke at the CMS Chabot meeting last year) of *All Over the Map* (National Geographic, 2018). Greg earned a Ph.D. in neuroscience from Stanford University. He writes about neuroscience in addition to cartography.

1:45-2:30pm **Stace Maples and Hannah Binzen Wild, *It Takes a Village to Find a Village: Finding Remote Populations with Remote Sensing.*** The speakers will discuss how, using a novel imagery analysis, the Stanford Geospatial Center designed and executed a reconnaissance project to locate remote settlements ahead of the first randomized public health survey conducted to assess their healthcare needs.

Stace Maples is the Geospatial Manager at the Stanford Geospatial Center at Branner Earth Sciences Library. Hannah Wild is an MD candidate at Stanford University School of Medicine.

2:30-2:45pm **Break-** coffee, tea, cookies, in Room 121A, SSRC

2:45-3:30pm **Leonard Rothman, MD, *The Story and the Maps of the California Gold Rush.*** The history of California gold, its locations, and the chronology of its discoveries, will be presented.

Len Rothman served as Vice President for Northern California and as President of CMS. He is a physician who served as Chief of Obstetrics and Gynecology at the Anne Arundel Medical Center in Annapolis, Maryland and has been an avid map collector for over fifty years.

3:30-4:15pm **Ed Lanfranco, *Mao on the Map--Quotes, Calligraphy and Images: 1958-1988.*** What did it mean when Chairman Mao was explicitly represented on a Chinese map? This presentation offers analyses and narratives focused on cartographic objects with imprints of Mao.

Ed Lanfranco was able to indulge a passion for collecting maps, atlases and globes living in Beijing from 1988 to 2009 while on a career trajectory that began as a Mandarin language student and ended serving as the Bureau Chief for United Press International.

4:15-4:30pm **Business Meeting**

*www.what3words.com

**FOR YOUR CONVENIENCE LOOSE SHEETS CONTAINING PROGRAM, MAPS & DIRECTIONS
AND MEETING REGISTRATION INFORMATION ARE ENCLOSED WITH THIS ISSUE**

DIRECTIONS TO OUR APRIL 13 STANFORD UNIVERSITY MEETING



The meeting will be held at the David Rumsey Map Center, located on the fourth floor of the Bing Wing of Green Library on the campus of Stanford University, Stanford, California. Parking on the weekend is free at most locations except where signs say otherwise.

Please enter Green Library via the Bing Wing entrance which is facing a circular fountain and the quad. Please announce at the portal that you are here for the California Map Society meeting at the David Rumsey Map Center and the portal staff will let you in, without registering as you would have already registered with the Center. Follow the signs to the Social Sciences Resource Center for registration.

To download a parking map of the Stanford campus, go to this URL: <http://stanford.io/1jOe2xt>

To get driving directions on your computer or in a browser, go to this URL: <http://bit.ly/2jnXb9P>

To get directions in your GPS or the mapping function of your smartphone, enter this address: 852-880 Crothers Way, Stanford, CA 94305. Note that this is the physical address which leads to the loading dock of the library. You will want to find parking and walk to the building as you cannot drive up right to the library.

BACK TO THE BASICS: 10 THINGS EVERY MAP COLLECTOR SHOULD KNOW

BY ELIANE DOTSON
OLD WORLD AUCTIONS

It's the beginning of a new year and time to start fresh and get back to the basics. Although many of you are experts who could certainly teach a master class in maps yourselves, I want to share with those new to collecting some of the basics of antique maps that every collector should know. The more you know about key map terms, how maps were made, and what factors affect value, the better equipped you will be to create your own collection and take care of it for generations to come.

#1 - Know the Lingo

There are many specialized terms used in the world of antique maps, and knowing them is the essential first step in understanding maps.

Jan Jansson, *Virginia*, circa 1648.



While most of these terms are self-explanatory, several deserve more explanation as they help distinguish states, editions, and reproductions, which will be discussed below. The **plate mark** is the impression that the engraved plate made when pressed onto paper to print the map. The plate mark can usually be felt by touch as an indentation in the paper, and there is also often some grayish ink residue along the edge of the plate mark that shows the physical size and shape of the plate. The **signature** is a separately printed element, usually composed of letters and/or numbers, that was added to aid the bookbinder in collating the maps into an atlas or book. Signatures can be on the recto (front) or verso (back) of the map. Maps that were bound into a folio-sized atlas were typically folded in half down the center of the map, which created a **centerfold**. Most folio-sized maps from the 16th-18th centuries will have a centerfold, which are still visible even if a map has been removed from an atlas and pressed flat.

#2 - Printing Methods

A few decades after the invention of the printing press by Johannes Gutenberg circa 1439, printed maps began appearing on the market. (Maps that were not printed and were done by hand are called manuscript maps, and these represent a very small percentage of the maps available on the market.) Knowing the full process of how maps were printed isn't necessary; however, under-

#4 - No Such Thing as Identical Twins

If you've ever been to a map fair, then you've probably walked around the room and seen multiple examples of the same map. However more likely than not, there are differences in each of these examples, and some of these differences can cause a distinction in rarity, historical significance, and value. Although a woodblock or copperplate may have been printed hundreds or thousands of times, not every example will be the same. There are obvious differences such as imperfections in the paper, the impression (how well the ink image is transferred to the paper), the color applied to the map, or the condition of the map depending on how it was handled over time.

Yet there are other differences, such as the state or edition of a map, which can be more subtle. The term **state** is used for multiple versions of a single plate, on which changes have been made between printings. Because plates were both expensive and laborious to engrave, they were often updated with changes rather than scrapped and remade. These changes include major ones (such as new cartographic information, a re-engraved cartouche, or a new title) and minor ones (such as touch-ups to improve the image or an updated plate number). Major changes to the cartography on a plate will impact the value, although earlier states are not always the most valuable, as it depends on which state is more interesting or historically significant.

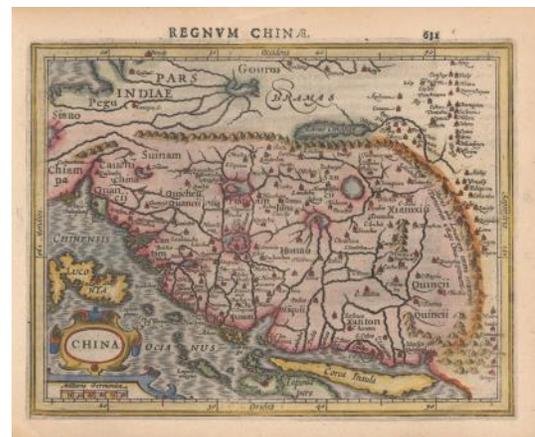


Second state of the Sanson/Jaillot map of North America, ca. 1698, and showing the "Island of California"



Fifth state of the Sanson/Jaillot map, published ca. 1719, with the coast of California completely re-engraved

The term **edition** can be used in several ways. Most commonly, it is used to describe a batch of impressions made from a plate and published at the same time. For instance, the maps in Ortelius' atlas, *Thatrum Orbis Terrarum*, appeared in many editions and can be identified by the text and page numbers that were printed on the verso of the maps. Sometimes the maps from different editions are identical, and sometimes changes were made to the plate and they represent different states. And occasionally, the plate got damaged or there were so many changes that it had to be replaced, which resulted in a new, re-engraved plate, which can be referred to as a new **edition** of the map. Similar to states, some editions can be more valuable than others, such as the first edition or an edition that is rarer than others.



Side-by-side examples of the same map (same plate) published in two different editions—one in an English version of Mercator's Atlas Minor and the other in a Latin edition

#5 - Condition is King

As with most collectibles, condition greatly impacts the value of a map. Flaws that are inherent to the process of papermaking, printing, and binding into book form generally do not decrease the value unless they are very distracting. These flaws include printer's creases, binding trims, paper flaws, and minor offsetting of the ink. Defects that are confined to the blank margins and do not impact the printed image also do not impact value greatly. When considering condition, it is important to assess the severity of the flaw and the possibility that it will lead to further damage. For instance, foxing, light toning, soiling, small worm holes, fold separations, minor damp stains, and extraneous creases are very common in paper. As long as they aren't very visible and the paper is stable, they are not cause for concern.

However, other issues can decrease the value of a map significantly, for example, tears in the image, dark toning of the paper, heavy soiling or staining, or cracks in the paper, which can be caused by the acidity of wood pulp paper or the oxidation of some of the pigments used in the 16th-18th centuries. Fortunately, most condition problems in maps can be improved or repaired by a professional paper conservator, thereby preventing further degradations and restoring the value of the map. In contrast, non-archival or poor repairs will further damage a map; it is better to leave a defect be than to make an inexperienced repair.

#6 - The Truth About Color

Although most collectors prefer maps that are colored, as color can highlight the interesting geographical and decorative details, color does not always increase the desirability of a map. Some maps were not meant to be colored; in particular, maps from the late 15th through early 16th centuries were published in black ink without any color added. With these early maps, most collectors prefer that they remain in their original uncolored state. Starting in the 16th century, publishers would offer atlases sans color and made-to-order, providing affluent or important clientele with options to upgrade their copies.

Choices in color ranged from simple outline color, which means that only the borderlines were highlighted, to elaborate full color examples that only the wealthiest could afford. If color was added soon after the map was printed around the time of its publication, it is referred to as *original* or *contemporary color*. Maps that feature original color are a big draw for collectors, especially when the color is well-preserved. *Later color* (also called *modern* or *recent color*) was applied well after the map's publication. It's a broad term; later color could have been applied yesterday in a startling replica of the old style or hundreds of years ago in a sloppy, anachronistic hand. Because it tends to increase the value of the map, sellers will typically point out when they believe an example is in original color. If a map isn't advertised as being in original color, it is likely later color.

The only downside to original color is that it can suffer from oxidation, which refers to the chemical reaction that occurs when certain substances are exposed to oxygen. Verdigris, the green pigment used on early maps, oxidizes over many years to varying degrees. At its most mild, oxidation causes the green pigment to turn darker or slightly brown; however, in severe situations, the green pigment deteriorates the paper and causes brittleness and cracking. This can be most readily seen by holding the paper up to light, or by viewing the back of the map. While maps with well-preserved, original color are highly prized by collectors, they are less common on the market than their modern-colored counterparts.

#7 - Lies and White Lies

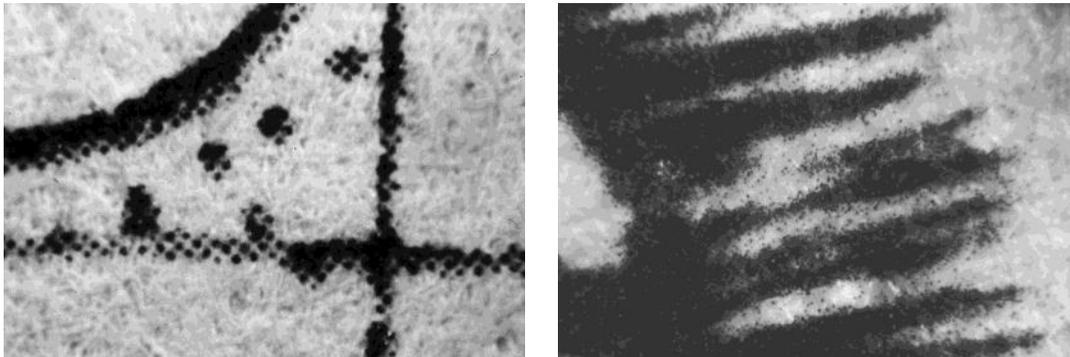
Although forgeries are common in the art world, fortunately they are not a big problem for antique map collectors. However, collectors should always be on the lookout for restrikes, reproductions and forgeries. A *restrike* is a much later edition pulled from the original plate and will usually be printed on different paper or have some notation that it is a restrike. A *reproduction* is made for decorative purposes, typically on modern paper and sometimes in a larger or smaller format. Even though restrikes and reproductions were not created with the intent to deceive, they can be mistaken for the real thing. A *forgery* is a fake that is being passed off as real. Fortunately, these aren't common in the map world and most maps are well-documented in reference books.

There are a few key steps that anyone can use to verify that a map is authentic:

1. Examine the map outside of a frame. Many reproductions and restrikes will indicate that they are reprints, either in the blank margin below the map or on the back of the map, both of which are typically hidden in a frame.
2. Get a sense for the paper. The type of paper used should correspond with the time period when the map was printed. Holding the paper up to light can help get a sense of whether the texture and consistency are appropriate.
3. Use a magnifier. Even a 10x magnification of the map will betray a reproduction by inspecting the black ink lines.

Most reproductions will have blurred lines, tiny specks of ink spattered around the lines, or the lines will be made up of tiny dots of ink.

4. Compare it with an original. It is not difficult to find an image of the same map on the internet, and by comparing the questionable map with a known original, you can spot differences. The two easiest features to compare are the fold lines and the plate mark; on a reproduction, these features will either be missing or will be added in a different location from the original.



Magnified examples of maps reproduced using modern printing methods. Note the lines made up of dots of ink created by halftone printing on the left, and the tiny splatters of ink created by a photocopier surrounding the image at right. (Images courtesy of [Collecting Old Maps](#), Manasek, Griggs & Griggs)

#8 - How to Value a Map

It's easier to figure out what to buy than to decide how much to pay. Determining what a map is worth is part science and part art. In general terms, a map is worth whatever the market indicates it is worth, so one way to get a sense for a map's value is to look at how much it has sold for in the past. Of course, when comparing prices, you have to take into account the differences in condition, color, and the state of the different examples of the map, as each of these factors affects the price. Certain regions, cartographers, and collecting themes (like the Island of California) are more popular and therefore, tend to sell for more. You must also take into consideration whether the comparable prices are auction results (also called hammer prices) or dealer prices, as the latter will typically be higher than auction results. Two great resources for map prices are [RareBookHub.com](#) and [OldMaps.com](#), and values listed within the last 5-7 years are still considered relevant.

Some maps are uncommon and haven't appeared on the market in many years. For rare maps, you may not find any historical pricing, so you'll have to look at prices for similar maps. In these instances, compare maps that show the same geographical region, were published within 10 years of the map in question, and are similar in size. However, the rarer a map is, the more valuable it will likely be in relation to comparable maps. Ultimately the market will decide what these maps are worth, and if you come across a really rare piece, don't miss out. Some maps are quite common, while others are only offered on the market once every 10-20 years.

#9 - Write Your Autobiography

While it may be tempting to follow the current trends in map collecting, it is not the best strategy for most collectors. A map collection should be personal. A map collection can be meaningful in many ways: it can trace your ancestry, showcase places you've traveled, or spark your intellectual curiosity about a particular time in history. There are so many different types of maps to collect that it can feel overwhelming if you take a shotgun approach.

Reference books can serve as an excellent way to narrow down your collecting area and determine what maps would be a good fit for your collection. There are books that cover geographic regions (like maps of the world, Holy Land, New England, etc.), specific collecting interests (like pictorial maps, railroad maps, Revolutionary War maps, etc.), or individual mapmakers.

Regardless of what you decide to collect, it is important to select a focal point and stick with it. Over time you can either further refine or even expand your area of interest depending on your time and budget.

#10 - Be a Map Custodian

The fact that so many antique maps have survived for hundreds of years is incredible. Once you add a piece to your collection, you must take steps to preserve your historical artifact for generations to come. Maps should never be handled by the very edge of the paper, as that can cause tears; ideally you should pick up a map several inches from the edge of the paper, using both hands to provide adequate support. Paper clips, binder clips, post-it notes, and tape should never be used on antique paper, as they can damage the image or paper surface. If you must write notations on a map (preferably on the back), using a soft leaded pencil is fine.

Many collectors opt to frame their maps both to preserve and appreciate them. Maps should be framed by a professional using only acid-free, PH-neutral materials, reversible mounting adhesives, and sealed frames. Framed maps must be kept away from direct light sources and high humidity to prevent damage to the paper.

Once you've run out of wall space, there are other options for preserving maps. Companies such as Gaylord Archival and University Products sell archival sleeves and folders for storing maps, which can then be housed in a flat file, on an easel, or on any flat surface. Clear archival sleeves are an excellent choice for maps, as they protect the map from any tears or damage due to handling, while still allowing you to view both the front and back of the map.

Regardless of how you choose to store and display your maps, consider yourself a temporary custodian, whose responsibility is to ensure your collection's continued survival for the next few centuries.

Beyond the Basics

Maps are prized by collectors around the globe for their beauty, historical significance, and the stories they tell. While there are many reasons that people collect maps, collectors typically have one feature in common—an intellectual curiosity powered by a thirst for knowledge. Maps teach us about history, geography, politics, religion, and culture by taking us to another place and another time. Regardless of your reason for collecting maps, having a solid foundation on the basics can help you take your collection to the next level.

Of course, this article gives just a brief overview of these topics. To find more information, please review one of the many excellent reference books on collecting maps. Here are three of my favorites:

- Manasek, F.J., Curt Griggs & Marti Griggs. *Collecting Old Maps*. Clarkdale, Arizona: Old Maps Press, 2015.
- Moreland, Carl & David Bannister. *Antique Maps*. Oxford: Phaidon Christie's, 1986.
- Potter, Jonathan. *Collecting Antique Maps*. London: Studio Editions Limited, 1992.



COMING FALL 2019

Historical Atlas of Hasidism or, How to Map a Spirit,
Marcin Wodziński, Ph.D., University of Wrocław, Poland

*If Americans Were Defined by the Colonial Frontier,
What Defined the Frontier?* Ken Habeeb

*The Erdapel, the World's Oldest Surviving Globe of Our
Planet Earth*, Leonard A. Rothman, M.D.

Sent to Jail for Mapping, Fred Auda's tale, as told to Juliet Rothman

Maps on Walls and *Mapping Asteroids*: two articles by Juliet Rothman

Carto-Quiz returns for the Fall

THE PREVENTIVE CONSERVATION OF ANTIQUE MAP COLLECTIONS

BY LINA PUKSTAITE

Map collections vary significantly by subject, age, and printing technique. Some collectors are interested in collecting antique maps, while others prefer to focus on a particular geographical location during different historical periods. Some collectors keep their maps in dark drawers, while others decorate their walls with them to enjoy the beauty of their treasures. However, when we speak of map storage, handling, display, preservation, and conservation, we can see that the same care guidelines apply to all collections.

A majority of early antique maps are printed on handmade linen, hemp, or cotton rag-laid paper, and may also be backed by a similar quality handmade paper sheet. A small percentage of maps that have survived to the present era were drawn on parchment or printed on paper, sometimes also hand colored with an aqueous medium (tempera, watercolors). Most conservators today consider maps to be fine arts objects, such as graphic art prints, drawings, or watercolors.

Antique maps were generally printed using woodblock or intaglio printing processes on laid paper. However, after the mid-19th century, lower quality, less expensive, machine-made wood pulp paper began to be used to print maps. Because this paper was in general use then, almost all maps printed after 1844, no matter how carefully, are prone to acidic deterioration from the lignin in the wood pulp cellulose fibers.

Early maps generally had a direct, practical function and purpose. The most common issues found with maps printed on antique papers are mechanical, such as paper deterioration at fold lines, fading pigments, moisture damage, and mold. Because most antique maps are quite rare, if not unique, it is generally best if even the smallest repair is provided by professionals. However, there are also very effective and powerful preventive tools that map collectors can utilize to avoid, or to significantly decrease, the deterioration processes in their collections. In general, the most important aspect of collection care is Preservation. Map collectors can save thousands on conservation by choosing the correct preservation materials, and carefully monitoring their treasures storage conditions.

What is the difference between Preservation and Conservation? Professionals often use “passive” and “active” to describe the difference between these two conservation terms. In “passive” conservation—**Preservation**—all the efforts are directed toward creating safest possible storage and care environment, one that does not affect the current state of collec-

tion. This can be defined as of the all technical, managerial, and financial considerations that can be applied to prevent deterioration, and to extend the life of the collection in its current condition. Preservation is much more cost-effective than “active” interventive measures, defined as **Conservation**: the professional treatment of antique maps in order to save and improve their state after damage and/or deterioration have taken place.

In order to avoid future major damage and conservation expenses, preventive strategies can be very helpful and effective. To assess a collection, it is helpful to consider storage conditions and handling, as well as the signs of damage:

Common causes of deterioration

Poor storage conditions:

- Incorrect temperature and relative humidity (RH)
- UV light or direct sunlight exposure
- Pollution
- Mold, pests
- Poor handling: tears, creases, deformations, losses

Signs of damage

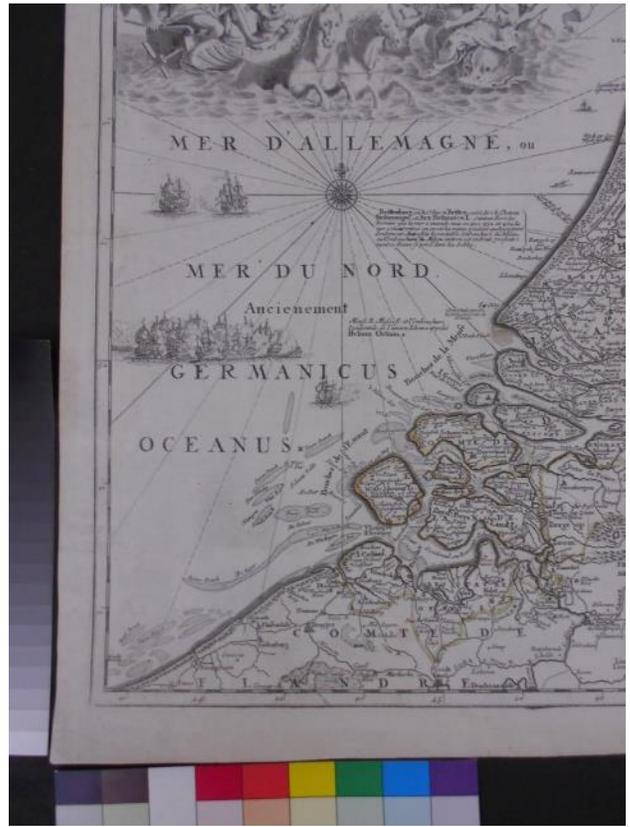
- Discoloration (mold, dirt, foxing, pigments fading, humidity, acids “migration” stains)
- Tears, creases, losses, PST (*pressure sensitive adhesive tapes*)
- Surface deformations

Most maps are drawn or printed on paper which is made of cellulose fibers, and contains 7% moisture. An environment which is too dry (less than 35% RH) and too hot is as damaging as one that is too humid, because dehydration of the cellulose fibers makes it brittle, and, with higher temperatures, damaging chemical reactions can proceed more quickly. Conditions which are too humid create a perfect environment for mold and mildew growth. If any of these signs of damage are noted in a collection, it is best to contact professional conservator as soon as possible. Frugal collectors may believe that they can easily complete simple repairs themselves. However, misguided conservation/restoration efforts may have drastic impact on the value of a map or collection, and a delay in necessary repair can result in both higher repair costs and permanent damage.

One of the biggest enemies of paper (as well as collectors and conservators!) is PST—pressure-sensitive tape. Collectors should never consider using this, even for the tiniest tear repair. PST adhesives will penetrate deeply into the paper fibers, and



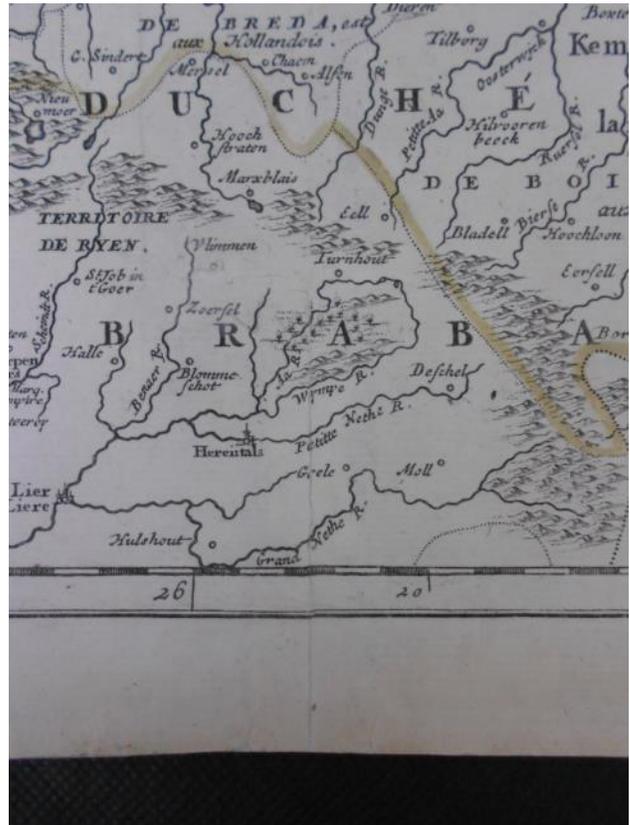
Moisture damage. Acids "migration" stains



The same map fragment after conservation



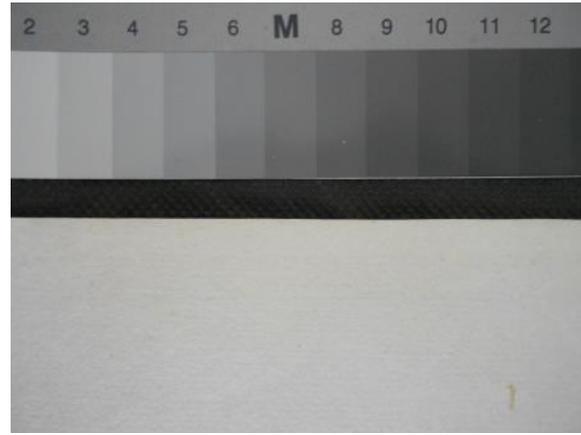
A tear and "mat burn" stain from the previous framing



The same map fragment after conservation



PST adhesives damage before conservation*



The same map fragment after conservation

will yellow, harden, leave stains, and have a rapid chemical effect. The procedure for adhesive residue removal is quite complex! The perfect pH (acidity or alkalinity) for paper is neutral number 7. Maps which have been printed after mid-19th century on wooden cellulose paper, and maps which are backed with linen, can become very acidic over time. The pH may drop as low as 4, and paper may become yellowed, stiff, brittle, or even fall into pieces. If these problems are noted, professional consultation is usually best.

Handling Antique Maps

Cotton, latex gloves, or bare hands?

Oils and salts from hands are easily transferred to the paper, causing deterioration and stains over time. However, wearing gloves reduces the ability to feel the actual paper of the map, and may easily lead to tears and deformations of paper. Because of this, most experts agree that freshly washed, thoroughly dried hands are more preferable for handling antique maps than wearing any kind of gloves.

Move maps, especially larger ones, very carefully—often, the paper may be more sensitive and brittle than expected, and damage can easily occur. Never handle maps by the edges, particularly if tears are already evident.

Always use a supportive, acid-free surface as your viewing space. Pick up the map with both hands to reduce the risk of creasing, bending, or tearing. An even better strategy: carefully slide larger size acid-free cardboard beneath the map, and using it as a “tray” to hold it safely.

Displaying Antique Maps

Collections are supposed to be enjoyed! Framing the most significant and favorite items of a collection provides an attractive and accessible way to both enjoy and share a special map. To ensure that a map is properly protected, mounting and framing should be done by professionals, using archival

quality, acid-free framing materials, and UV protection. Ultraviolet light can trigger a chemical breakdown of cellulose fiber connections, and cause inks and pigments to fade, and paper to change tone, and to become brittle. Always avoid hanging maps in direct sunlight, even when framed with UV protected materials. Fluorescent lights are also very harmful, and UV filters on light sources (lights, windows) should be used wherever possible.

When a framed map is purchased, it is important to be aware that old frames may be physically and chemically unsafe and may contain harmful materials, and that old mats may be acidic. Framed maps acquired by collectors should be professionally inspected by a conservator and, if necessary, taken to a professional framing gallery for re-framing.

Storing Antique Maps

The ideal collection storage space should maintain a humidity of **35-55% RH**, a temperature of **60-75F**, and all storage materials (drawer surfaces, folders, boxes, tubes, interlaying, sleeves) should be made of acid-free archival quality materials. It is important to inspect stored collections at least quarterly, if not monthly, and to check each piece, front and back, for any changes in paper, stain, pigment, tone, or color.

Map collections should be stored flat in shallow drawers or acid-free cases. Before long-term storage, any paper clips or binder clips should be removed. Since acids, mold, and insects can transfer easily from one sheet to another, it is best to avoid stacking items on top of each other. If necessary, not more than 5-7 same-size maps, interlayered with ~2” larger acid-free or buffered tissue/glassine and monitor may be placed together. Collections should be monitored at least once a month.

If a collection is stored in sleeves, each leaf should be stored in a suitably-sized (~2” larger) mylar, acid-free envelope/sleeve. Only one item should be stored in each sleeve. If a map is too

WHEN MARS HAD CANALS

BY BETSY MASON

*Betsy Mason is a member of the California Map Society, who has kindly offered to share with us this fascinating excerpt from her book, *All Over the Map: A Cartographic Odyssey*. She became interested in maps as a child, and learned how to make geologic maps while in college. She furthered her interests in mapping and writing by obtaining a Master's degree in Geology from Stanford, and completing a program in scientific writing at UC Santa Cruz, followed by a Knight Scientific Journalism fellowship at MIT. Her work as a science journalist has appeared in *Science*, *Nature*, *New Scientist*, *Discover*, *Wired*, and *the Science News*. Some of her work may be found at www.betsymason.com.*

*Co-author Greg Miller is a science and technology writer based in Portland. In addition to maps, he writes articles on neuroscience and other biologic and scientific areas. Together, Betsy and Greg co-author National Geographic's blog *All Over the Map*, which may be accessed at nationalgeographic.com/alllovertthemap.*

Betsy shares an excerpt from her book with us on a fascinating topic, entitled, "When Mars Had Canals."

"FOR NEARLY A CENTURY, HUMANS BELIEVED THE RED PLANET WAS HOME TO INTELLIGENT BEINGS"

The idea that there might be intelligent life on Mars began to take hold toward the end of the 19th century. Scientists' ability to see the Red Planet's surface had greatly improved in the 300 years since Galileo Galilei first laid eyes on it through a telescope. And how astronomers interpreted what they saw led to a public fascination that peaked in 1938 with the invasion hysteria caused by Orson Welles's radio broadcast of his "War of the Worlds."

Some of the first seeds of that fascination were planted almost 70 years earlier when British astronomer Richard Proctor published the popular book *Other Worlds Than Ours* in 1870. In it, he included a map of Mars [see image, next page], which he had pieced together in 1867 from drawings of the planet made by an eagle-eyed preacher. Proctor interpreted the light and dark spots on the planet as continents and oceans with ice caps at the poles. He was the first to name these features, honoring famous astronomers who had contributed observations of Mars with names like *Cassini Land* and *Tycho Sea*.

This vision of lands and seas similar to Earth's spurred speculation about the habitability of Mars. In his book, Proctor wrote: "Processes are at work out yonder in space which ap-

large to be stored flat, it can be carefully rolled and stored in a large-diameter, acid-free, paper or mylar-lined tube. Large maps should be rolled parallel to the enter fold. Multiple sheets must be rolled interlayered onto the same roll all at once. A tube which is shorter or the same length as the map to be stored should never be used. Antique maps should never be laminated. Heating, laminate adhesives, and lack of air can speed up deterioration process enormously.

Collection acidity—pH numbers—of stored collections should be monitored at least annually—a simple and inexpensive damage prevention procedure that can be provided by a professional conservator. Collectors should be careful not to use pH pens, which leave marks on maps! If significant changes in pH over the year are found, all storage conditions (RH, temperature changes, UV) should be reviewed and stabilized, and maps with lower than pH=6 should be alkalized in order to prevent further deterioration process.

Paper conservators can be the biggest friends of your collections. Collectors and conservators can work together to "heal" and save objects of cultural heritage. This is a noble, beautiful, important cultural and historical purpose which can help the antique maps we all cherish to survive.

Lina Pukstaite

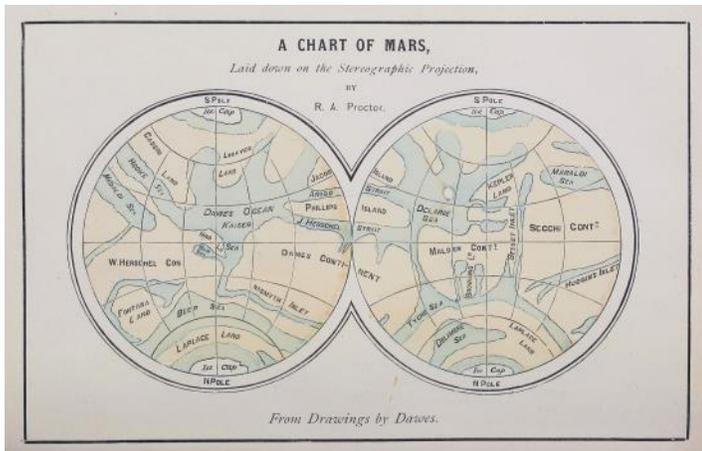
Member of American Institute for Conservation of Historic and Artistic Works and Bay Area Art Conservators Guild

- Paper conservator in private practice, owner of Paper Conservation LLC
- Former Head of the Art Department and Paper conservator in National Library of Lithuania

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- Care, Handling, and Storage of Works on Paper <http://www.loc.gov/preservation/care/paper.html>
- Conservation and Care of Antique Maps <https://www.farcroftuk.com/conservation-care-antique-maps/>
- How to...protect your rare Maps and Manuscripts <https://www.justcollecting.com/miscellania/how-to-protect-your-rare-maps-and-manuscripts-1000506362>
- Preservation Advisory Center. London www.bl.uk/blpac/pdf/environment.pdf
- Conservation Online <http://cool.conservation-us.org>
- International Preservation News www.icon.org.uk

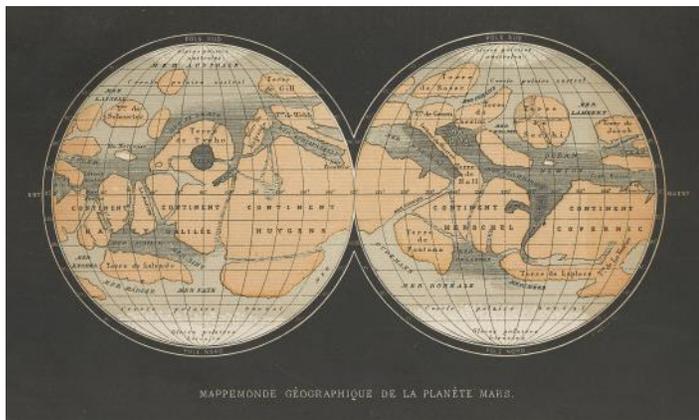
pear utterly useless, a real waste of Nature's energies, unless, like their correlatives on earth, they subserve the wants of organized beings."



British astronomer Richard Proctor compiled this map of Mars in 1867 from drawings made by a preacher, William Dawes, after whom he named several of the planet's features. Proctor interpreted the light and dark areas on Mars as continents and seas, which made the planet look similar to Earth and led people to wonder if it was also inhabited by intelligent beings.

Source: *Other Worlds Than Ours*, by Richard Proctor, 1867

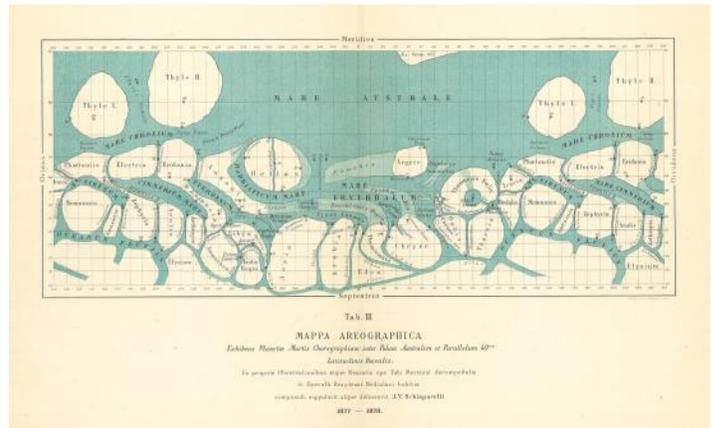
Other Mars geographers, known as areographers, continued in this vein. The maps of French astronomer Camille Flammarion, such as the one [see image below] from his 1884 book *Les Terres du Ciel*, resemble Proctor's, though they're more detailed. Like Proctor, Flammarion believed the planet could support life. In 1873, he wrote in *La Nature*: "On earth the smallest drop of water is peopled with myriads of animalcules,



French astronomer Camille Flammarion's 1884 map of Mars bears a resemblance to Proctor's 1867 map, but it is also a clear predecessor to later maps by Giovanni Schiaparelli and Percival Lowell that led to speculation about the existence of artificial canals on Mars. Flammarion was a proponent of the idea that Mars was habitable.

Source: *Les terres du ciel*, by Camille Flammarion, 1884

and earth and sea are filled with countless species of animals and plants; and it is not easy to conceive how, under similar



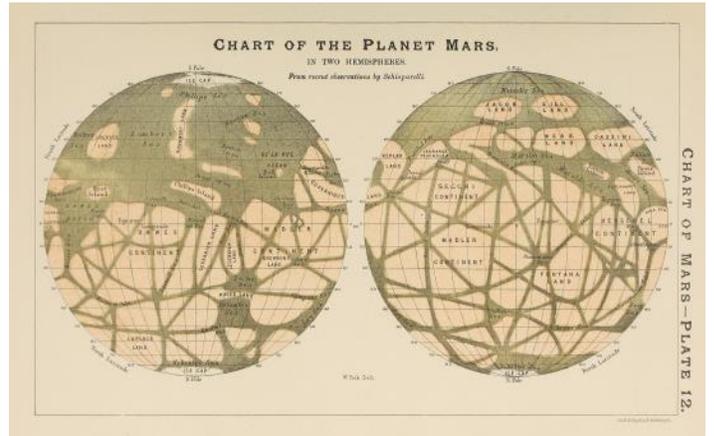
This map, published in an English astronomy handbook in 1891, shows how the water features separating landmasses on Schiaparelli's maps had become much straighter, leading to questions about their origin. Schiaparelli called them canals, an Italian word that can mean either artificial canals or natural channels, fueling speculation that the linear features were Martian-made.

Source: *A Popular Handbook and Atlas of Astronomy*, by William Peck, 1891.

conditions, another planet should be simply a vast and useless desert."

All this speculation about life on Mars influenced how subsequent maps of the planet were interpreted. In the late 1870s, Italian astronomer Giovanni Schiaparelli began making maps based on his observations of Mars that looked very similar to Flammarion's [see image above]. But by 1891, the presumed waterways separating landmasses on his maps had become much straighter [see image below]. People couldn't resist interpreting the lines as the work of intelligent beings. They just looked too straight to be natural.

Though he didn't completely rule out the possibility that the lines could be artificial, Schiaparelli was skeptical. But it seems



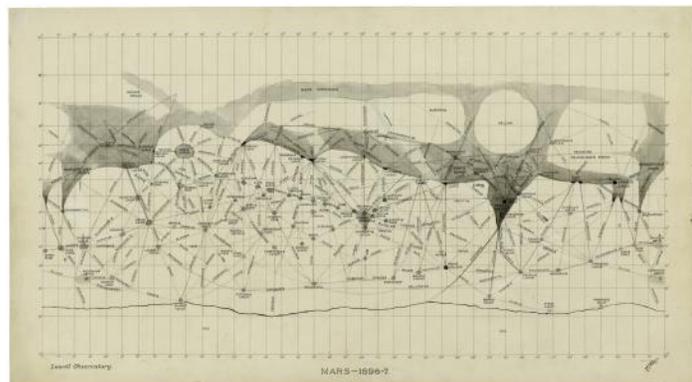
Giovanni Schiaparelli's 1878 map of Mars has a distribution of features interpreted as land (white) and sea (blue) that are similar to those on Camille Flammarion's 1884 map. Many of the names Schiaparelli gave to locations on Mars are still used today.

Source: Library of Congress

he inadvertently fanned speculation by describing the lines on his maps with the Italian word *canali*. This was translated into English as “canals,” which are artificial waterways by definition. In Italian, however, the word is also commonly used to mean natural channels, and this appears to be the meaning that Schiaparelli had in mind.

“It is not necessary to suppose them the work of intelligent beings,” he wrote in 1893. “And, notwithstanding the almost geometric appearance of all of their system, we are now inclined to believe them to be produced by the evolution of the planet, just as on the Earth we have the English Channel and the channel of Mozambique.”

The names Schiaparelli gave to locations on Mars largely survive today, but his most prominent legacy is the canali. Their enduring popularity was thanks largely to American astronomer Percival Lowell, who embraced and popularized the idea that the straight lines on Schiaparelli’s maps were water conduits built by Martians. In a lecture to the Boston Scientific Society in 1894, Lowell said, “The most self-evident explanation from the markings themselves is probably the true one; namely, that in them we are looking upon the result of the work of some sort of intelligent beings.” Lowell made a map [see image below] in 1897 that is filled with dozens of oases connected by more than 200 canals, each of which he named. Lowell correctly anticipated that his scientific colleagues would be reluctant “to admit the possibility of peers” inhabit-



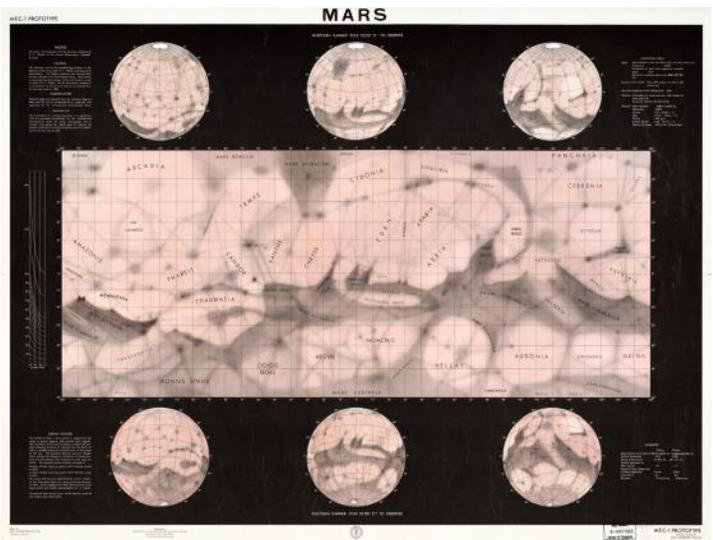
Percival Lowell was a champion of the idea that the linear features on Mars were artificial canals, built by intelligent Martians. His 1897 original manuscript resembles Schiaparelli’s later maps but contains many more canals. Lowell gave every one of the canals on his maps names including “Phlegethon,” “Gigas,” and “Thermadon.”

Source: Lowell Observatory Archives

ing other planets. But the public loved the idea, and his lectures were often packed. Lowell himself was so taken with the theory that he built an entire observatory in Flagstaff, Arizona, and spent years observing Mars and mapping its surface.

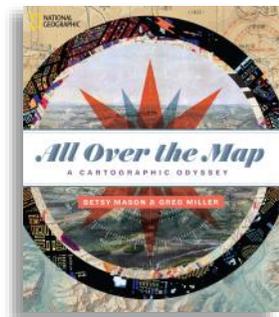
Soon, however, criticism of the canal hypothesis mounted as scientists learned more about Mars. There were the prohibitively cold surface temperatures that would rule out running water, and a scientific demonstration proved the straight lines could be merely the result of an optical illusion. But Lowell continued to write popular science books, culminating with *Mars as the Abode of Life* in 1908. His ideas persisted in the popular imagination for decades and inspired countless works of science fiction, including the 1938 “War of the Worlds” radio broadcast that dramatized an alien invasion and inadvertently fooled some listeners into believing it was real.

The canals hung around on maps as well, including, surprisingly, a map [see image below] made in 1962 for the U.S. Air Force. The map, which looks a lot like some of Lowell’s and Schiaparelli’s renderings, was made by Earl Slipher, an American astronomer who had joined Lowell Observatory in 1908. The Air Force used Slipher’s map in the planning of the first Mariner flyby missions. When the Mariner 4 spacecraft had the first close encounter with the Red Planet in 1965, any lingering doubts about the canals were finally put to rest.



This map was made by Earl Slipher in 1962 and published by the U.S. Air Force in 1965 in preparation for the Mariner flyby missions. It is notable because it inexplicably still contains Lowell’s linear canals, even though their existence had been debunked by the time the map was made. Text on the map notes, “The linear features are representative of the ‘canals’ as they have been drawn by many prominent observers of Mars.”

All Over the Map, a Cartographic Odyssey, Betsy Mason & Greg Miller, National Geographic, 2018, 318. Hardcover price \$35.



BAY AREA MAP GROUP MEETING

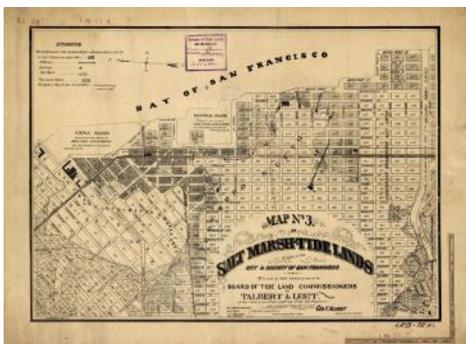
HOSTED BY EDEE & GEORGE PINESS

The Bay Area Map Group met on November 10th at the lovely home of Edee and George Piness in Mill Valley. This very congenial BAM group clearly enjoyed each other's company as well as their surroundings: Edee and George's extensive collections of arts and maps from every continent, beautiful prints of Burma with touches of gold, African masks and artwork, delicate Japanese prints—and, of course, a superb collection of maps.

Leonard Rothman introduced the map-sharing part of the meeting by reminding the group that this was the 10th year of the Bay Area Map Group. He thanked the gracious hosts, and also encouraged everyone to attend the two annual CMS meetings, especially encouraging the group to attend the April 13th meeting at the Rumsey Map Center.

Several people had brought interesting maps to share. Fred DeJarlais brought a reproduction of a map of the San Francisco eastern waterfront, complete with thoroughfares and pier improvements. The original, probably drawn in 1887 by George F. Allard, is five feet long and 36-42 inches in height, and decorates the wall of his former office. Annotations, written by hand, show both bathymetric contours and soundings along the shoreline that Allardt made in 1869 and placed on the map in 1900.

Allard arrived in San Francisco in 1858 and was “the most renowned engineer and surveyor on the West Coast” during



Salt Marsh Sales Map No. 3, G.F. Allardt, 1869, David Rumsey Map Collection

this period, and specialized in hydraulics, sewerage systems, waterworks and land surveying. He also produced 12 “sales” maps for the State Board of Tideland Commissioners that were used to

transfer submerged lots of land along the shoreline of San Francisco Bay to private parties. Interested buyers could purchase a submerged lot for nominal sums, fill them in, and build on them!

Marianne Hinckle shared one of her beautiful creations: a map of the Great Siege of Malta in 1565. She had seen these maps in an exhibit at a museum in Malta, had become in-



Cartouche from Marianne's keepsake

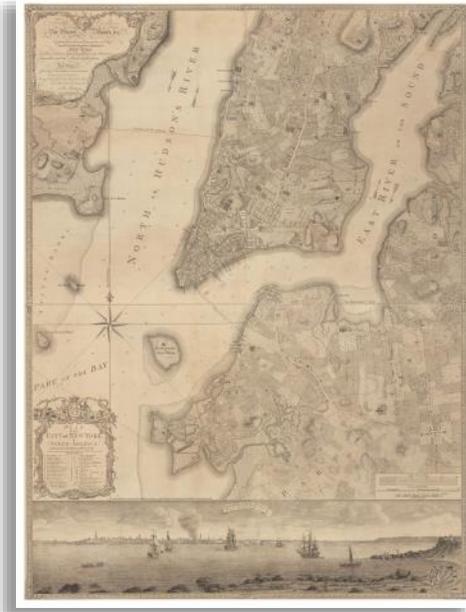
trigued with them, and had viewed Glen McLaughlin's collection. She had created her map and written the history of the siege for the Roxburghe Club in San Francisco—by far the largest keepsake

anyone had ever given to members! She also printed its folded cover, and the story of the fortifications on the island. The Siege had occurred during the period of Suleiman the Magnificent's great conquests; he had almost reached Vienna, had conquered Turkey and Rhodes, and wanted to conquer the Mediterranean to reach Rome. To do this, he sent the largest armada in the Mediterranean to conquer Malta. His victory, Marianne shared, would have meant the death of Christianity. During the war that ensued, engineers and observers sent messages to the Pope, and also produced maps which proved essential to the battles. During the months of the siege, from May to September 1565, at least 25 maps were drawn and then reproduced in map publications centers in Venice and in Rome. Suleiman's mission failed, both in Malta and in Vienna, and Christianity survived. Fred DeJarlais noted that map production was also essential in World War I, and that maps were eventually printed in the field and passed around at battles to guide the soldiers.

Marianne shared the important insight that people look at pictures more than at words. Maps and illustrations are vital in drawing people's attention to the words that accompany them. This function of maps gives us all something to consider.

The American Revolution and discoveries are the focus of Ron Gibbs' interest in maps. He showed the group an 1854 reprint of a wonderful map by Bernard Ratzel who both surveyed and created a map of New York between 1767 and 1768. Fred shared that surveying instrumentation was well developed during this period in history, so that maps could be more carefully drawn and accurate.

The American Revolution had broken out in 1775. George Washington mounted his cannons, and the British left Boston for Halifax in 1776. New York, it seemed, was a likely spot for their return, because it had the largest Loyalist population among its 20,000 inhabitants. In addition, if the British



“Plan of the City of New York in North America.” Surveyed by Bernard Ratzler in 1766-67; Thomas Kitchin, engraver. Published by Jefferys & Faden, London, England. Image in the Public domain, via Wikimedia Commons.

could control New York, they would succeed in dividing New England from the rest of the colonies farther south. It was also a favorable location for conquest: it’s many waterways would invite the British Navy, the world’s foremost naval power. The map’s prospect view is from Governor’s Island, looking up toward Manhattan, and east toward Brooklyn.

The British did indeed come from Halifax to NY. They landed on Staten Island and began to defeat Washington in Brooklyn, Kip’s Bay, Manhattan, Harlem Heights, White Plains, and Fort Washington—and kept winning until Washington famously crossed the Delaware—and the rest is history! Ron also had brought a 2009 issue of National Geographic, which had, across two pages, a modern map of Manhattan above, and a 1782 British map below.

Ken Habeeb’s notebook-sized undated English map of the United States was very intriguing. It does not include Chicago or St. Louis. Many place names are Native American. There is very little information about the Northwest, so it may have dated from before the Lewis and Clark expedition in 1804. But—then again—it could simply have been drawn by someone in England with little knowledge of America. Look carefully and please let us know if you have any information about the map.

Ken also brought the Cross Cups Synchronic Maps Atlas of the United States for the group to view. The atlas covers Amer-

ican history from early Colonial times to 1900, when it was published.

An artist who is a map-maker? Leonard Rothman brought two beautiful colored maps by N.C. Wyeth, Andrew Wyeth’s father, who was also an artist. They appear to be drawn from two world maps of the Eastern and Western hemispheres in the John Tallis Atlas of 1851. Leonard also brought the two original steel-engraved colored Tallis world maps for comparison. Tallis’ maps were also known as the last decorative maps, the style of which were created in Antwerp and Amsterdam in the 16th and early 17th centuries.

Tallis’ maps of the Western Hemisphere included Mexico, Texas, and California— as well as New Helvetia, which had been founded by John Sutter in 1839 near Sacramento from a land grant from the governor of the area. Thus, the Western Hemisphere map, drawn in 1851, already included the discovery of gold, which had occurred in 1849.

Leonard also brought a contemporary map from the New York Times to share. The Times had made contemporary maps of every building in the United States. Leonard’s example, from a Sunday Times, was of the San Francisco bay area, showing the building density and living areas throughout the city.



This map provoked a heated discussion! While Leonard had found it an interesting and challenging effort on the part of the Times, which apparently has one of the best cartographic departments among US newspapers, Fred DeJarlais objected to the project, saying “just because we can, should we? For what purpose?” As a retired urban planner, he didn’t see any purpose or reason for engaging in such a project. Wally Jansen said he had done a map of the lights in the world—a nighttime image which could be used to track electricity use world-wide. The map also showed electrical generators. North Korea appeared totally dark on the map, while South Korea was bright with lights—yet they both had generators. It was determined that North Korean generators were not being used for electric lights, but, rather, for hidden war material production. He felt that maps such as the Times buildings maps might have other applications. Walter Schwartz felt that the New York Times “made those maps because it sold newspapers!” Leonard offered to write to the Times and ask them their purpose and goals in producing the maps. Stay tuned.

A beautiful 1782 engraving (right) of a raid by the Dutch on the British, which had occurred in 1667 was brought to the meeting by Wally Jansen. The British had been interfering in Holland's overseas trade, having both colluded with the Spanish against the Dutch and passed Navigation Acts, which encouraged piracy against Dutch merchant ships, and the Dutch were reacting to these British actions. In the year 1667, the British fleet was experiencing some difficulties which made a Dutch attack at that time auspicious.



Wally is interested in family history, and had determined that one of his ancestors, Grand Pensionary Johan de Witt had masterminded the plan of attack. His brother, Cornelis De Witt, supervised the fleet's action, and is depicted leaning on a stick in the engraving. There does not appear to be any evidence that Johan de Witt had accompanied the expedition. This was one of the worst military defeats ever for the British. Paintings were made of this event in the victorious Netherlands, and Wally believes that his engraving, published by Dirk Langendijk, Matheus Salliech, and Dirk de Jong was one of these.

Fred Auda had a wonderful map of San Francisco's Chinatown after 1885, printed in the *San Francisco Daily Reporter* newspaper. During this period, real estate in the area where China-

town was located had become very expensive and valuable. Real estate investors and businessmen wanted access and ownership of the area, thus taking it away from the Chinese. To do this, they created a map which illustrates and documents "vices" in Chinatown, so that government entities might use the map to take the area away from its Chinese population. The map details every gambling business, every joss house, every opium den—and every house of prostitution, indicating whether the prostitutes were white or Chinese. They must not have been very successful, for Chinatown continues to be a predominantly Chinese area today.

Fred (Auda) had also brought a gift for Fred (DeJarlais), for his efforts with Calafia – a lovely Street Directory map of Santa Cruz, produced sometime after 1940.

The meeting continued with more socialization and discussion after all the maps had been presented.

By Juliet Rothman



*Official Map of "Chinatown" in San Francisco
Engraved & printed by Bosqui Eng. & Print Co., 1885.
Library of Congress Geography and Map Division Washington, D.C.
20540-4650 USA dcu*

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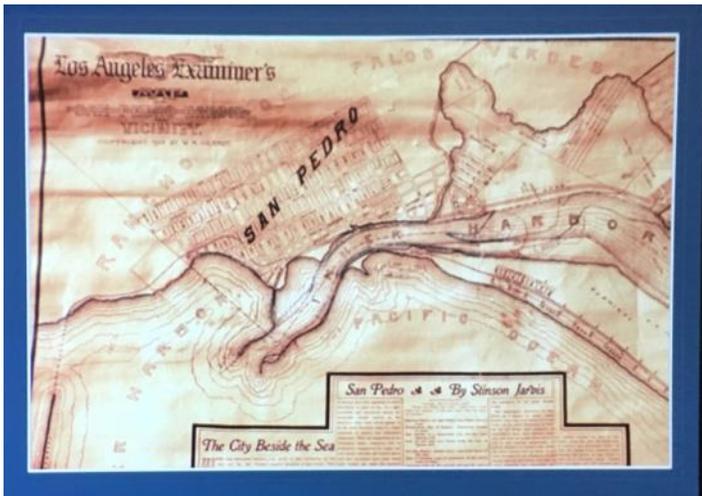
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FALL MEETING: LA MARITIME MUSEUM

BY JULIET ROTHMAN

The Fall CMS meeting, on November 3rd, took place at the beautiful Los Angeles Maritime Museum, located right on the water in San Pedro harbor on a beautiful, sunny day. Terraces overlooked the busy harbor's cranes, cargo ships, and the two cruise ships anchored at nearby piers. The museum itself featured intricately detailed models of centuries of ships, as well as an extensive history of navigation, focused on the West Coast, and a lovely meeting room.

Our President, Susan Caughey, welcomed members and guests, and SoCal President, Jon Jablonski, introduced the speakers. Not coincidentally, the first two presentations focused on ports. Our first speaker, past President Bill Warren's presentation, entitled *Los Angeles Harbor as a Man-Made Phenomenon*, focused on the development of San Pedro as the port of Los Angeles. He began by defining a "port" as "a place where ships come, load, and unload, without waves crashing over them." E.O. Ord made the first map of Los Angeles, in 1855, and also mapped the port.



Early depiction of San Pedro harbor, *Los Angeles Examiner*

Los Angeles originally didn't have a commercial port. At that time, almost all of southern California was a land grant to the Southern Pacific Railway. Determining the best location involved both politics and logistics. S. White, a State Senator at the time, wanted the port and the railroad terminus to be in one place. The resulting commission selected San Pedro as the site of the port, over Long Beach and Santa Monica, and then made the harbor area independent of the railroad's land grant. In 1906, Los Angeles annexed a strip of land, nicknamed "the shoestring", which extended from the city to the port, connect-

ing the two formerly separate areas into one. The "shoestring" still exists today.

San Pedro was selected in part because the Los Angeles River reaches the ocean at that point, so that port and river were intertwined, despite the fact that the river flows underground during most of the year. To manage the occasional severe floods, the US Army Corps of Engineers has built a channel, with bottom panel and solid retaining wall sides to contain the water. The water from the river is not swimmable – it is effluent.

A port essential involves access and transportation, in order to facilitate the moving of cargo and goods to and from the ships. Trains began to arrive in the area in 1876. A 1904 map shows an "inner" and an "outer" harbor, which was open to the ocean. A major area need was lumber—the LA area had no natural supply. Lumber, generally from the Pacific Northwest, arrived by ship through the shipping channel that led to the inner harbor. There, it was off-loaded and taken to the railroad cars for transport. The diagram on the right shows the current configuration of the port:



The next presenter, Daniel Elroi, President and CEO of North-South GIS, shared some insights into port management with his presentation, *Modern Applications of GIS in Port Management*. Daniel was one of the first people to obtain a degree specifically in geotechnology for ports. The Port of Los Angeles is the largest container port in the United States and requires a very sophisticated system of management for optimal functioning. The system is built through a series of digital maps.

Daniel shared the fact that 30-40 ports in the North America currently utilize digital technology. They are located on the west coast and were designed to meet post-9/11 security concerns, mostly concerning Asia. Forty percent of all imports into the United States enter the country through the Los Angeles and Long Beach ports. Source data for ports is not widely available, due to security concerns. This makes GIS port mapping especially challenging.

Specific areas where GIS mapping is used for ports includes: (1) planning and development, through executive dashboards, visualization, strategic planning, outreach, event planning, and collaborative design; (2) environment management, including noise monitoring, spill investigation, vessel monitoring, and



North American Ports with GIS Capability

forensic investigations; (3) community issues, with data sharing, disaster recovery planning, evacuation, and marketing; (4) logistics; (5) asset management; (6) financial asset management; (7) security; (8) domain awareness, for law enforcement, access, situational awareness; (9) property management; (10) tenants, for mass notifications, security planning, first response, permit tracking, and work order requests; and (11) maintenance.

After a delightful lunch on a sunny terrace with spectacular views, and time to peruse the museum's collections, we heard an interesting lecture from Fran Siegel titled *Translocation*. Fran is an artist whose special interest is drawing maps which incorporate the passage of time. Traditional maps, as we are well aware, document a moment in time. Her art maps multiple time frames through the use of light and shadow, and the way in which space moves through light. As the earth moves, light and shadow change images in very special ways.

Fran shared many examples of techniques for mapping space through time. A map of Genoa illustrates her concept clearly. Through photos, we could see things which remain fixed: (the rocks along the shore) and things moving: (the light, white clouds which traveled across the sky.) Her Overland Series includes 20 drawings on paper, where "multiple views form one." In one example from the series, she took various photos of the same place from an airplane, then integrated them into a drawing. In another, she uses images from photos which incorporate micro and macro viewpoints. The distance of the viewer from the map affects what is seen: if the viewer stands close, micro images are clearly visible, the tiniest details of space and place. If the viewer stands farther away, an overall view of form and area is seen.

Another map details the construction of the bridge between Long Beach and San Pedro. This image integrates views from

photos taken during different periods of construction into one drawing. In another series, she coordinated images from Santa Barbara historical records using maps from the collection curated by Jon Jablonski to create an integrated whole map of Santa Barbara through time.

The next presentation, *Roadways to Accelerated Aging in Los Angeles* explored digital mapping as a technique for the evaluation and possible prevention of disease spread in the Los Angeles area. Caleb Finch and Constantos Sioutas from the University of Southern California shared the information that globally there are 3 million premature deaths per year attributable to air pollution caused by human activity—a number to raise considerable concern! Airborne toxins of human origin are preventable, and exist in two phases: the vapor phase, which includes ozone, nitrogen oxides and sulfur oxides and the particle phase, from biomass burning, fossil fuel burning, dust, and especially dust from vehicles and roadways. Roadways and cars are especially major causes of air pollution: experiments with weigh new cars, then re-weigh them after a year, document the fact that approximately 10 pounds of material is lost over a year's time, primarily due to wearing of tires and brake pads. In addition, there is much erosion from roadway material, and erosion from the earth's crust as well. Air pollution thickens carotid arteries and increases the risks of dementia. This was assessed in Ontario, Canada, by mapping disease incidence along with distances from area freeways.

As a coastal plain surrounded by mountains, where pollution is trapped among the hills, Los Angeles is especially vulnerable. In addition, localized pollution is caused by 9 million drivers, by LAX, the 6th busiest airport in the world and, to a lesser extent, the two major ports. Studies have also shown that children's lung development is directly affected by high levels of pollution, though no "safe" lower limits have as yet been determined. There are also generational differences in disease rates: the individual's history of smoking and lifestyle during the period of life prior to the adoption of pollution control policies affect levels of health as well.

Since pollution controls policies have been introduced, there has been a 20-30% reduction in airborne pollution in the area. The reductions have been from direct traffic changes and tailpipe emissions, but road abrasion pollution continues. Specifically, in the San Pedro-Long Beach-Wilmington area, mapping studies have shown that there is greater pollution in colder weather. Winter brings a high pollution concentration near the ocean, while summer's levels are much lower. Railroads and ship traffic produce about equal amounts of pollution—a much greater proportion than that caused by nearby freeway traffic. However, if all the Los Angeles area is considered, the ships and

Continued at MARITIME on page 27

MAPPING CONTINENTAL DRIFT

BY HENRI K. LESE, PH.D.

Legions of people have looked at maps of the world and wondered if the continents—especially Africa and South America—once fitted together and could have become separated. This process of separation is called Continental Drift, and the fact that it occurs is now universally accepted. But how does it happen? The idea of continents wandering around and “drifting” on a fixed globe is very misleading and inaccurate. The theory of Plate Tectonics provides a compelling explanation for how continents drift, a process which can also be visualized using mapping techniques.

Development of an Idea

Abraham Ortelius (1527 – 1598) is recognized as the creator of the first modern atlas, the *Theatrum Orbis Terrarum* (*Theatre of the World*), in 1570. He noticed the geometrical similarity between the coasts of America and Europe-Africa, and proposed Continental Drift as an explanation. In *Thesaurus Geographicus* he suggested that the Americas were “torn away from Europe and Africa ... by earthquakes and floods” and that “The vestiges of the rupture reveal themselves, if someone brings forward a map of the world and considers carefully the coasts of the three [continents].”

Since Ortelius, many scientists have speculated that the continents move with respect to each other. These include Charles Lyell, Alfred Russel Wallace, James Dwight Dana, Franklin Coxworthy, Roberto Mantovani, William Henry Pickering, and Frank Bursley Taylor. In 1885 Edward Suess proposed the supercontinent, Gondwana, assuming a now submerged land bridge between the present continents.

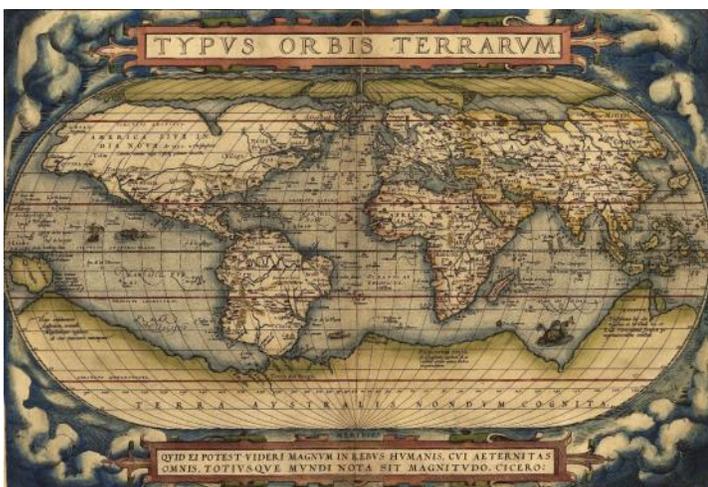


Fig 1 Ortelius World Map 1570

On the 6th of January, 1912, Alfred Wegener, a German meteorologist and climatologist, publicized his thoughts about Continental Drift in a lecture and three articles in the journal *Petermanns Geographische Mitteilungen*. In 1915 he published *Die Entstehung der Kontinente und Ozeane* (*The Origin of Continents and Oceans*), further expanding his ideas. He argued that all the continents were once joined together in a single landmass (Pangaea) and had since drifted apart. He also speculated about sea floor spreading and the role of the mid-ocean ridges. In his words, “the Mid-Atlantic Ridge ... zone in which the floor of the Atlantic, as it keeps spreading, is continuously tearing open and making space for fresh, relatively fluid and hot sima [rising] from depth.” He supposed that the mechanism causing the drift might be the centrifugal force of the Earth's rotation.

Wegener presented observational evidence that supports Continental Drift. His hypothesis was met with skepticism from geologists, however, as it lacked a plausible geological mechanism to explain how the continents could drift across the earth's surface.

Opponents argued that:

- the oceanic crust was too firm for the continents to “simply plough through;”
- Wegener's estimate of the velocity of continental motion, 250 cm/year, was too high;
- centrifugal forces generated by the rotation of the Earth were too weak to move continents.

A rival hypothesis stated that the continents were once connected by land bridges, which eventually sank into the oceans. Wegener dismissed this on the basis that it violated isostasy (gravitational equilibrium).

Evidence for Continental Drift

Wegener was not the first to suggest that the continents had once been connected, but he was the first to present extensive evidence from different fields.

Large-scale geological features on separated continents often match very closely when the continents are brought together. For example, the Appalachian Mountains of eastern North America match with the Scottish Highlands, and the rock strata of the Karroo system of South Africa are identical to those of the Santa Catarina system in Brazil.

The following map (Figure 2, next page) shows how identical fossils can be found in locations now widely separated.

These animals could not have crossed oceans, suggesting that the land masses had been connected when they lived.

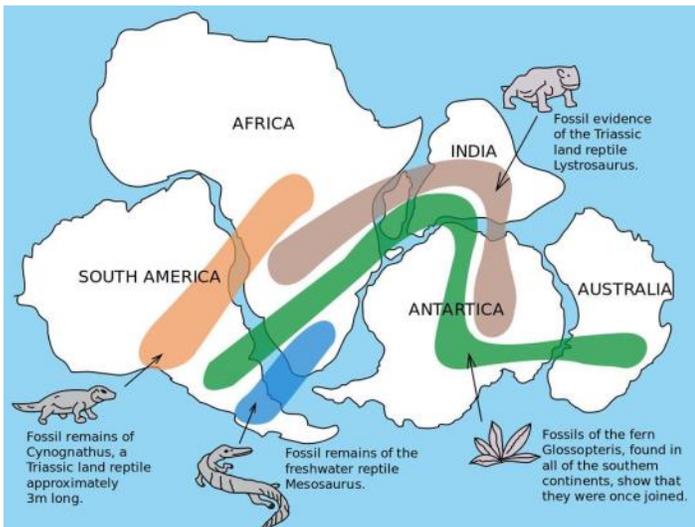


Fig 2 National Geographic Society

Fossils often indicate a climate was utterly different when they lived from the climate where they are found today. For example, fossils of tropical plants are found today on the Arctic island of Spitsbergen. These fossils must have “drifted” to their current location.

There is evidence for glaciation during the Carboniferous period. Striae left by the scraping of glaciers over the land surface in both Africa and South America show that they were close together at the time of this ancient glaciation.

The drift hypothesis also provides a plausible explanation for the formation of mountains. An older hypothesis suggested that the planet was once a molten ball, and that, as it cooled, the surface cracked and folded up on itself, forming mountains. If that were so, however, all mountain ranges should be approximately the same age, and they are not, thus negating the hypothesis. Wegener’s explanation, also found to be incorrect, was that as the continents moved, the leading edge of the continent would encounter resistance and thus compress and fold upwards. However, his suggestion that India drifted northward into the Asian continent to form the Himalayas was found to be correct.

Plate Tectonics

In 1919, Arthur Holmes elaborated on the idea that the Earth’s interior undergoes thermal convection. Hot, semi-molten rock in the Earth’s interior is less dense than the overlying cooler rock. This hot, lower density rock rises through the cooler rock, cooling and becoming denser in the process. Eventually, it sinks again. Convection is this cycle of heating and cooling, where currents within the Earth are strong enough to create motion in the overlying continents. Regarding upwelling pressure, Holmes notes that this process could even break a

continent apart, and drag the broken continental pieces in opposite directions, carried by the convection currents.

By 1960 much evidence had accumulated to support the thermal convection idea. For example, paleomagnetic data suggested that the ocean floor on each side of the mid-Atlantic ridge was moving away from the ridge. The youngest oceanic rocks occur near the ridge; older rocks are further away. The movement of sea floor away from mid-oceanic ridges is called sea floor spreading.

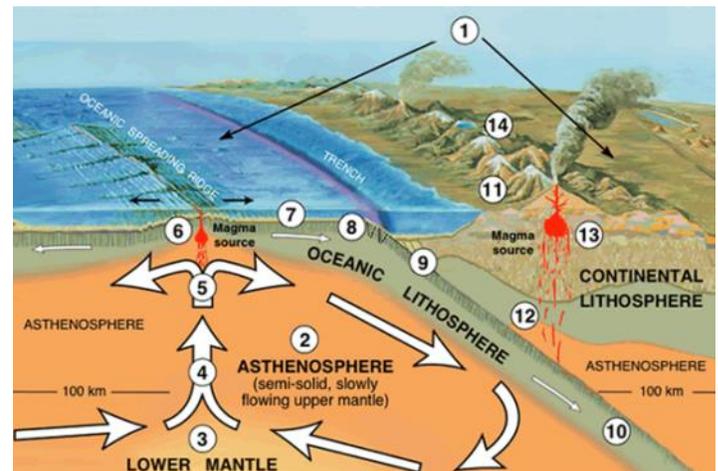


Fig 3

In the early 1960s Harry H. Hess and Robert S. Deitz independently published similar hypotheses based on thermal convection currents within the Earth. Both Hess and Dietz theorized “Plate Tectonics” as shown in Figure 3.

- The crust of the Earth consists of a number of rigid “plates,” which move with respect to each other.
- Hot magma slowly rises through the asthenosphere, creating volcanism at the oceanic ridges. As the magma cools it forms a new crust “oceanic lithosphere” and pushes the plates apart.
- Eventually the dense lithosphere sinks back into the asthenosphere in a process called subduction. It is heated and partially melts.
- The less dense reheated rock can eventually recirculate back to oceanic ridges.

Upwelling in the convection currents causes magma to reach the ocean bottom, forming new rock. This occurs at the mid-oceanic ridges. The ridges are shown in Figure 4, next page.

Downwelling of the convection currents drags the sea floor downward at oceanic trenches. One cycle in this process takes hundreds of million years, because the motion is very slow.

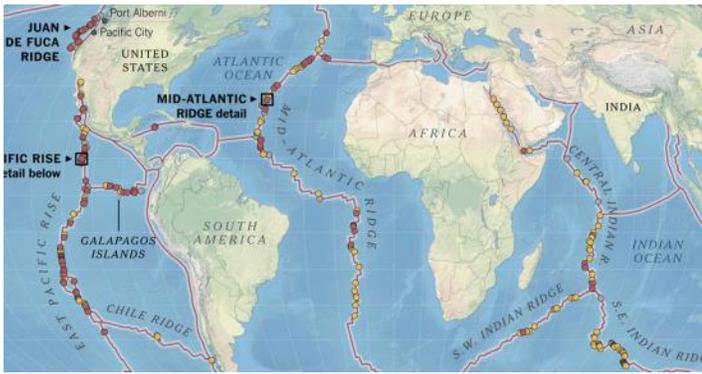


Fig 4 New York Times

In this scenario continents do not drift by pushing through the crust on which they reside.

Rather, the less dense continental rocks float on top of denser crustal rocks—the continents go along for the ride.

As we have seen, the Plate Tectonics theory provides an overarching explanation for continental drift and geological events such as mountain building, earthquakes and volcanoes. If one plate subducts under another, and both plates have continents, the lighter continental rocks are not subducted but crash into each other, forming mountains. This process is happening now, as India “crashes into” Asia, forming the Himalayas. Volcanoes such as the Cascades form when magma drifts up from descending lithosphere into continental rocks. This volcanism is very different from that found at mid-oceanic ridges. Earthquakes in subduction zones are very violent as the lithosphere is dragged under continental areas such as Chile, Alaska and Japan. Earthquakes in which two plates are sliding past each other, although strong, are not as violent as subduction earthquakes. An example is the Pacific Plate sliding by the North American Plate, along the San Andreas fault.

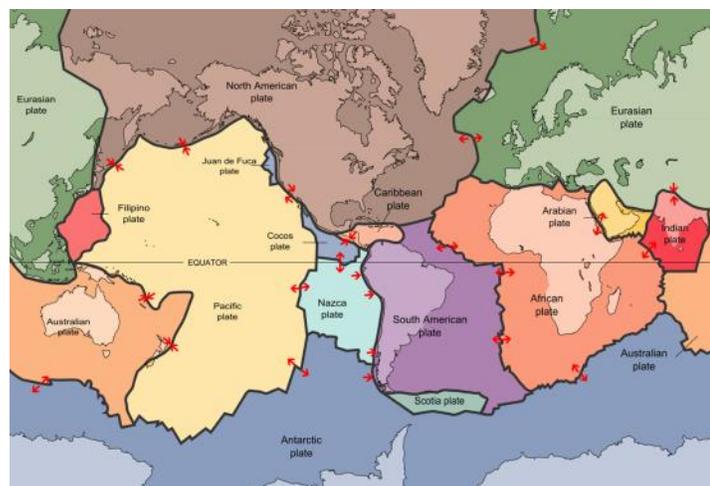


Fig 5 USGS

Figure 5 shows a map of tectonic plates as they exist today. The red arrows show the direction of motion relative to the adjacent plate. The rate of motion ranges from one to 7 centimeters per year (about ½ to 3½ inches per year)! That doesn’t sound like much, but over hundreds of millions of years the continents can move over vast distances.

What will the Earth’s Surface look like in the future?

Just as Africa once split from South America, parts of East Africa are currently splitting from that continent. The Somalian sub-plate is splitting from Africa along the East African Rift System. The part of the African continent on this sub-plate will likely someday be a new continent – many millions of years from now. Figures 6 and 7 illustrate this process clearly.

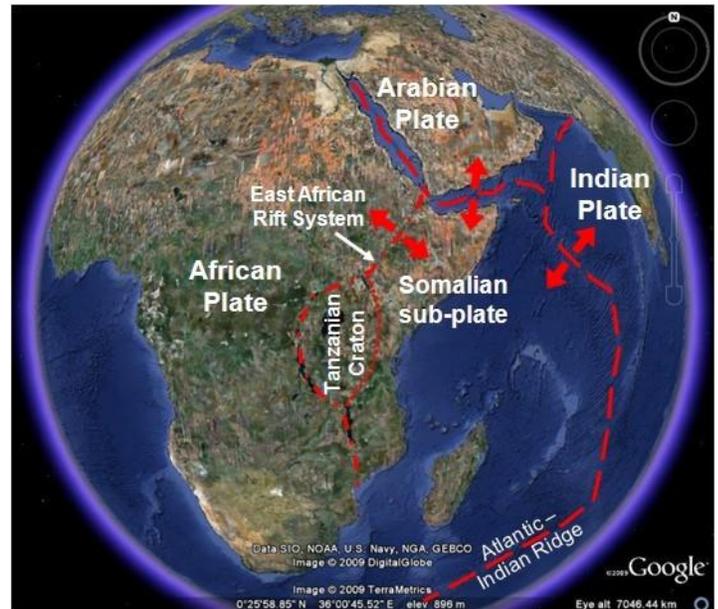


Fig 6

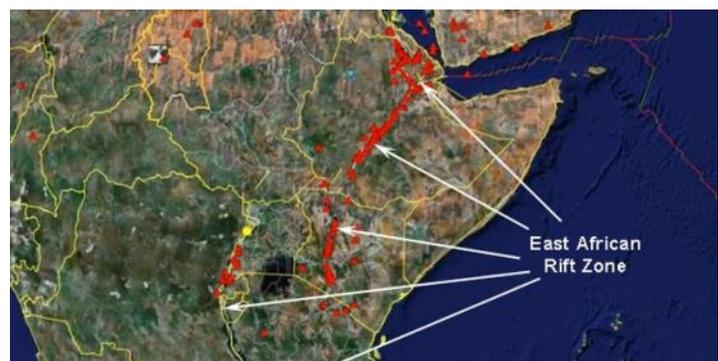


Fig 7

Visualizing Continental Drift

Ian Webster, an engineer, has created data visualizations and blogs about a wide variety of issues and technologies, several of which focus on planets, including our own. They can all be found at www.ianww.com.

One of Webster's visualizations, called Ancient Earth, can also be found at <https://experiments.withgoogle.com/ancient-earth>. It shows the position of continents at a fixed time in the past. You can select the time (in millions of years ago) at the top. The visualization shows the position of continents at that point in time on a slowly rotating globe. This has a huge advantage over Mercator type projections, which exaggerate the size of continents near the poles.

Notes

- 1 https://en.wikipedia.org/wiki/2Abraham_Ortelius#Theatrum_Orbis_Terrarum
- 2 https://en.wikipedia.org/wiki/Continental_drift
- 3 The lower level of Earth's crust.
- 4 Alfred Wegener, "The Origin of Continents and Oceans," Translated from the Fourth Revised German Edition by John Biram, Copyright © 1966 Dover Publications, Inc., New York
- 5 <https://www.amnh.org/learn-teach/curriculum-collections/earth-inside-and-out/arthur-holmes-harnessing-the-mechanics-of-mantle-convection-to-the-theory-of-continental-drift>
- 6 H. H. Hess, History of Ocean Basins, <https://doi.org/10.1130/Petrologic.1962.599>, (1 January 1962).
- 7 Robert S. Dietz, Continent and Ocean Basin Evolution by Spreading of the Sea Floor, *Nature*, volume 190, pages 854–857 (03 June 1961).
- 8 Ian Webster, with permission.

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- <http://www.ucmp.berkeley.edu/history/wegener.html>
http://etcweb.princeton.edu/CampusWWW/Companion/hess_harry.html
<https://pubs.usgs.gov/gip/dynamic/HHH.html>
<https://www.e-education.psu.edu/earth520/node/1793>
<https://pubs.usgs.gov/gip/dynamic/HHH.html>

MARITIME, Continued from page 23

railroads contribute a much smaller proportion overall than the freeways, which are by far the major cause of pollution. Mapping techniques demonstrate that air pollution has a **major** effect on health, which leads to a consideration that distance from freeways affects residents—and potential socioeconomic differences in residential areas.

Our last presenter, Julie Sweetkind-Singer, shared insights from her study of wartime mapping. Her talk, *Geographers at War: The Office of Strategic Services Mapping Program*, focused on the mapping which began during World War II, and featured maps from the Stanford University Library's collection. The Office of Strategic Services was created in 1941, and exist-

ed until 1945, when its functions were moved partly to the Department of State, and partly to the CIA. Arthur Robinson was the chief of the Map Division of the Service, which consisted of a number of departments, including Special Photography, Cartography, Map Information, and Topographical Models. The service divided its numerous projects by area, which provides some insight into the areas of concern during



Berlin: District Boundaries, 27 March 1938. From exhibits.stanford.edu/oss-maps at Stanford University

WWII: Europe, the USSR, "Far East", and Latin America. Each project area was further subdivided politics, geographics, and economics.

It was especially interesting to note that the Map Division had 38 geographers but no cartographers, rendering good geographical information available, but challenging to map with no cartographers available! The collection included almost 4,000 maps, which the Division procured, prepared, and also created. The maps could stand alone or were incorporated into reports used by the War Department and others. During the four years of its existence, the Map Division responded to 50,000 requests for maps, and distributed over 5,000,000 intelligence maps. Julie suggested viewing the website of the Office of Strategic Maps at Stanford, exhibits.stanford.edu/oss-maps for additional information.

President Caughey closed the day with a brief member's meeting, reflecting that the Society is financially solvent and had a robust increase in membership in 2018.

The CMS Spring meeting is scheduled for Saturday, April 13th at the Rumsey Map Center at Stanford University—please read about plans for this meeting beginning on page 2 of this issue, and plan to attend!

EVERYONE A SOLDIER! A 1958 OCTET OF MAOIST MILITIA TRAINING AND WALL MAPS

BY EDWARD C. LANFRANCO, PH.D.

I was fortunate to acquire a few intriguing book, map, document and other material culture objects from recent Chinese history during my time based in Beijing between 1988 and 2009. One of the more fascinating items panning out for me as a cartophile devotee of Panjiayuan, the city's famed flea market, was a double-sided eight sheet set entitled 民兵训练挂图 (*Minbing Xunlian Guatu*), People's Militia Training Wall Maps.



Fig. 1

The images shown here are part of an intact first edition including its outer wrapper (see Fig. 1). The initial print run of 230,000 sets was produced by the Beijing and Shanghai offices of the Cartographic Publishing House and distributed by New China Bookstore outlets nationwide. Issued in November 1958, these sheets come from a period when Mao Zedong's Great Leap Forward (GLF) was on its disastrous upward trajectory, promulgating unrealistic production targets for rapid industrial development and impossible timelines to complete massive infrastructure projects, all in a bid to transform Chinese society from its agrarian base into a showcase of Communist paradise attained. Estimates in the death toll for the famine associated with GLF policies range between 15 and 55 million.

A largely forgotten part of Mao's cataclysmic contribution to the Marxist-Leninist canon was a hairbrained concept of supplying weaponry to 220 million members of the countryside with his 'Everyone a Soldier' (*Quanmin Jiebing*) idea. The enumerated side of this document set illustrates the types of training designed for the militia while the other reveals the content of political propaganda maps at the height of the GLF.

This examination of the People's Militia phenomena shows poster number two of the instruction diagrams (Fig. 2) and gives a summary of the content of the last four maps in the set

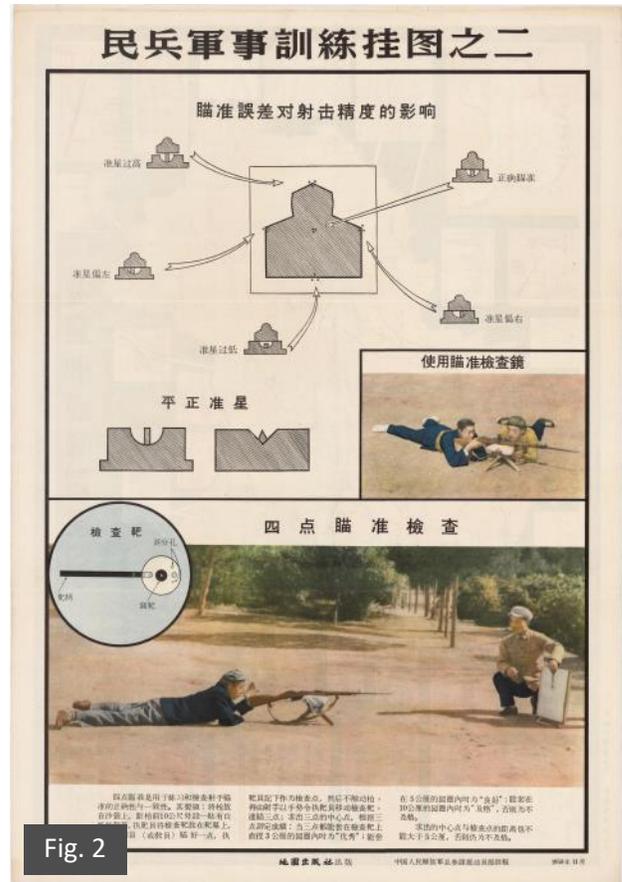


Fig. 2

covering militia history. However, the main story is about the first four maps (see Figs. 3-6) in the set. These are gripping pieces of cartographic evidence concerning key events of the Great Leap Forward as they were happening in 1958.

The back side of the outer wrapper explains that "the military training was divided into two forms: weapons training and combat positions" and states there are "more than 30 images representing a variety of shooting and basic combat movements and postures, with each figure accompanied by a brief explanatory text that was approved by the Mobilization Department of the People's Liberation Army General Staff."

This is the timeframe when China used the phrase "paper tiger" to lambaste its enemies, meaning their powers looked impressive on paper, but were ineffective in reality. The "Everyone a Soldier" movement, where the militia went from 5.5 million members in 1955 to 220 million by early 1959, was a Chinese paper tiger. Official records indicate that this massive increase

in militia numbers suffered from a notable “degree of formalism” a Marxian euphemism depicting an organization significant on paper only- and thus many of the units created were not sufficiently “pure,” meaning there was either a lack of enthusiasm or vigilance by local Party committees resulting in the conscription of undesirable elements or other miscalculations in membership.

Apparatchiks across the Party/State/Military nexus never genuinely tried to implement Mao’s delusion of arming and training everybody the rural populace between the ages of 16 and 50. The militia was divided into two clear categories: 15% (approximately 30 million people) were considered reliable and designated as “core” militia members and received a smattering of soldiering based on the charts of this set. A state-controlled media report from December 31, 1958 noted that there were over 30 million trained militiamen, then admitted only four million of those recruits received marksmanship practice with live ammunition.

All the training provided by regular army troops and political commissars adhered to the principle propounded by Mao that the Party controls the gun and never permits the gun to control the Party. The other 85% (190m rural residents) were deemed “ordinary” militiamen and women who probably never came closer to a rifle than looking at these posters. In fact, Mao was quoted in the newspaper Jiangxi Daily on December 13, 1959 as saying “the establishment of militia divisions on a large scale is not purely a question of mobilization of manpower, collective action and fulfillment of production tasks. It is a question of having the masses militarize and collectivize their life.”

The second half of the map images (not shown here) centers on the history of communist-led militia forces from its creation in 1927, the roles it played in revolutionary base areas during the war with the Kuomintang under Chiang Kai-shek, its functions during the Long March as well as Sino-Japanese War and the post-World War Two campaigns leading up to the victory

of Mao and his minions in 1949. However, the most alluring part of the Militia set are the first four maps covering different aspects of the Great Leap Forward and the events of 1958.

The first map in the series (Fig. 3) is entitled World Situation and offers three different types of information. Inside the top center of the map and going clockwise there are six major insets starting with the dozen countries of the Communist camp in 1958, followed by a pie chart showing the percentage of the earth’s surface controlled by Socialist, Imperialist, Independent, Colonized and former Colonial countries. The legend in the lower right corner explains the political color coding of landmasses and uses torch heads to show the location of uprisings. Next is a picture comparing the satellite prowess of the Soviet Union versus the United States. The lower left corner has charts showing 41 Years of Socialist Development, 1917-1958, and the upper left corner has a chart comparing the world population figures broken down by Socialist (960m), Imperialist (400m), Colonized (600m) and Decolonized (700m) camps.

The second informative images are boxes pointing to recent political events in various regions. The four boxes for North America illustrate the US as the new center of global imperialism, plus unrest in Cuba, Puerto Rico and the Panama Canal. The three boxes for South America cover events in Venezuela (July 1958), Colombia (1949-1958) and represent the rough reception Vice President Richard Nixon received during his tour of Latin America (May-April 1958). East Asia has boxes for Japan, South Korea and Taiwan, all linked to US imperialism. The three boxes for Southeast Asia have one for Vietnam and the 1956 Geneva Conference and two about Indonesia. Two boxes in Southwest Asia cover events from August 1958 in Jordan and Lebanon. For Europe, the French and British boxes denoting imperialist activities are cited plus the major Communist Party conference that took place in Moscow in November 1957. Africa has four boxes covering Algeria, Guinea, Nigeria and Egypt as well as 13 separate uprisings on the continent.

The final significant part of the map (bottom center) has Mao’s famous quote about the “East Wind prevailing over the West Wind” which suggested two different interpretations: one was that the balance of global power had tilted in favor of the Communist camp; the other was following the death of Stalin, China under Mao had taken over the leadership of world revolution.

The second map in the set (Fig. 4, next page) is entitled “The Motherland’s Important Construction Achievements.” It’s a brilliant example of the unrealistic economic production tar-



Fig. 3



Fig. 4

thanks to heroic Chinese miners. The map also has 22 boxes illustrating a variety of economic and infrastructure projects.

“The People’s Communes are Good” is the title of the third map (Fig. 5), which shows the first experiment of combining agricultural cooperatives into communes during the GLF. Formed in April 1958, the Chayashan Satellite People’s Commune was located in Suiping County, Henan Province. The Satellite in the name refers to Sputnik. By the autumn of 1958 rural China was organized into more than 26,000 communes. The text provides a comprehensive breakdown of the farming and social services collectivized in the commune.

The fourth and final militia map (Fig. 6) for discussion here is the “Motherland’s Beautiful and Rich Taiwan.” It also pertains to one of the major events of 1958. In August and September that year mainland China and the Republic of China (ROC) Taiwan exchanged artillery fire focused on the ROC-held islands of Quemoy and Matsu off the coast of Fujian province in an event now known as the Second Taiwan Strait Crisis. The map shows the natural resources of Taiwan and comes with a text describing China’s historical claim to the island.

gets and massive infrastructure projects set during the Great Leap Forward.

There are eight pink colored boxes covering the goals set in sectors including Petroleum, Iron, Steel, Machinery, Railways, Public Road/River/Air Routes, Electricity Transmission and Coal. One amusing little detail from the Coal section is an Englishman running away in shame as production figures surge

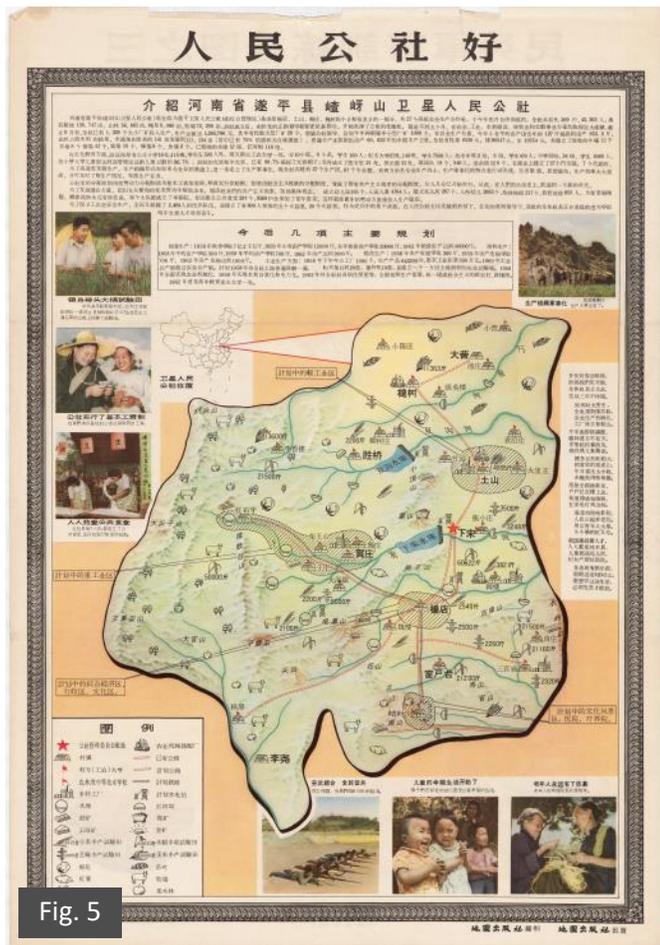


Fig. 5

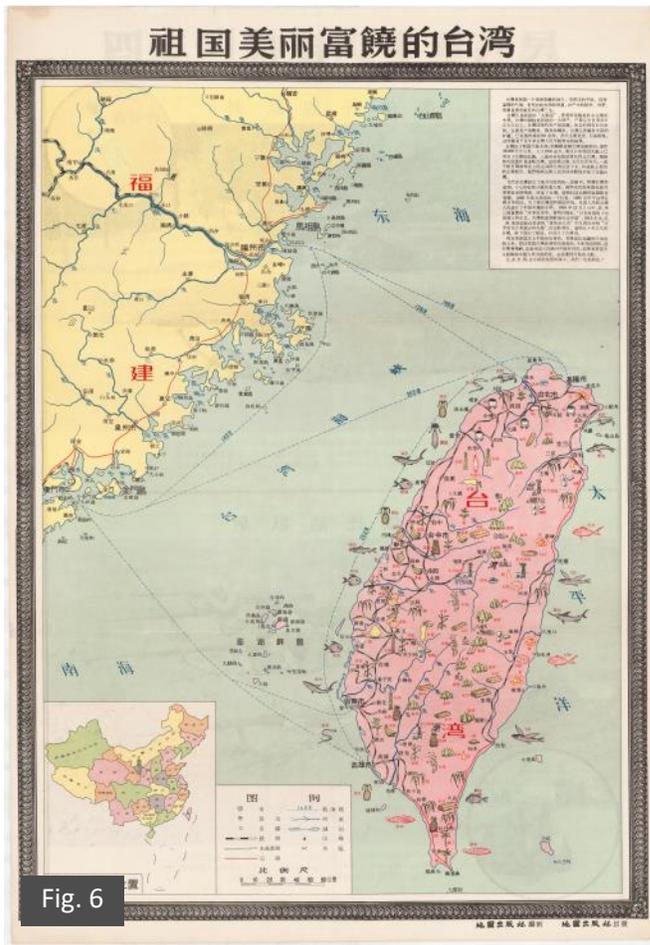


Fig. 6

MAPPING THE NICARAGUAN CANAL

BY MICHAEL JENNINGS, PH.D.

An especially important subgenre of cartographic productions in the 19th and early 20th century was the use of maps in proposed transportation infrastructure projects, especially canals and railroads. The magnificent 1858 map* of the planned route of a Nicaragua canal, embracing all of southern Nicaragua, is historically notable as part of the earliest well-developed technical plan for a Nicaragua Canal, a project that is still contemplated today, and has been in active planning as recently as 2014, with Nicaragua president Daniel Ortega supporting a Chinese-funded plan.

The map was the product of a French project with a rather colorful history, including the malfeasance of the map's maker, Aimé Thomé de Gamond, a 19th century engineer. Gamond is fondly remembered today as "the father of the tunnel," for the work he did to prepare for the Channel Tunnel, but it's amusing to speculate whether he might not instead have been famous for a Nicaragua Canal, had he not stolen funds from that project to fund his Channel Tunnel project.

A Nicaragua Canal

Almost since Europeans first crossed Central America and sighted the Pacific Ocean, they have dreamed of a canal that could shorten the long, dangerous trip through the stormy southern seas around Cape Horn. The early European explorers had sailed west, seeking

a quicker journey to Asia than the long voyage around the southern tip of Africa, and had discovered the Americas, which, for all the opportunities they offered, were blocking the route to Asia. The route south and then north along South America was long and extremely perilous, and there was no corresponding Northwest Passage through Arctic seas north of Canada. For today's ships, stormy seas pose less of a threat, but the long trip south still takes weeks longer than the time spent simply passing through the Panama Canal, creating the huge increase in cost and time that gives the Canal its economic and strategic significance.

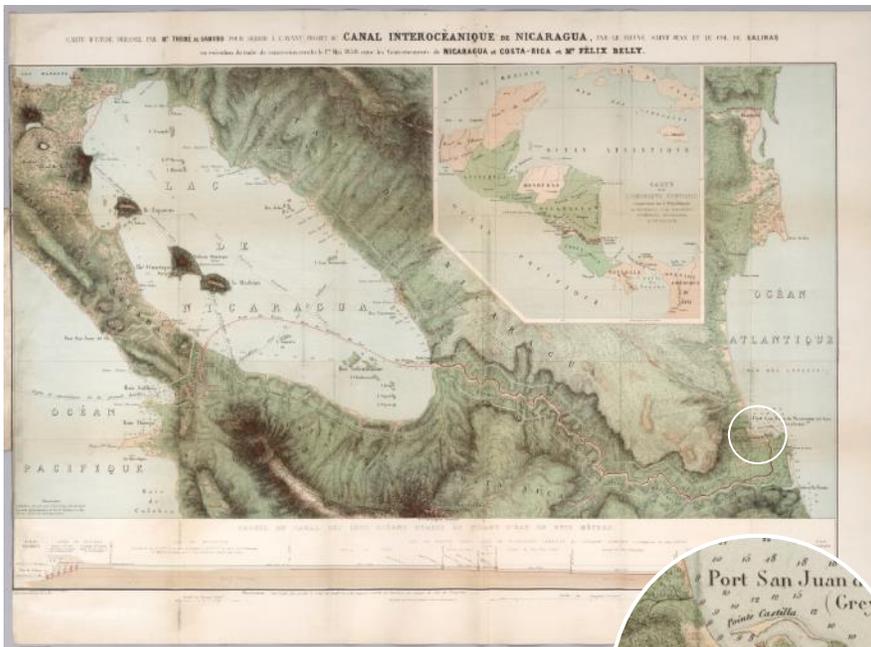
Central America only narrowly divides the Atlantic from the Pacific—the Panama Canal is a mere 50 miles long. As early as the 16th century, New Spain was considering various crossing routes. To the south was the narrow but mountainous Isthmus of Panama. To the north, Mexico's Isthmus of Tehuantepec, an historically significant overland route, as shown, for example, in a 1736 map*, specifically notes two navigable rivers that aid transport. Between these two sites lies Nicaragua, where the navigable San Juan River connects the Caribbean to Lake Nicaragua, which is separated from the Pacific by the narrow Rivas Isthmus, only 12 miles wide at its narrowest point.

France's Second Empire and Félix Belly's Nicaraguan Canal

During the reign of Napoléon III, France's Second Empire embarked upon a period of imperial expansion in Asia, Africa, and the Americas, including the failed attempt to set up a Second Mexican Empire. In 1846, two years before the revolutions of 1848 put him in power, Napoleon III had written a pamphlet about a possible Nicaragua Canal, a project that had his sympathies, and for which he turned to a well-known journalist, Félix Belly.

Belly had risen to fame in the early 1850s, particularly for his writings from Istanbul. In 1856, he was inspired to pursue a Nicaragua Canal, and by 1857, Napoleon III had made him an envoy to Central America. Belly formed an official company, and convinced the banker Moses Millaud, of Crédit Mobilier, to back the canal venture, including funding for an exploratory expedition to Nicaragua.

When Belly arrived in Nicaragua in early 1858, the country's president, Tomás Martínez Guerrero (in office 1857-67), was eager to build an inter-oceanic canal, which would benefit Nicaragua's economy. For much of its length, however, the San Juan River—the planned route for canal shipping—forms the border between Nicaragua and Costa Rica, thus necessitating Costa Rican cooperation. Within weeks of his arrival, the charismatic Belly had convinced Martínez and Costa-Rican president Juan Rafael Mora to sign the Cañas-Jerez Treaty (April 15, 1858), which not only committed the two



Carte d'Etude dressée par Mr. Thomé de Gamond pour servir à l'avant-projet du canal Interocéanique de Nicaragua, par le Fleuve Saint Jean et le Col de Salinas en exécution du traité de concession conclu le 1er. Mai 1858 entre les Gouvernements de Nicaragua et Costa-Rica et Mr. Félix Belly, printed by Avril frères, Paris. Image courtesy of David Rumsey Historical Map Collection.

nations to cooperate fully in building the canal, but also gave Belly's company exclusive rights to its construction and management.

However, Belly's early success with the Nicaraguan and Costa Rican presidents was followed by a key error: he encouraged Martínez and Mora, both of whom harbored anti-American (anti-U.S.) sentiments, to make a joint, public declaration that the canal project would specifically exclude American involvement, and, almost immediately thereafter, in the summer of 1858, traveled to the United States to find additional investors. His influence in the Martínez-Mora declaration was known, and he met with no success.

Belly returned to Paris so short of funds that he had to borrow money from the Honduran ambassador for his own passage. Once home, he found that his sponsor, Millaud, was himself nearly bankrupt, having lost his money on a wide assortment of international speculative schemes.

Recruiting Gamond and the failure of the project

Despite the setbacks, Belly continued pursuing the project. It was at this time that he approached Aimé Thomé de Gamond, an engineer with an international reputation and a significant fortune, which he had earned as a mining and canal engineer in the Netherlands.

Gamond had already begun his pursuit of a tunnel between France and England — another project supported enthusiastically by Napoleon III. Gamond agreed to serve as Belly's technical advisor and as his representative in Paris. As part of the agreement, Belly placed Gamond in charge of his company's finances, and even entrusted Gamond with his power-of-attorney, allowing him to borrow money on Belly's personal account.

The early relationship between Belly and Gamond produced the publication that includes Gamond's excellent map of Nicaragua and of the planned canal. The map captures the topography in gorgeous chromolithographed relief, and shows the route of the passage from the Caribbean, up the Río San Juan, across Lake Nicaragua, through the envisaged canal and locks traversing the Rivas Isthmus, and entering the Pacific at the Bahía Salinas, along the Nicaragua-Costa Rica frontier. Below is an engineer's cross-section of the canal route, and in the upper right quadrant of the composition is a map of the greater region.

Unfortunately for them, this magnificent map was the approximate high-water mark of the project, for, upon Belly's return to Central America, his attempts both to manage the initial prospecting stages of the vast engineering project and to gain funding and political support went awry.

He founded a base named Felicia, at the juncture of the Río Frio and Lake Nicaragua, but he and his men made little progress, with many falling ill or dying from tropical diseases. Belly's poor management led to his failure to meet with Presidents Martínez and Mora at a pre-arranged conference. Later, the steamship on which

he was traveling across Lake Nicaragua exploded, Belly and his crew were presumed lost, and his company's team in Felicia immediately decided to return to France. When Belly finally arrived at their camp in a lifeboat, he found it deserted.

Meanwhile, U.S. diplomats, who, at the urging of Cornelius Vanderbilt, had signed an 1849 contract with the Nicaraguan government granting them rights to build the canal, managed to convince President Martínez that Managua's future was best secured with the United States. This led Martínez to rescind the canal monopoly that had been granted to Belly by the Cañas-Jerez Treaty, thus opening the project to new suitors. Furthermore, when President Mora of Costa Rica was deposed in August 1859, the gains made during Belly's early political work in support of the canal were lost.

Belly returned to Paris again, this time to find that Gamond had borrowed vast sums of money under his name, all of which had apparently been exhausted in Gamond's work on the Channel Tunnel. Belly could not find any private entity willing to lend him additional funds, and the government of France, which was involved in the Second War of Italian Independence (1859-61), would not come to his rescue.

In the midst of these troubles, in February 1861, the man whom Belly had entrusted to manage his affairs, J.B. Roussel, sold Belly's stake in his own company in order to pay some of its debts, but declined to inform Belly. While Belly then sued Roussel, and would eventually win the case (in 1865), his opportunity to build the canal had passed. France would make one last attempt at placing an imperial presence in the Americas with Ferdinand de Lesseps's failed attempt to build a Panama Canal during the 1880s.

Epilogue

Gamond's map for the Nicaragua Canal is now only a memento of Belly's failed efforts. Gamond, who had built fame and fortune with his early work, lost his fortune (and, as we have seen, some of Belly's), but he continued his pursuit of the Tunnel. Both Napoléon III and Queen Victoria accepted his 1867 plan for a railway tunnel, though the plan was soon interrupted by the 1870 Franco-Prussian War. Later in life, now poor and with reputation in tatters, his daughter famously supported his efforts both in person, rowing the boat when he dove in the Channel for geological samples, and financially, through her work as a music teacher.

Today, Gamond is hailed as a visionary for the same pursuit of the tunnel that had led to his earlier ridicule, while his role in Belly's Nicaragua Canal project--both his help and his hindrance--is largely forgotten.

References

David Rumsey Collection (online): 4386.004; Kapp, *Maps of Central America*, no. 263; Palou 27059; Sabin 26518; Cf. C. Allen, 'Félix Belly: Nicaraguan Canal Promoter', *The Hispanic American Historical Review*, vol. 37, no. 1 (1957), pp. 46-59.

APPS FOR MAPS

MINING THE CONTENT OF MAPS: CREATING DIGITAL TOOLS AND HARDWARE FOR THE DAVID RUMSEY MAP CENTER

BY DAVID RUMSEY



Upper left: 16 x 12 ft 8k screen center, 12 x 9 ft 6k touch screen left; upper right: 60" 4k touch screen and event display in lobby; lower right: 60" 4k movable screen in the map center.

In planning for the David Rumsey Map Center, Salim Mohammed (Head and Curator of the Center) and I realized that to meet our goal of having a strong set of digital tools and apps to assist scholars, presenters, students, and faculty in using the center, we would have to design some of the tools we needed from scratch, and modify others that were already available to us. In addition to the software tools and apps, we also needed to conceive and design the hardware—computers and visual displays for the Center. Together this software and hardware would help users mine the content of the Center’s maps and also help them better understand their paper originals.

We started with the hardware. The two large visualization screen walls were adapted from existing models by Cinemassive to meet our goal of extremely high resolution—maps demand high-resolution, but most video walls had been designed for video, which is much lower resolution. We achieved our resolution through custom designed computers and video switchers, along with the most narrow bezel (the edges) displays that had yet been manufactured to give the visual sense of a continuous screen surface. The 16 x 12 foot main display is 8k resolution (8,000 by 4,000 pixels) and the 12 x 9 foot touch enabled display is 6k (6,000 by 3,000 pixels). The critical visual impact of the screens is that they allow the viewer to see the maps in sharp detail when viewed only a foot or less from the surface,

which is very important for map study. The screens’ large sizes are also immersive – again, very important for maps, which are about space, and our ability to be in that space. The video switchers allow users to put their own content on the screens directly from their laptops, which enables a greater variety of content to be shown. We also encourage users to create very high-resolution content, and to upload it directly to our on-site computers to take full advantage of the 8k and 6k resolutions. We added a third 60” touch screen in the lobby area of the Map Center, both to announce Center events and to show exhibition content. And, finally, we included a movable 60” screen for teaching and research use within the Center.

The screens were launched in early 2016, and typically have a five-year life span. We are already looking into the next generation of screens and computers that may be available in 2021, when we will redo the visualization walls. Redoing and updating is a fact of life for Center planning—technology refresh is part of our DNA.

To display maps on the screens at the Center, we use a mix of software programs. Stanford Searchworks, the main library catalog, is one of our primary discovery and display tools. The software programming team at the library enhanced its image display capabilities in order to handle the large number of atlas-

es in the Center’s digital collections. We also use the Luna Imaging discovery and display platform. Together, these tools give us access to over 200,000 images. In addition, both Searchworks and Luna enable IIIF discovery and display through the Mirador viewer developed at Stanford Library. This allows us to bring in images from other map collections that have IIIF capabilities—enabling access to a huge pool of images worldwide. Users can explore images, save them in groups, download them for offline use and publication, and share them with others. They can do this while they also explore the paper maps available at the Center.



Five georeferenced early maps of Baltimore compared to each other and a modern map in the Georeferencer grid.

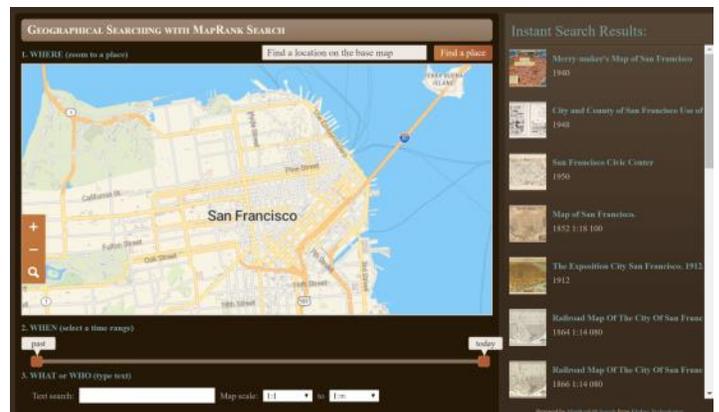


The Miradoor viewer for IIIF images – accessing content from distant map libraries.

Georeferencing is a software method that we use at the Center to allow maps to be accurately compared to each other and to modern satellite imagery. Initially we ourselves did the georeferencing, using desktop applications and displaying the results in Google Earth. We have done about 1000 maps this way. About 4 years ago, we added a georeferencing tool customized for our use by Klokan Technologies, that works in our online Luna application and allows any user to georeference maps. Over 34,000 maps have been georeferenced by our users with this method.

Once georeferenced, maps can be overlaid to see changes over time or compared side by side in groups to show different methods of cartographic representation.

Georeferencing also enables searching by map, rather than just searching by place name by using Map Rank Search, again cus-



MapRank search showing results of San Francisco map selection, with filters below.

tomized for our use by Klokan and embedded in the Luna viewer. Users simply draw the area they are interested in on a map, and MapRank returns the maps that are closest in coverage to what has been drawn. A time line allows specification of the time period, and there are additional filters such as scale, and key word search.



The Georeferencer tool, showing the method of georeferencing a map with common points.

Google Earth is frequently used at the center, both to show historical georeferenced maps and to show modern imagery. We primarily use the desktop client version, but the new web-based version will soon be incorporating our map layers, and we expect to see increased use of that as well. The web version has the advantage of being able to create URL links to any map or location within that map and share that information with other users or save it for later use.



Urbano Monte's flat polar projection 1587 world map georeferenced and placed as a globe in Google Earth.

For the 60" 4k touch screen in the center lobby, we commissioned a bespoke "screen saver" program from Stamen Design that shows zoomed-in views of the maps that are currently on exhibit in the Center. Touching the screen reveals the metadata for the map, and allows the user to explore the map. We occasionally use the same program on the two larger screens in the center.

Another approach to showing digital content is a commissioned software program by Adam Brin that we call the "Waterfall", which shows rows of map image thumbnails slowly scrolling up the 12 x 9 foot 6k touch screen. Thousands of thumbnails can be shown over several hours. The source can be the current exhibit, or any themed groups that viewers desire,



User exploring the "Waterfall" of map images on the 12 x 9 foot 4k touch screen. The thumbnails move slowly up.

such as world maps, Africa maps, pictorial maps, etc. Viewers can touch any of the thumbnails to blow up the map full screen and explore further. This program provides visitors with a



Exploring Virtual Reality with an Oculus Rift headset.

strong sense of the breadth and depth of the center's digital collections.

Virtual Reality is a growing field and is represented at the Center with 4 Oculus Rift headsets. We have commissioned a VR version of the famous Turgot 1739 map of Paris. We also use the VR version of Google Earth and other VR programs that are spatial in nature. We expect this area of interest to be growing in the future at the Center.

A very elegant piece of technology that sits quietly at the center of the top shelves over the bookcases are over 20 Mova Globes, which were provided to the Center by Mova International and have been slowly turning in their cases since the Center's opening, in 2016. Solar cells inside the globes produce electricity which drives the motors that turn the globes. Represented in the display are the planets, the moon, the earth, and historical globes.

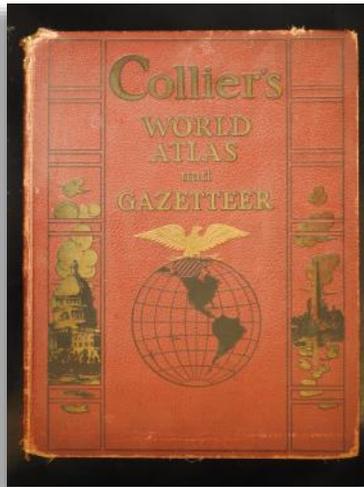
We anticipate that these computer programs, tools, and hardware will change and be expanded as the Center adapts to both the changing needs of its users and changes in the technology itself over time. Perhaps, in 20 years, we will look back at these deep map creation tools as "antique" and collectible!

The creation of these resources at the Center has been the result of a team effort of the center staff, Salim Mohammed, Deardra Fuzzell, TJ Cruzada, and Emily Prince, as well as support from Julie Sweetkind-Singer, Mike Nack, Deni Wiklun and Bob Schwarzwald of Stanford Libraries. Klokan Technologies, Luna Imaging, Stamen Design, Adam Brin, Ideum, Google, Mova International, and Cinemassive provided hardware and software consulting. The lesson we have learned from working with advanced technologies is that you get the best results with group effort and collaboration.

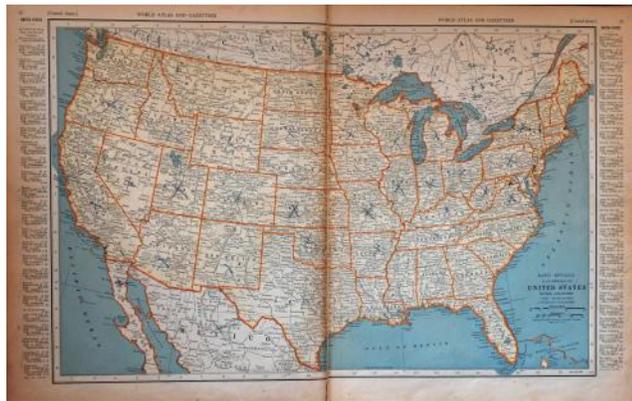
BIOGRAPHY OF AN ATLAS

JUDITH A. TYNER, PH.D.

The atlas resides on a high, dusty shelf—long unused and no longer useful. The dusty cover is a pebbled red leatherette with the world embossed in black and gold. But once it had an important role; not as a significant volume in national or world affairs, but for a family to understand those affairs. The atlas was published in 1937 by Colliers, a popular magazine of the time, with maps by Rand McNally. It contains country and state maps in color, black and white thematic maps and city maps and a gazetteer plus maps of the heavens and the solar system.



Colliers World Atlas Cover

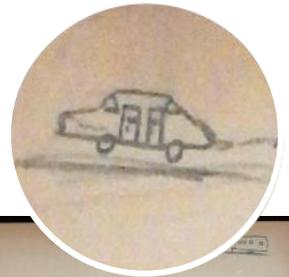


The United States, pages 12 & 13

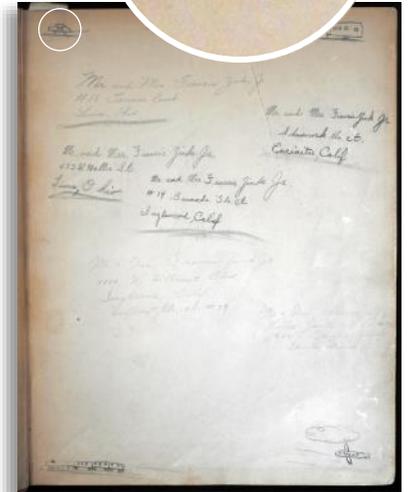
Typical of its time, the atlas is printed by cerography, i.e. wax engraving. Only three colors were used in addition to black—blue, cream, and orange. The US map does not show the states in different colors, nor are colors used to differentiate countries or minor civil divisions. No roads are shown on the primary maps, only railroads. This era was long before the creation of the interstate system and only 10 years since the origins of the US highway numbering system. Terrain is shown by ‘wooly worm’ hachures; there are no contour lines and certainly no shaded relief.

In the center of the flyleaf in neat handwriting is the phrase, “Mr. and Mrs. Francis X. Zink, jr., #18 Terrace Court, Lima, Ohio. Surrounding this in less elegant handwriting are the same names, but with five other addresses, one in Ohio and the

rest in California—the various places the owners lived. Simple drawings around the edges of the flyleaf show a car, a train, an airplane and a trailer.

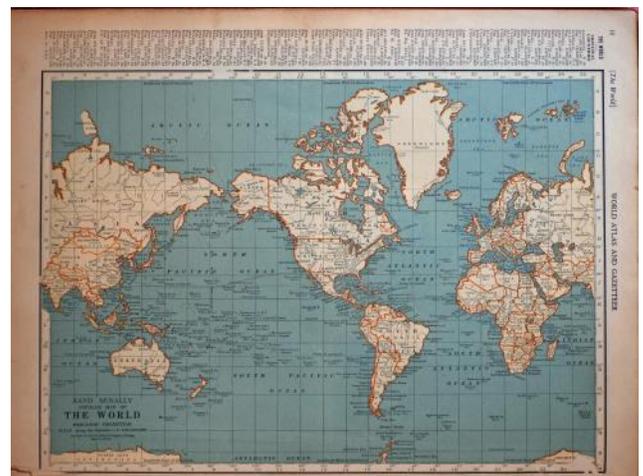


Before President Franklin D. Roosevelt gave his fireside chat on February 23, 1942, he asked listeners to have a map of the world before them because he was going to speak of places many of them had never heard of. The world map in the atlas is probably the one the owners consulted.



The flyleaf, showing atlas owner's residences and hand-drawn details

Various maps in the atlas have lines, circles and Xs penciled in or inked in. The map of the Pacific Ocean has a circle on the Korean Peninsula (not north and south Korea, but as one country) and a line joining it to the California coast. The marks were made at the beginning of the Korean War in 1950, but are eerily timely in 2019. The map of the United States—only 48 states at the time—has ‘Xs’ on 29 states plus

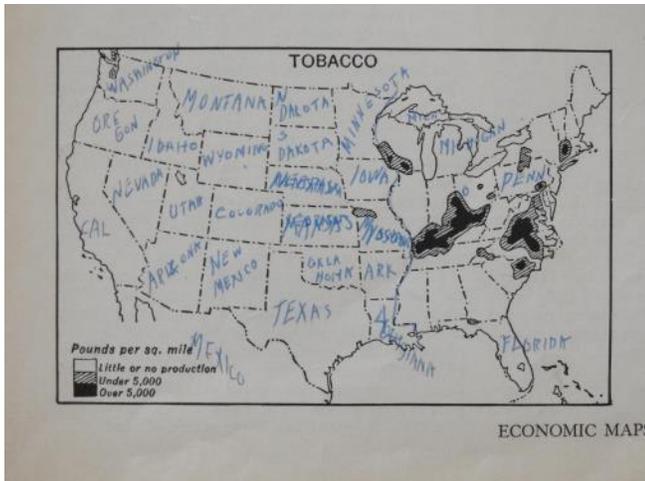


The World, page 10 (rotated 90 degrees)

Canada, Mexico proper and the Baja California peninsula, showing the states and countries the child of the family had visited before the atlas was placed on the dusty shelf.

Black and white thematic maps of the United States were plainly used, not for their subject matter, but to test

knowledge of state names and locations. The maps do not have printed names on them; the names are in pen with errors crossed out. Traces of marks on some country maps, indicate that the maps were traced to create maps for a social studies assignment or term paper. At that time, geography was not taught as a separate subject but was included under the social studies umbrella.



Sample of the black and white thematic maps used to test the geographic knowledge of the reader

Atlases of this time included gazetteers of the world—a brief encyclopedic entry of towns, states, countries, that provided basic information of location, population, industries and agricultural products. The owners checked this section for possible towns in which to relocate, when they left their family home in Ohio to make a post-war trek to California.

At the end of the atlas is a table showing US presidents by election year, party and chief opponent, up until 1936. The owner of the atlas added two entries to the columns—FDR's final 2 terms.

Year	President Elect	Party	State	Electoral	Year	Chief Opponent	Party	State	Electoral	Year	Remarks
1789	George Washington	Federalist	Virginia	69							
1792	John Adams	Federalist	Massachusetts	71		Thomas Jefferson	Democratic Republican	Virginia	68		Followed by James of Representatives.
1800	Thomas Jefferson	Democratic Republican	Virginia	73		Charles Pinckney	Federalist	South Carolina	74		
1804	James Madison	Democratic Republican	Virginia	122		Charles Pinckney	Federalist	South Carolina	74		
1808	James Madison	Democratic Republican	Virginia	122		DeWitt Clinton	Federalist	New York	36		
1812	James Monroe	Democratic Republican	Virginia	122		DeWitt Clinton	Federalist	New York	36		
1816	James Monroe	Democratic Republican	Virginia	122		James Calhoun	Federalist	Massachusetts	7		
1820	James Monroe	Democratic Republican	Virginia	122		John Quincy Adams	Democratic Republican	Massachusetts	7		Followed by James of Representatives.
1824	John Quincy Adams	Democratic Republican	Massachusetts	84		Andrew Jackson	National Republican	Tennessee	99		
1828	Andrew Jackson	Democratic	Tennessee	107		John Quincy Adams	National Republican	Massachusetts	35		
1832	Andrew Jackson	Democratic	Tennessee	182		Henry Clay	National Republican	Kentucky	48		
1836	Martin Van Buren	Democratic	New York	176		William H. Harrison	Whig	Ohio	23		
1840	William H. Harrison	Whig	Ohio	234		Martin Van Buren	Democratic	New York	56		Two-Prize until death of Harrison, 1841.
1844	John Tyler	Whig	Virginia	107		Henry Clay	Democratic	Kentucky	70		
1848	Zachary Taylor	Democratic	Louisiana	167		Leaves Cal	Democratic	Michigan	107		
1852	Millard Fillmore	Whig	New York	33		Franklin Pierce	Democratic	New Hampshire	10		Two-Prize until death of Taylor, 1850.
1856	Franklin Pierce	Democratic	New Hampshire	107		Winfield Scott	Whig	New Jersey	44		
1860	James Buchanan	Democratic	Pennsylvania	174		John C. Fremont	Republican	California	34		
1864	Abraham Lincoln	Republican	Illinois	212		Stephen A. Douglas	Democratic	Kentucky	12		
1868	Abraham Lincoln	Republican	Illinois	212		George McClellan	Democratic	New Jersey	45		Two-Prize until assassination of Lincoln, 1865.
1872	Andrew Johnson	Republican	Tennessee	71		Harris Stanton	Democratic	New York	38		
1876	Rutherford B. Hayes	Republican	Ohio	106		William Tilden	Democratic	New York	187		
1880	James A. Garfield	Republican	Ohio	214		W. M. Hancock	Democratic	Pennsylvania	107		Two-Prize until assassination of Garfield, 1881.
1884	James A. Garfield	Republican	Ohio	214		James G. Blaine	Republican	Maine	56		
1888	Benjamin Harrison	Republican	Indiana	233		Grover Cleveland	Democratic	New York	119		
1892	Benjamin Harrison	Republican	Indiana	233		Grover Cleveland	Democratic	New York	119		
1896	William McKinley	Republican	Ohio	271		William L. Bryan	Democratic	Nebraska	107		Two-Prize until assassination of McKinley, 1901.
1900	William McKinley	Republican	Ohio	292		William L. Bryan	Democratic	Nebraska	107		
1904	Theodore Roosevelt	Republican	New York	165		Alton B. Parker	Democratic	New York	140		
1908	Theodore Roosevelt	Republican	New York	165		William F. Bryan	Democratic	New York	140		
1912	William Howard Taft	Republican	Ohio	207		Thomas Woodrow Wilson	Progressive	New Jersey	89		
1916	Woodrow Wilson	Democratic	New Jersey	287		Charles E. Hughes	Republican	New York	254		
1920	Woodrow Wilson	Democratic	New Jersey	287		Charles E. Hughes	Republican	New York	254		
1924	Warren G. Harding	Republican	Ohio	267		Calvin Coolidge	Republican	Massachusetts	129		Two-Prize until death of Harding, 1923.
1928	Calvin Coolidge	Republican	Massachusetts	129		John W. Davis	Democratic	New York	129		
1932	Herbert Hoover	Republican	California	220		Alfred E. Smith	Democratic	New York	109		
1936	Franklin D. Roosevelt	Democratic	New York	472		Herbert Hoover	Republican	California	59		
1940	Franklin D. Roosevelt	Democratic	New York	531		Walter D. Ladd	Republican	Kansas	9		
1944	Franklin D. Roosevelt	Democratic	New York	531		Thomas Dewey	Republican	New York	9		

The United States presidents to 1936 with the final two terms of Franklin D. Roosevelt added by hand

During the lifetime of this atlas many significant world events occurred—World War II, the dropping of the atomic bomb, the Korean War, statehood for Alaska and Hawaii, the Vietnam War, satellites and the first steps taken on the moon, and 13 More presidents. Most of these events are not reflected in the atlas. Its useful life was about 10-15 years although it was occasionally consulted over a longer period of time. Eventually, new atlases were purchased but “the atlas” still remained in the home although it had become a historic reference, not a source of current information.

I know of the history and uses of this atlas because I grew up with it—it was, in a way, an older educated sibling, always willing to help with homework or fuel fantasies of travel.

Why should readers of *Calafia* care about a 1937 atlas that doesn't reflect the current world and would not be considered a collector's item? When we study atlases, we look at how they were made, who made them, what they showed, and how they fit into the grand scheme of cartographic history. But how were they actually used? Map collectors do not want atlases that have been marked up with childish handwriting, but that handwriting shows the importance and the use of the atlas. Until recently, collectors and historians have not been interested in maps and atlases of the mid-twentieth century, but this atlas and others of its age tell us much about world affairs, printing technology, and what was considered important to its owners in its time. I will move it from its high, dusty shelf to a place of honor.

The author is Professor Emerita of Geography
California State University, Long Beach

DR. WALTER W. RISTOW PRIZE

Students of the history of cartography are invited to submit papers for the 2019 Ristow Prize competition. Undergraduate, graduate, and first-year postdoctoral students of any nationality are eligible to compete. Papers must be in English, not exceeding 7500 words, and should be submitted digitally as a PDF document to eedson@pvcc.edu or in hard copy postmarked no later than June 1, 2019, to Evelyn Edson, 268 Springtree Lane, Scottsville, VA 24590, U.S.A. Appropriate illustrations, especially maps, are encouraged. The winning essay will receive a cash prize of \$1000 and will be published in *The Portolan*, the journal of the Washington Map Society. The prize, named in honor of the late Dr. Walter W. Ristow, is sponsored by the Washington Map Society of Washington, D. C. For more information, including a list of previous winners, go to the website www.washmap.org or contact Dr. Edson at eedson@pvcc.edu.

SAN FRANCISCO MAP FAIR

SEPTEMBER 21-23, 2018

BY MARIANNE HINCKLE

Building on the success of the 2017 rebirth of the San Francisco Map Fair, the mid-September 2018 ‘map weekend’ was another welcome success, attracting over 1,500 attendees. The Fair was sponsored by the History in Your Hands Foundation (HIYHF), a Chicago-based non-profit whose goal is to teach history through the use of objects that students can touch and hold, including, of course, maps. The California Map Society co-sponsored the event, and provided speakers for the lecture series.

The Fair was held at “The Lodge” at the Regency Center, located on Van Ness Avenue and Sutter Streets, where over twenty antiquarian book and map dealers showed their wares to enthusiastic ‘seasoned’ collectors and many younger ‘first-time’ buyers.

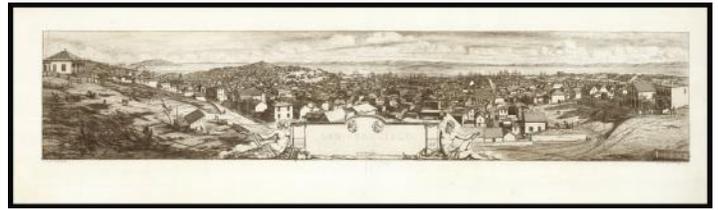
The Map Fair was organized around two guiding principles: Education, and Opportunity. Education’s goals were fulfilled through both the lecture series and the exhibitors interesting and varied displays, while Opportunity’s were well served by the large number and special interest areas of the dealers represented.

The dealers were from both North America and London, and included Altea Maps (London), Antiquariat Reinhold Berg (Germany), Ashman Antique Nautical Maps (South Carolina), B&L Rootenberg Rare Books (Sherman Oaks), Barry L. Ruderman Antique Maps (La Jolla), Boston Rare Maps, Inc. (Southampton), Daniel Crouch Rare Books (NY & London), Far West Maps & Books (Eugene, Oregon), Geographicus (Brooklyn, New York), HJB Maps (Chicago) High Ridge Books, Inc. (South Deerfield, Massachusetts), Manning’s Books & Prints (Pacifica, California), Martayan Lan Antique Maps (New York), Neatline Antique Maps (San Francisco), Old Imprints (Portland, Oregon), Old Map Gallery (Denver, Colorado), Old World Auctions (Glen Allen, Virginia), Sandra & John Berryman Fine Books (Ormand Beach, Florida), The Map House (London), The Old Print Shop (New York), The Philadelphia Print Shop (Philadelphia), Thomas Suarez Rare Maps (London) and Vetus Carta (Ottawa, Canada)

Dealer exhibits, in the MAP GALLERY area, had a wide-ranging representation of maps from around the world with a special emphasis on San Francisco, California, the American West and the Pacific basin.

One of the most striking nineteenth century images of San Francisco was presented by Daniel Crouch Rare Books of New

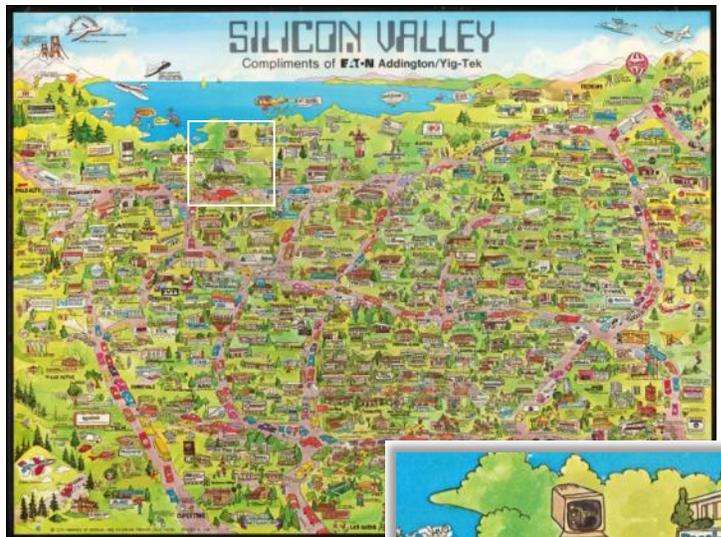
York and London, in “View of San Francisco” by Charles Meryon, an engraving of 1856. The engraving measures 13.25 by 45.25 inches and is exceptionally fine and detailed.



Meryon, Charles, "San Francisco" engraving, 1856 Paris

The Parisian artist’s work was commissioned by a prominent San Francisco banker, François Louis Alfred Pioche—as an ‘selling’ point to prospective investors for his growing American business interests during the Gold Rush bonanza days. Charles Meryon, the French printmaker, never visited San Francisco but was relied on five anonymous daguerreotype panoramas of the city for his etching—a copy of which survives in the Art Institute of Chicago.

Meryon was appreciated by only a few of his contemporary artists and critics, such as the Goncourt brothers, Victor Hugo and Baudelaire and experienced many hardships as an artist. However, we contemporary San Franciscans welcome seeing this fine view of nineteenth century San Francisco.



Silicon Valley, from “City Graphics of America” 1983.

Also from Daniel Crouch Rare Books is this contemporary representation of our “Cradle of the Computer Industry”: “Silicon Valley” (courtesy of EATON Addington Yig-Tek. A lithographed map from “City Graphics of America”, 1983. 30 by 39.75 inches)

The Fair's LECTURE SERIES, sponsored by The California Map Society, included four interesting presentations.

Nick Kanas, M.D., a member of the Society, shared his insights into, as well as examples of, *Pictorial Maps*, focusing on both their symbolism and artistry, and including both celestial and terrestrial maps.

Eliane Dotson, President of the Washington Map Society and owner of Old World Auctions, provided the group with her excellent expertise by presenting *10 Things To Know About Antique Maps*. She has graciously agreed to share these guidelines with readers of this edition of Calafia as well, and they appear on pages 8-13.

Ron Gibbs, M.D, also a member of the Society, has a special interest in the American Revolution. His presentation, *Revolu-*

tionary War Maps: George Washington and the American Revolution, 1775-1776 included George Washington's battle maps, portraits, and prints of the early years of the War of Independence.

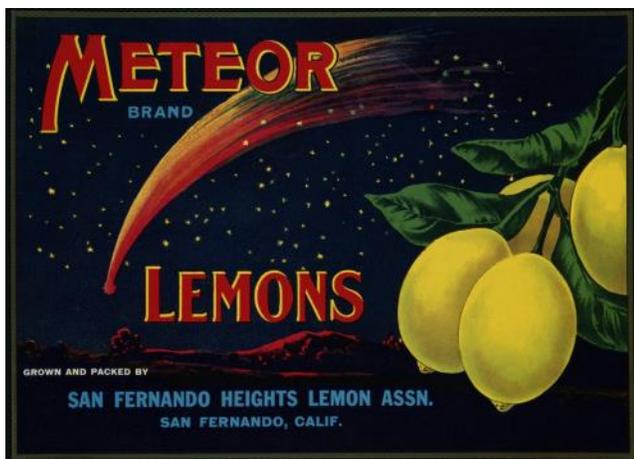
Daniel Crouch, of Daniel Crouch Rare Books, gave a presentation with the especially intriguing title of *There are three kinds of lies: lies, damned Lies, and statistics*, which explored some early efforts at cartographic data visualization, from sociological, epidemiological, and geological, as well as perspectives.

The Map Fair will return to the Bay Area next year on September 27-29th. The venue has been changed to Yerba Buena Center for the Arts. It promises to be an exciting event—mark your calendars and plan to attend!

IMAGES FROM NICK KANAS PRESENTATION



"Carriers of the New Black Plague," Cotton, William H., 1938. A powerful satirical commentary on totalitarian control of speech from the first edition of "Ken Magazine," "Liberty is now in totalitarian Eclipse."



Meteor Lemons Brand, crate label, ca 1930-1939 by San Fernando Heights Lemon Assn., San Fernando, California.

IMAGES FROM RONALD GIBBS PRESENTATION



The Campaign of 1776 around New York and Brooklyn, Henry P Johnson, circa 1878



Map detail used by Dr Gibbs in his description of the key battles in and around Trenton, New Jersey. From: "Plan of the Operations of General Washington against the King's troops in New Jersey, from the 26th of Decemberto the 3d of January 1777." [1777] Map. <https://www.loc.gov/item/gm71000654/>

MEET OUR MEMBER

RICHARD BREIMAN, M.D.



Richard is a newer member of the Society and has attended recent BAM meetings. He and his wife Leslie live in Alamo, east of San Francisco.

Richard was born in New York, but his family moved to Tucson, Arizona when he was 8 months old to escape harsh northeastern winters following a particularly severe blizzard the year he was born. His father fought in World War II and was involved in the both Normandy invasion and the Battle of the Bulge. He intended to be a physician but was directed to accounting by a military career counselor. Later, he was proud that his two sons became physicians. Richard's brother specializes in infectious diseases and epidemiology, having served as Director of the US Vaccine Program and as the the Center of Disease Control and Prevention's Chief of Global Disease Detection in Africa for nine years. Currently he is the Director of Emory University's Global Health Institute, conducting large research projects in Bangladesh and Africa, funded by the Gates Foundation. Richard knew he wanted to be a physician from the age of nine. While a student at the University of Arizona he came to San Francisco for a summer job and fell in love with the city, resulting in his selection of UCSF for medical school. After graduation he began surgery training at Yale but altered his career path when CT scanners were introduced and he realized that computerized imaging would revolutionize the future of medical care. He switched to radiology and headed back across country to Stanford in

1974. While there, he was involved in the development of an early advanced CT scanner by the Varian Corporation in Palo Alto. He completed his residency and fellowship at Stanford in 1979 and joined the faculty at Duke University as a professor of radiology.

In the 1980's, Richard returned to the San Francisco Bay Area, joining a private practice in the East Bay. He found that he missed academia and returned to UCSF as a professor of radiology, which allowed him to continue his research interests as well as teaching and mentoring medical students and postgraduate trainees. He served as the Director of the Center for Advanced Imaging Education within the school of medicine. He retired four years ago, shifting his research interests to prints, maps and antiquarian books.

Richard met his wife, Leslie, on a trip to the Grand Tetons with his brother during the summer before his brother began medical school and Richard moved to Stanford. Leslie was teaching near Boston and had come west with a friend for vacation, subsequently moving to California. Richard and Leslie have been married for 40 years and have two children, both living in the Bay Area.

Richard has always been a collector. As a child, he collected stamps, rocks and minerals and trading cards. As an adult, his interests switched to collecting stamps, vintage watches,

African and New Guinea ethnic art and antiques, including furniture, and scientific instruments. He began collecting maps, prints and books in 2011 when he visited a stamp dealer and noticed a large pile of papers and books on the floor of the shop. The dealer explained these had been given to him to sell by a young man who had inherited a house in Berkeley that contained his grandfather's collections. Richard looked over the material, thought it looked interesting and bought the entire pile without knowing much about it! A few days later, he purchased the dealer's next consignment from the same source. He has not purchased a stamp since then.

Richard's map collection is eclectic rather than narrowly focused, although he has a special interest in exploration, battle plan maps, celestial maps and those depicting California as an island. He especially enjoys 15th-18th century Dutch and German maps. His print collection includes the old masters, as well as travel and exploration illustrations and city and architectural views, such as David Robert's 19th century views of Egypt, Nubia and the Holy Land and Giovanni Piranesi's 18th century views of ancient Roman architecture. He also has a large collection of British satire, including William Hogarth, James Gillray, Thomas Rowlandson, as well as Isaac and George Cruickshank and many natural history prints, including 17th century Besler botanicals and 19th century Audubon birds and quadrupeds.

Among his favorite books are all eight volumes of the British Admiralty's officially authorized publications of Captain's Cook's journals of his three 18th century voyages of exploration. Another of his favorite books, entitled "*A Voyage Round the World by Way of the Great South Sea*" (the Pacific Ocean), published in 1726 by Captain George Shelvocke, a British privateer. The book includes the story of an albatross which was shot by a seaman, an action to which the crew's subsequent bad fortune was attributed. William Wordsworth was reading this book and related the story to Samuel Coleridge, which inspired Coleridge's "*Rime of the Ancient Mariner*". The book is also noteworthy for its description of gold in California 122 years before the start of the California gold rush.



CMS EDUCATION FUND

The California Map Society Education Fund was established in 2014 by the Society with the goal of sponsoring an annual lecture by a noted author or other expert in field of cartography. The lecture is held at the Rumsey Map Center at Stanford University, which co-sponsors the program. In addition, during the same week, the lecture is also held at a venue both in Los Angeles and in San Diego. The fund provides transportation, accommodations, and an honorarium for the speaker. In addition, the fund will support a short-term fellowship in cartography for a student from any university in the state of California at the Rumsey Map Center.

The Education Fund Program, which sponsors noted speakers and students in their short-term fellowships, is currently funded for five years. The Society is considering a plan which will provide funding for this program for many more years. Education Fund programs are in addition to our regular semi-annual conferences in Northern and Southern California, which are supported by CMS general funds as well as registration fees. The semi-annual conferences also include student presentations, supported by prizes for the presenters generated from CMS general funds.

Sponsors of the Education Fund include:

Gold

Pat Boyce
John Fleming
Fred DeJarlais
Nick Kanas
Leonard Rothman

Silver

Warren Heckrotte
Glen McLaughlin
Steven Hicks

Bronze

Juan Ceva
William Eaton
Anthony Farndale
Philip Hoehn
Wally Jansen
Barbara Keck
Donald Philipp
George Piness
Julie Sweetkind-Singer
Walter Schwartz
Bill Warren

The Society is grateful for their interest and support of this important program. Please consider adding your name to this very special list by making a donation to the Fund!

MY FAVORITE MAP

NICK KANAS, M.D.

The Third Edition of my book **Star Maps: History, Artistry, and Cartography** will be coming out this year, and it includes two new chapters: one on terrestrial and celestial pictorial maps, and one on celestial images in artistic paintings. Over the past few years, I have bought several celestial maps related to these two chapters, and I have chosen one of my favorite pictorials to write about in this section.

First, a word about pictorial maps, which have become increasingly popular over the past two decades and are becoming sought-after by map collectors. Unlike traditional maps, which stress accuracy and detail, pictorial maps focus on symbolism and artistry. Images and text are combined to tell a story and communicate a sense of the place being depicted in a dramatic, emotional manner. Humor and satire may be used through caricatures of real people, places, or events. There is variety in the size and form of landmarks and text to emphasize their relative importance. Bold bright colors may be used to enhance the emotional punch. Although they sometimes resemble cartoons in style, pictorial maps typically have a serious message to convey.

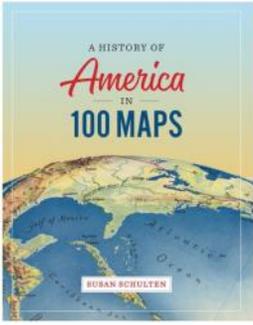
The map of the Moon shown in the figure has many of these characteristics. In celebration of the first manned lunar landing on July 20, 1969, it was drawn by the well-known commercial illustrator Michael Ramus (1917-2005). Merrill Lynch sponsored the map as a promotional poster. It measures 36.6 X 42.7 cm. The title in the bottom cartouche is *Myths, Maps & Men: Merrill Lynch Salutes the Year of the Moon*. To the left of the cartouche is a written tribute to events of 1969, and to the right, there are expectations for 1970 and the future. The center of the image is dominated by a cartoonish double hemisphere map of the Moon. On the left is a map of the far side, which was first visualized and photographed by the Soviet probe *Luna 3* on October 7, 1959. Note some of the named features and the symbolic Soviet rocket ship flying over the surface. The right hemisphere depicts the near side of the Moon, prominently showing the Apollo 11 and 12 landing sites. Since many of the large flat areas on the Moon are named (in Latin) *Oceanus* for “ocean” and *Maria* for “sea,” these regions on the map are accompanied symbolically by humorous sea monsters, clouds, and lightning, which of course do not exist on

the airless Moon. Between the two hemispheres is a Saturn V rocket, which was used to launch astronauts to the Moon as part of the Apollo program. Above the rocket is a giant American eagle carrying a banner with astronaut Neil Armstrong’s famous words: “One small step for a man...One giant leap for mankind.” Humorously perched on the eagle are caricatures of the three U.S. Presidents that supported the Apollo program, in order from lower to higher: John F. Kennedy, Lyndon B. Johnson, and Richard M. Nixon. There are other light-hearted lunar references throughout the image, such as the cow jumping over the Moon to the upper right and Selene, the Greek Goddess of the Moon, entering the picture with her chariot to the upper left. Along the bottom are old airplanes and a fantasied rocket ship, Romeo and Juliet holding hands beneath the moonlight, and Galileo observing the Moon with his telescope, accompanied by skeptical and stern clerics. Also running along the bottom is tickertape, representing Merrill Lynch’s activity as a stock investment company.

Although originally produced as a promotional poster to honor the first landing of astronauts on the Moon, this celestial pictorial map has particular relevance in 2019, when we are celebrating the 50th Anniversary of the lunar landing, which will take place on July 20, 2019. We are already seeing movies, television specials, and newspaper articles heralding the anniversary. Undoubtedly, more reminders like this map will appear as the time approaches to honor such an important and meaningful human exploratory activity.



BOOK REVIEW



A History of America in 100 Maps, Susan Schulten. University of Chicago Press, 2018, ISBN13-978-0-226-45861-8, 272 pages. Hardcover price \$35.

This book is a great read. It is not a book about maps, but rather about American history told through maps. If you are a history buff, you'll love it. And if you are a map lover, you'll treasure it. Professor Schulten's skillful exposition of the story of our country is not only easy to follow but gripping. Those who have attended any of Schulten's popular lectures at map conferences can recall being absorbed by her presentation. That same intensity is masterfully exhibited in this volume. As I was reading it, I kept saying to myself: "Just one more map before I go to bed."

In her words, "The purpose of this essay is to explain the often overlooked role of maps in history. Whether made for military strategy or urban reform, to encourage settlement or to investigate disease, maps both reflect and mediate change ... Above all, they demonstrate that the past was not just a chronological story but a spatial one as well." Many of the maps she selected are considered landmarks in cartography. Others are obscure. Some depict epic stories of battles won or treaties negotiated; others express native American beliefs, the fight against communism, and even the night club scene in Harlem. Individually, each map in the book relates a fascinating story, but taken together, as Schulten notes, they demonstrate the "persuasive power of cartography."

The book is organized into nine sections based on time periods—each with eight to twelve maps. Every section begins with a short unifying essay explaining the period as revealed by the maps. Along with the individual maps (all of which are high-quality reproductions and often feature a detailed close-up), is an essay of about 500 words. In the essays, the author describes an aspect of our nation's history using the maps to illustrate her points and discusses the map's creator and its historical context. Her first map is by Henricus Martellus Germanus, a beautiful 1489 manuscript of the known world made just before Columbus' journey. She ends the book with a map showing data visualization for autonomous vehicles made in 2018.

An interesting aspect of the book is that, unlike most histories, it does not have to be read completely or sequentially.

Readers can read as much as they like and can browse, looking for a favorite period in history or an individual map that interests them. However, I found that reading about one map led me to greater insight into the next. As a collection, the maps provide a unified understanding of significant periods in our nation's history. The author's approach demonstrates the fact that history is not linear—it zigs and zags.

Many of the maps were new to me; others were familiar as I am a longtime map collector. But in each case, fascinating new details were revealed. Despite having studied Vincenzo Coronelli's famed 1688 "America Settentrionale," I had not noticed an important detail in its elaborate cartouche. Schulten offers an insightful interpretation: "At the top, the winged head of inquiry struggles to reveal America by pulling back heavy drapes, suggestively symbolizing the way in which French explorers had uncovered the geography of the continent." That commentary demonstrates her close observations of the maps as well as her masterful use of words. When describing a simple map that looks like a large intestine, she advises readers, "but give it a second look, for it rewards patience."

Professor Schulten's goal of exploring an element of American history with each map is advanced by her knack for selecting maps that perfectly illustrate her point. Nevertheless, several maps star as actors in their own right in the drama of history. Equipped with Charles Preuss's seven-sheet "Topographical Map of the Road from Missouri to Oregon" in 1846, thousands of pioneers dared to make the arduous western journey. Twenty years later, a postal map of Georgia annotated with detailed population and economic data by county emboldened General Sherman's 1864 Union march to Atlanta. Armed with this information, he wrote, "I knew exactly where to look for food." According to Schulten, "It was the data [depicted on the map] that enabled Sherman to see what was possible as he prepared a march that shattered Confederate resolve."

Schulten writes of history with great passion. One cannot read her account of the struggle for our nation's independence, illustrated with a half dozen maps, without being stirred by emotion. Yet she is a careful and nuanced scholar. I highly recommend this work by one of America's leading historians.

Review by Wes Brown

*Professor Schulten, a well-known expert in history and maps, has taught at the University of Denver since 1996. She is the author of *Mapping the Nation: History and Cartography in Nineteenth Century America* and *The Geographical Imagination in America, 1880–1950* and is a sought-after speaker at map conferences in the United States and abroad.*

A NEW MEMBER—AND MUCH MORE

AN INTERVIEW WITH NAGIN COX
BY JULIET ROTHMAN

Our new member, Nagin (pronounced Nagee) Cox, is excited to be a part of CMS, and has offered to coordinate the Southern California member's group, whose first meeting will have been held before this edition of *Calafia* reaches the membership. Details of this momentous first meeting are included in a separate article. Now—a little information about Nagin, and about her vision of her involvement with the Map Society.

Nagin was born in India and lived in Kansas City and Malaysia—all before returning to Kansas City while she was still in elementary school. By the time she was 14, she knew that she wanted to work for the Jet Propulsion Laboratory (JPL), and planned her studies and activities carefully, always keeping her goal firmly before her. Nagin attended Cornell University, where she double-majored in engineering and psychology, graduating with both a B.S. and a B.A. She then entered the US Air Force on a scholarship for six years, during which time she received an M.S. degree in engineering. Nagin chose to remain in the reserves and worked for IBM until she was accepted at JPL to begin the work to which she has dedicated herself. She was married in 1992, and has no children.

Today, Nagin continues working at JPL, having achieved a leadership position in planning systems engineering on multi-robotic interplanetary missions. When I first reached out to talk with her, Nagin informed me that, regretfully, she was unable to talk until the recent Mars mission had successfully landed on the red planet, as she was completely engaged in the process!

What about maps? I asked her. How did you get involved?

One year, her husband gave Nagin a trip to La Jolla's Atlas and Map Museum as a Christmas gift. Nagin had always liked maps, and had followed map groups on Twitter, but at the La Jolla museum, she had her first serious conversation about maps with the museum's docent. Seeing how strong her interest was, the docent gave her a flier from the Map Society. Nagin checked it out—and joined! She says she immediately felt at home with the group.

Nagin doesn't collect maps in the traditional manner. However, she travels a great deal, and loves to collect tourist maps from all the places she visits. Over many years, she kept traveling—and her collection kept accumulating—and she began to develop a storage and organization problems that she was finally able to resolve. Her international tourist maps are archived safely and stored in photo boxes, including an "Arctic" and "Antarctic" box, while her domestic maps are organized by major areas of the country and kept in magazine holders. She also has some maps of other planets, such as Mars and Jupiter, and extra-terrestrial bodies, and labeled the holders with their names. Her collection of World Maps were so labeled—until she found that this didn't match the labels for the other planets. She renamed her world maps holder "Earth"! This made her re-



consider her other extra-terrestrial labels, and re-name them as well. Now, in addition to "Earth", Nagin has "Solar System", and "Universe", which she is considering re-naming "Galactic Maps"

Needing more information about storage, Nagin came to her first Map Society meeting with a planned goal: She would talk with people and learn how they stored their maps. She learned that most people had made, or purchased, special drawers, so that maps could be stored flat. Interesting,

she says, but she does not have flat maps! Tourist maps are always folded, and more easily stored in their folded positions, so that her system worked well for her, though it was so different from others. Nagin also buys some maps. She enjoys maps that are centered in different places, such as the North Pole. When asked about favorite maps, Nagin observed that she enjoys extra-terrestrial and polar maps. She also likes towel maps, because with those maps "You don't need to worry about folding and creasing them. They are more durable!"

With her membership, of course, came *Calafia*. In her first issue, Nagin noticed that Northern California had an active local group—the BAM (Bay Area Map) group, which meets and shares maps, talks and socializes, but that there was no similarly organized Southern California group. She volunteered to coordinate one, and a new group was born. Naming the group offers at least two options: GLAM—Greater Los Angeles area Map group, and SCAM—Southern California Map group, and Nagin plans to have the members of the group themselves choose its name. [Editor: GLAM was chosen] She plans to have three group meetings a year, where people can share maps and also consider other "fun things" to do. The first meeting took place in January at Nagin's home, which is in Crestenta, near Pasadena.

HISTORY IN YOUR HANDS

A FRESH PERSPECTIVE ON HISTORY

BY THOMAS PIERCE

The History in Your Hands Foundation (HIYHF) is a nonprofit organization that seeks opportunities to provide educational professionals and their students with authentic, historical pieces to help transform the everyday classroom into a hands-on museum. Based in the heart of downtown Chicago, the small HIYHF team consists of a combination of antiquity, coin, and map dealers, all of whom share a love for all things history. Officially formed in 2016, they are a new group that is actively attempting to change the face of conventional historical education. Having begun with the idea of personally visiting individual schools within the Chicago area, they have since re-focused their program in order to fulfill their mission on a larger, nationwide scale.

Following many lengthy discussions, this evolution has brought forth a brainchild dubbed the “Traveling Classroom Exhibit Program”. In one sentence, it is a system in which all the corresponding pieces of history, (maps, coins, antiquities, stereoscope images, etc.) are neatly organized and packed to be readily shipped anywhere in the country. With three current traveling exhibits in rotation, the staff members of HIYHF have had to become logistical experts in order to fulfill requests from teachers outside of the Chicago hub.

To request that an exhibit be sent to a school or individual classroom, teachers need only fill out a request form on the Foundation’s website. The form includes teacher contact info, the particular class subject, the class grade level, and shipping details. Teachers are asked for their date preference, and an alternate in case of conflicts, allowing them to effectively plan their class schedules and lesson plans. They are then added to the semester’s calendar and all the logistics are handled at History in Your Hands HQ.

The HIYHF team believes that any opportunity students may have to engage and connect with the past should be explored and supported. Traditionally, this means attending lectures, taking tedious and protracted notes, visiting and revisiting the library, and poring over volumes for short snip-

pets and key quotes. Although these activities are enticing for some, HIYHF has seized an opportunity to flip the script for the current generation of young learners. While encouraging hands-on interaction with the pieces provided by HIYHF, and relieving some pressure on the teacher to constantly be engaging, students can be transported back in time. Prior to the development of the Traveling Classroom Exhibit, the HIYHF team was visiting schools personally, and seeing how the pieces of history can connect students of any age to the subject matter on a deeper level than a textbook can offer. These experiences have helped to guide the current development of the program. In due time, the foundation believes it will have been inspired and sparked interest in students, so that they will help to preserve both the collecting community, and the collections, for yet another generation.



The “Classical Ancient World” themed Traveling Classroom Exhibit, all neatly packed up and ready to be shipped to a school near you!

TRAVELING CLASSROOM EXHIBITS

The current active Traveling Classroom Exhibits are always on the move, touring the country encased in lightweight plastic cases, jumping from classroom to classroom with a little help from FedEx. Presently, there are three exhib-

its, covering three vastly different topics. First, Ancient Classical World contains a variety of pieces such as oil lamps, a bronze spear head, multiple ancient coins, stereoscopic images of ancient sites, and several antique map reproductions pertaining to the corresponding regions. The second exhibit, Prehistoric Fossils, includes dinosaur teeth, trilobite fossils, neolithic arrow heads, petrified wood and much more. This exhibit also contains two large-format geologic time scales for students to roll out and use as a reference. Last, and possibly the most visually stunning of the three, is “American History through Cartography,” which is an extensive look back, from before the founding of our nation, up to the 20th century. Below are some images that should provide a well-rounded peek of the inside of that Cartography box.

Highlighting the progress and major acquisitions of the United States through the years is the keynote of this particular exhibit. Students can pore over the high-resolution reprints



Nova Virginiae Tabula (above)

By: Guillaume Blaeu, 1642 (Amsterdam)

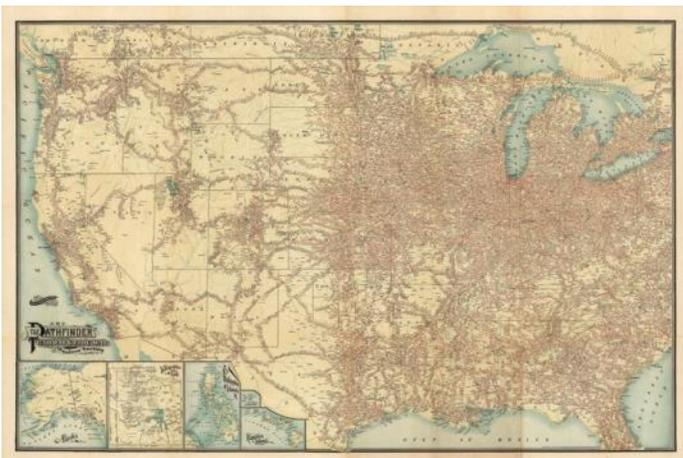
- One of the earliest maps to detail the English settlements in the Chesapeake Bay region, based on John Smith’s map of 1612.
- Includes numerous names of local indigenous tribes throughout the map.
- Map is oriented with North to the left as this is how Europeans would approach the land.
- Key indicates: Domus Regum – King’s House, Ordinariae Domus – Ordinary House, Lucubrations Anglorum – Extent of Exploration (everything beyond the cross was hearsay from natives).



Partie Occidentale de la Nouvelle France ou du Canada... (above)

By: Homann Heirs / Jacques Nicolas Bellin, 1755 (Nuremberg)

- The map summarizes the knowledge of the Great Lakes region as the French knew it toward the end of their occupation.
- It shows the river systems known to the French explorers, locates French forts and settlements, and identifies Indian Villages.
- The map also includes one of the more famous cartographic errors in maps of America, three false islands in Lake Superior, “Phillipeaux,” “Pontchartrain,” and “St. Anne.”



Map of the United States with the Contiguous British & Spanish Possessions... (above)

By: John Melish, 1819 (Philadelphia)

- The first American made map to present the United States from coast to coast. Became a visual embodiment of Manifest Destiny for
- Americans looking to move west.
- Melish used the exploration of Lewis and Clark to the Pacific and Pike to the Rockies to create the map.

without fear of damaging anything of major value, thus encouraging them to get close, use a magnifying glass, and think critically about the history of the US. With maps visually representing the evolution of our nation, the exhibit is an awesome tool for teachers to indicate key players and events while using primary source material. Rather than examining an image in a textbook or on a projected slide, students can interact with the paper map in its original scale and format. In addition to teaching history through geography, students can act as translators, with several maps in multiple forms of English, French and more. When studying a map, students can become detectives, thinking critically about what the mapmakers were attempting to portray or represent. One teacher told us that he created a fun activity by laying the maps out at random, and then challenging the students to put them in their correct order by publishing year!



**ABC Pathfinder Railway Guide Map,
Western Section (Left)**

By: New England Railway Publishing Company

Date: 1902 (Boston)

- This railroad map serves as a nice visual representation of how America expanded from east to west and the population density that resulted from such expansion by the turn of the 20th century.
- The map shows a clear cutoff in railroad access along the Central Plains states, mostly due to the geophysical obstacles harsh living conditions and the lack of farming land within the western states.

Worth noting are the five inset maps of Yellowstone, and more importantly, Alaska, Hawaii, Guam, and the Philippine Islands, which show the reaches of American expansion beyond the continental U.S.

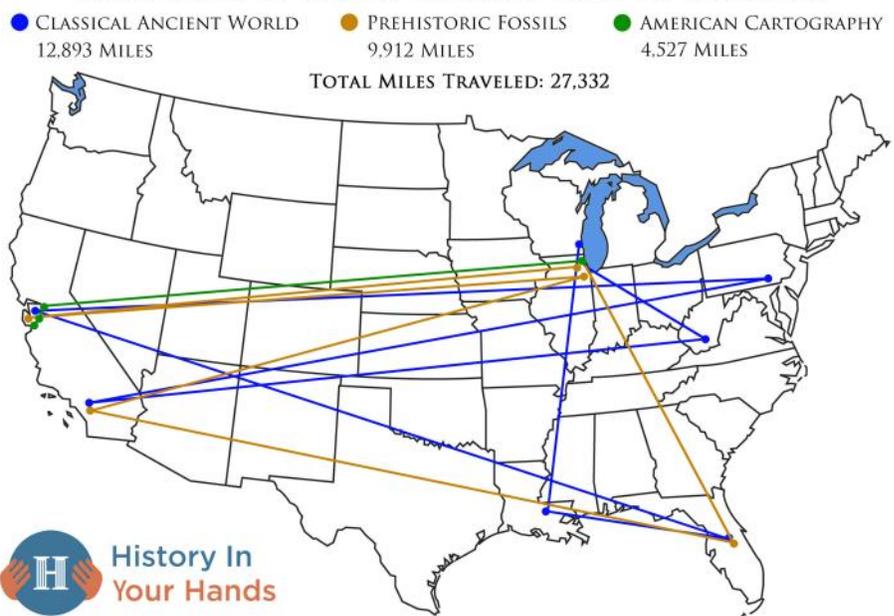
FIRST STRIDES

With the Traveling Classroom Exhibit program making its debut during the 2018 fall school semester, the team has had some breakout success. Visiting an impressive 17 schools in just under four months, all three exhibits saw plenty of mileage during the pilot run of the program. Demographic details gathered from teachers through an educator survey revealed that in the first active semester, the exhibits were experienced by a total of over 900 students. The largest portion of these, about 55% of the total, were middle school aged students (6th-8th grade). Together, all three exhibits logged a total of 27,332 travel miles, as depicted on the map to the right.

As we continue with the Traveling Classroom Exhibit program, we are encouraging teachers to support each other by donating any prepared lesson plans or activities that they have used, to work in tandem with the exhibits. With a database of downloadable lessons and activities available on the History in Your Hands website, we can develop a cooperative system for educators to learn from one another as well.

As the program expands and evolves further, the team plans to add duplicates of the current exhibits, as well as additional subjects including: “History of Money”, “Asian Art & Culture,” and a map series focused on the “Age of Explora-

**TRAVELING CLASSROOM EXHIBIT
FALL 2018 DISTANCE AND DESTINATIONS**



tion.” With so much success so early in the life cycle of this program, the team believes that the support for these hands-on learning opportunities can only grow.

History in Your Hands is always looking for talented, passionate, life-long learners to support their mission and further their cause. You can contact them via email at info@hiyh.org. As it says on the website, (www.hiyhf.org) “How better to prepare for the future than learning from the past.”

RESURRECTING THE WPA MODEL OF SAN FRANCISCO

BY DR GRAY BRECHIN



A startling message landed in my inbox ten years ago from a University of California employee overseeing the move of artifacts from a Berkeley warehouse to another warehouse in Richmond. Tamara Garlock wrote: “We found a 1935 scale model of San Francisco originally created for the 1939 World’s Fair at Treasure Island” which, she said, was stored in sections in sixteen wooden crates. Ms. Garlock had contacted me because she thought that, as the Project Scholar for the Living New Deal, I might have an idea of an alternative home for the model. The University recognized its value but also needed the considerable storage space that those crates were taking up in order to house its immense Anthropology Museum collection.

A photo I discovered at the National Archives showed the model when it debuted at City Hall in 1940. A caption said that it was 37 X 41 feet, so that if all 1517 square feet of it were reassembled, I thought, it would offer an invaluable freeze-frame of what the city looked like just prior to Pearl Harbor—sand dunes, truck farms, cemeteries, lumpy topography, and all.

When I visited the Berkeley warehouse amidst the move, I found what appeared to be hundreds of sections of an immense wooden jigsaw puzzle, grey with decades of dust, stored on racks in giant wooden crates that had been specially built to hold them. Yet these were not the entirety of the model since, I learned, about a third of it—the NE section of the city—was intact in a locked room at the College of Environmental Design. There, it had chiefly been used to do shadow studies of new downtown high rises.

I contacted the San Francisco *Chronicle’s* Carl Nolte, who visited the model at its new lodging in the Richmond warehouse and wrote a column about it in 2010. When no one stepped forward to take it, the *Chronicle* ran a follow-up editorial, with similar results; all public spaces large enough to accommodate such a behemoth, it seemed, must now be kept available for fundraisers.

The model was the idea of prominent architect and Art Deco master Timothy Pflueger, who noted, in 1935, that no comprehensive plan of the city had been done since Daniel Burnham’s visionary scheme of 1905-6. Recent developments during the Depression, such as the new Golden Gate and Bay Bridges, portended radical changes to the city’s layout that required a new master plan. “A large scale model of the entire city is indispensable in the study of the problems because of our hills and valleys,” Pflueger said. “No one can visualize the city from a flat map. The model should accurately show all natural topography in undeveloped areas, grades of existing streets, lot sizes, and developments.” Moreover, it would provide work during the Depression, Pflueger continued, “... for architectural and engineering draftsmen, men of various crafts who would work on the model and others who would gather and compile the data.”

Work it did provide, for the federal Works Progress Administration (WPA), under the sponsorship of the Planning Commission, employed 300 people to work on the project for more than two years at a cost of over \$102,000 (almost \$2 million today). During 1200 man-months of labor, they worked from field observations, a variety of maps, and a 1938 survey of the city by aerial photographer Harrison Ryker, which enabled them to include even



The author cleaning the ‘Ferry Building’

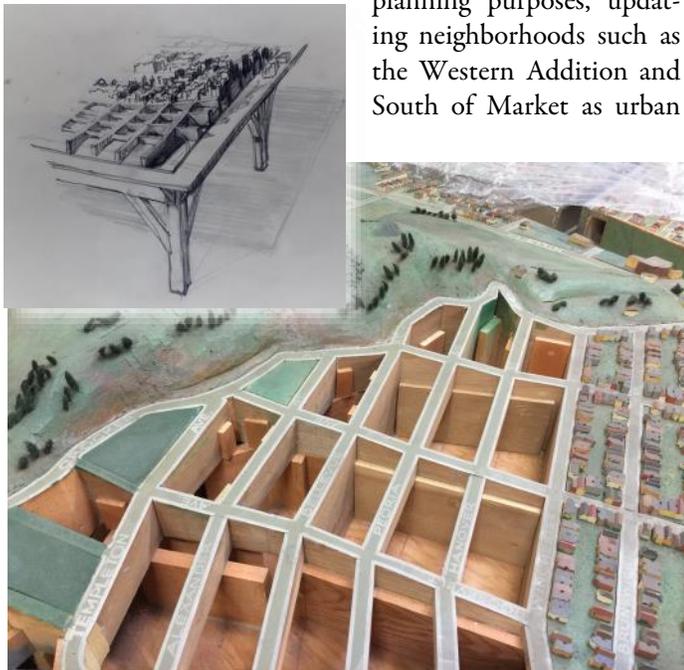
small outbuildings in the centers of blocks that were invisible from the streets. Built of poplar and sugar pine at a scale of one inch to 100 feet, the tallest point in the city—Mount Davidson—rose more than nine inches from the common base.

The model itself consists of 158 sections, whose streets provide a stationary grid for about 6000 removable city blocks upon which workers mounted tiny representations of structures present at the time of the model’s construction. On the city’s most extreme topography, the ingenuity of the construction is re-

vealed when the blocks are lifted off the armature. They were designed that way in order to be updated to anticipate or correspond with changes in the city's fabric.

The NE quadrant of the model—the historic city's nucleus—was apparently finished first and put on display at the 1939 World's Fair on Treasure Island, probably before the outermost neighborhoods were completed. The entirety was dedicated in the City Hall's Registrar of Voters room on April 16, 1940, but remained on display only until the beginning of the US engagement in World War II, when Mayor Rossi ordered it crated and stored to make room for the Civilian Defense Administration. From that point on, it was lost to the public as an educational tool.

The San Francisco Planning Commission and Redevelopment Agencies occasionally used sections of the model for planning purposes, updating neighborhoods such as the Western Addition and South of Market as urban



Inset sketch shows platform, block supports, streets and adaptability to changes by removal of blocks between streets. Larger, current image, shows some blocks removed for rehabilitation

renewal projects bulldozed them. At some point in the 1960s, it was transferred to Berkeley and U.C. ownership. The NE quadrant was kept intact for planning purposes at the College of Environmental Design's Environmental Simulation Laboratory, while the bulk of it was consigned to storage in the original wooden crates, and largely forgotten.

I had given up trying to find a home for the model when the San Francisco Museum of Modern Art's Curator of Public Dialogue, Deena Chalabi, arranged a lunchtime meeting with a Dutch couple in October, 2017. The artistic team of Lisbeth Bik and Jos Van der Pol (Bik Van der Pol) work

around the world, and were then looking for a project in San Francisco that would, they hoped, engage people in civic dialogue about the city's development at a time of unusual stress due to the radical changes attending the tech boom. Chalabi, whom I had told about the orphaned model, suggested that I share this information with Bik and Van der Pol as well.

Within months, and with the imprimatur of the SF MOMA and the San Francisco Public Library, Bik Van der Pol set in motion the transfer of the model from its two non-public venues in the East Bay to a spacious and well-lit warehouse space in San Francisco's South of Market district. The complicated move, and all details of cleaning, preservation, documentation, and the organization of the constituent sections of the immense model were masterfully marshaled by Chalabi's assistant Stella Lochman—a most fortuitous choice, since she possesses an encyclopedic knowledge of, and infectious enthusiasm for, the city in which she has lived her entire life.

San Francisco's billowing topography and microclimates have made it a city of distinct neighborhoods from the start. Bik Van der Pol planned to capitalize on these "villages" within the city by distributing the model's component sections to the SF's 27 branch libraries, where they would be displayed. Their project—part of the Museum's Public Knowledge outreach program—is known as Take Part and asks the question "Is there room in San Francisco for San Francisco?" Intended to encourage discussion and community, it has done precisely that in an ambitious two-month sequence of talks, bike tours, movies, and panel discussions orbiting around the still-fragmented model. However, both discussion and community actually began among those who answered Lochman's call for volunteers in the summer of 2018. As they meticulously brushed, vacuumed, and sponged away decades of grime, the volunteers not only revealed minute details and subtle coloration, but communed with the nameless workers who had built the colossus eighty years before. Just as Tim Pflueger had intended, the model taught them to see San Francisco's neighborhoods in a granular detail that none had ever experienced on foot, bicycle, or car, and that no flat map, or GoogleEarth view, could match.

David Rumsey took an interest in the model from the moment he saw it in storage at the Richmond warehouse. With the help of Beth LaBerge's high-resolution photographs of all sections of the model after its cleaning, as well as the 1938 aerial survey used by the WPA workers, Rumsey stitched together a composite image of the entire model with metadata and supporting information, such as archival photographs provided by the Public Library's San Francisco History Center, as well as contemporary images. Although no permanent home has yet been found for the model in its entirety, one can visit it on Rumsey's website where prewar cartography meets that of our own time.

WARREN HECKROTTE

1922—2019

Warren Heckrotte, founding member of the California Map Society, passed away on January 6, 2019 at the age of 96.

Warren was born in Ohio, December 5, 1922. He received a Ph.D in physics from UC Berkeley. As a nuclear expert at Lawrence Livermore Laboratory, he negotiated nuclear arms reduction treaties for the United States under five different administrations, from Kennedy to Clinton.

Warren was an active and engaged member of the Map Society. He was an avid map collector, has given much thought to the role of maps in both individual and communal lives, and has written about maps extensively in various journals and catalogs. He recognized the importance of maps in defining both how the world was conceptualized over time, and how individuals and societies understood their place in it. Modern GPS systems, he thought, seemed to discourage people from making “mental maps”, which he believed to adversely limit their connection to a specific place, and the feeling of moving through it.

He was predeceased by his ex-wife, Marjorie Anderson, his two daughters, Peggy and Nancy, and his long-term partner, Maggie Gee, a fellow physicist at the Lawrence Livermore Labs. He is survived by his stepson, John Starrels of Chevy Chase, Maryland, and his two grandchildren, Mia and Mickey Caro of Berkeley.

THOMAS CONRAD

1939—2018

Tom died in September of 2018. He is survived by his wife, Betty and son, Patrick. Born in Ohio, Tom and Betty were part of that mass exodus from the bitter cold of the Midwest to the sunny climes of Southern California. But before that Tom joined the air force and he and Betty spent four years stationed in Okinawa. Upon return, Tom attended Wayne State University and obtained a graduate degree in City Planning. His first planning positions were in the Midwest, then California with the city of Burbank, noted redevelopment attorney Eugene Jacobs, the Los Angeles Redevelopment Agency, and closed out a notable planning career with the San Francisco Redevelopment Agency as its Director of Planning and Programs.

Active during retirement in many charitable and non-profit organizations, Tom joined CMS and gave two talks to our members. Not surprisingly, Tom had a strong interest in historic urban development, using city maps as illustrative tools. He also served on the CMS board, shortly before the onset of a prolonged illness. The Society regrets his passing.

The Living New Deal has evidence that WPA workers built other city models, as well as many of the topographic models one still sees in national and state parks. A movie titled “A Better New York City,” for example, shows the workers creating a model of that city (not the giant model of the five boroughs that Robert Moses had built for the 1964 world’s fair that is now the star attraction of the Queens Museum), while the Los Angeles Museum of Natural History displays a detailed model of that city’s downtown before redevelop-



Along the northern waterfront

ment, which is just part of a larger whole. Our hope is that the excitement generated by the San Francisco model’s resurrection will not only find it a permanent home, but also reveal other models, long consigned to dust in basements and warehouses. Such models offer hard copy, three-dimensional glimpses of how U.S. cities looked eighty years ago even as the work of those employed by the WPA and other New Deal agencies helped lift those cities out of the Great Depression that had frozen their development for much of the thirties.

Dr. Gray Brechin is Project Scholar of the Living New Deal—an ever-growing team effort to identify, map, and interpret the public works legacy of Franklin Roosevelt’s New Deal—hosted by the U.C. Berkeley Department of Geography. He is the author of Imperial San Francisco: Urban Power, Earthly Ruin (U.C. Press, 1999 & 2006.)



55° of Latitude 1972*

This graphic depicts the travels of Fred and Judy Auda to South and Central America in 1972

The purpose was to match the scale of the trip to a visible scale of identity with the human form

Furthest southern and northern points, La Paz, Bolivia, San Francisco, during height of hemispheric Southern Summer and Northern Winter

Medium: earth curvature projected on paper to be wall mounted 11' x 2'

Presenting our position on the earth from a new angle or sense of kinesthesia of scale, on curvature, seeing past flatness

To be done as an eleven foot by two foot by two-inch standing column or wall piece, in porcelain, shadow outlines hand cut from original drawing.

To be experienced standing 36' from the wall looking vertically 11 feet to create illusion of earth's curvature



**One of a series entitled "Don't Confuse Your Body With the Planet" This is Series of drawings and objects offering ways of experiencing the scale of the planet using sound, geology and/or olfaction to provide a direct sense of earth-scale in relation to the human form."*

This shadow sequence was drawn at midday at nine locations between 17° south and 38° north of the Equator during December of 1972



MAPPING HERE & THERE:

MEETINGS AND EXHIBITS OF INTEREST TO MEMBERS

Current through April 20 – Boston – *Crossing Boundaries: Art/Maps*. The exhibition “juxtaposes contemporary works of art with selected maps . . . (to) . . . create dialogues that illuminate the crossing of the traditional boundaries of art and maps . . .” The exhibit is at the Boston Public Library’s Norman B. Leventhal Map and Education Center.

Current through September 8 – New York – *Navigating New York*. New York City’s transportation maps include early maps of ships, trains, and passenger ferry routes through modern bus, car, subway, and train routes, illustrating a complex and interconnected system. Artistic renderings, maps, guidebooks, and digital technologies in the collection of the New York Transit Museum are on view. The transit museum itself is located in a decommissioned subway station in Brooklyn.

Current and Ongoing – New York – The *Relief Map of the New York City Water Supply System* is in the Queens Museum, in the former New York City Pavilion of the 1939 World’s Fair. The map was commissioned in order to educate the public about the water supply system. Cartographers began the work in 1939, and it was made public at the City’s Golden Anniversary Exposition. In 2008, the 27-piece relief map was finally taken out of storage and conserved by a Conservation Lab in Ohio. It is on long-term loan by the NYC EPA to the Museum.

March 6 – Stanford University, David Rumsey Map Center. Author Betsy Mason discusses her current book, *All Over the Map*. See p. 44 of this issue of Calafia for a review of the book.

March 11 – London – Tim Marshall, best-selling author of *Prisoners of Geography*, will present *Divided: Why We’re Living in an Age of Walls* at the London Geographical Society’s Monday Night Lecture Series at the Society at 1 Kensington Gore, London, at 6:30 PM.

March 13-14 – Regensburg – The University of Regensburg’s Department of Southeast and East European History will host a workshop on *Maps in Libraries*, to explore digitization in map library collections and visual geosearch systems that can enhance access to information.

March 14 – Portland – The Osher Map Library hosts Dr. Tim Wallace’s presentation, *Mapmaking in the Age of Artificial Intelligence* at the University of Southern Maine, 6 PM.

March 19 – New York – Dr. Christina Dando, whose work focuses on gender and geography will present *History of Women in Cartography*, hosted by the New York Map Society at the New York Public Library’s Main Branch at 6:30 PM.

March 21 – London – Dr. Martin Brueckner, from the University of Delaware will present *The Rise of Monumental Maps in America: Aesthetics, Technology, and Material Culture*, as the “Maps and Society” lecture series continues at the Warburg Institute, School of Advanced Study, the University of London. The series is sponsored by the Antiquarian Booksellers’ Association’s

Educational Trust and IMCOS. For information, contact Tony Campbell at tony@tonycampbell.info.

March 21 – Washington DC – the Washington Map Society hosts Dr. Matthew Edney from the University of Maine Osher Map Library’s presentation of *The History of Cartography Project: Its Past, Future, and Lasting Importance* at 5PM at the Geography and Map Division Research Center at the Library of Congress, Madison Building. For further information, contact Eliane Dotson at eliane@oldworldsuctions.com or Bert Johnson at mandrake@verizon.net.

March 21 – Chicago – Dr. Susan Shelten, author and history professor at the University of Denver will present *How Maps Reveal (and Conceal) History*, illustrated by materials from the Newberry Library. Ruggles Hall, Newberry Library, 5:30 PM.

April 2-4 – Amsterdam – *Geospatial World Forum 2019* at the Taets Art and Event Park, has the theme of “Empowering Billions” as geospatial technology brings the 4th Industrial Revolution. #geospatialbydefault works to provide needed information to all. More information is available at geospatialworldforum.org.

April 3-7 – Washington DC – American Association of Geographers Annual Meeting will present research and applications in geography, sustainability and GIS sciences. The conference features 5,000 presentations, posters, field trips and workshops hosted by researchers and scholars in the field. Over 7,000 geographers from all over the world are expected to attend this major conference.

April 5 – Los Angeles – The Los Angeles Geographical Society presents *Environmental Planning: A Nexus of Geography Curriculum, Internships, Jobs, and Careers* by SDSU Geography alum Addie Farrell, an Environmental Project Manager, at the Los Angeles City College, Science and Technology Building, 855 N. Vermont Avenue, LA at 4 PM.

April 11 – Washington DC – Dr. Ronald Grim, formerly Curator of Maps at the Leventhal Map Center of the Boston Public Library will present *In the Footsteps of the Crime*. A few months after Dr. Grim was appointed Curator, E. Forbes Smiley, a map thief and a frequent visitor to the collection, was arrested when 70 maps he had examined were found to be missing. About half of these were recovered, but many continue to be missing. Dr. Grim will discuss recovery efforts, as well as resulting security and inventory measures.

April 13 – New York – Dr. Susan Schulten, author and professor from the University of Denver, will present *How Maps Illuminate and Complicate the Past* as they both “document a time and shape the course of history”, at the New York Map Society’s venue at the World School, 11 East 26th Street, 17th floor, at 2 PM.

April 13 – Stanford Univ – California Map Society. See page 2.

April 25 – Milwaukee – The Arthur Holzheimer Lecture Series presents *Maps and America* at the American Geographical Socie-

ty Library, Golda Meir Library, University of Wisconsin Milwaukee from 5:30 - 7 PM

April 26-27 – Dallas – The Texas Map Society meeting.

April 27 – Richmond, VA – Dr. Stephen J. Hornsby will discuss pictorial maps from his latest book *Picturing America: The Golden Age of Pictorial Maps*. The lecture will be followed by an exhibition of pictorial maps from the Library of Virginia, and will be held at the Library, 800 East Broad Street.

May 2 – London – Jeremy Brown, Ph.D, student at the University of London's Department of Geography will present *Democratizing the Grand Tour: Self-Reliant Travel and the First Italian Road Atlas in the 1770s*. at the Warburg Institute, School of Advanced Study, the University of London. The series is sponsored by the Antiquarian Booksellers' Association's Educational Trust and IMCOS. For information, contact Tony Campbell at tonycampbell.info.

May 2 – New York – Matthew Edney, who directs the *History of Cartography Project* at the University of Wisconsin-Madison will discuss his project at the New York Public Library's Main Building, hosted by the New York Map Society, at 6:30PM.

May 3-5 – Chicago – the 5th Chicago International Map Fair, sponsored by History in your Hands Foundation, will be held at the Newberry Library, 60 West Walton Street. The Fair will include a lecture series sponsored by the Chicago Map Society.

May 3-5 – Big Bear Lake, CA – The California Geographical Society's Spring Meeting will be held at the Lodge at Big Bear Lake, and feature presentations from students, professors, and professionals in the field.

May 3 – Los Angeles – Students at universities and colleges in Southern California will share presentations, posters, and maps at the Student Research Symposium at Los Angeles City College, Science and Technology Building, 855 N. Vermont Avenue, LA at 4 PM.

May 8-10 – Thessaloniki, Greece – The International Cartographic Association hosts the 14th *Digital Approaches to Cartographic Heritage* conference on digital cartography.

May 10 – Stanford University, David Rumsey Map Center. California Map Society / Rumsey Map Center Annual Lecture and Student Essay Competition Winner Talks. <https://library.stanford.edu/rumsey/events>

May 16 – Chicago – Michael Conzen will introduce a little-known Chicago cartographer in *Chicago Diagrammed: Frank Glossop and the Mapping of Business Before and After the Fire* an “unheralded but nevertheless, . . . broadly influential Chicago cartographer at Ruggles Hall, the Newberry Library at 5:30PM

June 1—DEADLINE— 2019 Ristow Prize student paper competition. Undergraduate, graduate, and first-year postdoctoral students are eligible to compete. See page 37 of this issue or go to www.washmap.org for details.

June 6-9 – London – Four map and book fairs in four days will be held, including PBFA, the London Rare Book Fair, the London Map Fair, and the Bloomsbury Book Fair.

July 2-5 – Salzburg – The University of Salzburg's Department of Geoinformatics and the Austrian Academy of Sciences host *GI Forum 2019*, applying a “spatial” view to the economy, society, and the environment, including “spatial” subjects such as planning, resource management, logistics and the humanities. For further information, contact office@gi.forum.org.

July 12 – Utrecht – The International Cartographic Commission on the History of Cartography hosts a special workshop on *Controlling the Waters: Seas, Lakes and Rivers on Historic Maps and Charts* prior to the general meeting July 13th in Leiden (see below). The workshop will focus on portolan charts, maritime and river cartography, hydrographic surveys, VOC charts, polder maps, and others. The workshop will be at Utrecht University. Contact Imre Demhardt at demhardt@uta.edu for further information.

July 13 – Leiden – Meeting of the International Society of Curators of Early Maps. For further information, please contact Ed Dahl at ed.dahl@sympatico.ca.

July 14-19 – Amsterdam – the 28th International Conference on the History of Cartography will be held at the Koninklijk Instituut voor Tropen. The series of presentations will focus on the theme of *Old Maps, New Perspectives: Studying the History of Cartography in the 21st Century*. The conference is hosted by Imago Mundi and the Explokart Research Group from the Special Collection at University of Amsterdam. For additional information, contact info@ichc2019.amsterdam

July 15-20 – Tokyo – the International Cartographic Association will present *Mapping Everything for Everyone* at the 29th International Cartographic Conference at the National Museum of Emerging Science and Innovation

August 27-30 – London – Royal Geographical Society's Annual International Conference 2019 will be held at the Society at 1 Kensington Gore, London and will include lectures, conferences, networking events, and research.

September 5-7 – Oxford – The IMCOS “Weekend in Oxford” will include a visit to the *Talking Maps* exhibit at the Bodleian Library as well as a Collector's Meeting.

September 7-9 – Sydney – In honor of the 250th anniversary of James Cook's discoveries on the east coast of Australia, the State Library of New South Wales will host an Historic Cartography meeting, which may also include a post-conference field trip to Canberra to the National Library of Australia. For information, contact Maggie Patton at maggie.patton@sl.nsw.gov.au.

September 18-21 – Reno – The Western Association of Map Libraries will hold its annual conference at the University of Nevada Reno.

John Docktor, a long-time member of the Washington Map Society, maintains a website that's bursting with news of the cartographic world. Check out: www.docktor.com

CMS OFFICERS: 2018-2019

President, Susan Caughey
president@californiamapsociety.org

VP for Southern California,
Jon Jablonski
jonjab@ucsb.edu

VP for Northern California,
Ronald Gibbs, MD
Ronald.Gibbs@ucdenver.edu

Treasurer, John Fleming
treasurer@californiamapsociety.org

Secretary, Kenneth Habeeb
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vp-mem@californiamapsociety.org

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PAST PRESIDENTS

Norman J.W. Thrower	1979-1980
Gerald Greenberg	1980-1985
Vincent Mazzucchelli	1986-1989
Cherie Northon	1990-1992
Alfred W. Newman	1993-1996
William Warren	1997-2000
Glen McLaughlin	2001-2003
David Kalifon	2003-2005
Thomas B. Worth	2005-2007
Susan Caughey	2007-2009
Philip R. Simon	2009-2011
Fred DeJarlais	2011-2013
Len Rothman	2013-2015

COVER IMAGE



Myths, Maps & Men: Merrill Lynch Salutes the Year of the Moon. Nick Kanas' Favorite Map, p. 43



CALAFIA, the name of our Society's Journal, was a fictional warrior queen who ruled over a kingdom of Black women living on the mythical Island of California.

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.

California Map Society
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NEW MEMBERS 2018-19

Gray Brechin
Beth English
Ameha Claire Fazio
Rowena Forest
Alexander Gao
Tina Glover
Travis Gradijan
Kay Hinn
Ed Hutton
John Isom
Anita Klune
Jean Lhuillier
Michael Maidenberg
Maya Malaviya
Roger March
M Martini
Betsy Mason
Andria Olson
Nica Powell
Thomas Price
Emily Prince
Dan Rademacher
Louise Ratliff
Jeff Seaman
Nanneke Shaffer
David Smollar
Gerald Tyner
David John Williams

§

New Life Members

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James Jeffrey, III
Michael Dean Jennings
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 Condition
 G..... GOOD
 F..... FAIR
 P..... POOR
 V.P..... VERY POOR
 Grade
 L..... LEVEL
 R..... ROLLING
 H..... HILLY
 M..... MOUNTAINOUS
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