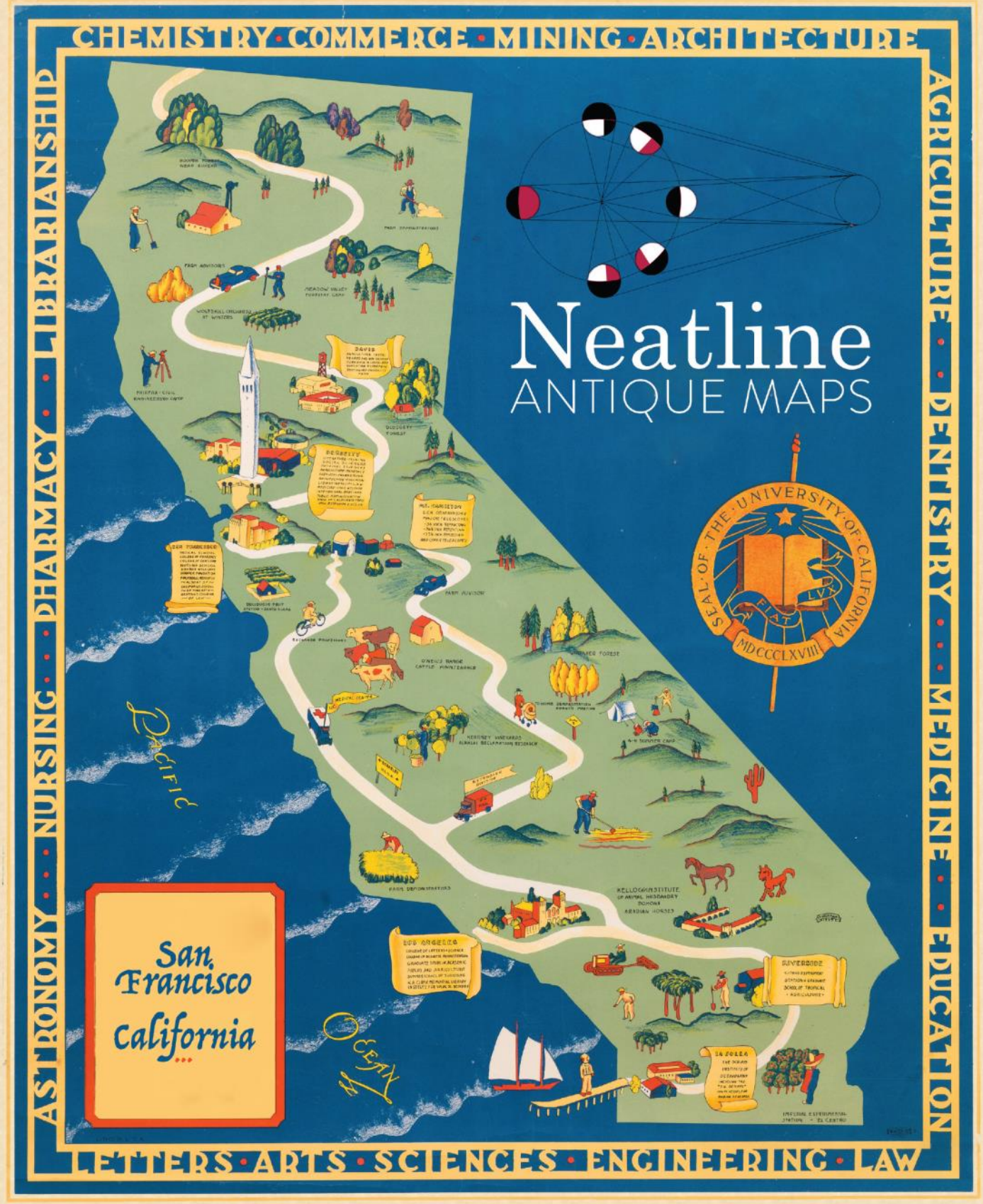
# Calafia

The Journal of the California Map Society
March 2018

Map of the World by Fra Mauro, circa 1450 (p. 29)

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# Calafia

THE JOURNAL OF THE CALIFORNIA MAP SOCIETY

Volume 2018, Issue 1 March 2018

www.californiamapsociety.org


## Contents




**Calafia : The Journal of the California Map Society**
Juliet Rothman, Editor
Fred DeJarlais, Publisher
The journal is published bi-annually by the Society.


# Spring meeting, April 21, 2018

## Chabot Space & Science Center, Oakland, CA

37.819°N 122.182°W or small.jump.robot*

10000 Skyline Boulevard, Oakland, CA

Kepler/Copernicus Rooms, Second Level, Dellums Building

Northern California Meeting — Our 83rd Regional Meeting

Don't miss what might be our best meeting, ever! We have a great location and full slate of fantastic speakers with captivating subjects.

The Chabot is easy to find. Just set your direction finder to one of the three addresses above and you'll find yourself in the beautiful Oakland Hills at the **Chabot Space & Science Center,** with its full-dome digital planetarium and historic observatory. We'll meet in the **Kepler/Copernicus Rooms,** located on the second level of the **Dellums Building.**


**See page 6 for Facility Map**

The morning will begin with **Michael Jennings, PhD**, a well-known San Francisco map dealer. He received his doctorate with honors in Near Eastern Languages and Civilizations from the University of Chicago. His dissertation explored the relationship between landscape and settlement in Jericho from the Hasmonean to early Islamic periods. This led to his love of, and engagement with, maps. Jennings will speak on *The Developing Map: An Illustrated History of the Mapping of the Arabian Peninsula from Ptolemy to Google.*

Our second speaker will be **Dan Rademacher**, Executive Director of GreenInfo Network, a Bay Area non-profit that supports public interest groups and government agencies with innovative uses of geospatial technology. GreenInfo's expertise is in the communication of large volumes of complicated data in easily understood maps. The breadth of its work is so wide that only Rademacher can explain it to us. He will describe some of GreenInfo's major projects during his presentation.

After a break we will hear from **Ron Gibbs, M.D.** joined CMS in 2015 when he moved to San Francisco from Denver, where he was the Chair of Obstetrics and Gynecology at the University of Colorado School of Medicine. When wearing his other hat, he follows his long-standing passion for maps, those focused on early American history and George

Washington in particular. His presentation, *On the Brink of Disaster, George Washington and the American Revolution, 1775-1776*, will trace the early years of the Revolution through Washington's battle tactics, using maps that explain the terrain that forced Washington to make tough decisions to ward off near-certain disaster.

**Lunch** will be on your own in the Chabot's Space Café. We'll have about an hour and a half, plenty of time for lunch and to wander around the Chabot on a self-guided tour.

Reconvening in the afternoon, our first speaker will be **Betsy Mason**, co-author of the National Geographic blog *All Over the Map*. Betsy is also a freelance science journalist and geologist and was a Knight Science Journalism Fellow at MIT for 2015-16. Her new book, to be published in the fall, will feature 40 of her exceptional map stories, and she plans to share some of them with us during her talk. If you've read her blog, you know that she always features fascinating map subjects, and her talk will not be an exception.

The next speaker will be **Kate Anderson, PLS,** who is a licensed professional land surveyor working in San Francisco, the only woman doing so. As a solo practitioner, she makes boundary and topographical surveys, condominium conversions, and architectural site surveys, as well as dealing with lot line adjustments and easement issues. She's often asked to make detailed measurements of building interiors, which leads to some of the interesting stories she will share with us as part of her talk about the work of a modern-day surveyor.

**Peter Hiller** will speak after the afternoon break. He is the curator for the Jo Mora Trust. His book, *The Life and Times of Jo Mora: Iconic Artist of the American West,* will be published by the Book Club of California later this year. Well known and beloved for his pictorial maps, published from the late 1920s to the mid-1940s, Mora was also an accomplished book illustrator, painter, sculptor and writer. Hiller will share some of his insights into Mora's productive life and will bring some of his original map drawings to display.

A brief business meeting will follow, with Adjournment by 5 pm.

*By Susan Caughey*

* http://www.what3words.com

# President's Letter
## March 2018

Not long ago one of our founding members railed at me "This map society was founded by map collectors and academics to talk about antique maps and now it's nothing like it's supposed to be. It's all about GIS!" True, we had just had a meeting where GIS and its offspring were the only topics, which I admit wasn't as it should have been. But if we are to grow as an organization we have to evolve along with the entire mapping world. If we want to attract younger members we have to do so by acknowledging the technology that has made geography departments the fastest growing area in our universities. And, yes, we need to balance both worlds by having presentations and events that address the interests of all of our members. I hope that by bringing in the technologically minded with talks about new innovations and uses we can expose them to the wider world of exploration and discovery and the history and artistry of hand-made maps and globes.
An organization needs to grow to remain vital. We lost four valued members last year to death but we gained 42 new paid members. Undoubtedly a record. And we owe it primarily to the efforts of **Fred DeJarlais**, who wears three CMS hats: Past-President, Vice President for Membership and Publisher of the *Calafia*. Fred spearheaded participation by CMS in the San Francisco Map Fair in September, obtaining a booth and creating signage and hand-outs for it, and recruiting volunteers to man the booth for a day and a half. Their effort gained us valuable visibility and at least 12 new members.

Fred wearing three hats and a recycled President (I held this position once before) are not healthy signs for our organization. We haven't had a Vice President for Northern California for almost a year. And Bill Eaton, our Vice President for Information Technology, is retiring from that position. We need help. Please let me know if you can.

Thanks!

*Susan Caughey, President*

# Editor's Note

It is with both excitement and gratefulness that we present this new issue of *Calafia* for your enjoyment. Excitement – because this latest edition continues our tradition of offering interesting and novel perspectives on this diverse and exciting field which we love so much. We have continued our new Apps for Maps feature with two interesting contributions: Jon Jablonski's presentation of the Framefinder tool, and Henry Gonzales' new app for locating historic markers throughout California. We can get to know our member Lavonne Jacobson, and learn about Julie Sweetkind's favorite map. Bill Warren shares another interesting book review, and we introduce articles by Ken Habeeb, Dydia DeLyser, Jon Schleuss, Leonard Rothman, Phil Simon, Susan Caughey, and Fred DeJarlais, our noted publisher. We share the experience of our first, new, San Francisco Map Fair, and our first, annual, Ruderman Conference at the David Rumsey Map Center.

And gratefulness – gratefulness for the efforts so many of our contributors have given to this special project, to making our Journal a source of information, education, entertainment, and connection for each of our readers. Gratefulness to our outstanding publisher, Fred DeJarlais, whose many, many hours of work have made this beautiful edition possible, and gratefulness to our Board for sustaining and supporting our efforts. Without each of you, this could not be!

And gratefulness to our members, as well. Your interest, your support, and enjoyment of our Journal makes my position as your editor very special!

We know that each of us has a special interest or special experience that has made cartography an important part of your life. We hope that you will continue our tradition by contributing to future journals, and sharing that interest or experience with all of us. We will be most grateful!

*Juliet Rothman, Editor*

# 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-tern 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 are 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
Leonard Rothman

**Silver**

Warren Heckrotte
Nick Kanas
Glen McLaughlin

**Bronze**

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

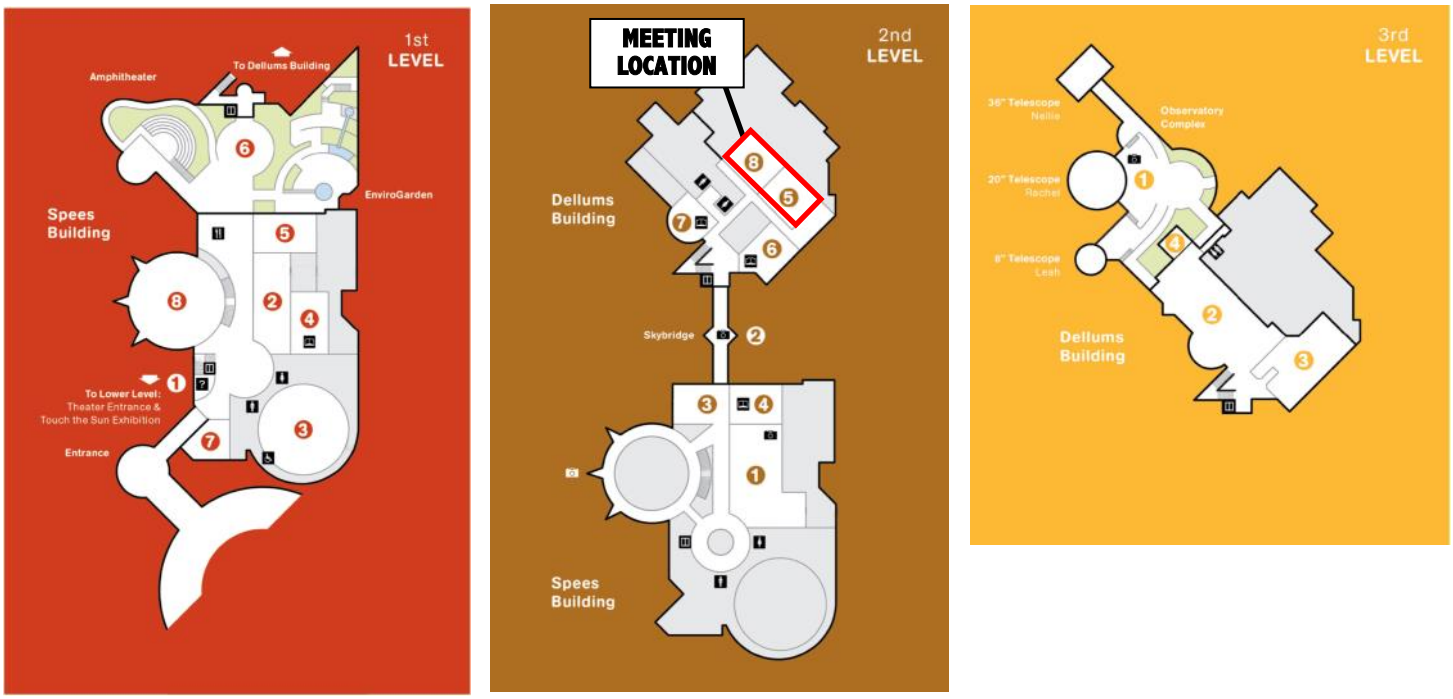
The Society is grateful for their interest and support of this important program. Please consider adding your name to this very special list by making a donation to the Fund!

**California Map Society Spring Meeting**
Saturday, April 21, 2018
**Chabot Space & Science Center**
10000 Skyline Blvd
Oakland, California
(37.819°N 122.182°W *or small.jump.robot**)

| | |
|---|---|
| 8:30-9:00 | Coffee |
| 9:00-9:15 | Welcome by President Susan Caughey |
| 9:15-10:00 | **Michael Jennings PhD,** *The Developing Map: An Illustrated History of the Mapping of the Arabian Peninsula from Ptolemy to Google***.** Jennings is a well-known San Francisco map dealer who earned his PhD in Near Eastern Languages and Civilizations from the University of Chicago. |
| 10:00-10.45 | **Dan Rademacher**, Executive Director of Greeninfo Network, a non-profit that supports public interest groups and government agencies with innovative uses of geospatial technology. Rademacher will describe its mission and some of its monumental projects. |
| 10:45-11:00 | **Break** |
| 1:00-11:45 | **Ron Gibbs MD**, *On the Brink of Disaster, George Washington and the American Revolution, 1775-1776*, will trace the early years of the Revolution through Washington's battle tactics using maps that explain the terrain that forced Washington to make tough decisions to ward off near-certain disaster. |
| 11:45-1:30 | **Lunch** and self-tour of the Chabot Space & Science Center |
| 1:30-2:15 | **Betsy Mason**, co-author of the National Geographic blog *All Over the Map* and author of a forthcoming book by the same name that is a collection of intriguing stories about maps, cartographers, types of maps, and stories told through maps. She'll be talking about some of these stories. |
| 2:15-3:30 | **Kate Anderson PLS** will speak about modern day surveying in San Francisco and her life as the only female professional land surveyor in the City. |
| 3:30-3:45 | **Break** |
| 3:45-4:30 | **Peter Hiller,** *The Life and Work of Jo Mora***.** Hiller is the curator of the Jo Mora Trust. Mora is beloved for his pictorial maps published from the late 1920s to the mid-1940's but he was also an accomplished book illustrator, painter, sculptor and writer. |
| 4:30-4:45 | Business Meeting |
| 5:00 | Adjourn |

*http://www.what3words.com

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




**Meeting: Kepler/Copernicus Rooms , Second Level, Dellums Building**

# DIRECTIONS TO THE MEETING

**From Oakland**

*From I-580 East*

Take the Fruitvale Ave exit, merge onto Harold St, turn left at Champion St, continue onto Lincoln Ave, continue onto Joaquin Miller Rd, turn left atSkyline Blvd. Turn right onto the driveway at the Chabot sign.

*From I-580 West*

Take the Coolidge Ave exit toward Fruitvale Ave, merge onto Montana St, turn right at Champion St, continue onto Lincoln Ave, continue onto Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

*From 35th Ave*

Head northeast on 35th Ave, continue onto Redwood Rd (35th Ave. becomes Redwood Rd.), turn left at Skyline Blvd, turn right at the next light to stay on Skyline Blvd, turn right onto the driveway at the Chabot sign.

**From East Contra Costa County (Orinda/Walnut Creek,)**

Take Hwy. 24 West to Hwy. 13 South toward Hayward, take the Joaquin Miller Rd/Lincoln Ave Exit, turn left at Monterey Blvd, take the 1st left onto Lincoln Ave, continue onto Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**From West Contra Costa County (Albany/Richmond)**

Take I-80 West to I- 580 East, take the exit onto Hwy. 24 East toward Walnut Creek, take the exit onto Hwy. 13 South toward Hayward, take the Joaquin Miller Rd/Lincoln Ave Exit, slight left at Monterey Blvd, take the 1st left onto Lincoln Ave and continue onto Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**From San Francisco**

Take I-80 East to I-580 East toward CA-24/Hayward/Stockton, take Hwy. 24 East toward Walnut Creek, take the exit onto Hwy. 13 South toward Hayward, take the Joaquin Miller Rd/Lincoln Ave Exit, slight left at Monterey Blvd, take the 1st left onto Lincoln Ave and continue onto Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**From Marin County**

Take I-580 East to Hwy. 24 East toward Walnut Creek, take the exit onto Hwy. 13 South toward Hayward, take the Joaquin Miller Rd/Lincoln Ave Exit. slight left at Monterey Blvd, take the 1st left onto Lincoln Ave and continue onto Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**From Castro Valley, Dublin, & Livermore**

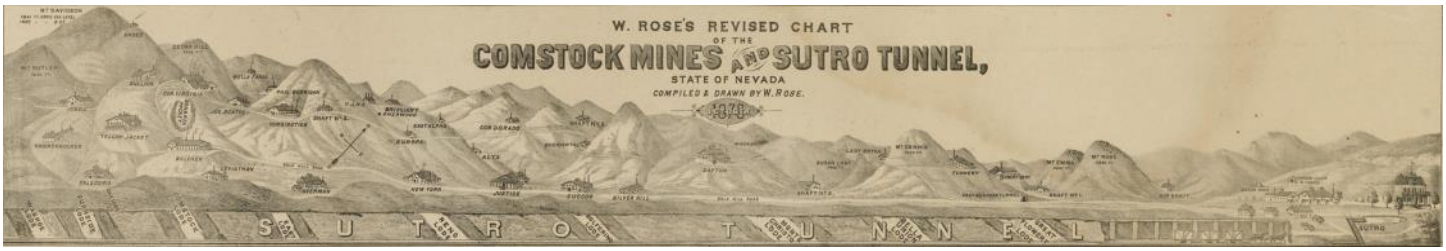
Take I-580 West toward Oakland, take a slight right onto Hwy. 13 North (Warren Freeway) toward Berkeley, take the Joaquin Miller Rd Exit, turn right at Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**From the South Bay**

Take I-880 North to I-238 South toward Castro Valley/Stockton/I-580, take the exit onto I-580 West toward Oakland, make a slight right onto Hwy. 13 North (Warren Freeway) toward Berkeley, take the Joaquin Miller Rd Exit, turn right at Joaquin Miller Rd, turn left at Skyline Blvd. Turn right onto the driveway at the Chabot sign.

**Parking**

Convenient, free parking is available in the adjacent 3-level parking structure. Additional parking for special events is available on weekends in the Staff Lot (near the Observatory) or in the West Lot off Skyline Blvd. Accessible parking is available near the main entrance to Chabot. Parking spaces for vehicles with disabled parking permits are located across from the parking structure – on the left coming up the driveway from Skyline Blvd. A drop-off area is also located in front of the main entrance.




# Mapping Three Dimensions: The Comstock Claims

## Juliet rothman

The mapping of the mining claims for the silver in the Comstock lode follows as complex a course as the very veins of silver themselves, and, like the remaining silver in the ground, the story of the claims and their mapping continues still today. This article can only begin to touch upon this intriguing area of mapping, but will hopefully stir interest in further exploration.

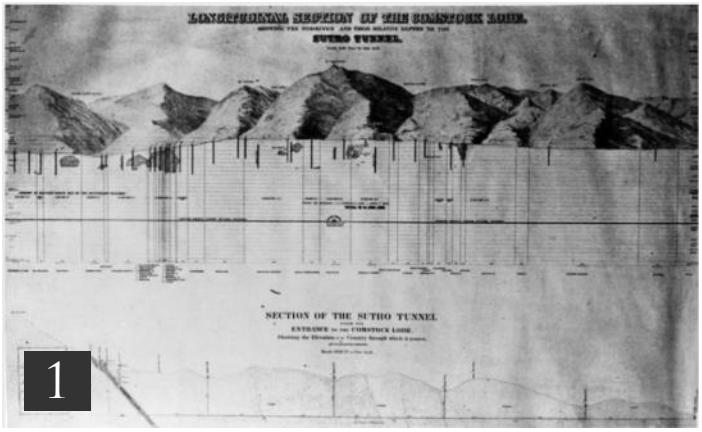
The Comstock Lode was formed through a fault fissure, and extended for four miles, reaching "unknown depths." Ages passed before the lode reached "completion" through "violent dynamic convulsions" and a "great fault fissure." (Smith, G.H., p. 71) As far as we know, the great treasures in silver and some gold lay undisturbed beneath the ground until the mid-19th century, when gold rush miners from California began to search for gold in the areas around Virginia City and found flakes and some nuggets, which encouraged further exploration and the eventual discovery of the Comstock lode. The lode was given its name after Henry Comstock, who, with his partner Manny Penrod, bought other miners' claims to the area while thinking it was rich in gold, rather than silver.

In researching mining claims, I was very fortunate to have been referred to David Davis, a Geologic Specialist with the Nevada Bureau of Mines and Geology. David says he was always very interested in both history and geology, and collected rocks from early childhood in his native Juliustown, New Jersey, and in Vermont, where the family vacationed in the summer. He attended VA Tech and graduated with a BS in Geology before moving to Reno, NV to attend the well-known and highly respected Mackay School of Mines at University of Nevada, Reno, graduating with an MS. He has worked for the Nevada Bureau of Mines for 30 years, beginning in the geology lab making thing slices of rock for study, and moving into IT where he continues today, after 3 years. He loves geology, maps, rock identification, and history. He is an information specialist and welcomes inquiries from anyone interested in exploring the Comstock and its claims further.

As we begin to consider the history of claims mapping, David shared, it is first essential to understand two common terms: lode claims and placer claims. Lode claims relate directly to a specific vein of silver deposit, to the actual mineral found in the rock itself, and follow the orientation of the vein. Placer claims are generally rectangles of land, and refer to all of the mineral deposits located within the boundaries of the placer, including the metals found in the dirt and gravel eroded from the rock. (David, D. personal interview)

Silver mining began, as we know, in Virginia City, with the gold rush in 1849. The 49ers first found the rich silver veins of the Comstock Lode buried under the bluish mud which was clogging up their sluice boxes as they searched for gold. When the "bluish stuff" was found to be silver, they recognized the value of their find, thus making the ways in which claims to a specific spot could be secured an all-important issue.

At the time of these discoveries, none of the land in the area had been surveyed or mapped. The location of Comstock claims were crudely and ineffectively documented at first. "Records", filled with easures and changes, were kept in a book on a shelf behind the bar of a saloon. Claims "usually consisted of a line or two claiming so many feet north or south from a stake or from another claim, with nothing else to identify the location, which made it easy at a later period to "float" a claim over more desirable ground." (Smith, G.H., p. 6) Litigation regarding the location of stakes, and the ways in which claims were recorded abounded.



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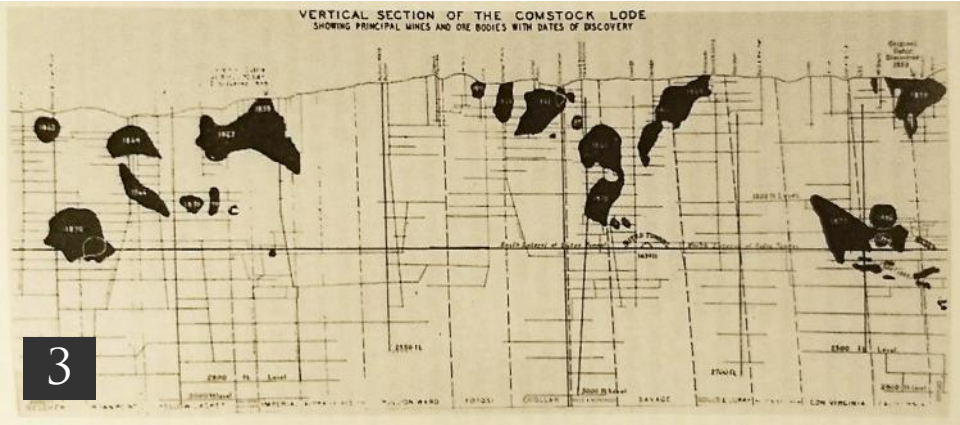
At the time of these early claims, silver and gold was the only money in circulation in the West (Ibid, p. 31). "Rules" for placer claims stipulated 50 feet "for each man", but these were not strictly adhered to by miners, who set their stakes to mark the boundaries of their claims as they wished. Some were never recorded. (Smith, G.H., p. 9) In 1859, John W. Mackay, who later became the Comstock's wealthiest individual claims holder, was among the first to discover and claim the "Ophir Diggings". (Ibid, p. 14-15)

Miners could also form a group, and claim adjoining areas, thus creating much larger joint claims. Mining companies often used the names of the original claim holders and formed stock companies, such as Gould & Curry, Hale & Norcross, Best & Belcher, Savage, Chollar, Overman, Belcher, Sides, and White and Murphy (Ibid, p. 11), as well as Ophir, Potosi, and Yellowjacket. Shares in the companies were sold "by the foot", a number which was unrelated to the number of shares each company held. (Ibid, p. 32)

There were, at first, no Federal laws which limited miners from locating mining claims on public lands. Miners were, in reality, trespassers onto these lands, but no actions were taken by the Federal government to address this. Contrary to the laws in other countries, mining laws in the US allow a miner's claims to follow a vein, even when that vein dips underneath another miner's claims (Ibid, p. 64) Rules were set which allowed claims to follow a vein for 200 feet in length, including "all of its dips, spurs, and angles." The width of a claim was not prescribed, and the claims filer could claim the entire width of the vein, which was up to 1,000 feet in some areas. (Ibid, p. 64-5)

The first official regulations regarding staking and mapping claims in the area were drawn up in 1859, and provided some consistent rules and procedures. Reviewed in 1866, these applied only to lode claims, but were later amended to address placer claims as well. An 1866 map illustrates depths of shafts for the proposed Sutro Tunnel. (MAP 1) Another example, the plat of the "stopes" (underground spaces created by the removal of minerals) of Consolidated Virginia and California's Bonanza mine, drawn in the 1870'as, looks downward from a horizontal plane from the 1200 Ft. to the 2200 Ft. levels, with each square representing 100 feet vertically, and with some stopes extending vertically upward from the main areas of the mine. (Smith, G.H., p. 166) (MAP 2). Another, a map of a section of the Comstock lode, drawn vertically, indicates the shape of the deposits and mines as well as the dates of discovery, thus setting the discoverer's claims to the mine by date. (Ibid, p. 276) (MAP 3)

*Horizontal Plat of Bonanza Stopes*

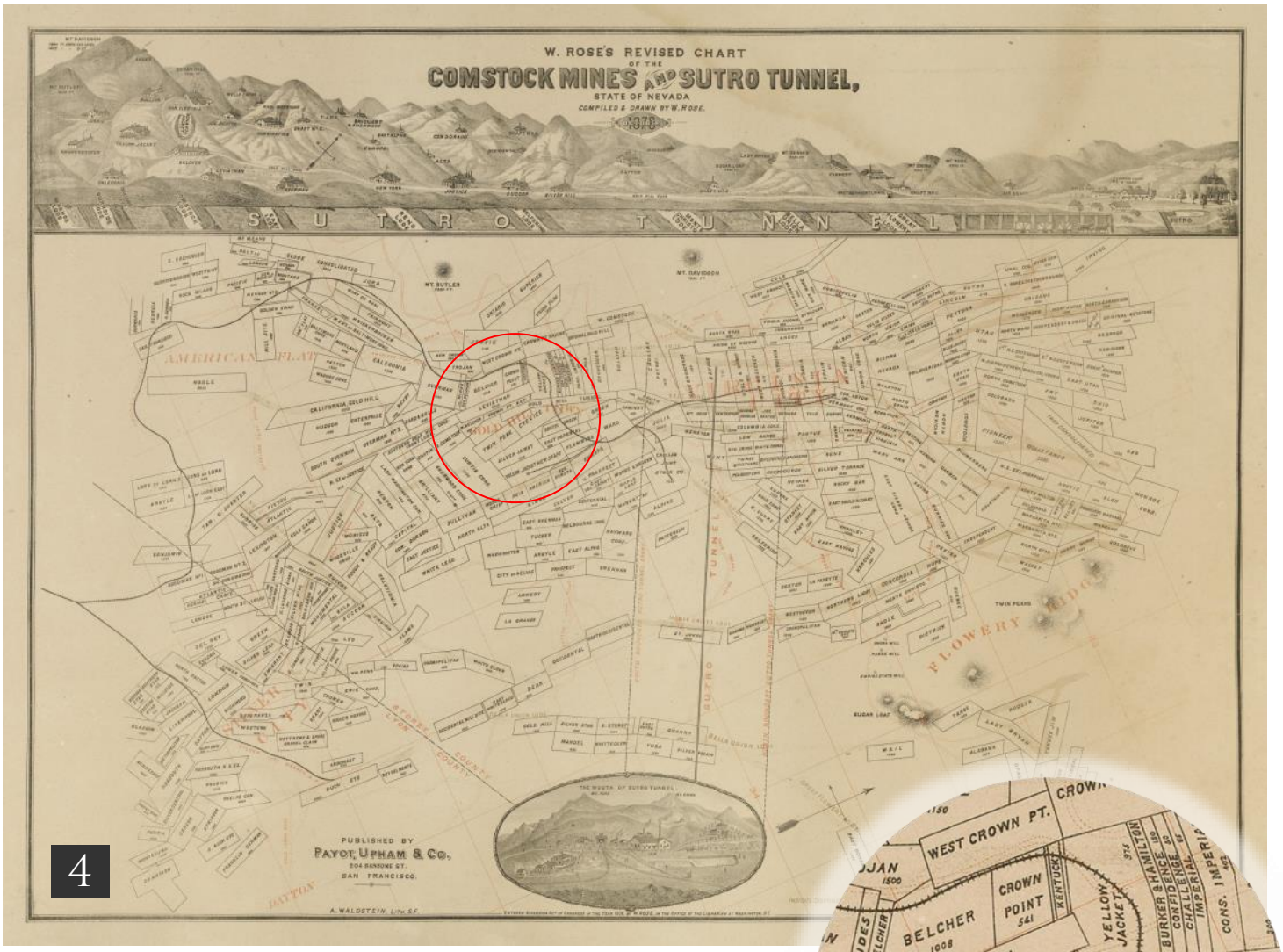


*Vertical Section of the Comstock Lode*

Lode claims could be mapped in several ways: the original map of the proposed Sutro Tunnels (above) was revised in 1878 by W. Rose (http://contentdm/library.unr.edu.cdm/singleitem/collection/hmaps/id/11/rec/54) (MAP 4) Two years later, in 1880, a surface map of the Comstock Lode indicates the location of mine shafts, as well as veins, streets, ravines, and tunnels (Ibid, p. 77) (MAP 5)

Nevada acquired statehood in 1864. An 1865 Higginson and Goldsworthy map illustrates the early gold and silver mining districts for the newly designated state. (http://contentde.library.unr.edu/cdm/single item/collection/hmaps/id/4764.rec/12) (MAP 6)

In 1872, the Nevada Mining Law set policies for staking both lode and placer claims. For placer claims, individual, officially designated "Mining Districts" had the power to set up their own rules and regulations for staking claims, and, in effect,


W. ROSE'S REVISED CHART
OF THE
COMSTOCK MINES AND SUTRO TUNNEL,
STATE OF NEVADA
COMPILED & DRAWN BY W. ROSE.
1878
SUTRO TUNNEL
MT. BUTLER
MT. DAVIDSON
AMERICAN FLAT
FLOWERY
PUBLISHED BY
PAYOT, UPHAM & Co.
204 BANSOME ST.
SAN FRANCISCO.
A. WALDSTEIN, Lith. S.F.

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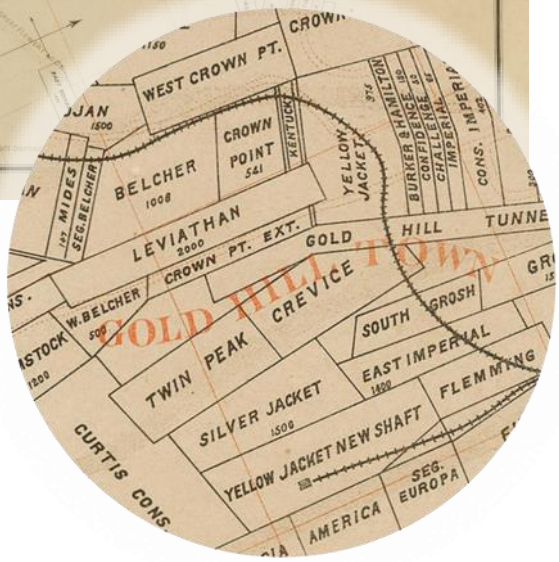
WEST CROWN PT.
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541
KENTUCKY
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BURKER & HAMILTON
CONFIDENCE
CHALLENGE
IMPERIAL
CONS. IMPERIAL
MIDES
SEG. BELCHER
BELCHER
1008
LEVIATHAN
2000
CROWN PT. EXT.
GOLD HILL TUNNEL
GOLD HILL TOWN
W. BELCHER
500
CREVICE
SOUTH GROSH
TWIN PEAK
EAST IMPERIAL
1400
FLEMMING
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1500
YELLOW JACKET NEW SHAFT
SEG. EUROPA
AMERICA
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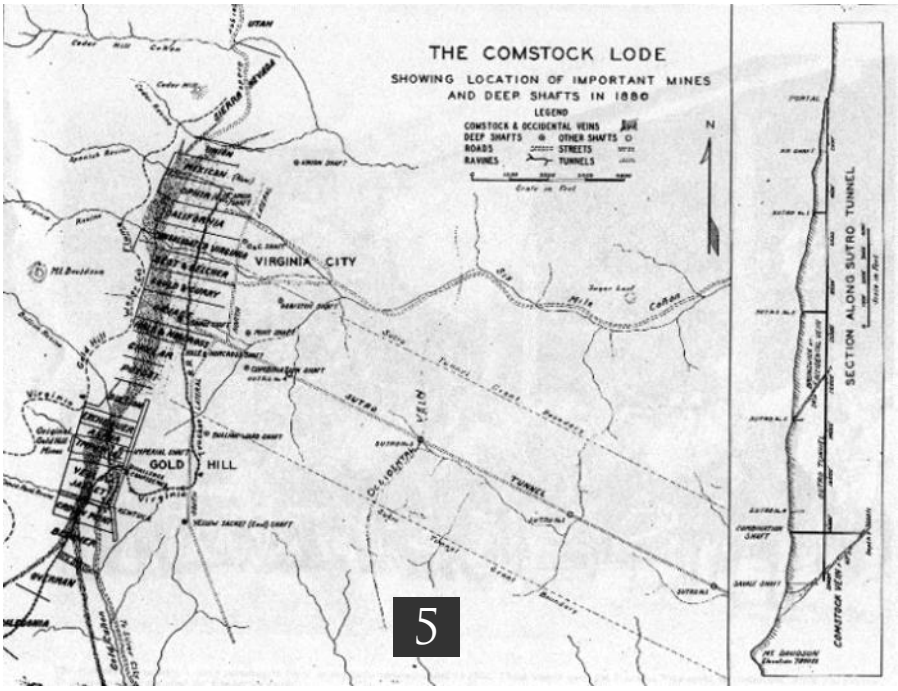
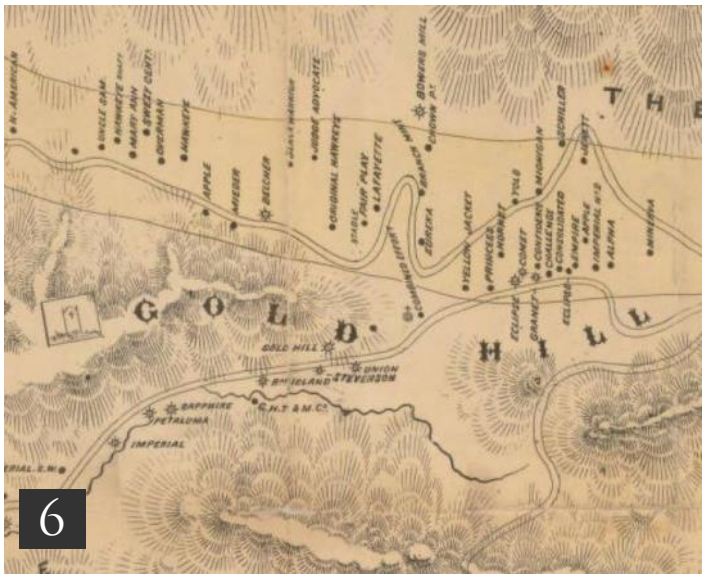

THE COMSTOCK LODE
SHOWING LOCATION OF IMPORTANT MINES
AND DEEP SHAFTS IN 1880
LEGEND
COMSTOCK & OCCIDENTAL VEINS
DEEP SHAFTS
OTHER SHAFTS
ROADS
STREETS
RAVINES
TUNNELS
Scale in Feet
N
VIRGINIA CITY
GOLD HILL
SUTRO TUNNEL
SECTION ALONG SUTRO TUNNEL
COMSTOCK VEIN

5

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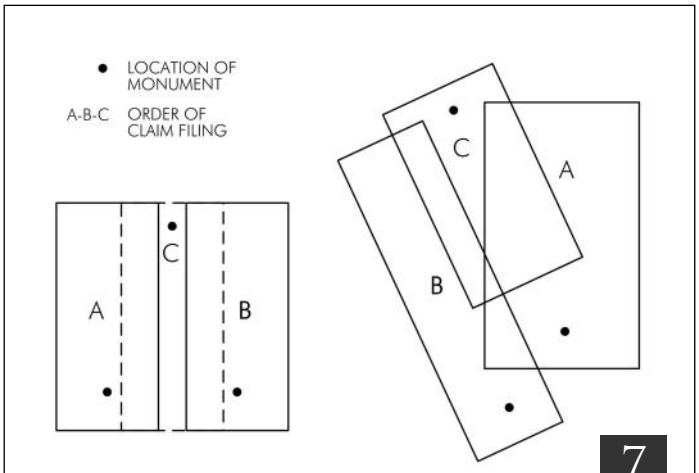


*Typical Placer Claim Mapping*

7

became the very first civil governments in these areas. Each "Mining District" had a prominent monument somewhere near its center, which served as a marker from which all claims could be drawn.

The placer claim process went something like this:

Find something
Create an area of claim around it
Set a monument within the area
Measure the claim's distance from other monuments.

Early placer claims were, literally, measured in footsteps. The miner would stake a claim, build his own marker, or "monument" as they were called, measuring it in footsteps from a neighboring marker or from the central district marker. He would measure the number if footsteps to the ends of his claim. Then, he would take these measurements to the Mining District Recorder's office, where they would be recorded. Records were kept in writing – there was no mapping at first to protect claims, or to provide accurate measurements. The Comstock Lode's Mining Districts in the area of Virginia City were named Ophir and Flower.

What happened, as it often did, when miners' claims overlapped? Each claim had a "discovery monument" somewhere on its claim. The earlier claim date had precedence. Odd shapes could result, as David Davis' diagram shows. (MAP 7) The claims monument has to be located in an unclaimed area. If it is located in an area where an earlier claim was already filed, the later miner's claim was completely forfeited. David's diagram illustrates the ways in which claims, originally rectangles or squares, could become odd shaped when claim filing dates were applied. David also illustrates how two rectangular claims, laid side by side with six inches between them affect a later, superimposed rectangular claim. Because earlier dates had precedence, the later clam could be reduced to a simple, six-inch strip only – still giving its owner a claim to the deposits found within


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those six inches! (Davis, D., personal interview)

The Bureau of Land Management website states that the first "official" survey of the lands around Virginia City's Comstock Lode was done in 1860. These records and surveys were held by the Virginia City Recorder. However, in 1875, there was a huge fire, and the city burned down. Some believe that the fire took with it all the books and records and surveys that had been done until that point, but there is no hard evidence of what actually occurred. Records were begun once again, and continued to be kept, first by the District Recorder and then, when counties were established as units of local government, by the County Recorder. Still today, no one is certain of what happened to the old records and to the


surveys of claims and boundaries. What is known is simply that, by the 1930's, all were gone. We do have a few maps of these early surveys and districts, including Davis' 1905 map, Hugo Hochholzer's 1865 topo map, and an 1877 map of Virginia City, with topo lines and mines.

MAP 8 — T.D. Parkinson's beautifully detailed 1875 map of the Comstock Lode and the Washoe Mining Claims illustrates the way in which lode claims followed the vein of the lode.
(http://contentdm/library.unr.edu/cdm/singleitem/collection/hmaps/id/1696/rec/47)

MAP 9 — An 1890 map of Southeast Virginia City illustrates both street layout and mineral claims.
(http://contentdm.library.unr.edu/cdm/singleitem/collection/hmaps/id/4655/rec/1)

MAP 10 — And an early 20th century map by Moran in 1923, show mining claims in fuller detail.
(http://contentdm.library.unr.edu/cdm/singleitem/collection/hmaps/id/1695/rec/9)

The legacy of the Comstock lode is an important one. Virginia City, Gold Hill, Silver City – these were the sites of the first silver mining camps in the United States, and the Comstock Lode was the first mined silver deposit in the country. It brought business to California, lifted it out of a depression, and grew the city of San Francisco, which, prior to the silver boom of the Comstock, was a town of 52,000. "Nearly all the profits from the Comstock were invested in San Francisco real estate and in the erection of buildings. California was the source of all supplies, from fruit to mining machinery, and every industry thrived" (Smith, G.H., p. 289).

Interested in staking a claim? More than 80% of Nevada is Federal land, and claims can still be filed – on Federal land – for mineral rights. The government retains ownership, but the claim holder can mine the land and retain the mineral rights. There are currently two ways to file claims: patented and unpatented filing. With unpatented claims, the government retains ownership of the land, while the individual claim holder has the mineral rights. Patented claims are a lengthier and more complex procedure. To have a clear, "patented" deed, the miner must have had the land surveyed, bring his official plat of the land to the appropriate government office, file official papers, pay fees, and go through a lengthy process before the deed can be granted. Current filers must be aware of federal laws, State of Nevada laws, and BLM laws for filing both with BLM and with the appropriate County Recorder. (Davis, D., personal interview)

**References:**

Davis, David A., Geologic Information Specialist, NV Bureau of Mines and Geology, personal interview

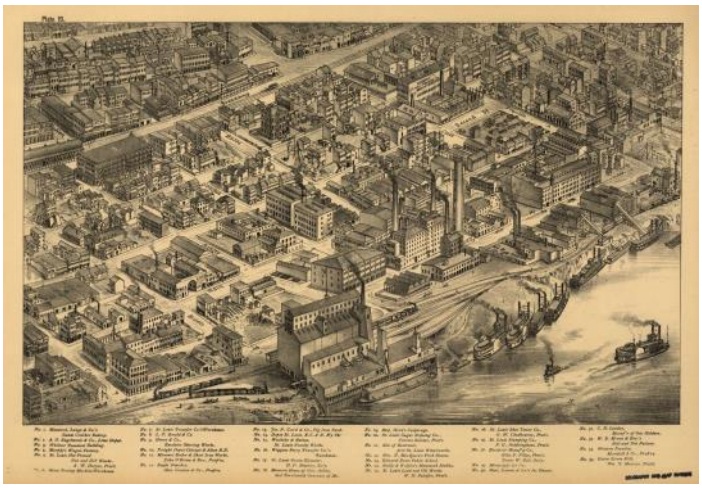
Smith, G.H. (1998) The History of the Comstock Lode. Reno: Nevada Bureau of Mines and Geology Special Publication.

**Websites:**

Main website: nbmg.unr.edu.
Publication Sp6 Special pubs 6 mining claim procedures for Nevada prospectors and miners (pdf)
Underground maps #120544 was 56x17 feet. Size is on the bottom left corner.
Huge collection (thousands) of maps – look up claims maps for VA City.

# CARTO-QUIZ

US River Cities: Can you identify them from historic bird's-eye views?



St Paul
St Louis
Savannah

Cincinnati
Memphis
Albany

Minneapolis
Sacramento
St Louis

Portland
Pittsburg
Louisville

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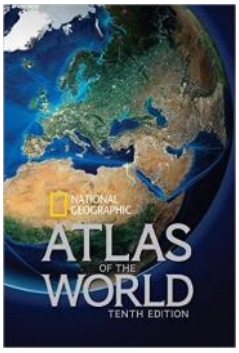
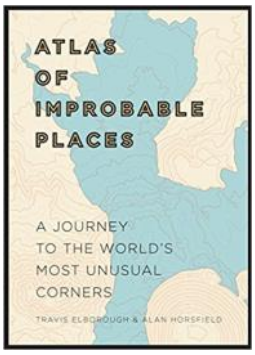
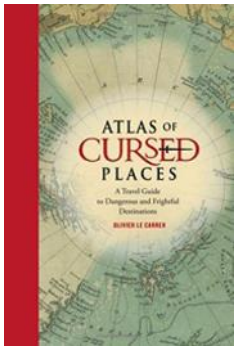
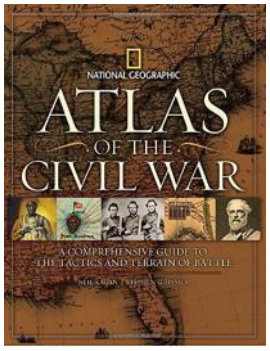
**27 Best World Atlases For Map Lovers In 2017 … a sample**

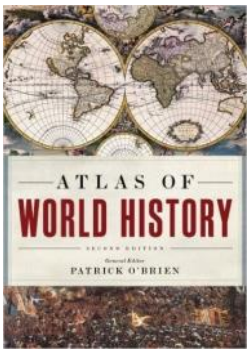
http://brilliantmaps.com/world-atlas/



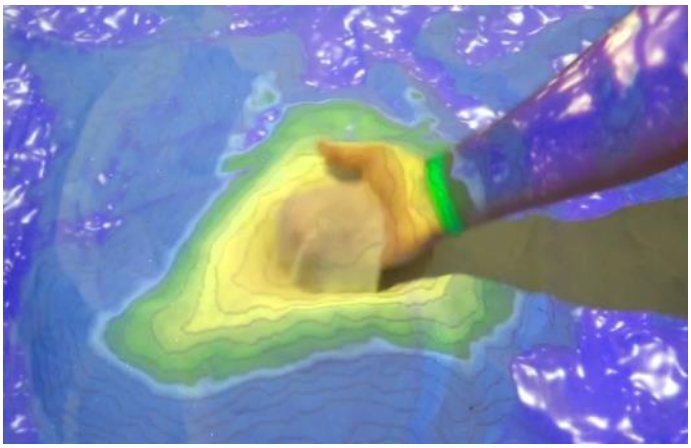



# Fall 2017 Meeting

## Juliet Rothman

After introductions from our SoCal Vice President Jon Jablonski and our President Susan Caughey, we began an exciting, full, day of interesting presentations and programs.

Emmanuel Masongsong and Henry Gonzalez of UCLA's Earth, Planetary, and Space Science Modeling and Educational Demonstrations Lab demonstrated three very hands-on lab projects: a drone with aerial photography and scientific tracking capabilities which was quite a bit smaller than a shoebox, a shake table which modeled earthquakes, which could be measured by placing a cellular phone with a seismography program on it directly on the moving parts of the table, and a modeling "sandbox" in which sand could be moved around to



*Modeling topography in an Augmented Reality Sandbox*

form mountains, valleys, rivers, and lakes. Special computer programs and lights over the "sandbox" used lights, elevation colors, contour lines, and images of blue, flowing waters to create dramatic scenery. Members and guests could "play" with all three of these hands-on demonstrations. Everyone was so fully engaged that they literally had to be pulled away from the projects to continue the meeting. Henry most helpfully assisted several of us to put the seismograph app on our phones, while Emmanuel explained the ways in which the sandbox can be used as a teaching tool. These special sandboxes are available in many universities and museums around the US. Further information may be accessed at https://arsandbox.ucdavid.edu and see related APPS for MAPS article elsewhere in this issue.

This presentation was followed by a StoryMap workshop led by Andy Rutkowski, assisted by Henry Gonzales. Andy explained that StoryMaps "take complex things, and make them accessible, such as hurricane maps (he used Irma as an example), policy briefs, and tutorials by providing a narrative which enables engagement." The creator of a StoryMap begins with a map and with "point data." Images and videos may then be added, and narratives describing or exploring each image composed and attached. Older maps may also be georeferenced over the StoryMap. Georeferenced maps, called "geotifs" may be downloaded from a georeferencer. Georeferencing is used to locate older paper maps, which don't have coordinates, so that their exact location is not accurately known. The georeferencing process gives old maps coordinates, and stores them, so that old maps can be locked on to newer maps via coordinates.

Andy took us through the process of creating a StoryMap of Los Angeles, and also of a concept, Manifest Destiny over time. StoryMaps can integrate different eras, names, and events. He used the StoryMap JS program to demonstrate the flexibility and variability of the maps, the colors, and the kinds of items that can be added to tell the story. ESRI's model of story maps have a cascade platform, offer options for how the screen is used, can be very interactive, and can embed other story maps within a story-map, creating what Andy referred to as "mini-movies."


*US Manifest Destiny StoryMap*

Henry illustrated each step of the process of creating a map using StoryMap JS, which can be accessed at https://storymap.knightlab.com. He began with a map of the world, which can be moved around to locate the specific area the user plans as the focus, zooming in or out to get the desired level of detail. He added a "headline" to the map, wrote accompanying text, and added specific titles, images, and videos. Useful resources for this project include: Georeferencer, other georeferenced map sources, such as the Rumsey Map Library and USGS, Mapbox, Carto, StoryMap JS, and Arcgis StoryMaps.

Storymaps can be published and shared on blogs, and via email.

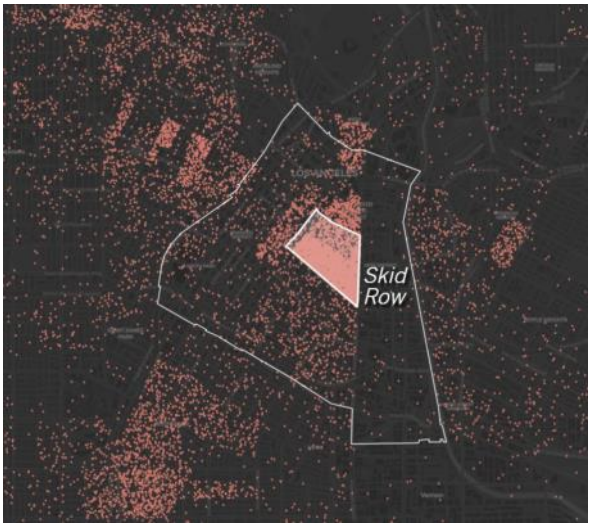
After a delicious lunch, we proceeded as a group to the UCLA Library Map Collection to view highlights of maps and the

*"Glued" to a Sanborn Map*

UCLA Geography Air Photo Archive, an exhibit mounted for our group by Andy Rutkowski and Jade Finlinsons. The exhibit included some beautiful Sanborn maps. Jade just graduated from UCLA with a Master's Degree in Library and Information Sciences. She explained that Sanborn maps include great details, like water mains under the streets, and were produced every few years in many cities. They were used by insurance agents, who often didn't visit the actual properties they were insuring, as they were able to get detailed information about possible insurance risks from the Sanborn maps.

The 20th century aerial images were primarily from two local sources, Spense Air Photo, and Fairchild Aerial Surveys. Fairchild was a national company with pilots who were trained in WWI, and often designed their own cameras. Jade explained that the pilots took their photos from two angles: oblique and landscape. Oblique views, she shared, were much more descriptive as their angle enabled better views of landscapes and actions on the ground.

Our next speaker, Jon Schleuss, Graphics and Data Journalist at the LA Times explained the challenges of mapmaking for journalistic use. Currently, the maps he creates must be usable in two very different forms: for the web, and for print. The web functions in pixels, and lines are drawn in black ink.




*Mapping LA's homeless population, Jon Schleuss, LA Times*

Newspaper pages, in contrast, function in picas, and black print uses 4 colors at once, which need to appear crisp and clean to the reader. He showed us several different kinds of maps, illustrating the enormous potential of maps for conveying information of various kinds. His mapping process was so interesting that your editor asked Jon to write an article on his work with maps for our journal so that everyone might share his experiences. He agreed, and provided the article included in this Journal.

Our final speaker, Dydia Delyser, from CSU Fullerton, is a historical and cultural geographer. She presented her research on a Packard (car company) sign, which sources say was placed on a rooftop in downtown LA in 1922-1923. Descriptions of the sign all note the "astonishment" of citizens viewing the neon lighted sign, which created traffic jams and necessitated police intervention to get traffic moving in the streets around the sign. The sources all speak of the sign, in "liquid light" at the intersection of 7th and Flower, downtown Los Angeles, but accompany this by a photo of a Packard sign above the doorway of a building that wasn't built until 1929! Dydia searched the LA Times for information, and found – nothing. She searched the Radio station and the Examiner and found – nothing. She searched through the Packard's own clipping service and found – nothing. Sign of the Times notes the sign could have been moved to above a door.

Intrigued, Dydia turned to aerial photo and to the Gladys Thomas Air Photo Archive. She searched oblique photos, found the street and buildings and found nothing conclusive, though a 1927 photo showed a Packard billboard with wires and neon – at Wilshire and Western! When she went back to research Signs of the Times once again, she found the sign – in San Francisco! Searching the San Francisco Chronicle, she found the rooftop neon sign on a new building for used cars –

on Van Ness Avenue's Auto Row, but very careful observation revealed that it said Overland, a sister company, and not Packard. The signs' origins remain a mystery.


*Packard Automobile Co. sign in Los Angeles, incorrectly identified as the first neon sign in America (Planet Retro blog,2012)*

**CMS Business Meeting**

A business meeting followed, led by Susan Caughey. She announced that Prof Henry Dimhart would be the Society's guest speaker, presenting at both a north and south California location in the Spring along with the winner of the student paper project. Due to John Fleming, our Treasurer's illness, Susan also gave the Treasurer's report. The Society has pledged $16,850 for speakers for the next five years, all but $650 of which has already been met by contributions. The Society may hold a joint event, possibly a workshop, with MapTime LA in the future. Susan also asked members for suggestions of venues and subjects for future meetings.

*Aerial Photo Archives, Geography Department, UCLA*

# RUMSEY MAP CENTER AND CMS EVENTS THIS SPRING

**March 15th, 4:30 PM, David Rumsey Map Center – Dr. Leonard Rothman**, past President of the California Map Society and Founding Member of the David Rumsey Map Center, will present *Exemplars of Cartography through Maps of the Holy Land*, sharing some of his insights and details of maps of Jerusalem and the Holy Land. The entire collection has been scanned and is available through the David Rumsey Map Center website.

**April 5th, 3:30 PM, David Rumsey Map Center -** The winner of the Rumsey Map Center's Annual Student Essay Competition, to be announced at a later date, will present her/his prize-winning talk. At the David Rumsey Map Center.

**April 5th, 4:30 PM, David Rumsey Map Center – Professor Imre Demhardt**, of the University of Texas at Arlington, will present *Men, Myths, and Maps: The U.S. Army Corps of Topographical Engineers and the Conquest of the West.*

**April 6th, 7:00 PM, Map and Atlas Museum of La Jolla – Professor Imre Demhardt** will present his lecture, sponsored by the California Map Society.

**April 7th, 11:00 AM, Monte Cedro Auditorium, Altadena – Professor Imre Demhardt** will present his lecture, sponsored by the California Map Society.

Additional Demhardt talk details, page 27

**April 21, CMS Northern California Meeting — see page 3**

**April 24th, 1-5 PM - Rob Dunbar, Dustin Schroeder, and Jenny Suckale** will present *Understanding Ice: The James B. Case Memorial Symposium*, which will explore the role of ice in "the behavior, evolution, and stability of earth." James B. Case was a glacial surveyor and photogrammatrist, who donated his glacier map collection to Stanford Libraries in 2017. The lectures are free of charge, but pre-registration is required. for the Rumsey Map Center events. Please visit their website to register.

MORE EVENTS! SEE MAPPING HERE & THERE, PAGE 45

# Unknown Parts

Kenneth Habeeb

**"FIRST THERE IS A MOUNTAIN, THEN THERE IS NO MOUNTAIN, THEN THERE IS." … Donovan**

From the Sixteenth century, Italian, then Dutch and French, German, and English cartographers took their turns mapping the vast African continent, freely borrowing from each other; only updating what they could, which was little—mostly river placement. Time passed, rife with the possibility of some creation out of whole cloth, and such a creation came to be in the form of the *Mountains of Kong*. The Mountains of Kong, and their counterparts to the east, the Mountains of the Moon were, along with the island of California, one of the most persistent cartographic fallacies ever put to paper.

Good and trustworthy geographic and cultural knowledge of deepest and darkest Africa was scarce and hard to come by, amazingly, well into the 20th century. As with other unexplored areas of the globe, mapmakers have always "had the difficult task of translating imprecise description in words to locations on maps."[1]

Early African maps contain phantasmagoric creatures as well as elephants and giraffes; the colorful characters being just artistic placeholders for the unknown. Those placeholders were eventually abandoned for unadorned map space. One of the first mapmakers to embrace the honesty of ignorance was Jean Baptiste d'Anville in the mid-18th century with his Kaart van Africa. It's likely that d' Anville felt the sting of Jonathan Swift's recently written little poetic dig at maps of the day:

> *"So Geographers, in Afric-maps,*
> *With savage-pictures fill their gaps;*
> *And o'er unhabitable downs,*
> *Place elephants for want of towns."*

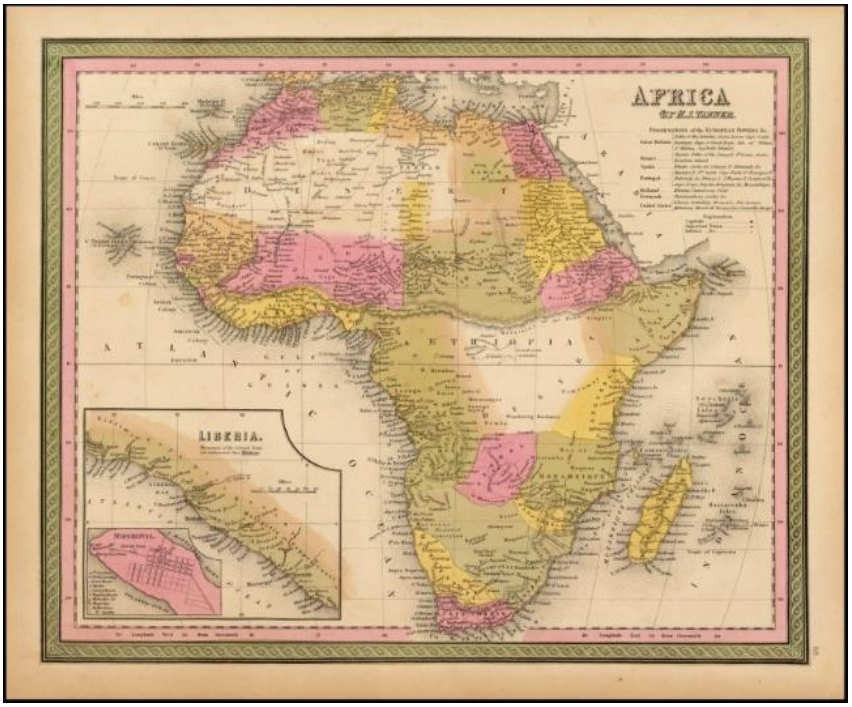
Another contemporary mapmaker, John Cary, penned the words, 'Unknown Parts' to explain his vast area of white space left for the African interior. I have a circa 1820s Carte dell' Affrica by the Italian, Bordiga, that labels the area 'Paese Incognito' or Incognito Country.

*Africae Antiquae Nicolas Blankaart, 1652*

True, the coastline had been well charted - and exploited, especially by Portuguese and Arab sailors and slave traders, but the African interior was another story. Dangerous, it had resisted penetration. The Arabic peoples had centuries and good proximity to explore it, but they did not map it in the way that Europeans would later. The 15th-century Arab explorer called Leo Africanus was gifted and determined, but he himself could only guess the origin and flow of the Nile and Niger rivers, two bodies of water important to ancient civilizations.

Sometime later, European cartographers attempted in vain to map the interior, feeling the pressure of scientists and businessmen looking for more and credible information. More information did finally arrive in the 18th and19th centuries. Credible would be late in coming. The geographic creations called the Mountains of Kong and Mountains of the Moon would help to explain what fractional little had been seen and could be sleuthed out at that time.


*Africa, 1805 John Cary, Engineer, Wikipedia*




*Africa, 1843, H.S.Tanner, Tanner's Universal Atlas (Lunae Montes) Image courtesy of Philadelphia Print Shop*

## "SEEING" THE MOUNTAINS

Who deserves the credit for this glaring geographic artifact? That is somewhat debatable, but its existence was 'corroborated' by a number of celebrated explorers, among them Rene Caillie, Hugh Clapperton, Richard Lander, and Mungo Park, all of whom not only claimed to see the mountains, but described them as being "lofty," or "blue," or made of "rugged granite," with elevations estimated as high as 14,000 ft.

Mungo Park's trek deep into the continent is central to the story.

In 1795, the *African Association*, a British club of geographers, scholars, politicians, humanitarians, and traders that had been founded to dispel the myths of the dark continent and shed light on some of its deeper secrets, found and hired a previously unheralded Scot by the name of Mungo Park to explore the interior. The *Association's* specific instructions were to chart the flow of the Niger River and attempt to reach the mysterious city of Timbuktu, which Europeans then believed held the wealth of successive kings. Mungo Park, for his part, hoped to attain fame in a history-making expedition, like navigator Captain James Cook before him in his epic world voyage.[2] Park wasn't the first explorer to venture into central Africa, but his predecessors had all failed before him—many of them perishing in their attempt.

*The Association* introduced Park to James Rennell, a leading geographer of the period, and one its members. Rennell was determined to update the status-quo d'Anville map of Africa. After learning of Park's itinerary, he set down some 'geographic demands' for him in advance. Rennell's 'demands' for information were the 18th-century equivalent of NASA scientists laying out a moon-landing protocol for Collins, Aldrin, and Armstrong. Mungo Park's courageous undertaking might be considered somewhat less important than a moon landing, but it was probably no less scary in its time. There were zero inoculations for any of a number of infectious diseases endemic to the treacherous terrain, like Cholera, Typhoid, Yellow Fever, Meningitis, and Malaria. In fact, Park did not escape the Malaria, and after nearly dying of it there, he staggered through the rest of his long trek, only to deal with natives who were not always friendly. Park was accosted several times, and in the last robbery of that first exhausting trip to Africa, he was spared only his hat and the clothes he was wearing.[3]

An exhausting three years later, Mungo Park made it back to England.[4] He returned a celebrity, albeit without any news of Timbuktu, because he did not reach it, but he certainly had tales to tell. Meanwhile, James Rennell had been working with the *Association* to draw up his map of Africa when Park returned. The *Association*, the world's first geographical society, could only make available to Rennell years of accumulated


*Detail, Moutains of Kong, 1839, Wikipedia*

second-hand information, and as it turned out, Park was less able to provide all that Rennell needed to map the real. Park was the first European to traverse the middle part of the Niger River, and he came back with compass readings for Rennell that showed that the Niger flowed from west to east, but not a lot more. He and Rennell were at best only able to confirm the opinion of ancient geographers Pliny, Herodotus, and Ptolemy about the direction of the river.

So, with what new information he was given, Rennell had to make a judgment call as to the Niger's exact placement, and that's when things go sideways. Park reported seeing a range of mountains running east to west on the horizon to the south of the Niger, within Africa's Kong empire. Appropriately, he named the range the Mountains of Kong. The placement of the mountains supported Rennell's reasoning that the Niger River would not be able to flow through such a barrier (unless it could go uphill), explaining why it was not seen by explorers below a certain latitude. Eventually, Rennell took the sum total of what he had, and published his *Map Shewing the Progress of Discovery & Improvement in the Geography of North Africa*, including Park's sighted mountains as a major feature of the continent. Thus, was born an enduring mountain chain of dubious pedigree, or did Rennell get the idea from exploration literature that pre-dates Park's journey?

At any rate, subsequent cartographic renderings of Africa's interior placed trust in the work of Park and Rennell, and the Kong and Moon mountain ranges lived on. On some maps, in fact, a combined chain of mountains appears from one side of the continent to the other, stretching almost 3000 miles!

The historians Thomas Basset and Phillip Porter identified forty maps showing this mountain chain between 1798 and 1892. Englishmen John Cary, Aaron and Samuel Arrowsmith, John Pinkerton, and John Thomson, Frenchmen Adrian Hubert Brue and Alexandre Lapie, and American Henry Schenk Tanner all perpetuated the fiction. In fact, established cartographers only abandoned the *Montagnes de Kong* after French explorer Louis Gustave Binger definitively established their non-existence in his own 1887-8 expedition to chart the Niger.[5]

Strangely enough, even as so many 19th century maps reflected the spurious mountain range, the real deal was missed by perhaps all but the ancients: a tall range of snow-covered peaks starting just inland of Africa's central *eastern* edge that we now call the Rwenzori. The Rwenzori is a chain once labeled by Ptolemy "the snowy source of the Nile." It was also called the Jibbel el Kumri by Arab explorers. Much later (and confusingly) it has been called the Lunae Montes, which of course means Mountains of the Moon, except these real mountains are far to the east of the earlier fiction.

The Rwenzori Mountains were only verified when an American journalist named Henry Stanley made his famous trek into the African interior in search of David Livingstone in the 1880s. Stanley wrote at the time from a camp in the Congo about his first view of the Rwenzori, "Following its form downward, I became struck with the deep blue-black color of its base. Thus I became for the first time conscious that what I gazed upon was not the semblance of a vast mountain, but the solid substance of a real one with its summit covered with snow."

The Rwenzori are now part of the story of global climate change. When Stanley first saw those mountains, they were topped by glaciers and snow estimated at more than three miles in size. Today less than half a square mile remains.[6]

So, Mungo Park and subsequent explorers of Africa missed the real mountain landmark—the tall Rwenzori, which are partly responsible for an important river and for the survival of area tribes. But put in context, the intrepid journeymen must be forgiven. They lacked our technology, but they certainly did not lack for courage. The 'Unknown Parts' of the African continent was a forbidding place, well earning its mystery.

**Notes:**

**1** Oscar I. Norwich. Norwich and separately, Richard Betts wrote the defining reference works for African cartography.

**2** Park's adventures ended not unlike Cook's; both perished either at the hands of natives or, in Park's case, drowning in an attempt to escape them during his second African expedition.

**3** Keeping the hat was fortunate because Park's notes were in the headband.

**4** Park had to be grateful for the good fortune of meeting a well-known slave trader who urged him to rest before continuing any further with his recurrent malarial fever; the irony being that the *African Association,* his employer, was avowedly anti-slavery. One of the first modern historians, Edward Gibbon, was a member of the Association criticized for also being anti-religious after writ ing *The Decline and Fall of Rome*.

**5** Binger found the origin of the Niger in the Gulf of Guinea along a boomerang-shaped flow to the Ivory Coast.

**6** Mount Stanley is a mountain located in the Rwenzori range. With an elevation of 5,109 m (16,763 ft), it is the highest moun tain of both the Democratic Republic of the Congo and Uganda, and the third highest in Africa.

**References:**

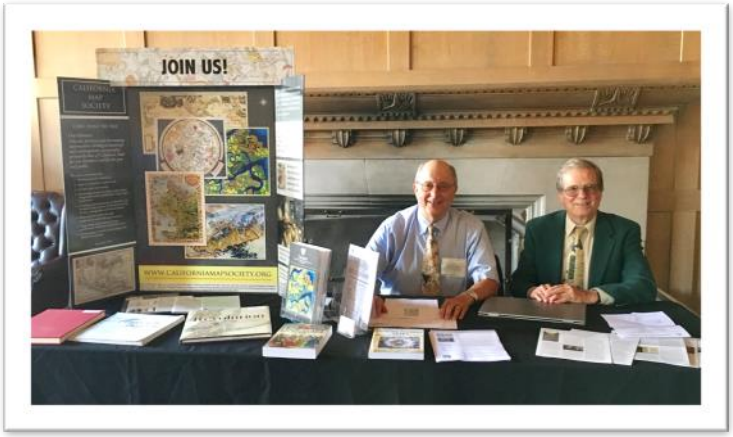
Norwich, Oscar I. (1997) Norwich's Maps of Africa

Sattin, Anthony (2004) The Gates of Africa: Death, Discovery, and the Search for Timbuktu

# San Francisco Map Fair
## September 15-17, 2017

After a very long hiatus, San Francisco hosted a Map Fair on September 15-17, 2017. The Fair was organized by the History in Your Hands Foundation (HIYH), and co-sponsored by AbeBooks.com, Harlan J. Berk, Ltd., Neatline Antique Maps, Geographicus, Boston Rare Maps, Inc., The Old Print Shop, Back to the Picture, Mountary Artisans of S.F., and – our own California Map Society. The Fair's founder, Sammy Berk, organized it "around two aspects we believe are essential for promoting study of cartographic history and the hobby of antique map collecting . . . education and opportunity". The map fair itself provides the "opportunity", and both the exhibits and the exhibitors provide an excellent "education."

HIYH itself was founded by two brothers, Sammy and Aaron Berk, of Chicago, dealers in antique coins, maps, and "ancient materials." Feeling that people were losing interest in history, they began their grass-roots organization to "build a new group of collectors," as Aaron says. Their goal is to "teach about the world and ancient cultures to promote understanding of the world of today." They work with teachers in schools, develop lesson plans, and use the antique objects themselves as the teaching components.



*Nick Kanas and Fred DeJarlais at the CMS Booth*

Held in the beautiful Lodge at the Regency Center, the Map Fair was very well attended - so well that, at times, one had to wait one's turn to peruse the maps that were displayed on walls, tables, and holders throughout the exhibit. Visitors were of all ages and interests - geology students, young parents with infants in carriers, people just beginning to collect maps, visitors to San Francisco, long-time collectors, and people interested in more modern cartographic applications. Friday night's festivities included a jazz band and delicious hors d'oeuvres. Admission on both Saturday and Sunday was free of charge, with donations accepted for the HIYH Foundation. There were 22 exhibitor booths, including: Alexandre Antique Maps and Books, Antiquariat Reinhold Berg eK, Arader Galleries, Barry Lawrence Ruderman Antique Maps, Bonhams, Boston Rare Maps, Inc., Far West Maps, Geographicus, Guerilla Cartography, Harlan J. Berk, Ltd., High Ridge Books, Inc., Manning's Books and Prints, Neatline Antique Maps, New World Maps, Inc., Old Imprints, The Old Map Gallery, The Old Print Shop, The Philadelphia Print Shop, Ltd., Sandra and John Berryman Fine Books, and Todd P. Cooper Antique Maps and Prints.

The Fair also sponsored a series of lectures, sponsored by the California Map Society. Presenters included: Nick Kanas' lecture on "Star Maps", Stace Maples' presentation "What's in a Map (. . . and How Do I Get it Out)?", Charles Fracchia's, entitled "Early Maps of San Francisco", and Darin Jensen's discussion "The Map Comes First: Crowdsourcing Content for an Organic Atlas Narrative", each very unique and intriguing subject of great interest to fully packed audiences of fair attendees.

A stroll through the Fair yielded some interesting insights and learning. Neatline Antique Maps, an online map dealer owned by Michael Jennings and his wife, both originally archeologists (they met in the field!), is dedicated to helping people to experience cultures, and to imagine the lives and feeling of people in other times and other places. With the destruction of archeological sites and the looting of artifacts continuing into current times, Michael and his wife believe that maps can now provide these kinds of experiences for everyone "holding and touching them", and their collection reflects their goals.

Asked which map in his exhibit was his favorite, Charlie Neushafer of New World Maps pointed to an 1853 Monk map, which he enjoyed because it showed all the Americas and Mexico, included vignettes of ships, a chart of distances, railroads and trails, "probably used commercially," he says, "rather than educationally." . . . . . And then, he said he had another favorite, a 1591 Jacques LeMoyne map of his own home state of Florida from the DeVry History. He loved this map because of the shape of Florida, and because of its age. And then, he said he had another favorite, an 1856 geological map of the State of California, with strikingly bright and beautiful coloring, in which Lake Tahoe is shown as Lake Bigler, its original name. Laughing about his difficulty in selecting *one* favorite, he said: "Asking which is your favorite map is like asking who is your favorite child" – an impossible task!

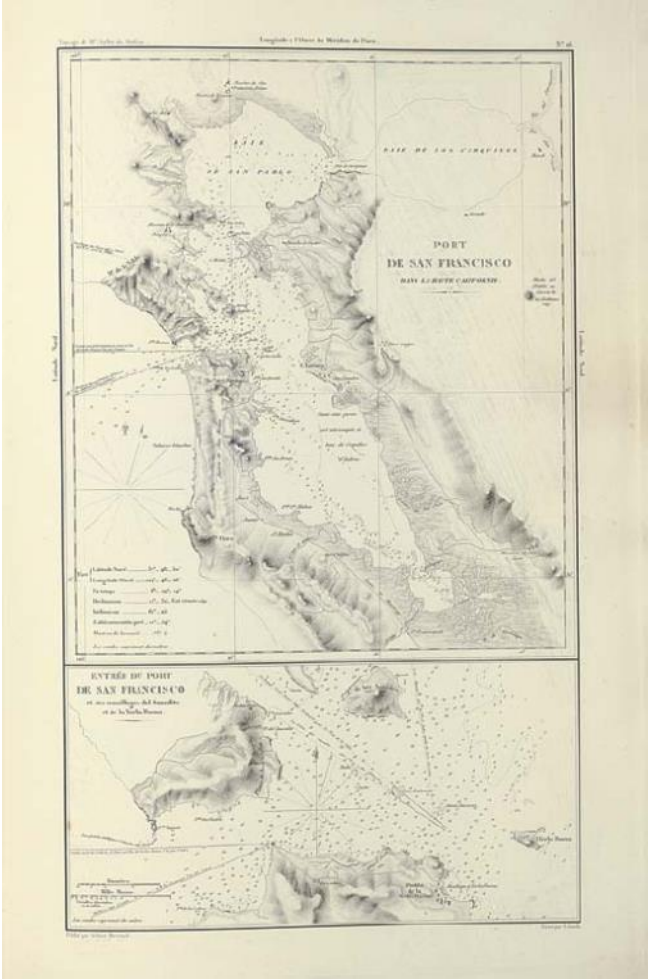
His thought was echoed by Gabriel Riddle of Arader Galleries, who also had three "favorite" maps. Coming from a background in the Classics, art, and archeology, Gabriel began by sharing that his favorite map was Richard Mason's 1848 map of the early discoveries of gold in California, which was brought before Congress to tell them the exciting news of gold. Samples were brought to show members, and the specific finds are numbered and located on the map. Fascinating . . . and then, Gabriel shared that his *real* favorite was Eugene Duflot de Mofras' 1884 map of the Port of San Francisco. This French survey map, which was designed to determine whether France should have an interest in the area for economic reasons, had been researched prior to the beginning of the Gold Rush – and had somehow missed it entirely! Had he traveled and mapped the area after gold had been discovered, he may have created a very different map, and the course of history for California may well have been quite different . . . and then, Gabriel said he really loved Benjamin Butler's 1851 map of the Gold Rush region, which is framed with a "little blue book" at the bottom of the mat. Gabriel explained that this was one of a group of maps designed for people to carry, hence the little blue cover. "Little blue book" maps were especially prized due to their accuracy and reliability.

Sydney Johnson and Barbara North at Guerilla Cartography have taken mapping and map collecting in a very different direction. Guerilla Cartography's mission is "to get more people to make maps" by encouraging them to contribute maps to their atlases. Their method for atlas production is crowdsourcing. They "put out a call for maps they are looking for online", asking readers "if you have a map, send it!" They receive maps from all over the world, and have a "Content Committee" to work with them and with the people who have sent them to prepare for inclusion in their atlas. Maps can be accurate portrayals of geographical or other information, but can also be fiction or fantasy maps related to the particular subject of the atlas. They have already created one, "The Food Atlas", and are working on their second, companion atlas, "The Water Atlas." Their interesting map titles include: "Water-Energy Conflict in Central Asia", "Locating Atlantis", "Water Depletion in Global Wetlands", "Fracking is Putting San Francisco at Risk", and "Pink Salt Lakes."

At the Bonham's booth, Alexandra Kaczenski clearly favored David Roberts' 1846-49 bound book of sketches of Egypt and Nubia, a very rare collection, rarely seen on the market. Her favorite was his sketch of the "Temple at Aboo Simbel". Each

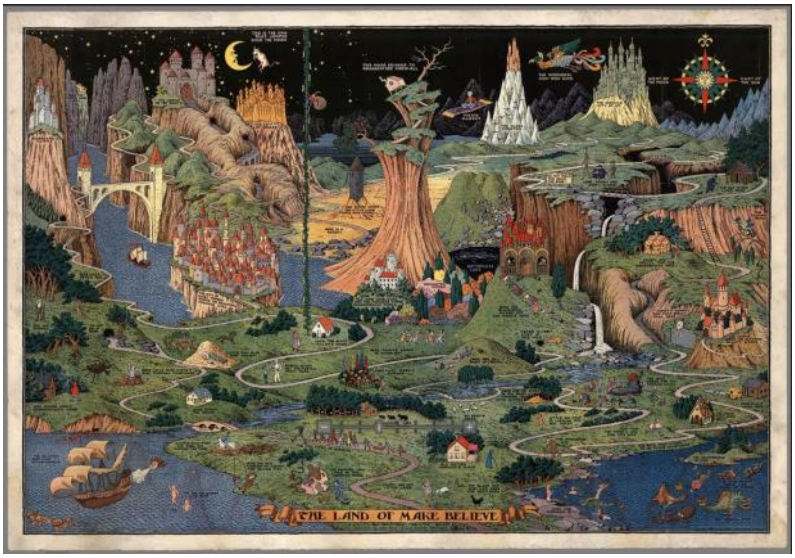

*"Carte Tres Courant de la Mer du Sud, Contenant des Remarquwa Nouvelle et Tres Util . . .", Henry Abraham Chatelain, 1719*

*Florida & Cuba, Jacques LeMoyne, 1591*




*Port of San Francisco, Eugene Duflot de Mofras, 1884*


*Map of San Francisco, W.S. Hutchinson, 1918*




*"Land of Make Believe," Jaro Hess, 1930*


*"Vichy Map," War-time Poster , circa 1941*

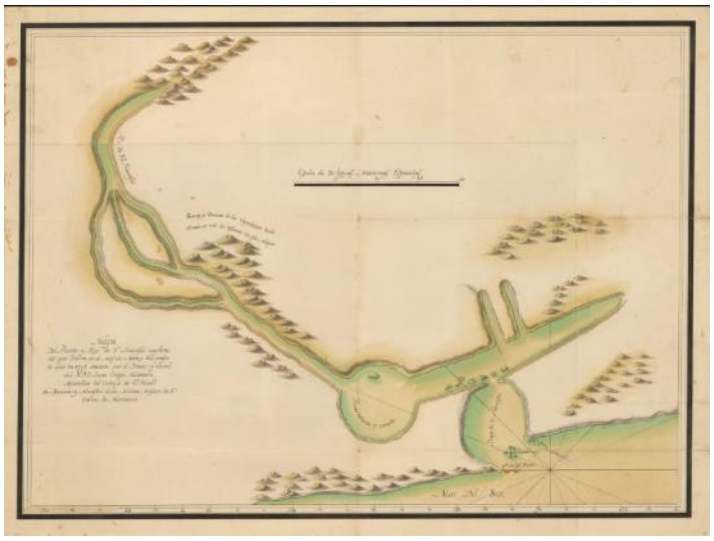
of Bonham's auctions have a theme, such as science and technology, 20th century, and fine books and manuscripts, the current auction theme, of which her book was a part. Down the aisle of exhibitors, Alexandre Arjomand of Alexandre Antique Prints, Books, and Maps sat next to his 1918 large and extremely detailed map of the city of San Francisco by W.S. Hutchinson, one of the most important maps of the city. The map drew many attendees, and Alexandre was kept very busy respond to all their questions as they carefully perused each detail.

*"The Pageant of History in Northern California," Millard Sheets 1950*

"The Land of Make-Believe," drawn in 1930 by Jaro Hess is central to Sammy Berk's exhibit at Harland J. Berk, Ltd. This fantasy map includes quotes and locations from many children's books of fairy talks, and shows a long road, which meanders all around the map and returns to its starting place, titled "The Path that Lead to No Place, Eventually," a space between two tall rocks in the upper left-hand corner titled "Here the North Wind Lives," the moon with a cow titled "That Jumper Over the Moon", and a group of small fairies in the center of the map titled "Here Faeries Dance in the Moonlight." Sammy also owns a map reproduction business, and sells reproductions of this very popular map through Vintage Maps.

*"Incunabula Map," Hartmann Schedel, 1493*

His personal favorite is the "Carte Tres Courant de la Mer du Sud, Contenant des Remarquwa Nouvelle et Tres Util . . ." This much sought-after map, by Henry Abraham Chatelain, drawn in 1719, is one of the most decorated antique maps of the world, complete with shipping routes and little ships, as well as beautiful vignettes of beavers, turtles, llamas and native tribes' rituals. There are nine medallions illustrating famous explorers.



*First manuscript map of San Francisco Bay, made in 1772 by Juan Crespi, Rafael Verger, and Pedro Font*

Craig Clinton, the owner of Old Imprints of Portland, whose specialty is pictorial maps, was busy with visitors. However, his lovely wife shared her favorite map, Millard Sheets' 1950 pictorial map entitled "The Pageant of History in Northern California." The "Pageant" is really two maps, "Mirror (ing) the Past and Present" and depicting "The Spirit of Achievement of the Peoples Living in the Great Circle of Lands Surrounding SF Bay" in watercolor. The map shows the city, the rivers and surrounding areas graphically. The "present" map includes the Golden Gate Bridge, and many cows in the farmlands nearby. The "past" map has no bridge – and lots of horses! An excellent resource on pictorial maps is *The Golden Age of Pictorial Maps*, by Stephen J. Hornesby.

Meanwhile, nearby, at Antiquariat Reinhold Berg eK, a very special map hung on exhibit: a Hartmann Schedel 1493 incu-


N.C. Wyeth's "Map of the East and West Hemisphere"

*"Map of the East and West Hemisphere," N.C. Wyeth, 1928*

nabula map, in Ptolemaic view, the last pre-Columbian world map, which was published in the Latin text of the Nuremberg Chronicle. It hung quietly with its price tag - $15,930.00! Across the way, Barry Ruderman's beautiful and extensive exhibit featured many memorable maps. His very favorite, he tells, is the first manuscript map of San Francisco Bay, made in 1772 by Juan Crespi, Rafael Verger, and Pedro Font. The map was drawn in California, which was unusual for that time period, as a part of the first official expedition to explore San Francisco Bay.

Geographicus' booth was dominated by a huge (approx. 12' by 7') Missionary Map of the World, showing two hemispheres. Kevin Brown shares that the map was made with colander linen fabric, and can be folded and taken on ministerial journeys and to ministerial lectures for display and education. The map includes a listing of the numbers of population in various areas of the world (of questionable accuracy). Cities and areas printed on the map may be underlined in red or green, denoting ministries active there: green denotes American ministries, while red denotes British. The map was first created in 1848, and the one at the exhibit was done in 1878. Reduced versions were also created in the 1880's.

Kim West of Far West Map and Books said her husband came up with the name of their business: their name is West, so Far West Map and Books seemed a logical choice! A map she loves, that really stands out in the exhibit due to its colors and designs, is from N.C. Wyeth's "Map of the East and West Hemisphere," which is actually two maps, originally painted as a mural for the National Geographic Society's building in Washington D.C. Wyeth made 5 maps for the Society in 1928. The "Western Hemisphere" map has the Greek gods Poseidon with his trident and Zeus with his thunderbolt, a mermaid, and Aeolus. The "Eastern Hemisphere", the place of exploration, has figures whom we guessed were Mercator


*"Chevalier Commercial, Pictorial &Tourist Map of San Francisco," 1915, Based on 1903 version*

(holding a measure), and Marco Polo (holding a map), and the sun and the moon. "Printed in 16th century style," Mrs. West shares, "see all the ships and the monsters?"

John Cresswell of the Philadelphia Print Shop wanted a special map from the moment he started his cartography business: an 1840 map of the island of Manhattan, a highly prized, beautiful and delicate rendering he finally did succeed in acquiring hung in his exhibit. He also pointed out two other maps which were especially interesting. One was a Weather Map from a specific date and time in 1873. Weather maps were creating be making multiple copies of a basic map, and then adding data as an overlay for a specific date and time across the entire United States. 1873? How could they have communicated this data so accurately in the times before the internet? Before even the telephone? By telegraph, John shares! There were many of these maps, all made through the US Army Signal Service Office. The exhibit also included a Chevalier map of San Francisco, based on a larger 1903 version, which was displayed at the 1915 Pan Pacific Exposition in San Francisco. This map is special for its delicate chromatolithography and the sympathetic typefaces used in printing. And, with his three maps, John also joins the "My Three Favorite Maps Club," along with Charlie Neushafer and Gabriel Riddle!

A *huge*, brightly colored map stared out from Harry Newman's Old Print Shop exhibit. It showed Churchill's face (not attractively) in the middle of a huge octopus covering most of Europe, with tentacles running down into Africa and the Middle East. Each tentacle was burning with bright red fire, and the name of the burning area was shown nearby. Harry shares that this is the "Vichy Map." Another map in his exhibit that stood out was starkly titled "Where Millions of Human Beings are Starving," a relief map of the Near East and Western Asia. This was a fundraising map for Armenian Relief.

This was a very well-balanced exhibition, which included ancient, more recent, and contemporary maps, and which appealed to every taste and every age, more so than seen in many previous fairs. The maps included here can only be a small taste of what was exhibited - there were many, many other outstanding maps at the Map Fair as well – a noteworthy event meriting our attention and a definitely long and delicious visit next time!

THE FAIR IS RETURNING TO SF IN THE FALL OF 2018!
— MORE INFO SOON —

## CMS-Rumsey Map Center Lecture

### Dr. Imre J Demhardt
Professor of History

University of Texas Arlington

**Thursday, April 5, 2018 – 4:30 pm – David Rumsey Map Center, Green Library, Stanford University**

**Friday, April 6- 7 pm – Map and Atlas Museum of La Jolla, 7825 Fay Ave, La Jolla**

**Saturday, April 7 – 11 am – Monte Cedro Auditorium, 2212 El Molino Ave, Altadena**

Free! Our annual lecture series sponsored by both CMS and the Rumsey Map Center will feature Professor Imre Demhardt of the University of Texas, Arlington. He is a well-known and popular lecturer in the history of cartography. The Rumsey Map Center program will also feature the winner of the CMS-Rumsey Map Center Student Essay Competition, whose presentation will be at 3:30 followed by Professor Demhardt's at 4:30.

Professor Demhardt's topic at the Rumsey Map Center and at the Map Museum of a Jolla will be *Men, Myths and Maps: The U.S. Army Corps of Topographical Engineers and the Conquest of the West.* The Corps of Topographical Engineers was established in 1838 and operated as such until the outbreak of the Civil War. The Topographical Engineers were an elite group of West Point graduates who accomplished an astonishing amount of work mapping and describing the West. Among them were George Meade, John C. Fremont and Stephen Long.

On Saturday, April 7 Professor Demhardt will speak in Altadena about the centuries-long search for a NW and NE passage around North America. *In Search for the NW and NE Passages: Assumptions, Surprises and Discoveries in the Arctic* is a timely topic that will certainly capture our attention and imagination.

**Reservations are required** for both the Rumsey Map Center and the Map Museum of La Jolla, where seating is limited. Register online at http://www.californiamapsociety.org/meetings-events/next-meeting-2. You do not need to register for the Altadena presentation.

*By Susan Caughey*

# Meet our Member
## LaVonne Jacobson

Lavonne's interest in maps began in very early childhood, in a small Danish-American town in Nebraska, where she and her brother spent many hours poring over their father's collection of maps and atlases, and the maps and stories in National Geographic. When the family moved to Seattle during her elementary school years, she and her brother's interest in maps continued there. She attended the University of Washington in Seattle, the first generation in her family to attend college.

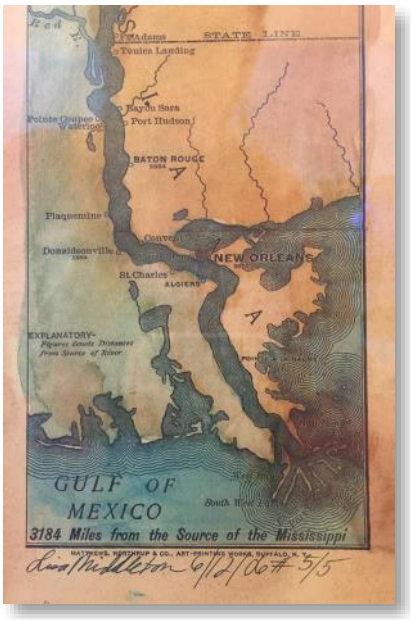
UW in Seattle is a huge campus, and it was difficult to access information. Lavonne had no idea that there was such a thing as a major in Geography. With her interest in National Geographic and its maps, she chose to major in Anthropology, getting both a BA and an MA in that subject and with a special focus on Africa. She tells the story of a class she took with a very special professor, who was "very lenient", and let her focus her semester's work on creating a dymaxion atlas of Africa – a map with layers of transparencies over it, each layer providing different information about the area of the map directly underneath it. It was her favorite project and she remembers that professor with gratefulness.

She began her lifelong library connection by working in the library on the U. of W. campus as part of her work-study program. A year after graduation, she entered Library School at the University of Oregon. Still interested in maps, she studied Cartobibliography ("how to be a map librarian"). Her favorite professor was the founder of the Western Association of Map Libraries, and got his students involved. Lavonne remains a member still today, enjoying all the people and the meeting activities. Upon graduation from Library School, Lavonne began her 44 years as a librarian at San Francisco State University. She has held several positions at the library, but always worked with maps and geographers.

Now that she is retired, Lavonne is still working – as a volunteer at the SFSU library. She works with Max Kirkeberg, an urban geographer who, over the past 50+ years, has been taking slide photos of San Francisco neighborhoods, and studying changes in each over time. The university is gradually digitizing his slides, and Lavonne organizes and types information about each slide into the system. There are over 60,000 slides – a huge collection! They can be viewed at: www.diva.sfsu.edu. Lavonne has kindly offered to write an article about this fascinating collection for *Calafia*.

Bookbinding was a special interest of Lavonne's, but she has given this up in favor of her volunteer work and her other interests: she loves music, and attends opera, symphony, and the Philharmonia Baroque Orchestra regularly. She loves going on frequent road trips. She travels primarily around the West, but also all over the United States as well as abroad. Her favorite places are the Utah National Parks (she's gone on at least five trips to those – and especially enjoys the Waterpocket Fold) as well as visiting Civil War battlefields.

Lavonne has three antique maps, which her brother and family sent to her. She collects maps of places to which she has traveled. Her very favorite map is an artist's reproduction of an 1866 Ribbon Map of the complete course of the Mississippi River, entitled "Father of the Waters." It is approximately 6" by 30" in length. A version of the map may also be viewed at the David Rumsey Map Center. She also collects maps of San Francisco. She loves two of these especially: an artist's map of San Francisco's natural areas and Ohlone villages, and the same artist's rendering of that same area at the time she was doing this work. Both hang in her home.




*Artist's rendition of "Father of the Waters" Ribbon Map, Coloney & Fairchild, 1866*

# My Favorite Map

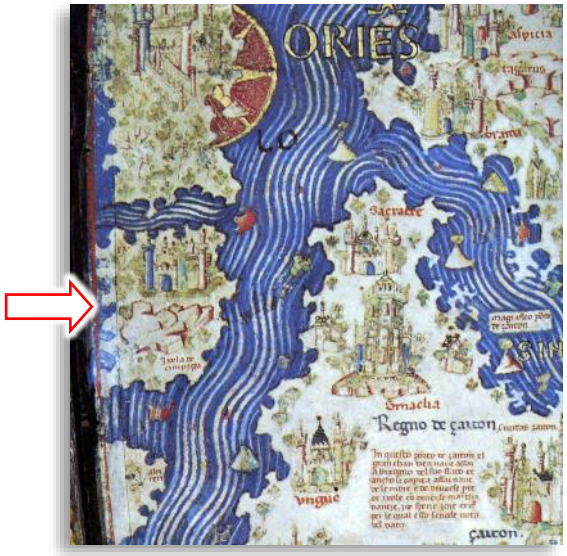
Julie Sweetkind-Singer

Asking a map librarian to pick her favorite map is like asking a parent to pick her favorite child! I see maps every day at work, often dozens in a day and more if we're sorting through a new acquisition or gift. The maps span dates ranging from the early 1500's to the present. They cover all manner of topics; topographic, geologic, environmental, social, and political. Some are mundane and others are works of art, as are so many of the glacier maps that we've recently been processing from a gift collection. This veritable flood of cartographic content makes it difficult to pick a few favorites and certainly impossible to pick only one. But, one map I'm especially drawn to is a map I've never actually seen in person. Of the two copies made only one survives. The surviving copy was made around 1450 at the request of the Venetian Signoria and lives at the Biblioteca Nazionale Marciana in Venice, Italy: the Map of the World by Fra Mauro.

In 1448 Portuguese King Alfonso V commissioned Fra Mauro, a Venetian mapmaker, to make him a world map. It took a team of painters over three years to paint the map on a wooden frame nearly eight feet square. Building on the Ptolomeic geography, Mauro received up-to-date Portuguese portolan charts of the Mediterranean and information about Portuguese navigation along the West African coast. He included the latest updates from travelers in Asia, including Marco Polo's reports, and from those who had traveled to Africa. Due to this legwork, the map is packed with cities, rivers, mountains, and text. There is no blank space, which one would not expect to see on a map from this period.

On the far edge of the map sits the "Ixola de Cimpagu," or Japan, the first such mention on a European map. Africa is shown as circumnavigable more than 30 years before the Portuguese rounded the Cape of Good Hope. A nearby annotation states that "around 1420 a ship or junk from India" had rounded the bottom of the continent, although this claim has never been proven. Here we see an early mash-up, if you will – a mappamundi combined with the beginnings of new cartographic practices.

It is this moment in time captured on this map that I find fascinating. It's a time when the cartographic world is about to change forever. The old ways of thinking predominate. The map is not cartographically accurate nor is that the point. It is a late medieval Christian cosmological statement and yet it pushes the boundaries of convention. We see the cosmos depicted on the map, but now on the top left edge near the frame with the Earth as the center of the universe. Atypical for a mappamundi, Jerusalem is not shown in the center of the map nor is the map oriented with the east at the top but rather the southern part of the world, both changes explained in annotations. Paradise now sits apart from the inhabited world in the lower left-hand corner.

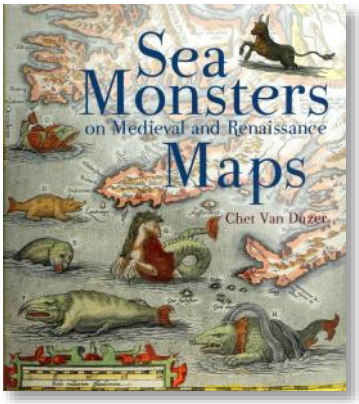



*Detail depicting Japan: Full map image on cover*
*Image courtesy of Wikipedia.org*

While we recognize the map as cartographically inaccurate, we must acknowledge that Mauro worked to get accurate information. In addition to Marco Polo, he relied on the travel accounts of Nicolo de Conti, an Italian merchant who traveled throughout Asia including China and Indonesia. Information about southeastern Africa is thought to have been transmitted to Rome by an Ethiopian embassy in the 1430s. Venice was an important trading port during this period of time and travelers from around the globe would have stopped there imparting information about where they had been and what they had seen. China is depicted with 30 named cities and geographic landmarks such as the Yangtze and Yellow Rivers. India's rivers – the Tigris, the Indus and the Ganges – are all shown. Java appears for the first time on a Western map. Within the known framework of the mappamundi, a new type of mapping based on first-hand and up-to-date information emerges.

I see in this map a world, a whole known world not just Europe and the Mediterranean, teaming with people, vibrant with trade and different cultures. This map invites me to engage deeply with its contents and to think about what it was like for the seafarers, the explorers, and the traveling merchants encountering people different from themselves and with their own fully developed cultures. Within 60 years the knowledge of the planet would radically shift with the discovery of the New World and Magellan's circumnavigation. The world we see here then fades away – true and yet not true anymore.

# Book Review




*Sea Monsters on Medieval and Renaissance Maps,* by Chet Van Duzer, London, The British Library, 2014, ISBN 978 0 7123 5771 5, paperback, 144 pp., illus., $24.95.

OK, so this book isn't your normally scholarly work about maps. Chet Van Duzer has written those kinds too, mostly about very early maps and their makers, and he is a recognized expert on these and on the recovery of data from damaged elements. This book is sort of the dessert of ancient map studies. It contains a great amount of scholarly reference with an equally great amount of scary pictures of mainly imaginary beasts and discusses how this concept passed from hand to hand among map makers.

Early maps were seldom drawn with navigation or land ownership in mind. Their inspiration came from tales told by mariners or from legends. When the mapmakers had filled in the central part of a sheet with an island they had a lot of white space staring them in the face. Oh sure, they could add ships, and they could add waves, but the buyers of their maps often wanted more, and who better to describe the briny deep than the sailors who lived on it? Explorers used maps as ways to illustrate their travels while sailors considered these maps as canvases to be embroidered.


*Whales attacking a ship on* ***Olaus Magnus****'s 'Carta marina'; (Stockholm, Sveriges nationalbibliotek, shelfmark KoB 2 ab)*

Mapmakers who were prolific plagiarists copied what their competitors had invented and voila! Chet Van Duzen has turned the whole lot into a handsomely printed book, with lots of colorful illustrations. Many of you may have heard Chet speak on early maps at the Ruderman Conference, held in the fall of 2017. He will be speaking at Stanford again in February about a large early map being pieced together at the David Rumsey Map Center. He has previously spoken about maps in many venues including the Huntington Library and Cal Tech, and he has written about interests as varied as floating islands and early Canadian history.

So where did this idea of sea monsters start? Many will be familiar with Ortelius's map of Iceland from 1590 and Olaus Magnus's Carta marina of 1572, both replete with wondrous living things. But these mapmakers were 500 years or so behind in depicting denizens of the seas. The Gerona Beatus *mappamundi,* dated about 975, includes Jonah inside a whale in the surround. By the 1500's, carnivorous whales and sea serpents were dining on sailors and entire ships everywhere. One of the favorite places to show them on a world map was in and around the


*St Brendan's ship on the back of a whale, and his men praying, in* ***Honorius Philoponus****, 'Nova typis transacta navigatio' (Linz: s.n., 1621), p.12 (British Library, G.7237)*

Indian Ocean, where little exploration had occurred, and imagination could run rampant and free. Artists with good imaginations were hired specifically to add interesting map embellishments, making the maps themselves more salable.

Van Duzer suggests there may also have been other motives leading to the addition of dangerous looking monsters to maps. A favored fishing ground might not look so inviting to a rival nation's fishermen if it were inhabited by man-eating octopi crawling onto the decks of ships from the depths. Common animals such as turtles and dolphins could easily be turned into monsters by making them substantially larger and adding teeth. Even now, the Loch Ness Monster reappears every few years or so in the tabloid press to remind us of our love for bizarre legends. On the other hand, captivating images of full-breasted mermaids never seemed to decrease the value of decorative maps either! The heyday of such maps was certainly the 1600's, as later maps tended to value accuracy above artistic genius.

So - this is a picture book of imagination, but also a very scholarly examination of who copied what and from whom. The map transition from monsters to realistic ships under sail may have been inevitable with the lessening of the fear of traveling vast oceans.

*Reviewed by Bill Warren*

# The Fitz Tabletop Globe

Leonard Rothman, M.D.

This globe is one of my personal favorites. It's a very innovative invention, and its creator was originally not a member of the elite group of fifteenth through nineteenth century cartographers and globe-makers, all of whom shared several important characteristics: they belonged to guilds, they could read and write fluently—and they were male. In this world, interested women and teenage girls were relegated only to the role of colorists.

However, a small beacon of light began to glow in a small corner of the geographic world, shone ever more brightly, and finally ignited a new flame. Ellen Elizabeth Fitz (b. 1836, d. ?), originally a governess living in St. John City, New Brunswick, Canada, became the first woman to construct a map globe. Ms. Fitz designed a globe specifically for students and, in 1875, obtained a United States patent for her work. Her globe was first demonstrated at the Philadelphia Centennial Exhibition in 1876. It was then enthusiastically approved by the City of Boston to be used in the Boston Public School system, and was manufactured for distribution ca. 1876.

The globe is 6 inches in diameter, and 9 inches in height, sitting on a round, cast-iron base with four tiered feet. The lower edge of the stand is ornamented with a gold rectangular design, and a gold leaf design adorns the base's top surface. In addition to the globe itself, Ms. Fitz also created and added a new, unique device to her globe design: a set of double vertical brass rings were placed parallel to each other almost encircling the globe. The bottom of the rings was left open so that they could slip around the globe's support post, and be removable if desired by the user. Using the rings, the globe could chart "daylight, twilight, and night", as described in her accompanying manual, the *Handbook of the Terrestrial Globe, or Guide to Fitz's New Method of Mounting and Operating Globes.* The rings can be utilized to show this information for any day of the year, anywhere in the world, when the globe was rotated in relation to the fixed point on the vertical pole representing the sun's vertical ray. Twilight is always located in the space between the two rings.

The analemma, placed in the Pacific Ocean, shows the declination of the sun and its place in the Zodiac for each day of the year. A circle is drawn and placed at the southern pole, around the periphery of Antarctica. Also, lines both above and below the equator demarcate the northernmost and southernmost levels at which bananas, vines, grains, and trees may be found. Texas is shown as a separate entity.

The map itself on the globe is composed of 12 hand-colored gores placed between the two polar calottes (domes). The globe's construction is modeled on the Gilman Joslin of Boston, and on the A.K. Johnston of Edinburgh globes. The sphere is thought to have been constructed by Gilman Joslin. The cartouche, located in the northwestern Pacific Ocean, reads: "Fitz Globe, Manufactured by Ginn and Heath."

Ms. Fitz's manual/informational book, mentioned above, also contained geometrical, geographical, and astronomical definitions, and as well as a presentation describing the apparent motion of the sun and the actual motion of the earth. She then poses 88 problems for students to solve related to latitude, longitude, and time, using her globe, as well as a student examination—with 96 questions!

**References:**

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Fitz, E.E. (1876) *Handbook of the Terrestrial Globe; or, Guide to Fitz's New Method of Mounting and Operating Globes* Boston: Ginn Brothers.

Normal B. Leventhal Map Center Collection, Boston Public Library https://collections.leventhalmap.org/search/commonwealth:x633f8883

Smithsonian National Museum of American History http://americanhistory.si.edu/collections/search/object/nmah.1064799

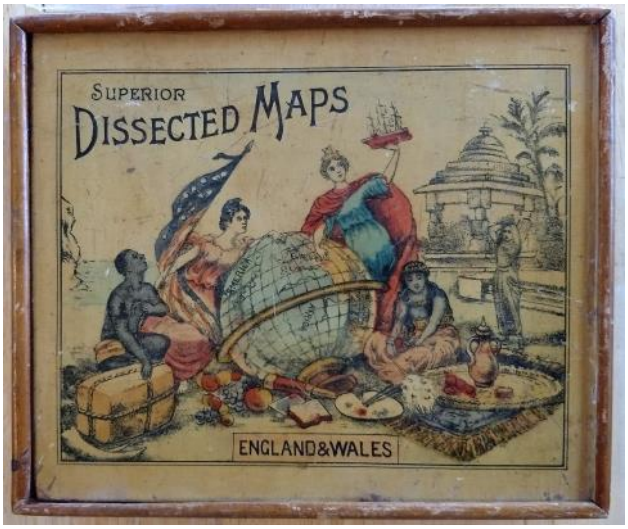
*Images provided by author*

# Puzzle Maps

## Phil Simon, CMS Past president

My wife Jan and I both flew internationally for much of our careers. Landing at SFO in the morning after flying all night left us feeling like zombies, but we knew that we had to stay awake for the day in order to be able to sleep that night. We didn't have the energy to do anything important so we started doing jigsaw puzzles—they kept us engaged and awake, and were a good way to spend the day. Over the years, we amassed quite a large collection of jigsaw puzzles. Somewhere along the way we discovered jigsaw puzzles with maps on them, and started learning about them and collecting them.

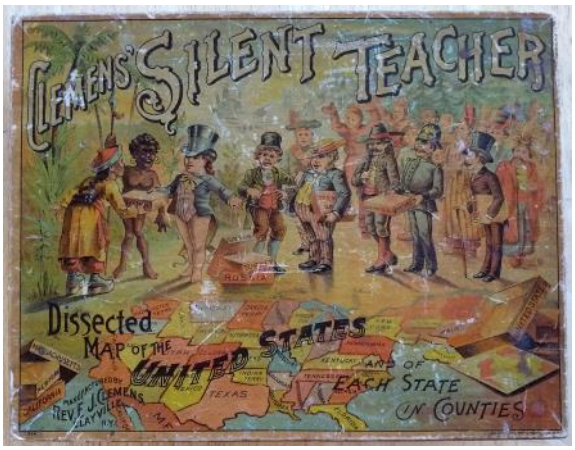
The earliest puzzle maps were called "dissected maps." These were the very first of what we call "jigsaw puzzles" today. The jigsaw tool itself had not yet been invented, and these "dissected maps" were made with a fret saw, and cut along straight lines. It was some time before interlocking pieces were introduced. An early example of dissected maps is the 1878 Gall and Inglis' *Superior Dissected Map of England and Wales*, pictured below.




*The illustration on the cover of the box is quite interesting. England is at the height of its power as illustrated by "Britannia", with one hand on the world and the other hand holding aloft a ship representing England's Royal Navy and all their trading ships. At her feet are some of the many goods that are brought from around the world. A young "Americana" is shown looking enviously at "Britannia"*

John Spilsbury, formerly the apprentice to the Royal Geographer, is believed to have been the first commercial manufacturer of dissected maps in England, in the 1760s. He managed to start quite a trend! Following his example and his method, all manufactured puzzle maps were in the form of dissected maps like Spilsbury's for a good 20 years afterward. The maps were designed as teaching aids for geography classes. As pupils put the pieces together, they would learn about borders, and the way in which states or countries were connected to one another. John Spilsbury had certainly spotted an excellent business opportunity! In the space of just two years, he marketed the eight map subjects most likely to appeal to upper class English parents: the world, the four continents then known (Africa, America, Asia and Europe), England and Wales, Ireland and Scotland.

At our last BAM (Bay Area Map group) meeting, I displayed some of our puzzle map collection. Some of the earlier puzzle maps from the 1800s are very interesting, not only for the geographic boundaries they display, but also for the social state-




*Clemens Silent Teacher: The cover of this puzzle is an example of what today would be considered "politically incorrect" with stereotyped caricatures of figures representing different countries.*

ments they make about various peoples shown on the box covers. Box covers were often quite elaborate, and illustrated populations, social groups, dress, and customs of the populations living in the areas shown on the maps within. Some of these covers would be considered very "policially incorrect" today, with themes like "educating the poor downtrodden."

Puzzle maps were also produced commercially as advertisements, such as that produced by the company that manufactured Duncan Hines Cookies.


*"Duncan Hines" sponsored puzzle map of the USA with advertising*

Twentieth century jigsaw puzzle maps were often used in classrooms as teaching aids. An especially good teaching map is


*John Wilder's 1929 US puzzle map. The borders of the puzzle have an attempt of interlocking pieces, but each state is individually cut out*

John Wilder, in the above image, has drawn his 1929 jigsaw map of the United States carefully around the borders of each state, so that students working with the map would not only learn the overall layout of the United States, but would actually become familiar with the size and shape of each individual state's piece in the process.


*French 1850 puzzle atlas "Atlas Geographique"*

Of special interest to me are the "Puzzle Map Atlases." These are not common, and it has taken me years to develop our collection. The majority of puzzle map atlases are from France, England, and the Netherlands, and each of these countries presented the atlases in unique styles. Those from France generally consisted of individual wooden maps stored in a single box, with one map placed on top of another. There can be as many as six or eight layers. These are easy to assemble, and often include a picture of the assembled map on a piece of paper to assist the user.

However, the puzzle map atlases from England and the Netherlands are quite difficult to assemble, as they are printed on wooden cubes. Each cube has six sides, so there are six different maps in each box, and without the paper guides for each map, assembly is quite challenging. The most difficult one in our collection was manufactured in Amsterdam. It has 42 cubes, each with six sides, making 252 possibilities, and, with 42 cubes there are over 10,500 options of where to place them! Later,


*Dutch, 1816, Covens & Mortier, Amsterdam, 42 cubes puzzle Atlas. Very difficult to assemble.*


*Japan, circa 1946, a sample of the very early attempts of Japan to produce products they could trade, as the majority of their manufacturing facilities had been destroyed. This puzzle was made out of eraser material.*

French puzzle map manufacturers also produced cube maps. Jan and I continue to enjoy our puzzle maps, and loved sharing them with BAM group members. These photos are but a small representation of our collection. I know of at least three books about puzzle maps that may be helpful to interested readers:

**References:**

a *The English Jigsaw Puzzle 1760-1890* by Linda Hannas, 1972, Wayland Publishers, London

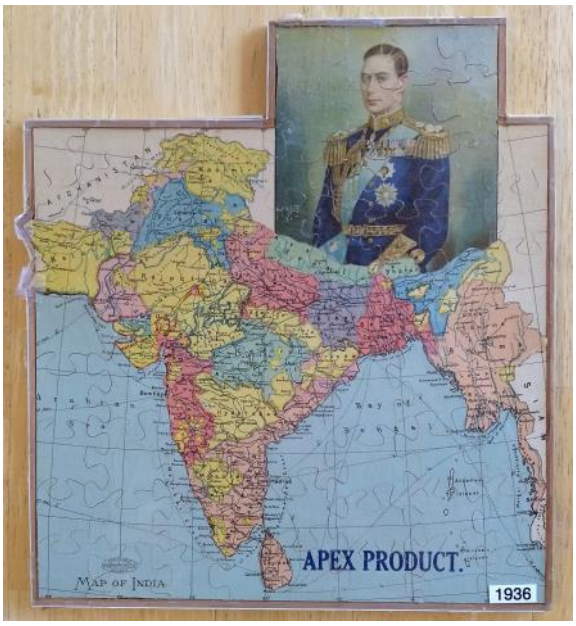
b *Neatly Dissected, for the instruction off young ladies and gentlemen, in the Knowledge of Geography. John Spilsbury and Early Dissected Puzzles*, Jill Shefrin, 1999, Cotsen Occasional Press, LA

c *The Jigsaw Puzzle, piecing together a History* by Anne D. Williams, 2004, Berkley Books, NY


*Boundaries of countries are often changed, but I have located a Scandinavian puzzle map manufacturer, Larsen, where you can obtain puzzle maps of the Baltic states, Balkans, and other difficult to find countries.*

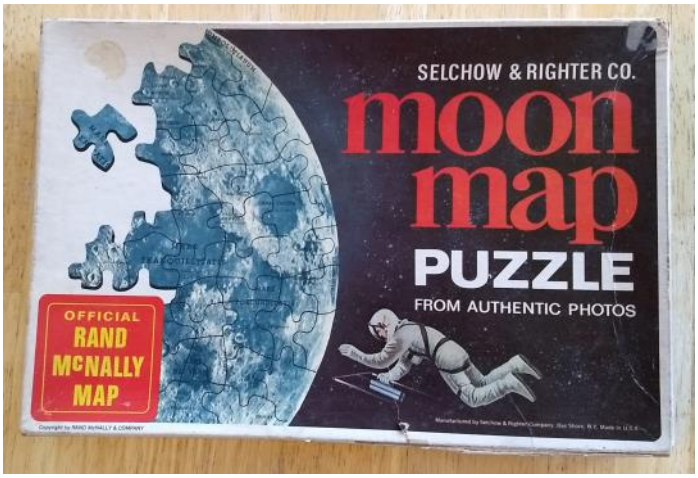


*Cocomalt flying Family puzzle map:*
*Another advertising example - "Cocomalt" includes a free 65 piece jig-saw in each can of Cocomalt (a beverage). This featured the "Flying Family" and their pet lion (still very young and small). They flew to all the state capitals and the jig-saw map shows their route.*




*Puzzle Map of India, 1936, Apex Product:*
*Features picture of the new king, George VI. This is before WWII and Britain controls India. Pakistan has not yet been created.*


*Atlas Geographique:*
*French puzzle Atlas, 1900, 35 cubes, 6 puzzle maps*




*Moon map puzzle, Selchow & Righter Co.,1962*
*In 1962 JFK announced that the USA was going to go to the moon! Moon maps were in demand, and moon map puzzles were soon available. The cover of this box has an imagined astronaut using his imagined hand-held jet pack to get to the moon.*

# How the Los Angeles Times tells stories through maps

Jon Schleuss

Los Angeles Times

$2.75 DESIGNATED AREAS HIGHER © 2018 WST † SATURDAY, JANUARY 13, 2018

**Montecito's deadly mudslides**

Before Tuesday's mudflows, maps used by fire and emergency response officials showed how devastating mudflows would cover neighborhoods down to the 101 Freeway and beach.

Flood debris flow risk area — 100-year flood zone

Thomas fire affected areas

Montecito

Los Angeles

Eucalyptus Hill

Montecito

Coast Village

Pacific Ocean

Sources: Montecito Fire District, Google Earth satellite image, Times reporting

Los Angeles Times

**Secret list of officer issues spurs review of past cases**

L.A. district attorney to examine deputies' roles in convictions, some of which could be vacated as a result.

By Maya Lau, Ben Poston and Corina Knoll

The Los Angeles County district attorney's office has launched a comprehensive

have testified and are trying to determine whether defendants should have been notified of the misconduct.

The deputies have been identified as potential witnesses in more than 4,400 felony criminal cases since 2000, according to a Times analysis of district attorney records, though it is unclear how often they testified or how significant a role they played in those cases.

Lacey said she could not recall a similarly large undertaking by her office

*LA Times coverage of the Ventura and Santa Barbara fire and mudslides—2018*

The Los Angeles Times has a long history of making maps. Some of the oldest (and coolest) date back to World War II and were drawn in perspective by hand. They're on display in our building downtown.

Nowadays we make all sorts of maps. Some appear only on our website, while others are designed specifically for the print newspaper. We've rapidly evolved in the last few years. In 2014 we were publishing using Google Maps. Now we're using a custom tool we call Map Maker that pulls data from Natural Earth and OpenStreetMap, which is curated by a volunteer army (including us). We've developed tools to help us make locator maps, which point out the location of a plane crash or the start of a wildfire.

When we publish something online we usually also have to make a separate version for newsprint. The deadline for publishing is - as soon as humanly possible. For the newspaper, the deadlines alternate depending on the day, and are in the evening. After editing, the pages are sent electronically to the press where lasers cut words, photos and maps into large sheets of metal.

Online, we have to build things in terms of pixels. Our website only allows us to use a few types of sizes. In contrast, for the newspaper we size things in terms of columns and picas.
We also have to worry about color. Our press prints in four colors: cyan, magenta, yellow and black. That means a page has to be hit with each color on the press during the printing process to get the full color map.

**MAPPING THE NEWS** On January 13th, we ran a full color map of predicted flood and debris zones near the Thomas Fire, California's largest recorded wildfire. When we built the map we had to keep in mind which features needed to be "tuned" to enable printing. For example, we had to make sure that the text was 100% black and not full-color black (a combination of several colors), because the page alignment isn't always exact, especially when you're printing hundreds of thousands of pages.

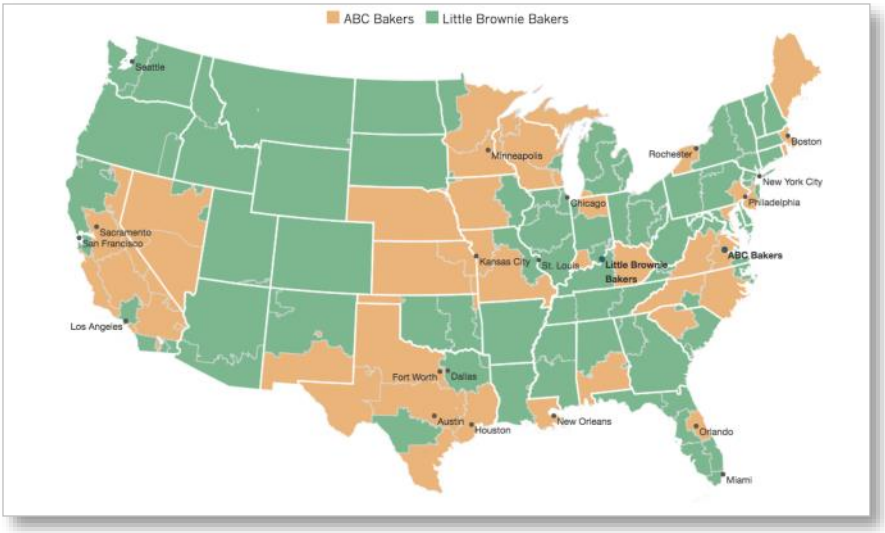
We also have a challenge in creating visual map-worthy stories from data. In 2015 Doug Smith, who's been at the Times for 47 years, got a large Excel spreadsheet of Los Angeles County's homeless population, counted by Census tract. We knew that it was certainly something we wanted to work with, but we were unclear of the best way to map the information to provide an accurate picture of this population.

Each row of data contained a unique ID, and the total number of people counted in that particular Census tract, as well as the number of vehicles and makeshift shelters used by people who were homeless in that area.

If we mapped the homeless population directly by Census tract, some areas would be distorted, because of their large size. Only a handful of people were counted as living in the Angeles National Forest census tract, for example, but this is a very large area, compared to the much smaller tracts in Downtown Los Angeles, which have hundreds of homeless people.
Eventually we settled on random dots in each shape. Each person counted got one dot that was randomly placed inside that particular census tract. Tracts with more people had more dots and relationship between space and numbers of people who were homeless was clearly seen: almost every corner of L.A. County has some kind of homeless population, and many live Downtown, in Hollywood, and in Venice.

We also do less serious mapping, too.

**MAPPING GIRL SCOUT COOKIES** Two reporters, who normally cover earthquakes, discovered something strange happening one spring: Girl Scouts were selling different cookies in our newsroom. The Thin Mints coming from Orange County scouts were smaller, darker, with ridges. The ones




coming from Los Angeles were rounder and larger. Amazed, they discovered that there are two unique bakers of Girl Scout cookies: ABC Bakers and Little Brownie Bakers. The two bakers made different cookies!

As a mapmaker, I quickly became interested in this enterprise. Intrigued, we learned that different parts of the country get different cookies to sell. But we didn't know which areas got which cookies. The only clue we could find was the Girl Scouts website. One of the reporters began typing ZIP codes into the search on the website, to see which code went with which Girl Scout Council (and thus figuring out the baker for the region).

After typing far too many ZIP codes, we wrote a little program, so that we could visit the website and search for the ZIP programmatically. The program searched more than 30,000 times, and eventually we were able to determine the bakers and the cookies for each area.

We then made a unique map - one no one had ever seen before. Los Angeles County got Samoas. Orange County and much of the Central Valley got Carmel deLites. Dallas got Tagalongs. Fort Worth got Peanut Butter Patties. Boston got Peanut Butter Sandwiches while the rest of Massachusetts got Do-si-dos. We now update the Girl Scout cookie map each year.

**MAPPING THE PRESIDENTIAL ELECTION** In late 2016 we knew we had to map the results of the presidential election. No matter the outcome, we knew that people wanted to know: did their neighbors vote like them?

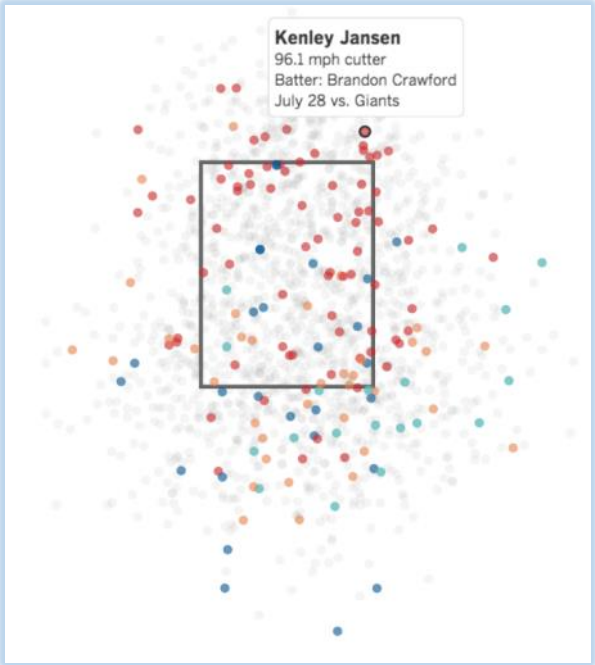
We set out to map the results from every election precinct in the state. This turned out to be a very complex undertaking, as each of California's 58 counties uses a different election system, and each one produces different data. Some use Excel to record their results. Others use PDFs. Some counties just told us the results over the phone. It was a little maddening, but we eventually got there and released all the data online (so researchers could also review the results). By January 6, 2017, we had published and updated every precinct's final result.

Sometimes we map things that don't really have much to do with geography.

**MAPPING SPORTS** Late last year we were preparing to launch a page celebrating the Dodgers' victory in the World Series with a "map" of all strikeouts every Dodger pitcher had thrown that season. When it became clear that they weren't going to win, we went up with the page anyway, though everyone was at home, crying.

Each pitch is color-coded by its type: fastball, curveball, changeup, and slider. Its location was provided by the MLB. We extrapolated their location by beginning at the coordinates of 0,0 (also known as Null Island) for each of the 1,684 strikeouts. If you put the data on a traditional map it would appear like a bunch of strikeouts in the Atlantic Ocean off the coast of Africa.

Each new project offers a chance to create a new way of telling a story through a map. And we're going keep on telling those stories every day.




*Photos courtesy of the LA Times*

# Apps for Maps

## UCSB Library 'FrameFinder'

Jon Jablonski

The University of California Santa Barbara Library has made the scanned portion of its aerial photography collection available for free online.

As part of a larger reorganization of the cartography collections, this new public service provides easy access to more than 250,000 scanned photographs of California landscapes dating back to 1927. Many of the earliest images document extensive oil development in Santa Barbara, Ventura, Los Angeles, and Orange Counties.

Information about more than 425,000 photographs is available in different ways. The easiest method is the FrameFinder tool (**figure 1**), which provides access directly to the scanned images by browsing on a map that opens zoomed into the UCSB campus. Dots representing the centerpoints of photographs are colored red to yellow, representing the oldest to newest photographs respectively. When you click on the centerpoints, metadata appears describing when the photograph was taken and its scale. If the photograph is already scanned, there is a link to download a high-resolution tiff file. Be patient: these are large files. Some color images are more than 200 megabytes!

If the photograph is not already scanned, there will be a link to request a scan from our department of Special Research Collections. SRC is now the custodian of the photograph collection, while our cataloging department is responsible for the metadata that drives the tool. The Library's new Interdiscplinary Research Collaboratory is responsible for continued development of the FrameFinder.

There are about 60,000 scanned images that are not yet in the FrameFinder. In order to provide access to these, our AP Flights catalog (**figure 2**) describes more than 4,600 records for aerial photography missions owned by the UCSB Library. You can get details about the areas that each flight covers, and many flights have scanned indexes available so that you can identify exactly the image you need (**figure 3**). You can then browse our photo directories to see if it is scanned. Again: if it's not, you can request a scan for $20. After it's scanned, it will be made available to every subsequent user.

Previously, users had to depend on the scanned indexes to identify specific photographs—a time consuming and arduous process. FrameFinder cuts two hours of work down to a few point-and-clicks.

At 2.4 million vertical survey images, the UCSB Library contains the largest collection of aerial photography in any academic library. The Library also holds extensive collections of oblique aerial photography. Large portions of the collection are at risk due to deteriorating filmstocks, and the Library is taking active measures to preserve the information on the film before it expires. At the same time, we hope that public access to the scanned images will raise awareness of the collection and its needs.

The FrameFinder is available at:
https://www.library.ucsb.edu/src/airphotos
A video demonstration is at: https://www.library.ucsb.edu/framefinder-documentation

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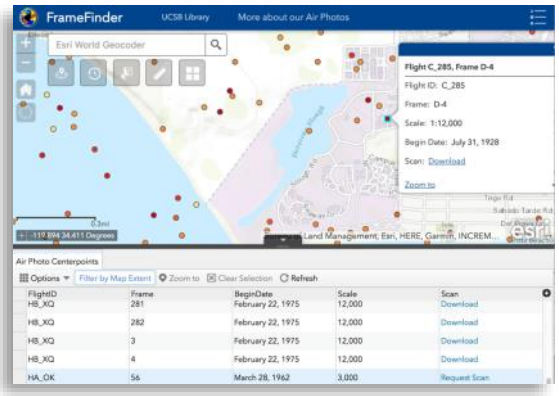


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# Bay Area Map Group Meeting

After a long hiatus, BAM members met on Saturday, November 11th at the beautiful home of Jan and Phil Simon who graciously hosted the meeting. After a very spirited and lively social hour, during which Phil's extensive puzzle map collection was explored by members individually over a glass of wine, the group gathered for more formal cartographic presentations by several members.

Phil welcomed the group of 16, and introduced the members who were presenting. While visiting a used books store, Leonard Rothman had randomly searched through a pile of old newspapers. He had found a treasure trove of war maps from the second World War, and had gathered them into a collection. The map he shared was from the October 1944 *San Francisco Call Bulletin* newspaper. The map is a colored clay relief map, made from clay impressions. It shows General Eisenhower's Allied armies pushing forward into Germany. Armies are identified by their national flag, and Swastika symbols show the Siegfried lines along the German border and along the Rhine, a series of forts and defenses built by the Germans during World War I.

*Guest Ron Gibbss with his map showing Washington crossing the Delaware (Willian Faden, 1777)*

The next presenter, Ron Gibbs, had also brought a war map – William Faden's 1777 map of General Washington Crossing the Delaware, a map with the same name as the famous painting by Emanuel Gottlie Leutze. After a discouraging year, filled with military losses, Washington had decided to attack the Hessian forces by crossing the Delaware River to Trenton, where they had gathered. During the American Revolution, fully 1/3 of the British forces were hired Hessian mercenaries. His victory, Ron shares "saved the cause of American independence."

Michael Jennings has a special interest in old maps of San Francisco, and shared his 1861 "Wachenreuder" map of the city. This early map shows "what a wild place" the area was at that time, with "outside lands" in the sand dunes inhabited by, in effect, squatters engaged in legal battles over claims. There were actually two land battles going on at the time: because Mexico had ceded the land to the federal government of the United States, there was a legal battle between the federal and city governments over ownership; and the battle for land grant rights between the squatters. The map has much detail, and includes the Farallons, which were part of the city at the time. This actually caused another battle: an "egg war", an economic battle over claims to the eggs of the birds nesting on the islands, an important source of protein for the population. Incredible as it seems, Fred Aula had brought the same map to the gathering! He shared details of the city's early Spring Valley water system visible on the map. Streets had been named and laid out, names which had changed over time. He also pointed out the location of Mission Bay, under water at the time, with streets carefully laid out (over the water) to enable real estate negotiations!

A touch of modern was shared by Walter Schwartz. On a recent trip to Spain, he had found and purchased a beautiful small mosaic globe in a tourist shop in Barcelona. The small, Gaudi-styled globe was very carefully detailed, with different shiny, brightly colored mosaics for each nation.

From very small to very large – Ken Habeeb shared a very large and lovely British Admiralty chart, a 1969 government survey map of Guadaloupe and Trinidad. This was a bathometric map – a sea chart of the region. The islands appear a small, detailed land masses amid a wide, very empty ocean.

Fred DeJarlais had brought a large and brightly colored Comstock Lode map, focused on the Sutro Tunnel, which he had found in electronic format while searching for high-resolution maps to accompany the article on the Comstock Lode in this journal. He had taken it to a printer, and obtained a 3 foot by 3 foot printed copy. The map showed the construction of the Sutro Tunnel between 1869 and 1878. It is a very early iteration of graphics on a map, with profiles both vertical – of the mines going down into the ground, and horizontal – of the mountains and surrounding areas.

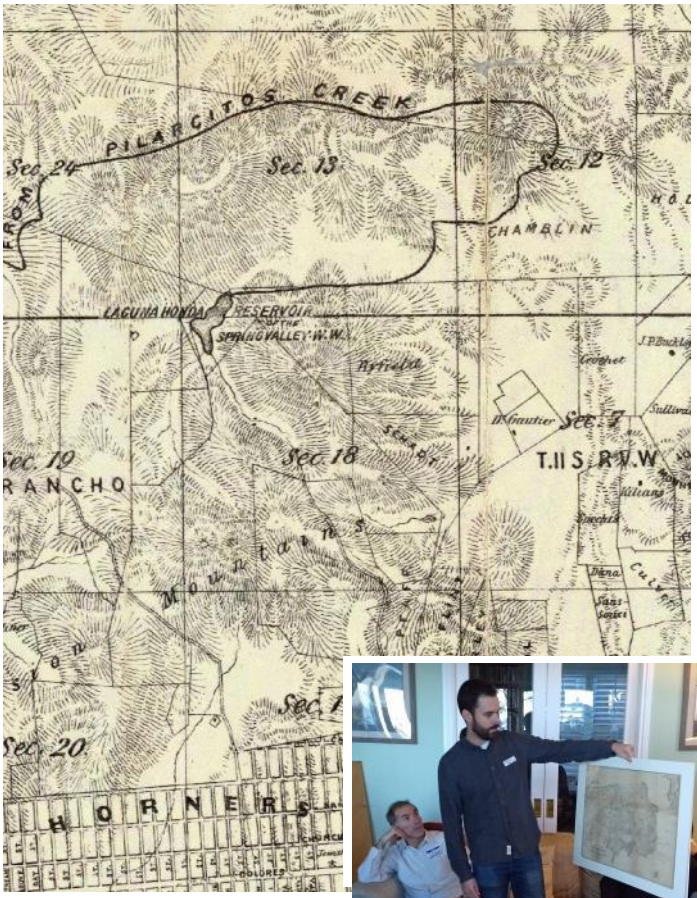
As miners dug into the ground to reach the silver lodes, they encountered a lot of water – hot water – which impeded and at times stopped the mining process. Sutro created a company to build a drainage tunnel to remove the water. However, the mines went deeper and deeper, and soon were below the level of the tunnel while, at the same time, improved pumping apparatus had been developed. The tunnel shown on the map was obsolete before it was completed.

Phil Simon's puzzle maps were fascinating. The earliest puzzle maps, he shared, were called "dissected maps", and were made for royalty. Why "dissected?" Because the jig saw had not yet been invented – so – they were not "jigsaw maps!" The maps were not interlocking, as they are today. Rather, they were cut into squares. These became very popular during the depression, as families could spend evenings together working on solving the map puzzles.

Phil's favorites are cube maps, and he shared a number with the group. The six-sided cubes that were used to make the maps allowed the mapmaker to present six different maps – one for each side of each cube – quite a challenging puzzle! Two of his favorites are an 1816 42-cube Dutch map, and an 1860 French puzzle map. He also has an 8-layer map of Paris, an 1819 "New Series" of puzzle maps, Gall & Ingalls' 1878 "superior dissected maps", and McClellan's "silent teacher" maps, a 1900 "atlas geographique" cube map, an 1894 dissected map of the United States, and an 1887 map of "America" teaching the "Indians." Three interesting oddities: the "flying family", a 65-piece jigsaw puzzle given away with the purchase of CocoMalt, a map of the United States made out of rubber erasers in Japan after World War II, and a 1952 Holgate "three dimensional" map – which is not three-dimensional!

After the presentation, guests were invited to view Phil's extensive cartography collection in his "map room." A lovely afternoon was had by all, and future meetings were enthusiastically planned.

*Phil Simon discussing his puzzle map collection with our editor dutifully taking notes.*




*Portion of San Franscico's "Outside Lands" from "Wachenreuder Map, 1861*

*Michael Jennings displaying one of two(!) "Wachenreuder Maps" brought to the BAMG meeting*

# Apps for Maps

Professor Paul Davis & the UCLA EDGE Lab Team:
Ana Costello, Emmanuel Masongsong, Henry Gonzalez

## UCLA LAB GIVES EARTH & SPACE SCIENCE STUDENTS AN EDGE

Traditionally Earth and space science is taught from textbooks and PowerPoint presentations, with limited field trips or other outdoor instruction to help students make a stronger connection to the concepts. Research has shown that geoscience and space science learning is greatly enhanced by using tactile analog models, and this holds true both in the classroom and for public outreach. Since subjects actively participate and manipulate models in their hands, they can be exposed to more complex concepts than from images or even video. While teachers are able to purchase basic models for use in the classroom, for college-level studies there are few commercially available tools for explaining more challenging material.

At UCLA, the Department of Earth, Planetary and Space Sciences (EPSS) realized this critical need for custom-built teaching and research aids and so formed a group to do just that. The Educational Demos for Geoscience Engagement (EDGE) lab focuses on building models and other teaching tools for oceanography, tectonics, space physics, plasma physics, and geophysics. Every model is designed with student learning in mind, is repeatable and operable by non-experts, and captures the concept that is being taught in the most straightforward manner possible.

**Why models?** Models serve as a type of analogy for events that take place in the real world. Research in cognitive science has suggested that analogy and metaphor allow students to create meaningful connections in their experience. Furthermore, using physical demonstrations allows instructors and presenters to clarify any issues that an audience might have with concepts presented in a lecture setting, where students have to develop their own metaphors. The goal of these models is to help students accurately indicate, represent and apply the concept demonstrated, and to clarify any misconceptions.

**Adults playing in the sandbox.** The UCLA EPSS Augmented Reality Sandbox is a visual-tactile teaching tool used to enhance classroom lectures in geology, hydrology, and topographic mapping. Mountains, canyons, and lakes can be sculpted in white sand, and a computer program scans the sand in real time to overlay colored elevation contour lines across the terrain. The most exciting part is giving participants the power to create virtual rain and floods, revealing the mechanisms and outcomes of sea level rise, catastrophic dam failures, erosion, and more. It can also be used to show magma outflow from an

*Sandbox caption (any of photos 1-4): The Augmented Reality Sandbox is a mesmerizing interactive demonstration of geological and topographical map concepts, used for undergraduate courses and Earth Science public outreach/education. The sand can be sculpted by hand and the contour lines and shading adapt in real-time, while water/snow/lava simulated flows*

erupting volcano, and can even simulate other fluids flowing under different gravity conditions, for example methane rivers on Saturn's moon Titan. Our geological mapping classes involve the creation and interpretation of geologic maps- introducing the Augmented Reality Sandbox to the curriculum allows students to have a smaller scale, more tangible representation of the conceptual aspects of these classes.

As a tactile demonstration, it has immense appeal for public outreach, and has been taken to various exhibitions including a tactile art exhibit for the blind, Consumer Electronics Showcase, and the California Map Society meeting.

**Making your own Earthquake.** Introductory level EPSS courses teach fundamental concepts about earthquakes. Models are perfect for demonstrating many aspects of such a large-scale physical event on a small, tangible scale. A transform fault is the vertical plane separating two tectonic plates that are moving in opposite directions. The rock strata are displaced parallel to the fault, creating stress which is called shear. The Strike-Slip model demonstrates these shearing forces due to tectonic motion, by turning a crank to move two blocks of foam against each other, until one of them shifts

*Strike Slip caption: The Strike Slip Fault demonstration models the San Andreas Fault in California, and allows students to collect and analyze real seismic data. By turning the crank on the right, tension builds in the "foam tectonic plates" and is suddenly released as a mini-earthquake, allowing students to generate and study the resulting seismic waves.*

abruptly. Students can make a real-world connection between this model and the local transform fault, the San Andreas Fault, which could spawn the next "big one." Students at UCLA can definitely relate to this, since Los Angeles is near the fault line, which lies along the North American and Pacific plates. To enhance the experience further, students can measure the fault displacement that is proportional to the shearing force with a seismometer app, now easily available on a smartphone or tablet.

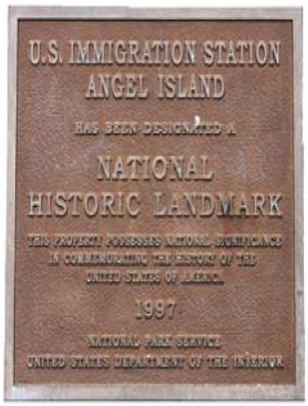
Shake tables can vibrate at different speeds, exciting structures in a similar fashion as earthquakes. One of the more useful aspects of a shake table is that it can test different types of building structures in order to record points of failure. This particular demo shows how buildings of different heights react to movement at different frequencies of shaking. This property, the resonant frequency of a structure, allows users to realistically simulate seismic activity of different strengths and immediately see the impact on a building.

In addition to the shake table, hand-held building frame models are used to demonstrate related concepts. While less accurate in the degree to which the platform moves, they offer a hands-on experience that a motorized table cannot. These building frames demonstrate the benefits of adding corner bracing to structures. Students can both create and see the effects of seismic force on a model with and without reinforcement.

Another demonstration models liquefaction, which shows how land is affected during an earthquake when the land is saturated with groundwater. In saturated soils, liquefaction is a phenomenon that can cause great damage during earthquakes. Liquefaction occurs in soils which have their void spaces (between individual particles of soil) occupied by water. During earthquakes, the water pressure causes soil to slide more easily because it is less tightly packed than dry soil, and so it loses its foundational strength and buildings sink or topple over. Classes use two machines to demonstrate the effect- one filled with sand saturated with water, and one filled with dry sand.

# MapTime
## A New Project

Members of the CMS and MaptimeLA will be sharing in a new project – a very special "Scavenger Hunt," currently under development. California has 1,100 historic markers scattered across the state. A list of the markers can be found at the state government's website. They are listed – without locations! This makes it extremely difficult for people to access markers of interest to them. Omar Ureta, a member of MapTime who specializes in map process, data, and design, has offered to design a simple app which can be uploaded to members' phones. It will contain a list of all 1,100 markers. When a member finds a marker, often along a roadway or near a visitor center, he or she takes a photo of the marker, and uploads the photo onto the app. The photo will record the marker's location by coordinates. When the marker is uploaded, it will automatically fall off the list of 1,100. We will then be able to provide this information to the public on a website, which will also list the names of project participants. Because many of the markers are not in good condition, we may also wish to clean them to make them more accessible, although this is not necessary to the project itself.




Omar is in the process of developing the application. More details to follow as the process evolves.

# The Ruderman Conference on the History of Cartography—October 19-21, 2017

Katherine Parker

## A NEW CONFERENCE FOR MAP SCHOLARS

In mid-October 2017, map scholars and enthusiasts converged on sunny Palo Alto for the first of what will become a series of conferences focused on celebrating emerging research in the history of cartography. The inaugural Barry Lawrence Ruderman Conference on Cartography took place at the David Rumsey Map Center at Stanford University on October 19-21, 2017. The conference, a biennial event, is designed to bring together established and emerging researchers interested in the history of cartography. This first iteration of the conference exemplified this ethos by highlighting a broad range of research from medical mapping to imperial imaginings, from tenth-century China to twenty-first century Singapore.

The proceedings opened on the 19th with a reception in the palatial Munger Rotunda at the Green Library on Stanford's campus. Then, the assembled group settled in front of the massive screen of the Rumsey Map Center to hear keynote speaker Parag Khanna. Khanna is a noted spatial thinker whose is currently Senior Research Fellow in the Centre on Asia and Globalization at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He is also the Managing Partner of Hybrid Reality, a boutique geostrategic advisory firm, and Co-Founder & CEO of Factotum, a leading content branding agency. Khanna discussed ideas developed in his book, *Connectography,* arguing that the global winners of the future will be the most connected entities, be they corporations or states. He accompanied the talk with an array of maps, some animated, which exemplified how cartography can creatively capture the complexities of our globalized present.

## URBANO MONTE PLANISPHERE

A major highlight of the three-day event was the surprise unveiling of a spectacular manuscript planisphere made by Urbano Monte in ca. 1587, the largest manuscript world map of the sixteenth century. Made up of sixty sections that join in five concentric circles, when joined the planisphere is nine feet in diameter.

David Rumsey, who purchased the manuscript from Barry Ruderman, printed a facsimile of the joined planisphere—likely the first time the planisphere was seen as Monte intended—and also displayed the original manuscript, which is bound as an atlas. Conference attendees circled the unrolled facsimile and were delighted by the detailed portraits of contemporary monarchs and legendary figures, including Prester

*One of 60 sections of the Urbano Monte planisphere.*

John. Additionally, on the Center's touchscreen, attendees could spin Monte's map transposed onto a sphere. They were also treated to a special keepsake publication highlighting the history of the map and showing some of its more spectacular imagery. Images of the Monte map are available by searching for "Monte" via the LUNA browser at www.davidrumsey.com.

October 20th witnessed the first half of the speaker presentations. The day started with Daniel Tuzzeo, PhD candidate, on religious cartography. He was the first of five Stanford speakers, a group that included three postgraduate students, one undergraduate, and an assistant professor. Next, Katherine Parker (Ruderman Antique Maps) discussed how cartography has been used in books about the Anson circumnavigation (17240-44) from the eighteenth to the twentieth centuries. Madalina Veres (American Philosophical Society) presented her research on Hapsburg mapping of the Indian Ocean in the eighteenth century, while Mirela Altic (Institute of Social Sciences Ivo Pilar; University of Zagreb) offered a three-part case study of Croatian Jesuit mapping in the Americas. The day ended with a final paper on Jesuit mapping, this time of North America, by Stanford PhD student Charlotte Thun-Hohenstein.

As the conference series wishes to highlight the promise of technology to further cartographic analysis, two interesting speakers in this area were also included. Benjamin Sacks (Princeton) shared how he has used QGIS to better visualize the urban planning of colonial cities in the eighteenth century. Chet van Duzer (Library of Congress; Lazarus Project) showed us how multispectral imaging changed what we can see on the Henricus Martellus world map (ca. 1491) held at

Yale and laid out the future of the potential of this technology.

October 20th continued with additional cutting-edge research from a global perspective. Stanford undergraduate Lauren Killingsworth, named a 2017 Global Winner by the Undergraduate Awards, dazzled the audience with her work on medical mapping in Oxford prior to the John Snow cholera map.


*Map of Oxford to illustrate Dr. Acland's Report on Cholera in Oxford in 1854 showing the localities in which Cholera and Choleraic Diarrhoea occurred in 1854 and cholera in 1832 and 1849." Henry W. Acland Oxford: 1856*

Joel Radunzel (West Point) also shared award-winning research with his 2015 MA thesis from Syracuse University that examined the fact and fiction of the British Palestine Campaign maps.

Other speakers included Steven Press (Stanford), who reflected on the role of maps in the Scramble for Africa. The last three speakers were PhD student Peter Hick, who shared his thoughts on imperial mapping in Ming-Qing China, Edward Boyle (Kyushu University) who talked about the intense geographic debate in Japan and Europe about the island of Karafuto in the Ezo region of Japan, and Junia Furtado (Universidade Federal de Minas Gerais) shared a theoretical reflection on types of knowledge conveyed in maps.

These speakers capped off a rich conference that showcased new research in the history of cartography, proving that the field is robust and diverse. For this first conference, the conveners strove for wide-ranging geographic coverage and a long chronological focus in order to capture the diversity of topics under examination in universities, archives, libraries, and by independent scholars. Future conferences will focus on a central theme such as indigenous maps or women in mapping and maps.

## NEXT CONFERENCE—FALL 2019

The next Ruderman Conference on Cartography will be in autumn 2019. The permanent URL is blrcc.stanford.edu. The digital exhibit, curated by each of the thirteen speakers, can be accessed at https://exhibits.stanford.edu/blrcc/.

*Conference particpants with Urbano Monte's Planisphere. Photo: Rumsey Map Center*

# Youth Contributor

Joshua Rothman De Beauchamp, Grade 5,
Roosevelt School, Santa Monica, CA

## Captain James Cook

By the end of this article I hope you will know a lot about James Cook.

James Cook was born on October 27, 1728, in Marton-in-Cleveland, Yorkshire, England. He was the son of a Scottish farmhand, went to live on the coast, and when he was 18 he was offered an apprenticeship as a merchant seaman. He joined the British Navy in 1755, and mastered navigation, charting, and mapmaking, and became a skilled cartographer. At age 29, in 1758, he was given a ship to chart Newfoundland off the coast of Canada. He was very healthy, he loved to eat fresh fruits and vegetables. He was very clean, always kept his ship neat and tidy, and he took baths very often.

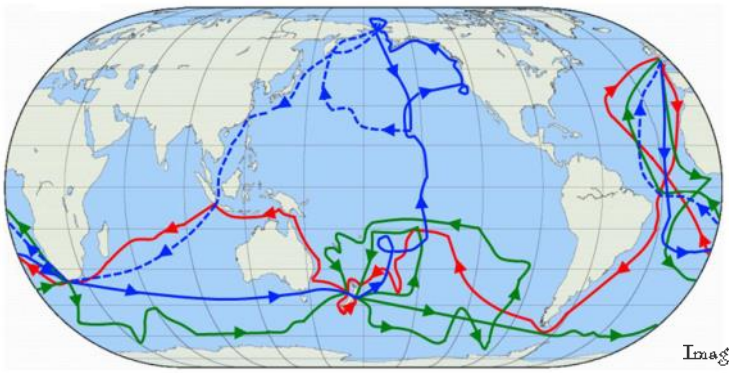
In 1768, he commanded the HMB Endeavor, the first scientific expedition trip in the Pacific Ocean. His expedition was very dangerous. He almost had his ship sunk near Australia while he was exploring Australia's east coast, but he survived because the ship had hit the Great Barrier Reef, which he also charted. It took him two months to repair the ship. The people who had helped him through the journey of the HMB Endeavor were, Zachary Hicks, John Gore, and Charles Clerke. He also visited Tahiti in 1769, to observe the planet Venus passing between the Earth and the Sun.

In 1772, on his second trip, he discovered and charted the islands of New Zealand. The discovery of New Zealand is very well known around the world. The person who had discovered it, though, was less well known - Captain James Cook. He landed there and mapped and charted the land and its surroundings.

On his third trip, he visited the islands of Hawai'i. He encountered 3 Maori natives on his ship. There was a fight, and Captain Cook got killed trying to kidnap a Hawai'ian chief on the 12th of October 1779.

Now to wrap it all up: he is best known for the discovery of New Zealand. He had accomplished many things such as academics, mapping, charting, and being an explorer on the open ocean. He died by trying to kidnap a Hawai'ian chief.

Thanks for reading. I hope you have learned a lot.



The Voyages of Captain James Cook

Red 1768-1771
Green 1772-1775
Blue 1776-1780

Image: Adapted from Slideplayer.com

## MAPPING HERE & THERE:
### Meetings and Exhibits of Interest to Members

Ongoing – Brooklyn, NY. Brooklyn Historical Society is displaying two very rare Revolutionary War maps that chronicle the landscape of 18th century Brooklyn, including the famous Ratzer map of New York.
http://brooklynhistory.org/docs/Ratzer_map.pdf

Thru March 11th – New York, NY. New York Historical Society hosts an exhibition entitled "Mapping America's Road from Revolution to Independence," a collection of hand-drawn and hand-printed maps from the 18th and 19th century, including some very rarely seen maps from their collections.
http://www.nyhistory.org/exhibitions/mapping-america%E2%80%99s-road-revolution-independence

March 2nd – Los Angeles. Los Angeles Geographical Society will present Dr. Mario Giraldo, Associate Professor of Geography from CSU Northridge, who will be discussion "Making Urban Ecosystems Sustainable: A Job Market for Geographers!" The meeting will be held at 4 PM at Los Angeles City College's Science and Technology Building.
http://lageography.org/lecture/

March 7th – New York, NY. New York Map Society will present a lecture by Dr. Priyamvata Natarajan, Yale University professor of astronomy, entitled "Mapping the Heavens: The Radical Scientific Ideas that Reveal the Cosmos" at Avenues: The World School, 17th floor, NYC
http://newyorkmapsociety.org/meetings.html

March 15th – Chicago, IL. Chicago Map Society will host a presentation by Don and Tonya Smith, of Greeley-Howard-Norlin & Smith, the oldest land-surveying business in the greater Chicago, a first whose surveyors have "... virtually walked every block in Chicago." The company has over 10,000 copies of plats and much survey-related documents and maps, including those of Chicagoland before the Great Fire. The meeting will be held at the Newberry Library at 5:30PM.
http://www.chicagomapsociety.org/upcoming-events/

March 15th – London, UK. London's Maps and Societies Lecture series will feature Dr. Thomas Horst who will present "Puttiaxton into Context: State Surveys in Early Modern Europe and Particular Reference to Palartinate-Newvurg, Saxony, and England." The meeting will be held at the Warburg Institute, University of London, Woburn Square, London at 5 PM.
http://www.maphistory.info/warburgprog.html

April 6th – Los Angeles. Los Angeles Geographical Society will present Dr. Sanchayeeta Adhikiri, Assistant Professor of Geography from CSU Northridge, who will lecture on "Wildlife and People: Conflicts in Rural India." The meeting will be held at 4 PM at Los Angeles City College's Science and Technology Building.
http://lageography.org/lecture/

April 12th - Washington DC. Washington Map Society will present a lecture by Dr. Mark Monmonier on "Patents and Plato: Map-related Patents in General, and One Clever Inventor in Particular." He will discuss the principle areas of invention and feature John Byron Plato (1876-1966), who developed and patented a method for assigning rural residences unique addresses. This led to the establishment of the Index Map Company. The meeting will be at the Library of Congress Geography and Map Division, and include rare maps from their collections.
http://www.washmapsociety.org/WMSMeet.htm

April 19th – Chicago, Il. Chicago Map Society will present a lecture by Carme Montaner at the Newberry entitled "Mapping the Amazon at the Second Half of the Eighteenth Century: The Contribution of the Franciscan Order" – the first detailed maps of the hydrographic networks of the Amazon River, made by Franciscan friars.
http://www.chicagomapsociety.org/upcoming-events/

April 20th – Boston, MA. Boston Map Society will present Dr. Priyamvata Natarajan's lecture on Mapping the Heavens, as described above, at the Harvard-Smithsonian Center for Astrophysics, Boston

April 21th – Oakland, CA. The California Map Society will hold its Spring meeting at the Chabot Space and Science Center with a full day of lectures and presentations. Please check this issue and the CMS website for additional details.
http://californiamapsociety.org/

April 25-28 – Quito, Ecuador. San Francisco University of Quito, Ecuador will host the Iberoamerican Symposium on the History of Cartography, presenting "Cartography and Itineraries: Maps, Images and memories based on the Route."
April 26th – London, UK. London's Maps and Society lectures continue with Dr. Ferdinand Opll's presentation on "Early Modern Town Plans and Views of Vienna and Their Importance in the International Context." The meeting will be held at the Warburg Institute, University of London, Woburn Square, London at 5 PM.
http://www.maphistory.info/warburgprog.html

April 28th – New York, NY. New York Map Society will present a lecture by Dr. Mark Monmonier, Syracuse University

professor specializing in toponomy, geography, and geographic information systems entitled "Patents and Cartographic Inventions: A New Perspective for Map History," at Avenues: The World School, 17th floor, NYC.
http://newyorkmapsociety.org/meetings.html

May 4th – Los Angeles. Los Angeles Geographical Society's meeting will feature a student research symposium with presentations, posters, and maps by students at universities in Southern California, at 4 PM at Los Angeles City College, Science and Technology Building.
http://lageography.org/lecture/

May 17th – London, UK. London's Maps and Societies lecture series will feature Professor Susan Schulten, who will speak on "Map Drawing in 19th Century Education." The meeting will be held at the Warburg Institute, University of London, Woburn Square, London at 5 PM.
http://www.maphistory.info/warburgprog.html

June 8th – Lisbon, Portugal. The European Research Council Project MEDEA-CHART will host a program entitled "On the Origin and Evolution of Portolan Charts" at the Insituto Hidrografico.

June 21st – Portland, Maine. The Osher Map Library will host the International Society for the History of the Map's symposium.
http://www.oshermaps.org/ishmap2018

July 15th-20th – Warsaw, Poland. The Seventeenth International Conference of Historical Geographers will present papers on historical geography with sessions, lectures, social events, and field trips in Warsaw and throughout Poland.
http://ichg2018.uw.edu.pl/

September 13th–15th – Oxford, England. The International Symposium on the History of Cartography's theme will be "Mapping Empires: Colonial Cartographies of Land and Sea" as influenced by exploration and imperialistic activity, focusing on Africa, Asia, the Americas, and Oceania. Conference presentations, technical visits, and social tours are planned.
http://history.icaci.org/

September 20th-23rd – Golden, CO. The Rocky Mountain Map Society will host the Society for the History of Discoveries at a join conference at the Colorado School of Mines. The September 20th program's theme will be The Golden West: Mapping the Stampedes, followed by an evening reception and Map Fair. The conference programs will move from the mapping of California, to the mapping of gold rushes in Georgia, Colorado, Australia, and Africa.
http://rmmaps.org/

October 4th-6th – Arlington, Texas. The Virginia Garrett Lectures on the History of Cartography will be followed by the Texas Map Society's Fall meeting at University of Texas' Arlington Library. Please see website for further details. https://texasmapsociety.org/events/

October 14th-20st – Manila, Philippines, and Hong Kong. The international Map Collectors' Society Symposium will begin in Manila October 14th through 17th at Ayala Museum in Makati City. A full schedule of presentations and activities is available at www.imcos-2018-manila.com. October 18th will be the travel day, and the Hong Kong portion of the conference will begin October 19th at the Hong Kong Maritime Museum. The website for this portion of the conference is not yet available.

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

## Answers to Carto-Quiz


Bird's-eye view of Saint Louis, Missouri as seen from above the Mississippi River. Janicke & Co., 1859, Library of Congress


Bird's-eye view of Cincinnati, Ohio as seen from above the Ohio River. John L. Trout, Henderson Lithographing Co., 1900, Library of Congress


Unique bird's-eye view of Minneapolis, Minnesota as seen from the roof of Macalester College. A.T. Andreas, 1874, Library of Congress


Bird's-eye view of Pittsburgh, Pennsylvania at the confluence of the Monongahela and Allegheny Rivers. Otto Krebs, 1874, Library of Congress

**The Guardian (UK) has a more challenging version of this quiz:** https://www.theguardian.com/cities/ng-interactive/2017/dec/19/quiz-city-historic-map

# California Map Society Officers: 2017-18

President, Susan Caughey
president@californiamapsociety.org

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

Treasurer, John Fleming
treasurer@californiamapsociety.org

Secretary, Barbara Wilcox
secretary@californiamapsociety.org

VP for Membership, Fred DeJarlais
vp-mem@californiamapsociety.org

VP for Publications, Juliet Rothman
rothman@berkeley.edu

Immediate Past President,
Len Rothman, MD
pastpres@californiamapsociety.org

## Become a Member!

| | |
|---|---|
| Student | -0- |
| Retired | $30 |
| Active | $40 |
| Patron | $100 |
| Life | $500 |

Register online at:
www.californiamapsociety.org
*Or mail the enclosed application*

## 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

*Map of the World by Fra Mauro, circa 1450*
*See "My Favorite Map," p. 29.*

# New Members 2017-18

Katharine Anderson, PLS
Benjamin Briggs
Farron Brougher
Daniel Burns
John Carnes
David Gregson
Kirk Hammond
Stephen Hanon
Les Holland
Tania Houtzager
Casey Koon
Catherine Luijt
Nicole Martinelli
Afsi Moaveni
Douglas Olcott
Lina Pukstaite
Dan Riley
Greg Scarich
Daniel Scollonl
Boyd Smith
Vanessa Stevens
Paul Switzer
Cal Welch
Peter Wrobel
Nancy Yamahiro
Benjamin Zotto
Karen Zukor

**Meeting and Student Memberships**

Gary Baker
Dydia DeLyser
Linda Gass
Henry Gonzales
Amalia Kotlyar
Emmanuel Masongsong
Dave Milewski
Tom Mullaney, Ph.D.
Omar Peña
Vanessa Szajnberg
Jon Schleuss
Ross Stein, Ph.D.
Charlotte Thun-Hohenstein
Daniel Tuzzeo
Omar Ureta

**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.

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**Barry Lawrence Ruderman**

Antique Maps Inc.

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