

Book Proposal

RENDERING THE AMERICAN WEST

Sara Plummer Lemmon, 19th-Century Botanist and Artist

by

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RENDERING THE AMERICAN WEST

Sara Plummer Lemmon, 19th-Century Botanist and Artist

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Summary

RENDERING THE AMERICAN WEST: *Sara Plummer Lemmon, 19th-Century Botanist and Artist* is an engaging account of an extraordinary woman who, in 1870, was driven by ill health to leave the East Coast behind for a new life in the West—alone. At thirty-three, Sara Plummer relocated to Santa Barbara where she taught herself botany and established the town’s first library in the back room of a stationery store.

Ten years later, she married the botanist John Lemmon, a Civil War veteran and survivor of the infamous Andersonville Prison, and moved to Oakland. The couple spent the rest of their lives collecting and describing hundreds of new trees and flowers, many of them illustrated by Sara, an accomplished artist. She became an acknowledged botanical expert and lecturer and was the first woman invited to speak to the California Academy of Sciences.

Like the women of the Oscar-nominated movie, Sara Lemmon is another “hidden figure”—of both science and art. While her official role was to illustrate her husband’s botanical papers, despite being a botanist in her own right, her considerable contributions to new scientific knowledge were credited merely as “J.G. Lemmon & Wife.”

By the early 1900s, Sara was considered “one of the most accurate painters of nature in the State [of California].” Sadly, most of her original illustrations were lost, probably in the fires that followed the 1906 earthquake, so the re-discovery of 200+ of her exquisite watercolors, has been an unexpected treasure trove. Those paintings, which reside at the University of California and Jepson Herbaria in Berkeley, are much too fragile to ever go on exhibit, so a selection of twenty will be seen for the first time in this book.



*Fig. i. Signed watercolor of Ipomea Thurberi. Signed on back:
“Mrs. S. A. P. Lemmon, Sept 13, 1882, Tanner’s Canon.”*

Photo by Wynne Brown. Original at University of California & Jepson Herbaria.



Fig. ii. Signed watercolor of *Gentian* (*Gentiana microcalyx*) by Sara Lemmon:

“Mrs. S. A. P. Lemmon, Sept 13, 1882, Tanner’s Canon.”

Photo by Wynne Brown. Original at University of California & Jepson Herbaria.



Fig. iii. Signed watercolor by Sara Lemmon: Cnicus edulis (now Cirsium edulis) Indian or Edible Thistle. Label on back: "Huachuca Mountains, Tanners Canon, A.T. Mrs. S.A.P. Lemmon, Sept., 1882. Photo by Wynne Brown. Original at University of California & Jepson Herbaria.

Who was this intriguing woman who, despite near-fatal health issues, found it “like death to be idle”?

Luckily, Sara was a prolific letter-writer, and she comes to life in this meticulously researched biography for general readers, based on 1,200 pages of her detailed, chatty letters to her family back East. However, this book is not just a collection of correspondence; instead, it is a work of literary journalism, an accessible and engaging read that combines the accuracy of traditional journalism with the narrative devices of fiction, such as scene-setting, interiority, and status details. Sara Lemmon's story leads the reader through the life and times of a 19th-century woman who was endlessly curious about the world—and constantly willing to illustrate it.

But Wynne Brown's narrative isn't just an account of dodging Apaches in Arizona. Readers experience sooty New York City in the 1860s, verdant northern California against a post-Civil War backdrop, and the opening of the turn-of-the-century West to those hungry for real estate. This book chronicles thirty years of Sara's life with John, discovering hundreds of new plant species throughout California, Oregon, and Mexico, and their travels, including their camping trips with friends John Muir and Clara Barton. Somehow Sara also made time to work as a journalist and to contribute as a social justice activist to causes including women's suffrage and forest conservation. She also established the first training school for nurses on the West Coast.

RENDERING THE AMERICAN WEST: *Sara Plummer Lemmon, 19th-Century Botanist and Artist* is a timeless tale about one woman's discovering who she is by leaving everything behind. Her inspiring story is a universal one of resilience, determination, and courage—and is as relevant to our nation today as it was in the 1880s.

Author biography

Wynne Brown is ideally qualified to bring this fascinating woman to general readers. Like Sara Lemmon, Brown is a mix of illustrator, scientist, and writer:

- Like Sara, Brown is a scientific illustrator, whose work has been included in many books and publications. Her first graduate degree was an interdisciplinary master's in biology and scientific illustration.
- Like Sara, Brown has worked as a scientist, doing ecological studies on bees and introduced honeyeaters in Australia, intertidal zone wolf spiders in Mexico, and the threatened Chiricahua Leopard Frog in Southern Arizona—experiences that have given her additional appreciation for Sara's field work.
- Like Sara, Brown has been a journalist, spending six years as staff writer/copy editor at a mid-size daily newspaper. Her second graduate degree was in journalism, and her thesis, "Literary Journalism in Medical Nonfiction," was published in the online journal *bylines* established by Jon Franklin, pioneer of creative nonfiction and author of *WRITING FOR STORY: Craft Secrets of Dramatic Nonfiction* (Plume/Penguin Press, 1994).

Brown is the author of two earlier books. *MORE THAN PETTICOATS: Remarkable Arizona Women* (Globe Pequot Press/Rowman & Littlefield, 2003, 2012) tells the story of the Grand Canyon State through the experiences of its pioneer women. It earned out its advance, went into a second printing, and in 2012 Globe Pequot Press released a second edition to commemorate Arizona's Centennial. It then was re-released by the publisher (now Rowman & Littlefield) in 2017, and according the latest royalty statement, that second edition has sold 1,300

copies. A third edition is planned for 2020.

Brown also wrote the award-winning THE FALCON GUIDE TO TRAIL RIDING ARIZONA: A Guide to Fifty of the State's Best Trail Rides (Globe Pequot Press, 2006). Each trail has its own story, and Sara Lemmon is the featured narrative in the Santa Catalina Mountains section.

Brown is also a poet, and she was the editor and designer for SPILLED: A Collection of the Dry River Poets (Casa Luna Press, 2011). Her poems have been published in *High Country News* (online), *Spiral Orb*, *Sandscript*, and elsewhere.

In addition to writing books, Brown runs a fulltime writing/editing/graphic design business. In 2016 she co-edited and designed the 283-page full-color guide book, CAVE CREEK CANYON: Revealing the Heart of Arizona's Chiricahua Mountains (EcoWear & Publishing, 2014), which won the Public Lands Alliance Publication of the Year and Association of Arizona Authors' Best Nonfiction Book of the Year. The first edition of 3,000 copies has sold out, and a second edition of 4,000 is currently being printed in China.

Her resume and more of her work can be seen at <http://www.wynnebrown.com/>.

On a more personal level, like Sara, Wynne Brown also moved alone to the West, leaving New York behind. Since then, she lived eight years in the Chiricahua Mountains, where Sara and John Lemmon spent a summer.

How appropriate that she now lives in Tucson—and within sight of Mount Lemmon.

The Market: Competing Titles, Audiences, and Sales Potential

RENDERING THE AMERICAN WEST is a work of narrative nonfiction that will appeal to a mix of readers. That blend includes those who enjoy popular science, biographies, Civil War journals, Western and women's history, and works about plants and art—and specifically about botanical illustration.

Popular science

Sales numbers and the best-seller lists for the past ten years show that popular science is indeed popular, even when excluding titles about medicine and health. Far from being intimidated, readers are happily buying and reading books about science, including Mary Roach's GRUNT: The Curious Science of Humans at War (W.W. Norton & Co., 2016); Sy Montgomery's SOUL OF AN OCTOPUS: A Surprising Exploration into the Wonder of Consciousness (Atria Paperbacks/Simon & Schuster, 2015); Naomi Klein's THIS CHANGES EVERYTHING: Capitalism vs. the Climate (Simon & Schuster, 2014); Elizabeth Kolbert's Pulitzer Prize-winning THE SIXTH EXTINCTION: An Unnatural History (Henry Holt and Co., 2014), and many, many others.

RENDERING THE AMERICAN WEST is a biography, and books that examine the lives of scientists or science writers are also popular. They include David Gessner's ALL THE WILD THAT REMAINS: Edward Abbey, Wallace Stegner, and the American West (W.W. Norton & Co., 2015) and Andrea Wulf's multiple award-winning THE INVENTION OF NATURE: Alexander Von Humboldt's New World, Knopf, 2015). Popular memoirs by science writers include Helen MacDonald's H IS FOR HAWK, Grove Press, 2015) and Sy

Montgomery's recent *HOW TO BE A GOOD CREATURE: A Memoir in Thirteen Animals* (Houghton Mifflin, 2018) among many others.

Although it's a blend of plant science and medicine, the list wouldn't be complete without Victoria Johnson's stunningly researched and engagingly written biography of Alexander Hamilton's personal physician, *AMERICAN EDEN: David Hosack, Botany, and Medicine in the Garden of the Early Republic* (Liveright/W.W. Norton, 2018).

"Hidden Figures"

Within the realm of women's history, *RENDERING THE AMERICAN WEST* falls into a new sub-genre one could call "Hidden Figures," a reference to the Oscar-nominated film of the same name about the forgotten black women who worked for NASA in the 1950s and '60s. Thanks to the movie, biographies in popular science about women who've been forgotten or neglected by the field have gained readership.

Quite a few of these books focus on groups of women; a partial list includes:

- Margo Lee Shetterly's *HIDDEN FIGURES: The American Dream and the Untold Story of the Black Women Mathematicians Who Helped Win the Space Race* (William Morrow, 2016)
- Lesley Poling-Kempes's *LADIES OF THE CANYON: A League of Extraordinary Women and Their Adventures in the American Southwest* (University of Arizona Press, 2015)
- Dava Sobel's *THE GLASS UNIVERSE: How the Ladies of the Harvard Observatory Took the Measure of the Stars* (Viking, 2016)
- Nathalia Holt's *RISE OF THE ROCKET GIRLS: The Women Who Propelled Us from Missiles to the Moon to Mars* (Little, Brown and Co., 2016)

- Amanda Adams' *LADIES OF THE FIELD: Early Women Archeologists and Their Search for Adventure* (Greystone Books, 2010) and
- Denise Kiernan's *THE GIRLS OF ATOMIC CITY: The Untold Story of the Women Who Helped Win World War II* (Touchstone/Simon & Schuster, 2013).

The “Hidden Figure” biography of a woman in science most similar to Sara Plummer Lemmon is Barbara R. Stein's *ON HER OWN TERMS: Annie Montague Alexander and the Rise of Science in the American West* (University of California Press, 2001). Deeply researched, well-written, and profusely illustrated with beautifully printed photographs, this book is a lively and accessible account of the woman who founded the Oakland-based Museum of Vertebrate Zoology. Annie Alexander was also a remarkable philanthropist who made it possible for many young women to work in science. Far from being competition, Stein's book is a natural companion, a kind of academic sequel to *RENDERING THE AMERICAN WEST*. Annie Alexander and her partner, Louise Kellogg, didn't quite overlap with the Lemmons: Their first expedition together, to Alaska to collect bird and mammal samples for the new Museum of Vertebrate Zoology, was in 1908, the same year John Lemmon died. But the science community of Berkeley and Oakland was small; although there's no mention of Sara or John in Stein's book, it seems likely that they all knew one another.

Other books about “hidden figures” include:

- Claire Brock's *THE COMET SWEEPER: Caroline Herschel's Astronomical Ambition* (Icon Books, March 2017) is the story of Britain's determined first female professional scientist in the late 1700s. Although Brock's book is a valuable addition to the genre,

Sara's story is likely to appeal to readers more eager to know about the American West and terrestrial science than astronomy.

- Glynis Ridley's *THE DISCOVERY OF JEANNE BARET: A Story of Science, the High Seas, and the First Woman to Circumnavigate the Globe* (Crown, 2010) is about the young French woman who, disguised as a man, accompanied botanist Philibert Commerson in 1766-69 on his round-the-world exploration. Reviewers complain that, through no fault of the author, this book is only thinly based on Baret's story since she didn't leave any journals. That's an objection unlikely to apply to *RENDERING THE AMERICAN WEST* since it is based on hundreds of Sara's letters. And, again, while Ridley's book would certainly appeal to the same readers, those curious about the American West a century later will also want to read *RENDERING THE AMERICAN WEST*.
- Kim Todd's *CHRYSALIS: Maria Sibylla Merian and the Secrets of Metamorphosis* (Houghton Mifflin, 2007): Solidly researched, thorough, and including frustratingly few illustrations, this book about a fascinating woman who was a leading entomologist in her time has much in common with *RENDERING THE AMERICAN WEST*—even though Maria Sibylla Merian was born nearly two hundred years before Sara. The two women shared the same courage and determination, and readers of either book are likely to enjoy both.
- Some recent books focus on individual women in the twentieth century who were involved in science—and then forgotten and/or deliberately neglected. A particularly relevant work is Jason Fagone's *THE WOMAN WHO SMASHED CODES: A True Story of Love, Spies, and the Unlikely Heroine Who Outwitted America's Enemies* (Dey Street Books,

2017). Just as Elizebeth Smith was smashing codes to defeat democracy's enemies, so did Sara flatten plants to defeat entropy and confusion in Nature's order. They were both trying to solve puzzles, and they were both unassuming, forgotten women who were (mostly) willing to remain in the background, unacknowledged as they protected their emotionally damaged and sometimes physically frail husbands—who then got all the credit for their work.

- Other books that fall into this category include Rebecca Skloot's *THE IMMORTAL LIFE OF HENRIETTA LACKS* (Crown/Penguin Random House, 2010); George Johnson's *MISS LEAVITT'S STARS: The Untold Story of the Woman Who Discovered How to Measure the Universe* (W.W. Norton, 2005); and George D. Morgan's biography of his mother, *ROCKET GIRL: The Story of Mary Sherman Morgan, America's First Female Rocket Scientist* (Prometheus Books, 2013).

Although they're not biographies, Sara Lemmon would be pleased to see that two books about botanical illustration have recently appeared on the market: Hans Walter Lack's *THE BAUERS: Joseph, Franz & Ferdinand: Masters of Botanical Illustration* (Prestel, 2015) and Wilfred Blunt and William T. Stearn's *THE ART OF BOTANICAL ILLUSTRATION* (Antique Collectors Club; revised and expanded edition, 2015).

In the last three years, two more books on botanical illustration have been released: Helen Bynum's (Compiler) *BOTANICAL SKETCHBOOKS* (Princeton Architectural Press, 2017) and Huw Lewis-Jones and Kari Herbert's *EXPLORERS' SKETCHBOOKS: The Art of Discovery & Adventure* (Chronicle Books, 2016).

Sales potential: Special-interest groups

- According to Bowker, 64 percent of book buyers in 2010 were female, and those numbers are unlikely to have changed significantly since then. Most likely, potential buyers of *RENDERING THE AMERICAN WEST* are older than fifty, college-educated, and possibly retired; more than half probably identify as female.

- This book could also be a logical and valuable in women's history/gender studies courses: Joan Korenman, of University of Maryland at Baltimore County, lists 900 such programs nationwide.

- Books about the Civil War are more than numerous: One estimate is 65,000. Many of these enthusiasts will enjoy *RENDERING THE AMERICAN WEST* since John Lemmon barely survived six months in the horrific Andersonville and Florence prisons, and his experiences there colored much of the Lemmon marriage. In one letter Sara described the new love of her life as “a poor Union Andersonville soldier—a physical wreck but he has a mind and a heart that will never die.” And in another she described his battle-scarred sword that hung proudly on the wall of their herbarium home. The book includes some of John's reminiscences that are not available elsewhere.

- Botanical illustrators are another group of potential buyers, some of whom are already interested in reading this book. According to its website, the American Society of Botanical Artists numbers over 1,000 members, and an Arizona-based subset of the group has applied for a Redd Foundation grant for an exhibit and catalog of Sara Lemmon's work, based on *RENDERING THE AMERICAN WEST*. Wynne Brown has been approached to be a keynote speaker at the national organization's convention in 2021—a potentially golden opportunity to

promote the book.

- It's actually remarkable that Sara lived to be eighty-six, given her health challenges, but even more so because of the treatments she “medicated” herself with: mustard plasters, syringing her ears with sweet oil and brandy, and St. Jacob’s Oil, in which the active ingredients were chloroform and turpentine, among many other “cures.” Many healthcare practitioners may find *RENDERING THE AMERICAN WEST* of interest because

- (a) Sara spent three years nursing wounded Civil War soldiers at Bellevue Hospital in New York City,

- (b) she established the first training school for nurses on the West Coast, and

- (c) she established the first Red Cross chapters in Oakland and San Francisco (quite likely because of her longtime friendship with Clara Barton).

- Brown is an alumna of The Beard School (now Morristown-Beard School), Skidmore College, University of Arizona, and University of Tennessee—all outlets willing to promote books by graduates.

Promotion / Funding

How will potential readers discover RENDERING THE AMERICAN WEST: *Sara Plummer Lemmon, 19th-Century Botanist and Artist*?

And is there any funding for this project?

Promotion: Email newsletter

Word is already getting out about this remarkable woman, thanks in part to a MailChimp electronic newsletter Brown established in 2018 about her research. The initial issue can be seen here: <http://mailchi.mp/fef663bdcdc9/introducing-sara-lemmon>. The newsletter now has 640+ subscribers. The January 2019 issue included an annual report informing subscribers about the progress of the project: [https://mailchi.mp/20bb70d2cdda/looking-back-at-last-year-and-forward-to-2019?e=\[UNIQID\]](https://mailchi.mp/20bb70d2cdda/looking-back-at-last-year-and-forward-to-2019?e=[UNIQID])

The open rate for the newsletter is usually around 52 percent, and every issue elicits personal responses from 8-10 percent of the subscribers. (Brown writes back to each of them.)

Promotion: Speaking events

A selection of 2015-2020 scheduled and recent speaking events includes:

- 2020: Brown has been contacted about being a keynote speaker for the American Society of Botanical Illustrators' national convention (no date set yet).
- Sept. 20, 2019: "Sara Plummer Lemmon: 19th-century Botanist and Artist," Arizona Native Plants Society, Sierra Vista, Ariz.
- Summer 2019: "Touching the Heart of the Santa Catalinas: Sara Lemmon, Intrepid

19th-Century Botanist and Artist,” talk to be scheduled at Summerhaven / Mount Lemmon Community Center.

- May 10, 2019: “Revealing Sara Lemmon, Intrepid 19th-Century Botanist and Illustrator,” Border Community Alliance, Tubac, Ariz.
- March 28, 2019: “Sara Plummer Lemmon: 19th-century Botanist and Artist,” University of Arizona Herbarium, Tucson, Ariz.
- Oct. 6, 2018: “Sara Plummer Lemmon: 19th-century Botanist and Artist,” Arizona Native Plants Society, Tucson.
- Aug. 28, 2018: “Revealing Sara Lemmon, Intrepid 19th-Century Botanist and Illustrator,” Adobe Corral of Westerners, Tucson.
- December 7, 2017: “Revealing Sara Lemmon, Intrepid 19th-Century Botanist and Illustrator,” Arizona History Museum, Tucson.
- April 15, 2017: Brown presented her research as “Botanizing Among the ‘Wild Beasts and Savages’: Sara and John Lemmon in Southern Arizona, 1881-1892” at the Arizona-New Mexico Joint History Convention in Flagstaff.
- 2015-2017: Brown did several presentations on Sara Lemmon to groups statewide, including the Western National Parks Association, Wings over Willcox, Sky Island Alliance, Friends of Cave Creek Canyon’s Heritage Days, and the Cochise County Historical Society.

Promotion: Media coverage and articles

- May 2019: Brown’s research on Sara Lemmon was featured in a 9.5-minute interview the week of May 30, 2019, on Arizona Public Media/NPR program, “Arizona Spotlight”:
<https://radio.azpm.org/p/radio-azspot-episodes/2019/5/29/152475-walking-in-the-footsteps-of-sara-plummer-lemmon/>
- April 2019: Brown’s invited blog post for Women You Should Know went live April 23, 2019:
<https://womenshouldknow.net/botanist-artist-nurse-teacher-sara-plummer-lemmons/>
- 2019 (in progress): Brown was invited to submit “Botanizing Among the ‘Wild Beasts and Savages’: Sara and John Lemmon in Southern Arizona, 1881-1892” to the *Journal of Arizona History*. (Article in progress.)
- March 8, 2018: “A Friendship Revealed – and Revived?”: Invited blog post for *The Bigger Picture*, Smithsonian Institution Archives, about the connection between Sara Lemmon and Adelia Gates.
- January 2018: “Climb Every Mountain,” Brown’s research on Sara Lemmon was featured in a radio drama written by Laura Markowitz, writer/NPR producer, and John Vornholt, screenwriter/author of many *Star Trek* novels. The work is part of the “Tales of Tucson” series and aired on KXCI-91.3 FM and is available online at <https://kxci.org/podcast/climb-every-mountain-original-radio-drama-of-the-sonoran-southwest/>
- September 27, 2017: *Arizona Highways* published “Botanizing in the ‘Wild Country’: Sara Lemmon’s Legacy in Southern Arizona” on the magazine’s blog:

<https://www.arizonahighways.com/blog/southwestern-legacy-sara-lemmon>

The magazine's circulation is about 200,000 and, according to Wikipedia, claims readers in all fifty states and two-thirds of the world's countries.

Wynne Brown has been a regular presenter, moderator, and/or panelist at many earlier events, including the Tucson Festival of Books (now the nation's third-largest book fair), an ideal venue for the book. Additional speaking events featuring Brown's earlier books include:

- Television interview (Arizona Public Media's "Arizona Illustrated")
- Radio interviews (Tucson's KXCI, 91.3 FM and "Voices of the West," KVOI AM, www.kvoi.com)
- Keynote speaker for Goshen College's "Telling Our Stories" event in Goshen, Indiana.
- Numerous presentations to local historical, natural history, and cultural clubs, and various book signings in Arizona and New Mexico.

Promotion: Memberships

Brown's national and regional memberships include:

- Society of Professional Journalists
- National Association of Science Writers
- Editorial Freelancers Association—Brown hosts the regular monthly meetings of the Southwest/Arizona chapter
- Women Writing the West
- Western Writers of America, and

- Arizona Professional Writers (formerly Arizona Press Women)

Brown is active on LinkedIn, Twitter, Facebook, and Instagram. She has also written about the Sara Lemmon project on her blog, [Just North of Paradise](#).

Being well aware that her skills lie in writing and research rather than public relations, Brown has already approached Lynn Wiese Sneyd, of LWS Literary Services in Tucson, Arizona, to advise her on promoting the book, once she has a contract.

Funding

Funding for the project is also underway. So far, Brown has received nearly \$13,000 in donations to support this project. The money has come from a mix of private foundations, historical societies, arts groups, natural history enthusiasts, and generous individuals. The most recent was a grant of \$1,000 from Money for Women/the Barbara Deming Memorial Fund.

The electronic “Sara Lemmon Project” newsletter’s 640+ subscribers are a good start toward building the list of potential donors—and, in fact, the very first issue elicited an unsolicited donation of \$250.

In addition, the director and staff of the Mount Lemmon Sky School are very interested in this book and have offered to host the book launch at their facility on the top of Mount Lemmon. (Some staff members swear Sara haunts the premises as a benevolent spirit, and they’ve named the female dormitory “Sara’s Room.”) The director has also indicated that the UA College of Science would be very supportive of the book and might use it as part of the Sky School’s instructional materials.

Specifications and delivery

(a) Length

The first draft is about 70 percent complete at 57,000 words. Brown estimates that at completion the manuscript will be 80,000–85,000 words, including notes and bibliography.

(b) Delivery

Brown estimates that she would be able to deliver the completed manuscript within four months of receiving a contract.

(c) Number and type of illustrations

- The book will be illustrated with roughly twenty black and white photographs, several line illustrations, and three maps.
- Ideally, twenty reproductions of Sara’s watercolors would be printed in color in a gallery section in the center of the book. Given the prohibitive cost of color printing, another option might be to link to a website where readers could see the full-color versions. Brown is also aware of the possible need for a subvention to cover the cost of color printing for both a first edition and any subsequent reprinted editions.
- Brown has already acquired permission from the University of California and Jepson Herbaria legal department to reproduce any of the high-resolution photographs she has taken of all of Sara Lemmon’s letters and artwork, as long as the caption includes the specific language, “Photograph by Wynne Brown. Originals at the University of California and Jepson Herbaria.”

Annotated Proposed Table of Contents for

RENDERING THE AMERICAN WEST

Sara Plummer Lemmon, 19th-Century Botanist and Artist

[Frontispiece: Map of the United States, with an inset photo of Sara in her twenties, showing New Gloucester, Maine; Dover, Mass.; New York City; St Augustine, Fla.; her 1870 route through Panama; San Francisco, Oakland, Santa Barbara, Sierra Valley, Calif.; Tucson; New Orleans]

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Acknowledgments

Preface

This section introduces Sara Plummer Lemmon to readers and explains why author Wynne Brown believes Sara's story is important for our times. Any work of literary journalism requires immersion, and Brown provides the project's backstory as she describes her six-year journey into Sara's life. In addition nationwide trips to numerous libraries and museums, including the Smithsonian Archives, she traveled to the University of California and Jepson Herbaria Archives three times. There she photographed 1,200 pages of Sara's beautiful but difficult-to-decipher handwritten letters and then spent the next two years reading and transcribing them.

Although Sara’s life ended tragically, *RENDERING THE AMERICAN WEST* leaves readers with a hope-filled vision for the legacy of this remarkable woman. Brown presents evidence for her theory that most of Sara’s artworks were lost in the fires that followed the 1906 San Francisco earthquake. Fortunately, two boxes of her watercolors were stored in a basement in Hawaii, and readers share in the excitement of re-discovering those works. Because of the extensive mold and insect damage, the works are far too fragile and damaged to ever travel. Brown was able to round up enough donations to fund a conservator’s time to assess what needs to be done to preserve the works from further degradation, and readers get to share a piece of that journey.

So far, short of visiting the archives, this book is the only window through which to view Sara’s exquisite and fragile work.

Prologue — (New York Harbor, December, 1869)

The book opens *in medias res* with Sara on the deck of the SS *Alaska* in New York Harbor, bound for California, leaving behind everything and everyone she’s ever known. This section briefly describes her early years and education in New England and touches on her move to the bustle of New York City to attend the Cooper Union for the Advancement of Science while teaching art and calisthenics. In her “spare” time, Sara nursed wounded Civil War soldiers in Manhattan’s Bellevue Hospital—fortuitous preparation indeed, for, decades later, she would marry a traumatized survivor of the hellacious Andersonville Prison. That she even chose to work in a hospital is ironic since Sara had her own terrible health and frequent lung ailments. Those numerous illnesses, including her near-death from measles, are part of what eventually drives her to relocate to California.

Readers also see how close “Sadie” is to her brothers Charles, Osgood, and Seth, but even more so to her father, Micajah Plummer, and her sister, Mattie. For most of her life, Sara will continue to write home nearly every Sunday afternoon.

A year later, in 1870, she writes “My dear Sister Mattie” from California about how forlorn she felt on the *Alaska*, how hard the past year has been, how homesick she still is.

But, ever-resilient, she writes, “I have good courage and hope, feel very well, have many friends here.”

Chapter 1 — “Now I am at the jumping off place” (San Francisco, 1870)

Fig. 1-1. Sara Allen Plummer in her late 20s, a decade before she left New York for California.

Having wrenched herself away from the East Coast, Sara sets up a temporary home base in San Francisco. She explores the surrounding “rich land, valued at \$100 per acre,” including early Vallejo, Santa Clara, San Jose, and Oakland—and decides that if she were a man, she’d go into raising California livestock. In many ways, Sara is her father’s daughter: Her interest in agriculture isn’t surprising, given that Micajah was a farmer. This chapter provides some background about her family.

Fig. 1-2. Sara’s February 13, 1870, letter to Mattie.

Thanks to her outgoing personality and her New York connections, she makes important contacts, including the internationally famous Norwegian virtuoso musician and composer Ole Bull.

Even in just the first month of being in California, Sara begins developing friendships that will benefit her for the rest of her life—as the reader gains a vivid picture of life in Northern California in 1870.

Her health, already fragile, declines in the Bay Area’s fogs and chill, and she decides to head south in search of a kinder climate.

Chapter 2 — “Perhaps you’ve heard our Sadie was killed” (*Santa Barbara, 1870*)

Santa Barbara’s weather agrees with Sara’s fragile respiratory system, and she settles there. She makes friends, takes the lead in forming a local natural history society, and learns the local plants by drawing them. Readers gather a deeper knowledge about her early education and art background, as well as seeing her views of 1870s Santa Barbara soon after the first telegraph message arrived.

Fig. 2-1. Earliest surviving painting of Sara’s, signed and dated.

Fig. 2-2. The book of algae Sara makes and sends to Seth, her younger brother.

Soon after her arrival, Sara is “adopted” by former New Englanders Colonel Bradbury Dinsmore and his family in Montecito (now the home of Oprah Winfrey, Ellen Degeneres, and others).

She mentions meeting an appealing young man (“a cherished acquaintance”), which leads to a flashback about her deep friendship with her divorced older cousin, Llewellyn Solomon Haskell, founder of the Llewellyn Park community that still remains in Orange, N.J. Was the relationship with Cousin Llew one of the factors that drove Sara to leave the East Coast? We’ll

probably never know.

Within a few months, she has a terrible fall from a carriage, and the nation's newspapers carry a report of her death "at a young and promising age"—to the consternation of many, especially Cousin Llew. Fortunately, the Dinsmores nurse her through her slow recuperation. The accident leaves her mostly deaf for weeks, which gives her time to think about her new life, as well as reason to fret over her new hometown's lack of a library.

Chapter 3 — "It is like Death to me to be idle" (*Santa Barbara, 1870*)

By the end of 1870, Sara is mostly recovered from the accident—and restless. She writes Mattie, "As you know, it's like Death to me to be idle."

She's also short of money. So "Miss S. A. Plummer" establishes a small lending library in the back room of the stationery store where she also sells "drawing apparatus, paints, crayons, and other items of use and ornament, too numerous to mention."

Fig. 3-1. Announcement of the new library and stationery store.

This chapter describes her community, her lodgings, and the new library, including her request for a textbook by the world-famous botanist Dr. Asa Gray. Little does she know that Dr. Gray will play a large role in her later life.

Fig. 3-2. Stereograph of Miss Sara Plummer in the new library and stationery store.

By the end of 1873, Santa Barbara has become so popular that housing is unaffordable for either the town's new library or its custodian. In response, Sara wangles a way to buy and renovate a small building that will house both her and the library.

Fig. 3-3. Sara's January 27, 1873, letter showing her sketch of the future library building/living quarters and the needed construction.

Two and a half years after her arrival in California, Sara finally gets to see a familiar face from her past: Cousin Llewellyn Haskell travels from New York to Santa Barbara to visit her. But within a month he falls ill with no one but Sara to care for him. Despite all her best nursing efforts, he dies.

Devastated, she writes Mattie, “Alone is the word for me.”

In 1875, she herself nearly dies from pleurisy. The pain is so severe that the doctor is required to inject morphine into her side—four times.

While convalescing, Sara reflects how much she relished the culture and stimulation of New York City. Through a flashback, readers watch as she attended frequent concerts and art openings and hung out with progressives like Clara Barton and Fanny Gage, along with the poets Alice and Phoebe Carey. (Sara was even among those who filed by Abraham Lincoln’s casket in 1865.)

Once recovered, she sets up a salon in the stationery store to bring in lecturers. Most notably, the new salon attracts a renowned Western botanist named John Gill Lemmon.

Fig. 3-4. John Gill Lemmon, in 1874, shortly before meeting Sara.

Chapter 4 — “A great botanist from the Sierras” (*Michigan; the Civil War; California, 1832-1876*)

Early in the 1860s, John Gill Lemmon, a Michigan-born school superintendent by trade and botanist by inclination, had joined the Union army.

Fig. 4-1. Young “JG” Lemmon.

After eleven battles, he was captured by the Confederates and eventually released in 1865 from the notorious Andersonville, S.C., prison where he had been held for months. He was so weak and emaciated that his mother, Amila Lemmon, arranged to move him to his brother’s house in Sierra Valley in northern California, to either recuperate or die. She was so concerned she moved there as well.

Fig. 4-2. Civil War image showing JG Lemmon and his engagements, prison terms.

Fig. 4-3. JG Lemmon’s November 22, 1864, letter to his family from Florence Prison.

John had always been interested in natural history, and while convalescing outside, he noticed an unusual five-leaf clover. He sent it, along with a few other unusual-looking plants, to a local botanist, who in turn mailed the specimens on to Dr. Asa Gray, Harvard University’s botanist. Dr. Gray confirmed the clover and several others as new species—and urged John to go look for more.

*Fig. 4-4. Photo: Sara’s watercolor of *Trifolia lemmonii*, the five-leaf clover.*

Thus began John Lemmon’s new career and exploration of the West, despite what are clearly symptoms of PTSD from his horrific prison experiences.

Fig. 4-5. JG Lemmon, after the Civil War.

To provide some context to Sara and John’s botanical work, this chapter also describes the plant frenzy that had swept both America and the rest of the world in the 1880s: People of all ages spent all their free time outside, enthusiastically ripping up ferns, mosses, and flowers, climbing trees to yank down pine cones—and then sending samples to local botanists, or further

afield to Dr. Gray.

Fig. 4-6. Illustration: The eleven noted botanists, including Asa Gray and John Muir, who were all in communication with Sara and John during the 1880s.

In March 1876, John Lemmon and Sara Plummer meet, most likely at a lecture at her library, and soon become “botanical comrades.”

Chapter 5 — “My dear, soul-knit brother” (Santa Barbara, Sierra Valley, 1876-1878)

Within several months, John is smitten with Sara, and he names a newly discovered sage scrub (*Baccharis plummerae*) in her honor.

The many touching letters between Sara and John reveal a friendship that blossoms slowly over several years into a deep love as they move from sharing the details of various plants to devising pet names for one another: She refers to him as “Lemmonia” (his botanical name), and he calls her “Amabilis,” for the stately Silver Fir tree that first ignited his love of botany. The word also means “loving” in Latin.

Fig. 5-1. John Lemmon’s photo of Abies amabilis, the stately Silver Fir, the basis for his nickname for Sara.

Their relationship deepens through their frequent letters despite the distance between Sierra Valley and Santa Barbara. And despite the terrible health problems that afflict them both, they manage to persevere in their beloved science.

Thanks to Sara’s determination and gracious social skills, John is able to spend a day in the field escorting the internationally famous botanists, Dr. Gray and Sir Joseph Dalton Hooker, in

the Sierras.

The Amabilis/Lemmonia relationship continues to blossom, and in 1877, John finally works up the courage to propose to Sara. After a sleepless night, she writes a heart-wrenching letter rejecting him, saying that two people in such chronically poor health should never marry.

Fig. 5-2. One page of Sara's December 17, 1877, letter to John, rejecting his marriage proposal.

Chapter 6 — “Into the matrimonial vortex!” (Santa Barbara, Oakland, 1880-1881)

Sara and John resign themselves to a long-distance botanical comradeship.

In 1878, she is the second female scientist to join the august California Academy of Sciences. A year later, she accepts John's invitation to join him—with, of course, Amila as chaperone—on a field trip from Sierra Valley to Pyramid Lake, Nevada. The month-long journey is rugged, blazing hot, and uncomfortable—and Sara loves every minute of it.

In early 1880, she's unable to find any work and is near despair. She's then slammed by a bout of spinal meningitis that nearly kills her. John's away collecting plants in southern Arizona Territory, but Sara refuses to allow anyone to notify him that she's deathly ill because she doesn't want him to worry or take precious time away from botanizing. Fortunately, he had become pen pals with Mattie—who tattles to him about Sara being so sick.

Fig. 6-1. Mattie Plummer Everett, around 1880.

He abandons the field work and races back to California.

We'll probably never know what finally changes Sara's mind about marriage—but on Thanksgiving Day, 1880, Miss Sara Allen Plummer becomes Mrs. J.G. Lemmon.

By this time, John, along with Amila, has relocated to Oakland and established a new herbarium. Sara moves in with them.

Figs. 6-2, 6-3. Sara and John at the time of their marriage.

Chapter 7 — “Try to touch the heart of Santa Catalina” (*Southern Arizona, Spring 1881*)

“Sara Plummer Lemmon” soon becomes a name known among prominent botanists. In April 1881, on Sara's suggestion, the newlyweds (minus Amila) travel to Tucson to spend their honeymoon botanizing in the rugged, unexplored Santa Catalina Mountains.

Fig. 7-1. Aerial photograph showing Mount Lemmon and the rugged topography of the Santa Catalina Mountains.

After three attempts to reach the peak from the south-facing side of the range, they're forced to give up. On the advice of locals, they travel to Oracle on the north side of the mountains.

Fig. 7-2. April 26, 1881, postcard Sara sends her family from Oracle Camp.

With help from local rancher Emerson O. Stratton, they make it to the top of the highest peak, and the two men decide to name it Mount Lemmon—for Sara, honoring her as the first white woman to reach the pinnacle.

Fig. 7-3. MAP 1: The Arizona Territory in the 1880s, showing the Santa Catalina, Chiricahua, and Huachuca mountains, and the Grand Canyon where Sara and John will be

botanizing for the next couple of years.

The couple then moves on to explore other areas of southeastern Arizona, including the Chiricahua Mountains, in the hottest part of summer. They stay at Fort Bowie where they're protected from the still-active Apaches, and John discovers a new species of wild potato, a discovery that convinces them they need to return later that year once the monsoon rains have started.

Sara's first scientific paper, a booklet titled "Ferns of the Pacific Coast," is published.

Chapter 8 — "An extreme outpost of civilized life" (*Southern Arizona, Fall 1881*)

The newlyweds return to Oakland and their busy schedule of sending out plants and teaching botany classes. Sara conquers public speaking and continues to illustrate the new species they've discovered. They travel to the 1881 Chatauqua Literary and Scientific Circle, the first in California, and both present talks to enthusiastic audiences.

In August Sara and John return to southern Arizona after the cooling summer rains, where they can "study and botanize the region to our hearts' content" under the protection of Fort Bowie.

They've arrived a month after the Battle of Cibecue Creek in which the American military forces had killed an Apache chief not far from the fort. Led by Juh, Naiche, and Geronimo, a band of Apaches bolts from the Fort Apache reservation and heads south—directly toward where Sara and John are camped.

This chapter explores the history of the Apaches in southern Arizona and attempts to take a

balanced approach to the sensitive and problematic collision of science and colonialism. Sara, like many of the white settlers, is both intrigued and terrified by the Indians, and her letters describe them in language considered extreme and politically incorrect these days. (That universal fear of “others” is not unlike contemporary attitudes and events in parts of southern Arizona, 138 years later.)

Chapter 9 — “Eleven days of dungeon life” (*Southern Arizona, Fall 1881*)

Despite the “Indian troubles,” the couple collects many new species, including a tall handsome daisy-like flower that Sara finds. Little does she know that it will turn out to be, not just a new species, but a new genus. She is as much a scientist as John—and in addition she’s doing scientifically accurate paintings of the new species, most of which, tragically, have been lost.

Fig. 9-1. Field collection notes in Sara’s handwriting.

Fig. 9-2. Sara’s painting of Red Alum-root, Henchera sp., “Mts of Arizona.”

After a few weeks at Fort Bowie, they shift their camp—by mule-drawn military ambulance—to the abandoned old Fort Rucker post forty miles away. “Doctor” Monroe, a seemingly eccentric local miner/hermit, invites them to stay in his very primitive cabin instead of camping.

Fig. 9-3. MAP 2: Fort Bowie, Camp Rucker, and Apache Pass.

Their visit proceeds serenely until another band of Apaches escapes from the San Carlos reservation. Sara and John then spend a harrowing eleven days hiding out in a mine tunnel,

accompanied by the now obviously sociopathic Monroe.

Fig. 9-4. Sketch of the 250-foot tunnel where Sara and John stay for eleven days with “Doctor” Monroe, based on John’s description.

The U.S. Cavalry eventually arrives, to Sara and John’s enormous relief, and the couple is transported back to Fort Bowie.

When they return to Oakland in late fall, they learn that Dr. Asa Gray has honored Sara by naming the new daisy-like plant *Plummera floribunda* for her, using her maiden name. She’s so delighted she dances around the herbarium with such enthusiasm she tips over the chairs.

Chapter 10 — “happy in our work & in each other” (*Oakland, 1881-1882*)

To complicate their Chiricahua adventure still further, Sara had fallen through a hole in Fort Bowie’s commissary floor, severely injuring her leg. But once back in Oakland, she’s able to enjoy and describe all their visits with their good friends, John Muir, Charles Parry, and Edward Greene.

Another significant meeting occurs when Adelia Gates (a decorative flower painter whose work is now a part of the Smithsonian Institute Archives) arrives at their front door. Adelia, Sara, and John arrange a trade of Sara and John’s botanical knowledge for Adelia’s help in finishing a backlog of Sara’s illustrations.

Fig. 10-1. Photograph comparing Adelia Gates’ painting with the one Sara does as an assignment “after Adelia Gates.”

Botany has continued to be a popular national and global pastime, and by now Sara and

John are an accomplished and sought-after speaking team. The microscope that was given to Sara as a farewell gift from New York’s Bellevue Hospital comes in handy for their classes.

Fig. 10-2. Sara’s undated pen-and-ink illustrations from the microscope.

Charles Crocker, the railroad magnate, donates \$20,000 to the California Academy of Sciences and—better yet—he presents Sara and John with railroad passes for the following season. This gift provides the financial means for them to return to Arizona, where Sara will create most of the only paintings that have survived.

She is saddened by the deaths of Ralph Waldo Emerson, Henry Wadsworth Longfellow, and Darwin, all within a few weeks of one another, and comments in her weekly letter home, “The brilliant lights seem to be going out...”

Chapter 11 — “Rushing reckless life of a true mining town” (*Southern Arizona, Summer 1882*)

After a winter of the whole household battling yet more illnesses, in May 1882, Sara and John take the train back to Tucson, now a thriving town with a brand-new brick courthouse and alight with gas lamps.

Fig. 11-1. John’s photograph of Sara, sitting cross-legged on the ground under a parasol, preparing to paint the four-foot high Ajo Lily.

They spend two days in racy Tombstone, touring the mines while lodging at the Grand Hotel—which would burn to the ground within a couple of weeks of their stay.

By then, they’ve moved on to the protection of Fort Huachuca in the Huachuca Mountains (near present-day Sierra Vista in Cochise County) since the Apaches are still a worry. Readers

get a brief glimpse into the history of Arizona Territory’s military forts, particularly Camp Huachuca, which transitioned from a simple military camp to an official fort during Sara and John’s stay.

The botanists get tentative permission to camp within shouting distance from the fort, where Sara’s able to both collect and illustrate the species they find.

*Fig. 11-2. Sara’s signed and dated painting of Yellow Columbine, *Aquilegia chrysanthea*.*

Chapter 12 — “A Botanic Paradise” (Southern Arizona, Summer/Fall 1882)

The couple quickly realizes they’ve landed in an area resplendent with botanical riches and resolve to remain there for the rest of the summer and into fall. They’re especially pleased to find new species of ferns since “Fern Mania” has taken over the nation. Sara writes home about the people who visit their camp (including Apache scouts), the forty new plant species they discover, a huge cavern they explore, and the two baby turkeys she adopts.

Fig. 12-1. U.S. Army photograph of Apache scouts, some of whom may be among those described by Sara.

Fig. 12-2. Sara’s painting of Coral Bells and Cotton Fern, painted in the Huachucas during this 1882 trip.

With the Battle of Big Dry Wash between the U.S. Cavalry and the White Mountain Apaches taking place July 17, Fort Huachuca’s captain insists the couple remain close by. They do however make various forays, including one to the verdant San Rafael Valley.

Despite the inconveniences of camping and the adventures of flooded rivers, which she

describes in richly detailed letters to Mattie and Father, Sara makes many new paintings. (Dozens of these were revealed for the first time in more than a century at the UC & Jepson Herbaria archives in January 2017).

Figs. 12-3 through 12-6. Photographs of four of Sara's paintings from this trip.

Chapter 13 — “Considered by less ambitious a fine season’s work” (*Southern Arizona, 1882-1883*)

In October Sara and John board the train and return to Oakland, where with Amila’s help, they’re forced to pack up and move the entire herbarium to more economical lodgings—despite all three members of the family being sick for months. In fact, John is so gravely ill that Sara confides in her sister that “I must turn more and more to the deep study of botany. The time may not be far distant where I shall have to move on alone.”

John writes Asa Gray that, according to his physician, he is “not long for this world.” He also mentions the twenty-five paintings that Sara did in the Huachucas and that they’ll be giving at least several full-sized framed paintings to the California Academy of Sciences—which will eventually be gutted by fire in 1906.

Sara too is battling health woes, which she diagnoses as gallstones, and treats with Sedlitz powders. It’s a wonder that she’s survived the “medicines” of the day thus far; this chapter explores some of those “cures,” in addition to flashing back to the medical world she was a part of in New York City.

Yet, despite all the illnesses, by midsummer 1883 Sara and John have both recovered enough to return to Arizona Territory’s Santa Catalina Mountains where they spend three weeks

botanizing. Their intention is to return to the Huachucas for another extended stay, but they're forced back to Oakland by poisoned well water and an outbreak of yellow fever.

Fig. 13-1. Sara's signed and dated watercolor of Ipomea coccinea, Red Morning Glory, painted in the Huachucas during this 1883 trip.

By now twelve different plants have been named for Sara, but she feels the need to write a gently admonishing letter to Asa Gray pointing out that her work should be credited the same as male collectors.

Throughout the winter, they continue teaching and doing presentations about their Arizona adventures. Sara also begins researching the idea of homesteading a ranch, a property that would finally and for always be their own.

Chapter 14—“Lives cast in pleasant places” (*Northern Arizona and New Mexico, 1883-1884*)

The following year the couple focuses their collecting efforts in Northern Arizona and explore the Acoma Pueblo, the Hualapai Reservation near Peach Springs, and Flagstaff. Sara's letters describe their interactions with the Hualapai Indians. They then move on to Albuquerque, at the time only three years old.

John writes of the “dozens of excellent watercolor paintings” done by Sara; some are for the Territorial Fair where Sara's work wins a First Prize, an award of \$15, and a silver medal.

Within a month of returning home, they're on the road again: to the World's Industrial and Cotton Centennial Exposition in New Orleans—otherwise known as the World's Fair.

Fig. 14-1. Poster of the World's Fair.

In a letter to Sir John Hooker, John says they are bringing 100 watercolor paintings by Sara and will be New Orleans for seven months.

Chapter 15 — “Greatest Display the World Has Ever Seen!” (*New Orleans, 1884-1885*)

Sara had been elected Vice President of the Pacific Slope for the Women’s Department for the Exposition and was then appointed Commissioner for California for the Dept. of Women—which meant she was responsible for overseeing 18,000 exhibits.

She and John spend a busy and lively seven months in New Orleans and get to know Clara Barton and her field agent, Dr. Julian Hubbell. Sara describes having her own private office and how the food is so expensive on the fairgrounds, the only thing they buy is popcorn.

After the immense amount of work packing up the Exposition displays, Sara and John head north, stopping to visit the Andersonville and Florence prisons where John was held captive. Eventually they arrive in New England where they work with Drs. Asa Gray and Sereno Watson at the Harvard Herbarium and then travel on to Dover where Sara can finally introduce her family to her husband of four years.

They have a delightful time with Mattie and Father, especially the evenings spent singing “Yankee Doodle Dandy” accompanied by John on the little silver flute he managed to keep with him throughout the war and his imprisonment. (Osgood, Sara’s older brother, on the other hand, writes a cross and disapproving letter to Mattie about how “poor and plucky” Sara and John’s botanical enterprise is “perfect nonsense.”)

Sadly, their warm and loving visit in Dover is cut short by word that Amila Lemmon is

dying. They bolt for the West Coast, hoping they can make it back to Oakland in time.

Chapter 16 — “Our hillock at Cholame” (*Near San Luis Obispo, 1885-1886*)

Despite their best efforts, “Little Mother” has already been buried by the time Sara and John get home. John is appointed Commissioner of Forestry, which is accompanied by the first steady income they’ve seen. (The World’s Fair was so poorly managed and lost so much money the exhibitors feel fortunate if they receive half of what they were promised.)

They return to the Pacific Grove Retreat where Sara gives several talks on both botany and ethnology before they head to Santa Cruz so that she can paint a Mariposa Lily.

Fig. 16-1. Photograph of what’s left of Sara’s painting of California Pink Poppy, California Yellow Poppy, and Mariposa Lily—after massive insect damage.

Sara and John are both active in the G.A.R. (Grand Army of the Republic) and after the annual Encampment, they spend two weeks near Webber Lake with Clara Barton and Julian Hubbell. No cabins are available, so the group camps the entire time, reveling in the open sky, stories, songs, and recitals around the fire.

Sara writes of sketching the different species of evergreens so intensely she’s given herself a stiff neck and headache.

Fig. 16-2. Sugar Fir watercolor painted and signed by Sara.

Fig. 16-3. One of Sara’s pen-and-ink pine illustrations.

She also writes of doing the “luster painting” for the white satin dress worn by Alice Kingsbury Cooley in the production of the play “Hunchback.”

In their continuing effort to invest so that there's some money for their old age and growing infirmities, they homestead 160 acres near San Luis Obispo. At last this aging couple will have their very own house. They're just beginning to build a cabin, and construction seems to be progressing smoothly—until their tent burns under mysterious circumstances, with all their valuables.

The biggest heartbreak is finding the melted remains of John's little silver flute.

Fig. 16-4. Sara's partially burned February 28, 1887, letter to Mattie, describing their efforts to build a cabin.

Chapter 17 — “A certain flexibility of spirit” (Oakland and Mexico, 1886-1889)

With exhausting effort, along with some financial help from the still-disapproving Osgood, Sara and John finish the cabin at Cholame. They now own the “ranch” and are hoping to ride the California real estate train to riches—someday.

Back in Oakland, they move the Herbarium yet again, this time to a “sky parlor,” the top of the tower in the Medical College of the Snell Seminary, despite the struggle both have with the three flights of stairs.

Fig. 17-1. Illustration of Snell Seminary.

In May 1888 they travel south 500 miles and are triumphantly successful in finding *Pinus parryi* in Baja California, an important addition to their massive 100-page *Forestry Report on the Pines of the Pacific Slopes* published in November 1888. Sara's article in the *San Diego Bee* describes the trip, and the journey eases some of the grief they feel with the deaths of both Asa

Gray and Father.

Fig. 17-2. Sara’s illustration of Parry’s Nut Pine.

Fig. 17-3. Photograph of Parry’s Nut Pine with their driver for scale, as described by Sara in an article for the San Diego Bee.

The Legislature informs them the appropriated funding for their salary is now gone. Sara spends time in Sacramento meeting “Senators, assemblymen & their wives, lobbyists and all sort of peculiar people” and is vindicated when both houses agree to pay her claim for \$1,000 for the Exposition work: \$25,408 in 2017 dollars!

Actually receiving the money proves to be more difficult.

Chapter 18 — “The narrowest escape from instant death” (*Oakland, 1889-1892*)

Life settles down, and John and Sara spend the growing seasons out in the field collecting. Once cold weather hits each year, they shift to indoor activities in their Oakland home and herbarium, spending their time working hard on various books, describing new species, and trying to support themselves by selling specimens. That challenge becomes even harder as the promised funds from the Forestry Board prove elusive.

Sara also writes “Marine Algae of the Western Shore”—which seems to have either been lost or never finished.

By 1890 Sara is fifty-four years old, and all seems to be going reasonably well—until she has a terrible fall down a flight of concrete steps. She’s nursed by her friend and sees firsthand how ill-prepared most professional nurses are. Once recovered, she solicits—and receives!—

funding from wealthy San Francisco residents and friends to establish the first training school for nurses on the West Coast. This section provides some background on the horrific conditions of the hospitals of the time, in which patients took turns nursing one another and helped themselves to whatever “medications” happened to be on one another’s bedside tables.

Fig. 18-1. Page from Fall 1891 issue of Nurse World, describing Sara’s establishment of the Training School for Nurses.

It is still like death to Sara to be idle: She’s an auditor and one of the directors for the Pacific Coast Women’s Press Association, belongs to both the California Press Women and the Women’s Temperance Union, is heavily involved with the suffrage movement, helps establish the Red Cross chapters in Oakland and San Francisco, and begins the campaign to make the Golden Poppy the California state flower.

In spring and early summer of 1892, she and John re-visit southern Arizona’s Chiricahua Mountains and Fort Rucker, gathering notes for “a forthcoming book to be fully illustrated.” Both are amazed they could have lasted in the miner’s tunnel for eleven days.

Fig. 18-2. Photo: Photograph of the mine tunnel today.

As they’re being driven from Camp Rucker back to Fort Bowie, their wagon is stopped by none other than the Apache Kid. Amazingly, perhaps because they are unarmed, he lets them go on their way.

In fall they make a second trip, this time to Northern Arizona, including Flagstaff and the Grand Canyon, and then on to revisit Albuquerque.

Chapter 19 — “Sell everything and move to California!” (*Oakland, 1893-1900*)

In the summer of 1893, the couple travels to Chicago for the World’s Fair. Although they’d planned to both go to New York to see about publication of the “big book,” (*Handbook of West-American Cone-bearers*), John catches pneumonia and retreats alone to Oakland in October. Sara continues on to Dover to visit Mattie and returns home to John in time for the New Year.

John and Sara, although chronically short of money (partly because of their land investments), are content. Their life revolves around one another and their friends, who include poet Ina Coolbrith and Yosemite promoter James Hutchings. They still do collecting trips to the Sierras and elsewhere in the West, sometimes accompanied by John Muir and Clara Barton, and are hard at work on the *Handbook*.

Fig. 19-1. Photograph of Mattie, dated 1894.

Fig. 19-2. Photograph of Sara and Mattie in Yosemite, no date.

In 1894 Sara strains her eyes doing five detailed illustrations for the *Revised Third Reader*, published the following year by the California State Board of Education—for which she’s paid \$30.

Fig. 19-3. One of Sara’s pen-and-ink illustrations for the Revised Third Reader.

She’s also working hard on a history of the Red Cross, and she and John are both focusing their efforts on forest conservation. In addition, she gives a botany talk to the Women’s Congress at the Golden Gate Hall, which is “packed with people.”

In 1895 they travel to Mexico, and the *Handbook of West-American Cone-Bearers* is published. At the end of the year, they move to what will be the final home of the Lemmon

Herbarium—after camping in the backyard while waiting for the house to be finished.

Fig. 19-4. The Lemmon Herbarium, showing their workspace.

In the fall of 1898 Sara takes a trip to Los Angeles, and John writes her: “I hope to find a letter from my best friend, one who shares every waking thought as well as my dreams.”

Chapter 20 — “Wish we were out in the wild woods” (*Oakland and Arizona, 1900-1903*)

In early 1900, young Mattie’s twin infant sons, Sara’s great-nephews, die within a week of one another, most likely of “milk fever.”

The following year, Sara has an emergency appendectomy, and while convalescing she works on her book, *A Record of the Red Cross Work on the Pacific Slope: Including California, Nevada, Oregon, Washington, and Idaho with their Auxiliaries*, which includes personal reminiscences of Clara Barton and is published in 1904.

Fig. 20-1. Front cover of Sara’s book.

But before then, in March 1903, the Golden Poppy finally becomes California’s official state flower. In recognition of her ten-year efforts of being “the one largely responsible,” Sara is awarded the Bald Eagle quill-feather pen used by the governor to sign the bill.

The fourth edition of the *Handbook of West-American Cone-bearers* is published, and it includes five black-and-white reproductions of Sara’s watercolors, as well as the full text of her article in the *San Diego Bee* about their trip to Baja to find Parry’s Pinyon.

Fig. 20-4. Sara’s signed painting of Silver Fir from book.

John's book, *How to Tell the Trees*, is published—and copyrighted in Sara's name—and includes a section by Sara on the vital importance of forest conservation.

Although Mattie and George still refuse to move to California, despite Sara's pleas, their son Charley does relocate to Oakland, where he'll become an immense help to Sara and John.

Chapter 21 — “We are busy every hour” (*Oakland and Arizona, 1904-1905*)

Mattie's husband, George Everett, dies in May 1904.

Sara and John return to Arizona in 1905 and, astoundingly, given their chronic frailness and age (she is sixty-nine, he's seventy-three), they hike and ride to the peak now named Mount Lemmon in celebration of their twenty-fifth wedding anniversary. They then travel to Mexico and spend time in Guadalajara, Mexico City, and Jalisco.

Fig. 21-1. Sara's postcard to Mattie describing their Silver Wedding Anniversary trip up to Mount Lemmon.

Within the next couple of years, John's health, which has never been good, begins to falter even more. Sara does most of his work, leading some botanical experts to suspect she'd been doing much of the work attributed to him all along.

Chapter 22 — “Safe – tho' terribly shaken” (*San Francisco, Oakland, April 1906*)

In March 1906, John's article on “Matchless Forest Endowment” appears in *Out West* magazine, next to a poem by Sharlot Hall.

Fig. 22-1. Photograph of John and Sara from Out West magazine.

The very next month, on April 18, at 5:12 a.m., the San Francisco Earthquake hits. “It is terribly, horrible,” she writes to her sister. “We are busy every minute caring for the distressed ones.”

Within a day, fires devastate the city, consuming the California Academy of Sciences, where so many of Sara’s paintings and their specimens are housed.

Fig. 22-2. Photograph of Sara’s April 1906 postcard to Mattie describing the earthquake.

Although she never complains in her letters, Sara and John are both shattered by the loss.

Chapter 23 — “I feel so helpless and alone ...” (*Oakland, 1906-1912*)

John’s health continues to deteriorate, and to the distress of them both, he loses most of his vision.

On November 24, 1908, he dies from pneumonia, at age seventy-six. Among many others, John Muir writes a sweet, heartfelt note of condolence to Sara, knowing how devastated she is.

Fig. 23-1. Sara’s December 14, 1908, letter to Osgood, describing the funeral and how lost she feels.

In the summer of 1910, Sara travels to Europe with family members, and in 1912 she contributes a list of ferns in Yosemite to help the Sierra Club. She also encourages her great-nephew, Harold St. John, to become a botanist—which he does. (The plant sciences laboratory at the University of Hawaii is named for him. The few paintings of Sara’s that have survived were

stored in his basement in Hawaii.)

Epilogue: “Partners in Botany” (Oakland, 1908-1923)

Sara struggles after John’s death, and she never really recovers from losing her Lemmonia. She has “a nervous breakdown” in 1913, and, at 7:30 p.m. April 22, 1916, at the age of 79, this “Housewife & Botanist” is committed to Stockton State Hospital for “senile dementia.”

How ironic that the date would later become known as Earth Day.

Photograph of Sara, undated, but probably in her sixties or seventies

Photograph of the paper committing her to the hospital

Heartbreakingly, by the time she is committed, this brilliant dignified woman believes people are trying to poison her, she is profane, and has “to be watched to prevent her from leaving her home unclad.”

Because of their land investments, now worth \$15,000, and her \$12/month pension from the U.S. government, the \$12/month cost of the hospital is covered.

Sadly, the conditions of the hospital are deplorable.

Sara Allen Plummer Lemmon dies at 6:30 p.m., January 15, 1923.

She is buried with John, under a gravestone in Oakland’s Mountain View Cemetery—labeled “Partners in Botany.”

Photograph of gravestone that reads “Partners in Botany”

Her art lives on, and two boxes of her watercolors from their 1884 trip to Arizona were recently donated by Harold St. John's grand-daughter to the University of California and Jepson Herbaria Archives.

Conservation efforts are underway.

Sample chapters

Prologue

(New York Harbor, December, 1869)

Icy bits of sleet peppered Sara's face and caught in the curls of her auburn hair. She tried turning her shoulder into the fierce December wind that buffeted her long coat and skirt against her legs, to no avail—and still she waved, waved until her arm ached, and kept waving, long after the figures of Mattie and Father were too tiny to discern among the crowd of well-wishers on the harbor dock.

The wooden side-wheeled steamer S.S. *Alaska* churned slowly through the steel-gray waters off Manhattan, away from Brooklyn where she'd graduated from Greenleaf Female Institute with a teaching certificate, away from the Cooper Union Institute for the Advancement of Science and her hard-earned degrees in physics and chemistry, away from the New England coast where she'd spent her childhood, away from Bellevue Hospital where she'd nursed so many Civil War soldiers, away from all the students who'd learned to paint thanks to the art lessons she provided.

Away from her loving, supportive family: her three brothers, but especially her father and Mattie, her only sister.

Away from a man who worshiped her and called her “my beloved.”

Away from everything and everyone she'd ever known—leaving it all behind.

Sara remained there, shivering in the wind, long after every other passenger had retreated below and she was the last person on deck.

After years of juggling her teaching, her night classes, and volunteer nursing work, Sara thought she knew about being tired. But right now she was tired beyond any fatigue she'd ever known. She was tired of being sick, tired of packing, tired of saying good-bye, tired of trying to explain to loved ones that her very survival depended on starting a whole new life—a life that had to be a whole new continent away. A life in exile from a contented busy life in New York City.

Mattie was two years younger than Sara and had married. By now she and her husband had two daughters, named Mattie and Sara (nicknamed Sadie) in honor of their mother and aunt. Several months after arriving in California, Sara sent young Mattie a letter that read:

*Dear Little Goody Two Shoes,
Your Aunt Sadie wants to come home after she gets well, but it won't do in a great many weeks yet because she might get sick again and die. But after I get well some time we will all get together, and you and Sadie will have a tea party and then I can come to it and won't we have a good time!*

There's no doubt that Sara's fragile health was the driving force for her new start in California. She'd barely survived measles in 1863 and suffered from colds, catarrh, and bronchitis every winter. When she nearly died of pneumonia in March 1869, her friends packed what she needed and had her transported to Savannah, Georgia. While recuperating there, she faced the realization that one more winter in the Northeast would probably kill her. Even once she'd moved to a milder climate, her lungs would remain vulnerable for the rest of her life.

Standing on that windswept deck, Sara was frightened—and yet, excited. Another decade was receding along with the New York coastline, a decade that marked the end of the Pony Express and the beginning of paper money in the United States, a decade in which E. Remington & Sons developed the first typewriter and Alfred Nobel patented his new mixture known as “dynamite.”

The decade had also brought the end of slavery—and the untimely end of President Abraham Lincoln. Within the last year, Ulysses S. Grant had been sworn in as the eighteenth president of the United States, and Elizabeth Cady Stanton was the first woman to testify before Congress. It was also the year the American Museum of Natural History was founded in New York City.

Within weeks, it would be 1870, and Sara was thirty-three years old. Too old to marry, her brother Osgood had told her (she would prove him wrong), but surely she was still young enough to begin anew?

What adventures, what joys, what more tragedies would the next year, the next decade, the rest of her life bring?



Had Sara known the challenges of that cross-country move, had she foreseen the financial struggles and multiple near-brushes with death, not to mention the loneliness and homesickness of years passing before seeing her family again, she might have reconsidered her strategy.

But then she'd have missed out on adventure, exploration, recognition for her work—though so much less than she deserved.

And most of all, she'd have missed out on true love and partnership.

A year later, on Dec. 27, 1870, she wrote Mattie from Santa Barbara:

What a homesick Christmas I had this year. Not quite as forlorn as last year on board [the] steamer Alaska in the Caribbean Sea, watching the flying fish and porpoises. Wonder where I shall be next year—I dare not think of it. I hope the next year will be freighted with better things than the past has been. This old year seems like some horrid dream.

[But] I have good courage and hope, feel very well, and have many friends here.

The next year would indeed bring better things, and the young woman who couldn't stand to be idle would find herself more than busy.

And her new community of Santa Barbara would be the beneficiary in many ways.

Chapter 1

“Now I am at the jumping off place”

(San Francisco, 1870)



Fig. 1-1. Sara Allen Plummer in her twenties, a decade before she left New York for California. Photo by Wynne Brown. Original at the University and Jepson Herbaria Archives, University of California, Berkeley.

May 10, 1869, marked the driving of the Golden Spike at Promontory Summit in the Utah Territory. It was the hammering in of the last connection in the first transcontinental railroad that joined the Atlantic and Pacific oceans.

Six months later Sara was among the last few hardy souls who journeyed to San Francisco via Panama.

Several shipping lines ran regular routes from New York to Aspinwall (now known as Colòn) on the east side of Panama, and from 1848 to June 1869, 375,000 other California-bound travelers had chosen that route.

From Aspinwall, Sara spent a day bumping across the 47-mile isthmus, a train or carriage ride through the malaria-ridden swamp and jungle. After arriving in Panama City on the west coast, she was able to snag another steamer that churned its way north past Central America, southern Mexico, and the Baja peninsula.

Three weeks later, she disembarked gratefully in San Francisco.

Especially given her fragile lungs, the trip was hard on her. She spent several weeks recovering in San Francisco, later proclaiming proudly to Mattie that she'd gained five pounds. But in typical Sara-style, she wasn't about to recuperate by languishing in bedrest. Despite a hollow cough every morning, by afternoons she'd feel better and was determined to be out and about exploring her new world.

One advantage of being nearly middle-aged was that she'd had years in New York to become well-connected, and she traveled with a carefully protected sheaf of letters of introduction. One of her first visits was to the wife of General William Starke Rosecrans, a Civil

War Union general who'd led the troops at the September 1863 Battle of Chickamauga (and suffered an ignominious defeat).

Sara had been reluctant at first to inconvenience her, but Mrs. Rosecrans turned out to be so welcoming and warm that Sara wrote later, "I was sorry the stage coach shorted my visit to only about an hour!"

Sara was apparently blessed with superlative social skills. She easily made new friends wherever she went, and she spent much time and effort writing letters and sending small gifts to remain connected to the old ones.

While in the Bay Area, she explored widely, writing Mattie that she had traveled 300 miles around San Francisco. One day she joined several new friends on the *Vanderbilt* steamer to what's now called Mare Island, actually a peninsula joined to the mainland by a series of small sloughs. It was originally named Isla de la Yegua, or Mare Island, in 1835 by General Mariano Guadalupe Vallejo in gratitude that his prized white mare swam ashore after the ferry she was on capsized in a storm. (The Mare Island Naval Shipyard, the oldest on the West Coast, lasted more than a century before being closed in 1993. It's been restored and is now on the National Register of Historic Districts.)

From Mare Island, Sara and her new friends traveled to Napa Valley and White Sulphur Springs, which was the most fashionable place where the San Francisco elite could escape the coastal damp and cold. Sara reveled in the February warmth—and in the sunburn that lightly blistered her nose, commenting, "Everybody said the burn improved my looks or rather added to it—it did me good."

Despite the fun of exploring, Sara was terribly homesick. Observing how the land was used made her miss her family, and especially her father, even more. After serving in Captain John Smith's company in the War of 1812, Micajah Sawyer Plummer had married Elizabeth ("Betsey") Parsons Haskell in 1831, and the couple moved first to Portland, Maine, then later to New Gloucester, Maine. There Micajah took up the grocery business, along with farming on the side. Betsey soon gave birth to Sara's two older brothers, Charles Giddings Plummer, born October 4, 1833, and Osgood Plummer, on April 16, 1835.

The very next year Sara Allen Plummer, named for her paternal grandmother, was born on Saturday, Sept. 3, 1836—only a month before Charles Darwin would return to England on the HMS *Beagle* with all the biological evidence he would need for his theory of evolution.

Two years later, Betsey gave birth again, this time to Sara's only sister, Martha ("Mattie") Allen Plummer, on August 17, 1838.

And, seven years later, perhaps as an afterthought and making Sara a middle child, Seth Haskell Plummer was born Jan. 8, 1845.

By this time Micajah had sold his grocery store, focusing on fulltime farming for most of Sara's childhood.

Now in sunny California, perhaps because she was the daughter of a farmer, Sara was particularly intrigued by the valley's economics, writing Father that land was \$100 per acre and that grapes were fetching \$20 per ton. She saw a variety of investment opportunities—depending on one's gender: "If I were a man, I see many ways that I should delight in making wealth and prosperity crown my efforts," and mused, "I should turn my attention to raising stock."

On the way back to San Francisco, the group stopped in to visit Dr. Arthur Wesley Saxe, thanks to another letter of introduction given to Sara from her influential cousin, Llewellyn Haskell.

Born in New York, Dr. Saxe had traveled overland to California in 1850, one of many who'd come in search of gold. That effort didn't pan out, and in 1852 his wife Mary and their two small children made the then-grueling trip to join him—via Panama.

Sara's trip was nearly two decades later, but one can still imagine Mary and Sara chatting animatedly over cups of tea and comparing their journeys across the Caribbean and the Isthmus.

Sara shared much in common with Dr. Saxe as well and described him as “one of the first physicians on the coast, a genius.” It's not surprising that she, as a future botanical illustrator, was delighted to meet him: “He sketches the surrounding hills about this Santa Clara Valley (called the Garden of California) and works on an acre of land surrounding his house, cultivates all sorts of rare tropical plants and knows the names and habits of every one and devotes himself to scientific pursuits generally.”

A month after her visit, Dr. Saxe donated one of his illustrations, referred to in the minutes as “a beautiful colored drawing of *Rhododendron Californicum*,” to the California Academy of Sciences. Years later, Sara would become the Academy's second female member—and the first to be allowed to speak to that august group of scientifically inclined men.

It was such a pleasant visit with the Saxes, according to Sara, that the group “went back on our way rejoicing” before stopping to explore San Jose. At the time, the town had about 12,000 inhabitants, and Sara described it as “a beautiful city in nature's wealth of scenery.”

In another foreshadowing of her future, the group stopped in Oakland, “the Cambridge of San Francisco” where “fine residences and the scientific and literary institutions are located.”

Little did she know this community would become home to her and her future husband for many years.

Sara’s interests were wide-ranging, and she’d been a music lover and frequent concert-goer in New York. In 1868, her correspondence shows she’d made the acquaintance of Ole Bornemann Bull (pronounced *O-lah Bool*), a prominent Norwegian 19th-century violinist and composer often compared to Niccolò Paganini. Bull frequently toured with Clara and Robert Schumann, Franz Liszt, and others. Again, coincidentally, he too had recently arrived in San Francisco.

Sara wrote Mattie a week later:

I called on Ole Bull at the Lick House and had a delightful time. He seemed very glad to see me and said, “O, I remember you.” He showed us his violin, 400 years old, the “Di Salo,” and I parted, giving him a bouquet of violets. He is full of vivacity and good cheer.

Now, while trying to decide where to establish her new home, she soon realized Northern California’s temperamentally dank winter wasn’t helping her fragile health, especially after passing through the balmy tropics of Panama. She’d only managed to enjoy several healthy weeks in San Francisco before bronchitis struck once again.

As soon as she was well enough, she ventured south by boat intending to explore the Santa Barbara area. It was a rough trip, and “the little coast steamer tossed like an eggshell, just as one might off Norman’s Woe—Father knows what that means—and I for the first time was sea sick.”

Norman's Woe is a rock reef off the Massachusetts coast near Gloucester, close to where Sara grew up. It's most famous for inspiring Henry Wadsworth Longfellow's poem, "The Wreck of the Hesperus," which was first published in 1840 when Sara would have been four years old.

Once again, Sara's charm and warmth won her the kindness of strangers. The weather had delayed their arrival by six hours, and the passengers didn't land until midnight. Yet the captain made certain that Sara was safely on shore and in a carriage. Once she'd arrived at the American House, a brand-new, two-story hotel, she reported that she took off her waterproof and boots and collapsed onto the comfortable bed—without even bothering to undress any further.

Later, on February 13, 1870, she wrote Mattie that the trip had been the worst she'd ever experienced and that her weak lungs had never been so severely taxed.

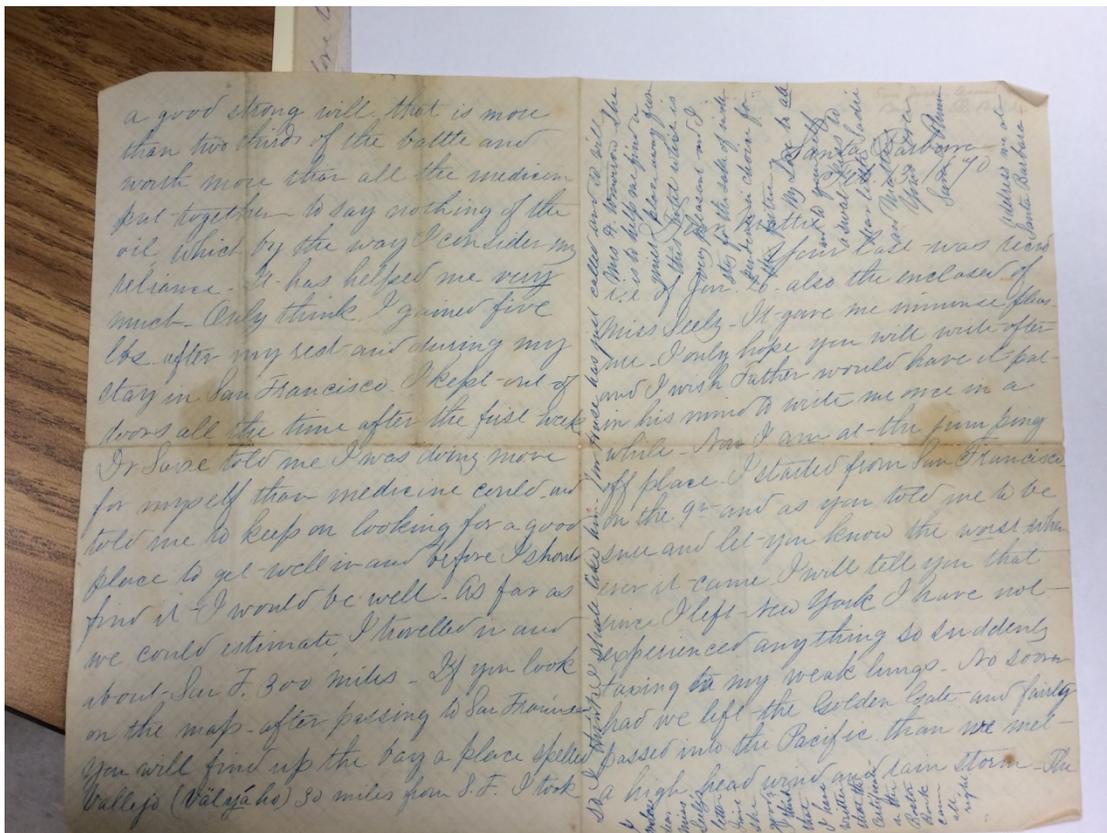


Fig. 1-2. Page of Sara's February 13, 1870, letter to Mattie. Photo by Wynne Brown. Original at the University and Jepson Herbaria Archives, University of California, Berkeley.

But, within a day, she wrote: "I am rapidly getting back on my feet again, and today feel in good spirits and am up, have a good appetite, and the weather is fine after two days rain."

Once she'd recovered, yet another letter of introduction allowed her to meet Charles Enoch Huse and his wife. Huse, originally from Massachusetts and a Harvard grad, had been voted class poet and was fluent in Latin, Greek, Spanish, French, Italian, and German. Like so many others, he had come to the Golden State as part of the Gold Rush and then moved on to more lucrative pursuits—one of which landed him in jail for six hours for jury tampering.

By the time Sara met him, his fluency in Spanish had eased the way for him to become county clerk, recorder, auditor, state assemblyman, and district attorney. The year before she arrived, he had helped establish Santa Barbara College.

Yet again, Sara's outgoing personality won her a new friend as Mrs. Huse agreed to visit her the next day. Even though Sara found the American House itself to be very pleasant, it was centrally located and thus noisy, and the two women resolved to find her a quieter place to live. Another reason Sara wanted to move was that she was frugal—and secretly worried how far the money she had would stretch.

Besides, was Santa Barbara really the right place for her?

It was still too early for her to form an opinion of the town that would become home for the next ten years. She wrote Mattie:

I cannot tell you anything of Santa Barbara, only that it contains about 1,000 people and that it is situated in a valley protected on the north west by high mountains and extending close to the shore. The people seem supremely lazy living in one story a-do-be houses, i.e. The a-do-be is mud dried. Some [walls] are several feet thick, I am told.

Although her letters never mentioned being afraid, she probably felt some trepidation—and perhaps she even paused before writing:

“Now I am at the jumping-off place ...”

Chapter 6

“Into the matrimonial vortex!”

(Santa Barbara and Oakland, 1877-1880)

Sweet good-nights and downy pillow notwithstanding, John was devastated by Sara’s rejection of his marriage proposal.

He’d written to their mutual friends, Christopher and Emily Parry, while waiting in suspense to hear back from Sara. Emily had replied, warily, about the both the fiscal and physical challenges they’d face if Sara agreed to marry him:

Few persons have taken a stronger hold on our affections [as you and Amabilis], and the consummation of your hopes and wishes would give us great joy were it for the best—but under the circumstances I fear there might be some clouds to dim the matrimonial horizon. You are both of delicate organization and without a competence to depend upon, you might see some dark hours though seasoned with genuine affection. There might be trials.

Evidently Sara and John agreed—reluctantly—and they resigned themselves to a long-distance botanical comradeship. Few of their 1878 letters to one another have survived. John gave up being snowed in at Webber Lake and spent the winter working at the California Academy of Sciences in Alameda, perhaps to be closer to Sara. He then lined up a gig as botanist

on a summer-long expedition with Dr. Dio Lewis—most likely with Sara’s help since Dr. Lewis was the very same man who had hired Sara to teach calisthenics in Manhattan twenty years earlier.

That same year, 1878, they were both elected to the Academy as resident members. Sara was the second female member, and she continued working there, unpaid, sending out specimens all over the country. In one package of oaks to George Engelmann, she added a note: “If there is anything in the way of assistance by collecting in this region, it will give me pleasure to forward it to you. ... I am on the alert at every opportunity offered to collecting and study in our beautiful & [exact?] science of botany.”

In June John returned to Santa Barbara to lecture on the California Pitcher Plant (*Darlingtonia California*), and it can be safely assumed that he and Sara spent some time out botanizing together.

1879 started auspiciously for John when Asa Gray, who’d become his primary patron, wrote that he’d recommended him to receive passes on the nation’s railroad system for botanical research. Free travel was a huge boon, and a benefit the couple would depend on for years to come.

And, finally, in spring, John was able to convince Sara to come visit him in Sierra Valley with the added inducement of a botanical trip to Pyramid Lake, Nevada—chaperoned, of course, by none other than Amila Lemmon.

It was a lengthy trip, four weeks, and the plant list John submitted to Asa Gray gave full credit to Sara: “Plants collected from Sierra Valley to Goose Lake Oregon via Pyramid Lake,

Surprise Valley, the Humboldt desert & headwaters of the Pitt River, through Washoe and Roop counties of Nevada & Plumas, Lassen & Modoc counties of California. By J. G. Lemmon & Miss Sara A. Plummer.”

Sara loved every moment of it, writing to her friend “Papilio” (possibly Emily Parry) about the hard, hot, twenty-mile drive over alkali desert until reaching the lake, where

Our toil & fatigue was for the time forgotten as we reached the summit pass that for the first time allowed the eyes to gaze with delight upon its distant shore—the blue waters as smooth and blue as the sky above reflecting the mountain, rocky islands and the striking rock pyramid rising 600 feet out of the water. Papilio, I tell you this scene of grandeur & beauty so overpowered me that I was quite dumb & my mind actually turned away discouraged in the attempt to comprehend & so I gazed & wondered & kept wishing that every friend I’d ever known could be there then too.

Not surprisingly, Sara was not one who would sit inertly by as an unoccupied passenger:

As we went down the grade in many places the steep and sandy road, narrow sometimes quite blocked with stones—you should see the developing skill of “yours truly” in handling the ribbons [reins] & managing the break [sic]. The pair of horses drawing our covered camp wagon, heavily loaded, bearing also a precious burden—J.G.L.’s mother, over 76 years of age, lively & most entertaining—were not to be trusted for a minute, their feet becoming tender from the long journey through alkali soil & hot sand & stones, caused them to search for easy footing—no matter what the consequences might be at the rear. But we managed to make the descent in safety—at the same time to observe the striking peculiarities & wondrous beauties of this lake.

They also met up with Indians, a first for Sara, and a sample of what she would encounter

later with the Arizona Territory's Apaches. Pyramid Lake is thirty miles north of Reno and is now surrounded by the Pyramid Lake Paiute Tribe. But back in 1879 the reservation was smaller and located about thirty miles from the lake. Although the Indians generally stayed on the reservation, the Plummer-Lemmon expedition had some trepidations:

We lay down that night upon our camp beds with some watchful, nervous sensations & every time the willows swayed & sang their willowy strains, I for one thought of the sly tread of these wily creatures. It sounds like the parting of limbs & [illegible word] by a hatchet for the work of a tomahawk. Nothing occurred, however, but next morning before we were up, one "big injun" started into camp, being politely told to "vamoose," he disappeared. Later a tattooed squaw with her painted papoose tied upon her back against a board that looked like a small coffin cover came paddling along with a little boy about 8 years of age strutting in her wake, bow and arrows in hand. We thought the neighborly feelings might have been stimulated somewhat through the olfactory nerves for he, she & it made a halt just in front of our coffee pot & frying pan that were filled and steaming & sizzling over a blazing fire. Now we spoke. She chuckled & sniffed, rapidly unstrapped her papoose—but O, the wave and fatal word "vamoose" suddenly caused her to gather up and retreat with a snarl, grunt & a farewell scowl.

Thus ends the Indian events to date.

The Pyramid Lake trip gave Sara a taste for what life as Mrs. J. G. Lemmon might be like, and she wrote, "How I wish that I could impart to you and all friends some of the pleasures of this nomadic camp life."

The trip apparently also confirmed John's hope that Sara could become the partner he'd been hoping for. He wrote Asa Gray that "Miss Plummer proves an excellent explorer with keen vision & skillful hand. In case some suitable things in our collection prove distinct, I strongly

urge that she be honored—both in recognition of service now, and for several years of laborious but unrecognized work in Southern Cal.”



In May the official description of the new species, Plummer’s *Baccharis* (*Baccharis plummerae*) was published by Asa Gray in the *Proceedings of the American Academy of Arts and Sciences*. In it he wrote that the plant was “...discovered by Miss Sara A. Plummer, an ardent botanist, whose name it is a pleasure to commemorate.”

That summer Sara made a long-awaited trip back East to visit her family and friends. In July Captain Plummer wrote her about John who was still in the Oakland area:

Mr Lemmon staid [sic] a few days with us. I think him very much more worn than ever I saw him, and certainly more unbalanced. I fear, Sara, that it will not be very long before he will be totally unfit to take care of himself. I have not heard it from him but from other sources that he has procured his pension, at fifteen dollars a month.

In today’s currency, that would amount to about \$360 per month—hardly enough for one person to live on and certainly nowhere near sufficient for two hardworking botanists.

Sara’s health and finances weren’t doing all that well either, and in September Asa Gray wrote John, “I fear Miss Plummer is ill. She was here a very few days and then disappeared. Her sister said she had been poorly.”

By now, even though they’d never met, John and Mattie were botanical pen pals. Mattie, like so many nineteenth-century women, was a budding amateur botanist. In October John sent

her a cigar box of seeds, bulbs, and cones with a note referring to Sara as “my little botanical sister Amabilis.”

He was continuing to hunt hard for work—not very successfully—even to the point of selling arrangements of dried flowers to tourists at Yosemite. He had applied to Clarence King to go along on the 40th Parallel survey (asking “the Harvard professor” Sereno Watson to endorse him), but King claimed they didn’t need a botanist. Georg Engelmann had been contributing to John’s support by buying plant specimens. By November John was so disheartened he wrote Engelmann, “Money has never been so scarce here.”

At the end of the year he told Engelmann he was moving his personal herbarium to the “wealthy and aristocratic city of Oakland. . . . If I was receiving a salary from Govt as I deserve to, being a victim of Rebel hate, I could get along perhaps, but I expect to go down in neglect and poverty. . . . I have only myself to blame—I might have taken the Rebel oath and gone out of Andersonville.”

Another friend of Sara’s wrote her, “Prof. L is both lonely and disgusted. What he may do in his desperation I cannot imagine.”

Sara was still close friends with her “chosen” cousins, Captain and Mrs. Plummer, and frequently went to visit them in Alameda, conveniently close to John’s temporary herbarium. Once she returned from her trip back East, the two botanical comrades were apparently spending some time with one another: In January she wrote Engelmann a postcard: “I am glad the *Pinus ponderosa* var *Jeffreyi* with cones reached you. We took great pains to get it. [signed, Miss Sara A Plummer].”

That same month she wrote home that she was reading William Prescott's *Conquests of Mexico and Peru* aloud to Mrs. Plummer, which she described as "wonderfully interesting... more interesting than any novel." In passing she mentioned that Mr. Lemmon had visited and asked her to tell Mattie that the Parry's Lemon Lily bulb he had sent would flower in spring "after its bulbous rest."

That species is a particularly showy and unusually fragrant lily and is now considered rare, perhaps, ironically, because of well-meaning enthusiastic botanists. Earlier that summer John had written Sereno Watson that he'd found a secluded valley inhabited by the lily and had come away with 300 bulbs.

He asked Watson, "Can you help me sell them?"



In early spring of 1880, Sara was struck down—again.

She had been visiting Alameda as usual and was to deliver a botanical talk to the literary society in Oakland, despite a terrible cold. After her presentation, the hosts, Mr. and Mrs. Franklin Warner, insisted that she avoid the night air and remain with them overnight instead of starting the journey home.

So she accepted their invitation, but by the next morning, her cold was even worse. The Warners' family doctor "happened" by, examined her, and delivered the bad news: Sara didn't have a cold, she had spinal meningitis. It would be much too dangerous for her to head home to Santa Barbara.

Once again (“the way I came here was providential”), Sara had fallen into the care of remarkably kind and supportive people.

Six weeks later, she was still at the Warner residence, and on April 15 she was finally able to write her family:

Am propped up in bed but mean to write you a line to tell you that I am slowly on the mend. The Dr. and all who know say it will be months before I become entirely well again but that I will with care. I have a hint that it is a slow process for when I attempt to test the moral courage of one set of nerves, for instance the feet, to see how much locomotion they can stand, the heels refuse to touch the floor, the perhaps the back of the head suddenly weakens, or the right arm drops useless, knees give out, eye won't see, ears won't hear or worse for woman, the inferior maxilly suddenly refuses to perform its normal flexible function. I haven't yet been affected in the tongue, and that is the sole exception, but I'm out of the worst of it. But what a care & source of anxiety I've been in all this time, especially to the skilled Dr. Pearse and Mr. & Mrs. Franklin Warner.

The Warners, former New Englanders and “both finely educated and cultivated” spared no pains or expense or labor on her behalf.

A week later she'd recovered enough to continue her letter on “a sad & sickening day for Oakland & vicinity”:

There passed by our windows eight horses at one time & six at another bearing the fragmentary bodies of the men who were blown to atoms. 25+ at the Giant Powder works in the adjoining town of Berkeley. I never saw anything sadder.

In the meantime, that spring John had headed off to southern Arizona to do some more collecting. He had been chastised—yet again—by Asa Gray for sloppy labeling, and he was determined to do a better job. Sara knew how much the trip meant to him and was equally determined to not upset him by letting him know how ill she was.

But she hadn't counted on her little sister being a tattletale ...

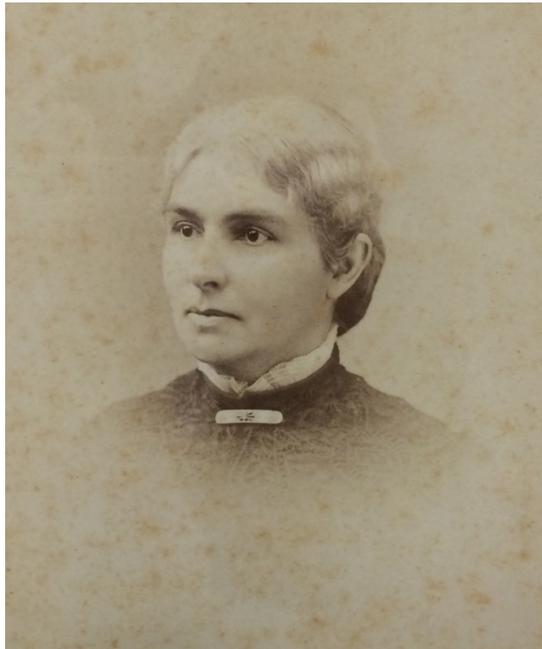


Fig. 6-1. Mattie Plummer Everett around 1880 in her early forties. Photo by Wynne Brown. Original at the University and Jepson Herbaria Archives, University of California, Berkeley.

On April 26 John was in Tucson after botanizing in the Huachuca Mountains. Upon receiving Mattie's information about Sara, he responded to his soon-to-be sister-in-law (whom he'd never actually met) by writing,

... And all the while I've been gleaning here with eager hand and delighted senses, our dear little sister (whom I call Amabilis) has been suffering sickness near death. She is so careful not to distress her friends that she kept the facts

from me all these weeks.

You are kind enough to allude to the excursions she and I have enjoyed both at her home in Santa Barbara and at mine in N. Cal. Yes. They were blissful and enjoyed to the full, my aged mother sharing the long excursion to the Modoc regions last spring.

He then dropped his fieldwork to return to Oakland immediately.

The next surviving letter is from Sara to Father on September 19 around the same time as President Rutherford Hayes was visiting San Francisco—the first American president to ever visit the West. “I suppose there will be quite a spread,” she wrote glumly. “Yesterday the school children of S.F., several thousand, occupied one of the principal streets to be inspected by the express desire of the Pres & Mrs. H.”

California was also celebrating the thirtieth anniversary of its admittance to the Union, but Sara was feeling far from celebratory. She was in San Francisco hunting for work and described the discouragement of having “climed [sic] many pairs of stairs into offices, editors dens, etc. to get writing and copying to do”—all in vain. She was desperate to find some sort of work even though one of her friends urged her to wait until she was more recovered.

Easy for the friend to say, she pointed out: “She does not know how light my pocket is or how much I feel the need of doing something for a livelihood, something that my strength will allow—and that will, I fear, be a difficult matter.”

She also wrote that John was off exploring and collecting in the Mt. Shasta area, loyally proclaiming that he deserved to be paid twice what he was getting for a recent government publication on the locusts that had ravaged the harvest the previous fall. That led her to a

passionate political rant:

He deserves a pension as he has the honor of helping save our beloved country at the almost destruction of his own life. His Co. of Mich 4th Cavalry captured Jeff. Davis while he was starving in prison. I for one never will forget the solid wicked South who may thank the North that they were not snuffed out but who now are plotting to yet destroy the Union & get hold enough that which they tried to destroy. I pray that even by the help of the sword and cannon they may never get into power as long as there is a vestige of the traitors left. If I were a man, I surely would stump the [county?] in the coming campaign for Garfield & Arthur. It will be a sorry day for the whole country if the Dems get into power. Anyone can see that by their record & belongings, their three or four-sided platform with that figurehead of [Winfield Scott] Hancock. But no more from the fullness my heart. Love to Mattie, George, the children & all inquiring – Ever your attached Sara A. Plummer

It also seems that Sara was doing some of John's correspondence during his absence. In Asa Gray's Harvard files is a handwritten letter in Sara's distinctive handwriting, dated October 11, 1880, but signed "J.G. Lemmon." In it "J.G." writes that "he" will be collecting in Arizona and Mexico for a few weeks before returning to Oakland for the winter's work.

It was most likely on this trip that John explored the Santa Catalinas and discovered two new species of ferns (then called *Notholaena Grayi* and *N. lemmonii*)—which whetted his appetite to return at some point to Southern Arizona. We'll probably never know if he had the slightest suspicion that he'd be back the following year—as part of a honeymoon trip.

Ten days later, John himself wrote George Engelmann from Fort Grant, just east of Tucson, that he wasn't able to afford to go the Santa Rita Mountains. Instead he had climbed Mt. Graham of the Pinaleno Mountains where he found some new species—and saw a native parrot,

which, frustratingly, he surmised fed on the seeds he needed to identify the still disputed Arizona Pine (*Pinus arizonica*).

He also wrote that he was returning to Oakland the next day and would be heading immediately to Sierra Valley to bring his mother back to Oakland to live with him for the winter.

Fig. 6-2. Map of the mountain ranges of southern Arizona.

It's odd that John never mentioned Sara in that letter because two weeks later, on Sunday, Nov. 7, 1880, she wrote her father from Santa Barbara:

Yesterday was a busy day.

I am having all my household goods packed in with the dust and rubbish to be sent to Oakland on the Southern on Tues., at 6 a.m. when I go as far as San Luis Obispo about halfway up to remain in a visit one Str over at Mr. Edgar Steele's, warm friend of mine whom I've written to you about before.

All my friends here congratulate me warmly on my choice of Mr. Lemmon and say it is just the thing for me as they see the suitability of the alliance—and they all know him and his sterling worth.

All her household goods didn't include very much. She figured they wouldn't get much at auction and that it'd be easier to cull it all in Oakland. So her packed goods included “two chairs, a sofa-bed, a 3/4 bed—good mattress—a pair blankets, quilts, three sheets, pillow cases, a few towels, 1 cooking stove and a small kerosene stove, a carpet, a few odd white dishes, glass jars, knives, forks, spoons &c—all common, but they well be enough and will answer the purpose for ourselves.”

And she promised Father that there would be a corner for him—if only he would visit.

One week later, on Nov. 13, her last letter as a single woman to her future husband was a mix of the practical—and the sweetly sentimental. On one hand, she wrote, “What a time we shall have in unpacking and casting out and arranging the collection of rubbish!” while on the other she wrote how she wished he could be there with her every hour and:

I pray we may be, O, I devoutly hope we may & then comes the [resolve?] that united we must not overlook anything or neglect little things that will appeal to each individually for the other. Lemmonia, dear, we have assumed deep responsibility & for that reason our happiness will increase in proportion as we show no [illegible word because there's a dried plant—a four-leaved clover??—on top of it!] in meeting life as it comes to us. We will try, won't we dear Heart? Then we will shall get all the happiness we can from our, perhaps, brief existence.

How I wish the preliminaries were done with and that we were settled peacefully in our Herbarium Snuggery.

Miss Sara Plummer and “Professor” John Lemmon were married quietly on Thanksgiving Day, 1880.

Sara, proud of her frugality, wrote her brother Charley that she only spent “\$2!” on her wedding outfit: a new pair of gloves, \$1.25, & for trimming a traveling hat, 75¢” since all the other “fixings” were in her band box. (She did point out that Mr. Lemmon had to spend more extensively, around \$50.)

By this time, John had relocated to Oakland with, of course, Amila (who Sara referred to as “Dear Little Muzzer”) and his entire herbarium, to Blake House, on the corner of 12th and Washington Streets.

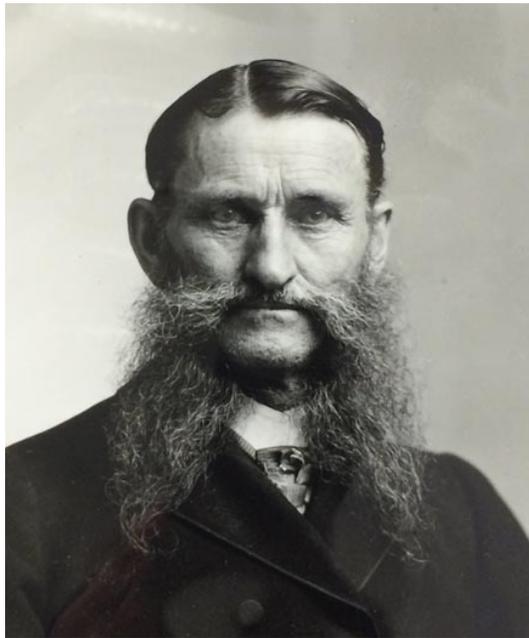
The Parrys, delighted that their friends had finally made up their minds, attended the ceremony and gave the newlyweds a beautiful gold and silver burnished stand for their dinner table.

The Civil War may have been over for a decade and a half, but it still haunted the household. Sara warned her brother that “Lemmonia” was particular that people remember the second “m” in his name: The other branch of the family were Southern Rebels and had changed their name to “Lemon.” He had no desire to be confused with them.

Other reminders of the war moved into the new residence as well:

The old battered sabre hangs upon the wall as quietly as though it had not done execution in battle. He still keeps the old waterproof hat that used in those cattle-pens to carry water in to the thirsty and dying comrades, the tin pint dipper used to draw & carry rations in, some of the raw beans served to the poor prisoners and the very fife handed down from soldier to soldier & Mr Lemmon being the last one who didn't succumb, still keeps it as a remembrance of what would sometimes keep the boys' spirits from entirely forsaking them.

You can now understand why he wishes two ms in his name—but enough of this, we are as happy in our snug, cozy home with his dear aged mother, as you, Jean, or any looker-on could wish.



Figs. 6-3, 6-4. Sara Allen Plummer Lemmon and John Gill Lemmon in photographs they had made around the time of their wedding on Thanksgiving Day, 1880. Photos by Wynne Brown. Originals at the University and Jepson Herbaria Archives, University of California, Berkeley.

Chapter 7

“... try to touch the heart of Santa Catalina”

(Southern Arizona, Spring 1881)

Ten years had passed since Miss Sara Plummer had established the Santa Barbara Library. Now, thanks to “entering the matrimonial vortex” at age forty-four, she was Mrs. John G. Lemmon. She was both pleased and relieved when the International Order of Odd Fellows offered to buy her library.

The newlyweds settled contently into uniting their lives and their botanical collections under one Oakland roof. Each day they labored over their immense piles of plants, labeling and re-organizing specimens, assembling species lists, and sending off sets of rare Pacific ferns to Eastern botanists who were willing to pay up to 50 cents per plant.

“This, we hope, will keep the wolf from the door,” Sara wrote to her brother Charley.

Or, at least, they labored each day except for Thursdays from 1 p.m.–4 p.m., the time slot set aside for social visits for all three members of the herbarium household. Having her nearly eighty-year-old mother-in-law in residence was fine with Sara: She described the still-fearless Amila to Mattie as “small & nimble & very bright and is to be with us during the winter. She is excellent company, a great reader. We chum together ever so much.”

By this time Sara's name was known among prominent botanists, and all the newspapers and botany publications were full of the Plummer-Lemmon wedding. "Marriage of Distinguished Scientists!" announced the *Santa Barbara Weekly Press*. Even John Coulter of the staid *Botanical Gazette* wrote, in January 1881, that the wedding between two well-known botanists "is so botanical that to mention it seems very appropriate."

At Sara's suggestion, the couple had decided to postpone their honeymoon until spring. As John described it,

My wife, being as enthusiastic and as devoted to botany as I, was the first to propose that, instead of the usual stupid and expensive visit to a watering-place, idling our time in useless saunterings, and listening to silly gossip, we should wait a few weeks, devoting the time to study; then, at the right time, make a grand botanical raid into Arizona, and try to touch the heart of Santa Catalina.

Everyone warned them of the dangers and rigors of the area. But, according to John, the more they heard, the more determined they were to explore the area. After all, there was reputed to be a high protected valley that even Cyrus Pringle hadn't been able to reach—and, having spent time with Pringle, both Sara and John envied his "strong frame and good health" and also admired his conscientious and painstaking botanical work. Additionally, Gen. Eugene Carr told them no white man—or woman—had been there, mostly because until recently it was an Apache stronghold.

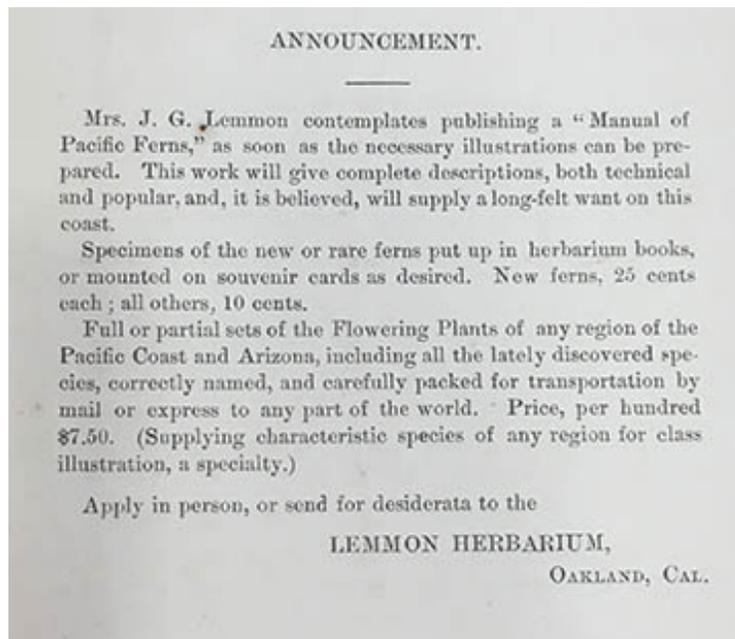
John wrote:

... when we learned all this, the information but intensified the resolution formed on a preliminary excursion the season before, that we would penetrate these unknown mountains.

Given Sara and John's collective infirmities, one can't help wondering: What were they thinking!?

That spring of 1881 was busy enough even without preparing for an overland wilderness expedition. On March 7, Sara presented a paper at the California Academy of Sciences, announcing to her family, "I have the honor to be the first lady who has ever addressed that august body."

Her paper was also a ground-breaker, being one of the first ever on Pacific ferns.



*Fig. 7-1. This announcement describing Sara's intended book was the last page of John's book, *Ferns of the Pacific Coast, including Arizona: a full Conspectus of Tribes and Genera*, published in 1882. (Image 6874 from Arizona Historical Society.)*

We can only imagine the flurry of packing between presentations, teaching botany classes, proofreading scientific publications, sending off plant sets, double-checking lists of supplies, arranging rail and wagon transportation, and all the inevitable last-minute correspondence. Not only had Sara's paper been accepted by the *Rural Press*, but she and John had finished preparing a technical manual on the ferns, completely illustrated by Sara. They were also at work on a popular plant guide that they hoped to have out in time for the holidays at a cost of a dollar or two each. (An 1880s dollar would be worth \$25 in 2018.) Sara wrote Mattie that she had the manuscript nearly ready and had done seventy full-color paintings. She'd also used their compound microscope to create pen-and-ink illustrations of the spores, root hairs, and more.

Tragically, the book was never published, and the manuscript as well as the illustrations have all since disappeared.

But at last they were ready. Amila had agreed to stay home to watch over the herbarium as her “wandering children” explored, and, on March 20, 1881, Sara wrote her family:

Tomorrow at 4 P.M. Lemmonia & I start for Arizona and New Mexico on a botanic exploring expedition. The Presidents of Council of the California Academy of Sciences recommended and requested that Gov. [Leland] Stanford give us a pass over their railroads till June 30, 1881. We may be able to renew them if we do well on the trip, i.e. send some good things to the Academy and Gov. S—in the way of defunct Apache skulls, Aztec pottery, rare plants etc. and it is worthwhile. ...

I have long desired to see the far-off land of the Apaches and then to go with Mr. Lemmon exploring, and gathering the rare and perhaps new species of

flora will be sufficient delight to more than balance the fatigues consequent upon such a trip.

Semmon Herbarium
Oakland, Cal. Mar. 20, 1881.

My dear Father, Mattie Geary & I.
Tomorrow at 4 P.M. Semmonia & I start for Arizona & New Mexico, on a botanical exploring expedition. The President & Council of the Academy of Sciences recommended & requested Sec. Gen. Stanford to give us a pass over their R.R.s till June 30, 1881. We may be able to renew them if we do well on the trip - i.e. send some good things to the Acad. Gen. S. - in the way of deerskin, Apache skulls, Agave, Yucca, some plants &c. - and it is worth while. With Sec. S.'s signature

Fig. 7-2. On March 20, 1881, Sara wrote home about their plans to explore the Arizona Territory—despite the dangerous Apaches. (Photo by Wynne Brown. Original at the University and Jepson Herbaria Archives, University of California, Berkeley.)

Sara reassured her family that they were well prepared and provisioned—right down to “the big lunch basket filled with corned beef, crackers, cheese & three or four jars of nice currant jelly, brought in by good, thoughtful friends.”

How could Mattie and Father not be as excited as she was? After all, she wrote, “the whole outfit and occasion [is] brimful of interest and enthusiasm, if you will allow the expression.”

These two plant enthusiasts were far from casual armchair botanists. It was a thousand miles by rail from San Francisco to Tucson, where they would stop for several weeks to collect plants of the Santa Catalina Mountains, from bottom to top. Their railroad passes would then allow them to travel for free to El Paso, Texas, where they planned to do more collecting. On the return trip, they’d stop again and hire a wagon to head south, probing deeper into the Arizona Territory’s unexplored Chiricahua and Huachuca Mountains.

Mattie and Father had to be concerned when they read the following words: “You will hear from me or us from time to time. With love and goodbye—your good son and new brother Lemmonia and mother join in love, as ever yours, Sara A. P. Lemmon.”



Tucson was a lively, thriving town back in March 1881, with 10,000 souls—only some of whom attended the four churches, read the five newspapers, or attended the three schools. What probably mattered more to the locals was that the town also claimed to be home to more blacksmiths than any other town of its size in the United States.

Many residents called the climate “agreeable” despite a high of 110 the previous year—and a measurable amount of snow in March 1881.

Soon after that last snowfall, and almost precisely a year after the first train had pulled into town, the two middle-aged botanists clambered stiffly down to the platform from the Southern Pacific Rail Road car. Despite their frail health, their luggage contained camping gear, walking

sticks, sturdy calfskin boots, and more, according to Sara:

... a big amount of surplus papers and dryers to change off with & pack plants into. We take several changes of flannel underclothes, the oldest & poorest to be thrown away after they will not hang upon us any longer time—then a supply of tea, sugar, coffee, rice, beans, flour, popcorn, pickles, syrup, canned meats & fruit, butter cheese &—then ammonia for snakebites, a few medicines for any emergency, each a pair of blankets, pillows & each a shawl for night wraps.



Fig. 7-3. Photographer Carleton Watkin's image of Tucson in 1880.

They hired a wagon to take them six miles northeast of Fort Lowell to the outer limits of

town where they set up their headquarters in a deserted cabin—deserted, that is, by all except pack rats. They unpacked, sorted their gear, and, too eager to sleep, rose early the next morning to start exploring the mountain.

Sara described their outfits and what they carried:

Mr. Lemmon, or Lemmonia, as I call him, has a gray suit of strong duck, boots, the soles of which are covered with heavy gimp tacks, a big slouch hat, and heavy buckskin gloves.

Mine is made up from a deep olive green broadcloth & corduroy walking suit, presented by Dr. Dunning's wife just before she died out here. It makes a strong short dress, with turkish trousers met by leather leggins buttoned and strapped under the heavy calf-skin shoes, also gimp nailed, long dog-skin [sic] gloves and a broad-brim hat constitute my tout-en-semble.

Each carry strong wire flower presses to put plants in. Said presses filled with about 150 folio sheets of thin Manila paper with felt paper, dryers between every 10 folios for the fieldwork.

The Santa Catalina range is a sky island, rising up from the surrounding Sonoran Desert, 1.65 billion years of tortured geology, nearly 10,000 feet tall and stretching seventy miles in length. Looking from where Sara and John arrived near what is now midtown Tucson, the shape of the range is deceptively smooth, its highest rocky crags lurking beyond a gentler fore-slope. Perhaps that's the reason the indigenous Native American tribe, the Tohono O'odham, named it *Babad Du'ag* or "Frog Mountain," honoring (if not quite accurately) the Sonoran Desert Toad, a common local amphibian.



Fig. 7-4. Aerial view of the Santa Catalina Mountains in 2018. Mount Lemmon is the highest rounded peak near the top middle part of the image. Photo by Wynne Brown.

At the bottom, the honeymoon couple saw spreading flats of creosote bushes, evocatively fragrant after rain, and the wandering track of the Rillito River among cottonwood groves and scattered mesquite bosques. Then and now, as the elevation changes, so do the vegetation communities, shifting from desert scrub through grasslands, into oak woodlands that then blend into pine forests. At the top, 7,000 feet above the desert floor, visitors can be excused for thinking they've been transported to Vermont's scarlet maples in fall or a Canadian winter's snow-covered firs.

The Sonoran Desert, covering central and southern Arizona, is rich in both fauna and flora and is one of the most highly biodiverse areas in the world. Two thousand plant species are

found here, along with 550 kinds of vertebrates and an uncountable number of invertebrates. Currently, about 1,500 plant species have been identified just in the Santa Catalina range—but when Sara and John arrived in 1881, many of those species were new to science.

The couple deliberately planned their trip for spring, one of Southern Arizona's two prime times for botany—the second being late summer when the monsoon storms re-awaken the parched desert. Sara's artist eye, accustomed to coastal New England and California, must have been astonished: green-trunked "palo verde" trees showered the ground with golden blossoms, bright yellow brittle bush still flowered in the shade, the long witches' arms of the ocotillo stretched toward the sky with scarlet fingertips, and barrel cactuses were studded with brilliant orange blooms. Even the wildlife was bizarre. Gambel's quail chattered, their ridiculous top knots bobbling as their call of "*Cuidado! Cuidado!*" warned thumb-sized youngsters of Cooper's hawks swooping through on a speedy and often lethal ambush. One long-tailed bird didn't fly, but ran past their campsite, and a large pink-and-black beaded lizard lumbered along the wash, its shiny leathery tongue licking up unwary ants. Odder yet, the serpents wore rattles and weren't afraid to shake them in warning.

Creeks, lined with green carpets of sedges and punctuated with hopbushes, still trickled clear with snow melt, and the descending trill of an occasional canyon wren bounced off canyon walls. At night coyote choruses woke them, alerting them to the scuttle of skunks among the dry leaf litter, in search of any escaped food scraps.

The magnificent yet improbably comical sentinel saguaros, home to Gila woodpeckers and gilded flickers, towered over it all.

Day after day, Sara and John scabbled up and down steep cliffs and ravines among plants

that all seemed determined to draw blood: opuntia spines, cat claw thorns, yucca spears, agave bayonets. They dodged the bundles of prickly fallen teddy-bear cholla—while always keeping a watchful eye out for the rumored still-active Apaches. They each lugged water, a little food, plant presses for flowers and leaves, and wads of damp rags to wrap and preserve any prized and fragile ferns they might find.

At first it was all such a contrast to the cool fogs of the Bay area that Sara paused frequently to inhale the essence of the desert, to savor the sun's heat penetrating that dark green broadcloth, and to allow her eyes to stretch over the vast expanse. Each evening the sun sank behind the jagged Tucson Mountains, to the southwest was Baboquivari Peak, the Santa Ritas underlined the southern horizon, and dawn broke behind the Rincons. Further east were the Whetstone Mountains and Tombstone, where the shootout at the OK Corral would occur a few months later.

But spring is short-lived in the desert. As the days wore on, daytime temperatures rose until the heat was “torrid.” The closest spring, three-quarters of a mile away, shrank to a dribble so small they had to squeeze their rubber drinking cups into crevices to get any water at all.

They found a tiny cave halfway up the mountain and made numerous trips to ferry all the gear so they'd be closer to the top, their ultimate destination.

The days grew even hotter, the terrain more rugged.

Some honeymoon! And yet, both of them were deeply happy, exclaiming joyously to each other as they found “new glories”—an unknown agave here, a mystery mallow there—and busily spent every evening pressing, packing, and labeling the day's finds. The seeds they gathered of

one particularly fragrant plant, later named *Tagetes lemmonii* or Lemmon's Marigold by Asa Gray, they would plant back at the Oakland herbarium. Eventually it would become the stock that would supply California's nurseries.

Each day they covered a different route, thinking *this* one would wind its way to the top of the mountain. Each day they'd end up peering down a five-hundred-foot-deep ravine or hopelessly up at an unclimbable cliff. Three times, they set out on paths that surely aimed for the summit—and each path dwindled into yet another dead-end in terrain much too rugged to cross.

Finally one afternoon they reached a point high enough they could see another ridge topped by the true upper peaks, invisible from the desert below. And between them and the peaks was “an abyss two thousand feet deep and twice as far across that everywhere separated us from the main mountain.”

“There was no help for it. We must return, baffled,” John wrote. “Beneath us yawned the chasm. Beyond, and far above, stood the guardian pinnacle, between which lay the narrow saddle through which we could not pass.”

After two weeks of rugged field work and three blisteringly hot attempts to reach the top, they were exhausted and nearing the end of their supplies—but not yet completely defeated. They lugged their equipment back down the hot, rocky slopes, returned to town, and rested up. They talked to locals, including “Colonel” Charles Poston and General E.W. Rice, who both suggested that the north side of the range should be less steep.

Still determined, they hired a stagecoach to take them to the north-facing side of the mountain range where someone lent them a mule to haul their collecting and camping supplies.

They stopped at Oracle Camp for several days of botanizing and where Sara, always the diligent correspondent, sent a quickly scrawled post card to her family. Postmarked April 28, she described camp life as “exhilarating when not overworked searching for plants, etc.”

They then continued on up the mountain, bringing an introduction to rancher Emerson Oliver Stratton. He was an Easterner, a miner, and an entrepreneur who had established a homestead in 1879, naming it Pandora Ranch because he’d spent all his money and “everything was gone but hope.” He described it years later:

When I arrived, I built a good-sized dugout in the side of the mountain, covered it with a dirt roof, and faced it with boards and a door and window I had brought with me. I furnished the place with a stove, a bed, and other items made from boxes. Just outside I pitched a tent for any company that might drop by. Then I went back to Florence and brought out the family.

When John and Sara met them, the Strattons were still living in the dugout, but any available lodgings at all were welcome to the two weary botanists. Stratton described the couple years later to his daughter, Edith Kitt: “When we saw them coming, Dr. Lemmon was riding and she was walking behind. They were very tired and certainly glad to get to the ranch and much surprised to see a cultivated white woman there. And indeed your mother [who hadn’t seen a white woman in many months] was glad to see them.”

Although he’d never been to the top of the mountain, Stratton claimed to know a route that should work. To Sara and John’s enormous gratitude, he offered to accompany them to the 9,157-foot peak —and better yet, he could provide both riding and pack animals.

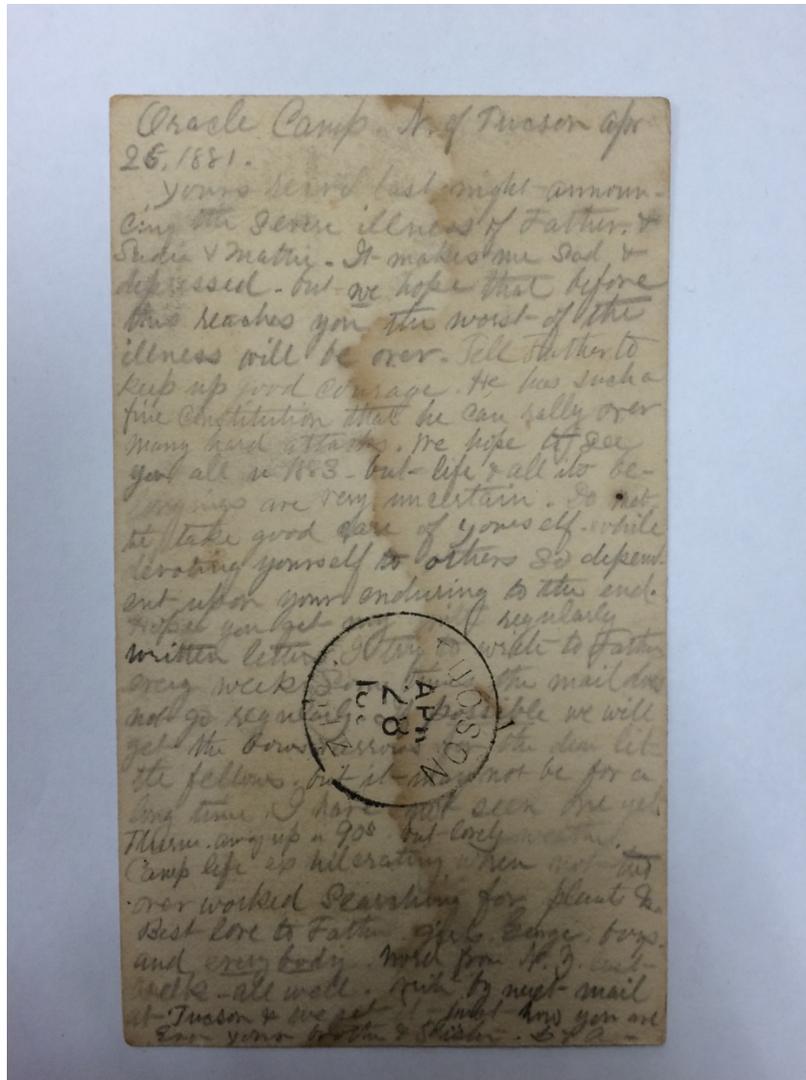


Fig. 7-5. Sara's postcard to her family from Oracle Camp. Photo by Wynne Brown. Original at the University and Jepson Herbaria Archives, University of California, Berkeley.

Two days later, the three of them set out early, passing abandoned mine shafts and bare hillsides that had been logged earlier. Soon the trail rose so steeply they had to dismount and lead their horses, but eventually, slowly, between pauses to pant and gasp, they reached the highest peak of the Santa Catalinas.

“We christened it Mount Lemmon,” wrote Stratton, “in honor of Mrs. Lemmon, who was

the first white woman up there. I chopped the bark off a great pine tree on the very top and we all carved our names.” (Apparently, the tree blew down in the early 1960s.)

According to the collection records Sara and John sent Asa Gray, there at the top was “a fine deer park” with “thousands of acres of pine trees large and abundant enough for fine lumber.”

John also reported Stratton shot a huge buck and later watched as a mountain lion carried it away; the lion was so large that neither the antlers or feet of the deer touched the ground. They also saw a new species of parrot—and most exciting for John, there was the tree he was hoping for most, *Pinus arizonica*, a new species of pine!

Hardships and all, John summarized their experiences in the mountain range as:

Suffice it to say, perhaps no more vivid and pleasing contrasts, no more new and valuable floral treasures, no more interesting zoological discoveries, can be met with elsewhere in the large Territory of Arizona, than in this terra incognita, this forest in the mountaintops, this museum of natural history, the heart of Santa Catalina.

Perhaps John should have saved his proclamations—for later that same year, they’d find another botanical paradise in a sky island not too far away, and then in 1882 they’d encounter a third one that was even richer in “new glories.”

But for now, on May 12, the *Arizona Weekly Star* announced that the Lemmons had discovered many new plants, including twenty-one new species of ferns as well as a large number of grasses. Just as Sara and John had stood on the shoulders of the botanical giants before them like Asa Gray, Cyrus Pringle and Georg Engelmann, so would future ecologists, like

the great Forrest Shreve twenty years later, rely on their work.

Fortunately for the naming of the peak, Emerson Stratton had a valuable family connection: His daughter Edith married George Kitt, whose uncle was George Roskrige, the early Pima County surveyor. Stratton went on to write, “When Mr. Roskrige made a map of the country about 1904, he put in the name Mt. Lemmon.”



The plant lists John sent to Asa Gray and Georg Engelmann show that the couple then moved on to El Paso, collecting at the top of the Organ Mountains, along the Rio Grande, and even gathering poplar leaves in the streets of Franklin, Texas, now part of College Station in the Brazos Valley. (The lists are confusing since John’s field notes were apparently casual: Sometimes he indicated the same date for two different localities. For example, it’s unlikely they were in both Oracle Camp in the Santa Catalinas and near El Paso on May 12.)

From El Paso, they then took the train back west, getting off in Willcox and traveling by wagon to the Dos Cabezas Mountains where they collected a few oaks and even a maple similar to one they’d gathered in the Santa Catalinas (“yields good sap for sugar” was John’s comment).

They then traveled on to the Chiricahua Mountains where they stayed in Teviston (re-named Bowie in 1910) along the railroad line. Once again, they benefitted from Sara’s ability to make new friends as they became acquainted with Captain James H. Tevis. Her connections to old friends was valuable as well: They moved on to Fort Bowie where the surgeon was a Dr. Ord, the brother of General Edward Ord of the Western Division, who happened to be one of Sara’s Santa Barbara friends.

The fort itself was near the dreaded and infamous Apache Pass in an area still vulnerable to Indian attack—but oh-so-tempting to the couple since it had never been botanized before.

By now it was the end of May and scorchingly hot, but John made several forays out from the fort and found a new species of wild potato, a discovery that made them yearn even more to return in a couple of months once the summer rains had started.

Col. George W. Baylor, commander of the Texas Rangers, promised to keep Sara and John under military protection if they came back later in the year—and Dr. Ord assured them of free housing at the fort.

So, with those reassurances, they packed up their hundreds of plant specimens, caught the train to Tucson, and returned to Oakland.

No sooner had they arrived home that they immediately renewed their railroad passes, determined to return to southern Arizona once the rains set and the “flora will be changed and renewed.”

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