
CADWALADER RINGGOLD, U. S. NAVY Gold Rush Surveyor of San Francisco Bay and Waters to Sacramento, 1849-1850

by Alan Fraser Houston

By early summer of 1849, hundreds of ships were anchored in the harbor of San Francisco. Forty-niners were scrambling for available means of transportation to the gold region, and suppliers faced the same difficulties as the gold seekers. Navigation by ships on the Sacramento River was severely limited by reefs, bars, mud, and tortuous channels. Groundings were frequent and losses occurred. Ships were forced to unload to smaller vessels at either San Francisco or across the bay at Benicia, resulting in delay, inconvenience, and increased expense. Non-existent charts of the harbor, bays, rivers, and shoals compounded the hazards. The business community and local government quickly recognized the problem and just as quickly proposed a solution: enter marine pioneer Cadwalader Ringgold, USN.

On June 20, San Francisco's *Alta California* announced:

Enterprising—A subscription is on foot among our business men¹ to survey and buoy the Suisun bay and the Sacramento river between this port and Sacramento city. Captain Ringgold, U S N, has been employed to make the survey, and there is every prospect that it will be speedily accomplished.²

Ringgold later replied:

[T]he enterprising citizens of San Francisco . . . in the absence of any authentic charts, saw the necessity of careful and immediate surveys. Being at the time in California,³ I was requested to undertake the laborious and toilsome duty of surveying a vast and unknown sea, buoying out the channels, and removing the many obstacles attending intercourse with the mines.⁴

Who was Cadwalader Ringgold? What were the eastern origins of this noted but largely undocu-

mented nineteenth-century marine explorer? What were his contributions to San Francisco and the gold regions? The answers to these questions begin with his family's distinguished military tradition and with his own exemplary naval career.

The sixth of eleven children, Cadwalader Ringgold was born on August 20, 1802, at "Fountain Rock," his father's 18,000-acre estate in Washington County in western Maryland. His father, Gen. Samuel Ringgold of the Maryland militia, served in the Maryland state senate and, except for one term, as a U. S. congressman from 1810 to 1821. Cadwalader's mother was Maria Cadwalader, the daughter of the distinguished Gen. John Cadwalader of Philadelphia. Gen. John Cadwalader had been commander of the "silk stocking company" of Philadelphia at the opening of the Revolutionary War, so-called because it was recruited from the elite young men of Philadelphia. Under General Cadwalader's command, however, they were a well-drilled, efficient, and effective force. General Cadwalader led his Pennsylvania troops in the winter campaign of 1776-77 and received General Washington's recognition: "A man of ability, a good disciplinarian, firm in his principles, and of intrepid bravery."⁵ In defense of General Washington, General Cadwalader later successfully fought a duel with Gen. Thomas Conway after the latter had sought to undermine Washington's leadership.

Cadwalader Ringgold's older brother, Samuel, was born at Fountain Rock in 1800 and graduated from the U. S. Military Academy at West Point in 1818 with high honor. He began service as a lieutenant of artillery and became an aide to Gen. Winfield Scott. Prior to the Mexican War, while at Fort McHenry, Baltimore, he organized the first corps of flying artillery—a corps capable of rapid move-



U.S. Brig of War *Porpoise*, unsigned oil painting, ca. 1836. Lt. Cadwalader Ringgold sailed the 224-ton ship from Hampton Roads, Virginia, to the Pacific Northwest via the South Seas and Antarctica, as part of the U.S. Exploring Expedition under the command of Lt. Charles Wilkes, 1838-1842.
Courtesy Peabody Essex Museum, Salem, Mass.

ment. Immensely popular and highly respected, Major Ringgold was wounded at Palo Alto in the Mexican War on May 8, 1846, while personally directing cannon fire. He died at Port Isabel, Texas, on May 11, and was buried with full military and civic honors on December 22, 1846, at Green Mount Cemetery in Baltimore.

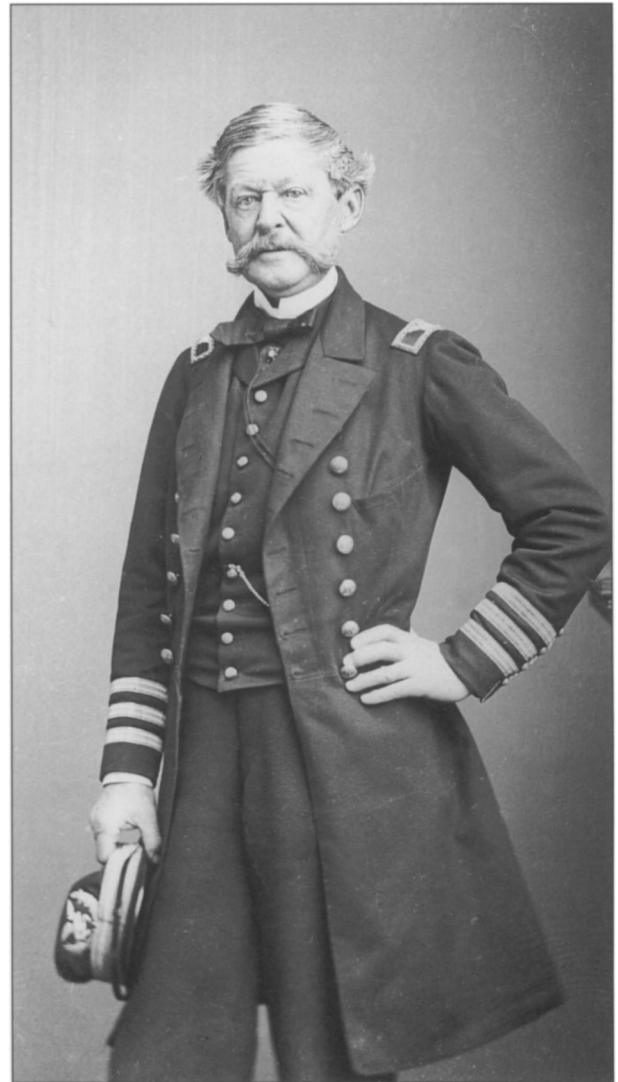
Cadwalader Ringgold's half-sister, Marie Antoinette Ringgold, the "beautiful and accomplished"⁶ sister of George Hay Ringgold, moved to California⁷ and married the prominent Gen. Henry M. Naglee in San Francisco on May 26, 1865.⁸ The woman jilted by Naglee's marriage to Miss Ringgold subsequently published years of his correspondence for the world to read, titled: *The Love Life of Brig. Gen. Henry M. Naglee, consisting of a correspondence on love, war and politics.*⁹

After the death of his wife in 1811, Cadwalader's father married Marie Antoinette Hay in 1813. The result was another five children, one of whom was Lt. Col. George Hay Ringgold. Born in 1814, this half-brother to Cadwalader and Maj. Sam Ringgold graduated from the U. S. Military Academy in 1833. George Hay Ringgold later became a paymaster during the Mexican War, and was promoted to Lieutenant Colonel on May 28, 1862. Known as an amateur painter,¹⁰ he first settled in California in 1855, and was in charge of paymasters for the Department of the Pacific during the Civil War. He died in San Francisco on April 5, 1864, and, following a funeral with a military escort of six companies, was buried at Calvary Cemetery, now part of Cypress Lawn, San Mateo County. Flags flew at half-mast over public buildings, forts, hotels, and ships in the harbor.

The Cadwalader and Ringgold family traditions¹¹ continued with the appointment of Cadwalader Ringgold as midshipman on March 4, 1819. The appointment had the assistance of his father, who had written to the Secretary of the Navy, Benjamin W. Crowninshield (1772-1851), on April 1, 1818, seeking a warrant for midshipman. The senior Ringgold described his son as about fifteen years of age, "of good size, remarkably manly and amicable in his disposition" and "will never disgrace any commission his country may bestow on him." Young Cadwalader had "early predilections for that service [Navy]" and "his education has been directed to that object."¹² Cadwalader's record of over forty-five years of naval service would fulfill his father's every expectation.

Cadwalader became a Navy lieutenant in 1828. In his early service, he served aboard the *Columbus* in the Mediterranean during 1820 to 1821, and against Caribbean pirates in 1822 and 1823. He returned to the Mediterranean with the *North Carolina* from 1825 to 1826. He was with the *Vandalia* from 1828 to 1832, and the *John Adams* in the Mediterranean from 1834 to 1835.¹³ His introduction to California came as commander of the brig *Porpoise* from 1838 to 1842 with the Wilkes expedition, known officially as the United States Surveying and Exploring Expedition, but usually as the U. S. Exploring Expedition—one of the major explorations of the nineteenth century. Charles Wilkes (1798–1877) was appointed midshipman a year before Ringgold in 1818 and lieutenant two years before Ringgold in 1826. In 1830, Wilkes became responsible for the Navy's division of charts and instruments.

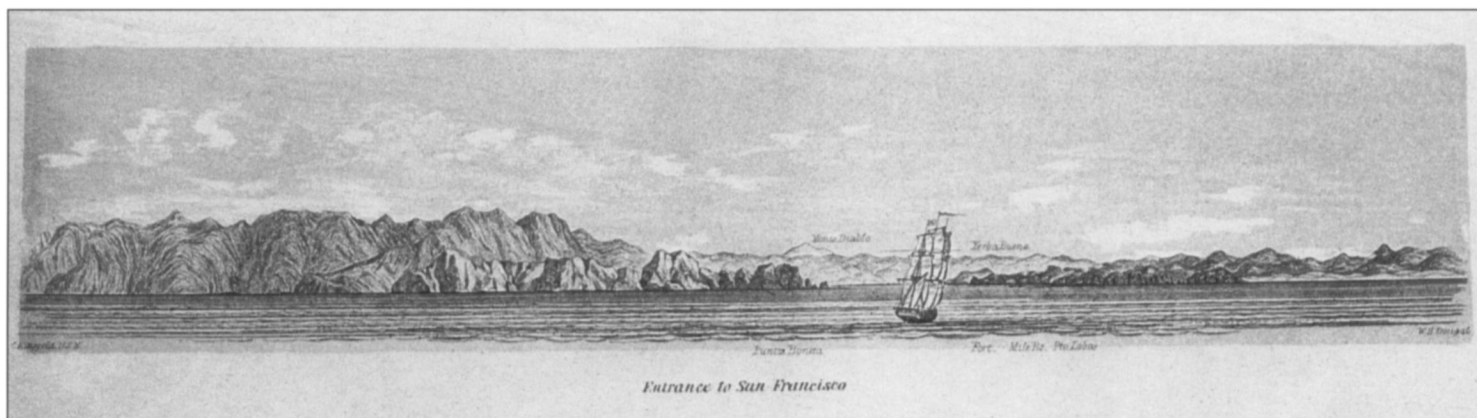
In 1836, Congress authorized a surveying and exploring expedition to the southern seas. Wilkes was assigned command after Capt. Thomas ap Catesby Jones (1790–1858) resigned in frustration over long delays in preparing the expedition.¹⁴ The compliment of scientists, naturalists, botanists, and others was borne by two tenders, two sloops-of-war, *Peacock* and *Vincennes*, a store-ship, *Relief*, and the brig-of-war *Porpoise*. The *Porpoise*, 224-tons, was built in 1836 at the Charlestown (Massachusetts) Navy Yard and was commanded by Ringgold at the invitation of Wilkes. On August 18, 1838, the expedition sailed south from Hampton Roads, Virginia, and followed the South American coast to Orange Harbor at Tierra del Fuego. From there, in late February and March of 1839, several vessels sailed south for an exploration of Antarctic waters. After returning to Orange Harbor, the expedition next



Capt. Cadwalader Ringgold (1802-1867).
Library of Congress.

sailed north to Chile and Peru before heading west to the Samoan Islands and Australia. Leaving Sydney, they again sailed south and explored fourteen hundred miles of Antarctica in January and February of 1840, thus proving the existence of a southern continent. The French had been there almost simultaneously, but had only briefly sighted land before reversing course to the north.

The squadron ultimately proceeded on to Fiji and the Sandwich Islands (Hawaii). While at the Fiji Islands, the expedition captured the islanders' chief, Vendoni (or Vendovi), who was taken prisoner aboard the *Vincennes*. Seven years prior, Fijians, inspired by Vendoni, had killed and eaten eleven crewmen of the Salem, Massachusetts, brig *Charles Doggett* (or



Lithograph view of San Francisco Bay. From Cadwalader Ringgold, *A Series of Charts with Sailing Directions, Embracing Surveys of the Farallones, Entrance to the Bay of San Francisco . . .* (Washington, D.C.: 1852). Courtesy of the author.

Dagget).¹⁵ Shortly after Vendoni's capture, Fijians, at the island of Malolo, ambushed and killed two highly popular officers of the expedition, one the only son of Wilkes's widowed sister. Unlike retribution for the crewmen of the *Charles Doggett*, revenge at Malolo was swift and severe. With Wilkes delayed by grounding on the north side of the island, Ringgold led an assembled eighty-man force from the south side. Two villages were destroyed and, sparing women and children, an estimated eighty-seven natives were killed before the Fijians capitulated.

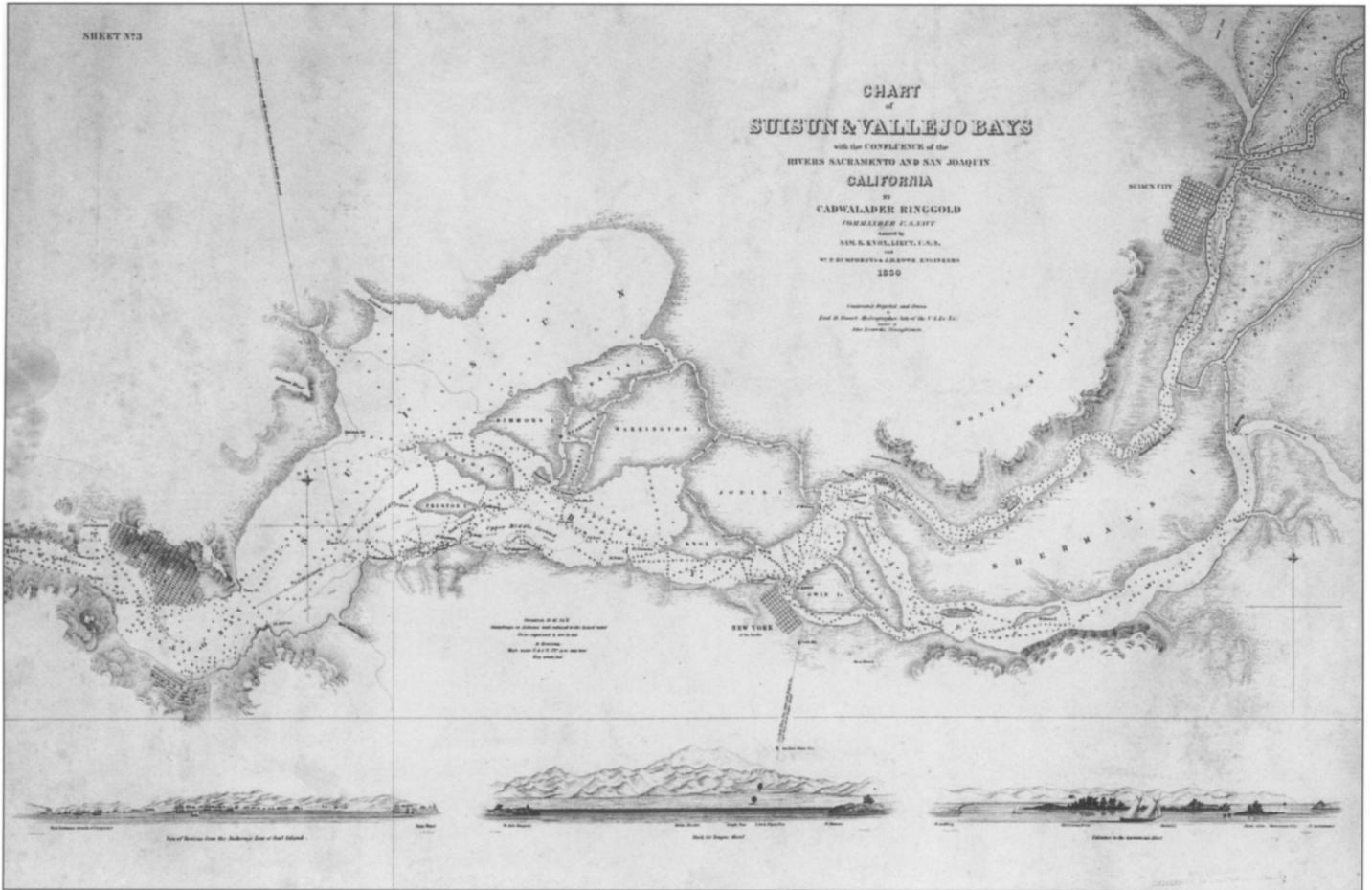
In mid-1841, the expedition sailed east across the Pacific and began an exploration of Oregon and the Pacific Northwest. Transferring his command to the *Porpoise*, Wilkes remained in the Northwest, sending Ringgold south in command of the *Vincennes*. With the captured Vendoni still aboard, the *Vincennes* sailed from the Columbia River on August 10, 1841, and arrived in San Francisco Bay on August 14. Here, Ringgold learned of President William Henry Harrison's sudden death, after only four weeks in office, and was brought "almost to tears."¹⁶ On the eighteenth, to mark the third anniversary of the expedition's departure from Hampton Roads, the ward room officers held "a grand dinner celebration" for Ringgold.¹⁷ The officers apparently had more than dinner: "By night tha Were drunk Enough Singing Halloing & making the most Hediou noise." Ringgold, however, entertained only a few guests and "struck the Californians as 'severe and forbidding'" and "too busy to be social."¹⁸

Ringgold had work to do: on the nineteenth of August, under cloudy weather and breezes from the south and west the crew was "Employed fitting out the party for surveying."¹⁹ On the twentieth, with some of the crew setting up a portable house on

shore for survey instruments and with the *Vincennes* anchored at Whaler's Harbor next to present-day Sausalito, Ringgold left with seven boats and about sixty officers and men to begin an anticipated six-week exploration of San Francisco Bay and the Sacramento River.²⁰ By the twenty-third, they reached the residence of "Captain Suter" [sic] at New Helvetia, in present-day Sacramento. Sutter had warning of the explorers' approach: he sent horses for the officers, put on his uniform, and fired his cannon on their arrival.

Leaving Sutter's Fort on the twenty-fifth,²¹ the explorers continued up-river, passed the mouth of the Feather River, and encountered rapid water and snags before arriving at a local landmark, the Indian fish weir, five days later. With increasing difficulty, the group continued another several miles before stopping at lat. 39°13'39"N, long. 122°12'17"W, near today's Colusa, California.²² From there, they descended the river, taking an Indian hostage after another Indian stole the "bowie-knife-pistol"²³ belonging to the expedition's naturalist, Dr. Charles Pickering. When the hostage later attempted escape, and with "a dozen triggers ready to be pulled,"²⁴ Ringgold held back firing. Repassing the Feather River, and low on provisions, the survey party again spent several days at Sutter's. The expedition returned to Whaler's Harbor and reboarded the *Vincennes* on September 9 after an absence of twenty days.²⁵

On September 7, 1841, Wilkes ordered an overland party from Vancouver to explore south through Oregon to northern California. The group reached the headwaters of the Destruction River on October 2 and followed it to the Sacramento River, arriving at Sutter's Fort on October 19. Here James Dwight Dana, the expedition's geologist and an outstand-



ing American geologist of the nineteenth century, informed Sutter that he had seen “the strongest proof and signs of gold.”²⁶ Continuing on, with the loan of a boat from Sutter to carry the sick, they reached San Francisco Bay on October 23.

Following the completion of the explorations in the Northwest, Lt. Wilkes on the *Porpoise* and other members of the expedition on the *Oregon*²⁷ arrived in San Francisco on October 18 and 19, respectively. The combined expedition left San Francisco Bay on November 1, 1841, nearly losing Wilkes and the *Vincennes* on the bar, and recrossed the Pacific to Hawaii, the Philippines, and Singapore. They passed the Cape of Good Hope and arrived in New York on June 10, 1842, with the *Porpoise* arriving several weeks later. During three years and eleven months at sea, Ringgold and his crew had sailed a total of 95,000 miles and lost only two men during the voyage.

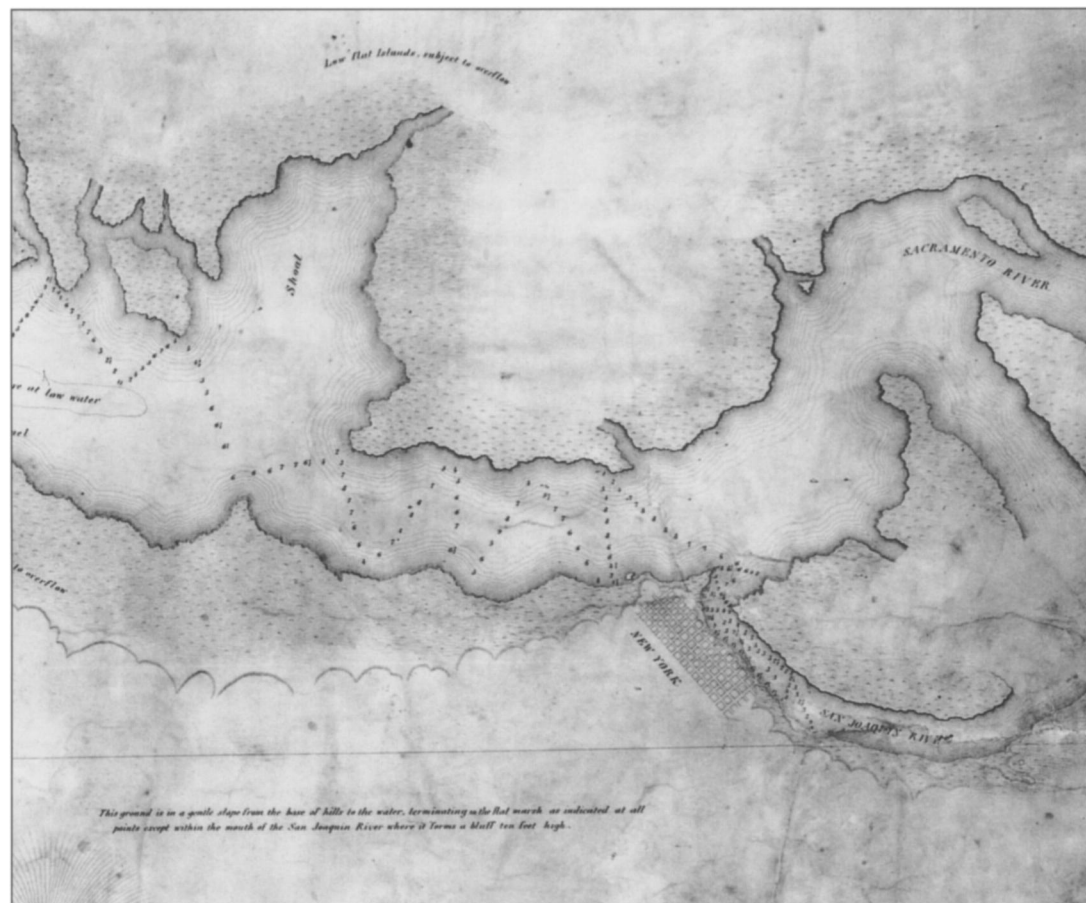
The expedition was greeted by an apathetic officialdom and Wilkes was soon court-martialed and faced multiple charges, chiefly excessively harsh pun-

ishments and failure to adequately document the Antarctic discovery. Lt. Wilkes often exceeded the twelve lashes allowed by law, and poor log-keeping allowed the French to claim the first discovery of Antarctica. Thus, the officers of the expedition spent their days in the courtroom providing testimony. Ultimately, Wilkes received a reprimand from the court. The massive number of specimens the expedition brought to Washington ultimately became the foundation of the Smithsonian’s collections and the expedition’s scientific achievements were recognized internationally. The reports of the U. S. Exploring Expedition, compiled over the course of the next decade, are very rare today. Only about one hundred sets were issued and many of these were presented to foreign dignitaries and foreign governments. Wilkes published his own account of the voyage, which was issued in five volumes and an atlas in 1844. A sixth volume, the work of ethnologist and philologist Horatio Hale, was published in 1846.

At the time of Ringgold’s visit in 1841, San Fran-

Compare Ringgold's *Chart of Suisun and Vallejo Bays* [at left] and a detail of the preliminary *Chart of Suisun Bay* [right] prepared by Blair, Hammond, and Sherman, which circulated as a promotional document by land speculators representing New York of the Pacific, a would-be shipping and commercial town at the mouth of the San Joaquin River. Early maps of varying accuracy were often utilized and circulated in this manner by land developers and other salesmen.

Courtesy Bancroft Library.



cisco Bay was sparsely settled and visited infrequently by merchant vessels. Consequently, there was little demand for marine surveys and charts. However, that need changed dramatically as San Francisco experienced a transformation unlike any that had occurred in its history or, perhaps, even in the history of the world: the discovery of gold in 1848 and the gold rush of 1849.

In August of 1849, Ringgold, in command of the chartered brig *Col. Fremont*, began the definitive survey of the bay region. The Bay of Suisun was the highest priority, since it was the "most difficult to navigate, and least understood."²⁸ The Bay of Suisun was unquestionably problematic for gold seekers and goods moving up-river to Sacramento and the gold fields. "In May last [1849]," observed San Francisco's *Alta California*, "so little was known of Suisun Bay that pilots were constantly running vessels, even of light draft, on the banks and shores of that bay; and sea going ships did not attempt to navigate the bay except to lay up as storehouses at Stockton

and Sacramento city."²⁹ It is not surprising that Ringgold and his crew, some veterans of earlier expeditions, first surveyed and charted the Sacramento River from the Strait of San Pablo to the Bay of Suisun and located a deep channel in the latter. The survey placed heavily anchored buoys marking the channel, and, through the printing firm of Messrs. Woodruff and Addison, charts with sailing directions were available to mariners in a few weeks time.

Using its base, conveniently located on the plain near the City of New York of the Pacific (present-day Pittsburg), the hydrographers were able to extend their system of triangulation and azimuths toward the east and Sacramento, but also to the west and to San Francisco Bay and San Francisco. However, this portion of the survey was not without problems. Vandals cut down a "large signal pole, placed, at much time and trouble, at an important point in the triangulation."³⁰ In the summer of 1849, many interests competed for shipping traffic, land sales, and settlement. A charted channel that took commerce

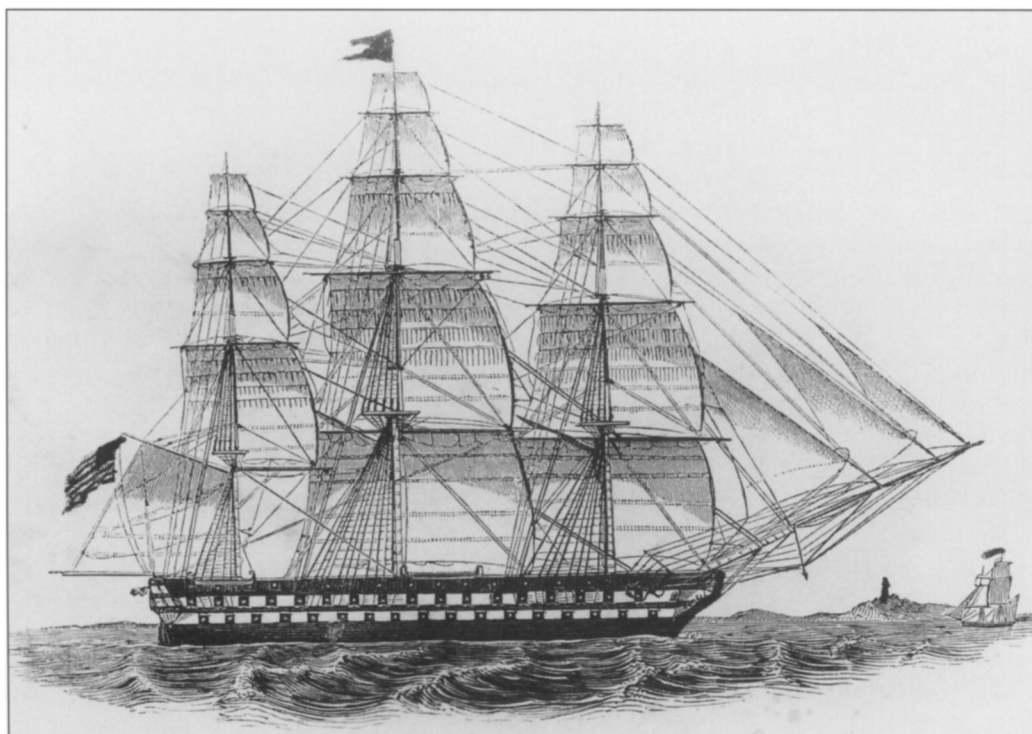
away from a prospective city was a threat, and an isolated pole was a tempting target. The newspaper asked for information regarding the perpetrators and announced a reward before reporting that "Capt. Ringgold . . . will leave immediately, and extend his surveys up to Sacramento City."³¹ Winter offered the advantage of the rivers at their lowest stage, making exploration of their channels easier, an advantage not lost by Ringgold and his men.

While Ringgold was away, the *Alta California* created a swirl of controversy when it reported not on Ringgold's activity but that of others.³² Lithographed charts had been issued of Suisun Bay with soundings "from Karquinez Straits to the site of their projected city [New York of the Pacific], from a survey made . . . by Lieuts. Blair and Hammond, U. S. N. . . . we trust it will be useful to the proprietors in building up their enterprise, and reaping a suitable reward for industry and labor expended thereon." This attribution of the chart to officers of

the Navy was in fact incorrect, since only Blair was a Navy lieutenant; Hammond was U. S. Army (USA).³³

A third surveyor with Blair and Hammond was Lt. William Tecumseh Sherman, USA, who had also worked on the survey of New York of the Pacific, whose intensely competitive proprietors, Messrs. Stevenson, Parker & Co., gratuitously distributed the charts mentioned above. The attention given the Blair/Hammond/Sherman survey provoked sharp controversy and a flurry of letters to the press—the first round, a letter simply signed: "The Navy."

"The Navy's" letter angrily proclaimed that the officers responsible for the survey and chart had no approval or sanction from the Navy. The writer noted inaccuracies: the chart placed New York of the Pacific thirty-seven miles from the ocean rather than the actual fifty-seven miles and that, contrary to claims, the only buoys ever placed had been those of Ringgold's in August. The letter stated that "every



The U.S.S. *Ohio*, shown in this lithograph, was launched in 1820 and quickly became the pride of the Navy. After extensive retrofitting in the late 1830s, the seaworthy vessel played a critical role in the siege of Vera Cruz during the Mexican War, and afterward continued to serve with both the Atlantic and Pacific fleets. *Courtesy Collections of the Mariners' Museum, Newport News, Va.*

advantage claimed . . . for New York of the Pacific, exists in the imagination of the proprietors,"³⁴ a theme to be reiterated by others. For instance, world traveler, writer, and lecturer Bayard Taylor visited San Francisco and the gold regions in 1849 and his vision was clearly more accurate than that of the proprietors. He characterized the city of New York of the Pacific:

its aspiring but most awkward name, is located on a level plain . . . backed by a range of barren mountains . . . There never will be a large town there, for the simple reason that there is no possible cause why there *should* be one. Stockton and Sacramento City supply the mines, San Francisco takes the commerce, Benicia the agricultural produce, with a fair share of the inland trade, and this Gotham-of-the-West, I fear, must continue to belie its title.³⁵

In fact, the three officers, Sherman, Blair, and Hammond, had borrowed a four-oared boat from the mail steamer *California* and then convinced the crew of the *Ohio*, the Pacific Squadron's flagship lying at Sausalito, to supply them for the purpose of laying out military grounds near Benicia. "The Navy" railed that such a boat was far too small to carry adequate surveying equipment and heavy buoys and anchors as had been suggested. The small party returned in the short time of ten days and "the Navy" argued that "it was impossible for any party in so small a boat, to have taking [sic] the soundings, measured the angles, and computed the distances, necessary for a correct chart, in *ten months* . . . the U. S. Schooner *Ewing*, drawing 9 feet of water, had visited "New York of the Pacific" twice within the past six weeks, with good pilots on board, yet both times she grounded at the slough of N. York.³⁶

A letter in defense of the May 1849 survey by Sherman, Blair, and Hammond was immediately forthcoming. Sherman wrote: "The circumstances under which we made the preliminary survey of Suisun Bay, or the degree of perfection we gave the work is nobody's business save those interested. The Lithographic Map is as correct as we designed it, and in all its essential particulars has been confirmed by subsequent surveys . . ." ³⁷ This rare chart, located and reproduced here, can be compared with its Ringgold counterpart and demonstrates that it is of limited scope. It mainly serves to chart the immediate approach to New York of the Pacific.

It is apparent that Sherman and the others had acted in good faith and had made a brief, preliminary survey. The proprietors of New York of the

Pacific then used the survey to extol the virtues of their enterprise, misrepresenting the location's deficiencies and provoking "The Navy."³⁸ Whether Ringgold wrote the letter, sanctioned the letter, or even knew of the letter is not known, but it is likely that anyone associated with the Ringgold survey would have been offended by the limited chart touted by the proprietors of New York of the Pacific. At the time of the letter, published on November 1, 1849, Ringgold was away, finishing his survey of the Sacramento River and Sacramento City. It is highly likely that the letter emanated from Commodore Thomas ap Catesby Jones, commander of the Pacific Squadron and a friend of Ringgold's. In the Navy of the time, no subordinate would have dared to enter such a controversy.

Commodore Jones considered Benicia a port and city location far superior to San Francisco. Thomas Oliver Larkin sold Jones a number of lots at bargain prices for Jones's assistance in promoting Benicia, the projected city that Jones considered "my darling."³⁹ Jones took every opportunity to anchor the Pacific Squadron's fleet there and once ran the storeship *Southampton* aground enroute to Benicia—thus naming Southampton Shoal. Reflecting the chicanery of the times, Larkin asked Ringgold to prominently display Benicia on the latter's charts. However, Ringgold, faithful to his maritime cause, replied in a letter to Larkin:

you offered and gave me an additional sum, for my exertions in giving all the attention I could to the location of your favorite place, Benicia. A glance at the Charts will shew [sic] there was no lack of work on that portion of my Survey, which had attracted the admiration and attention of all men of science and experience. The Straits of Carquines and Benicia stand out in bold relief. The charts dont [sic] claim to embrace the topography and minute details of the interior. They were, as they express in the memoir, intended for practical navigators, and to assist in reaching the mines."⁴⁰

Not only was Jones a champion of Benicia against other upstart "cities," but his Welsh-English blood was probably still boiling from comments in early May by the *Alta California* in which the editorial "author traveled out of the record to disparage the Navy."⁴¹ The May editorial had read in part:

Thus has the enterprise of Col. Stevenson and his associates rendered a more important service to California than the entire naval force of the country, which has been stationed here for the last two years

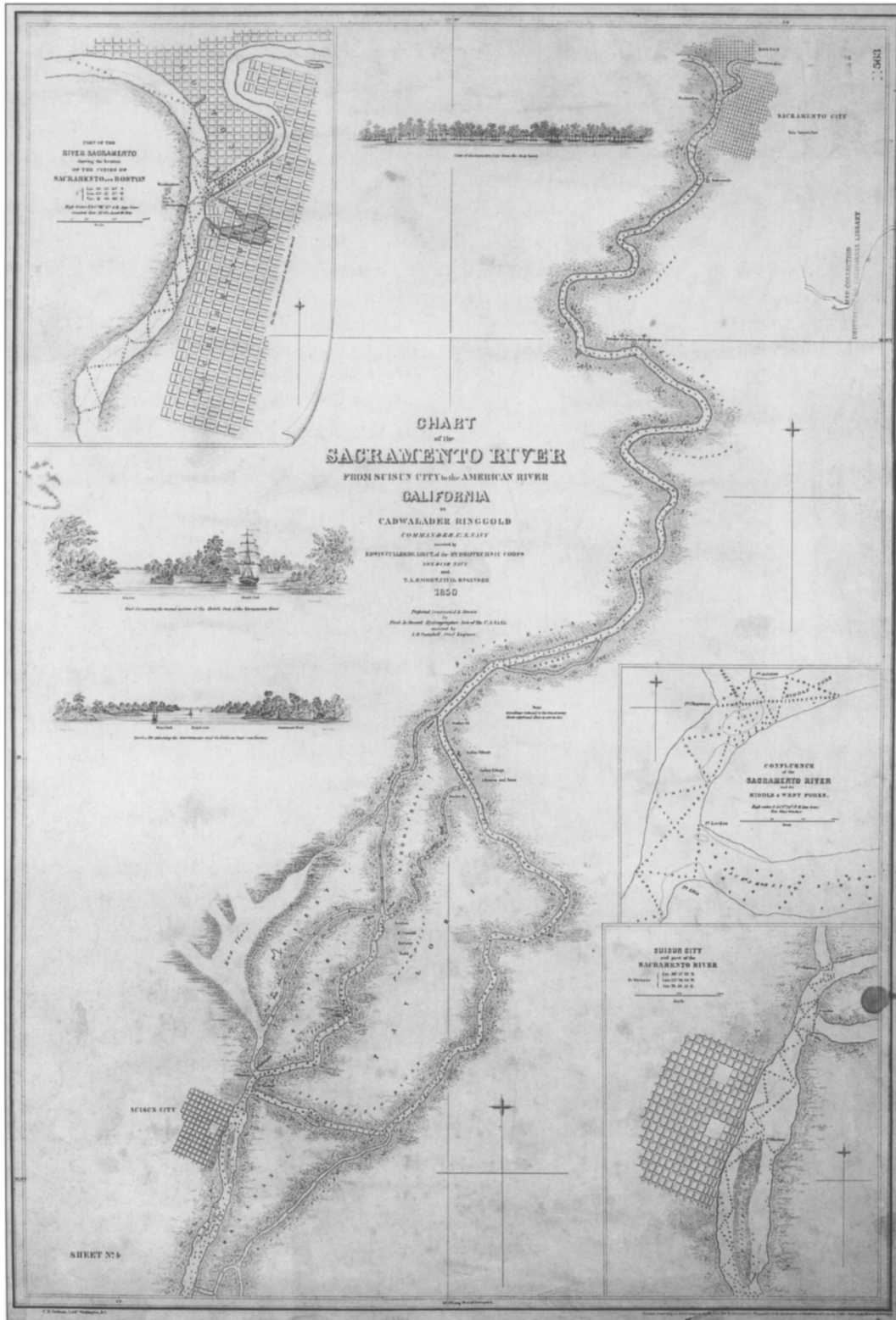


Chart of the Sacramento River, by Cadwalader Ringgold, Commander, U.S. Navy.
 Courtesy Bancroft Library.

... We have deemed this extended notice of this new city [New York of the Pacific] a duty we owe the proprietors thereof, for the pains they have taken and the expense they have incurred, in making an accurate survey of the Bay of Suisun, and the various channels leading from it to the rivers Sacramento and San Joaquin. They have thereby conferred a lasting benefit on the whole country, and deserve at least, this public acknowledgement of their enterprise.⁴²

Lt. Sherman's autobiography, written many years later, sheds light on his survey but omits mention of the controversy. In early 1849, Sherman's army pay was seventy dollars a month—at a time when servants were hiring at \$300 a month. Most soldiers had simply deserted by 1849, and only a few officers remained. Sherman recalled:

As there was very little to do, General Smith encouraged us to go into any business that would enable us to make money. R. P. Hammond, James Blair,⁴³ and I made a contract to survey for Colonel J. D. Stevenson his newly-projected city of "New York of the Pacific," situated at the mouth of the San Joaquin River. The contract embraced, also, the making of soundings and the marking out of a channel through Suisun Bay. We hired, in San Francisco, a small metallic boat, with a sail, laid in some stores, and proceeded to the United States ship Ohio, anchored at Saucelito, where we borrowed a sailor-boy and lead-lines with which to sound the channel. We sailed up to Benicia, and, at General Smith's request, we surveyed and marked the line dividing the city of Benicia from the government reserve. We then sounded the bay back and forth, and staked out the best channel up Suisun Bay, from which Blair made out sailing directions. We then made the preliminary surveys of the city of "New York of the Pacific," all of which were duly plotted; and for this work we each received from Stevenson five hundred dollars and ten or fifteen lots. I sold enough lots to make up another five hundred dollars, and let the balance go; for the city of "New York of the Pacific" never came to anything. Indeed, cities at the time were being projected by speculators all round the bay and all over the country.⁴⁴

At the end of Sherman's two-month leave of absence, he recalled, "[I] knocked off my work, sold my instruments, and left my wagon and mules with my cousin Charley Hoyt, who had a store in Sacramento."⁴⁵

The controversy was over by mid-November, when Ringgold returned again to San Francisco, his survey work completed as far as the city of Sacramento. Press comment was positive: "We have been

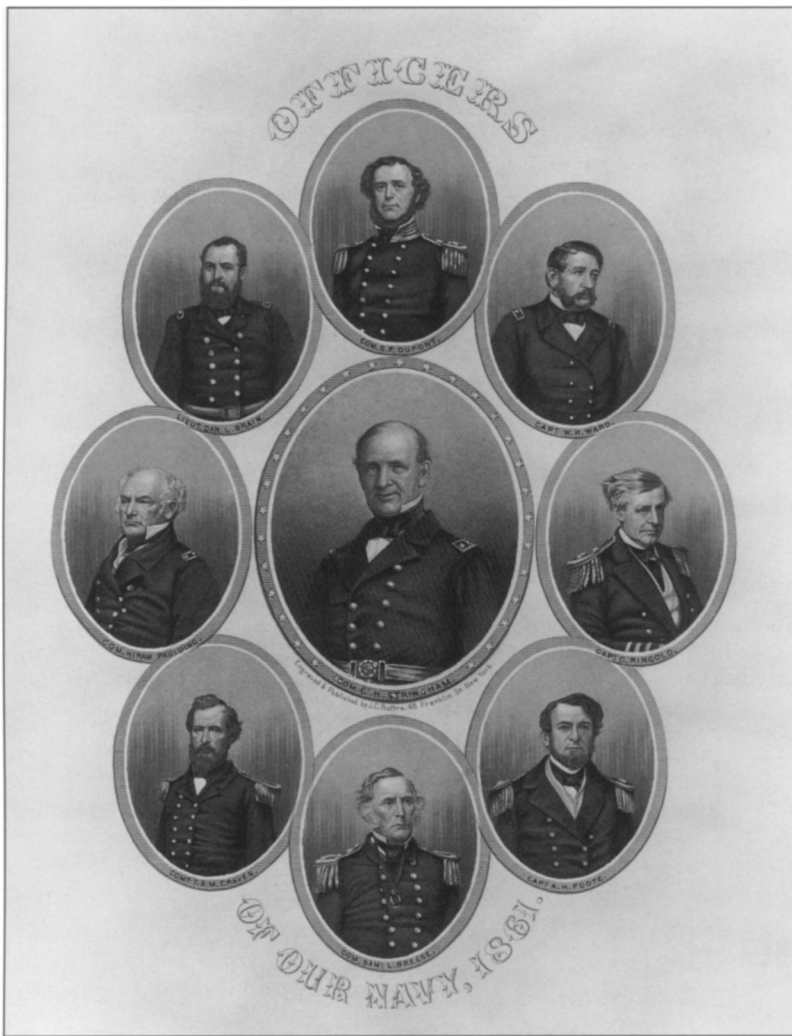
favored with an opportunity of examining portions of the charts in the course of construction, and as far as our judgment justifies, we are pleased to say they do credit to the officer who has faithfully prepared them, after so much time and labor. Doubtless they will incalculably assist in the safe and easy navigation of the whole route to the interior, and greatly facilitate the communication with our friends also."⁴⁶ A glance at the existing Ringgold charts confirms their comprehensive nature—from the Farallone Islands to Sacramento City.

At year's end, with another segment completed, that is, the East Bay, Suisun, and the Sacramento River (see the chart shown here), Ringgold chartered a schooner and began the work of buoying the harbor at San Francisco and the dangerous shoal known as Blossom Rock. Ironwork required to produce the buoys went slowly and delayed their progress.⁴⁷ Meanwhile, vessels continued to strike uncharted rocks within the harbor.⁴⁸

By the end of January 1850, Blossom Rock was marked by a large cylindrical buoy with a red flag, moored in three fathoms of water. Southampton Shoal, east of Angel Island, was marked by three buoys moored in two and one-half fathoms, and Invincible Rock, lying in the channel through the straits of San Pablo, was located for the first time and marked by a large white spar buoy. The *Alta California* reported that "The improvements have been made by order of the late Governor, General Riley. When the whole duty so essential to safe navigation, now in course of completion, shall have been executed, concise directions and a description will be prepared for the public advantage by the superintendent."⁴⁹

Ringgold became involved in another controversy that does not appear to be intentional. In the spring of 1850, the city of San Francisco announced that it would sell lots at auction, allowing one water-lot and one land-lot per bidder. This practice was subject to abuse: individuals such as Capt. Joseph L. Folsom used his clerks to bid for lots that they resold to him. Sensing the potential for abuse, a group of citizens, with Ringgold's name among them, petitioned the court. The group contended "that they [the Ayuntamiento] have not properly carried out the Mexican laws, have squandered the property of the city and performed other illegal acts for which they pray an injunction. The bill was filed and the injunction granted."⁵⁰

In response, public officials scrambled to avoid the appearance of impropriety.⁵¹ Ringgold graciously



This 1861 engraving, "Officers of our Navy," was done from photographs. Ringgold, a captain by that time, appears to the right of Comdr. Silas H. Stringham, center. *Courtesy National Portrait Gallery.*

and confidence, and elicited the approval of the Coast Survey, of Lieut. [Matthew] Maury of the Washington Observatory, and other scientific authority."⁵⁴ The necessity for accurate surveys and charts secondarily resulted in the formation of a Board of Pilot Commissioners and the appointment and registration of competent, experienced pilots.

The result of Ringgold's efforts was his volume, *A Series of Charts with Sailing Directions*, printed in Washington, D. C., in five editions. The fourth edition consists of forty-eight pages, five charts, and twelve lithograph views. Ringgold's name appears on the very first of the views, titled, "Entrance of San Francisco." In his preface, dedicated to William H. Aspinwall of the "Pacific steam mail line," Ringgold wrote: "I have decided to inscribe the charts to you . . . to offer you this testimony of

my sincere respect . . . You did me the honor, some years since, to invite me to take charge of the steamer *California*, the pioneer of your line, and to conduct her in safety to her destination; and although I was prevented, by official duty, from compliance with your request, I have not forgotten the kind terms in which the invitation was communicated."⁵⁵ The *California*, which left New York in October of 1848, before President Polk's official announcement of the discovery of gold on December 5, 1848, was the first of the Pacific Mail Steamship Company's vessels to arrive in California. The offer of the *California's* command to Ringgold was no small honor.

The charts and sailing directions encompassed the Farallones, the entrance to the Bay of San Francisco, the bays of San Francisco and San Pablo, the straits of Carquines [sic] and Suisun Bay, confluence and deltaic branches of the Sacramento and San Joaquin rivers, the Sacramento River to the American River, and included the cities of Sacramento and Boston.

side-stepped the issue and stated that he had only allowed his name to be used. In a public letter, Ringgold stated: "For obvious reasons, it does not become me to take part in the affairs of the city, and which properly belongs to the citizens more interested than myself, and who design a permanent residence. Not being acquainted with alleged facts, set forth in the 'Memorial' I deem it proper to request that my name be withdrawn therefrom."⁵²

After completing work on the Sacramento River, San Francisco Bay, harbor, and intermediate bays, the final phase was the survey and charting of the sea approaches, work completed in June of 1850.⁵³ Although some charts had been printed to satisfy pressing local needs, the full volume of charts and sailing directions took longer and ran several editions. At the end of 1851, the *Alta California* had only praise and gratitude for Ringgold: "The series of charts which he published have won for him respect

For the General Chart, Ringgold appended several other surveys to his own. For instance, at the time of Ringgold's survey, Lt. William Pope McArthur, of the *Ewing*, was in the Bay Area surveying for the selection of military and naval depots, and his survey of the city of Vallejo was included in the General Chart. Similarly, a survey of the San Joaquin River by C. D. Gibbs of California was included. Finally, to delineate the shoreline from Punto de los Reyes to the Golden Gate, Ringgold used the survey of the "justly celebrated Beechey."⁵⁶

In the preparation of the final charts, Ringgold was assisted by "Frederick D. Stuart, of Washington, a gentleman of great experience and skill in the hydrographic art, in all its details. All the observations and data upon which the charts are based and projected, have undergone his severe and searching scrutiny."⁵⁷ Stuart had been a hydrographer with the U. S. Exploring Expedition and also served with the later Ringgold-Rodgers-Brooke expedition as Ringgold's personal secretary. Albert H. Campbell, a young civil engineer who would later leave a mark in California, also assisted in preparing several of Ringgold's charts.⁵⁸

Ringgold sought to have his volume published by the U. S. government and enlisted influential friends, including Thomas Oliver Larkin, to assist him in his efforts. However, challenged by Senator Jefferson Davis, who refused to support publication of non-government surveys, Ringgold was unsuccessful. A major implication of Davis's position was that non-government, or non-U. S. Coast Survey, charts might be unreliable. Davis pointed to a discrepancy between Ringgold and the Coast Survey in the location of the Farallone Islands, but, in the end, the error was not Ringgold's, it was the Coast Survey's. In a calculation error discovered by Coast Survey Superintendent Alexander Dallas Bache, the latitude of South Farallone was off by five minutes (5') or approximately five miles—not inconsequential for a fog-shrouded mariner seeking entrance to the Golden Gate. In contrast, Ringgold's work was shown to be accurate to within three seconds (3"), a matter of yards not miles. Due to the remoteness of the California coast, it took many years for the Coast Survey to survey San Francisco Bay and adjacent waters. In fact, as late as 1858, topography executed, i. e., charted by the Coast Survey, was 1,889 miles of the Atlantic coast, 764 miles of the Gulf coast, and 259 miles of the Pacific coast. Ringgold, responding to local initiative, conducted his surveys effi-

ciently and accurately at a time when they were urgently needed.

A testimonial to the value of Ringgold's work ironically comes from a Sherman memorandum on the subject, written in the summer of 1850 when Sherman was in Washington. It is clear that Sherman considered the Ringgold surveys and charts, not his own, to be definitive:

If General Jones would apply for, and receive from the Navy Department the map of San Francisco Bay, as surveyed by Commander Wilkes when on his Exploring Expedition, it would facilitate any description I may be called on to give of Benicia and San Francisco— Also a map was subsequently made by Lieut. Ringgold U. S. Navy about July and August 1849, a copy of which may also be procured from the same office.

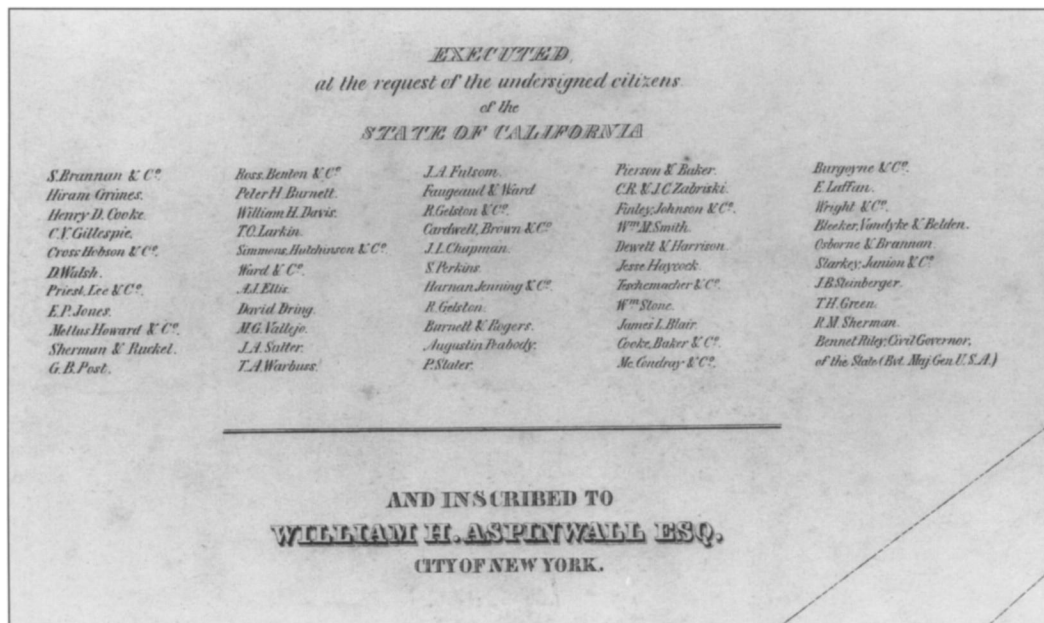
These maps give the shoreline of San Francisco Bay, with the soundings &c which would enable me to give the Committee on [Foreign affairs, crossed out] Commerce a good idea of those waters and the relative importance of the two places.

W. T. Sherman

July 28, 1850⁵⁹

Cadwalader Ringgold's subsequent career continued as successfully as it had to 1851.⁶⁰ Following his California surveys, he was assigned to duty in Norfolk, Virginia. Working with the Bureau of Construction, Equipment and Repair, he participated in the selection of "a suitable location for a Dock Yard for the [Navy's] Pacific station,"⁶¹ which became the Mare Island Navy Yard. In August 1852, with Commodore Matthew Perry (1794-1858) and others, Ringgold served as a member of the Board of Examination for the midshipmen of the Naval Academy at Annapolis. Ringgold would not be ashore long, for in mid-June 1853 he again sailed from Hampton Roads, Virginia. This time, on the flagship *Vincennes*, he anticipated a long surveying expedition to the western Pacific and the Far East.

During this expedition, known as the North Pacific Surveying and Exploring Expedition, or the Ringgold-Rodgers-Brooke Expedition, a sister to the more famous and simultaneous mission of Commodore Matthew C. Perry, Ringgold became sick in July 1854 and was sent home. A few months later, on September 21, 1854, the *Porpoise*, also with the expedition, parted company with the small fleet. The *Porpoise* was never seen again, presumably lost in a typhoon. Ringgold was declared unfit for active



Detail of the inscription to the fourth edition of Cadwalader Ringgold's volume *A Series of Charts with Sailing Directions*, "executed at the request" of prominent early Californians including M.G. Vallejo, J. A. Sutter, S. Brannan, Peter H. Burnett, Thomas O. Larkin, and forty-nine others. Ringgold's inscription was a tribute to W.H. Aspinwall, founder of the government-contracted Pacific Mail Line in 1848 and the Panama Railroad, completed in 1855. The U.S. Pacific Mail Steamship *California*, first of the line's three trade ships, was the first steamer on the West Coast. Ringgold's naval commitment prevented him from accepting the high honor of commanding Aspinwall's ship. *Courtesy Bancroft Library.*

service by a board of naval physicians convened by Perry, and was placed on the reserve list by the Naval Retiring Board on September 13, 1855. Ringgold recovered from his July 1854 illness, intermittent fever (malaria), in a few weeks. Determined to fight for his career and his reputation, Ringgold refused to accept the board's decision. After petitioning Congress unsuccessfully, he appealed to a Court of Inquiry. After a long struggle—almost three years—Ringgold was returned to the active list on January 23, 1858, retroactive to April 2, 1856.

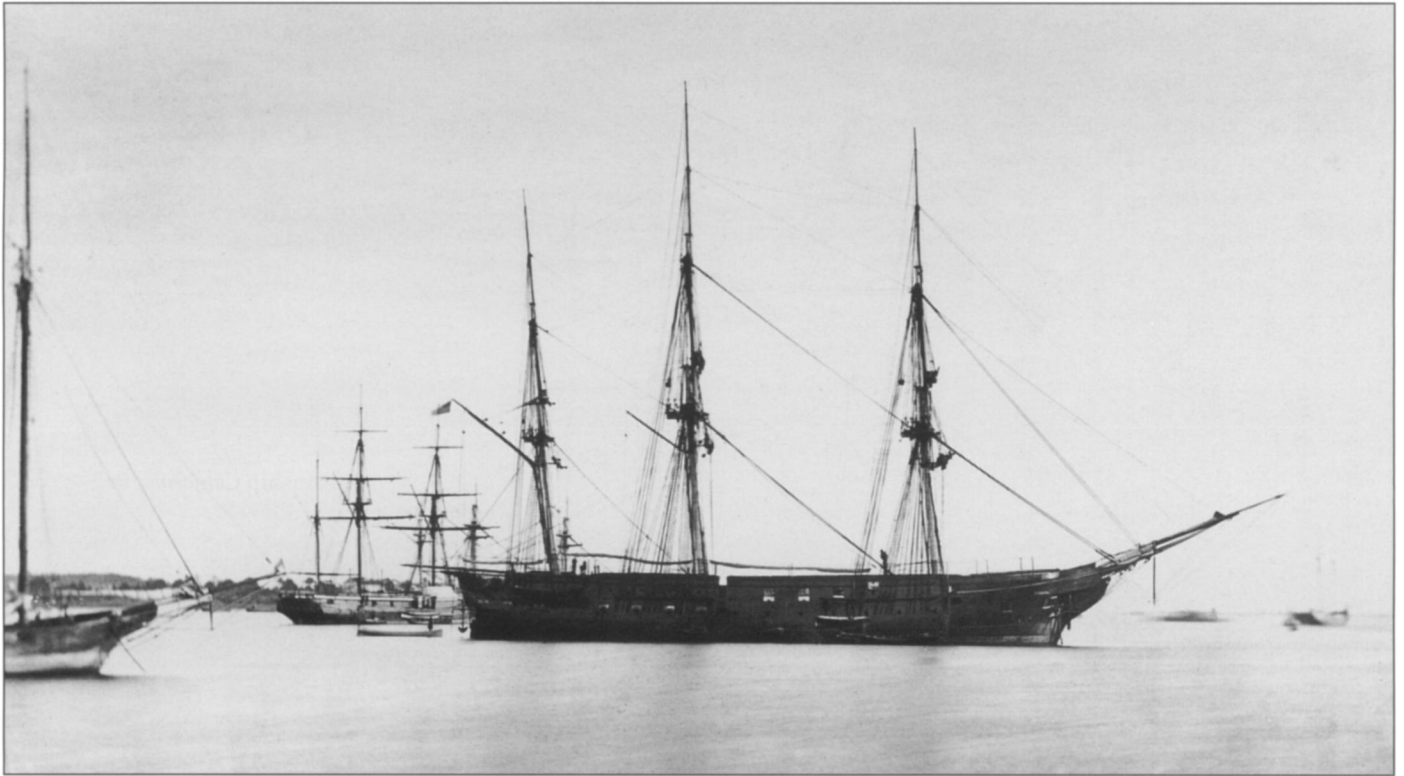
For the next several years, Ringgold remained in Washington, where he worked on charts from the recent expedition. In fact, charts of the western Pacific from the Ringgold-Rodgers-Brooke Expedition were used by the U. S. Navy in World War II,⁶² as were some from the U. S. Exploring Expedition.⁶³ Ringgold even found time to socialize with other Washington, D. C., notables at one of President Buchanan's 1859 receptions at the White House.⁶⁴ In late 1859, he again served as an examiner at the Naval Academy.

After the onset of the Civil War, Ringgold, now Captain Ringgold, was ordered on September 9, 1861 to proceed without delay to Hampton Roads and report to Flag Officer Silas H. Stringham to command the U. S. frigate *Sabine*. Assigned to the southern division of the Atlantic Blockading Squadron, Ringgold and the *Sabine* were ordered to take up station off

Georgetown, South Carolina. The *Sabine*, a 44-gun frigate and fast sailer of 1,726 tons, was laid down in 1822 at the New York Navy Yard, but not completed until 1855. She was one of a number of frigates built to Brandywine plans, the standard design for frigates of the U. S. Navy until the end of the era of sailing ships-of-war.

On November 1, 1861, Ringgold and the *Sabine's* crew heroically rescued a battalion of four hundred Maryland marines from the sinking steam transport *Governor* during a severe storm that swept the Union fleet approaching Port Royal, South Carolina. For this effort, and for the February 1862 search and rescue of the disabled ship *Vermont*, Ringgold received commendations from the Maryland legislature and the United States Congress. He also received a gold medal from the Life Saving Benevolent Association.

From November 1862 to February 1863, Ringgold and the *Sabine* cruised the Azores, the Cape Verde Islands, the coast of Brazil, and back to New York in search of the notorious Confederate raider *Alabama*. Ringgold very much regretted that "it has not fallen to our lot to encounter the *Alabama*,"⁶⁵ and, indeed, it fell to others to eventually find and sink her. In mid-1863, Ringgold, now a commodore, was ordered to cruise the vicinity of Bermuda and then the New England coast in an unsuccessful search for another Confederate raider, the bark *Tacony*.



The U.S. Frigate *Sabine*, above, which Ringgold captained during the Civil War, was his final command. This early Civil War photograph captures the ship at Hampton Roads off Fortress Monroe (now Fort Monroe), Virginia, a Union outpost that, like Fort Pickens, never fell to the Confederates. *Courtesy Collections of the Mariners' Museum, Newport News, Va.*

Ringgold was retired for age on August 20, 1864, and two years later was promoted to Rear Admiral,⁶⁶ retired, a promotion that fell to those commodores who had commanded squadrons.⁶⁷ After the Civil War, Ringgold made his home at 18 East Eighteenth Street in New York City. Ringgold, who had never married, died of apoplexy (stroke) in New York on April 29, 1867. The funeral cortege of four hundred marines and carriages proceeded from Ringgold's residence in Union Square down Broadway to Trinity Church, with the marine band playing "Dead March in Saul." Admirals Farragut, Bell, and Stringham and a number of generals attended. Following the ceremony, Ringgold's remains were transferred by train to Green Mount Cemetery in Baltimore, where they were interred next to the grave of his brother, Maj. Sam Ringgold.

A glance today at the busy shipping traffic of the Golden Gate and San Francisco Bay confirms both Ringgold's vision and his contribution to the region: "After some experience in many parts of the world, I freely venture the opinion, there is no sheet of water

on the globe better adapted for great national and commercial purposes than the Bay of San Francisco and its vast tributaries."⁶⁸ Ringgold's service to California, forgotten now,⁶⁹ was acknowledged at the time by the *Alta California*: "a gallant and efficient officer . . . Captain Ringgold is well known to the State of California, as one of its earliest friends, and an officer whose scientific explorations have contributed largely to her interests."⁷⁰ CHS

See notes beginning on page 234.

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