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Exploring Desert Stone

Steven K. Madsen

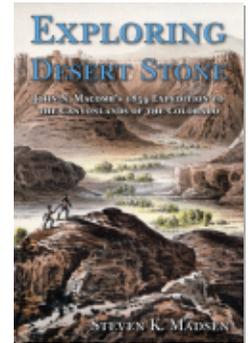
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ORGANIZING THE EXPEDITION

August 5, 1859. Camp No. 16 at the Rio Florida, 220 miles northwest of Santa Fé, New Mexico:

We have just heard rumors of a fight between our soldiers & the Mormons in the Salt Lake City—these rumors are brought in by Indian traders who came into our camp yesterday on their return from the great rivers we expect to visit—the reports are so extravagant we can scarcely believe them—they speak of battering down houses & killing women & children—so unusual a course for us that I cannot credit the reports—yet the description of the effects of the great guns so accurately given by the Indian reporters would seem to give a color of truth to the story after all—for without witnessing such scenes the Indians could hardly contrive such a story.¹

So wrote Capt. John N. Macomb, Jr., to his wife, “Nannie,” as he led an Army exploring expedition into the wilds of Utah Territory.

In the years before Captain Macomb’s survey, Utah Territory was administered by federally appointed officials who frequently clashed with a powerful governor, Brigham Young, over Indian policies, mail contracts, land surveys, and probate courts. Since Young served also as the prophetic leader of the Church of Jesus Christ of Latter-day Saints, dubbed the Mormon Church, federal appointees feared the power he exercised. Furthermore, Utah’s populace overwhelmingly supported Young. Ultimately, open conflict intensified between federal

1. Captain John N. Macomb, Jr., Santa Fé, New Mexico, to Ann Minerva “Nannie” Rodgers Macomb, Washington, D.C., August 5, 1859, Rodgers Family, Papers, Library of Congress. (Hereafter LOC.)

and local officials and complaints reached Washington. In the spring of 1857, when James Buchanan became president, he acted on these complaints by sending an expeditionary force commanded by Albert Sidney Johnston to Utah to replace the governor and insure allegiance to federal authority.

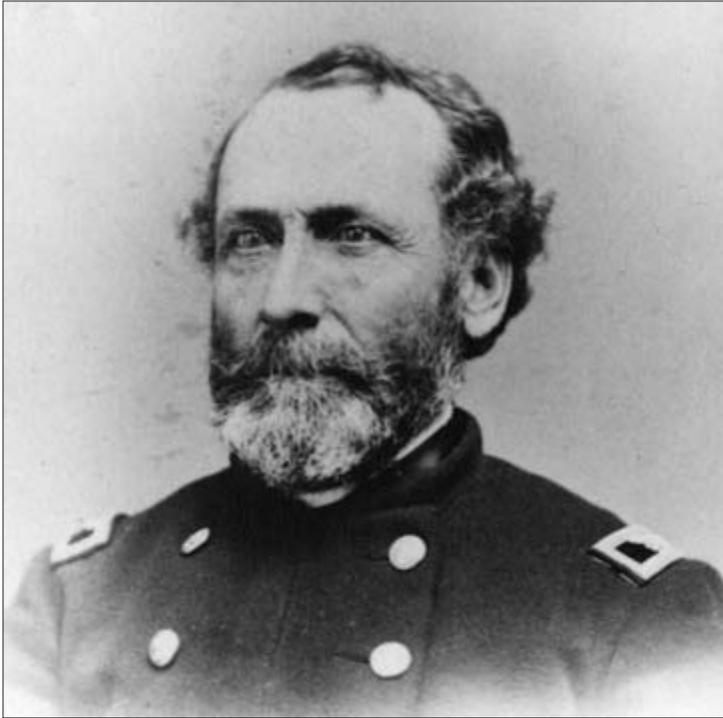
During 1857–1858, the clashes between the United States and the Mormons, known as the Utah War, accelerated the exploration of the Mountain West by the Army’s topographical engineers. Historian C. Gregory Crampton wrote, “The success of the Mormon resistance to Johnston’s Army in 1857 and the logistical isolation of the federal troops at Camp Floyd [some forty miles from Salt Lake City] made it imperative that the War Department seek new supply routes into Utah.”²

Prompted by the conflict, the War Department directed the U.S. Army Corps of Topographical Engineers during the years 1857–1859 to survey the Mormon territory and find new approaches to Utah. They launched a three-pronged effort: From the Gulf of California Lt. Joseph C. Ives steamed up the Colorado River in the USS *Explorer*, a fifty-four-foot iron sternwheeler, to Black Canyon, where Hoover Dam now stands. Before turning back, he continued overland with a small party of men to explore the Grand Canyon. From Camp Floyd Capt. J. H. Simpson marched westward across the Great Basin to Genoa, Nevada, and beyond—on existing roads—over the Sierra Nevada Mountains to Placerville, near Sacramento. On the return march from Genoa he followed yet another path across the great interior basin, thereby discovering a shorter route to California, which the Pony Express and mail and stage lines would later follow. From Santa Fé Capt. John N. Macomb plotted a course into Utah’s canyon country and attempted to find a military route through the legendary sandstone labyrinth near the junction of the Green and Colorado rivers.

With their tents pitched in the San Juan River drainage along a wilderness trail, the men of the Macomb expedition, also known as the San Juan Exploring Expedition, seemed “inclined to believe” the reports that “our troops had bombarded Salt Lake City.”³ Though the reports later proved false, Macomb’s adventure into the West’s raw frontier moved forward.

Following the survey, Macomb commissioned a famous cartographer to create a map of the region his party explored. With the outbreak of the Civil War, the government delayed publication of the expedition’s report,

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2. C. Gregory Crampton, “Mormon Colonization in Southern Utah and in adjacent parts of Arizona and Nevada,” unpublished manuscript, 1965, 74.
 3. Charles H. Dimmock, *Papers, 1850–1873, Diary*, August 4, 1859, Virginia Historical Society, Richmond. (Hereafter cited as Dimmock, *Diary*, VHS.)

*United States Military Academy Library Special Collections*

John N. Macomb, Jr.

which cost its members and its cartographer, the recognition due them. A number of biographies of the leading men still overlook the venture, or they ignore its important achievements.

The following narrative history represents the first detailed study of the Macomb expedition. Publication of this volume highlights the Macomb report's beautiful color plates and the magnificent map of the region. It also features an interesting selection of the newly discovered official records, personal correspondence and diaries, raw pencil sketches, and other primary materials related to the frontier survey and its men. These documents provide fresh insights and new interpretations into the lives and contributions of Macomb and his companions.

In the course of their exploration of the West's interior, the ambitious John S. Newberry launched a series of excursions to closely examine the region's geography and natural history, particularly its paleontology, geology, and anthropology. As a civilian geologist, Doctor Newberry's duties involved collecting scientific specimens, including zoological and botanical samples, for the Smithsonian Institution and providing a full report on the geology and mineralogy of the area. If necessary, he was required to supply



Ann Minerva "Nannie" Rodgers Macomb.

medical and surgical attention to the men and to produce a report on the natural history of the region he examined. Determining the region's natural resources for later exploitation by miners, cattle and sheep ranchers, railroaders, and settlers, was an implied task assigned to the team.

Just as Newberry made short jaunts to study the area, I make tangential journeys to depict more fully the activities and personal lives of Macomb and his companions. We will find an ambitious scientist and physician possessing great vision and intelligence and a tendency to see the beauty and potential in nature. We will also learn of the visual sensitivity of the expedition's homesick topographer, who depicted wilderness scenes in pencil drawings and romantic word pictures. And we will discover both a loving family man and a task-oriented commander, with little imagination or landscape appreciation, who despised the desert Southwest.

Born April 9, 1811, in New York City, John Navarre Macomb, Jr., was the great grandson of Philip Livingston, a signer of the Declaration of Independence. In 1838, John married his cousin, Czarina Carolina

Macomb, the daughter of General Alexander Macomb, Jr. She died in 1846. Four years later, he married Ann Minerva Rodgers, kin to a long military line. From the two marriages came eight children.⁴

Macomb launched his military career from West Point, where in 1832 he graduated from the military academy. That same year he served in the Black Hawk Expedition in the Midwest. Assigned to artillery units and engineering duty over the next several years, he rose through the ranks. Among his many duties, he made a hydrographic survey of the Straits of Detroit, took charge of seven military roads in Michigan, and made the preliminary surveys of the Manitou Islands and Grand Traverse Bay. Promoted to captain of the Topographical Engineers in 1851, he took charge of the survey of the northern and northwestern lakes. During that period, he began the survey of the Straits of Mackinac. Near the close of his surveys of the Great Lakes in 1856, the War Department assigned him to serve as the chief topographical engineer in the Military Department of New Mexico.⁵

The Army sent Macomb to New Mexico to replace a fiscally incompetent officer and repair the budgetary mess he had created. More importantly, the Army directed him to construct five vital military roads in the district. Macomb arrived in May 1857, and by July 1858 he had constructed and improved the “roads which formed the basis for New Mexico’s highway and railway system.” According to historian David Remley, Macomb’s work won the praise of the *Santa Fé Gazette* and of New Mexico’s governor. In addition, along the Taos to Santa Fé wagon route, the people of New Mexico erected a memorial pole in honor of Macomb, “who by aid of the government greatly improved the road.”⁶ In 1859, Macomb was a forty-eight-year-old career officer. His wife and family resided at 361 H Street in Washington, D.C.

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4. See “John Navarre Macomb, Jr., Colonel, United States Army,” Arlington National Cemetery Web site, <http://www.arlingtoncemetery.net/jnmacomb.htm> (accessed August 14, 2003). Macomb’s children by his first wife included John Navarre Macomb and John Navarre Macomb, III. (Apparently, the first son died in infancy.) From his second wife came William Henry Macomb, Montgomery Meigs Macomb, Augustus “Gus” Canfield Macomb, Minerva Henry Rodgers Macomb, Christina Livingston Macomb, and Nanny Rodgers Macomb. See “Family of Marshall Davies Lloyd: John Navarre Macomb, Jr.,” by Marshall Davies Lloyd, <http://www.gencircles.com/users/mlloyd/3/data/1038> (accessed September 15, 2004).
 5. Macomb to Col. J. J. Abert, October 30, 1858, Letters Received, Bureau of Topographical Engineers, War Department Records, National Archives, Washington, D.C. (Hereafter NA.) Other officers who graduated with Macomb included James H. Simpson and Randolph B. Marcy.
 6. David Remley, “Adios Nuevo Mexico.” *The Santa Fé Journal of John Watts in 1859* (Las Cruces, New Mexico: Yucca Tree, 1999), 136, 155; Frank N. Schubert, *Vanguard of Expansion: Army Engineers in the Trans-Mississippi West, 1819–1879* ([Washington, D.C.]: Historical Division, Office of Administrative Services, Office of the Chief of Engineers, [1980]), 79. See also Egloffstein to Macomb, June 12, 1861, NA. For a full account of Macomb’s federal road projects in New Mexico, see W. Turrentine Jackson, *Wagon Roads West: A Study of Federal Road Surveys and Construction in the Trans-Mississippi West, 1846–1869* (Berkeley: University of California Press, 1952), 112–20.

Despite its military and political origins, the San Juan Exploring Expedition culminated in a quintessential scientific endeavor that collected rare and unique specimens for the Smithsonian Institution and made important contributions to America's scientific foundation. With a prime objective "to examine especially . . . the region . . . traversed by the old Spanish Trail," the reconnaissance would explore more than two hundred miles of the historic trace and fill a great gap in the geographical knowledge of the American West. Another important objective was "to fix also in position the lower portions and the mouths of the Green and Grand rivers"—to locate the junction of the Colorado and Green rivers.⁷

Until recently, the results of the Macomb expedition have remained largely ignored. The conditions of the Civil War delayed the publication of the final report for more than fifteen years. When issued in 1876 the report drew little public attention since America's frontier exploration focus was set on the Great Surveys—those of Ferdinand V. Hayden, Clarence King, George M. Wheeler, and John Wesley Powell.

Nevertheless, the contributions of the San Juan Exploring Expedition deserve our attention. The Macomb survey eloquently described and splendidly illustrated its scientific work. The surveyors studied the region's resources, assembled topographic information, and gathered important natural history specimens. Enraptured by spectacular landscapes and marvelous fields of archaeology, geology, and paleontology, the Macomb explorers poetically interpreted the frontier region transected by their team.

The expedition's assistant topographer and geologist both were prone to adopt the nineteenth-century tendency to romanticize red rock erosion as cyclopean cities and Gothic cathedrals. However, they yielded to a stronger and more modern impulse for fact gathering, attention to detail, and astute observations of geologic wonders. The keen and often poetic observations of the geologist, the expedition's key player, went beyond the typical topographical studies of the period to make "a significant contribution on erosion to world geology."⁸ Furthermore, he would make a startling discovery while en route to the inner reaches of today's Canyonlands National Park.

In 1987, following twelve years of investigative field work, Moab naturalists and writers Fran and Terby Barnes scaled a multicolored sandstone cliff in southeastern Utah's "Canyon Pintado" and rediscovered the long-lost site of the first sauropod dinosaur bones found in the western

7. Capt. A. A. Humphreys, Washington, D.C., to Capt. John N. Macomb, Santa Fé, New Mexico, April 6, 1859, NA.

8. Newberry helped revise American geology with his scientific studies of the Colorado Plateau region. See James M. Aton and Robert S. McPherson, *River Flowing from the Sunrise: An Environmental History of the Lower San Juan* (Logan: Utah State University Press, 2000), 50.

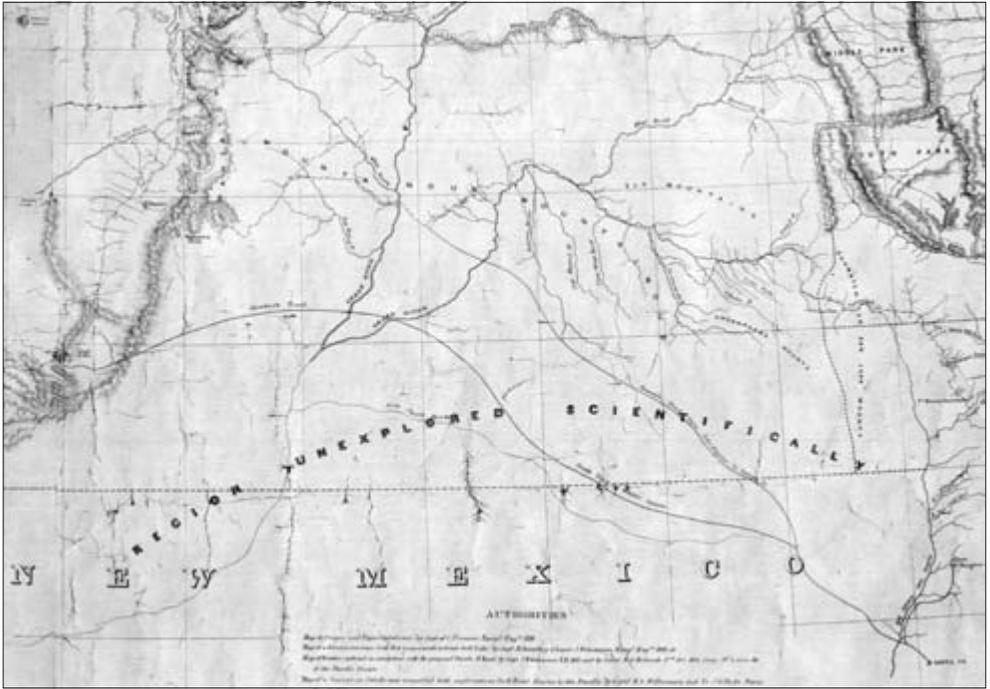
hemisphere. (This sauropod, a giant, long-necked, long-tailed, plant eater from the Jurassic Period, may be the ancestor of all North American sauropods.) John S. Newberry in 1859 had originally located the bones some 250 feet above the canyon floor and excavated several samples for the Smithsonian Institution. Newberry reported that he made the discovery “directly on the Old Spanish trail.” He pulled from the site a femur, a humerus, portions of the ribs, and some toes of the “monster.” But he complained that he had been compelled to stop the dig after excavating about two hundred pounds of the fossils.⁹ The find was an unexpected outcome of an expedition whose mission included the acquiring of “good results for the great map of our country.”¹⁰ At that time, large blank spaces and numerous representations of mythical natural features riddled frontier maps.

For example, the widely circulated commercial map issued by J. H. Colton & Co. in 1855 charting Utah and New Mexico territories carried two glaring geographical fictions: The great Colorado and Green rivers merged far below the confluence of the San Juan and Colorado rivers. Both river junctions appeared incorrectly deep inside New Mexico Territory.¹¹

Before 1858, the Grand Canyon region and the remote heartland of the Colorado Plateau (named by geologist Newberry), a highland region drained by the Colorado River and its affluents, remained largely unknown, an immense mysterious land in America’s interior West. This *terra incognita* appeared as a large blank on the “Map of the Utah Territory showing Routes connecting it with California and the East,” issued in 1858 by the Corps of Topographical Engineers. Bold letters swept across the map’s white space proclaiming it a “Region Unexplored Scientifically.” This same map showed a mythical, wild variant of the Old Spanish Trail, labeled as the “South Trail in Winter Season,” crossing the Green and Colorado not far above their confluence. B. A. M. Froiseth copied this fiction on his “New Sectional and Mineral Map of Utah,” published in 1878.

The collective efforts of the U.S. Topographical Engineers and the Pacific Railroad surveys, contemporary to the Macomb expedition, had

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9. John S. Newberry to Dr. Joseph Leidy, January 17, 1860; John S. Newberry to Dr. Joseph Leidy, February 8, 1860, Historical Collections, Library, College of Physicians of Philadelphia. See also John N. Macomb, *Report of the San Juan Exploring Expedition, from Santa Fé, New Mexico, to the Junction of the Grand and Green Rivers of the Great Colorado River of the West, in 1859, . . . with Geological Report by Prof. J. S. Newberry* (Washington, D.C.: Government Printing Office, 1876), 91. (Hereafter Macomb, *Report*.)
 10. Macomb to Humphreys, July 7, 1859, “Monthly Report of June 1859,” NA.
 11. J. H. Colton & Co., *Territories of New Mexico and Utah* (New York: J. H. Colton, 1855). These same errors reappeared on A. P. Wilbar’s “Sketch of Public Surveys in New Mexico, 1860,” in U.S. Congress, *Report of the Secretary of War*, 36th Cong., 2d sess., Senate Executive Document 1, vol. 2, serial no. 1081 (Washington, D.C., 1860).



Section of “Map of Utah Territory showing the Routes connecting it with California and the East,” 1858.

filled many of the blanks on the map of the western United States and greatly increased the geographical and geological knowledge of the region. Miners, farmers, cattlemen, and lumbermen who studied the government publications and maps resulting from these surveys easily accessed the unexploited areas of the West along well-defined pathways.

Beyond plotting the easiest routes into the West, the publications helped debunk the geographical myths, including El Dorados and fictitious lakes, streams, and mountain ranges. But the challenge of completing the scientific explorations in the remaining unknown lands of the West persisted. With the Utah War came a new urgency to explore the enormous extent of uncharted ground and led Capt. Macomb to plot a course from Santa Fé into Utah’s canyon country and attempt to penetrate its intricate landscape near the confluence of the Green and Colorado rivers.

The natural wonderland that surrounds the legendary junction of these two mighty rivers possesses a geographic unity. Its immense, jagged landscape has been elaborately sculpted by rushing waters, creating a harmony of colors, erosive cuts, and formations. The physical characteristics

of the area played a role in the development of the Old Spanish Trail, which looped northward in a great arch around the more deeply eroded interior of the Colorado Plateau. The rugged features and steep-walled gorges in the heart of the high plateau region formed an insurmountable obstacle to direct east–west travel.

On April 6, 1859, by order of the Secretary of War, Capt. A. A. Humphreys, Chief of the War Department’s Office of Explorations and Surveys, sent instructions to Macomb, stationed in Santa Fé, to explore the San Juan River basin and the “lower courses of the head-tributaries of the Colorado of the West.” In addition, he directed Macomb “to determine the most direct and practicable route that may be through the region between the Rio Grande and the southern settlements of Utah.” Furthermore, Humphreys ordered Macomb “to examine *especially* the part of the region in question traversed by the ‘Old Spanish Trail’ from Abiquiu N.M. to California, with a view to ascertain if there be a practicable route, in the neighbourhood of the San Juan River, between New Mexico and Utah.”¹² [Emphasis mine.]

Before the reconnaissance, Humphreys furnished Macomb with a map and explanatory notes “summarizing the total knowledge of the War Department in 1859 of the topography of the region.”¹³ In the explanatory notes to Macomb we read:

The position of the “Old Spanish trail” is represented on the compiled map of Lt. Parke, Top. Eng., near the 37th parallel. By Captain Beckwith it was moved more than a degree further north, as the trail was believed to cross Green and Grand Rivers some distance above their junction. Both positions are laid down on the accompanying map under the supposition that Capt. Beckwith’ [s] map is correct, it seems difficult to imagine why the early Spanish travellers from Santa Fé to Los Angeles should have taken so great a circuit to the north, instead of following the practicable line of country along the 35th parallel.¹⁴

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12. Humphreys to Macomb, April 6, 1859, NA. In August 1858 Lt. Henry L. Abbott, in charge of the Office of Explorations and Surveys, notified Captain Macomb that the War Department contemplated the idea of exploring the region along the Old Spanish Trail to the settlements northwest of Santa Fe, beyond the San Juan River. Secretary of War John B. Floyd directed Abbott to transmit an estimate of the travel time and costs to Macomb and to get his input. Macomb responded that, with an escort of three hundred men, he could thoroughly explore the region in ninety days, but the cost would be nearly \$20,000 instead of the proposed \$12,000. See Macomb to Humphreys, October 26, 1858, NA.
 13. As quoted in Steven K. Madsen, “The 1859 San Juan Exploring Expedition along the Old Spanish Trail,” *Spanish Traces* 12, no. 3 (Fall 2006): 18.
 14. [Lt. Joseph C. Ives] to Macomb, “Memorandum to accompany a map furnished to Captain J. N. Macomb, Topl. Engs., for his assistance in the exploration of the San Juan River &c.,” [April 1859], NA.

The Old Spanish Trail, 1829–1848, a trade and emigrant route, spanned the greater part of the American Southwest and linked the frontier settlements on the upper Rio Grande to the Spanish-built settlements in southern California. New Mexican wool merchants hauled woolen goods—raw wool and locally woven fabrics—on the backs of mules from Santa Fé, New Mexico, to Los Angeles, California. In California, they exchanged their woolen products for horses and mules and drove them back to Santa Fé, where they made a handsome profit. Horse dealers also found a ready market among American Indians and fur trappers in the mountain wilderness.

In 1829, Antonio Maria Armijo blazed the southern route (the Armijo Route) of the Old Spanish Trail. One segment of his pioneering path crossed the San Juan River and ran the length of New Mexico's Cañon Largo where Macomb's command later marched.

Another alternate route of the Old Spanish Trail—the North Branch—followed a path with ample room for wagon traffic. Captain John W. Gunnison in 1853 followed this branch via Taos, New Mexico, as well as Colorado's Cochetopa Pass and Grand Junction, to rejoin the "Main Route" of the Old Spanish Trail near Green River, Utah.

Fur traders William Wolfskill and George C. Yount in 1830–1831 developed the trail's Main Route. Their path looped northward into present-day central Utah to avoid hostile tribes in the region to the south. In addition, the long, waterless stretches south of Utah hindered direct east–west travel. Macomb and his companions later followed the Main Route of the Old Spanish Trail to reach their destination.

Macomb wrote his wife about his forthcoming trip, "I expect to trust myself in the care of experienced travellers of this country and to plod along absorbed with my Survey & astronomizing." Additionally he assured his wife, "I expect to go out by way of Ca[ñ]ada and Abiquiu where I was working a road last summer. My first route is to be over a part of the old "Spanish trail," which I have heard very favourably spoken of in regard to supply of grass, water and fuel."¹⁵

To aid Macomb in his exploratory survey of the uncharted land crossed by the Old Spanish Trail, the War Department authorized him to employ four assistants: one physician/naturalist, one topographer, one assistant astronomer and meteorologist, and one guide, plus the necessary number of packers, herders, and camp men.

Macomb focused on one position in particular. He quickly sent a letter to the noted trapper Antoine Leroux of Taos, New Mexico, asking him to pilot the expedition. Leroux, a skilled trail guide, possessed extensive

15. John Macomb to "Nannie" Macomb, June 19, 1859, LOC.



Section of “Map of the Territory of New Mexico . . . 1844–47,” by J. W. Abert and W. G. Peck. The Macomb Expedition followed generally the historic road from Santa Fé to Abiquiu. See Wm. H. Emory, *Notes of a Military Reconnaissance*, 1848.

knowledge of the Old Spanish Trail route. But Leroux either declined the offer or was unavailable at the time.¹⁶

Macomb immediately rushed another letter to the commander of the New Mexico Military Department requesting a military escort “to protect my party during the tour of duty”; the Navajo were presently at war in the region. In determining the strength of the escort, Macomb asked the

16. Macomb to Leroux, May 28, 1859, NA.

department to consider “the necessity of frequently sending all detachments to the right and left from the main party; and also the very unsettled state of affairs at this time in the Navajo country across the northern lands of which this expedition will pass.”¹⁷

Taking precautions to safeguard his outfit, Macomb asked the military department of New Mexico for three hundred men. The soldiers would furnish “safe escort through a wild and inhospitable tract of country, partly occupied by hostile and treacherous Indians.”¹⁸

For subsistence, New Mexico’s military department suggested that the detachment “carry some Bacon” and supply itself with “Beef Cattle for the first few days, and for the remainder sheep, . . . at a rate of three to each man, having the sheep sheared to facilitate their traveling.” The commanding officer of Fort Defiance, in present-day Arizona, was ordered to “furnish Captain Macomb with any supplies, you have on hand, that can be spared from the public service.” Macomb, however, was required to pay for any provisions shared with “the civil employees.”¹⁹

Macomb began at once assembling an entourage of civil employees and other important people to carry out a scientific study of the southeastern approach to Utah Territory. Besides Newberry and Dimmock, his personnel included Albert H. Pfeiffer, “sub-agent for the Utah Indians,” who facilitated Macomb’s passage through the country of the Capotes and other bands of Ute Indians; Nepomuceno Valdez, Ute interpreter; Armijo (or Jaramillo), the guide; John Campeau and Juan P. Martin, who

17. Macomb to Lt. John D. Wilkins, Military Department of New Mexico, May 28, 1859, NA. Macomb took precautions to avoid the disasters faced by John W. Gunnison and John C. Fremont on their overland expeditions. He set out on his expedition in the summer season to prevent entrapment in heavy snow. He also took along a military escort to protect them from attack by indigenous tribes.
18. “The escort for passing through the region to the North and West of Fort Defiance should not be less than three hundred men. There should accompany the expedition an experienced “mountain man” as a guide, in addition to the persons enumerated in the preliminary estimate.” Macomb to Humphreys, October 26, 1858, NA. On his arrival in Santa Fé, Newberry wrote Spencer F. Baird, assistant secretary of the Smithsonian Institution: “Macomb has made application for 300 men as escort so we shall probably be safe, but will be restricted in our movements.” John S. Newberry, Santa Fé, New Mexico, to Spencer F. Baird, Washington D.C., June 4, 1859, Record Unit 7002, Box 30, Smithsonian Institution Archives. (Hereafter SIA); F. A. Barnes, *The 1859 Macomb Expedition into Utah Territory* (Moab, Utah: Canyon Country Publications, 2003), 79. Dimmock blamed the reduction in troops on Col. Benjamin L. E. Bonneville. See Dimmock, Diary, July 5, 1859, VHS.
19. The expedition ultimately purchased the sheep and “experiment[ed] in subsistence,” said Newberry. Newberry, *Abridged Diary*, July 18, 1859, Letters Received, N unentered 1861, Bureau of Topographical Engineers, War Department Records, NA; John D. Wilkins, to “Officer Commanding Fort Defiance, New Mexico,” July 8, 1859, Department of New Mexico Letters, vol. 10, p. 351, Record Group 98, NA, in Arrott’s Fort Union Collection, Thomas C. Donnelly Library, New Mexico Highlands University. (Hereafter Arrott’s Fort Union Collection.) See also J. N. Macomb correspondence, 1858–1860, Part II of BANC MSS P-E 219, Bancroft Library, University of California, Berkeley. Fort Defiance was originally chosen as the starting point for the Macomb expedition. It is unknown why Santa Fé was subsequently selected.

served as scouts; some unnamed Indian guides; and three assistants—Louis Wm. Dorsey of Washington, D.C., Francis P. Fisher of New York, and James H. Vail of Virginia. Fisher assisted Macomb with astronomical observation; Dorsey and Vail carried barometers and thermometers and kept daily records of their readings. Dorsey also assisted Newberry in collecting natural history specimens.²⁰

Several camp followers apparently joined Macomb's group as cooks and common laborers. Including the military escort, the exploratory party totaled "not less than sixty men."²¹ Macomb's party also comprised a small group of men he had hired to establish a camp at a mountain pasture twelve miles east of Santa Fé as a recruiting place for the animals that would be used on the march.²² (Among the unidentified members named in the Macomb expedition were Stephen Conroy, Joseph Dély, Benjamin Lepard, James McGrace, a Mr. Hathaway, a Mr. Lawlep, a Mr. Ferry, and a Mr. Johnston or Johnson.)²³

To transport supplies, survey instruments,²⁴ and specimens, Macomb purchased pack animals from a nearby road construction team and

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20. Macomb, *Report*, 5, 7, 97; Charles H. Dimmock, Topographical Memoir, Series I, Box 21, Rodgers Family, Papers, Manuscripts Division, LOC; See also F. A. Barnes, *The 1859 Macomb Expedition into Utah Territory*, 85; F. A. Barnes, "Early Explorations of Utah," *Canyon Legacy* 9 (Spring 1991): 3–4. Macomb, Newberry, and Dimmock tripped over the spelling of Nepomuceno Valdez. Macomb spelled his name Neponocino, Newberry referred to him as "Ponocino," and Dimmock called him "Pomosima," "Pomosamia," and "Tomasonia." In 1867, E. H. Bergman correctly spelled his name when he listed Nepomuceno Valdez as his "Mexican guide." See E. H. Bergman, Commander of Camp Plummer, to J. H. Carleton, Commander of New Mexico Military District, Santa Fé, "Report of a Reconnaissance to the Animas River to Locate a Site for a Military Post," unpublished manuscript, March 15, 1867. Armijo, or Jaramillo, has not been identified. Nevertheless, one José Miguel Jaramillo served as a guide for a command of mounted riflemen sent from Fort Craig, New Mexico, to pursue more than one hundred Navajos who had stolen large numbers of sheep. In February 1860, they engaged a Navajo party in battle, "killing and wounding sixteen Indians." See S. Cooper, "Report of the Adjutant General," No. 12, in *Report of the Secretary of War*, 36th Cong., 2d sess., Senate Executive Document 1, vol. 2, serial no. 1079 (Washington, D.C., 1860), 202–203. At age 20, in 1848, Francis Porter Fisher graduated from Harvard, then married Ann Eliza Crane of New York five years later. Following his service with the Macomb expedition, he worked as a civil engineer for the Texas and New Orleans Railroad. In 1861 he joined the 55th Illinois Infantry and participated in the Civil War. After the war he moved to Chicago, where he and his brother Frederic started the Fisher Bros. fire insurance firm. He died in Chicago in 1907. "Francis Porter Fisher," in Charles T. Rothermel and Company, *Portraits and Biographies of the Five Underwriters of the City of Chicago*. (Chicago: Charles T. Rothermel and Company, 1895). http://www.archive.org/stream/portraitsbiograp00chas/portraitsbiograp00chas_djvu.txt (accessed May 23, 2009).
21. John D. Wilkins, to "Officer Commanding Fort Defiance, New Mexico," July 8, 1859, in Arrott's Fort Union Collection.
22. Macomb's account of June 21, 1859, Letterbook, 64, Letters Received, Bureau of Topographical Engineers, War Department Records, NA.
23. Macomb bought two mules from "A. D. Johnson" on June 23, 1859. It is possible that Johnson accompanied the expedition. In later years, he became a steamboat captain on the lower Colorado River.
24. Humphreys to Secretary of War John B. Floyd, April 6, 1859, NA.

from private individuals. Of the sixty-nine mules and eight burros, “to say nothing of Donkeys,” that he acquired for the march, thirty-two mules and one bell mare came “from the caballada of Don V. S. St. Vrain.”²⁵ Furthermore, Macomb noted that “the escort has as many more” animals.²⁶

Nevertheless, the challenge of finding enough pack animals to supply Macomb’s outfit caused him “unexpected delays.” The large number of animals required to launch the Utah War effort had depleted local herds in New Mexico. He wrote, “There has been an unusual scarcity of mules in this section of the country for the last eighteen months; that is since the purchases were made for the use of the Army in Utah. This has greatly delayed me in that essential part of my outfit.”²⁷ In late November 1857, Col. Albert Sidney Johnston had sent Capt. Randolph B. Marcy with a small force from Camp Scott in what is now Bridger Valley, Wyoming, to Fort Union, New Mexico, to purchase 1,500 horses and mules for the U.S. Army. Marcy’s command followed a course “through an almost trackless wilderness, in the very depth of winter” to obtain the necessary animals, returning the next June with almost 1,000 mules, 160 horses, and a few sheep. It was a heroic march.²⁸

The scarcity of stock animals in New Mexico concerned Macomb who worried about equipping his own expedition. But he faced stubborn resistance from mule owners: “There are some 20 mules and a few donkeys to be purchased yet—and the holders think that we want them more than they do & charge for them accordingly.”²⁹ Nevertheless, Macomb had acquired up to this point six thousand pounds of provisions. He could afford to relax a little.³⁰

Total appropriations for the federally funded survey amounted to \$20,000. Of that amount, \$500 could be spent to purchase, “for the purpose of trafficking with Indians, and compensating them for services, such articles of Indian goods as may be more desirable.” In outfitting his

25. “Mules or other Public Animals, Santa Fé, N.M., June 1859, San Juan Expedn.” Letterbook, 64, Letters Received, Bureau of Topographical Engineers, War Department Records, NA. Vincent St. Vrain was “a member of the famous family of traders originally from Missouri, lived in Mora.” Remley, “*Adios Nuevo Mexico*,” 217 n. 4. As kin to Taos trader Céran St. Vrain, Vincent served as executor of his will when he died in 1870. Ceran, the more famous frontiersman, was a wealthy merchant, land grant owner, and political figure in New Mexico. “Bent, St. Vrain & Company,” <http://www.sangres.com/history/bentstvrain.htm> (accessed May 10, 2007).

26. John Macomb to “Nannie” Macomb, August 5, 1859, LOC.

27. Macomb to Humphreys, July 7, 1859, NA.

28. A. H. Guernsey, “Army Life on the Border,” *Harper’s New Monthly Magazine* 33, no. 196 (September 1866): 437; Charles P. Roland, *Albert Sidney Johnston: Soldier of Three Republics* (Austin: University of Texas Press, 1964), 211.

29. John Macomb to “Nannie” Macomb, July 3, 1859, LOC.

30. *Ibid.*

party, Macomb complained that the limited resources around Santa Fé drove up prices and rapidly exhausted many of the funds that had been appropriated for the expedition.³¹ He also noted that “the expedition can only last a certain length of time on account of the limited supply of money, by wh[ich] entirely I am to govern my movements.”³²

The War Department placed Macomb under strict orders to balance the expedition’s financial accounts. Nevertheless, without any input from Macomb, Lt. Joseph C. Ives, officiating in the War Department’s Office of Explorations and Surveys, deducted \$1,500 from the total appropriations “to defray charges for transportation” of Macomb’s assistants and the survey instruments from Washington to Santa Fé. In addition, Ives appointed the five technical assistants for the expedition—Dorsey, Fisher, Vail, Newberry, and Dimmock. Macomb received copies of each appointment, “with instructions,” in Santa Fé.³³

A retelling of the travel experiences of Macomb’s civil assistants to and from Santa Fé, and their sojourn in the city, gives us fresh insights into overland travel and frontier conditions. In addition, we may view the expedition and its members through a more powerful lens by using the newly discovered depictions of diarist Charles Henry Dimmock.

Dimmock possessed a rare quality among the men of his day: literary skills to eloquently depict the American frontier. His writing style alternates between the recording of detail—including the mundane chronicling of mileages, temperatures, time schedules, and weather conditions—and the poetic and literary grand style of the period, characteristically Victorian and full of embellishment.

Dimmock’s professional skills as a civil engineer and surveyor contributed greatly to the success of the Macomb expedition. He drew “an excellent sketch of the [Macomb] route . . . in one large map” at a scale of “half an inch to the mile.” Moreover, as assistant topographer of the expedition, he wrote a topographical memoir of the route and mileages

31. Humphreys to Macomb, April 6, 1859, NA; Macomb to Humphreys, July 7, 1859, NA. Much of the money appropriated for the reconnaissance covered salaries. The War Department allocated a \$125 monthly salary for each of Macomb’s assistants. Newberry’s salary, however, amounted to \$150 per month. Along with the other assistants, he was entitled to travel expenses. While on duty in the field, they could get one army ration per day. As a civilian geologist, Dr. Newberry’s duties involved collecting scientific specimens, including samples of zoology and botany, for the Smithsonian Institution and providing a full report on the geology and mineralogy of the region explored by the party. If necessary, he was required to supply medical and surgical attention to the men and to produce a report on the natural history of the region he examined.

32. John Macomb to “Nannie” Macomb, June 19, 1859, LOC.

33. Ives to Floyd, April 28, 1859, NA; Ives to Charles H. Dimmock, April 25, 1859, NA; Ives to Louis William Dorsey, April 25, 1859, NA; Ives to Francis P. Fisher, April 25, 1859, NA; Ives to John S. Newberry, April 28, 1859, NA; Ives to James H. Vail, April 25, 1859, NA.



Charles H. Dimmock.

traveled by the pack train.³⁴ (A close examination of Dimmock's exceptional field map enables modern explorers to accurately locate the eastern leg of the Old Spanish Trail.)

More important, perhaps, were his artistic skills—his pencil drawings of people, landscapes, architecture, and other subjects—and his diary account of the expedition, that provide rare first glimpses of the wild, Far West and help verify the travel route of Macomb.

34. Dimmock explained his qualifications: "In ten years experience, as a Civil Engineer, I have been enabled to become familiar with every department of that profession. What talent I may naturally have possessed has been cultivated by Map drawing & Topographical sketching. If credentials of proficiency are desired, they will be presented." Dimmock, Baltimore, Maryland, to Mr. R. Drinkard, Esq., April 25, 1859, NA. Dimmock, was twenty-seven years old in the summer of 1859. It appears that the War Department regulation that prevented Dimmock and his associates from publishing their findings or experiences in the field may have originated from a policy applied by John C. Fremont in 1845.

Born October 18, 1831, in Baltimore, Maryland, Dimmock at an early age moved with his parents to Virginia where he enrolled in the Richmond Academy under Col. Claude Cozet. Dimmock's father, a West Point graduate, served as a military officer in the commonwealth and, before the Civil War, took charge of the Richmond Armory. At age sixteen, Charles entered the field as a civil engineer and worked several years surveying the line on the Virginia and Tennessee Railroad. The Baltimore and Philadelphia Railroad subsequently hired him, and he worked on that line under the direction of J. Ridgeway Trimble (later a general of the Confederate States of America).³⁵

In 1858, Dimmock moved back to Baltimore to study law. There he married Emily Moale, whom he affectionately called "Emmy." In 1859, he and Emmy had a baby son, Charly, and were expecting a second child. In the office of S. Teakle Wallace, Dimmock read law and passed the Maryland bar. During his tenure with the law firm Lt. Joseph C. Ives, representing the War Department's Bureau of Topographical Engineers, apparently contacted him to serve with the Macomb expedition.³⁶

The government directed Dimmock to travel to Santa Fé with another civil assistant, Francis P. Fisher. In early May of 1859, Dimmock departed his residence in Baltimore and boarded the train for New York to pick up Fisher, who would accompany him to Independence, Missouri, via St. Louis. The War Department's Office of Explorations and Surveys had allotted \$80 for their travel expenses to Independence, not enough to pay for the entire trip. So Dimmock fronted some of the expenses until he could be reimbursed. Most of their trek was on the Baltimore and Ohio Railroad with stops at Martinsburg, Grafton, Bellaire, Zanesville, Cincinnati, Vincennes, and St. Louis.

At St. Louis Dimmock hired a carriage to visit the nearby arsenal, perhaps to get information and ideas for his father who later served as Virginia's chief of ordnance works. From St. Louis, Dimmock and Fisher traveled to Jefferson City and boarded the Missouri steamboat South Wester, bound for Independence. Card playing and gambling seemed to be the only recreation on board ship. The Missouri River appeared "wretchedly muddy," noted Dimmock. He observed that the restless passengers complained about the number of landings the boat made. One of those on board, land speculator J. T. Watkins paced the deck nervously. (Watkins had purchased property in nearby Beattie, Kansas, in anticipation of the coming railroad.)³⁷

35. Charles H. Dimmock, Papers, 1850–1873, Section 11, Obituaries, VHS.

36. Ibid.

37. Dimmock, Diary, May 14, 1859, VHS; "History of Beattie," Beattie, Kansas, Web site, <http://www.marshallco.net/beattie/history1.html> (accessed June 24, 2007).



Courtesy of the Smithsonian Institution Archives

Dr. John S. Newberry.

When they reached Independence, the head of the Santa Fe Trail, they found Newberry and the expedition's other civilian assistants, Louis Wm. Dorsey and James H. Vail. Newberry immediately paid Dimmock \$14.50 for his additional travel expenses.

Independence, with a population of about three thousand, the last city on the edge of the American frontier, served as the terminus of the Santa Fe Trail. Here Dimmock, Newberry, Dorsey, and Vail boarded the Santa Fé-bound stage. Fisher remained behind for a week to await the arrival of a freight of survey instruments, slowly making its way from Washington, D.C.

Between May 16 and June 4, 1859, Maccomb's assistants traveled the Santa Fe Trail via the Cimarron Cutoff. The trip gave Dimmock an opportunity to engage in a scientific exploration with Newberry. The

thirty-six-year-old scientist and physician had previously explored the West with two other government parties.

Newberry was born December 22, 1822, in Windsor, Connecticut, and reared in Ohio. In his youth, his father opened and operated a number of coal mines not far from present-day Cleveland. Newberry discovered fish and plant fossils from the shale that saturated the “fossiliferous strata” of his father’s mines. His studies in natural science eventually gave him the skills needed for his later career. He became well versed in paleontology and the abundant fossils found in “coal-measures.” Nevertheless, he entered Western Reserve College and “pursued studies in medicine.” Later, in 1848, he graduated from Cleveland Medical School, began practicing medicine, and married Sarah Brownell Gaylord of Cleveland. The following year he and Sarah traveled to Paris, France, where he continued his medical education and studied botany at the Jardin des Plantes. After returning to Cleveland in 1851, he went back to his medical practice. Four years later, the government appointed him to serve with Lt. R. S. Williamson’s exploration of the West Coast between San Francisco and the Columbia River. In 1857–1858, he served with Lt. Joseph C. Ives in his exploration of the lower Colorado River.³⁸

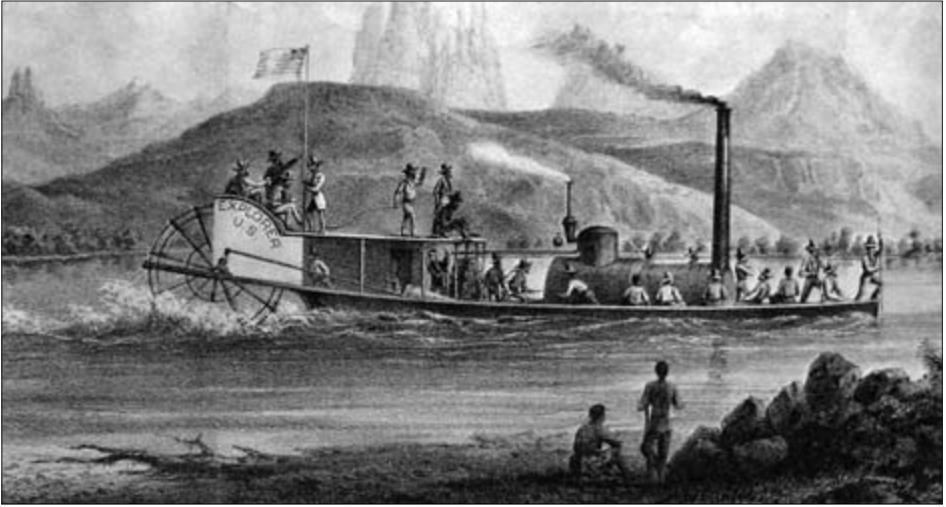
With the Ives expedition, Newberry explored the Colorado River upstream to the head of navigation and beyond, into the Grand Canyon. In January 1858, Ives assembled his expedition at Fort Yuma, near the U.S.-Mexico border, about 150 miles upstream from the Gulf of California. Over the next two months, his team ascended the Colorado by steamboat—the USS *Explorer*—to Black Canyon, where they struck rock. Undeterred, he proceeded in a skiff to the mouth of Las Vegas Wash. Ives then sent the steamboat back to Yuma and, with a small exploring party, continued his survey of the Colorado by land. From Diamond Creek to Havasu Canyon, Ives, Newberry, and others examined the Grand Canyon. They crossed the Painted Desert to the Hopi villages and disbanded the expedition at Fort Defiance, in what is now Arizona. (Since both the Ives and Macomb expeditions explored the canyons of the Colorado and scientifically studied the geography and geology of the Colorado Plateau, they are considered complementary surveys.)³⁹

Newberry’s astute observations contributed greatly to the emerging school of thought in American geology known as fluvialism.⁴⁰ (Fluvialism

38. Charles A. White, “Biographical Memoir of John Strong Newberry, 1822–1892,” in National Academy of Sciences, *Biographical Memoirs*, 1909, 5–7.

39. C. Gregory Crampton, *Land of Living Rock: The Grand Canyon and the High Plateaus: Arizona, Utah, Nevada* (New York: Knopf, 1972), 96–100.

40. Aton and McPherson, *River Flowing from the Sunrise*, 50.



Lithograph of the USS *Explorer*, illustrated in the report of the Ives Expedition.

is the study of landform changes produced by the action of streams.) Exploring deep inside the lower gorge, Newberry saw firsthand the clear evidence of fluvial erosion over time. In his published report, he described the erosive power of the Colorado River.

In 1869, when John Wesley Powell launched his famous voyage of discovery down the Colorado River, Newberry resented the news story “that nothing is known of the grand cañon of the Colorado.” He reminded readers of Denver’s *Daily Rocky Mountain News* of the Ives expedition that “entered the mouth of the big cañon, and afterwards explored its source two hundred miles further by land, or to the junction of the Little Colorado.” Furthermore, he had served as “geologist to another expedition in 1859, Capt. MaComb [*sic*], which explored the country around the junction of the Grand and Green rivers, and traversed the valley of the San Juan[,] . . . a stream as large as the Connecticut ‘whose banks, lined with ruins, and once supporting a hundred thousand people, are now entirely deserted.’”⁴¹

The Ives expedition never completed the survey of the great canyon. However, one publication claims that Newberry actually convinced Powell “that an expedition by boat down the Colorado River through

41. Denver, Colorado, *Daily Rocky Mountain News*, June 23, 1869, 1. The newspaper responded, “It appears from Prof. Newberry’s statement that the portion of the cañon between the mouth of the San Juan and the Little Colorado, a stretch of over two hundred miles, has not yet been explored. . . . and Prof. Powell’s party have virtually a new field for discovery.”

the Grand Canyon would be worth the risk in order to complete the survey.”⁴²

Historians James M. Aton and Robert S. McPherson have explained the significance of Newberry’s achievements. They wrote that Newberry’s landmark case study, in which he eloquently described the river systems of the Colorado and the San Juan as major agents of landscape change, ultimately drew international attention to the region, particularly among geologists. Aton and McPherson added that Newberry’s arguments for the fluvial theory of landform development strengthened the Darwinian view of earth’s antiquity. Newberry’s “study of erosion helped geologists push back the age of the earth and rethink geomorphology.”⁴³

On the road to Santa Fé in 1859, Newberry continued his study of landscapes and erosion, and examined the geology of the land bordering the Santa Fe Trail. The journey allowed him to confirm many of his conclusions from the previous year on his homeward journey following the Ives expedition. “I am happy to say that the conclusions arrived at in my former report on the geology of this region, in regard to the relative position of the various strata noticed, were fully confirmed by our later observations,” he wrote.⁴⁴ Some of the scientific specimens gathered by Newberry would become compositions for Dimmock’s drawings. During his travels, however, Dimmock failed to sketch any mules, the chief mode of transporation used by the expedition.

“Mules wretched and roads fearful,” griped Dimmock as they started their journey. The mules often became unruly, one “hard to get in ranks; kicking out of traces.” Sleeping in the cold wind one night, Dimmock witnessed “mules getting away from their pickets crowded around the wagons for protection from wind. One dropped its manure upon Dorsey’s bed.”

If and when stage stations offered food to passengers, the generally poor meals didn’t help matters any. At the Little Muddy, Dimmock noted, “Branch justified its title. A mud puddle! Such a breakfast! Cooked by teamsters with unwashed hands. Bill of fare—Fried Bacon, Crackers & Coffee, muddier than the Little Muddy.” But Dimmock’s experience at Martin Kozlowski’s stage station near Pecos, New Mexico, proved an exception to the rule. “Our host a Pole (Kousloski) gave us a first rate supper and admirable beds.” The historic station still stands along the Santa Fe Trail.

To augment their stage fare, the men shot at wild game. “Dr. Newberry shot wild Goose . . . [and] killed 4 snipe. Self 2 wild ducks,” noted Dimmock. At another location, “one of the Teamsters (Mexican) shot

42. Ann G. Harris, Esther Tuttle, Sherwood D. Tuttle, *Geology of National Parks*, 6th ed. (Dubuque, Iowa: Kendall/Hunt, 2004), 8.

43. Aton and McPherson, *River Flowing from the Sunrise*, 50.

44. Macomb, *Report*, 15.



Photo by author

Martin Kozlowski's stage station on the Santa Fe Trail, in today's Pecos National Historical Park, New Mexico.

two Antelopes near us, in pursuit of which [Vail] had gone. Bough[t] the hind quarters." At one camp, an oyster can placed too close to the cook's fire burst, "filling Dorsey & self with fragments."

In addition to wild geese, ducks, and snipe, Dimmock and his fellow travelers observed plovers, antelope, grey wolves, sheep, and "myriads" of prairie dogs. They also passed a "train of Burrows (Donkeys), laden [sic] for the Indian trade." Near the Little Arkansas River, they found "innumerable" buffalo.

Along the way, the party contended with sulky teamsters, high winds, rain, mist, heat, dust, and parched conditions. In the valley of the Cimarron, insects pestered everyone. Newberry apparently took advantage of the situation and at one point resorted to "bug bottling."

The men faced challenges ranging from water leakage in the stage to abominable sleeping arrangements—men forced at times to sleep inside the coach, on the floor, or on the makeshift bunks of stage stations or outdoors, where heavy dew wet their blankets.

Passing through the Shawnee and Kaw reservations, they met a number of Kaws and Kiowas on the road. When Dimmock gave money to a Kaw Indian chief, he became "indignant because he received so little." The "Road passes about 35 miles through I[ndian] T[erritory]," noted

Dimmock as they traveled across the panhandle of Oklahoma. Dimmock was repulsed to see an American Indian lady, “with two very pretty girls,” who “amuses herself *eating* the lice from the head of the younger.”

Bouncing about inside the stage, Dimmock and his associates noticed a stream of prospectors trudging up the Santa Fe Trail returning from the Pike’s Peak gold rush, “foot sore & disgusted.” Dimmock recorded one miner’s experience. “Could make 10¢ a day & d[amne]d hard work at that! Good chance to starve unless you steal & if you steal your[*sic*] certain to be hung.”⁴⁵

At “Whetstone Spring,” along the Overland Trail, “stone fused by volcanic action” caught Newberry’s eye. Among the large number of geologic remnants at the site, he collected the “fossils of plants in the sandstone around the spring.” One narrow leaf fossil appeared similar to “one obtained at Smoky Hill,” noted Newberry. He also found “a remarkable fissure” that had “been opened by volcanic force in the rocks containing these plants.” Here he discovered “five species of fossil plants, three of which were new.” Attempting to pinpoint the locality of the whetstone fossil plant, modern scientists in 1987 found a leaf similar to Newberry’s *Salix foliosa* along Palo Blanco Creek in Union County, New Mexico. They also discovered quartzose, which could “serve as an excellent grinding stone, hence the name Whetstone.”⁴⁶

While examining Whetstone Spring, Dimmock paused to measure and sketch an antelope horn that, for him, seemed remarkable. At another paleontological site, Dimmock sketched an “Apus,” or fossilized crustacean “allied to the horse shoe crab.”

At regular intervals, the stage stopped in a number of impoverished New Mexican villages scattered along the trail. In his cursory observations, Dimmock seemed inclined to record their squalid conditions and paint a poor image of their inhabitants. He was especially critical of the Santa Fe Trail town of Tecoloté, where he paused to sketch the local church.⁴⁷

Stopping at Fort Union, a military station built to protect overland travelers, Dimmock briefly described the location. “Queer looking cluster of cabins, built of round pine logs & ‘adobes.’ Saw several officers & were invited to drink the meanest possible whiskey, as we found it. Country around a Sodom—No rain having fallen for more than six months. Hot! Very hot!”

45. Dimmock, Diary, May 22, 1859, VHS.

46. Macomb, *Report*, 32; Spencer G. Lucas, Adrian P. Hunt, Kim Martini, “Newberry’s Locality for Cretaceous Plant Fossils at Whetstone Creek, New Mexico,” *New Mexico Journal of Science* 27, no. 2 (December 1987): 97.

47. Dimmock, Diary, June 2–3, 1859, VHS.



Photo by author

The renovated adobe church in Tecoloté, New Mexico.

Nineteen days out of Independence, dust-covered and hungry, they reached Santa Fé and stepped off the stage near the historic plaza or public square. That evening, Dimmock and his companions enjoyed “a good dinner & comfortable rooms” at the Exchange Hotel, dubbed “the Fonda, the American hotel of the city.” The present La Fonda, built in the early twentieth century, sits on the spot of the former inn, at the end of the Santa Fe Trail, opposite the downtown plaza.⁴⁸

Settled by Spaniards on the site of abandoned Pueblo ruins overlooking the northern Rio Grande Valley, at the western base of the Sangre de Cristo Mountains, Santa Fé in 1610 became the capital of New Mexico. Laid out around the plaza, Santa Fé emerged as an important trading hub for merchants using the Camino Real, the Old Spanish Trail, and the Santa Fe Trail. When northern Mexico fell to the United States in 1848, American troops occupied the city and established Fort Marcy north of the Palace of the Governors, the seat of government facing the city center. Perhaps because of the limited capacity of the army post, or his officer

48. Today's La Fonda, or “inn,” was built in 1922 on the site of the former one-story hostelry, constructed in the 1840s. The hotel claims that the original building existed as early as 1821, when Capt. William Becknell opened the Santa Fe Trail from Missouri. On his arrival in Santa Fé Dimmock wrote, “Stopping at the Fonda, the American hotel of the city. Gave us a good dinner & in comfortable rooms we feel like taking ‘mine ease in mine Inn.’” Dimmock, Diary, June 4, 1859, VHS.



Lithograph of Santa Fé, ca. 1846. Issued in Wm. H. Emory's
Notes of a Military Reconnaissance, 1848.

status, Macomb resided in privileged conditions—in the quarters of the Catholic bishop near the end of the trail.

At first sight, Macomb expressed satisfaction with his government-appointed assistants. He recorded: “The stage came in about noon and I have seen and conversed with Dr. Newberry and Mr. Dimmock—with whom I feel well pleased, and I trust that we shall go smoothly through the season and think none worse of one another at the close up of it.”⁴⁹

Dimmock felt positively impressed by Macomb, whom he described as “an unostentatious, cultivated gentleman.” On meeting the captain, he drew his salary and promptly sent it to his wife Emmy.⁵⁰

After meeting Macomb, Newberry felt that the captain needed to do more homework before entering the field. Newberry wrote the assistant secretary of the Smithsonian, “Have seen Macomb, and like him very much, but as we suspect he might be slightly improved. If you had him at the Smithsonian for a half day and could talk zoology into him all the time, I think he would be better prepared to go into the field than he now is.” “His interest in natural science is no[t] quite decided but general & abstract,” he added.⁵¹

Newberry's inquisitive, scholarly nature caused him to accept the appointment to join the Macomb expedition and explore the Colorado

49. John Macomb to “Nannie” Macomb, June 4, 1859, LOC.

50. Dimmock, Diary, June 5, 1859, VHS.

51. Newberry to Baird, June 4, 1859, SIA; Cited in F. A. Barnes, *Canyonlands National Park: Early History and First Descriptions* (Moab, Utah: Canyon Country Publications, 1988), 114.

Plateau region close to the Grand Canyon area. For Newberry, the great, unexplored region ahead offered a “repository of truth which we might gather and add to the sum total of human knowledge.”⁵² He was firmly determined to explore the innermost reaches of the Colorado Plateau.

Macomb, on the other hand, grew anxious as the starting date of the expedition neared. Harassed with the problems of outfitting his expedition he wrote his wife, “I could not help feeling rather overpowered . . . in relation to the outfit for this exploration with but little prospect of discovering any thing worth knowing—but Dr. Newberry says the country must be explored & the Govt. *ought* to pay for the expense so I have given myself less anxiety on the subject of late.”⁵³

With help from a military insider who had the ear of the Secretary of War, Macomb would be released from his assignment in New Mexico following the expedition. He now could bear the task of conducting the survey. He wrote, “I feel very much indebted to Major [Henry Hopkins] Sibley for his timely suggestions to the Secretary [of War] for without the homeward tendency of the expedition the whole thing would be utterly distasteful to me. I look upon all of this region, I have yet seen[,] as being worth less than the cost of examining it.”⁵⁴

In the field, the surveyors would carefully record the Hispanic and Native American names of physical features, locate prehistoric ruins, and study and collect specimens of the geology, botany, mineral resources, and fossil remains of the trail landscape. In addition, they would sketch the wild and beautiful scenery along the Old Spanish Trail, take barometer readings, make careful triangulations, and map the expedition’s course.

The War Department authorized the shipment of several fragile and expensive U.S. Topographical Bureau survey instruments to Santa Fé for the expedition. The instruments included portable transit, telescope, sextant and artificial horizon, pocket and sidereal box chronometers, prismatic and pocket compasses, odometers, reconnoitering or “spy” glass, and cistern and “syphon” barometers. The expedition also had access to the following tools and useful items: pocket and spirit levels, thermometers, surveyors’ compasses, drawing instruments, triangles and rulers, colors, scales, surveyors’ chains and sets of pins, measuring tape, target, camera lucida, theodolite, nautical almanacs, barometer tubes, and a bottle of mercury—presumably for use in the levels. In addition, they had

52. Macomb, *Report*, 84.

53. John Macomb to “Nannie” Macomb, July 10, 1859, NA.

54. *Ibid.*, July 19, 1859, NA. Major Henry Hopkins Sibley, inventor of the famous “Sibley tent,” had served in the Utah War. In the Civil War, he lost New Mexico for the South, thus ending the Confederacy’s expansionist dreams.

“an ambulance to carry inst[rument]s.”⁵⁵ They did not however take the ambulance with them on their wilderness survey.

No stranger to survey equipment, Macomb made good use of the tools shipped to Santa Fé. As a member of the elite Corps of Topographical Engineers, he possessed exceptional surveying skills. He also immersed himself in military life.

Aside from his military career, Macomb was a devoted family man and husband. His letters to his wife, Nannie, illustrate his affection and sensitivity: “With love to all I remain your devoted husband” and “ever your own devoted husband.” He lovingly called Nannie “my dear wife” or “wifey.” And he regularly showed concern for his children’s education and hoped for his family’s good health. In addition to routinely sending his wife and children support money, Macomb gathered flowers on the expedition and sent them home. He displayed a lively interest in Nannie’s newsy letters and responded by elaborating on the daily activities related to his survey work.⁵⁶

Dimmock’s diary reveals that he, too, was loyal to his family. During his absence from home, he forwarded his salary to his wife, Emmy. While stationed in Santa Fé, he bought a Navajo tilma, or cloak, for his infant son, Charly. He also commissioned a local jeweler to fashion a set of “Aztec” earrings that he designed for Emmy. On the night before the expedition’s journey into the field he somberly wrote, “Home sick to night, horribly.” Dimmock spent a great deal of his leisure time writing to Emmy and his mother, Henrietta. He anxiously awaited the arrival in Santa Fé of the eastern and southern mail stages to get the news from home.⁵⁷

We know very little of Newberry’s personal life. His former associate, Gen. William Birney, recalled Newberry’s “virtue of human kindness.” He often “bestowed alms” to beggars “because it grieved him to witness even seeming distress without trying to relieve it.” From his marriage to wife Sarah, came seven children. Newberry characterized himself and his wife as “fondest parents.” In his correspondence to Spencer F. Baird, his mentor at the Smithsonian, we discover that he christened his third son “Spencer Baird” in the church to which Newberry belonged. In 1859, Newberry purchased a set of earrings as a gift for his wife before heading home to Cleveland.⁵⁸

55. Humphreys to Floyd, April 6, 1859, NA; “Instr. on return 30th Sep. 1859,” Letters Received, Bureau of Topographical Engineers, War Department Records, NA.

56. See John N. Macomb’s Correspondence in part II.

57. See Charles H. Dimmock’s Diary in part II.

58. *Selected Families and Individuals: John Strong Newberry*. See <http://members.cox.net/paradis-eoc1/pafg140.htm> (accessed February 16, 2008); Charles A. White, “Biographical Memoir of John Strong Newberry, 1822–1892,” in National Academy of Sciences, *Biographical Memoirs* 6 (1909): 13.



Charles Dimmock Papers, Special Collections Research Center,
College of William and Mary

The hills south of Galisteo, New Mexico, near Captain John Pope's artesian well. Sketch by Charles H. Dimmock.

Beginning in May 1859, when his civil assistants were traveling overland to Santa Fé, Macomb commenced taking astronomical and barometrical observations to prepare for his expedition. But he “found no chance to observe” on “cloudy & windy” evenings. When his men finally arrived in Santa Fé, particularly Dimmock, Macomb began conducting “simultaneous” cistern barometric readings in Albuquerque and Santa Fé to determine the accuracy of the instruments.

Dimmock also assisted Macomb “in placing the Transit table” as well as “in time observations” and in calculating “the Barometrical elevations of Santa Fé & Algodones.” Moreover, Dimmock helped Macomb calculate the difference in height, barometrically, between Santa Fé and Galisteo, New Mexico. The determination: 917.3 feet.

Galisteo was near Capt. John Pope's artesian well drilling site, visited by Newberry, Dimmock, and Fisher on June 28. Captain Pope bored the well “in the hope of obtaining water that should spontaneously rise above the surface.” He drilled the well in anticipation of possible railroad construction through the valley. Newberry noted that the valley of Galisteo Creek formed “a natural pass from the plains to the valley of the Rio Grande, affording a practicable and convenient railroad route.”⁵⁹ In later years,

59. Dimmock, *Diary*, June 6, 16, 22, 28, 1859, July 1, 1859, VHS; Macomb to Humphreys, July 7, 1859, NA; Macomb, *Report*, 38.



Hills south of Galisteo, New Mexico, dubbed by locals “Dinosaur Back.”
The Placer Mountains appear in the background.

the Atchison, Topeka and Santa Fé built its line along a route not very far from Pope’s well water.

Near Galisteo, likely in the Placer Mountains, Newberry and Dimmock made a failed attempt to find gold.⁶⁰ Newberry paused here to sketch the landscape’s most dominant feature, the dike of igneous rock, later illustrated in his report.⁶¹ Dimmock drew a nearly identical sketch of the terrain.

Earlier in the year, New Mexico’s Bishop Jean Baptiste Lamy had invited Macomb and another Army officer to accompany him on an excursion from Santa Fé to Captain Pope’s artesian well “to see the . . . boring in progress.” Macomb quipped, “So we are going with the Roman Catholic Bishop to see a Pope, if not *the* Pope.”⁶²

60. Macomb, *Report*, 51; Dimmock, *Diary*, June 28–29, 1859, VHS. Newberry described the Placer as a group rather than a chain of mountains. He noted, “The Placer Mountains have received their name from the [great quantities of] gold which they furnish.” He added, “The ‘Old Placer’ has been worked by the Mexican population since the first occupation of the country by the Spaniards, and probably was a place of resort by their predecessors the Pueblo Indians. . . . An American company has recently purchased a proprietorship at the Old Placer.” Here Newberry obtained “very beautiful specimens of the sulphides of copper and iron.” He also noticed “many large masses of magnetic iron ore” near the Old Placer. Macomb, *Report*, 39–40.

61. *Ibid.*, lithograph between pp. 50–51.

62. John Macomb to “Nannie” Macomb, February 6, 1859, LOC.

The captain stirred some excitement in Santa Fé at one point when he brought out his telescope and exhibited its capacity to the townsfolk, including the governor of New Mexico, Abraham Rencher, and his wife. Among the party appeared nineteen-year-old John Watts, a student on leave from college in Bloomington, Indiana. Watts kept a diary of his sojourn in Santa Fé in 1859. Among the entries is a record of his encounter with Macomb. He enjoyed peering through Macomb's telescope, "the first one I ever looked through." Watts noted, "We looked at Saturn—the moon and several other of the stars—looking time about. I noticed a broken uneven [edge?] on the lower portion of the moon which the Captain says are mountains." Macomb also displayed "a sextant he had to measure the distances between the stars," wrote Watts.⁶³

The following evening Macomb and Dimmock "were beset by the city gamblers," presumably from the Fonda Hotel, desiring to engage in "moon gazing." Dimmock wrote, "They all saw in the moon something of their avocation—one silver, another a woman's dress &c."⁶⁴

Apart from impressing local crowds, Macomb engaged his assistants, Dimmock and Fisher, in meticulous surveys and measurements. Dimmock took responsibility for training Fisher "in reading [the] vernier," a device used for making finer measurements with survey instruments. Ultimately, their most reliable tools would be James Green's cistern barometer, William Würdemann's sextant no. 12, and sidereal chronometer no. 217. (The numbers apparently relate to the inventory of the U.S. Topographical Bureau.) In the field the observers noted, "After leaving Camp No. 7 Chrom. No. 217 was used for all observations where it is not otherwise specified." The surveyors also used pocket chronometer no. 8632, sidereal chronometer no. 225, and Jurgenson watch no. 6960. In measuring the distances of the march, they also had the use of chains and sets of pins and other surveying equipment.⁶⁵

On one occasion, Dimmock called into question Macomb's instrument readings, since their barometric observations were nearly identical. So he "ran over the ground with the levelling instrument" from the courthouse to Fort Marcy, the old post located on the hill above Santa Fé, 664 yards north of the plaza, and found that it "agreed with a former line run by the Capt[ain]."⁶⁶

In addition to his survey work, Macomb faced heavy demands as the leader of the expedition since he held many roles, including commissary,

63. David Remley, "Adios Nuevo Mexico," 123–24.

64. Dimmock, Diary, July 7, 1859, VHS.

65. Ibid., June 13, 1859; "San Juan River Survey: Astronomical and Barometrical Observation, 1859," Bureau of Topographical Engineers, War Department Records, NA.

66. Macomb to Humphreys, July 7, 1859, NA; Dimmock, Diary, June 25, 1859, VHS.



Photo by author

Modern survey marker at old Fort Marcy in Santa Fé.

and endured many interruptions in the course of a day. Sunday July 3, 1859, he writes: “I had no sooner seized the pen again than in came my *hostler* with ‘Captn. I cant get any waterhole to soak them rawhides in.’” Macomb finally gained access to a muddy corral pond and before he could toss in the hides, he faced “various other interruptions,” including a shipment of “all my provisions & camp equipage” for the expedition. “These had to be received and stowed away at once! I have now some of my young gentlemen keeping guard over these stores and shall have until we can depart from this City for there is not a reliable lock in the Castle I have rented, on the other side of the Parroquia from my quarters, to keep these things in until the day of my departure from this City.”⁶⁷

As noted earlier, Macomb resided in Bishop Lamy’s quarters, adjacent to the adobe parish church, La Parroquia, at the end of San Francisco Street. The present St. Francis Cathedral, built of stone under the direction of the Catholic bishop rests on the site of the former structures.⁶⁸

(Dimmock had the good fortune to meet the famed bishop, who “insisted upon our visiting his flower garden & gave us a boquet [*sic*] of very delicate construction.”) While stationed in Santa Fé, Macomb’s men attended the local Catholic services held there. Dimmock also attended the

67. John Macomb to “Nannie” Macomb, July 3, 1859, LOC; See also Dimmock, *Diary*, July 3, 1859, VHS.

68. John Macomb to “Nannie” Macomb, July 3, 1859, LOC. Bishop Lamy built the Romanesque style cathedral in 1869. Lamy was Macomb’s “landlord.” Macomb referred to his residence as “the Bishop’s *palace*.” See also Dimmock’s *Sketchbook* in Charles H. Dimmock, *Papers, 1850–1873*, Section 6, *Sketchbook*, 1859, VHS.



Courtesy of Margaret Jones Perritt and the Virginia Historical Society

La Parroquia. The adobe cathedral in Santa Fé, New Mexico, 1859. Pencil sketch by Charles H. Dimmock.

local Baptist church and listened to a good sermon but refused to return. “Such singing as would delight an ear attuned to board sawing,” he protested. (In his diary, Dimmock held tight to the reins of his beliefs and never revealed his religious affiliation.)

In this frontier setting, he encountered the typical languor of nineteenth-century Santa Fé, interrupted at times by pulses of excitement, such as lively concerts on the plaza by the Army regimental band, political campaigns (particularly the Miguel Antonio Otero race for Congress), circus activities, the arrivals and departures of both the eastern and the southern mail stages, and Catholic festivals and processions. Dimmock chronicled the events on Corpus Christie Sunday. “Observed by the Catholics with much form. Morning the Host carried from Shrine to Shrine by the Bishop & his assistants, followed by the girls from the Convent in white & men in the rear shooting blank cartridges to scare the Devil.” In addition, he recorded the local Masonic Order’s observance of St. Juan’s Day with a procession and oration.



Photo by author

St. Francis Cathedral, built on site of La Parroquia in Santa Fé.

More important, Dimmock gave an account of a grand political reception. Congressman John S. Phelps of Springfield, Missouri, was “met by an escort & band” and “received by the Gov.,” New Mexico’s Governor Rencher. The reception included “Many Speeches.” According to Dimmock, “Hon. Mr. Phelps” came to town to promote “this route for the Pacific R[ail] R[oad].”

Dimmock spent much of his leisure time sketching scenes in and about the city. On one occasion, he captured in pencil the indigent “flower boy of Santa Fé adorned with the old military cap of Capt. Macomb.” Macomb considered him “one of my pet beggars.” He enjoyed the “sweet parfum” [*sic*] of the “bruised rose leaves which after the fashion of the Country, he dignifies as ‘Rosas de la Castilla!’”⁶⁹

69. Charles H. Dimmock, Papers, 1850–1873, Section 6, Sketchbook, 1859, VHS; John Macomb to “Nannie” Macomb, June 4 1859, LOC. It appears that Dimmock’s “flower boy,” Faustin Ortéga Ortiz, was murdered in March 1890. Locals found his brutally beaten remains, with bullet wounds, in an arroyo, according to (*Santa Fé*) *New Mexican*. Cited in Paul Weideman’s “Fort Marcy Area Holds History,” (*Santa Fé*) *New Mexican*, <http://www.freenewmexican.com/sfguide/114.html> (accessed May 31, 2007).

Dimmock also attended bailés (dances), read books from the library of Fort Marcy, met and dined with military officers, visited with political figures (including Governor Rencher), waited for the mail stages that carried news to and from home, and played cards. He also spent a great deal of time writing letters.

One of the highlights of Dimmock's stay in Santa Fé included meeting Kit Carson. "Was introduced and had a conversation with Kit Carson. He has a broad, german head, do. face, hair long & in elf locks, eyes small & restless, colour gray. Mouth broad & decided, filled with strong, irregular teeth. Body heavy & shoulders broad. Lower limbs comparatively slight & a little bowed. Height about 5ft. 9 in. Age 48 years."⁷⁰

In preparing for the survey, Dimmock spent much of his time helping Macomb. He assisted Macomb "in Sextant observations & adjusting Barometers" and several other technical duties.⁷¹ In addition, Dimmock "aided the Capt. in packing" and noted, "Much depends on the docility of the mules." On the day they were to set out, Dimmock reported on the stubborn behavior of the animals. "Some of them . . . exhibit decided indications of dislike for the packs," he wrote. On the journey, Dimmock observed "while unpacking a wild mule with Cook's tripods & axes kicked herself free of her load, cutting her legs severely."⁷²

Just days before the expedition embarked on their journey into Ute and Navajo country, Col. Benjamin L. E. Bonneville, New Mexico's military commander, limited their escort to forty infantry soldiers and one officer. Macomb responded "in great disgust" at the number of men supplied by the military. On hearing the news, Dimmock unfairly characterized the colonel as "an old woman."⁷³ He complained that the force was "entirely inadequate for our trip....We will be much circumscribed it is feared in our operations."⁷⁴

70. Dimmock, Diary, June 23, 1859, VHS.

71. Ibid., June 6, 1859, VHS.

72. Ibid., July 12, 13, 14, 1859, VHS.

73. Ibid., July 5, 1859, VHS. Lt. Milton M. Cogswell (1825-1882) would command Macomb's escort. He graduated from West Point in 1849 and served with the U.S. Infantry. In 1855 the Army assigned him to duty in New Mexico. At the outbreak of the Civil War he commanded the New York Volunteer Infantry. During the war he was captured at the battle of Ball's Bluff, Virginia, and held prisoner until released in a prisoner exchange. In 1865 the Army brevetted him a colonel for his "gallant and meritorious service" during the war. Following the war he served in various capacities, including military governor in South Carolina. From 1869 until his retirement in 1871 he served with the 21st Infantry in Arizona. Near the close of his life, he served "under President Hayes at the Soldier's Home in Washington, D.C." *Selected Biographical Sketches: Milton Cogswell*. <http://www.arlingtoncemetery.net/milton-cogswell.htm>. Accessed May 8, 2007.

74. Dimmock, Diary, July 5, 1859, VHS; John D. Wilkins, First Lt., Third Infantry, to "Officer Commanding Fort Defiance, New Mexico," July 8, 1859, in Arrott's Fort Union Collection.



Sketch of the "flower boy" of Santa Fé, by Charles H. Dimmock.