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Jerry E. Mueller and Wade A. Mueller
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EARLY IMAGES OF THE ORGAN MOUNTAINS: ARTWORK OF THE U.S.-MEXICAN BOUNDARY COMMISSION OF 1851–1852

JERRY E. MUELLER[1] and WADE A. MUELLER[2]
[1]GEM Consultants, 4120 Tesota Drive, Las Cruces, NM 88011; [2]U.S. Air Force, Goodfellow Air Force Base, San Angelo, TX 76908

Abstract—Errors on the J. Disturnell Map of 1847 precluded the establishment of a land boundary between the United States and Mexico as prescribed by the Treaty of Guadalupe Hidalgo of 1848. A compromise boundary between the U.S. Commissioner, John Russell Bartlett, and his Mexican counterpart, Pedro García Condé, was repudiated in Washington and eventually led to the Gadsden Purchase in 1853. Bartlett did succeed in traveling for more than a year through the desert Southwest, recording his experiences in a personal journal that eventually became the basis for his two-volume book *Personal Narrative*. As part of the Boundary Commission activities, Bartlett and his chief artist-illustrator, Henry Cheever Pratt, made more than 200 sketches, drawings, and paintings, including several of the Organ Mountains of southern New Mexico. The latter were made in the period 1851–1852 and provided easterners with their first glimpse of the region. Of the four drawings reproduced here, one is a previously unpublished pencil sketch of a waterfall developed on the Orejon Andesite in Fillmore Canyon. Two drawings depict the west side of the Organ Mountains near Fillmore Canyon and distinguish the topography developed on the quartz monzonite to the north from that developed on the volcanic rocks to the south. The fourth drawing is a view of the Organ Mountains sketched from the floodplain of the Rio Grande near former Fort Fillmore. The Bartlett papers and drawings have been retained by John Carter Brown Library in Providence, Rhode Island, since 1886 and are available for academic research.

INTRODUCTION

The Treaty of Guadalupe Hidalgo brought an official end to the United States-Mexican War in 1848. Article 5 of the treaty details the agreement between the two countries on where the international boundary would be established and marked, starting at a point near San Diego, California, and proceeding eastward. Appended to the treaty, for reference purposes, was a map of the United States produced by J. Disturnell in New York in 1847. Although the text of the treaty specifies how various sections of the boundary were to be surveyed—San Diego to the mouth of the Gila River; eastward along the Gila to the western boundary of New Mexico; upstream along the Rio Bravo del Norte (Rio Grande) from the Gulf of Mexico to the southern limit of New Mexico—the only dictate for the western and southern limits of New Mexico was to follow "those laid down in the map" (Mueller, 1975, p. 128).

The treaty also stipulated that the boundary would be surveyed and marked by a joint boundary commission. Of the two U.S. commissioners nominated by the Democratic administration of President James Polk, only one, John B. Weller, actually completed work in the field, on that portion of the land boundary between San Diego and the confluence of the Gila and Colorado Rivers. Weller was removed as boundary commissioner in late 1849 by the Whig administration of Zachary Taylor, although he continued with the survey of the land boundary while awaiting the arrival of his successor. Weller was replaced by John C. Frémont, formerly of the Army Corps of Topographical Engineers, who arrived in California in 1850, only to resign from his appointment. The boundary commission adjourned in early 1850, agreeing to reconvene at El Paso del Norte (Juárez) on the first Monday in November of 1850. Official correspondence between the two countries reveals the frustration of the Mexican Commissioner, Pedro García Condé, at the repeated delays on the part of the United States in fixing the boundary.

JOHN RUSSELL BARTLETT
Providence to El Paso

John Russell Bartlett, raised in eastern Canada, spent the greater part of his career in Providence, Rhode Island, where he was able to pursue his intellectual interests and further develop his artistic talent, all the while forging a close relationship with Brown University, which granted him an honorary degree in 1848. During the period 1836-1849, Bartlett lived in New York and operated a bookstore frequented by leading writers, artists, and politicians. He was a cofounder of the American Ethnological Society and the author of *Progress in Ethnology* (1847) and *Dictionary of Americanisms* (1848), the latter the standard work on the subject in the last half of the 19th Century, its last edition appearing in 1877. Bartlett returned to Providence in 1849 and used his widely respected reputation to secure a federal position for himself, not in a diplomatic post as he had sought, but as the U.S. Boundary Commissioner charged with marking the boundary line between the United States and Mexico (Sweeney, 1996).

Bartlett and several members of his senior staff arrived at Indianola on the Texas Gulf Coast on August 31, 1850. There, he rendezvoused with the main advance party of the commission for outfitting and the arduous 800-mi trip overland to El Paso along the San Antonio Road. Of his approach to Guadalupe Peak, on November 10, 1850, Bartlett states, "The projecting cliffs of white and orange stood out in bold relief against the azure sky, while the crevices and gorges, filled with snow, showed their inequalities with a wonderful distinctness....No painter's art could reproduce, or colors imitate, these gorgeous prismatic tints" (Bartlett, v. I, p. 119). At Guadalupe Pass, Bartlett got his first extended view of New Mexico—from the plain and lakes of Salt Flat Graben below to the Guadalupe and Sacramento Mountains to the north-northwest. He subsequently camped at the Cornudas del Alamo on November 11 and at Hueco Tanks on November 12, reaching El Paso November 13, a few weeks ahead of Commissioner Condé.

The great compromise

The reorganized joint commission began to operate in early December 1850, and soon discovered one of American history's most significant cartographic errors. The Disturnell Map correctly showed the southern boundary of New Mexico westward from where it intersected the Rio Grande about 8 mi (7' of latitude) upstream of El Paso. However, the grid was incorrect and indicated that El Paso del Norte was located at 32°15' N lat. and 104°39'

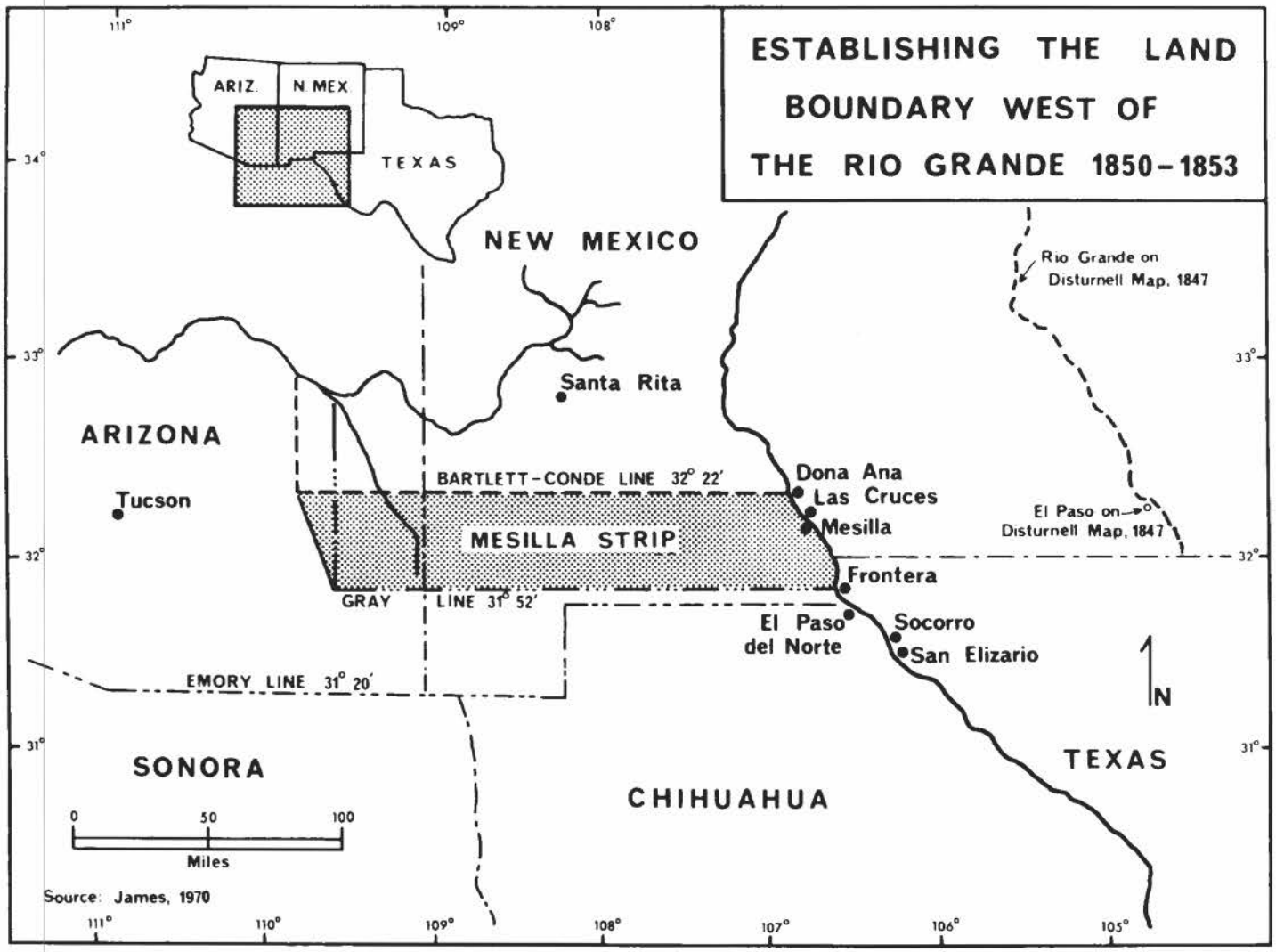

FIGURE 1. Fixing the land boundary west of the Rio Grande. The disputed Mesilla Strip was absorbed into the United States by the Gadsden Treaty of 1854. The current boundary is that fixed under the leadership of Major William H. Emory, U.S. Boundary Commissioner (1854–1855) and his Mexican counterpart, Don José Salazar.

W long., or approximately 34 mi too far north and 137 mi too far east of its actual location (Fig. 1). After much discussion, the joint commission, empowered by the treaty, effected a compromise that would place the southern boundary of New Mexico at 32°22' N lat., following that parallel westward from the Rio Grande a full 3° of longitude into what is now eastern Arizona. Bartlett in effect traded some latitude for longitude. He knew he had secured the rich Santa Rita copper deposits for the U.S. At the same time, he considered the disputed Mesilla Strip to be largely worthless desert terrain.

Because of internal dissension among the members of the U.S. Commission regarding the compromise, and the fact that southerners felt that the Yankee commissioner had given away the only possible route for a southern transcontinental railroad, the compromise was never accepted or approved in Washington. Hence, the land boundary that exists today between the Rio Grande and San Diego is a product of the Gadsden Treaty of 1853, a resolution of the stalemate generated by errors on the Disturnell Map and the controversy resulting from the Bartlett-Condé compromise.

Travel and adventure

The Boundary Commission under Bartlett and Condé moved its field headquarters to Santa Rita del Cobre to oversee the survey of their intended land boundary, then continued westward to survey the boundary along the Gila. Bartlett, always in search of provisions and adventure, spent more than a year traveling through parts of what are now New Mexico, Arizona, California, Sonora, and Chihuahua, returning to El Paso on August 17, 1852 (James, 1970). Still without a final resolution of the land boundary, Bartlett decided to visit surveying operations along the lower Rio Grande that were being conducted by his new astronomer and chief surveyor, Major William H. Emory, a no-nonsense West Pointer and southerner who had previously distinguished himself in the Mexican-American War as part of the Mormon Battalion. Emory had also worked for Weller during the early days of the commission in California (Metz, 1989).

Emory had arrived in El Paso in November, 1851 and found the local commission staff in disarray and virtually bankrupt. According to Emory, "...with the exception of one or two, none were fitted for the service on which they were engaged; most of them ignorant of the first principles of surveying, and embroiled in feuds with each other...the commissioner...or...the scientific corps" (Emory, 1857, p. 10–11). He clearly blamed the commission's financial woes and lack of leadership on Bartlett who "...was at the moment, with an equipage and corps of attendants, visiting the States of Chihuahua and Sonora, and the Geysers of California—places sufficiently distant from the line" (Emory, 1857, p. 11). In

addition, Emory had been instructed by the Secretary of the Interior to sign the Bartlett-Condé compromise, which he did with a cleverly drafted notation that he was a witness only—that he could not approve the work of his predecessors because he had no firsthand knowledge of its accuracy. His real concern was to prevent the loss of the only reasonable corridor for the southern transcontinental railroad. This tactic worked and delayed the land boundary resolution through 1852, by which time Bartlett's leadership was hotly debated in Congress and in the press. Emory's maneuver allowed powerful southern senators the time they needed to effectively kill the Bartlett-Condé compromise. A feud developed between Bartlett and Emory that would carry well beyond the years of the boundary survey.

Side-trip to the Organ Mountains

In late September of 1852, Bartlett traveled to the newly established Fort Fillmore, a few miles south of Las Cruces on the east bank of the Rio Grande, to obtain a military escort for his trip downriver to see Emory. While there, Bartlett and other officers of the commission, escorted by Major Steen and ten dragoons, decided to visit the Hugh Stevenson silver mine on the west slope of the Organ Mountains. After traveling some 15 mi on horseback, Bartlett sent several members of the party ahead to the mine, while he detoured to hike Fillmore Canyon, about 5 mi south of the Stevenson Mine. He writes, "I then took my rifle and walked a couple of miles through it and the deep gorges which indent the ridge. In this ramble I passed a beautiful little stream, which, rising far within the defile, wound its way along through many intricacies, where it had worn for itself a deep bed, until it tumbled over the rocks in a single fall of some fifty feet. Although the quantity of water was small, the fall was exceedingly picturesque" (Bartlett, v. II, p. 393). Bartlett sketched the waterfall on September 27, 1852, but there is no indication of this in his journal or his *Personal Narrative* (Fig. 2). Apparently, the drawing was never converted from the pencil sketch into one of the more dramatic sepia and wash renditions for which Bartlett is noted. The waterfall and environs today are much the way they appear in Bartlett's sketch. Approximately 0.4 mi upstream and to the east of the waterfall, Fillmore Canyon is crossed from north to south by the Modoc Fault. Less than 0.1 mi downstream of the waterfall is the site of the former processing mill of the Modoc Mining Company which ceased operations in 1907.

FIGURE 2. "Water Falls-Organ Mountains," pencil sketch by John Russell Bartlett, September 27, 1852, item 172-I, *Sketch Book*, of the John Russell Bartlett Papers. The view is to the east-northeast along Fillmore Canyon. The vantage point for this drawing is located at 32°20.30' N lat., 106°35.15' W long., on the west flank of the Organ Mountains. Reproduced by permission of the John Carter Brown Library, Brown University, Providence, Rhode Island.

FIGURE 3. "Organ Mountains, New Mexico," 13 x 18.25 in., pencil and sepia wash by John Russell Bartlett, item 82 of the John Russell Bartlett Papers. Based on item 172j, *Sketch Book*, of the John Russell Bartlett Papers, "Organ Mountains near Fort Fillmore," a pencil sketch by John Russell Bartlett dated September 27, 1852. The center of the view is northeast from vantage point 32°20.13' N Lat., 106°36.04' W long. Reproduced by permission of the John Carter Brown Library, Brown University, Providence, Rhode Island.

Bartlett exited Fillmore Canyon and "...took a sketch of these mountains and of the defile through which I had passed. A small stream flowed near us, marked by a line of fine large oaks. Midway between this spot and the mountains rises a bold mass of white granite" (Bartlett, v. II, p. 394). The white granite he refers to is actually the upper member of the Cueva Tuff, mapped and described by Seager (1981) as an Oligocene rhyolitic ash-flow tuff that is massive and grayish-orange. The relative resistance of the Cueva Tuff is apparent both in Bartlett's drawing and in the field where it forms a nearly vertical wall rising above the surrounding pediment and alluvial fans (Fig. 3). Bartlett strongly contrasts the Cueva Tuff in the right foreground of his drawing with the much darker and somewhat older Orejon Andesite behind the Cueva. The Orejon Andesite is mapped and described by Seager (1981) as Eocene/Oligocene andesitic flows interbedded with volcaniclastic rocks, all of which appear "dark-gray, greenish-gray, or purple-gray."

In the left center of Bartlett's drawing and to the left of the line of oak trees along the creek, a relatively dark mass of the Orejon Andesite, in the form of an elongated hill, rises a few hundred feet above the surrounding piedmont zone. Behind that hill and rising to a height one-third the way to the top of the Organ Mountains, is a group of alternating steep ridges and canyons developed on steeply-inclined Upper Paleozoic sedimentary rocks. These rocks include the Abo, Hueco, and Panther Seep formations, and the Lead Camp Limestone. The spectacular high pinnacles that form the highest ridge in the Organ Mountains are developed on the Organ Needle quartz monzonite phase of the Organ Batholith (Seager, 1981). This corresponds to the "...light gray granite..." described by Bartlett (1854, v. II, p. 394).

Anyone familiar with the Organ Mountains will recognize that the highest elevations are in the southernmost peaks of the Organ Needles, yet these peaks in the upper center of Bartlett's drawing appear too low, perhaps by as much as 2000 ft in the representation. There is a relatively straightforward explanation for this apparent discrepancy. The present authors were able to determine, with great precision, the vantage point from which the original sketch was made, a shoulder along the steep south bank of the arroyo that emanates from Fillmore Canyon. Because the southern peaks of the Organ Needles bend to the southeast and away from the observer, there is an illusion in the field that this part of the range is actually lower than the Needles just to the north! However, the effect also appears to be exaggerated somewhat on the Bartlett drawing. At increasingly greater distances to the west of the artist's vantage point, the southern Needles rise to occupy their true prominence on the skyline.

Interestingly, Bartlett lists the individuals who accompanied him to Fort Fillmore and on the field excursion to the Organ Mountains, but no mention is made of his commission's chief artist and illustrator Henry Cheever Pratt, a longtime acquaintance from Boston and product of the Hudson River School of Art (Sweeney, 1996). Yet in the Bartlett collection at the John Carter Brown Library is a watercolor by Pratt that seems to be a nearly identical perspective of the Organ Mountains as Bartlett's (Fig. 4). Though relatively simple, the Pratt version underrepresents the southern

extent of the Organ Needles in much the same fashion as the Bartlett drawing, only the degree of deemphasis is about 50% greater. Missing in the Pratt watercolor are the animals and people that are found on the Bartlett sepia and wash portrayal of the Organ Mountains. However, Pratt added some details of vegetation in his watercolor that are not present in the Bartlett sepia and wash, motivated perhaps by an attempt to identify the Organ Mountains as a potential source of timber to support further development in El Paso and the Mesilla Valley.

We considered that Pratt might have remained behind in El Paso while Bartlett visited Fort Fillmore and the Organ Mountains: that Pratt might have produced his watercolor at a later date, based on Bartlett's original pencil sketch. However, another drawing in pencil and assigned to Pratt was among the Boundary Commission documents Bartlett gave to John Carter Brown Library in the 1880s. This undated and unsigned drawing is a depiction of the Organ Mountains from a point near the east bank of the Rio Grande, about midway between old Fort Fillmore and Las Cruces (Fig. 5). In fact, the drawing was made a stone's throw to the west of the residence of a modern-day geologist whose work on the Organ Mountains has become the standard (Seager, 1981). Pratt's drawing includes a simple outline of Tortugas Mountain in the left foreground, with the Organ Mountains in the background. Fillmore Canyon almost evenly divides the Organs between the pinnacles developed on monzonite to the north, and the ridges developed on volcanic rocks to the south. From this perspective, the heights of the Needles are correct. A small woodcut based on this drawing appears in Bartlett's *Personal Narrative*, enhanced by the addition of water flowing along the east bank of the Rio Grande, and a small boat with two people and a sail (Bartlett, 1854, v. II, p. 393).

A distinct possibility exists that the Pratt watercolor was based on one or both of the Bartlett drawings, or perhaps Bartlett fashioned his sepia and wash after Pratt's watercolor, the latter based on Bartlett's pencil sketch. That would account for the fact that the people and animals, not present on the original pencil sketch or in Pratt's watercolor, were included on Bartlett's sepia and wash. Also, in the right foreground of Bartlett's original pencil sketch, there is a handwritten note to add a "few mesquite bushes with yuccas," an instruction followed more closely on Pratt's watercolor than on Bartlett's final drawing. If Pratt did not accompany Bartlett and the others to Fort Fillmore and the Organ Mountains, when and how did Pratt complete his pencil sketch of the Organ Mountains from the Rio Grande? The answer might lie in the fact that Pratt arrived in El Paso in July of 1851, and only later that summer was he able to join the itinerant commissioner at Santa Rita. The major road north of El Paso would have taken Pratt directly past the point from which his pencil sketch "Organ Mountains from the Rio Grande" was made. Therefore, the pencil sketch by Pratt may predate the other Organ Mountains drawings by more than a year. However and whenever Bartlett came into possession of the sketch, the following notation, in Bartlett's handwriting, was added to the left margin of the drawing: "Organ Mts. Taken on the Rio Grande 9 mi below Donana [sic]."

FIGURE 4. "Organ Mountains, New Mexico," 10 x 14 in., black and white reproduction of a watercolor by Henry Cheever Pratt, item 12 of the John Russell Bartlett Papers. The perspective is the same as that of Figure 3. Reproduced by permission of the John Carter Brown Library, Brown University, Providence, Rhode Island.

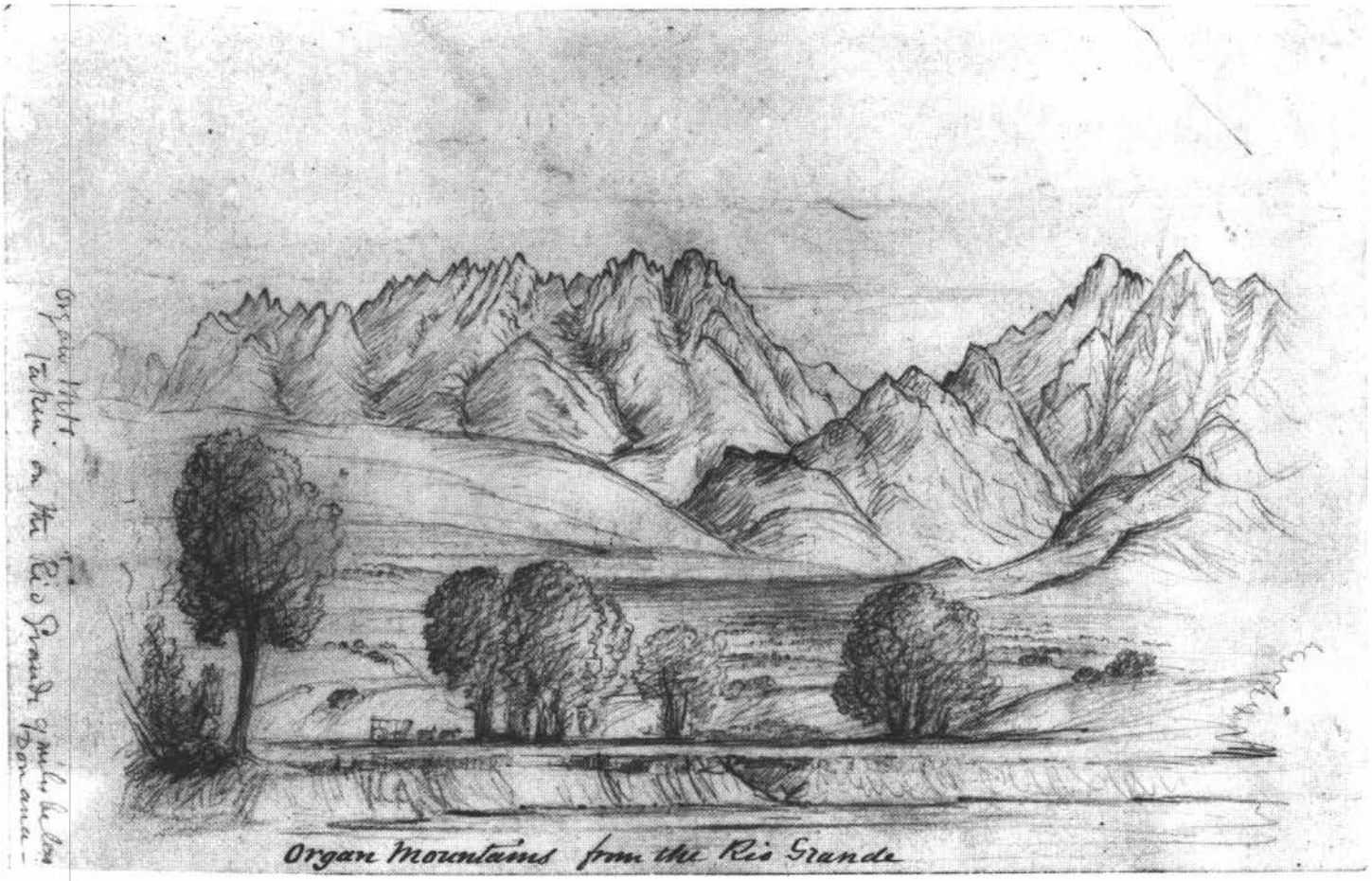

FIGURE 5. "Organ Mountains from the Rio Grande," 5.25 x 8.25 in., pencil sketch attributed to Henry Cheever Pratt, item 24 of the John Russell Bartlett Papers. Notation on left margin is in Bartlett's handwriting and reads, "Organ Mts. Taken on the Rio Grande 9 miles below Donana." The view is to the northeast, and the vantage point is just west of 32°15.55' N Lat., 106°44.70' W long., now located in a pecan orchard. Reproduced by permission of the John Carter Brown Library, Brown University, Providence, Rhode Island.

The return to New England

Bartlett and Pratt left El Paso 11 days after the excursion to the Organ Mountains, never to return to the area. Bartlett did visit Emory's operations on the lower Rio Grande, eventually disbanding the commission at the Texas Coast, where all equipment and supplies were sold at salvage. Bartlett returned to Providence in late January of 1853, his federal career over. He continued to defend his reputation in Washington and in the press. At the same time, Bartlett, knowing fully well that the government would not publish his report on the boundary survey, worked feverishly to get his personal journal and artwork into print. Rather incredibly, he succeeded in publishing his renowned two-volume *Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua* the next year. Unfortunately, most of the artwork associated with the boundary survey was not included.

Bartlett's reputation in Providence never waned. In fact, he was elected Rhode Island's Secretary of State from 1855 to 1872 (Fig. 6). He remained a prolific researcher and published several books in addition to his *Personal Narrative*. To his credit, he collaborated for many years to help John Carter Brown establish a first-rate research library on early Americana at Brown University. It is there that Bartlett's original papers and artwork from his boundary commission days reside.

Henry Pratt returned to Boston and was a prolific producer of oil paintings, many based on his experience on the boundary survey. One of his works, "Grand View of the Organ Mountains" is known only from Pratt's records; the painting itself remains unlocated (Sweeney, 1996). Like Bartlett, Pratt's work was largely forgotten by the early part of this century. However, there has been a resurgence of interest in both among artists and historians following the publication of *Bartlett's West* by Robert V. Hine in 1968. More recently, the Albuquerque Museum published *Drawing the Borderline: Artists-Explorers of the U.S.-Mexico Boundary Survey*. The illustrations in both volumes are superb.

SUMMARY

Historians and political scientists will continue the debate over the accomplishments, or lack thereof, of John Russell Bartlett and his colleagues on the U.S.-Mexican boundary survey of the early 1850s. However, everyone will agree that Bartlett's *Personal Narrative*, based on his personal journal and accounts of travel in the region, has contributed greatly to the early literature on the American Southwest and the U.S.-Mexican borderlands. Many of Bartlett's artworks dealing with mountains, canyons, rivers, and rock piles, especially those rendered in sepia and wash, are nothing short of spectacular. The few drawings presented here are only a very small part of a collection at John Carter Brown Library that totals more than 200 images.

ACKNOWLEDGMENTS

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Lawton, and Geraldine M. Mueller for their reviews of the manuscript. Special thanks to the staff at John Carter Brown Library, especially Dan Slive and Susan Danforth, for providing access to the Bartlett collection and for granting permission to reproduce the artwork presented here. Richard Hurley, photographer at John Carter Brown Library, did a masterful job of reproducing the artwork, especially the very difficult and faint pencil sketches.

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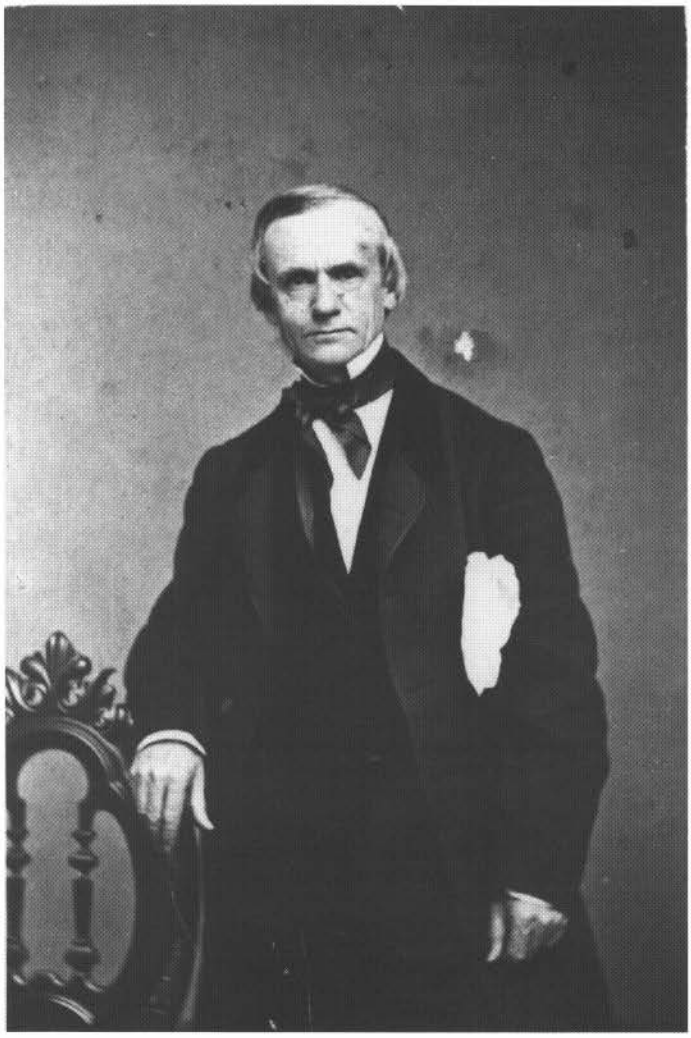

FIGURE 6. John Russell Bartlett (1805–1886) as he appeared about 1862. Bartlett at this time was Rhode Island's Secretary of State. He never returned to the Southwest after his days as U.S. Boundary Commissioner (1850–1853), although his legacy of that ordeal are the very successful two-volume *Personal Narrative* and the fabulous collection of artwork at John Carter Brown Library.

View westward toward the Palomas Basin from Longbottom Canyon in the Caballo Mountains. Photograph by Greg Mack.