

**Figure 1.** A map indicating the various depictions of "Beaver Lake," the water body surmised to be represented at the end of the Beaver (or Lost) River on the maps derived from the "Smith Map." The dashed lines represent the different courses cartographers assigned to the Beaver River over the years. The position of the lake and river moved north and west, until the lake finally stopped being drawn at the end of the Beaver River and was ultimately identified as today's Pruess Lake. (Map by the author.)

# THE MOUNTAIN MEN, THE CARTOGRAPHERS, AND THE LAKES

BY SHERI WYSONG

Six miles north of Milford, Utah, was once a small seasonal wetland—more of a sink than a lake—that sat in a depression along the path of the Beaver River, was optimistically called Beaver Lake, and disappeared as white settlers diverted water from the river for irrigation. Five miles south of Garrison, Utah, in the Snake Valley near the Nevada border, sits Pruess Lake, another small water body now altered by diversions.<sup>1</sup> These two diminutive features—seemingly unconnected, one of them no longer extant—are part of a larger story that involves some of the major characters of American exploration and cartography in the nineteenth century, including William Ashley, Jedediah Smith, Charles Preuss, and especially David H. Burr. The four men were linearly linked through their activities: Smith and Ashley through the fur trade in the 1820s, Ashley and Burr through government positions in Washington D.C. in the 1830s, and Burr and Preuss through cartographic work in the same city in the 1840s. This article is about the discovery, mapping, and naming of these two lakes, a case study that teaches about the shifting, incomplete understanding and representation of geography in the American West.

In 1822, the Missouri businessman William Ashley partnered with the veteran fur trader Andrew Henry to hire “Ashley’s Hundred”: one hundred “enterprising young men” who would travel to the Rocky Mountains to trap beaver. One of these young man was Jedediah S. Smith, who became a legendary explorer of the West. In 1826 and 1827, Smith traversed the Great Basin from north to south and west to east. In Utah, the areas Smith explored included the southwestern portion of the state.<sup>2</sup> Smith and his partners David E. Jackson and William Sublette, who bought out Ashley in 1826, returned to St. Louis in 1830, where they collaborated with Ashley on creating a map of the Rocky Mountain region. The map—which was largely attributed to Smith and is commonly referred to as “the Smith Map”—would provide mid-nineteenth century cartographers with a new and more accurate understanding of the region, particularly the Great Basin.<sup>3</sup>

Before cartographers had access to the Smith Map, they relied on the explorations and maps of Atanasio Domínguez and Silvestre Vélez de Escalante to fill in some of the geographic blanks of the Great Basin. In 1776, Domínguez and Escalante set out from Sante Fe to find an overland route to southern California. Unlike Smith and Ashley, who had accumulated their understanding of the region from years of their own travels and from other fur traders, the fathers were limited to their knowledge of a path they traversed once, augmented by conjecture based on the information they had gleaned from Native Americans. The Domínguez and Escalante maps of the Great Basin formed the basis of highly inaccurate depictions of the region for over half a century after their travels.

Twenty-five years after the creation of the Smith Map, in 1855, another key player in the mapping of the West—David Hugh Burr—arrived in the Territory of Utah as its surveyor general. That August, Burr set a sandstone monument at the southeast corner of the Temple Block in Salt Lake City that marked the reference point for all future surveying for most of the state and is still in use today (fig. 2).<sup>4</sup> In addition to his surveying, Burr may have left another historical fingerprint in Utah, one that is little known but significant in its own right, with regards to the mapping and naming of Beaver and Pruess lakes. And, in making the connection between the lakes, a larger story becomes evident: Burr might well have been influential in the preparation of the 1848 Frémont-Preuss map, accounting for the enigmas found on that map that have remained unexplained until now.

Burr, who was born in Bridgeport, Connecticut, in 1803, became the aide-de-camp to Governor DeWitt Clinton in 1825. Soon thereafter, he was appointed to the job that became the first of his true callings: heading up a road surveying crew, mapping the roads in the state of New York.<sup>5</sup> Upon completion of the surveys, Burr ventured into his second true calling—cartography. He used the reports and maps from the road surveys to compile an atlas of the state of New York, which he self-published in 1830.<sup>6</sup> Burr then set his sights higher and began work on a world atlas, probably planning to publish it himself. He could not complete the atlas, however, because in the early 1830s, he accepted an appointment as the Topographer to the U.S.

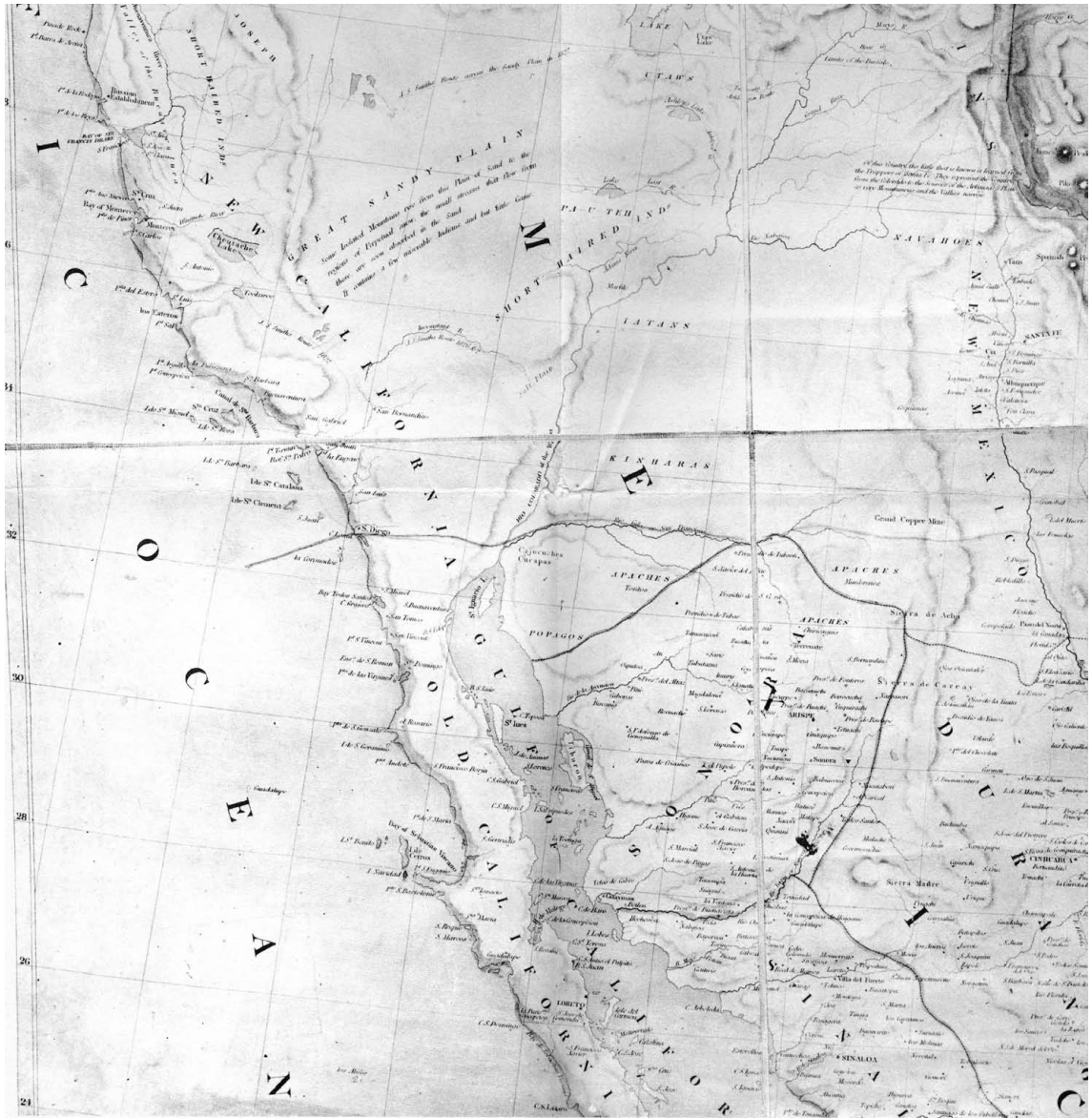
Post Office and moved his family to Washington, D.C. The engravers of the maps took over the project, and D. S. Stone of New York City completed and published the *Universal Atlas* in 1835.<sup>7</sup> Further, according to Walter Ristow, Joseph H. Colton broke into the cartography business around 1831 in New York City by purchasing the copyrights of Burr's maps of New York state. Colton did not publish any maps until 1833, at which time he published revised editions of Burr's maps of New York, Ohio, and Texas, as well as Burr's new map of the United States. The J. H. Colton Company eventually grew to become one of the preeminent map publishing companies of the nineteenth century.<sup>8</sup>

Meanwhile, several months prior to Burr's arrival in Washington, D.C., Ashley was elected to the U.S. House of Representatives from the state of Missouri.<sup>9</sup> Smith had died in the spring of 1831, and Ashley was in possession of the Smith Map for at least part of the time period he was in Washington. A July 19, 1834, letter from Hugh Campbell to his brother Robert Campbell—a fellow trapper and friend of Jedediah Smith—discussed publishing Smith's memoirs and map. Hugh stated that the previous February, Ira Smith, Jedediah Smith's brother, had "promised to send me the Journal & a map left by his brother with a view to their arrangement for publication. He has gone to Santa fe and perhaps he has left them in charge of some person. Gen. Ashley had the maps which he said he would procure from him." Ashley, as evidenced in the following paragraph, most certainly provided the Smith Map to Burr to use as a reference.<sup>10</sup>

In 1836, Burr traveled to London to collaborate with the British cartographer John Arrowsmith to produce an atlas of the United States, which Arrowsmith published in 1839.<sup>11</sup> Burr based the western portion of one of the maps, *Map of the United States of North America with Parts of Adjacent Countries*, upon information that could only have come from the Smith Map.<sup>12</sup> Maurice Sullivan, an early researcher of Smith, wrote in 1934 that, "Besides the *Journal* there is a map, drawn in 1839. This map, entirely overlooked by scholars who have contradicted one another about the routes of Jedediah Smith, plainly is based on Jedediah's own directions, if not actually copied from the long-missing chart.

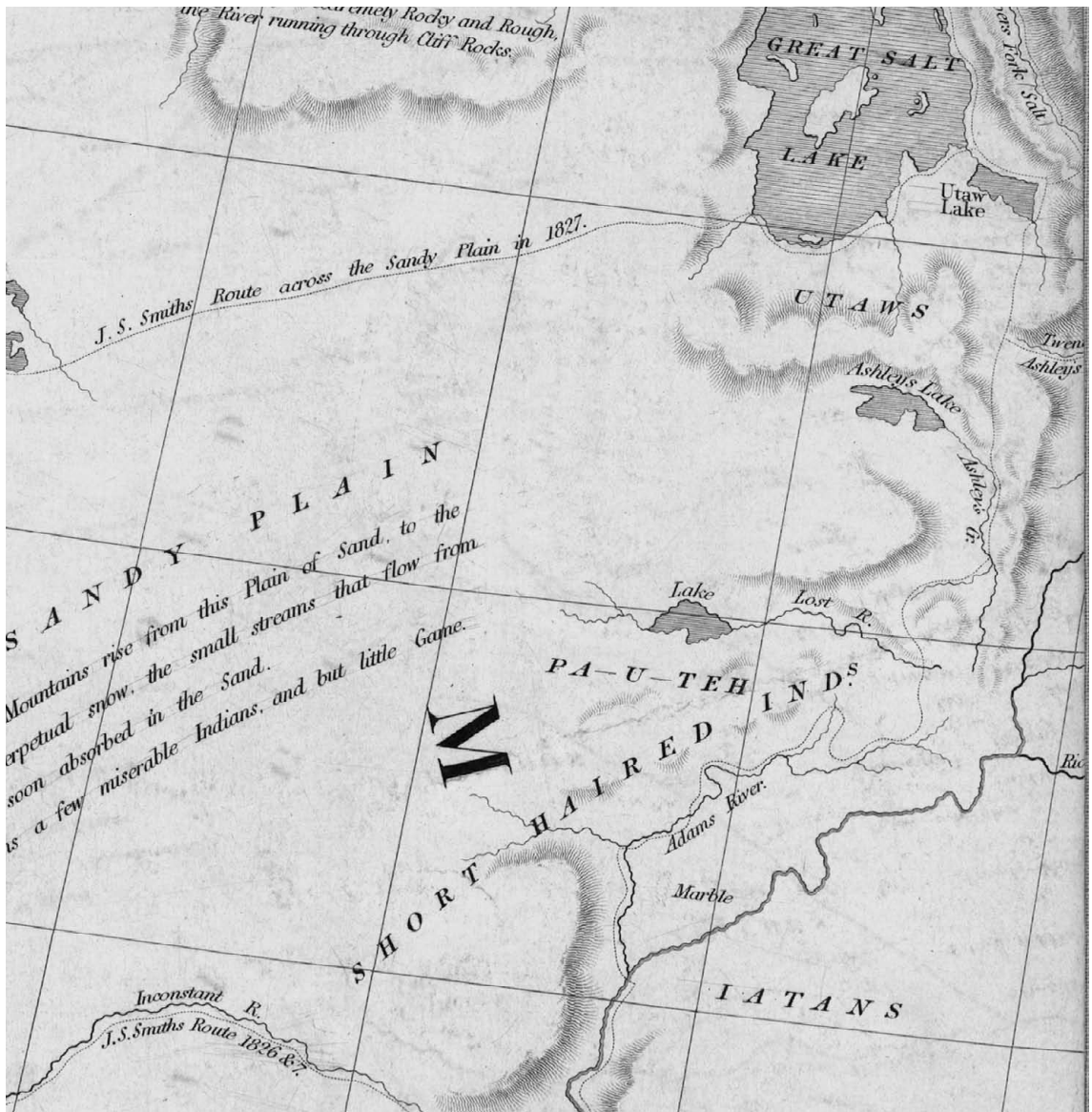


**Figure 2.** A replica of the Great Salt Lake Base and Meridian monument, which stands at the southeast corner of Temple Square in Salt Lake City. Benjamin Thomas Mitchell carved the original monument, and David H. Burr placed it at the site in August 1855. (Photograph by the author.)



Map (1839) by David H. Burr, Geographer to the House of Representatives, showing the Jeddediah Smith trails. The far western part of this map is so nearly accurate that it must have been copied from a sketch by Smith himself, or based on Smith's notes. It misidentifies the first part of the route after leaving San Gabriel for the north, and does not give the name Smith's River to the first river struck after crossing the Buena Ventura; otherwise it shows superior information on the Smith travels. In Division of Maps, Library of Congress.

**Figure 3.** A reproduction of David H. Burr's 1839 *Map of the United States of North America* that Maurice Sullivan included in his 1934 edition of *The Travels of Jeddediah Smith*. Sullivan's caption of the map reads: "Map (1839) by David H. Burr, Geographer to the House of Representatives, showing the Jeddediah Smith trails. The far western part of this map is so nearly accurate that it must have been copied from a sketch by Mr. Smith himself, or based on Smith's notes." (Maurice S. Sullivan, *The Travels of Jeddediah Smith*, 1934.)



**Figure 4.** Detail of David H. Burr's *Map of the United States of North America*. In the middle portion of the map, the Lost (Beaver) River can be seen as flowing into what would be called on later maps "Beaver Lake." In 1826, Jedediah Smith followed the river west about to probably the point of the "R." on the map, before abandoning it and turning south. Smith's 1827 route to California intersects the river just west of where its eastern head is depicted (Courtesy Library of Congress, G3700 1839 .B81).

On it the trails blazed by Smith are definitely shown.”<sup>13</sup> Sullivan was referring to Burr’s 1839 map and even included with the first printing of the book a foldout copy of the western portion of the map (fig. 3).

Not only did Burr’s 1839 map include Smith’s routes but those of Ashley as well, who also did some exploring although not to the extent of Smith (fig. 4). Why would an atlas map include the routes of western explorers? Perhaps because the map used for the atlas was originally meant for another purpose. It also depicted routes unrelated to Ashley and Smith, such as Stephen Harriman Long’s route and the St. Louis to Santa Fe Trail. Burr might have intended the western portion of his map for government use, drawing it to provide information on the exploration of the region west of the settled United States, and so Ashley proffered the Smith Map to him for that purpose. The cartographic historian Carl Irving Wheat documented that “A *Manuscript Map of the Western part of the United States and Northern part of Mexico* compiled for this department by David H. Burr” went missing from the Department of State sometime prior to October 28, 1839. Wheat speculated that it could have been Burr’s copy of the Smith Map.<sup>14</sup> Burr might have “borrowed” the map, extended it to the east and south by copying his 1832 *Mexico* and his 1833 *United States* from the 1835 universal atlas, and then sent it to Arrowsmith to include it with the 1839 atlas.<sup>15</sup>

Wheat also discussed another Burr map, *Northwest-Coast of North America and adjacent Territories*, which was published the next year, in 1840.<sup>16</sup> It may have been that this map (which was used for Robert Greenhow’s memoirs) was initiated for the 1839 atlas map, but to expedite publication of the atlas, Burr chose to copy existing maps. Still, Burr’s 1840 map also

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relied on the Smith Map, particularly depicting Smith’s Utah geography. The most compelling evidence of this derivation is the presence of two rivers, the Sevier, which he called “Ashley’s River,” and the Beaver, which he called “Lost River.” Smith described naming these rivers in two segments of his memoir, one found in the 1920s and published by Sullivan in 1934 and another found in 1967 and published by George R. Brooks in 1979.

Smith had encountered the Beaver River twice during his travels, in 1826 and 1827, and named it “Lost Creek” because as he followed it west in 1826 from the foothills of the Tushar Range, “the water began to fail and was apparently soon lost in the sand.”<sup>17</sup> Clues about where the water “began to fail” come from early Mormon history. In the late 1850s, Mormons tried to settle a townsite along the river about two-and-a-half miles northwest of present-day Minersville. They then moved upstream to the town’s current location due to a lack of water, only to have the same problem finally solved by building canals and dams.<sup>18</sup>

The Domínguez-Escalante journal provides further clues about the nature of the river prior to settlement. In early October 1776, the fathers encountered the Beaver River bed, which they called “Arroyo del Tejedor,” west of Clear Lake in Millard County. They ascended it south to about six miles south of Milford before departing the streambed and traveling southwest. Although they found pools of brackish water in the streambed, they never encountered flowing water. Domínguez and Escalante described travel through the area on October 8, 1776, as “so soft and miry everywhere that many pack animals and mounts, even those that were loose, either fell down or became stuck altogether.” Beaver Lake, in other words, was a mud flat that mired their animals.<sup>19</sup> From this information, I have deduced that spring runoff would contribute enough water to allow the river to flow as far north as its mouth on the Sevier River. As it did so, it would spread out in the depression a few miles north of Milford, filling “Beaver Lake.” But as the runoff ebbed so did the river, which would stop flowing well upstream of Beaver Lake, which would in turn become a mud flat by late summer. Currently, Minersville Reservoir holds back the spring runoff, and only in years of unusually high

snowpack in southern Utah does water flow north of Milford.

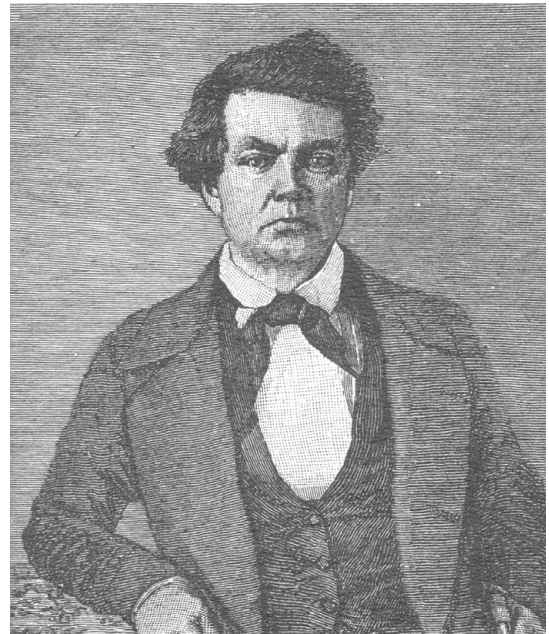
Smith would have descended the Beaver River toward the point from which Domínguez and Escalante had departed it about five weeks earlier in the year. The river might have still been flowing to that point, but Smith still would have been about eleven miles south of Beaver Lake and could not have observed it. Both of the Burr maps depict a “Lost R.” ending in an inland lake (simply labeled “Lake” in the 1839 map), which might explain Smith’s use of “apparently” in describing the origins of his name for the river. Daniel Potts, one of Smith’s employees, led an exploration party in the area around Sevier Lake in the spring of 1827 and possibly observed what was called “Beaver Lake” (temporarily full due to spring runoff) on the 1873 map by United States Geological Surveyor George Wheeler. Wheeler’s map placed Beaver Lake almost exactly on the intersection of longitude 113° and latitude 38°25′ in the Beaver River bottoms north of Milford, Utah, and southeast of the Beaver Lake Mountains.<sup>20</sup> Potts would almost certainly have relayed the information found during the party’s exploration to Smith or one of his partners, which could then have led to its inclusion on the Smith Map.<sup>21</sup> The lake surmised to be Beaver Lake appears on other maps derived from the Smith Map, including Albert Gallatin’s *Map of the Indian Tribes of North America* (1836) and Charles Wilkes’s *Map of Upper California* (1844)—although Gallatin and Wilkes differ slightly from each other and from Burr regarding the lake’s longitude and latitude projection.<sup>22</sup>

Why all these cartographers shifted the location of Beaver Lake could be the subject of its own article; indeed Morgan and Wheat wrote extensively on the discrepancies of the various Smith-derived maps. But it is apparent that when trying to map the location of a lake that had never been properly geolocated—not until after Mormons settled the area in 1859 was it mapped with instruments sophisticated enough to accurately determine latitude and longitude—or even described, cartographers eventually located it in a position that led to its identity being swallowed by that of an entirely different lake.



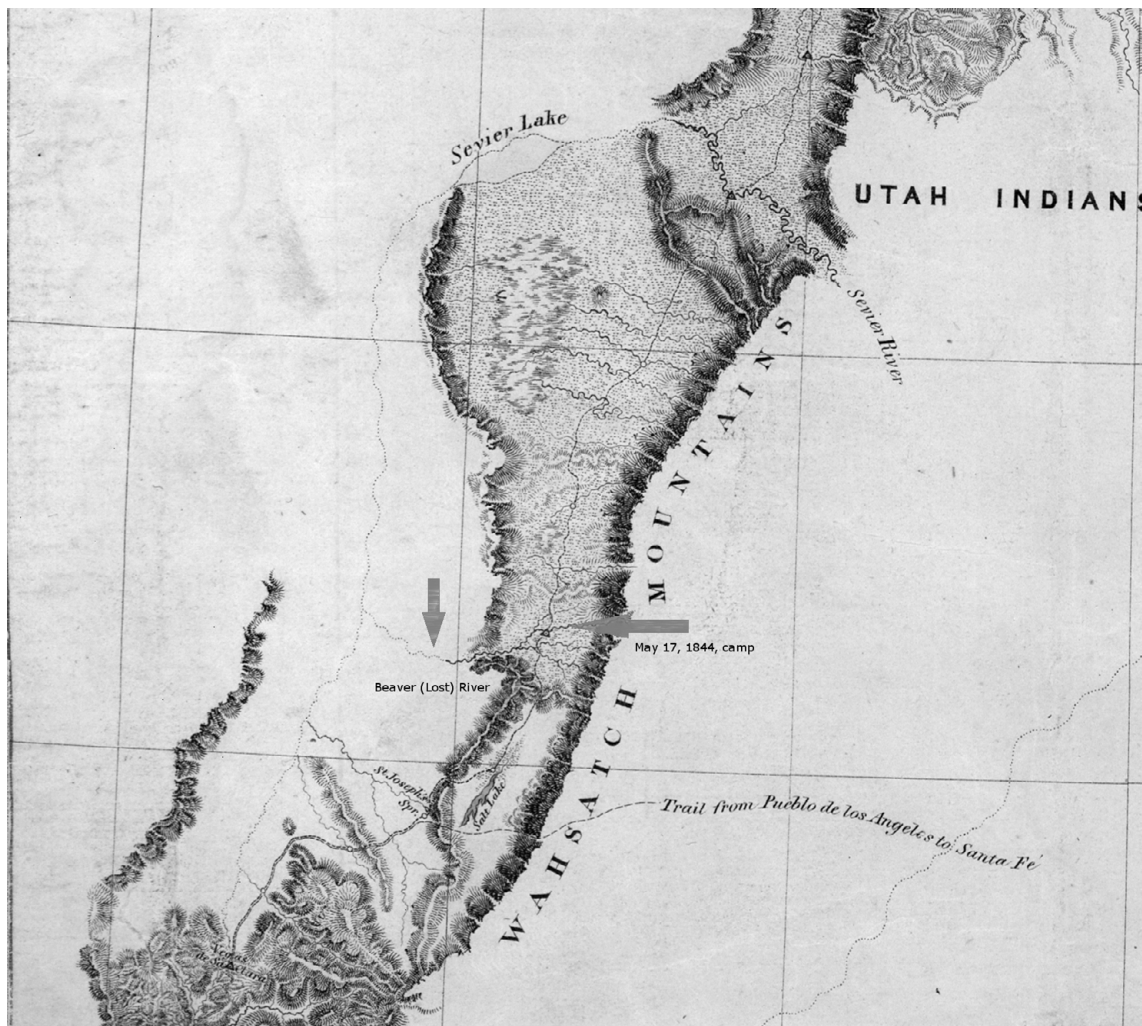
Preuss Lake is a small lake, about one square mile in size, fed by the Big Springs or Lake Creek, in Snake Valley on the Utah-Nevada border. It was originally two smaller lakes, but upstream water diversion and a dam built in 1900 to support irrigation resulted in one lake with an upstream marsh. It is named for Charles Preuss, (“Preuss” rhymes with “grouse”) one of the cartographers for John C. Frémont (fig. 5). Neither Preuss nor Frémont had been to Snake Valley, so how did a geographic feature, unknown at the time of their travels, come to be named after Preuss? I wondered about this for many years. Then one day, a historic map published by a colleague of David H. Burr provided me with a partial answer.<sup>23</sup>

The German-born Preuss accompanied Frémont on his first (1842), second (1843–1844), and fourth expeditions (winter of 1848–1849).<sup>24</sup> After the first and second expeditions, he drafted the *Map of an Exploring Expedition to the Rocky Mountains in 1842, Oregon and California in the Years 1843–44*, which was published in 1844 and again in 1845 (fig. 6).<sup>25</sup> Sometime after Preuss completed this map, the Senate or-



**Figure 5.** A portrait of Charles Preuss, the German-born cartographer for three of John C. Frémont’s expeditions. This reproduction originally came from a daguerreotype published in 1891 in *Century Magazine*. (LeRoy Hafen, ed., *The Fremont Disaster, 1848–1849*, 1960.)





**Figure 6.** Detail of *Map of an Exploring Expedition to the Rocky Mountains in 1842, Oregon and California in the Years 1843–44*, by John C. Frémont and Charles Preuss, with overlays. The first arrow points to Frémont and Preuss's concept of the route of the Beaver or "Lost" River. As the river continues west from Minersville, Frémont and Preuss used a dashed rather than solid line. When it reaches about longitude  $113^{\circ}20'$ , it enters into north flowing streambed (again indicated by a dashed line), coming up from the region of Mountain Meadows, continuing north to the south end of the Sevier Lake. It is unclear if the dashed lines were meant to indicate that these were speculated courses or ephemeral streams, which might have led to incorrect assumptions by subsequent cartographers. Another arrow points to the May 17, 1844, campsite on the Beaver River; the expedition did not explore very far west of this site. (Courtesy Library of Congress, G4051.S12 1844 .F72.)

dered the preparation of a map of the Oregon Trail. Preuss declined to accompany Frémont on his third expedition (1845), staying behind to compile the *Map of the Road from Missouri to Oregon* using his and Frémont's notes and drawings. He published the Oregon Trail map in 1846. The Senate was apparently pleased with Preuss's work, and on February 2, 1847, it commissioned him to prepare a map of Oregon, California, and the central section of the Rocky

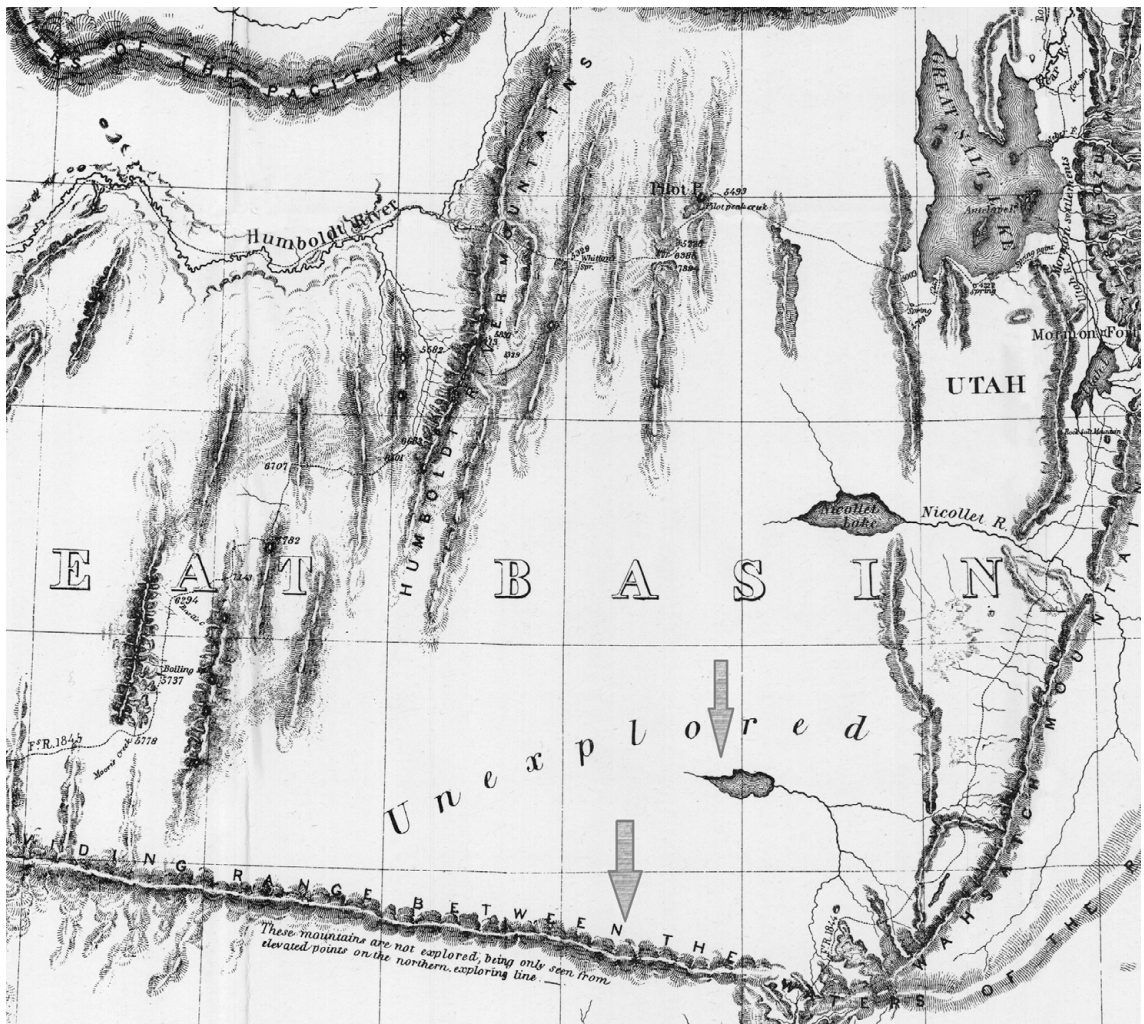
Mountains "with the additions which the present expedition of Lieutenant Colonel Frémont may contribute to the work."<sup>26</sup>

Frémont, who had just been appointed the military governor of California, sent Preuss Edward M. Kern's topographic reports and maps for the third expedition's 1845 travels through the Great Basin and 1846 travels through California, which took place prior to the outbreak

of the Mexican-American War.<sup>27</sup> In preparing this *Map of Oregon and upper California from the surveys of John Charles Frémont and other authorities*, Preuss did some peculiar things. Rather than build upon his and Frémont's earlier 1845 map, he seems to have used Burr's 1839 and 1840 maps. This may have been because the 1845 map did not deal with much of the region Preuss needed to cover. It does not explain why, however, Preuss made some drastic changes in the geography that he and Frémont had more correctly depicted in 1845. Burr may well have been in Washington, D.C., at some point while Preuss was working on his map.<sup>28</sup> Although evidence indicates Burr had returned to surveying and was in the South

through much of the mid 1840s, he may have returned to D.C. in late 1847 and early 1848 and influenced Preuss to use Smith geography for the unexplored regions of the Great Basin, since Preuss definitely did so.<sup>29</sup>

Preuss made an intriguing change in his portrayal of the Beaver River. The 1844–1845 map depicts the river head at about 38°30' latitude in the Tushar Mountains above Beaver, Utah, where Frémont's entourage had camped on May 17, 1844, and ending in the Sevier Lake (see the caption to fig. 6). However, on the 1848 map, Preuss's representation of the Beaver River reverted back to something similar to the Burr and Wilkes maps: a river flowing almost



**Figure 7.** Map of Oregon and upper California (1848) by Charles Preuss and John C. Frémont, with overlays. The arrows point to an unnamed lake straddling longitude 114° and to the east-west mountain range that Frémont mistakenly believed to exist. (Courtesy Library of Congress, G4210 1848 .F72.)

due west, ending in an unconnected lake to the southwest of Sevier Lake (called “Nicolett Lake” by Frémont). Preuss, however, moved the lake at the end of the river farther west to the 114° degree longitude line, with both river and lake unnamed (fig. 7). He then repeated the error of having streams flow north from the region of Mountain Meadows, connecting with the Beaver River before feeding into the lake.<sup>30</sup>

Preuss was persuaded to accompany Frémont on his fourth expedition, when Frémont recklessly chose to cross the Rocky Mountains during the winter and lost ten men.<sup>31</sup> When Frémont and those of his remaining men who chose to continue from Taos to California—a group that included Preuss—arrived in late in the winter of 1849, they dispersed to take advantage of the newly discovered gold strikes. Preuss struggled to get a foothold in the region but returned to Washington, D.C., in 1850. Back in the East, among other things, he created the *Map of a Reconnaissance between Fort Leavenworth on the Missouri and the Great Salt Lake* with John Gunnison, which portrayed Howard Stansbury’s 1851 explorations around the Great

Salt Lake. On January 13, 1852, the U.S. Senate passed a resolution to hire a draughtsman “to mark and lay down the on the maps, now in the room of the Committee on Public Lands, the state of the surveys” and subsequently appointed Burr to the position.<sup>32</sup> But Preuss remained unable to find a niche. Then, on September 1, 1854, Preuss hung himself.<sup>33</sup>

Preuss may have forever been remembered only for his contributions to “Frémont’s” maps and expeditions. But, in 1855, there was an intriguing change on a map published in a world atlas by J. H. Colton, *Map of the United States*, which now called the unnamed lake depicted in the 1848 Frémont-Preuss and 1854 Burr maps “Preuss Lake” (fig. 8). Further, in the same atlas, Colton published a map, *Territories of New Mexico and Utah*, that also no longer showed the lake as fed by the Beaver River, (the map showed the east-west portion of the Beaver River separately) but rather only by the streams coming northwest from Mountain Meadows. This came closer to the actual nature of Pruess Lake (note the change in spelling).<sup>34</sup>



**Figure 8.** Detail of George W. Colton’s 1855 *Map of the United States*, published as a pocket map, with “Preuss L.” at bottom center, between longitudes 113° and 115°. Note, above the lake, the notation “Capt. Gunnison Killed.” This was the same Gunnison with whom Preuss had worked just three years earlier. (Author’s collection.)

The first known Anglo exploration of the area around what is currently named Preuss Lake occurred in the late spring of 1855. That year, Brigham Young sent the White Mountain expedition of twelve men into Snake Valley, a north-south trending valley that crosses the Utah-Nevada line on longitude 114°. <sup>35</sup> They found a small lake, just east of the line, about one to one-half a degree north of where the Burr and Frémont maps (among others) had depicted the lake at the end of Smith's "Lost River."<sup>36</sup>

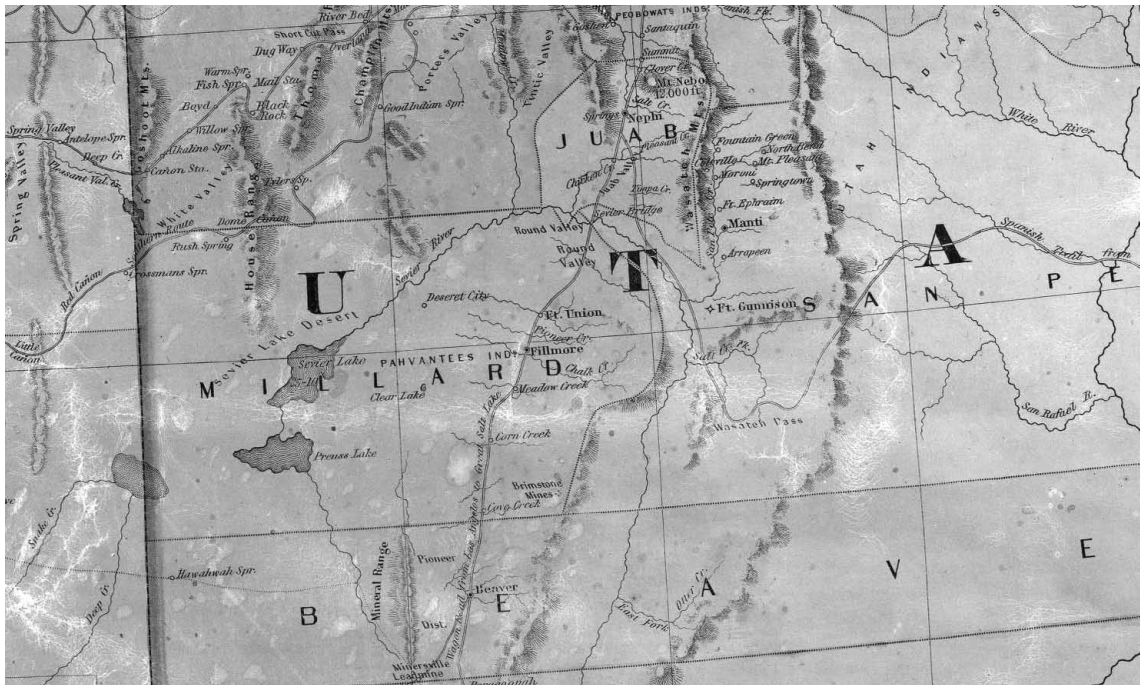
How did it come to be called Preuss Lake, and how did this information get relayed to cartographers so quickly? As it so happens, just as the reports of the White Mountain expedition were being completed in the summer of 1855, Surveyor General David H. Burr arrived in Utah. Before Burr left for Utah, he had produced his *Map of the United States, 1854*.<sup>37</sup> On this map, published two months prior to Preuss's death, the lake on longitude 114° remained nameless.<sup>38</sup> But now, the White Mountain explorers had verified that a lake existed on longitude 114°. Burr's activities in the previous twenty years put him in an ideal position to encourage naming the lake for Preuss and to remove the Beaver River as its source for cartographers, most notably Richard Swainson Fisher.<sup>39</sup> Fisher had published Burr's 1845 map of Texas and made significant contributions to G. W. Colton's 1855 and 1856 atlases.

Could Burr have relayed the information about the lake to Fisher and Colton in time to change the source of the lake and add Preuss's name on the 1855 maps? Up until the time John M. Hockaday established reliable mail service between Utah and Missouri in 1858, it had been undependable. William M. F. McGraw had the contract at the time, and the Mormons were not happy with his service. But Hockaday, by the time of Burr's arrival, had also established a monthly stage service in the state and was working with McGraw.<sup>40</sup> If a letter from Burr to Fisher was sent from Utah late in the summer of 1855, took a month to arrive in St. Joseph, Kansas, another two weeks via steamship up the Missouri and Ohio rivers to Pittsburgh, and finally traveled by rail to New York City, it could have arrived there in time to make a change to maps published that same year.<sup>41</sup>

The following year, in 1856, Colton republished his 1855 atlas and continued calling the small water body on longitude 114° "Preuss Lake."<sup>42</sup> By 1865, the Colton maps had changed the nature of Preuss Lake. These maps showed the lake as having an outlet that flowed *east* to the Beaver River, instead of being fed by a west-flowing Beaver River—a depiction that reverted back to the 1845 Frémont-Preuss map.<sup>43</sup> After 1866, when the Utah-Nevada border was established on longitude 114°, Colton placed Preuss Lake on that border but continued to show an east-flowing outlet.<sup>44</sup>

The shifting representation of Preuss Lake in the 1860s occurred with other mapmakers as well. In 1864, the historian Hubert Howe Bancroft drew Preuss Lake as the 1854 Burr map had, but by 1867, he made a dramatic shift from maps derived from the original Smith Map.<sup>45</sup> The increased Mormon settlement of the region had undoubtedly led to more geographic information reaching cartographers, including information about one feature currently named the "Wah Wah Valley hardpan." The hardpan sits about five miles southwest of the southernmost point of the Sevier Lake and is the terminus of the Wah Wah Wash. The wash occasionally collects water from the mountains on the east and west sides of the valley and flows from south to north to the hardpan. Bancroft must have recognized that the "Preuss Lake" of the Colton maps had been farther east on the earlier maps and deduced that it was actually meant to be the Wah Wah hardpan, about halfway between longitudes 113° and 114° (fig. 9).<sup>46</sup> He then tried to reconcile the Beaver River

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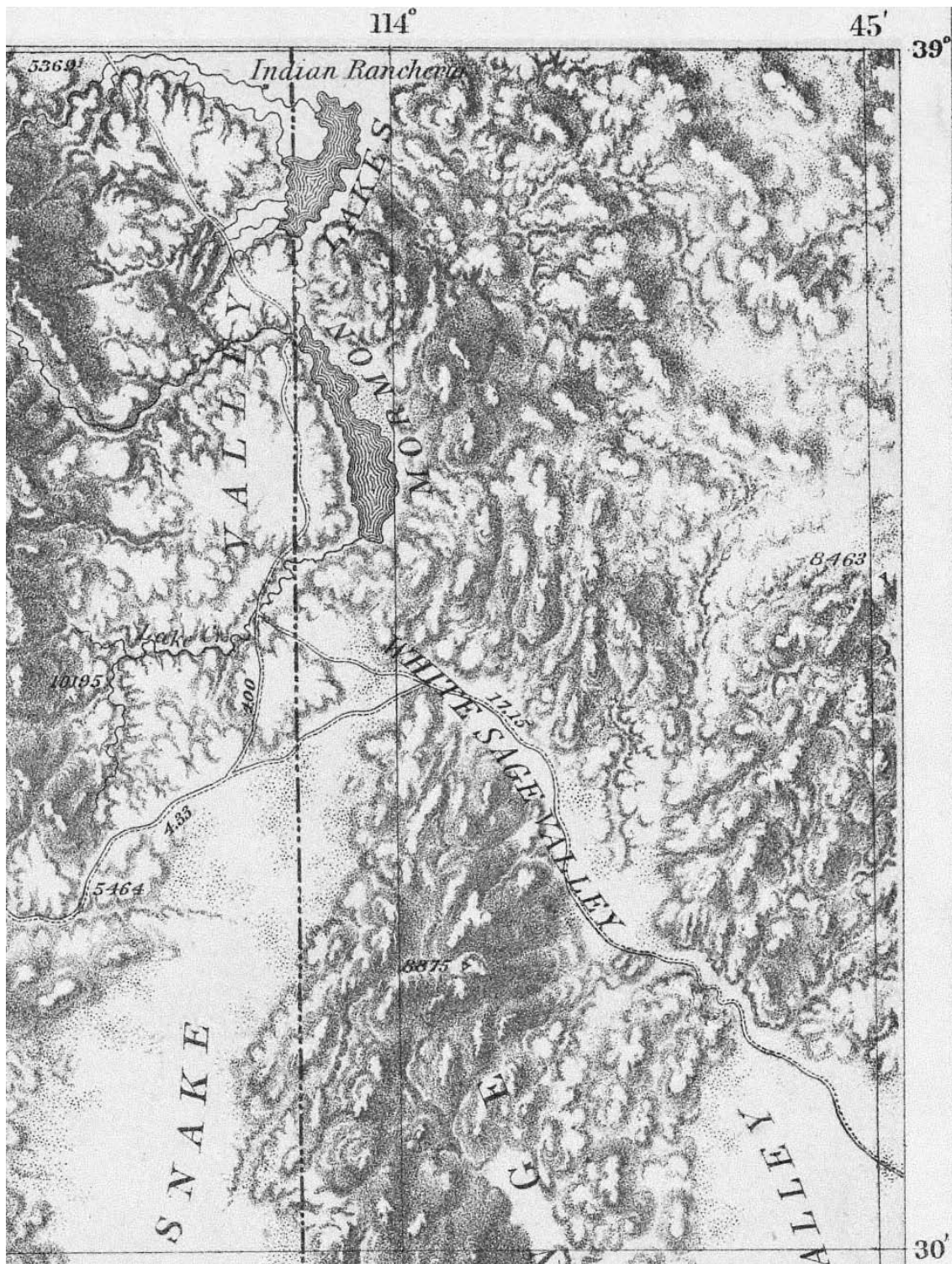


**Figure 9.** Detail of Hubert H. Bancroft and W. H. Knight's *Bancroft's Map of the Pacific States*, 1867. Bancroft also depicted the lake found by the 1855 White Mountain expedition on the Utah-Nevada border as being sourced by streams from the Snake Range, the first known map to do so. (Courtesy David Rumsey Map Collection, 2549.000.)

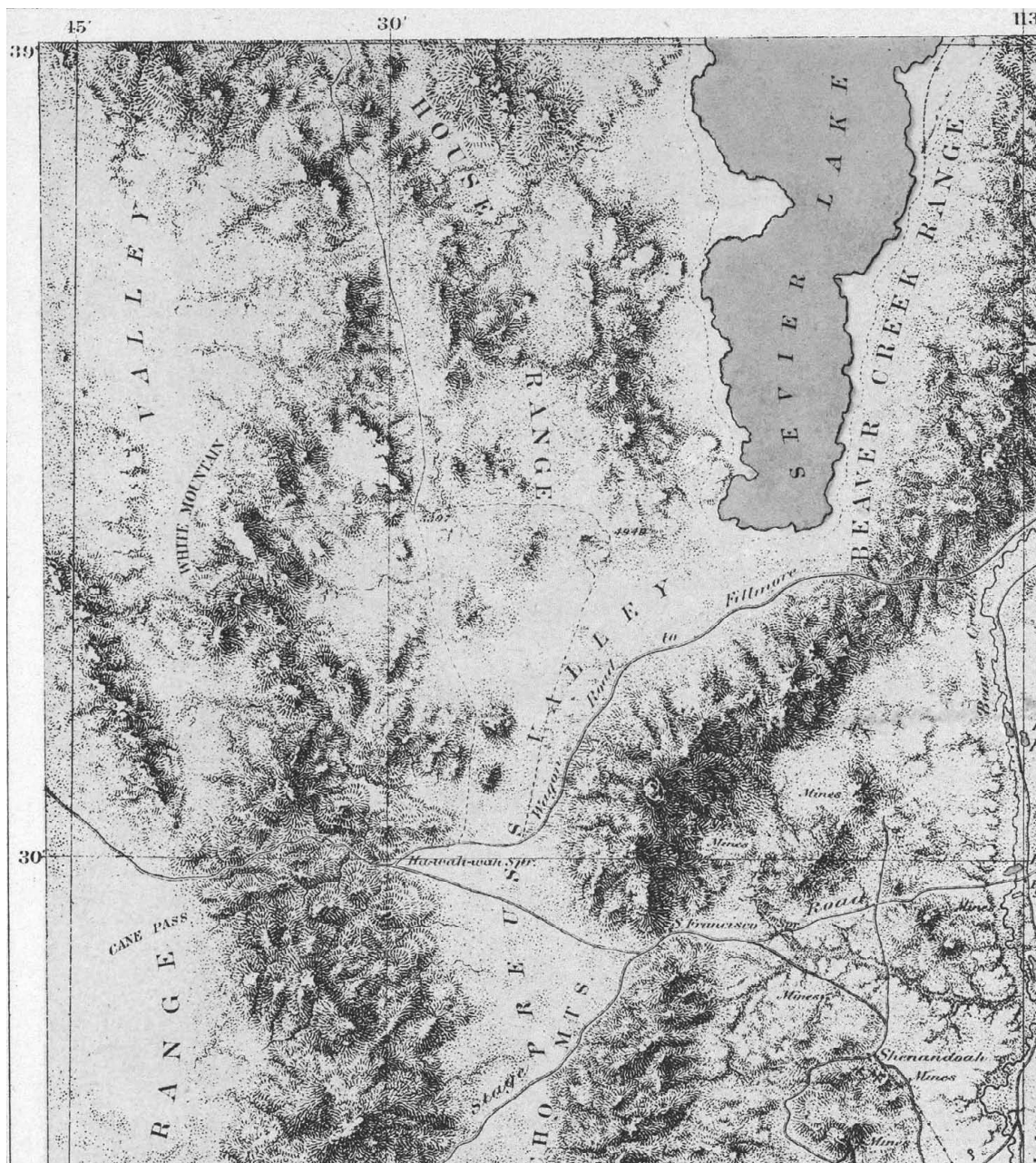
and Wah Wah Wash, ending up with a mish-mash of the two and omitting the San Francisco Mountains, which were vital to understanding the geography of the area.<sup>47</sup> Bancroft drew “Preuss Lake” as fed by what was meant to be Wah Wah Wash (incorrectly depicted as having its head at Minersville) and, further, showed a connection between the southern end of Sevier Lake and the hardpan.<sup>48</sup>

But the lack of clarity regarding the lakes located on longitude 114° and along the Beaver River remained. During the conflict with federal authorities, Mormon settlers established Snake Creek Farm in the vicinity of today's Garrison, Utah, a few miles north of the lakes the White Mountain expedition had found a few years earlier. By June 1858, Snake Creek—the source of irrigation water for the farm—had dried up, and the settlement was abandoned shortly thereafter.<sup>49</sup> When George M. Wheeler's expedition arrived in 1872, the area had been resettled by non-Mormons, who may have called the lakes “Mormon Lakes” because of the Mormon's earlier presence, since that is what Wheeler called them on his 1872 map (fig. 10).<sup>50</sup>

At the time of Wheeler's survey, maps published by other cartographers still depicted Preuss Lake as fed by the Beaver River, which flowed westerly an entire degree of longitude too far.<sup>51</sup> Wheeler did not recognize the correlation between what he would call “Beaver Lake” and the “Preuss Lake” of the maps, probably because he was disproportionately influenced by Bancroft's map (or maps derived from Bancroft). Wheeler wrote in his report that, “It was determined that the hypothetical lake named ‘Preuss,’ after Frémont's chief topographer, and hitherto placed on the maps as being crossed by the boundary line between Nevada and Utah,” (the 114° longitude line), “was without doubt the alkaline flat (overflowed from Sevier Lake at seasons of high water) lying to the southward of the this lake, and between the Hawawah and Beaver Creek Ranges.” Thus he named the present-day Wah Wah Valley (derived from “Hawawah”) “Preuss Valley” and gave both aquatic features—the seasonal wetland east of Sevier Lake fed by the Beaver River and the lakes on longitude 114° discovered by the White Mountain expedition—the alternate names of Beaver and Mormon lakes (fig. 11).<sup>52</sup> Charles Mahon's



**Figure 10.** Detail of George M. Wheeler's 1872 *Parts of Eastern and Southern Nevada and Southwestern Utah*. Note the "Mormon Lakes" at the top of detail, along longitude 114°. (Courtesy David Rumsey Map Collection, P1281-75.)

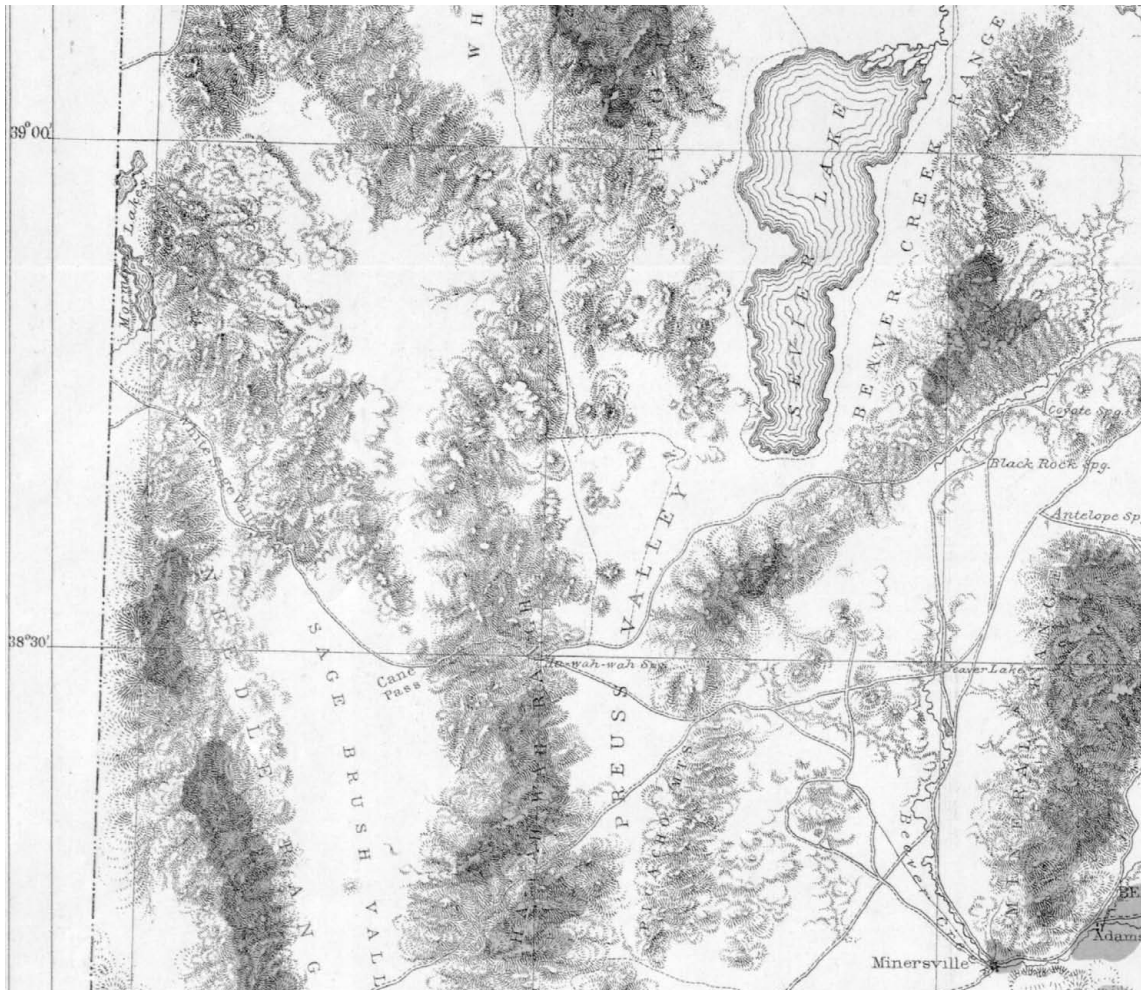


**Figure 11.** George M. Wheeler, 59. *Southwestern Utah*. Note “Preuss Valley” at the center bottom. Detail. (Courtesy David Rumsey Map Collection, P1281-78.)

1878 map, as well as other maps derived from Wheeler, did likewise (fig. 12).<sup>53</sup>

Neither “Mormon Lakes” nor “Preuss Valley” remained on maps for long—notwithstanding my theory that cartographers meant to call the lake found by the White River expedition in 1855 “Preuss Lake” or because the Mormons had identified the lake as such. The year after

Wheeler published his maps, 1874, the first known map that depicted Pruess Lake with its correct source and current name (but spelled “Preuss”) was published.<sup>54</sup> Then, in 1878, B.A.M. Froiseth published a *New Section and Mineral Map of Utah*, which spelled the lake’s name with the *e* and the *u* transposed, resulting in “Pruess Lake,” by which it is known today (fig. 13).<sup>55</sup> In 1886, Colton started depicting

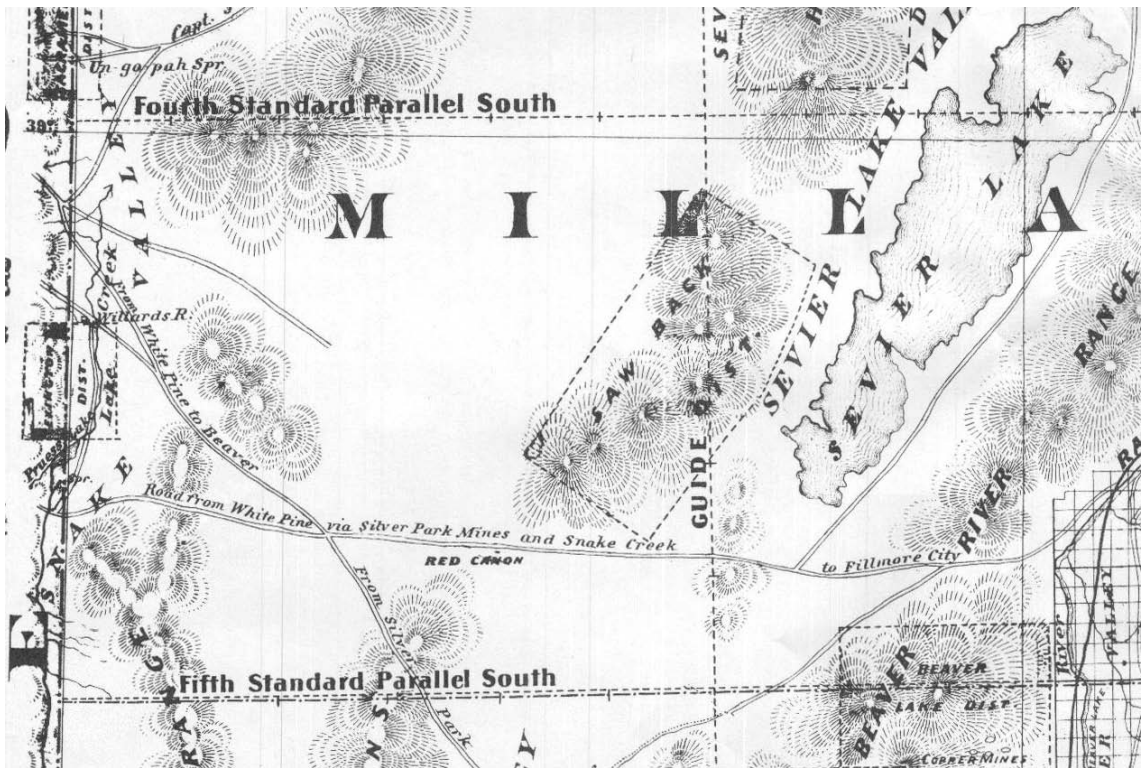


**Figure 12.** *Map of Utah Territory Representing the Extent of the Irrigable, Timber and Pasture Lands* (1878), compiled and drawn Charles Mahon for the Commissioner of Public Lands. Note, in the northwest quadrant, the “Mormon Lake,” now called Pruess Lake. In the southeast quadrant is Beaver Creek (River) at about the point at which “Beaver Lake” is located. Between these points is “Preuss Valley.” (Courtesy Library of Congress, G4340 1878 .G4.)

the lake’s location and source correctly but with Froiseth’s incorrect spelling.<sup>56</sup> George F. Cram, in a 1922 map, spelled it correctly, but all other later maps examined for this article spelled it “Pruess.”<sup>57</sup> An 1874 map by Asher and Adams also depicted “Preuss Valley” (indicating that they had based the map on Wheeler) but changed it to “Preuss District.” “Preuss Valley” began disappearing from maps as cartographers began calling Wah Wah Valley by its current name, as indicated by a map made by Mosiah Hall.<sup>58</sup> The latest map on which I have found Preuss Valley is the 1960 *Landforms of Utah in Proportional Relief* by Merrill K. Ridd, on which it is called “Wah Wah (Preuss) Valley.”

A final geographic mystery about these lakes remains. How did Beaver Lake, which is located almost exactly on longitude 113°, come to be located on longitude 114° on so many maps? An examination of Burr’s 1839 map indicates that Smith may have placed the “lake” about 30 minutes too far west, between 113° and 114° longitude, and 30 minutes too far south at latitude 38°. Then in 1848, Pruess pushed Beaver Lake 30 minutes both west and north until it straddled longitude 114° at about latitude 38°25’, landing it about 35 miles south of Pruess Lake. Subsequent cartographers, until Bancroft, followed suit. Pruess had moved the “lake” north to reconcile it being the eastern end of the westerly flowing Beaver River,





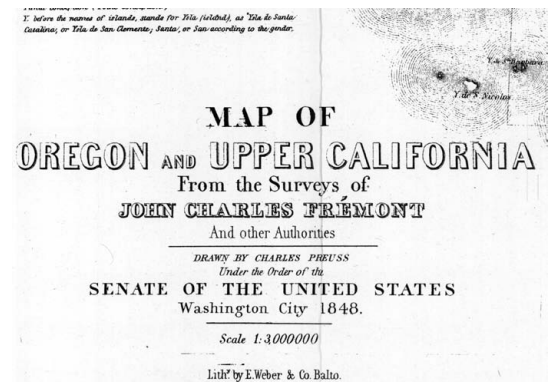
**Figure 13.** Detail of B.A.M. Froiseth's 1878 *New Section and Mineral Map of Utah*. Note, on the left edge, the misspelled inscription, "Pruss Lake." (Utah State Historical Society, photo no. 9983.)

which Frémont's 1843 expedition determined was farther north than indicated on Burr's map.<sup>59</sup> Why Preuss also moved the lake west and had the Beaver River, which stops flowing west at longitude 113°, continue west another degree remains a mystery, but in so doing he set himself up for the only geographic honorarium he ever received.

In 2011, Bob Cornett of the Sharlot Hall Museum posed this question and answer: "What did history do for him [Preuss]? There is a small misspelled 'Pruss Lake' in Utah."<sup>60</sup> The answer to Cornett's question should not be so flippant. The lake at the end of Smith's "Lost River," as drawn by Burr in 1839, was relocated almost a decade later by Preuss to a site that would cause it to be mistaken for the lake found by the White Mountain expedition another seven years later. Burr, who may well have influenced Preuss to draw the Beaver River and lake as he did in 1848, may then have been the person to immortalize Preuss by seeing that this enigmatic little lake was named for him. The history of the naming of Pruss Lake reveals the

efforts of his contemporary cartographers to honor Preuss; in doing so they tied him to the achievements of several of Utah's most important early American explorers.

#### Web Extra



Visit [history.utah.gov/uhqextras](http://history.utah.gov/uhqextras) to see the complete versions of several maps mentioned in this article, as well as to learn more about the lives of David H. Burr and Charles Preuss.

## Notes

- 1 John W. Van Cott, *Utah Place Names* (Salt Lake City: University of Utah Press, 1990), 26, 305.
- 2 Edward Leo Lyman, "Rethinking Jedediah S. Smith's Southwestern Expeditions," *Utah Historical Quarterly* 84, no. 4 (Fall 2016): 281.
- 3 Dale L. Morgan and Carl I. Wheat, *Jedediah Smith and His Maps of the American West* (San Francisco: California Historical Society, 1954); Carl I. Wheat, *Mapping the American West, 1540–1857; A Preliminary Study* (Worcester, MA: American Antiquarian Society, 1954), 90–97.
- 4 The reference point of the Uintah Basin and Meridian was established in 1875 north of Roosevelt, Utah, and is the reference point of land surveys of the Uintah Indian Reservation in parts of Duchesne and Uintah Counties.
- 5 Charles Burr Todd, *A General History of the Burr Family, with a Genealogical Record from 1193 to 1891*, 2nd ed. (New York: Knickerbocker Press, 1891), 199.
- 6 Walter W. Ristow, *American Maps and Mapmakers* (Detroit: Wayne State University Press, 1985), 104.
- 7 *Ibid.*, 106.
- 8 Charles Burr Todd stated that Burr opened "a large publishing house in New York City," an exaggeration of the scope of Burr's endeavor. However, when Todd's assertion is coupled with a statement of Walter W. Ristow, the former chief of the Geography and Map Division of the Library of Congress, that Burr had established a map publishing company it leads to speculation as to what had happened to Burr's company. Ristow's comment about Colton's purchase of Burr's copyrights also fits nicely with the timeframe of Burr's move to Washington D.C. Burr's move and new employment might have forced him to abandon his venture and sell the business, not just the map copyrights. This could be the foundation of Todd's assertion that Burr had "a large publishing house in New York City."
- 9 Ashley was initially elected to fill the seat left by Spencer Darwin Pettis, who died from a gunshot wound sustained in a duel.
- 10 Dale L. Morgan, ed., *The West of William H. Ashley: The International Struggle for the Fur Trade of the Missouri, the Rocky Mountains, and the Columbia, with Explorations beyond the Continental Divide, Recorded in the Diaries and Letters of William H. Ashley and His Contemporaries, 1822–1838* (Denver: Old West Publishing Company, 1964), 323.
- 11 Todd, *General History of the Burr Family*, 199–200; David H. Burr, *The American Atlas, Exhibiting the Post Offices, Post Roads, Rail Roads, Canals, and the Physical and Political Divisions of the United States of North America* ([London?]: John Arrowsmith, [1839]), available from the Library of Congress, accessed February 8, 2015, [hdl.loc.gov/loc.gmd/g3700m.gct00185](http://hdl.loc.gov/loc.gmd/g3700m.gct00185). The Todd reference states that Burr traveled to London in 1846 to collaborate on the atlas, but *New York, Passenger and Immigration Lists, 1820–1850* (ancestry.com) document a thirty-three-year-old David Burr arriving from Liverpool on the *St. Andrew* on October 13, 1836. Since the atlas was published in 1839, it appears that Todd's date was either a misprint or he had misinformation.
- 12 Burr, *American Atlas*; Will Bagley, *South Pass: Gateway to a Continent*, Kindle ed. (Norman: University of Oklahoma Press, 2014).
- 13 Jedediah Strong Smith, *The Travels of Jedediah Smith: A Documentary Outline Including the Journal of the Great American Pathfinder*, ed. Maurice S. Sullivan (Santa Ana, CA: Fine Arts Press, 1934). Sullivan stated the map was drawn in 1839, but misspoke. The map was published in 1839; it is unclear when it was drawn.
- 14 Morgan and Wheat, *Jedediah Smith*, 20. At that time, the "Western part of the United States" would have consisted of the territory acquired in the Louisiana Purchase. "Oregon," the area west of the Continental Divide north of Mexico, was not, prior to 1846, officially part of the United States. The "Northern part of Mexico" would have been the area south of the forty-second parallel and west of the Continental Divide; depending when the map was created, it would have included the present day states of Texas, Utah, Nevada, California, Arizona, and parts of neighboring states. The fact that the title does not mention the republic of Texas indicates the map may have been drawn prior to 1836. It is debatable, then, if the referenced map extended west to the Pacific Ocean and was the copy of the Smith Map.
- 15 Arrowsmith published another version of this map in 1842. David H. Burr, *Map of the United States of North America* (London: John Arrowsmith, 1842), available at David Rumsey Map Collection, accessed March 30, 2018, [davidrumsey.com](http://www.davidrumsey.com) (hereafter DRMC).
- 16 David H. Burr, *North-west-Coast of North America and adjacent Territories . . .* (Washington, D.C.: Blair and Rives, 1840), available at University of Washington Digital Collections, accessed December 11, 2016, [digitalcollections.lib.washington.edu/cdm/ref/collection/maps/id/42](http://digitalcollections.lib.washington.edu/cdm/ref/collection/maps/id/42).
- 17 Jedediah S. Smith, *The Southwest Expedition of Jedediah S. Smith: His Personal Account of the Journey to California, 1826–1827*, ed. George R. Brooks (Glendale, CA: Arthur H. Clark, 1977), 54.
- 18 Aird Merkle, *Daughters of Utah Pioneers*, Beaver County Company, *Monuments to Courage: A History of Beaver County*, 2nd ed. (Beaver, UT: Beaver Printing Company, 1948), 209–211.
- 19 Francisco Atanasio Domínguez and Silvestre Vélez de Escalante, *The Domínguez-Escalante Journal: Their Expedition through Colorado, Utah, Arizona, and New Mexico in 1776*, trans. Fray Angelico Chavez, ed. Ted J. Warner (Provo: Brigham Young University Press, 1976), 70.
- 20 George M. Wheeler, 59. *Southwestern Utah* (Washington, D.C.: Weyss, Herman, and Aguirre, 1873), DRMC, accessed February 8, 2015, [davidrumsey.com](http://www.davidrumsey.com). Beaver Lake might often have been the endpoint of the Beaver River when the flow was too low to continue north to the Sevier River. As with Sevier Lake, which is now commonly known as Sevier Dry Lake, Beaver Lake would have disappeared as water from the Beaver River was later diverted for irrigation after white settlement of the area. Wheeler, "Southwestern Utah."
- 21 At some point, Potts must have also told Jedediah Smith that the Sevier River (which he called "Ashley's River") also ended in a lake: Smith included it on his map without having personally observed it, having encountered the river too far upstream to deduce its mouth. The mountain men must have known of the existence of Sevier Lake because of the maps based on the explorations of the Domínguez and Escalante. A member of the party, Bernardo de Miera y Pacheco produced a map that depicted the Green River flowing to Sevier Lake. In 1820, American cartographers Jedediah Morse

and Sidney Morse published a map, *United States* that perpetuated Miera's error, as did other contemporary maps. (Chapter 4 of Richard Francaviglia's *Mapping and Imagination in the Great Basin* discusses several of these maps.) In 1824, Ashley and several men had taken bull boats down the Green River to prove that it flowed to the Colorado River, not a lake to the west. However, this information was slow to find its way to cartographers, and the Morses repeated the mistake on their 1828 version of their map. Maps based on the explorations of Ashley, Smith, and their men are the first known to correctly depict the Sevier River—as a river flowing to the lake once thought to be fed by Green (Buenaventura) River.

- 22 Morgan and Wheat, *Jedediah Smith*.
- 23 Van Cott, *Utah Place Names*, 305.
- 24 Preuss, like Burr, was born in 1803.
- 25 John Charles Frémont, *Map of an exploring expedition to the Rocky Mountains in the year 1842 and to Oregon and north California in the years 1843–44* (Washington, D.C.: U.S. Senate, 1845), available from Library of Congress, accessed February 7, 2015, [hdl.loc.gov/loc.gmd/g4051s.ct000909](http://hdl.loc.gov/loc.gmd/g4051s.ct000909); Charles Preuss, *Exploring with Frémont: The Private Diaries of Charles Preuss, Cartographer for John C. Frémont*, trans. and ed. by Erwin G. Guddé and Elisabeth K. Guddé (Norman: University of Oklahoma Press, 1958), xi.
- 26 *Cong. Globe*, 29th Cong., 2nd Sess. (1847), 305.
- 27 Although Frémont receives credit for creating this map, it's debatable how much influence he had on it, beyond providing the records of his 1845–1846 travels. He would have been distracted by the disputes over his appointment as military governor of California, which led to a court martial that was not resolved until January 1848.
- 28 Todd, *A General History of the Burr Family*, 182, 200; *Register of Officers and Agents, Civil, Military, and Naval in the Service of the United States*, 1837, 1839, 1841, 1843, 1845.
- 29 Todd, *General History of the Burr Family*, 182, 200; United States Department of State, *Register of All Officers and Agents, Civil, Military and Naval, in the Service of the United States*, 1837, 1843, 1847, 1849; David H. Burr, *The State of Texas, 1836–1845* (New York: Richard Swainson Fisher, 1845), available at Yale University Library Digital Collections, accessed March 30, 2018, [digital.library.yale.edu/cdm/ref/collection/10261/id/2147](http://digital.library.yale.edu/cdm/ref/collection/10261/id/2147).
- 30 Another intriguing change in the maps was the depiction of an east-west mountain range said to be part of the “Dividing Line between the Waters of the Pacific and the Waters of the Great Basin.” In his report accompanying the 1845 map, Frémont hinted at the existence of the east-west range: “And in returning from California on the Spanish trail, as far as the head of the Santa Clara fork of the Rio Virgen, I crossed only small streams making their way south to the Colorado, or lost in sand as the Mo ha ve; while to the left lofty mountains, their summits white with snow, were often visible and which must have turned water to the north as well as to the south, and thus constituted, on this part, the southern rim of the basin.” Particularly enigmatic is that in his 1845 map, Frémont provided a remarkably correct delineation of the Great Basin—given his limited exploration of the area—while the east-west portion of his new “dividing line” bisected it just below 38 degrees latitude. This implied that the southern third of the region was part of the Colorado River watershed and thus, “Waters of the Pacific.” Why
- did Preuss and Frémont make such a drastic addition? Burr's 1840 map might provide a clue. On it can be found an east-west mountain range called the “Snowy Mountains.” Preuss and Frémont's range was farther south, but Burr's map might have reinforced Frémont's belief that an east-west range existed, so he and Preuss placed it on their map. John C. Frémont, *The Expeditions of John Charles Frémont*, vol. 1, ed. by Donald Jackson and Mary Lee Spence (Chicago: University of Illinois Press, 1970), 701. Richard V. Francaviglia discussed the possible origins of Frémont's error but came to no conclusions. Richard V. Francaviglia, *Mapping and Imagination in the Great Basin: A Cartographic History* (Reno: University of Nevada Press, 2005), 87–89.
- 31 John Noble Wilford, *The Mapmakers* (New York: Vintage Books, 1981); LeRoy R. Hafén and Ann W. Hafén, eds., *Frémont's Fourth Expedition: A Documentary Account of the Disaster of 1848–1849 with Diaries, Letters, and Reports by Participants in the Tragedy* (Glendale, CA: Arthur H. Clark, 1960).
- 32 *Cong. Globe*, 32nd Cong., 1st Sess. (1852); *Register of Officers and Agents, Civil, Military, and Naval, in the Service of the United States on the Thirtieth September, 1853* (Washington, D.C.: Robert Armstrong, Public Printer, 1853); “The D. Griffing Johnson, A. J. Johnson and J. H. Colton Connection,” *Geographicus*, June 13, 2009, accessed September 24, 2017, [geographicus.com/blog](http://geographicus.com/blog).
- 33 Preuss, *Exploring with Frémont*, xxviii
- 34 George W. Colton, *Territories of New Mexico and Utah* (New York: J. H. Colton, 1855).
- 35 Clifford L. Stott, *Search for Sanctuary: Brigham Young and the White Mountain Expedition* (Salt Lake City: University of Utah Press), 14–17, 79. White Mountain, in Millard County, is now known as Crystal Peak.
- 36 David Evans, “Report of the White Mountain Mission, 1855 July 17,” 3, box 74, fd. 25, Brigham Young Office Files, 1832–1878, CR 1234 1, LDS Church History Library, Salt Lake City, Utah.
- 37 David H. Burr, *Map of the United States* (New York: Ackerman Litho., 1854), DRMC, accessed May 2, 2018, [davidrumsey.com](http://davidrumsey.com). This map depicted the Beaver River exactly as the 1848 Preuss map did. Burr also changed the names Jedediah Smith had used for the “Ashley” (Sevier) and “Adams” (Virgin) rivers to the names used on Frémont-Preuss 1848 maps: Nicolette and Rio de Virgen, respectively.
- 38 From late 1853 until Preuss's death, the presence of Burr and Preuss in Washington, D.C., would have again overlapped.
- 39 Ristow, *American Maps and Mapmakers*, 323.
- 40 Bagley, *South Pass*, 3892, 3822, 3830.
- 41 Colton's map of New Mexico and Utah changed the course of the Beaver River, but his United States map did not. This could indicate that Colton received last-minute information and did not have time to change both maps.
- 42 J. H. Colton, *Territories of Mexico and Utah* (New York: J. H. Colton, 1856), DRMC, accessed September 17, 2017, [davidrumsey.com](http://davidrumsey.com). This time, Colton's atlas was in one volume instead of two.
- 43 George W. Colton, *California, Nevada, Utah, Colorado, Arizona and New Mexico* (New York: J. H. Colton, 1865), DRMC, accessed May 2, 2018, [davidrumsey.com](http://davidrumsey.com).
- 44 George W. Colton, *California, Nevada, Utah, Colorado, Arizona and New Mexico* (New York: G. W. and C. B. Colton, 1869), DRMC, accessed February 8, 2015, [davidrumsey.com](http://davidrumsey.com).

- 45 Bancroft was running a publishing house in San Francisco for his brother-in-law. On the 1864 map, he depicted the segment of the Beaver River from a few miles north of present day Milford north to Black Rock very accurately. How Bancroft did so is a mystery, because the river was not surveyed until 1870 by a contractor hired by the successor of David H. Burr. Hubert Howe Bancroft and W. H. Knight, *Bancroft's Map of California, Nevada, Utah and Arizona* (San Francisco: H. H. Bancroft, 1864).
- 46 Bancroft managed to put his Preuss Lake almost exactly on the hardpan, indicating that it—like the segment of the Beaver River he had mapped in 1864 (which persisted on the 1867 map)—had been geolocated through the use of sophisticated instruments. However, his lake on the Utah-Nevada border was still well south of the actual Preuss Lake.
- 47 Neither the 1864 nor 1867 maps depicted “Beaver Lake”; rather, it was drawn as an approximately one-mile-square “pond” on the 1870 survey plat of the area. I have found Beaver Lake only on Wheeler’s map and those derived from it.
- 48 Hubert Howe Bancroft and W. H. Knight, *Bancroft's Map of the Pacific States* (San Francisco: H. H. Bancroft, 1867), DRMC, accessed September 24, 2017, davidrumsey.com.
- 49 Stott, *Search for Sanctuary*. The plat of the 1881 GLO survey of the area depicts the location of Brigham Young’s house.
- 50 George M. Wheeler, 58. *Parts of Eastern and Southern Nevada and Southwestern Utah* (New York: United States, 1872). Wheeler also gave the name of the mountain just across the border his own name. Wheeler Peak, now part of Great Basin National Park, is the second highest mountain in Nevada.
- 51 Samuel Augustus Mitchell and W. Williams, *Map of the United States and territories . . .* (Philadelphia: S. A. Mitchell, Jr., 1870), DRMC, accessed February 8, 2015, davidrumsey.com.
- 52 George M. Wheeler, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian*, vol. 1 (Washington, D.C.: Government Printing Office, 1889), 28. The “hypothetical lake” was Beaver Lake, misplaced one degree to the west. Wheeler must have interpreted the Bancroft map as depicting the flow of the waterway between the hardpan (which Bancroft called Preuss Lake) and Sevier Lake as running south from Sevier Lake. Which direction Bancroft thought the flow ran can be assumed from the 1845 Frémont-Preuss map in which the Beaver River flows north to the south end of Sevier Lake.
- 53 U.S. War Department, Chief of Engineers, *Map of California and Nevada, with Parts of Utah and Arizona* (Washington, D.C.: War Department, 1879); Joseph A. West, *West's New Sectional and Topographical Map of Utah* (Utah: Joseph A. West, 1885); both available at DRMC, accessed February 8, 2015, davidrumsey.com.
- 54 Asher and Adams, *Utah* (New York: Asher and Adams, 1874), DRMC, accessed February 10, 2015, davidrumsey.com.
- 55 B.A.M. Froiseth, *Froiseth's New Sectional and Mineral Map of Utah* (Salt Lake City: B.A.M. Froiseth, 1878).
- 56 George W. Colton, *Wyoming, Colorado and Utah* (New York: G. W. and C. B. Colton, 1886), DRMC, accessed February 10, 2015.
- 57 Francaviglia, *Mapping and Imagination*, 161.
- 58 Mosiah Hall, Charles Wright, and Don Maguire, *Relief Map of Utah* (Salt Lake City: Pierce and McMillen, 1895), available at Library of Congress, accessed May 2, 2018, loc.gov/resource/g4341c.ct000806/.
- 59 Frémont’s expedition, unlike Smith’s, had instruments allowing them to accurately determine the latitude and longitude of their location.
- 60 Bob Cornett, “Charles Preuss, the Reluctant Explorers and Mapmaker for John C. Frémont,” *Sharlot Hall Museum*, August 20, 2011, accessed May 2, 2018, archives.sharlot.org/articles.