

NEVADA HISTORICAL SOCIETY QUARTERLY

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THE COVER: Silver miners "picking" ore in the Consolidated Virginia Silver Mine, Virginia City, Nevada. (From Frank Leslie's Illustrated Newspaper, March 9, 1878)

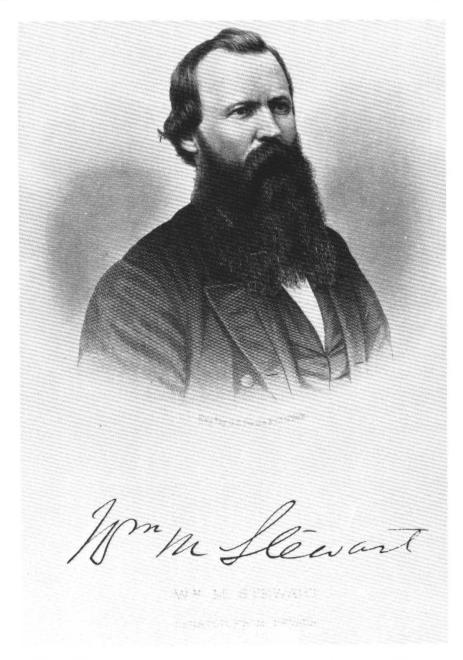
"We Are the Trustees for Posterity": The Western Movement for a National Mining School, 1850-1900

CLARK C. SPENCE

IN THE LATTER HALF OF THE nineteenth century, western mining was in a state of transition. Self-made mining men, trained in the hard school of experience, prevailed at the time of the California gold rush: the "by guess and by God" approach predominated. But as new mineral developments occurred in Nevada, Colorado, Idaho, Montana and elsewhere in the West, often involving more complex ores, gradually the need for formally educated engineers became apparent. Yet educational facilities were limited and graduates in short supply until sufficient pressure demanded the establishment of both state and federal mining schools, invariably with more success on the local than on the national level.

In the 1850s practically all of the technically trained American mining engineers had been prepared in Europe. There was no school of mines as such in the United States. A few young Americans had attended the Ecole des Mines in Paris or perhaps Clausthal in Prussia or Schemnitz in Hungary; but most had enrolled in the Königliche Sächsische Bergakademie at Freiberg in the silver-lead country of Saxony. Spokesmen for the American mining industry recognized the situation and early proposed that indigenous institutions be established to provide skilled mine supervisors and trained engineers.

Early efforts were directed toward creation of a private school of mines, one which would do much to eliminate the chaos so apparent in western mining. Commenting in 1856 of the wreckage of many ill-fated mining companies a few years before, Robert G. Rankin, an expert on bituminous coal deposits, viewed this disaster as "the natural consequences of the great ignorance prevalent throughout our country on the subject of practical and economic mining." A little earlier, in Albany, when delegates of the American Association for the Advancement of Science had discussed the creation of such a school, Rankin had been in the forefront, but cautioned that the approach must be "practical and adaptive": "such institutions do not spring



Sen. William M. Stewart of Nevada introduced a bill in the Senate in 1867 to create a national school of mines. (Nevada Historical Society)

up full armed—full fledged like the classic mentors from cerebral embryonics of modern Jupiters." In 1857 Rankin headed a group of scientists who drew up "Articles of Organization of the American School of Mines," which was to

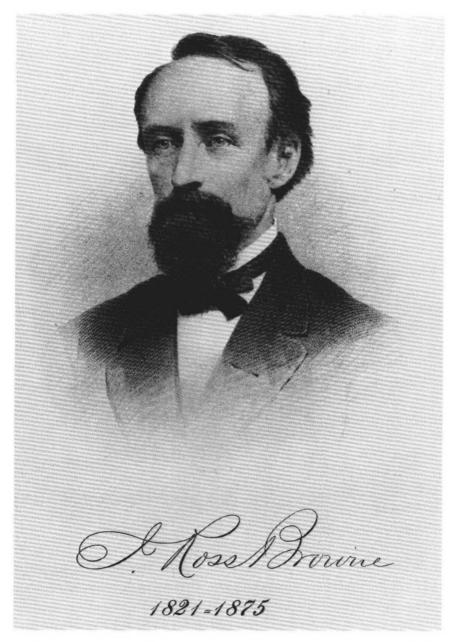
come complete with museum, assay office, library and laboratory, and to be self-sustaining, with its main aim the economic and scientific development of American mining.⁴

This proposal never became reality, but meanwhile westerners called for both state and nationally supported mining schools. In California especially, by the early sixties, attention was regularly directed not only to the need for a codification of mineral laws "but also an institute for the diffusion of knowledge in this branch of science, whereby the miner, engineer and prospector may be drilled in the art to prosecute mining in all its bearings." When the legislature dragged its heels, private citizens drafted their own proposal. Editors condemned the inefficiency of mining in the West, pointed out that agriculture received government aid at both state and federal levels and that European nations were more progressive in the education of mining experts. "Experience, coupled with a proper application of science, is the only foundation for the position of Mining Superintendent," one editor admonished. "Give us a first class mining school, with a salaried professor for each branch," he told the California Assembly, "thereby you will merit the blessings and thanks of a grateful people, who are now groping in darkness while in search of the needy."5

It was at Columbia University in New York in 1864 that the first real mining school in the United States was established, an event that brought praise from enlightened mining men across the country but never dampened the drive for a national institution. In mid-1866 the editor of the *American Journal of Mining* pointed out that Norway, with about the population of New York state, supported a mining college, while the United States, the world's leading mineral country, was far behind scientifically. "Is the cause of the want of favor for such institutions, a want of sympathy with theoretic science, and must we set it down as a fact that wealth and learning are so uncongenial, that their marriage necessarily entails loss of affection and separation?" 6

While Freiberg graduates damned the "pseudo-savants and speculative charlatans, whose unblushing exaggerations have thrown so much odium upon true science and legitimate mining enterprises," and "attest the folly and costliness of labor without skill," western politicians sought action.⁷ William H. Clagett, silver-tongued Montana lawyer and later delegate to Congress, early suggested a government mining school and Nevada's first Senator, William M. Stewart, and the state's one Representative, Delos R. Ashley, vainly pursued such legislation on Capitol Hill in the mid-sixties.⁸

A Marysville, California, newspaper carried comments from a reader in March, 1867, urging a national school of mines, and pointing out that mining was a complex business and merited more than passing attention. There was no such thing as a "natural" mining superintendent or manager any more than there were "natural" doctors and lawyers, this correspondent argued. To develop mineral resources judiciously and make quartz mining a legitimate



J. Ross Browne, author and artist, was a leading proponent for a national school of mines. (Nevada Historical Society)

business required a school of mines, "for mining without sufficient knowledge, acquired by experience and study combined, is nothing else but a lottery or a gambling institution." 9

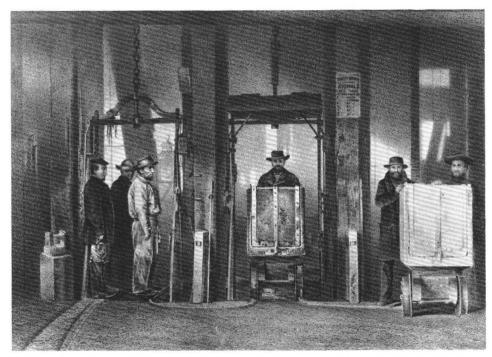
No voice was more persistent in the late sixties than that of J. Ross Browne, adventurer, artist, confidential government agent, author—and at the time—collector of mineral statistics for the federal government. Well known for his colorful descriptions of Washoe and other Nevada mining camps, Browne was impressed both by the mineral richness of the West and by the extravagance of its exploitation. He calculated the 1867 precious metal yield at around \$75 million for the country, and estimated a loss of 25 percent, or another \$25 million because of faulty reduction methods. On the Comstock Lode alone, 35 percent was lost, a disgraceful example of improvidence. "No country in the world can show such wasteful systems of mining as prevail in ours," he charged, arguing that as an obligation to future generations, Congress should create at least a national bureau of mines and preferably also a federal school of mines. He had noted that graduates of European technical schools, Freiberg particularly, provided what scientific knowledge was available in the West, and he believed it wrong to rely upon foreign institutions. ¹⁰

In the Rockies and beyond, Browne's ideas were widely aired. The editor of the San Francisco Bulletin thought a national bureau of mines would be a boon if kept clear of politics and run by scientific and practical men for the benefit of the mineral industry. A federal mining school, said the Bulletin, would also be a major asset: it "would be to the mining interest what West Point is to the military service, and Annapolis to the naval. . . ." The editor endorsed Browne's ideas as "practical and valuable," acknowledged that California would someday have a full-blown mining school, but that its worth would be enhanced by contact with a broader, national school of mines. 11

The Pacific coast publication, *Mining and Scientific Press*, lauded Browne's move for "A National Mining College," and again pointed to the immense waste in American mining which, even though better than in Australia and Brazil, lost from one-fifth to one-quarter of the gold value in the tailings. The editor could see no reason for young Americans to have to cross the Atlantic for their training. State schools were fine, he noted, but even they were lacking. Americans wanted something extra—

something of a more national character—an institution of the highest grade; one worthy of the richest mineral region in the world, peopled by an intelligent and progressive race, and comprising at least eight of the most promising States and Territories of the Union. 12

Browne sailed from San Francisco in September of 1867 and arrived in Washington by the end of October to complete his official report on mineral statistics and to lobby for a federal school and a bureau of mines. As he wrote William Sharswood, a prominent Philadelphia chemist, "I am going to ask Congress to establish in the centre of the great mineral region West of the Rocky Mountains, a Mining School, similar in its general provisions to the Schools of Freiberg, Schemnitz, Paris, Berlin and London." ¹³ He corre-



Shift landing, Savage Mine, Virginia City, 1867. (Reprinted from Geological Exploration of the Fortieth Parallel, Vol. III, GPO, 1870)

sponded with interested individuals and button-holed members of Congress, including Senator William M. Stewart of Nevada, to discuss strategy. 14

Soon eastern newspapers also carried Browne's proposal for an "American Polytechnic School" for mining. As the New York World carried the story, Browne argued that western mineral production was gradually declining, except in Nevada, despite the fact that mineral wealth seemed to be unlimited. The application of science to the business of mining, especially to ore treatment, he contended, could save at least \$15 million in silver and ore, without taking into account low-grade materials, "which, in any country possessing first-class mining schools, would be inexhaustible sources of wealth." Nor did this take into account "the immense losses" from "erection of unsuitable machinery and from ignorance of the chemical composition of ores and the process of reduction applicable to each class." An estimated \$9 million was lost on the Comstock each year, more than one-third of the total product, according to Browne, while at Freiberg far poorer ores lost but 5 to 9 percent. 15 The World, however, while approving of Browne's ends, vigorously rejected his means. Like a number of engineers who hit the ceiling at the idea of Congress appropriating funds to build silver reduction works, the editor of the World was appalled at the idea of government help for mining.

For our part, we trust that the business of mining and our schools of mines may be spared the meddling and marring of Government interference. Governments can do well their single business of ordaining and establishing justice between men. Whatever else they undertake they botch, and get power thereby sooner or later to be misused. ¹⁶

Ultimately, on December 2, 1867, as befitted a spokesman from a mineral state, William M. Stewart introduced into the Senate a bill to create a national school of mines. Stewart had played an important role in the passage of the National Mining Act in 1866 and a year earlier had unsuccessfully sponsored a measure to grant a million acres of public domain to create a federal college of mines in Nevada. 17 Stewart's new bill (Senate Bill 156) would tax gold and silver bullion, the proceeds to be earmarked for a mining school "to be located on the line of the Pacific railroad, west of the Rocky mountains, as near as practicable to the centre of the mining States and Territories." Each state or territory wholly or partially west of the eastern base of the Rockies were entitled to choose one member of a governing board of directors, such a board to make rules and regulations, supervise funds and appoint professors and officials. Tuition was to be free to any qualified American citizen, as determined by the faculty; also admitted free were foreign students deemed to be "duly qualified by the authorities of the school; but all students were to pay their own travel, board, lodging and book expenses. Staff would do assays, tests, and metallurgical or other experiments free, except for the actual cost of materials used, and the faculty would take over permanently the task of collecting mineral information previously done by the commissioner of mineral statistics. Moreover, faculty members

. . . shall make annual visits to the principal mining districts accompanied by their respective classes, for the purpose of examining the mines, mills, and modes of working, and instructing the pupils in the practical operations of mining and metallurgy; and the said professors and teachers shall also, as far as their time will permit, give free lectures to the miners on geology, mineralogy, metallurgy, and mining engineering, and kindred subjects.

The Secretary of the Treasury was to be ultimately responsible for the new institution; to him the Board would report annually; to him was delegated the task of locating the school and planning the buildings—"which shall be plain and substantial, and upon the most economical plan consistent with the purposes of the institution." Under his jurisdiction, the major mining schools of Europe were to be examined; and at least half of the revenue from the bullion tax was to be invested in government securities on his advice to build up a permanent fund to keep the school going once the tax was removed.¹⁸

After Stewart introduced the bill, several weeks would elapse before the Senate Committee on Mines and Mining would be in a position to report it out. Meanwhile, Browne took the offensive. While Stewart wrestled with the

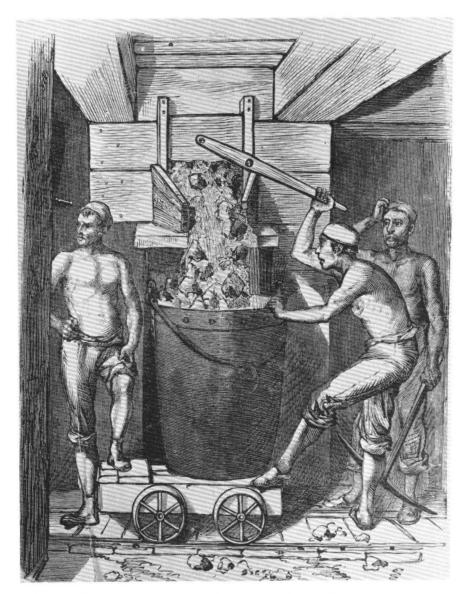


Illustration from Frank Leslie's Illustrated Newspaper, 1878. (Nevada Historical Society)

committee, of which he was a member, Browne published a pamphlet describing the importance to the public of the national school of mines. This detailed argument, with excerpts from supporters, Considerations in Reference to the Establishment of a National School of Mines as a Means of Increasing the Product of Gold and Silver Bullion, was circulated among friends and potential backers and appended to his 1868 report on mineral resources.¹⁹

For Stewart and Senate Bill No. 156 the going was not easy. Since the measure had been introduced on the first day of the second session of the Fortieth Congress, it took time even for the committee to consider it. As Stewart began to sniff a rising opposition, on January 16 he asked for an opportunity to explain the importance of the proposal and after some delay was granted the floor, where he proceeded for three-quarters of an hour to argue each detail of his bill.²⁰

He began with the many blunders in mining that occurred as placer operations declined and deep-level vein mining grew in significance: "But the principal reason is want of knowledge." Processes used on the Comstock, which was exploited "with great profit and great waste," simply would not work on ores in all other areas. Experience accumulated too slowly, said Stewart. "The labor of thousands, constituting a large majority of the miners of the Pacific, has been utterly wasted in vain attempts to find mines where geology teaches mines cannot exist." ²¹

Distinguishing between trained scientists and the charlatans who brought science into disrepute, the Nevada senator noted a real demand for engineers. "An education at Freiberg is a guarantee not only to position and influence, but to the regard and confidence of the humblest miner."²² The fact that American scientists were educated abroad, especially in Germany, was "a reproach" to Stewart, who cited federal aid for agriculture, lighthouses and the coastal surveys as precedents for assistance to mining. Earlier he had introduced a bill to create a federal bureau of mines, but after consultation with colleagues from California, concluded that such an agency located in Washington could never be satisfactory.²³

His bill would tax all bullion one-half a percent, bringing in an estimated \$250,000 to \$300,000 to establish the school in 1868. Admitting that the levy was "unjust and oppressive" in that it hit dividend-paying and non-dividend-paying mines alike, Stewart would have preferred to finance the institution by direct appropriations, but saw no real hope for that. ²⁴ However established, such a school, together with the Pacific railroad "and other improvements which may follow," would soon more than double precious metal yield, increase the gold supply, contribute to national prosperity and help pay off the public debt. ²⁵

Most people were in favor of establishing such a school, but there were differences of opinion over such basic questions as location or whether the federal government should be involved. The editor of *Scientific American* could see no need to have the institution situated in the mining west and was also skeptical of assigning any role to Washington. The "remedy for the want of truly scientific knowledge on this subject is to be found in the exertions of individuals and companies directly interested in mining, rather than in appeals to the government either of a state or the nation."²⁶

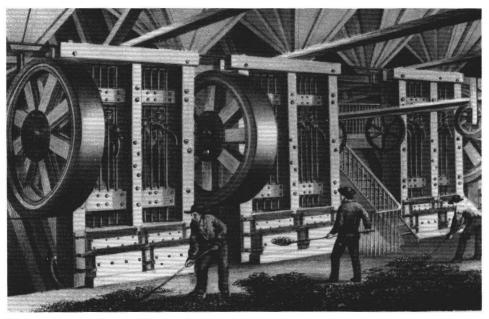
The bill and Stewart's defense of it brought considerable comment. The

Secretary of the Treasury mentioned a national mining school in his annual report, albeit with different ideas on how it should be achieved, an attitude not anathema to Stewart's supporters. "The Secretary's views on the subject are just and liberal, and merit the favorable consideration of Congress." Mining editors and local western newspapermen liked the basic concept, if not always the threatened presence of the federal bureaucracy.

The editor of the influential *Mining and Scientific Press* noted that the bill had the impress of Commissioner of Mineral Statistics Browne and proceeded to use Browne's figures on loss of ore value through inefficient working. An American program to produce a corps of educated miners and engineers would take time "and every day's delay is costing the country thousands of dollars," the editor wrote in a friendly editorial that would be copied by west coast newspapers.²⁸ "The project seems exceedingly practical," said the proprietor of the *Nevada Transcript*, a newspaper published in Nevada City, California, "such a school would greatly aid in the development of mineral resources" but San Francisco would be the most ideal site.²⁹

In the City by the Golden Gate, the editor of the *Alta Californian* liked the general proposal but pointed out "grave defects" in the bill. The bullion tax, of course, was unfair. Another weak point was the suggested governing of the new school—a mechanism which "fails on every point of efficiency, economy and applicability." Selection of school directors by politicians was disturbing enough in itself, and distance and isolation, were negative factors. With directors scattered throughout the west, how could they meet often enough to chart a firm course? "With Congressional rates for mileage, the cost of each meeting would be fully enough to run the institution for a year." Rather, let these nominations be made by such scientific bodies as the American Philosophical Society, the American Academy of Arts and Sciences, the Smithsonian Institution and the California Academy of Sciences.³⁰

In the California legislature, assemblyman John W. Dwinelle introduced a memorial to Congress asking for certain amendments of the Stewart bill. Dwinelle, "a scholarly land-title lawyer," was one of the early proponents of higher education in the state and had introduced the bill which became the charter of the University of California in early 1868. He asked that the school be located near, but not necessarily on, the Southern Pacific railroad line, thus making Grass Valley eligible as a site. He suggested that the institution's board of directors be appointed by the governors or the legislatures of the states and territories west of the western base of the Rockies, thus excluding Colorado, Dakota and Montana. Dwinelle would also require foreign students to pay tuition and, he proposed that portions of the fund to be established by the bill be allotted to the land grant colleges of the Morrill Act, a recommendation that brought immediate fire from the editor of the Alta Californian, who believed that the need was to maintain one good mining school, not a number of mediocre ones. The Dwinelle memorial, he con-



Battery Room. (From Views of the Works of the Gould and Curry Silver Mining Company, Virginia City, N.T., c. 1860)

cluded, would be "a serious obstacle" to passage of the Stewart measure and should be replaced at Sacramento by "a simple prayer for the speedy establishment of the College." The *Mining and Scientific Press* also criticized the bill's "pretty rough handling by the California Legislature" and urged that partisan feelings be discarded and wholehearted support thrown behind Stewart, despite some weaknesses in his proposed law.³²

That eternal commentator on western matters, Mark Twain, also took note of Dwinelle's "curious resolution" and predicted that it would be rightfully tabled in Washington. This "funny document," said Twain, "has two clauses in it that are especially entertaining, and would be still more so if they were set to music." One was the provision to exclude foreigners, which in light of American enrollment in Freiberg, was a selfish, "poor-spirited measure"—resurrected from the Dark Ages. The other was Dwinelle's proposal to divide the revenue from the mines among a number of state institutions.

The idea is threadbare and old. The Japanese astrologer, Prof. Blake, who knows so much more than it is lawful for any one to know, is here, now, trying to get the revenues from the mining States conferred upon Columbia College for the establishing of a mining department in that institution.

Two hundred and eighty other colleges are begging for the same revenues for the same purpose. . . . Why, even the purblind, broken-winded, Old Red Sandstone paleozoic saurian, the Smithsonian Institute, has awakened from its ancient dream of

Roman horseshoes, Grecian funeral processions, and pre-Adamite ferns and turnips, and it wants the revenues to endow a Mining Bureau with!³³

Impractical schemes like Dwinelle's resolution could only delay legislation, Twain argued, urging his readers to write their congressmen.

Even so, critics of the Dwinelle petition saw reason to modify the Stewart bill. A spokesman for the *Alta Californian* outlined the measure for the paper's readers and accepted the general idea but saw some changes desirable. New Mexico ought not have as much weight in directing the new mining college as California: the number of directors from each state should be the same as its representatives in both houses of Congress, with each territory given one for its delegate. Or an alternative, and perhaps even fairer, method, according to the *Alta*, would be to assign each state and territory one director for each \$5 million in gold and silver produced annually, with reapportionment every five years.³⁴

The versatile engineer-editor of the American Journal of Mining, Rossiter W. Raymond, who would replace J. Ross Browne as Commissioner of Mineral Statistics, was himself a Freiberg student, but supported the bill from the beginning, although aware of its shortcomings—especially its lack of explicitness in planning, organizing and controlling the school. Cautioning against government interference in mining, Raymond argued that individual mine owners lacked the necessary knowledge to reform the most prevalent evils—inefficiency and waste. Information, he said, "is the least debt which the government owes to its citizens engaged in this work." Stewart's proposal ought not only be acted upon, but the school made "as it ought to be, the foremost in the world."³⁵

Raymond also hit hard at an article appearing in the Virginia City *Territorial Enterprise* in the summer of 1868, which had ridiculed the Stewart proposal "with much wit, but little justice" and quibbled over whether the institution should be called a school of mines or a mining school. Who cares what it was to be called, asked Raymond. "Shall we stifle the child in a fight at the christening?" Fifty American students currently at Freiberg indicated a need and a desire for science in mining, but it should be American, not German, science. "The mistakes of scientific men who were not practical, and of practical men who were not scientific, have cost this district more than many Sutro tunnels," said Raymond.³⁶

Some eastern newspapers were cool to the idea. The *New York Times* admitted the value of a national school of mines but thought that the government might as well establish a national school of agriculture or of commerce or of commercial navigation to aid other interests. Friends countered with the argument that such federal agencies already existed in the form of the Bureau of Agriculture, the Coast Survey and the Lighthouse Board, while the Morrill Act provided educational funds for colleges, none of which had yet developed

a mining school, although the University of California was about to create a theoretical mining department which was in no way a substitute for a specialized college focusing on mining alone. Still, the government role was not preeminent: individual enterprise was more important. "The agriculture, commerce and navigation of the Pacific Coast would now be carried on chiefly by Digger Indians, if it were not for the adventurous spirit of the American people and the allurements inherent in the business of mining."

The New York World agreed wholeheartedly. The "enormous progress" already made in mining had been accomplished without government help. "Much remains to be done. God forbid that our mines should be hindered in the doing of it by any sort of Government meddling whatever." While very much an advocate of free enterprise, Rossiter Raymond was quick to acknowledge the role of individualism in mining; he also called attention to

 \ldots hundreds of educated foreigners, who have been "helped" by their governments, crowding our young men out of the field of scientific mining and metallurgy; thousands of tons of American ores, shipped around half the world to countries where "governmental meddling" has taught people how to extract the metal from their compounds.

Meanwhile, American production decreased and loss increased every month and the mining industry fell prey to "speculation, fevers of hope, panics of despair, mistakes, swindles, self-deceptions, crazy inventions, growing disgust of all men." Mining, once considered the "surest of occupations" and the "foundation of many a great national career," was "now becoming a by-word and a scoffing!" The time for action, said Raymond, was immediately. "Ex post facto mining schools will not affect the irretrievable past." ³⁹

In subsequent editorials and speeches, Raymond and Browne both carried the message to the public. One standard argument, propounded again and again, was that mining was essential to civilization. Open to private enterprise in the United States, the industry must be overseen to at least some extent in the interests of conservation. Individuals should not be allowed to ruin "by ignorant and wasteful management" what Nature had endowed on future generations. "We are the trustees for posterity." If \$9 million a year were lost in handling Comstock silver ores and 5 dollars wasted for every dollar extracted from the sulpherets of Colorado, these shortcomings "are so much robbery of our children."

Raymond reiterated that in a mineral west of great riches individual initiative was not able to stem the tide of waste and inefficiency. "One might as well expect the Indian to commence scientific stock-raising, while the prairie swarms with buffalo. . . . A despotic government would stop all this waste by arbitrary measures; a democratic government must stop it by teaching the people better."⁴¹

According to Raymond, western precious metal production had decreased

between 1863 and 1867, in part because of Civil War effects on labor, in part because of a generally dull business climate and detrimental taxation policies, but also because of the chaos created by changes encountered in mining itself. Deep-level mining required capital and fostered speculation. As mines grew deeper, engineering difficulties multiplied; extraction and reduction of ores grew more complex. Dropping shafts, tunneling, timbering, hoisting and ventilating took money and talent to accomplish; ores dug from deep underground were not decomposed and were hard to break down—they came "in the most intricate and obstinate mineral combinations." A thoroughly American mining school would systematize and bring order, Raymond argued. "We have only to stop the leaks in our channels, and these springs of golden bounty will irrigate and fertilize, for a thousand years to come, every field of American industry and commerce."⁴²

In an appearance before the California Academy of Science in June of 1868, Raymond, now newly appointed mining commissioner, lauded his predecessor, spoke highly of individualism and called for a real American science of mining developed in an indigenous national school. Scientists were not yet in good repute in the West. "There is a class that superstitiously venerate anybody who has the smell of a German college on his garments, and another with whom to be called a scientist is to be pronounced a humbug." In agriculture, land remained and a mistake made one season could be rectified the next. Not so with mining: a mine was a wasting asset. Once taken out, precious metal was gone forever. A school was vital: "a mining education was worth five hundred mining laws."⁴³

Others argued the European precedent. Across the Atlantic, nations had found it necessary to augment private schools by subsidizing mining education. Moreover, was not a national school of science (not mines) "a favorite project of our first President," George Washington?⁴⁴

But despite such compelling and imaginative arguments, the bill was doomed in the Fortieth Congress. Stewart reported it out of the Committee on Mines and Mining with minor amendments on February 19—mainly to specify eight directors by name—for the first two years, but the measure was lost.⁴⁵

Early in the following year, Delos R. Ashley, Nevada Republican, introduced a similar bill into the House of Representatives. Ashley's measure (H.R. 1657) proposed that Congress provide funds to determine the value of public mineral lands and at the same time endow a national school of mines. Like the previous Stewart bill, this never came to a vote. 46

In 1869 the campaign continued, with support from William P. Blake, the Yale professor who reported on precious metals exhibited at the Paris Exposition of 1867 and took the occasion to urge creation of a national mining school, "graduates of which might explore the country's mineral resources through a federal corps of mining engineers" with a scheme of rank and promotion similar to those of the Army engineers.⁴⁷

In his continuing supportive addresses, Ros' Raymond urged the government to dispose of its mineral lands as rapidly as possible and at the same time help to consolidate the private gains being made regularly in western mining and smelting. Most men, he said, "seem to think science means Germany, and books. Now we are making science on this coast every day, and throwing it away." What was needed was collection and preservation of this new American advance. "The best agency for the concentration and crystallization of our great experience in the mines, mills and furnaces of this country, would be a National School of Mines," he told the California Academy of Sciences. A few months later, quoting a "sensible article" from the New York Shipping and Commercial List, Raymond saw no reason why such an institution "would not be as useful to the country as the Military or Naval Academy."

It was in his 1869 report on Mineral Resources of the States and Territories West of the Rocky Mountains that Raymond spelled out his arguments in the most detail. Theoretical scientific principles remained constant everywhere, he contended, but the best modes of applying these principles varied with area and circumstance, with such factors as labor, fuel or transportation determining the economic feasibility of different processes and methods.

It is a severe requisition that we make upon a young graduate of a foreign school of mines, when we ask him to adapt his acquired science to our widely different circumstances. Every such graduate has to reconstruct, alone and for himself, the whole art which he has learned—a work requiring genius as well as intelligent perseverance, and one in which many men fail, who, if they had been educated in the region where they were to practice, would have been respectably and deservedly successful all their lives.⁵⁰

A school of mines would rapidly give the United States "a settled and digested American science of mining and metallurgy" and remove the public stigma—much of it unjustifiable—of foreign-educated engineers unable to adapt their ideas to western mines or of charlatans who imposed on common credulity by parading the name of foreign schools and absurd processes. Nor did the public understand that young mining men trained abroad required experience and seasoning in the new environment. Rather than to install them as superintendents or as inspecting experts passing judgment on investments—as was so often the case—"the true wisdom is to give them subordinate positions at the mines, where they may gradually learn the new conditions of the problem, and fit themselves for higher positions."⁵¹

A cadre of mining engineers trained in an American national school, plus the exposure of ordinary miners to basic lectures and experiments, would restore western confidence in the practicing scientist, Raymond insisted. Such a school could also function as a bureau of mines, take over the collection of statistics, and serve as a unifying factor for mining interests previously widely isolated but plagued by constantly increasing difficulties, some different, some similar, but all receptive to an approach from a centralized, umbrella agency.⁵²

William Stewart introduced another school of mines bill in February of 1870. This bill (S. 585) proposed the establishment of a national school to be located at one of the federal mints or assay offices, unless otherwise stipulated. Personnel included a comptroller and two professors—one of chemistry and metallurgy and the other of mining engineering. An initial appropriation was asked of \$50,000 for books and apparatus, as Stewart apparently hoped an economy-minded Congress could be persuaded to make a modest beginning, which could then be gradually expanded. But editors believed that such an inauspicious inception could hardly attract any but local students and the idea of a national school would be lost. In addition, western congressmen could never agree on a location and Stewart's efforts again came to nothing.⁵³

About the same time, it was proposed that mining engineering be added to the curriculum at West Point. According to the somewhat dubious editor of *Mining and Scientific Press*, "The one great advantage from such a school would be that we could be certain that a graduate from there had really studied his profession faithfully, which guarantee we have from no other mining school at present." ⁵⁴

But this was only a vague suggestion, never a concrete one. In 1871, when John Church circulated his pamphlet, *Mining Schools in the United States*, reprinted from the *North American Review*, he noted that the only real school of mines in the country was at Columbia in New York City. Prior to its opening in 1864, American engineers educated abroad returned with specialized knowledge, sectional prejudices and "too often antiquated ideas of management . . . too cumbersome for use in the American field." Church advocated the founding of a number of mining academies—schools complete in themselves, not merely courses in mining or metallurgy added to already existing technical programs. In addition to Columbia, which was already "one of the best schools in the world—more scientific than Freiberg, more practical than Paris," another institution, preferably in San Francisco, was warranted, although others believed a federal school ought to be among the mines themselves and suggested Grass Valley as the ideal.⁵⁵

Early the same year—1871—Senator Cornelius Cole of California introduced a bill in the Senate to incorporate "The United States Mining School and Metallurgical Company," a multiple-purpose institution which was to teach geology, mineralogy, chemistry, metallurgy and mining engineering and would be authorized to build and operate up to five metallurgial works and buy gold and silver ores. Location of school and plants was at the discretion of the directors. The company's nominal stock was set at \$10 million, but when buildings for mills and for a school to handle 300 students were completed, the concern would receive \$1 million in United States bonds. Each additional mill up to the prescribed limit warranted \$500,000 more in bonds, to a total of \$3 million, with a few thousand acres of public

land thrown in for building sites. Critics were rightly dubious: if a school of mines were needed, it was on a more reasonable basis. Once bonds and land were given, there was no mechanism to force the school to continue, no penalty for closing; nor were any conditions or guidelines set down for its management or course of study. ⁵⁶

From time to time, others revived (at least on paper) the idea of a school of mines and engineering fostered by the federal government and endowed like West Point and Annapolis. One such proposal of 1873 would allow such an institution to enroll private paying students, but like the academies would allow each United States Representative in Washington to appoint one student from his district. ⁵⁷

But as time passed, state mining schools developed and expanded. By 1893, sixteen such institutions, sixty percent of them public, including the University of California and the Colorado School of Mines, had turned out a total of 871 graduates. 58 This growth eased concern for a federally subsidized national institution, although western politicians never completely abandoned their efforts. The year 1893 saw efforts by hard-riding congressmen from mineral states to divert a portion of federal money from mineral lands in nine western states, those funds to aid schools of mines in those areas. But, while the Senate approved such a measure, the House did not. 59 Again, in 1900. New York's Chauncey Depew sought legislation in the Senate to provide \$15,000 in federal funds annually in support of existing or yet to be established schools of mines in each state or territory. Depew's motives were not clear; he argued that mining was due the same encouragement as agriculture; but the measure was received gingerly by the mining press, which more than ever looked askance at governmental meddling and insisted "that the great Mineral Industry of the United States is capable of taking care of itself." Good state schools had no need of "this dole from the National Treasury"; poor ones had no right to exist. 60 That agriculture had been "a sturdy and successful beggar," was no reason that mining schools required a "dole." As Richard P. Rothwell, of the Engineering and Mining Journal put it, self reliance was "the most precious of the attributes of the American citizen, and the most injurious thing that could happen to him would be to look to the government to help him out of his difficulties and to do everything for him."61 Congressmen agreed and killed both the Senate bill and its counterpart in the House. 62 That this was not an uncommon outlook was indicated again in 1903 when editor Thomas A. Rickard referred to a proposal for federal aid to mining schools as "paternalism gone mad." 63 Now that private and state facilities were available for training engineers, the mineral industry was as laissez faire as American business in general.

If nineteenth-century efforts to promote national subsidies for technical mineral education were not persuasive, so far as Congress was concerned, the supporting arguments do tell a great deal about western mining itself. That sensible men recognized the inefficiency and wastefulness of the technology of their day and sought to improve it through education was no more unusual than the appeal to Washington. A generous federal government had allowed its mineral resources to pass into private hands for a song, but it left their exploitation strictly to private enterprise.

NOTES

- ¹ Clark C. Spence, Mining Engineers and the American West (New Haven: Yale University Press, 1970), 25-30.
 - ² Robert G. Rankin, "American School of Mines," The Mining Magazine 7 (October 3, 1856): 244.

3 Ibid., 245, 246-249.

4 The Mining Magazine 7 (January, 1857); 60-64.

⁵ For various comments at the state level, mainly in California and Nevada, see *Mining and Scientific Press* (San Francisco) 4 (January 11, 1862): 4; (February 15, 1862): 4; (February 22, 1862): 4; 5 (March 15, 1862): 4; 6 (October 7, 1862: 8; (June 22, 1863): 2; 7 (January 2 & 23; April 9, 1864): 2, 56, 232.

⁶ American Journal of Mining 1 (June 9, 1866): 168.

- ⁷ American Journal of Mining 2 (November 3 &10, 1866): 90, 107; Memoirs of the American Bureau of Mines (New York, 1867): 8.
- ⁸ Weekly Independent (Helena, Montana), 25 January 1868; Russell R. Elliott, Servant of Power: A Political Biography of Senator William M. Stewart (Reno: University of Nevada Press, 1983), 274; William Clagget served in the Nevada Territorial House of Representatives in 1862 and 1864 representing Humboldt County, and the Nevada State Senate in its first session in 1864-65 representing Storey County.

⁹ Marysville Appeal, 2 March 1867, clipping, Bancroft Scrapbook, 51:2, 587, Bancroft Library.

- ¹⁰ J. Ross Browne, Report on the Mineral Resources of the States and Territories West of the Rocky Mountains (Washington, D.C.: Government Printing Office, 1868): 9-10, 660-661. For Browne, see David Michael Goodman, Western Panorama, 1849-1875: The Travels, Writings and Influence of J. Ross Browne (Glendale: Arthur H. Clark Company, 1966).
- ¹¹ Cited in Considerations in Reference to the Establishment of a National School of Mines as a Means of Increasing the Product of Gold and Silver Bullion (Washington: Intelligence Printing House, 1867): 13.
 - 12 Mining & Scientific Press 15 (September 28, 1867): 200.
- ¹⁸ Browne to William Sharswood, Washington, 7 November 1867, William Sharswood MSS, American Philosophical Society; also quoted in Goodman, Western Panorama, 243, note 13.

14 Ibid., 242-243.

- 15 New York World, quoted in Considerations, 4-5.
- ¹⁶ New York World, quoted in Considerations, 4-5; American Journal of Mining, 4 (November 23, 1867): 328.
- ¹⁷ Congressional Globe, 39th Congress, 1st session, 1866, 36, pt. 1: 520; Elliott, Servant of Power, 54-55.
- ¹⁸ Congressional Globe, 40th Congress, 2d session, 1867, 39 pt. 1: 1; ibid., 1868, 556; Considerations, 6-8.
 - 19 Browne, Mineral Resources, 1868: 659-65; Considerations; Goodman, Western Panorama, 244.
 - ²⁰ Congressional Globe, 40th Congress, 2d session, 1867, 39, pt. 1: 10; ibid., 1868: 553, 556-557.
- ²¹ Speech of Hon. William M. Stewart, of Nevada, on the Bill to Establish a National School of Mines; Delivered in the Senate of the United States, January 16, 1868 (Washington: Rives & Bailey, 1868): 5; Congressional Globe, 40th Congress, 2d session, 1868, 39, pt. 1: 556-557.
- ²² Speech of Hon. William M. Stewart, 7; Congressional Globe, 40th Congress, 2d session, 1867, 39, pt. 1: 557.
 - 23 Ibid., 558, Speech of Hon. William M. Stewart, 7-8.
 - ²⁴ Ibid., 9; Congressional Globe, 40th Congress, 2d session, 1868, 39, pt. 1: 558.
 - 25 Ibid., 560-561; Speech of Hon. William M. Stewart, 10-11.
 - ²⁶ Scientific American 18 (January 4, 1868): 9.
 - ²⁷ Considerations, 10.
 - ²⁸ Mining and Scientific Press 16 (January 4, 1868): 8. See Silver Bend Reporter (Belmont, Nevada), 18

January 1868, clipping in Bancroft Scrapbook, 31, 144 (California Education and Schools), Bancroft Library.

- ²⁹ Nevada Transcript, 3 January 1868, clipping, ibid., 31, 143.
- 30 Alta Californian, undated clipping, ibid., 31, 141.
- ³¹ The Journal of the Assembly during the Seventeenth Session of the Legislature of the State of California, 1867-68 (Sacramento: D. W. Gelwich, 1868) (January 15, 16 & 18): 263, 272, 293; Alta California, 18 January 1868, clipping, Bancroft Scrapbooks, 31, 143; Alta Californian, 3 July 1868, clipping, Bancroft Scrapbook, 51:2, 660; Walton Bean, California: An Interpretive History (New York: McGraw-Hill Book Co., 1868), 267.
 - 32 Mining and Scientific Press 16 (January 25, 1868): 56.
- ³³ Territorial Enterprise (Virginia City), 7 April 1868, quoted in Alta Californian, 11 April 1868, clipping, Bancroft Scrapbook, 31: 146. Twain's "Prof. Blake" was undoubtedly William P. Blake of Yale College, in Japan earlier with Raphael Pumpelly.
 - 34 Alta Californian, 18 January 1868, clipping, Bancroft Scrapbook, 31: 143.
- 35 American Journal of Mining 4 (December 7 & 21, 1867): 361, 392. For Raymond, see Thomas A. Rickard, ed., Rossiter W. Raymond (New York: American Institute of Mining Engineers, 1920).
- ³⁶ Raymond to editor, Territorial Enterprise (July 21, 1868), unidentified clipping (possibly Alta Californian), 21 July 1868, Bancroft Scrapbook, 21: 159.
 - 37 New York Times quoted in Considerations, 9-10.
 - 38 New York World, quoted in ibid., 5.
 - 39 American Journal of Mining 4 (December 28, 1867): 407.
 - 40 American Journal of Mining 4 (December 21, 1867): 392.
 - 41 Raymond in Opinions of the Press, 8.
 - 42 Ibid., 10.
 - ⁴³ American Journal of Mining 6 (July 4, 1868); Mining and Scientific Press 16 (June 6, 1868): 371.
 - 44 Considerations, 10, 11.
- ⁴⁵ Congressional Globe, 40th, Congress, 2nd session, 1868, vol. 39: 1287. No director was named for Idaho in the amended bill, but others included: Sherman Day and William Ashburner of California, F. A. Tritle and D. W. Welty of Nevada, A. C. Gibbs of Oregon, A. J. Simmons of Montana and John Pierce of Colorado. Browne, Report (1868), 665.
 - 46 Congressional Globe, 40th Congress, 3d session, 1869, vol. 40, pt. 1: 282.
- ⁴⁷ William P. Blake, Report upon the Precious Metals: Being Statistical Notices of the Principal Gold and Silver Producing Regions of the World Represented at the Paris Universal Exposition (Washington: Government Printing Office, 1869): 240-241; Mining and Scientific Press 18 (March 27, 1869): 194.
 - 48 Mining and Scientific Press 19 (July 24, 1869): 60.
- 49 Shipping and Commercial List, quoted in Engineering and Mining Journal 8 (November 23, 1869): 327.
- 50 Raymond, Mineral Resources of the States and Territories West of the Rocky Mountains, 1 (Washington: Government Printing Office, 1869): 225.
 - 51 Ibid.
 - 52 Ibid., 226-227.
- ⁵³ Congressional Globe, 41st Congress, 2nd session, 1870, vol. 42, pt. 2: 1535; Mining and Scientific Press 20 (April 2, 1870): 217; New Northwest (Deer Lodge), April 15, 1870.
 - 54 Mining and Scientific Press 70 (June 4, 1870): 380.
- ⁵⁵ John A. Church, Mining Schools in the United States (New York: Waldron & Payne, 1871): 16-17, 18-19, 22; Mining and Scientific Press 22 (March 25, 1871): 184-185.
- ⁵⁶ Congressional Globe, 41st Congress, 3d session, 1871, vol. 43, pt. 1: 290; Engineering and Mining Journal 11 (January 17, 1871): 41.
 - 57 Journal of the American Bureau of Mines (Chicago), 1 (August, 1873): 2-3.
- ⁵⁸ Samuel B. Christy, "The Growth of American Mining Schools and Their Relation to the Mining Industry," American Institute of Mining Engineers, Transactions, 23 (1893), 445.
- ⁵⁹ Originally these states were California, Oregon, Washington, Montana, Idaho, Nevada, Wyoming, Colorado and South Dakota. A subsequent amendment added Minnesota to the list. Edgar B. Piper to Samuel Christy (San Francisco, October 23, 1893); Christy to Piper (Berkeley, October 26, 1893), draft, Christy MSS, Bancroft Library; Congressional Record, 53rd Congress, 1st session, 1893, vol. 25, pt. 2: 2501; ibid., 1893: 2329; ibid., 1893, vol. 25, pt. 3: 2850-51; ibid., 1893: 2882; ibid., 53d Congress, 2nd session, 1894, vol. 26, pt. 3: 2099.

- ⁶⁰ Congressional Record, 56th Congress, 1st session, 1900, vol. 33, pt. 2: 1661; Mining and Scientific Press 80 (March 17, 1900): 286.
 - 61 Engineering and Mining Journal 49 (March 24, 1900): 342-3.
 - 62 Congressional Record, 56th Congress 1901, vol. 34, pt. 3: 2440.
 - 63 Engineering and Mining Journal 76 (July 18, 1903): 78.

Diehard or Swing Man: Senator James W. Nye and Andrew Johnson's Impeachment and Trial

MICHAEL GREEN

"The President called upon the lightning," a young French correspondent named Georges Clemenceau informed his readers when the House of Representatives impeached Andrew Johnson, "and the lightning came." The Senate trial that followed culminated a three-year battle between the president and Congress over how to reconstruct the Union. Johnson's efforts to stop Radical and moderate Republicans from reconstituting Southern society and protecting and increasing black rights had prompted threats of impeachment, but the threats became a reality in February 1868 when he attempted to replace Radical Secretary of War Edwin M. Stanton. Accused of violating the Tenure-of-Office Act, which was designed to limit the president's ability to remove federal officials who disagreed with his policies, Johnson was acquitted by a vote of thirty-five to nineteen—one less than the two-thirds majority needed for conviction. Seven Republicans had joined twelve Democrats to save Johnson. No president has come closer to being removed from office.

Almost from the moment the Senate acquitted Johnson, contemporaries and historians have speculated that other Republicans were ready, if necessary, to join or replace the "seven martyrs" who opposed his conviction. They have focused their attention on, among others, James W. Nye of Nevada. Their interest appears to have been aroused largely by John Bigelow, a former United States minister to France and longtime New York newspaperman and political leader who mentioned Nye in his diary as a possible swing vote, and to a lesser extent by a New York Herald report that the Nevadan might vote for Johnson's acquittal.² Yet, according to more recent scholarship, "the assertion made by many historians that . . . James W. Nye of Nevada stood ready to switch . . . derives from sources which are, at best, secondhand and, at worst, unreliable"-primarily Bigelow's diary, which contained "mere hearsay which is contradicted by other and much stronger evidence." This evidence has not previously been analyzed in depth, but an examination of Nve's political and personal principles reveals why Nve voted as he did, and why it is highly improbable that he might have been a "martyr."3

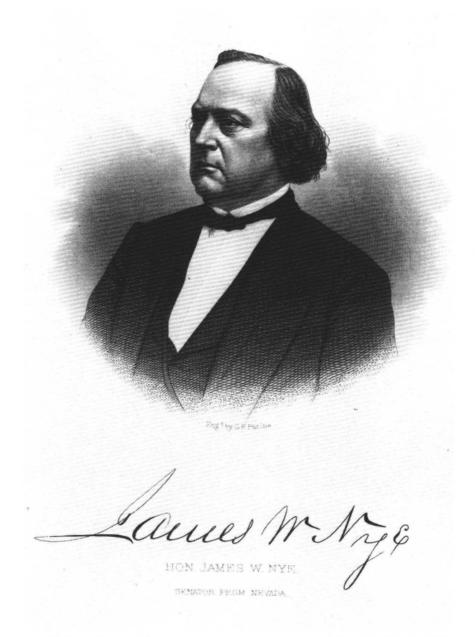
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Born in 1814 in DeRuyter, a New York town that later became a way station for the Underground Railroad, Nye enjoyed a successful legal career amid his political activities. Known as the "Grey Eagle" for his flowing mane and "General" after he was commissioned in the New York militia, Nye practiced law in Syracuse and New York City and was a state district attorney, Madison County judge, and New York City Metropolitan Police Board member. He served on New York's state Democratic committee in 1840 and supported Martin Van Buren's unsuccessful presidential candidacy in 1844. In 1848, Nye was a delegate to the anti-slavery Free-Soil convention that nominated Van Buren as a third-party candidate for president and ran for Congress as a Barnburner, the radical wing of New York's Democratic party. Although he lost to Whig incumbent William Duer, Nye made his long-standing reputation as an outstanding political stump speaker in the hundreds of anti-slavery speeches he delivered throughout New York.⁴

It was a short step from Nye's Free-Soil and Barnburner activities to the Republican party. He became a cog in William H. Seward's and Thurlow Weed's New York Republican machine and remained a loyal Republican until he died. Nye found the new party's goal of stopping the spread of slavery compatible with his hopes and ideas. "I do not know, and personally, I do not greatly care, that it shall work out its great ends this year, or next, or in my life-time," Nye told his fellow Republicans, "because I know that those ends are ultimately sure." 5

For many Republicans, the means to these ends required Seward's presidential nomination in 1860. Nye was at the forefront of this movement as a New York delegate to the national convention, where he managed Seward's campaign funds. These he dispensed freely, if unsuccessfully; but when Abraham Lincoln was nominated, he swallowed his disappointment and loyally stumped for the Republican candidate, speaking ardently and often. He toured the West with Seward that fall, demonstrating his ability to arouse and amuse an audience and declaring at one stop where the New York senator sat on his hat, "I could have told you it wouldn't fit before you tried it on." Yet Nye was also a trusted political lieutenant whose duties earned him the enmity of many influential people, including powerful New York Tribune editor Horace Greeley, whom he accused of trying to undermine Seward, the newly-appointed secretary of state. 6

Recognizing his loyalty, Seward appealed to Lincoln to reward Nye with a patronage job. The *New York Herald*, which looked far more sympathetically upon slavery than did the Republicans, accused Nye of applying for every available spoils post in New York, but instead he ended up as governor of the newly-created Nevada Territory. Although worried at the time about his political future, he later contended that Lincoln chose him to assure Nevada's loyalty to the Union. That fealty at first was uncertain: the thousands who rushed to the Comstock mines and the towns that sprouted around them included Southerners and others sympathetic with the Confederate cause.⁷



James W. Nye, Nevada Territorial governor and senator. (Nevada Historical Society)

Their sympathies, in stark contrast to Nye's, were not with blacks. Nevada's first territorial legislature banned black suffrage, black and Indian court testimony in cases involving whites, and miscegenation. In particular, Nye attacked the ban on court testimony. Twice he asked the legislature to repeal

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the law, and twice he failed, prompting him to lament to Seward that such restrictions were "behind the Spirit of the Age." Given the lack of support Nye received in his endeavor, he may well have been ahead of his time, and perhaps at considerable risk: as William Hanchett pointed out in his study of the rights of Civil War-era Nevada blacks, his opinions "might have ruined him politically by identifying him as a 'nigger lover.'"

That was the last thing Nye wanted, for his ultimate political goal was a United States Senate seat. He worked hard to win it, fighting for statehood, building a successful Republican machine, and earning a great deal of popular support. Ultimately, he was successful, although the legislature required several ballots and Comstock political power William M. Stewart's endorsement before giving the territorial governor a majority. The legislators may have had an inkling of the position Nye would take on Reconstruction: throughout the war the governor had attacked advocates of a settlement with the Confederates. Indeed, when a Nevadan murdered a Confederate sympathizer, Nye, in his final days as territorial governor, declared, "I want him convicted, and before I resign . . . I mean to pardon him. If it be meritorious to shoot a traitor in South Carolina, it cannot be unpardonable to shoot one in Nevada." 10

Nye's opinions on Reconstruction issues were equally forceful. He opposed the speedy restoration of Southern states: "If we are to take poison, let us take it in small doses, a little at a time; do not give us a fatal dose at once." The senator also fought a bill that would have allowed minor Confederate officeholders to register to vote, explaining, "The man who pulled the trigger of the musket is an infant in crime compared to those who controlled him and made him to do it." In addition to endorsing tight federal controls over Southern affairs, the Nevadan also expressed the fear that the Supreme Court would overturn the more radical Reconstruction legislation that Congress had passed. 12

Nye had solidly supported most of these Reconstruction measures, and he remained consistently radical from the Thirty-Ninth Congress to the Fortieth. He voted for the Thirteenth and Fourteenth Amendments. In addition, he backed efforts to extend the life of the Freedmen's Bureau, an agency designed to help the former slaves; he also supported the unsuccessful attempt to override Johnson's veto of the bill and its eventual passage in a revised form. Nye also endorsed the Civil Rights Act of 1866 and the overruling of Johnson's disapproving response. The Tenure-of-Office Act, which limited Johnson's power to remove federal officeholders, won Nye's support, as did the Army Appropriations Bill requiring orders to go through General of the Army Ulysses S. Grant. The Nevadan voted as well to override the president's vetoes of the Military Reconstruction Act, which divided the South into military districts under generals, and the Supplementary Reconstruction Bill, which streamlined the administrative details of other radical measures. In the supplementary Reconstruction Bill, which streamlined the administrative details of other radical measures.

In addition, Nye demonstrated his long-standing commitment to black rights. He favored suffrage in Washington, D.C., and one quantitative study found that he supported the freedmen in ninety percent of forty-two roll call votes, tying him for seventh among all of the senators who voted on those measures; another ranked him among the "consistent radicals" throughout Johnson's presidency. Nye, described by one historian as "more free-thinking than most Westerners on equal rights," believed it "the bounden duty of the Government to afford protection to emancipated Negroes." Other Republicans, including Seward, leaned toward conservative Reconstruction, but not Nye, who somewhat theatrically proclaimed to his colleagues,

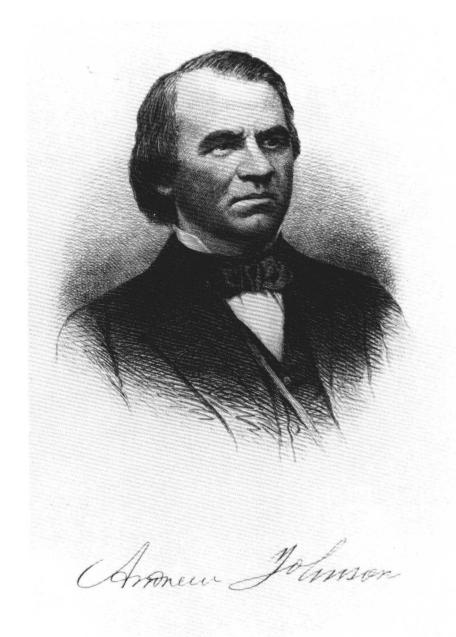
I know and feel perhaps as strongly as anybody the prejudice of race. I was brought up in a section of this country where colored men were seldom seen, and I imbibed prejudices founded upon color; but when I saw almost three hundred thousand of them enlist under a flag that had heretofore been only a symbol of oppression to them, and cross bayonets with enlightened white men, the enemies and foes of this country, and die transfixed with them, my prejudices disappeared. . . . (I)t is far safer to trust ignorant loyalty than cultivated disloyalty. It is a lesson that should not be forgotten. ¹⁶

Nye's willingness to trumpet his Radical Republican views frequently moved him to "wave the bloody shirt" until he became known as "Hangman Nye." "If I had my way," he announced, "I would have hung Jeff Davis, no matter how I tried him . . . and the world would have said amen." When Massachusetts Senator Henry Wilson urged forgiveness for the South, Nye, harkening perhaps to Seward's "higher law" oration, declared,

We have a high example of the manner in which rebels were treated by Divine power. When the arch-rebel was convicted before a tribunal that unmasked rebellion to its nakedness, he was thrown over the battlement, kicked out, and he has never returned to disturb the peaceful reign of Him who reigns over all. Here my friend, reversing that great and divine example, says he wants to hug them at once—to reach out his hands for them. It is simply a matter of taste, in which I do not share with the honourable Senator from Massachusetts. ¹⁸

Nye's Radical dogma proved politically popular in Nevada. In 1867, the Radicals were losing power to conservatives in what the *New York Times* called "a reaction against the extreme acts and measures of the Republican party" and "the bullying influence which such men as . . . Nye . . . and men of (his) stamp mistake for statesmanship." The Nevadan faced a tough reelection fight against Charles DeLong, who had been active in Nevada politics from its territorial beginnings and Nye's ally in the battle to ratify the Nevada Constitution in 1864. DeLong, a Stephen Douglas supporter in 1860, had what Effie Mona Mack, Nye's only published biographer, referred to as "copperhead proclivities . . . (a)nd it was on this note that Nye waged his campaign against him." These tactics, playing on Nevadans' fresh memories of statehood having been "Battle-Born," paid dividends. Nye won reelection after legislation and his followers rejoiced that "the country is *safe*." 20

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President Andrew Johnson was acquitted by one vote before becoming the first president in history to be impeached. (Nevada Historical Society)

Nye's opinions clearly placed him in the Radical wing of the Republican party, and those views were warmly regarded in Nevada, which heartily endorsed the Radical civil rights program despite the state's racist predilec-

tions. Nye's popularity in Nevada was more than matched by Andrew Johnson's unpopularity. Most Nevada Republican editors and politicians had looked favorably upon the president's Freedmen's Bureau Bill and Civil Rights Act vetoes while Democrats praised Johnson and pestered him for patronage jobs. Eventually, however, the tide turned against Johnson in Nevada, just as it had in Congress: the 1867 legislature backed the Fourteenth Amendment and attacked Johnson, and the state's Republicans stepped up their criticism of the president.²¹

Thus, the views of Nye and his constituents were clear when Johnson provoked a confrontation with Congress. The highly confusing Tenure-of-Office Act gave the Senate the power to approve the firing of any federal official whose appointment required its approval. When Johnson had lawfully tried to replace Secretary of War Edwin M. Stanton, a Democrat-turned-Radical Republican whom he had inherited from Lincoln, with Grant, Congress was not in session; when it reconvened, Nye was part of the thirty-five to six Senate majority that turned him down. These procedures had been proper, if controversial, but Johnson's second attempt to remove his Radical Cabinet member in favor of Adjutant General Lorenzo Thomas proved far more acrimonious. For Nye, however, the issues were clear: he voted to convict Johnson.²²

However, the depth of his commitment to conviction has been the subject of conjecture. One study ranks the Nevada senator among "Republicans relatively committed to conviction" because early in the trial he favored a motion to lengthen the proceedings. Yet Nye was one of only nine senators favoring conviction who opposed Johnson on every question raised about admitting evidence. By the latter standard, Nye appears to have been wholly unsympathetic with the president's position.²³

Nye's votes reveal his consistent opposition to Johnson's cause. On March 13, 1868, the "Grey Eagle" supported the House managers' losing effort to begin the trial immediately; he settled for a resolution that "the trial . . . shall proceed immediately after replication shall be filed." The Nevada senator also joined the majority that defeated a proposal to give Johnson's defense attorneys thirty days to answer the House prosecutor's reply, choosing instead to allow them one week. Indeed, except for votes when Nye was absent because of illness or other commitments, and the one time be broke with the Radicals to support adjournment, the Nevadan was unwavering in his support for a speedy trial.²⁴

Nye also held fast to the Radical line on admitting evidence. He favored introducing the details of Thomas's appointment when the House managers were making the request, but not when the president's counsel sought the presentation of the evidence. That pattern continued when the senators and the attorneys questioned other witnesses, including Secretary of the Navy Gideon Welles and General William T. Sherman, who sympathized with Johnson's conservative Reconstruction policies.²⁵

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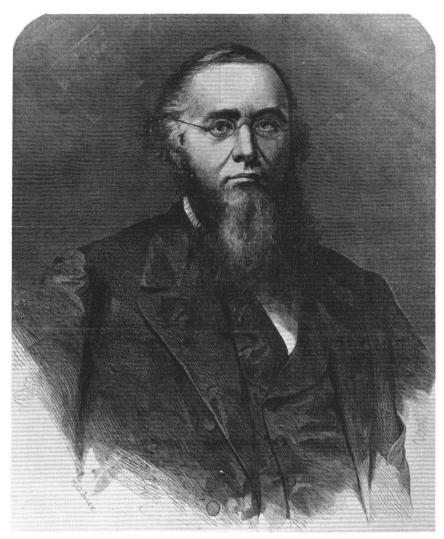
Nye took a similarly Radical Republican view of Chief Justice Salmon P. Chase's role as presiding officer during the trial. Chase may have been acting impartially or supporting Johnson because he wanted to be president; he may have wanted to keep Senate President Pro Tempore Benjamin F. Wade from becoming president because of a political dispute with his fellow Ohioan. Whatever Chase's motivations, the Radicals wished to keep the chief justice's participation to a minimum. Nye and his fellow Radicals believed that Chase had no right to vote to break ties or to judge the admissibility of evidence.²⁶

The Nevadan also supported Radical policies when the trial ended. On May 7, after supporting Massachusetts Senator Charles Sumner's losing effort to force an immediate vote, Nye joined a thirty-seven to thirteen majority voting to determine Johnson's fate by May 13.²⁷ Eventually, the Senate changed the date to May 16, giving ill senators time to recover and, presumably, wavering senators time to change or make up their minds. The delay also afforded the opportunity for private caucuses and public speculation: after the Senate met privately on May 11, one of those present predicted Johnson's conviction by the slimmest possible margin, a thirty-six to eighteen majority that would include Nye. Such newspapers as the New York Times, Cincinnati Gazette, and Sacramento Union agreed in their reports on the outcome and Nye's place in it; the New York Herald did not include him in its list of senators whose votes were in doubt.²⁸

The predictions about Nye proved to be far more accurate than those concerning the president's fate. On May 16, 1868, Nye joined the thirty-four to nineteen majority that wanted to begin with Article XI, the "Omnibus" article listing all of the high crimes and misdemeanors of which Johnson was accused. The vote to convict was thirty-five to nineteen, Nye voting guilty "full and strong." When the court met again on May 26, the votes, including Nye's, were the same on Articles II and III, which concerned Stanton's ouster. Finally, Nye and the rest of the Radicals, aware that these were the Articles with the best chance of winning a two-thirds majority for conviction, surrendered to the inevitable and voted to adjourn.²⁹

Obviously, Nye strongly supported Radical Republican efforts to unseat Johnson. His votes demonstrated his ambivalence about a fair trial and his antipathy toward the president, for he invariably agreed with the prosecution's requests or objections on questions of evidence and its efforts to quicken the proceedings. Indeed, his voting record as a senator seems to have been a harbinger of his trial record. Nye had unswervingly opposed Johnson's conservative, pro-Southern Reconstruction policies, casting his lot with the Radicals and the more liberally-inclined, pro-black moderates.

But that is not in itself an explanation for Nye's desire to depose Johnson. The president clearly was a formidable obstacle to Radical Reconstruction and thus to the success of the Radical Republican policies Nye supported, but little more than nine months remained in Johnson's term when the Senate



Edwin M. Stanton, secretary of war under Presidents Abraham Lincoln and Andrew Johnson. (Illustration from Harper's Weekly, May 26, 1866)

voted on Article XI; to convict him might have been to make a martyr of him. 30 Moreover, the enormously popular Grant was virtually assured of the Republican presidential nomination. Grant's election seemed almost as likely, unless Senator Wade did become president, and even then he was expected to be at best the vice-presidential candidate. Nonetheless, many private citizens and politicians, especially moderates and conservatives, were determined to keep Wade out of the White House; they either disagreed with Wade's racial or economic ideas, disliked him personally, or saw him as an

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obstacle to their own ambitions.³¹ With all of the arguments for and against conviction, why was Nye seemingly so ardent in favoring Johnson's removal?

The investigation the House managers conducted after the president's acquittal prompted questions about Nye's ardor. Thurlow Weed, Secretary of State Seward's close ally and onetime operator of the New York machine which Nye had supported, was among the witnesses who testified that Kansas Senator Samuel Pomerov had written a letter offering to sell his vote and the votes of at least two others for \$40,000. One of the senators whose names Pomerov was alleged to have dropped was Nye's. Weed doubted that Nye was aware of Pomeroy's activities or that he would have voted to acquit Iohnson. Pomerov insisted that the letter was a forgery: the House investigators, doubtless disposed to side with a fellow Radical, agreed. Whatever the source, the letter certainly raises doubts about Nye's vote. If Pomerov, who himself had a checkered career, was indeed offering to deliver votes to the pro-Johnson forces, it was only logical for him to name senators who might have been favorable to the president's position. This makes Nve's position somewhat less certain, and the comments in Bigelow's diary and the New York Herald, no matter their accuracy, only add to the uncertainty. 32

Moreover, the assumption that Nye might have been willing to switch is not without foundation. He had been close to Seward, who staunchly supported Johnson. He had also spoken against impeachment when the House Judiciary Committee first began to investigate the president in 1867, arguing that "(t)he presidency was a position which commanded respect . . . and it should not be assailed without good reason." Although Nye believed fervently in the principles for which the Republican party, and particularly the Radical Republicans, stood, he was also fiercely loyal to the party itself. Whether he would have voted to acquit Johnson had party leaders asked him to do so can only be speculated; the *New York Herald* believed that it was possible:

Nye, by a singular rumor, had been mentioned among the doubtful. Jim, it was said, would be found "all right" should it be necessary, and, therefore, his answer was waited for with much interest. He said "guilty" in a peculiarly Nyeish style, from which nothing in particular is deducible. It was evident that Nye was not required to be "all right," and he was not.³⁴

As Nye himself had declared almost a month before Johnson ordered Stanton to relinquish the War Department, "I am ready and willing to make large allowances for the weakness of men. I am willing to see men change, and I desire to see them change when they are wrong."³⁵

Finally, Nye himself may have harbored higher political ambitions. It was an election year, and the Lincoln, Ormsby, and Esmeralda County conventions and several Nevada newspapers had endorsed Nye for the vice-presidency as a favorite son. His chances of winning the nomination were

slim, as Nye well knew—even the state convention did not endorse him, a decision that disappointed several Republican editors—but Nye clearly was an ambitious and dedicated Republican.³⁶

Nevertheless, the evidence of Nye's thoughts and actions before, during, and after the trial suggests that he was equally dedicated to Johnson's conviction. Nye opposed the president on every question of admitting evidence, a decidedly Radical view. His biographer described him as "violently opposed" to Johnson.³⁷ Contemporaries did not expect him to vote for acquittal and, save for Bigelow and the *Herald*, did not list him among those ready to do so if necessary. In the middle of the trial, Johnson supporter Gideon Welles described him in his diary as "(b)lundering, plundering Nye, without honesty or integrity," and wrote of the Senate,

As for the crowd of little creatures who are out of place in the Senate, and ought never to have been there—like . . . Nye . . . and others who are neither statesmen, enlightened legislators, nor possessed of judicial minds—no one expects from them justice or any approach to it. But the question is whether the abler minds will be carried away by chief conspirators who hold in their hands the great amount of partisan small trash.³⁸

Nor was Nye friendly any longer with Seward, his onetime benefactor. They had divided over Reconstruction: the secretary of state had united with his president while the Nevada senator had followed the Radical Republicans. Stumping in New Jersey during the 1866 mid-term election in which Johnson "swung 'round the circle" for conservative congressional candidates,

. . . Nye recalled the parting of the ways for his audience. "A friend of mine in the Cabinet (a man who, if I had served my Maker as faithfully as I served him, I would feel pretty sure of finding favor in the hereafter), this man said to me, 'You are too radical.' "The astounded general replied, "I don't hold a political principle today that I did not learn of you." 39

Moreover, the events that followed Johnson's acquittal reveal Nye to have been an unrepentant Radical Republican. One of the seven moderate Republican senators opposing conviction was Maine's William Pitt Fessenden:

When Fessenden later met Nye, he fumed, "You had not the courage to act conscientiously, and let seven of us bear the whole brunt of the odium. It was a mean trick." Nye retorted that "at least he had not been animated by a malignant spirit and jealousy."

Also, when several Republicans who had opposed convicting the president attended a party caucus on May 28, Nye was among the Radicals who walked out in protest. Those are the words and deeds of an angry Radical who wanted to be rid of Andrew Johnson.⁴⁰

In addition, Nevada politics behooved Nye to be an unrepentant Radical.

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The state's Republicans, who comprised the popular majority, expressed their pleasure over Johnson's impeachment in spontaneous demonstrations: "we have not seen Union men of all shades so elated, in many a day" Carson City's daily reported. Nevada's Republican machinery quickly made its attitude clear: Union clubs in Virginia City, Gold Hill, Carson City, and Truckee Meadows (near what was then the small young town of Reno) passed resolutions supporting impeachment and conviction, and conventions or clubs in other areas registered their approval of Radicals and disapproval of Johnson. The state party convention also criticized the president and praised the impeachers.⁴¹

The press was even more vocal than the politicians. Six of the young state's nine newspapers violently attacked Johnson and demanded his conviction: Virginia City's famed Daily Territorial Enterprise, the Carson Daily Appeal, Gold Hill Daily News, Austin's Daily Reese River Reveille, the Washoe City Eastern Slope, and the Esmeralda Union. One moderate paper, Virginia City's the Daily Trespass, criticized both sides, particularly the impeachers. The two Democratic weeklies, Unionville's the Humboldt Register and Belmont's Silver Bend Reporter, were virulently anti-Radical, if only mildly enthusiastic about Johnson. None of the papers equivocated in its pages. 42

Nor did Nye's Senate colleague from Nevada, William M. Stewart, equivocate; he violently opposed Johnson. Stewart, who changed parties several times during a California and Nevada political career that spanned more than half a century, changed his mind about Reconstruction and Johnson about a year after his election, claiming that the president broke his promise not to veto the Civil Rights Bill. Stewart and Nye voted together most of the time during the trial, as well as on major Reconstruction bills. Stewart left behind a bitter personal denunciation of Johnson and a legal opinion citing the president's violation of the Tenure-of-Office Act to justify his vote to convict. For his stand, Nye's younger colleague received fulsome praise from Nevada's Radical press. 43

In addition, Nye invariably enjoyed favorable treatment in the pages of the state's Republican newspapers. They lauded his speeches and offered appropriate and worried expressions of sympathy when they received word during the trial that he had fallen ill. 44 The Carson Daily Appeal, which looked with particular favor upon Nye, captioned one editorial "True Among The Faltering." Referring to "our proud old 'Grey Eagle of Liberty,' " the Appeal declared, "Sick and debilitated as Nye is, we may rest assured that if he has to be borne into the Senate chamber in the arms of his friends, then and there to breathe his last, that with his dying whispers he will pronounce Johnson 'guilty.' "45 Virginia City's Republican Trespass, preaching moderation in part in response to the Enterprise's radicalism, summarized the anti-impeachment viewpoint, whose adherents were decidedly a Nevada minority, when it complained,

It was all right for . . . Nye, and other Senators, to say freely before the convening of the session that they were satisfied the first business would be to impeach the President, and that he would be removed. It was all well for the ultra radicals to thus commit themselves in advance; but for (Iowa Senator James W.) Grimes to dare think the cause insufficient for such measures, and to express his conviction, was damnable. 46

For Nye to have voted otherwise would have damned him in the eyes of Nevada's Republican editors, although the effect on his political future is questionable. Nye's term was up in 1872 and he hoped to win another, but by then the issue was not Reconstruction but money: the most important component for a successful campaign was a bankroll, and Nye lacked one. He also suffered from a largely unimpressive Senate record and the beginnings of senility. Republican Comstock millionaire John P. Jones began five terms in the Senate, but Nye's political career had ended: he died in an asylum in White Plains, New York, on Christmas Day, 1876.⁴⁷

During the remainder of his term, Nye reflected the wane of Radical Republicanism. He backed the conservative version of the Fifteenth Amendment, which began as a far-reaching measure and ended up stating simply that blacks had the right to vote, in part because Stewart was managing it and in part because both of them realized that a radical piece of legislation would never receive sufficient nationwide support. Nor was Nye necessarily committed to overstating the Radical Republican viewpoint:

Noting Sumner's almost obsessive belaboring of the slavery issue, Nye . . . remarked that he was "in the position that the clown in the circus took when he pounded the wood-chuck with a club till he was told it was dead. Said he, 'I know it.' Then he was asked 'Why do you want to pound things after they are dead?' 'Well,' said he, 'I want to convince this particular wood-chuck that there is punishment after death."

Yet as late as 1872, only two senators opposed an amnesty bill for ex-Confederates whose rights still had not been fully restored. One was Sumner. The other was Nye. As Nye himself proudly informed the Senate a month before Johnson's impeachment, "I, sir, am a Radical. I glory in it." ⁴⁹

It was the Nye who gloried in Radicalism who voted Andrew Johnson guilty of high crimes and misdemeanors. This was the senator who had consistently opposed Johnson's conservative Reconstruction policies. This was the onetime Barnburner and Free-Soiler who had stumped against slavery and for black rights. This was the veteran and inveterate politician who understood power and knew the views of his constituents—how they would react to a vote for acquittal, and how the Republican party at the national and local levels would react. It may well be that the *New York Herald* and John Bigelow were correct in their view that Nye was among those who might have supported Johnson, but, as one historian explained, "for party reasons pre-

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ferred not to display the courage of their convictions."⁵⁰ To have voted for acquittal, however, would have been to go against all that he had previously said and done and all that Nevada Republicans had said and done.

One historian who studied the controversy was referring to James W. Nye, among others, when he lamented, "Why should so many of the irreconcilables be faceless individuals?" The Nevada senator and Nevada itself participated minimally in the whole process. But one vote saved Johnson from the two-thirds majority that would have made him the only president ever removed from office; had one of the "seven martyrs" changed his mind, would that vote have been Nye's? Perhaps now he is less faceless, but an examination of the man and his record seems to leave little doubt that he was indeed irreconcilable. James W. Nye voted to convict Andrew Johnson and remove him from office, and the evidence indicates that he did so out of his own unshakable conviction that Johnson was guilty.

Notes

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- ¹ Georges Clemenceau, American Reconstruction, 1865-1870 (New York: DaCapo Press, 1970), 151. Virtually all text on the era deals with the controversy at least in some way. The old, pro-Johnson standard is David Dewitt, The Impeachment and Trial of Andrew Johnson (New York: The MacMillan Company, 1903). Newer, more anti-Johnson interpretations are Michael Les Benedict, The Impeachment and Trial of Andrew Johnson (New York: Norton, 1973), and Hans L. Trefousse, Impeachment of a President: Andrew Johnson, the Blacks, and Reconstruction (Knoxville: University of Tennessee Press, 1975).
- ² For more on this speculation, see Ralph J. Roske, "The Seven Martyrs?" American Historical Review, 64 (January 1959): 323-30. The sources that mention Nye are the New York Herald, 17 May 1868; Diary of John Bigelow, 23 September 1868, John Bigelow Papers, New York Public Library; Trefousse, Impeachment of a President, 169. Ibid and John Niven, Gideon Welles: Lincoln's Secretary of the Navy (New York: Oxford University Press, 1973), 563, are examples of two excellent works that make references to Nye as a possible swing vote on this basis.
- ³ Albert Castel, *The Presidency of Andrew Johnson* (Lawrence: Regents Press of Kansas, 1979), 193. It should be noted that an examination of Nye must rest almost entirely on newspapers, congressional documents, and contemporary and secondary accounts. Nye left few personal papers, and the diary once attributed to him has since been found to have been written by a contemporary, Henry Goode Blasdel, Nevada's first elected governor. See L. James Higgins, "A Mystery Cleared: The Diary of James W. Nye," *Nevada Historical Society Quarterly* 26 (Summer 1983): 127-32.
- ⁴ There are three major sources for biographical information on Nye: Effie Mona Mack, "James Warren Nye, A Biography," Nevada Historical Society Quarterly 4 (July-December, 1961): 8-59; Jud Burton Samon, "Sagebrush Falstaff: A Biographical Sketch of Janes Warren Nye" (Ph.D. dissertation, University of Maryland, 1979); and Patricia Kohlman-Craig, "James Warren Nye: The Man Behind The Scenes" (master's thesis, University of Nevada, Las Vegas, 1981). See also Myrtle Tate Myles, Nevada's Governors: From Territorial Days to the Present, 1861-1971 (Sparks: Western Printing and Publishing Company, 1972), 6; Richard G. Lillard, Desert Challenge: An Interpretation of Nevada (New York: A. A. Knopf, 1942), 211; Eric N. Moody, ed., Western Carpetbagger: The Extraordinary Memoirs of "Senator" Thomas Fitch (Reno: University of Nevada Press, 1978), 58; George Washington Julian, Political Recollections, 1840-1872 (Ohio: Negro Universities Press, 1944), 56; Dumas Malone, ed., Dictionary of American Biography (26 vols., New York: Charles Scribner's Sons, 1934), 13: 600; Hubert Howe Bancroft, Bancroft's History of Nevada, 1540-1888 (Las Vegas: Nevada Publications, 1981, originally published as part of Bancroft, History of Nevada, Colorado, and Wyoming, 1540-1888, San Francisco: The History Company, 1890), 187-88.

- ⁵ Kohlman-Craig, "The Man Behind The Scenes," 1, 10, 14-15, 25; Kent D. Richards, "The American Colonial System in Nevada," Nevada Historical Society Quarterly 13 (Spring 1970): 29; Mack, "James Warren Nye," 11; Samon, "Sagebrush Falstaff," 44-79, 182-210.
- ⁶ Kohlman-Craig, "The Man Behind The Scenes," 25-30; Mack, "James Warren Nye," 11-12. The anecdote about the Western tour is from Merlin Stonehouse, John Wesley North and the Reform Frontier (Minneapolis: University of Minnesota Press, 1965), 134. Seward's outstanding biographer characterized Nye as "vulgar"; see Glyndon G. Van Deusen, William Henry Seward (Rochester: University of Rochester Press, 1967), 232. On Greeley, see James W. Nye to William H. Seward, 23 February 1861, William Henry Seward Papers, University of Rochester Library; Kohlman-Craig, "The Man Behind The Scenes," 33-34; Samon, "Sagebrush Falstaff," 236.
- New York Herald, 2 March 1861; Kohlman-Craig, "The Man Behind The Scenes," 34-35; Samon, "Sagebrush Falstaff," 237; Kohlman-Craig, "The Man Behind The Scenes," 35-56, 38-41; Samon, "Sagebrush Falstaff," 237-51; Russell R. Elliott, History of Nevada (Lincoln: University of Nebraska Press, 1973), 69; Myles, Nevada's Governors, 3; Stonehouse, John Wesley North, 131, 139; Richards, "American Colonial System," 29; Effie Mona Mack, Nevada, A History of the State from Earliest Times Through the Civil War (Glendale: Arthur H. Clark, 1936), 269-70.
- ⁸ William Hanchett, "Yankee Law and the Negro in Nevada, 1861-1869," Western Humanities Review 10 (Summer 1956): 242-43; Elmer R. Rusco, "Good Time Coming?": Black Nevadans in the Nineteenth Century (Westport: Greenwood Press, 1975), 25-26; Elliott, History of Nevada, 387; Samon, "Sagebrush Falstaff," 267-68, 281-82.
- ⁹ On Nye as a politician, see Mack, "James Warren Nye," 16, 36; Richards, "American Colonial System," 32-35; Kohlman-Craig, "The Man Behind The Scenes," 47; James W. Hulse, *The Nevada Adventure: A History*, 5th edition (Reno: University of Nevada Press, 1978), 102; Gilman M. Ostrander, *Nevada: The Great Rotten Borough*, 1859-1964 (New York: A. A. Knopf, 1966), 92. For some of the endless and entertaining tales of Nye's conviviality, see Stonehouse, *John Wesley North*, 134, 139-43, 151-52; Kohlman-Craig, "The Man Behind The Scenes," 47-48; Charles C. Goodwin, *As I Remember Them* (Salt Lake City: Salt Lake Commercial Club, 1913), 151-59. Obviously, the Mack article, Kohlman-Craig thesis, and Samon dissertation are liberally sprinkled with information about these topics.
- 10 The anecdote is from the Virginia City Territorial Enterprise, 23 January 1877, cited in Samon, "Sagebrush Falstaff," 280, and Mack, "James Warren Nye," 44. For details on the Senate election, Nye's relationship with Stewart, and Stewart's life, see Mack, "James Warren Nye," 30; Effie Mona Mack, "William Morris Stewart, 1827-1909," Nevada Historical Society Quarterly 7 (Spring-Summer, 1964); Ruth Hermann, Gold and Silver Colossus: William Morris Stewart and His Southern Bride (Sparks: Dave's Press, 1975); and Russell R. Elliott, Servant of Power: A Political Biography of Senator William M. Stewart of Nevada (Reno: University of Nevada Press, 1984), especially 43. See also Ostrander, Great Rotten Borough, 39; George D. Lyman, The Saga of the Comstock Lode: Boom Days in Virginia City (New York: Charles Scribner's Sons, 1934), 325: Samon, "Sagebrush Falstaff," 256-330.
- ¹¹ Henry Wilson, History of the Reconstruction Measures of the Thirty-Ninth and Fortieth Congresses (Westport: Negro Universities Press, 1970), 404, 446-47.
- Eugene H. Berwanger, The West and Reconstruction (Urbana: University of Illinois Press, 1981), 213; Goodwin, As I Remember Them, 152-53; Dewitt, Impeachment and Trial, 218-19.
- ¹³ Earl J. Pomeroy has argued that Lincoln wanted Nevada in the Union to get the state's votes for the Thirteenth Amendment. See Pomeroy, "Lincoln, the Thirteenth Amendment, and the Admission of Nevada," *Pacific Historical Review* 7 (December 1943): 362-68.
- 14 For a nice summary of Western votes on these issues, see Berwanger, The West and Reconstruction, 258-60
- ¹⁵ Ibid.; Glenn M. Linden, Politics of Principle: Congressional Voting on the Civil War Amendments and Pro-Negro Measures, 1838-69 (Seattle: University of Washington Press, 1976), 10; Michael Les Benedict, A Compromise of Principle: Congressional Republicans and Reconstruction, 1863-1869 (New York: W. W. Norton & Company, 1974), 28.
 - ¹⁶ Berwanger, The West and Reconstruction, 54; Wilson, Reconstruction Measures, 211.
- ¹⁷ Samon, "Sagebrush Falstaff," 341, 361; Robert Merrifield, "Nevada, 1859-1881: The Impact of an Advanced Technological Society on a Frontier Area" (Ph.D. dissertation, University of Chicago, 1957), 214; Congressional Globe, 39th Congress, 1st session, 1866: 2527; Congressional Globe, 40th Congress, 2nd session, 1868: 2492-93.
 - 18 Wilson, Reconstruction Measures, 410.

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¹⁹ New York Times, 10 October 1867, 4, in Benedict, A Compromise of Principle, 274; Michael Les Benedict, "The Rout of Radicalism: Republicans and the Election of 1867," Civil War History 18 (Winter 1972): 334-44.

- ²⁰ Samon, "Sagebrush Falstaff," 326; Mack, "James Warren Nye," 49; Myron F. Angel, ed., History of Nevada, with Illustrations and Biographical Sketches of its Prominent Men and Pioneers (Berkeley: Howell-North, 1958, originally published Oakland: Thompson and West, 1881), 89; on the celebration, see Walter Van Tilburg Clark, ed., The Journals of Alfred Doten, 1849-1903 (Reno: University of Nevada Press, 1973), 2: 911.
- ²¹ Berwanger, The West and Reconstruction, 63, 69, 74, 119-91, cites legislative actions and correspondence with Johnson; Rusco, "Good Time Coming?", 21, 42, 44; Benedict, A Compromise of Principle, 41; James G. Scrugham, ed., Nevada: A Narrative of the Conquest of a Frontier Land, Comprising the Story of Her People from the Dawn of History to the Present Time (Chicago: American Historical Society, 1935), 1: 270.
- ²² Edward McPherson, The Political History of the United States of America during the Period of Reconstruction. . . . (New York: Negro Universities Press, 1969), 262; Edward L. Gambill, "Who Were The Senate Radicals?" Civil War History 11 (Fall 1965): 241, 243; Supplement to the Congressional Globe: Trial of Andrew Johnson, President of the United States on Impeachment by the House of Representatives for High Crimes and Misdemeanors, 40th Congress, 3rd session, 1868: 411-12.
- ²³ Benedict, A Compromise of Principle, 367-68; James E. Sefton, "The Impeachment of Andrew Johnson: A Century of Writing," Civil War History 14 (June 1968): 146; McPherson, Ordeal By Fire: The Civil War and Reconstruction (New York: Alfred A. Knopf, 1982), 523.
- Supplement to the Congressional Globe, 13 March 1868, 8-11; 23 March 1868, 27; 24 March 1868, 28;
 April 1868, 92; 4 April 1868, 212; 10 April 1868, 160; 13 April 1868, 162-163; 15 April 1868, 175; 17 April 1868, 209; 25 April 1868, 310; 27 April 1868, 320; 30 April 1868, 351.
- ²⁵ Ibid., 1 April 1868, 71; 2 April 1868, 82-83; 10 April 1868, 140, 158-60; 13 April 1868, 166, 168-70; 16 April 1868, 195, 200-03, 208; 17 April 1868, 225; 18 April 1868, 231-38; 20 April 1868, 246.
 - ²⁶ Ibid., 31 March 1868, 62-63; 1 April 1868, 63.
 - ²⁷ Ibid., 6 May 1868, 406; 7 May 1868, 408.
- ²⁸ Edmund G. Ross, History of the Impeachment of Andrew Johnson (Santa Fe: New Mexico Printing Company, 1896), 129-33; Dewitt, Impeachment and Trial, 520, 580; New York Times, 12 May 1868; 14 May 1868; 15 May 1868; Daily Territorial Enterprise, 17 May 1868; Gold Hill Daily News, 18 May 1868; New York Herald, 13 May 1868.
 - ²⁹ Supplement to the Congressional Globe, 1868: 411-12; 1868: 414-15; New York Times, 17 May 1868.
 - 30 Humboldt Register, 18 April 1868; 25 April 1868.
- ³¹ Any attempt to list all of the analyses and pro-and-con arguments would go on forever. See particularly Sefton, "A Century of Writing," 120-47; Hans L. Trefousse, "The Acquittal of Andrew Johnson and the Decline of the Radicals," *Civil War History* 14 (June, 1968): 148-61; George C. Rable, "Forces of Darkness, Forces of Light: The Impeachment of Andrew Johnson and the Paranoid Style," *Southern Studies* 17 (Summer 1978): 170-71; McPherson, *Ordeal By Fire*, 532-33.
- ³² Dewitt, Impeachment and Trial, 569-70; New York Times, 23 May 1868; 28 May 1868; New York Herald, 26 May 1868; 28 May 1868; Berwanger, The West and Reconstruction, 43-44, 236-37, 244. Samuel Pomeroy was indicted later for illegal use of campaign funds and Nye defended him on the Senate floor. See Samon, "Sagebrush Falstaff," 408-11.
- 33 Sacramento Bee, 31 January 1867, quoted in Berwanger, The West and Reconstruction, 223; Kohlman-Craig, "The Man Behind The Scenes," 15, 71; Goodwin, As I Remember Them, 154.
 - 34 New York Herald, 17 May 1868.
 - 35 Congressional Globe, 40th Congress, 2nd session, 1868: 727.
- ³⁶ Carson Daily Appeal, 12 March 1868; 15 March 1868; 26 March 1868; 8 April 1868; 9 April 1868; Daily Reese River Reveille, 20 March 1868; 4 April 1868; 10 April 1868; 13 April 1868; Daily Territorial Enterprise, 27 March 1868; 4 April 1868; 8 April 1868; Esmeralda Union, 14 March 1868; 28 March 1868; Gold Hill Daily News, 12 March 1868; 16 March 1868; 9 April 1868; The Daily Trespass, 18 March 1868; 8 April 1868.
- ³⁷ Mack, "James Warren Nye," 46; Rable, "Forces of Darkness, Forces of Light," 167-68; Sefton, "A Century of Writing," 146.
- ³⁸ Howard K. Beale, ed., *Diary of Gideon Welles* (New York: Norton, 1960), 28 March 1868, 3: 326; 14 April 1868, 3: 332-33; *Daily Territorial Enterprise*, 13 March 1868; Dewitt, *Impeachment and Trial*, 516; John B. Henderson, "Emancipation and Impeachment," *Century Magazine* 85 (December 1912): 207.

- 39 Samon, "Sagebrush Falstaff," 353.
- 40 Benedict, A Compromise of Principle, 314. See also Roske, "The Seven Martyrs?", 323-30.
- ⁴¹ Carson Daily Appeal, 26 February 1868; 8 March 1868; Daily Territorial Enterprise, 4 March 1868; 24 March 1868; 28 March 1868; 1 April 1868; 4 April 1868; Gold Hill Daily News, 4 March 1868; 14 March 1868; 23 March 1868; 27 March 1868; Daily Trespass, 4 March 1868; 9 March 1868; 24 March 1868; 27 March 1868; Daily Reese River Reveille, 3 March 1868; 17 March 1868; Esmeralda Union, 4 April 1868; Silver Bend Reporter, 14 March 1868; Humboldt Register, 7 March 1868; Washoe City Eastern Slope, 28 March 1868. On the state convention, see Carson Daily Appeal, 9 April 1868; Gold Hill Daily News, 9 April 1868.
- ⁴² Much background information has been consulted by the author, who is preparing several studies on the Nevada press and its reaction to Johnson's impeachment and trial. Two excellent starting points on the press, both bibliographic with some analysis, are Angel, ed., *History of Nevada*, 291-322, and Richard E. Lingenfelter and Karen Rix Gash, *The Newspapers of Nevada: A History and Bibliography*, 1854-1979 (Reno: University of Nevada Press, 1984).
- ⁴³ For information on Stewart, the author has consulted the aforementioned Mack, Hermann, and Elliott works. The best for Reconstruction is Elliott. See also the *Supplement to the Congressional Globe*, especially 433-34, and George Rothwell Brown, ed., *Reminiscences of Senator William M. Stewart of Nevada* (New York: The Neale Publishing Company, 1908), especially 174-75, 188-95, 201.
- 44 See, for example, Carson Daily Appeal, 23 February 1868; 16 April 1868; Daily Reese River Reveille, 3 March 1868; 19 March 1868; 11 April 1868; Daily Territorial Enterprise, 7 March 1868; Gold Hill Daily News, 7 March 1868.
- ⁴⁵ Mack, "James Warren Nye," 49; Carson Daily Appeal, 24 April 1868; 13 May 1868; Gold Hill Daily News, 23 April 1868.
 - 46 Daily Trespass, 2 June 1868.
- ⁴⁷ This obviously brief account is boiled down from Angel, ed., *History of Nevada*, 91; Elliott, *History of Nevada*, 162; Elliott, *Servant of Power*, 320, note 14; Hulse, *The Nevada Adventure*, 115-16; Myles, *Nevada's Governors*, 8-9; Ostrander, *Great Rotten Borough*, 69, 168; Mack, "James Warren Nye," 46; Mack, "William Morris Stewart," 94.
- ⁴⁸ The major account of the Fifteenth Amendment is William Gillette, *The Right to Vote: Politics and the Passage of the Fifteenth Amendment* (Baltimore: Johns Hopkins Press, 1965). See also Benedict, A Compromise of Principle, 333-34, 374, 376; Berwanger, *The West and Reconstruction*, 173-80; Elliott, History of Nevada, 388; Elliott, Servant of Power, 62-64. On Sumner and Nye, see David H. Donald, Charles Sumner and the Rights of Man (New York: Alfred A. Knopf, 1970), 429-30.
- ⁴⁹ Congressional Globe, 40th Congress, 2nd session, 1868: 727. On the amnesty bill, see James G. Blaine, Twenty Years of Congress: From Lincoln to Garfield with a Review of the Events Which Led to the Political Revolution of 1860 (Norwich, Connecticut: Henry Bill Publishing Company, 1884-1886), 2: 514.
 - 50 Niven, Gideon Welles, 563.
 - 51 Sefton, "A Century of Writing," 146.

Knock, Knock, Who's There?— The Tommyknocker¹

RONALD M. JAMES

DEEP INSIDE THE EARTH, miners toil, extracting precious ore. Without heavy machinery nearby, the only sounds are the scraping of shovels, the tapping of hammers and picks, and a brief word here and there. Not far away, a wooden beam groans. An eerie quiet falls over the tunnel as the men listen. "Old Tommyknocker says all is well," one of the miners finally whispers. Others laugh nervously as work resumes.

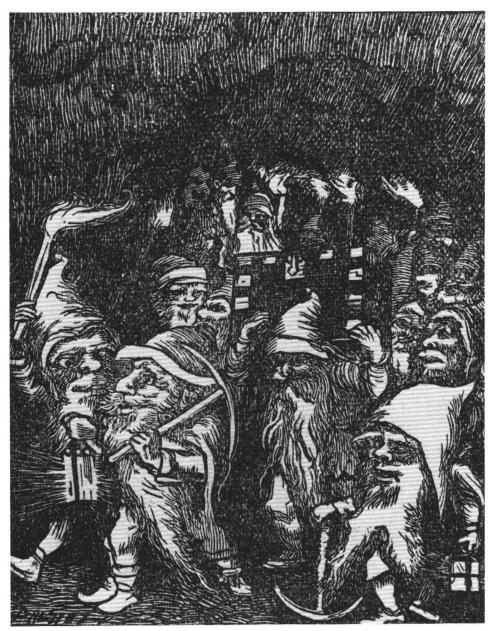
Such scenes, once common in Cornwall, followed the Cornish wherever they emigrated during the nineteenth century. Miners of the American west adopted this part of Cornish folklore making Tommyknockers at home in the New World. The wide distribution in western America of stories about this dwarf of the mines testifies to their popularity.

When Cornish miners immigrated to America, their beliefs were affected by the new environment. Some motifs disappeared while others thrived. The key to the Tommyknocker's survival was its adaptability to American mines.

According to Cornish folklore, the knockers were dwarf-like men with wrinkled faces and long gray beards. Taking their name from the background noise of rapping and tapping in old mines, they were mischievous creatures. If treated kindly, however, they could be helpful. Numerous legends tell of miners who neglected to show due courtesy and subsequently lost all luck. For example, Tom Trevorrow, a miner from St. Just, Cornwall, told the knockers to be quiet and later refused to share his supper with them. In revenge,—they chased him from the mine, and he ended his days as a farmer.²

Another Cornish story tells of a man and his son who traced the sounds of knocking to dwarfs who were working a rich vein. The men promised the knockers a tenth of the profits in exchange for permission to work the mine. The men set to work, and everything went well as long as they kept to the bargain, but when the father died, his son hoarded all the wealth. His luck disappeared, and he became a beggar.³

The Cornish Tommyknockers were neither good nor bad but had a potential to be either. They rewarded those of pure motives and punished exces-



Tommyknockers. (From The Princess and the Goblin, Blackie, London, n.d.)

sive curiosity and greed. The miners could interpret their knocking as a clue to wealth or as an omen of imminent danger, such as a cave-in. The weird sounds deep in the tunnels sometimes emptied a mine for the day, the miners refusing to go where the knockers had given warning.⁴

Similar mining spirits existed wherever people mined the earth. The Germans called them *Kobold*, the Welsh, *Coblynau*, and the English, Goblin or Dwarf.⁵ Some of these were more malicious than others, but the basic belief remained: the underground spirits were personifications of the desire for wealth and of the dangers inside the mine. They fed on the fear of the miners and thrived in the gloomy subterranean environment. Of all the international variants, the Tommyknocker of Cornwall became the most widespread.

Cornwall, that tiny peninsula in western England, was once famous for its abundant mineral wealth, but thousands of years of mining impoverished the land. An economic slump in 1825 drove many of the Cornish to emigrate, a trend which lasted for nearly a hundred years. Many of these emigrants were experienced miners, and they came to America just when the incipient industrial economy needed people with their skills. News of rich strikes brought the Cornish miners to the Mother Lode country of California and then to Nevada's Comstock Lode and elsewhere in the West where mines existed.

The headstones of the Virginia City cemetery show the influx of Cornish miners in Nevada during the last century: stone after stone bears the inscription "Native of Cornwall." To some extent, the Cornish immigrants taught Nevada how to mine, but they were not the only ethnic group attracted by the news of easy riches. "All of the people of the earth had representative adventures in Silverland," Mark Twain observed. Some, like the Cornish, were experienced miners, but many were not. Those who were to survive underground needed to learn from their knowledgeable coworkers.

Due to the prestige of the Cornish miners, their influence eventually came to be felt above ground as well as in the mines. They introduced a style of cooking—Cornish "pasties" were a mining-community delicacy. Cornish wrestling became popular, and the Cornish gave the West a new vocabulary—"lode" for example is an archaic word brought to America by the Cornish. In the mines, the Cornish used their special type of pump to drain water. There are many other examples of Cornish influence, but perhaps their most colorful contribution was the Tommyknocker, the popularity of which eventually exceeded the distribution of the Cornish themselves. Stories of the underground antics of these spirits became so popular, that one account even found its way into the Virginia City Evening Chronicle:

Last night two men, who were prowling around in the Baltimore mine at American Flat, got scared nearly out of the township by the queer sights in an old drift. They went into the mine for the purpose of seeing whether there was ore enough in sight to profitably extract on tribute. Climbing into a stope, they heard the click of hammers, and were much surprised, as they supposed no one had been there for years.



Miners from the Yellow Jacket Mine in Gold Hill, Nevada. (Nevada Historical Society)

Following up the sound, they were astonished to see two striking hammers hard at work on the head of a rusty drill which was deftly turned by unseen hands, and though not a soul was in sight except themselves, they heard a lively conversation, but could make out no words. They looked and listened for some minutes, when fear took hold of them, and they ran out of the mine quickly. At the toll-house, they related their experience and were laughed at, but to prove that their heads were clear they conducted a couple of skeptics to the spot and found the hammers still at work. The men insisted that they did not deceive themselves, and those who went with them say that the above statements are facts. 11

Such stories were apparently common in Nevada mining communities. For example, Billie Williams, a prospector of Cornish descent who struck gold at Olinghouse, Nevada in 1860, said that the Tommyknockers had shown him where to find rich ore. He claimed that they were "the ethereal bodies of the departed miners." Williams added that they warned miners if treated properly—otherwise the Tommyknockers became angry and would blow out candles, tamper with dynamite fuses, hide tools, and drop rocks on the heads of miners. ¹² Such anecdotes survived in Nevada until the 1930s. ¹³

Perhaps because of its long life span, the belief in Tommyknockers shows the effect of its new American home. The differences between the American Tommyknockers and their Cornish ancestors were due to differences in the cultures.

The Cornish miners were undecided as to the origin of the Tommyknockers. Some said that they were the spirits of Jews condemned to work in mines by Caesar as punishment for crucifying Jesus. Others maintained that



Cornish tombstone, Virginia City Cemetery. (Photo courtesy of author)

they were spirits of Cornish miners who died in accidents. Still others suggested that they were mining elves unrelated to humans.¹⁴

In America, the stories about the origin of the Tommyknockers could not be so diverse. The idea of exiled Roman Jews was historically impossible. Americans have seldom seriously entertained the idea of elves, and so the most elf-like qualities of the Tommyknocker did not survive the passage to the New World. Nevertheless, in both Cornwall and western America, it was common to leave small clay statues of Tommyknockers with match stick eyes and small clay pipes at the entrance to a mine. The miners left bits of food and tallow before the statues as votive offerings so that the Tommyknockers would be well-disposed towards them. These statues were not meant to be likenesses of dead miners—they seem, rather, to harken back to the idea that the spirits were dwarfs or elves.

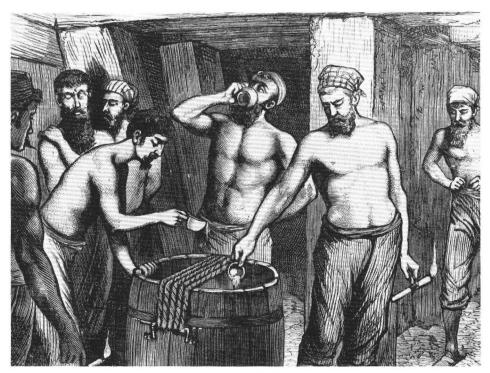
The belief in ghosts, however, persisted in America, and so the notion that the knockers were the shades of dead miners became popular in the mines of the West. The European and American expressions of this folklore are actually similar. The principal difference lies in what the Tommyknockers did to or for the miners. In Cornwall, most of the legends tell of the knockers rewarding good and punishing evil. Their warnings of impending danger appear to be less common in Cornwall than in America where stories dealing with rewards and punishments are virtually non-existent. The underlying moral of the Cornish tradition is that a miner who is willing to accept a moderate income and who is not too ambitious or inquisitive is worthy of reward. American culture, however, reinforces ambition, creativity and curiosity. The Cornish type of legend telling of miners rewarded for following sounds without question and then taking only a portion of the wealth did not survive in America. American folklore cannot condemn a miner's desire to take everything.

On the other hand, the practical aspect of the tradition thrived.¹⁶ The Tommyknockers were omens of danger, giving the miners something on which to focus their interpretations of subtle signs of danger. The miners were not necessarily sophisticated enough to realize why, when the timbers of the mine moaned one way, it was safe, but that, when the mine echoed with another sound, it meant danger. Nineteenth-century mining expertise was based on experience, not science.

As late as the 1930s, George Orwell was able to observe English miners relying on the "feel" of the mine:

An experienced miner claims to know by a sort of instinct when the roof is unsafe; the way he puts it is that he "can feel the weight on him." He can, for instance, hear the faint creaking of the props. The reason why wooden props are still generally preferred to iron girders is that a wooden prop which is about to collapse gives warning by creaking, whereas a girder flies out unexpectedly. The devastating noise of the machines makes it impossible to hear anything else, and thus the danger is increased.¹⁷

Whether the miners called it instinct, intuition or the warning of the Tommyknockers, they were in fact giving expression to their own unconscious interpretations of the underground environment.



Miners refreshing themselves with ice water at 1600 ft. (From Frank Leslie's Illustrated Newspaper, March 30, 1878)

The Tommyknockers prevailed in America because the diverse traditions which surrounded them allowed Americans to choose what part to believe. Some of the traditions did not survive and others easily adapted to the American West. Western mining communities salvaged the most practical part of the belief: the Tommyknockers became almost exclusively a warning device, giving personification to the subtle signs of danger which might otherwise go unnoticed.

Whether in Cornwall or America, stories about spirits in the mine also represented creative expression of the folk. The practical nature of the belief did not diminish its artistic quality. As with any other element of folklore, the Tommyknockers survived because they did not conflict with the regional culture and environment, because people perceived them as useful, and because they provided people with material for a good story. Folklore is at its best when it is both practical and entertaining.

Belief in Tommyknockers faded, however, both in America and Cornwall. As electric lights made mines less gloomy, the environment was no longer right for the spirits. The Tommyknockers fled into dark corners until even these last refuges succumbed. Heavy machinery made the subtle noises in

the mine harder to hear so that eventually only after-hours sightings occurred. ¹⁸ As Orwell pointed out in his description of North English mining in the 1930s, steel supports replaced the groaning wood timbers, thus eliminating one of the principal sources of "knocking." The growing need for professionally-trained mining engineers also weakened the traditions surrounding the Tommyknockers. Institutions such as the University of Nevada's Mackay School of Mines¹⁹ began producing educated technicians who were probably less likely to believe (or to admit believing) in spirits in the mine.

Nevertheless, Tommyknockers did survive the crossing of the Atlantic and they did prosper in their new home. Belief in the spirits among the Cornish was apparently dead by the turn of the century, 20 but it seems to have remained in America until at least the 1930s. The Tommyknockers were able to flourish because the accompanying folklore included messages which reinforced and were compatible with American ideals. In America, the Tommyknockers became the ghosts of dead miners—an idea less outrageous to American tastes than was the belief in elves. These spirits also had a practical purpose: the miners believed that they warned of dangers. The adoption of the Tommyknockers by non-Cornish miners illustrates that this was not exclusively immigrant folklore, destined to vanish with the first generation of Cornish in the New World. The belief in Tommyknockers became genuine American folklore, conforming to its new environment.

NOTES

- ¹ The author wishes to thank the International Telephone and Telegraph Corporation and the Institute of International Education for partial funding of this research.
- ² Tony Deane and Tony Shaw, *The Folklore of Cornwall* (New Jersey: Rowman, 1975), 69. See also W. Bottrell, *Traditions and Hearthside Stories* (London: Beare and Son, 1870-1880).
 - ³ Robert Hunt, Popular Romances of the West of England (London: Chatto and Windus, 1930), 90.
- ⁴ Besides Deane, Folklore, Bottrell, Traditions, and Hunt, Popular, see also M. A. Courtney, Cornish Feasts and Folklore (Penzance: Beare and Son, 1890) for several good descriptions of this belief.
- ⁵ Kenneth S. Goldstein and Neil V. Rosenberg, eds., Folklore Studies in Honour of Herbert Halpert (St. John's, Newfoundland: Memorial University of Newfoundland, 1980); Lydia Fish, "The European Background of American Miners' Beliefs," 163 ff. See also Wayland D. Hand, "The Folklore, Customs, and Traditions of the Butte Miner" California Folklore Quarterly (January 1946): 1.
 - ⁶ John Rowe, The Hard-Rock Men (New York: Harper, 1974), 25-38.
 - ⁷ Mark Twain, Roughing It, part two (New York: Harper, 1974), 25-38.
- ⁸ Fish, "European," 158: "The majority of miners' beliefs is concerned with the accidents: omens, dreams or premonitions which foretell disasters, actions which are due to be performed or avoided in order to prevent trouble. Even the youngest miners, who would scorn paying attention to supernatural warning, soon learn to trust their hunches and to get out of an area immediately if it did not 'feel' right."
- ⁹ Caroline Bancroft, "Folklore of the Central City District, Colorado," California Folklore Quarterly (October 1945). See also Russell R. Elliott, History of Nevada (Lincoln: University of Nebraska Press, 1973), 98.
- ¹⁰ James C. Baker, "Echoes of Tommyknockers in Bohemia, Oregon, Mines," Western Folklore (April 1971): 121-122.
 - ¹¹ Virginia City Evening Chronicle, 8 October 1884.
- ¹² This, according to an interview in 1912. See Marguerite Humphrey, "The Tommy Knockers," in Thomas Elgas, Nevada Official Bicentennial Book (Las Vegas: Nevada Publications, 1976).

- ¹³ Fisher Vane describes a sighting in the Little Giant Mine at Battle Mountain, Nevada in 1935. See "Spooks, Spectres, and Superstitions in Mining," *The Mining Journal* (May 30, 1937). See also a report from Colorado in 1931: Bancroft, "Folklore," 332.
- ¹⁴ See Bottrell, Traditions; Hunt, Popular; and see the articles by Wayland Hand, "California Miners Folklore" California Folklore Quarterly (April and May 1942).
 - 15 Ibid., May, 1942, 128.
 - 16 Fish, "European," 165.
 - ¹⁷ George Orwell, The Road to Wigan Pier (San Diego: Harcourt Brace Jovanovich, 1958), 46.
- 18 This is true of Vane's report from Battle Mountain, "Spooks" and of the Colorado report of Bancroft, "Folklore."
- ¹⁹ Established in 1904; courses in mining were taught earlier, however. See Samuel B. Doten, An Illustrated History of the University of Nevada (Reno: University of Nevada Press, 1924), 110-113.
- ²⁰ Based on testimony collected by the author in May, 1981 at the Geevor Mine and other locales in Cornwall. Informants knew of the tradition, but even the oldest miners, some of whom had worked almost sixty years, said that the references to knockers were "long gone" when they first started working the mines. Orwell, in *Road to Wigan Pier*, makes no mention of a corresponding belief in his study of North English miners. This, too, is no surprise since the belief was probably extinguished there as well by the turn of the century. Folklore collectors in Britain cease to report finding the belief after about 1900.

NOTES AND DOCUMENTS

Regulating Public Health in Nevada: The Pioneering Efforts of Dr. Simeon Lemuel Lee

GUY LOUIS ROCHA

"THE ENACTMENT OF THE LAW [creating the Nevada State Board of Health in 1893] was a wise one," wrote Carson City physician and board member Dr. Simeon Lee in 1905, "and reflects credit upon the introducer, and the members of the legislature, who, by their vote, made it an organic law, but they ceased from their labors and stopped half-way." Twelve years had elapsed since Governor Roswell Colcord first appointed Dr. Lee to the Board of Health. During that time the state legislature had passed no substantial public health legislation. Furthermore, an original appropriation of one thousand dollars to operate the board had been reduced to a mere five hundred dollars. Dr. Lee's Biennial Report of the State Board of Health, 1903-1904, and a report to Governor John Sparks on his trip to inspect health conditions in Goldfield and Tonopah in early 1905, provide an excellent insight into his pioneering—and frustrating—efforts to bring contemporary standards of public health to Nevada. Fortunately for Nevadans then and now, by the time of Dr. Lee's death in 1927 practically every public health program and law he had recommended over his thirty-four years on the board had been adopted.

Simeon Lemuel Lee was born, September 4, 1844, in the farming community of Vandalia, Illinois. In 1863, young Lee left hearth and home to fight for the Union cause and saw considerable action in the bloody campaign to capture the port city of Mobile, Alabama. Upon leaving the service in 1866—having risen through the ranks from private to second lieutenant in less than three years—Simeon Lee entered Cincinnati Medical College of Ohio and, in 1870, graduated with the degree of M.D.

Within months after his graduation, the twenty-six-year-old physician decided to make his fortune "out West" and established his first practice in



Dr. Simeon L. Lee, posing in his Civil War uniform wearing his medals. Note the Shriners metal on the bottom right. (Nevada Historical Society)

Carson City. Ever adventurous, Dr. Lee in late 1872 left the pleasant confines of the state capital for the rugged mining country of southeastern Nevada. The contemporary reports of lawlessness, violence and death in

Pioche and environs presumably held some allure to a doctor in search of new opportunity and a thriving practice. Lee would spend nearly seven years in the isolated frontier community administering to the needs of both the white and Indian populations. By the time he returned to Carson City in 1879—after a brief stint in Eureka—he was thoroughly familiar with the conditions and problems of public health in frontier Nevada.

"Lem" Lee spent the rest of his life, some forty-eight years, in private medical practice in Carson City. He is probably best remembered for his magnificent collection of minerals, shells, and Indian artifacts now housed and displayed at the Nevada State Museum. Yet few people realize, and fewer yet recall, that Dr. Lee almost single-handedly established basic standards of public health in the state.

Probably his greatest achievement as a member of the State Board of Health was the adoption by the legislature of a comprehensive vital statistics law in 1911. Nevada's first vital statistics law had been passed in 1887 and required county recorders to keep birth and death records. But it was readily apparent by the time Dr. Lee was appointed to the board that the reporting of births and deaths was sporadic, and the law was virtually unenforceable. He was particularly concerned with determining the causes of death in his efforts to prevent the spread of contagious diseases. Dr. Lee spent ten years lobbying for a centralized vital statistics function before he finally witnessed the fruits of his labor.

The two documents that follow are representative examples of Lemuel Lee's work in the public health field. The biennial report to the governor speaks for itself, and provides a snapshot depicting twelve years of neglect on the part of the state's decision makers in addressing public health concerns. His efforts in 1905 brought some success. The state legislature passed bills which established county boards of health, increased the State Board of Health's budget to one thousand dollars for the biennium, and appropriated five hundred dollars to cover the costs incurred during Dr. Lee's investigation of a smallpox epidemic in southwestern Nevada. Despite these small successes, "Nevada trailed in the wake of her more ambitious and progressive sisters until 1911," Lee wrote, "when a new era dawned, and a new order of things was inaugurated."

The report on conditions in early Goldfield and Tonopah is an especially insightful document. Dr. Lee was particularly impressed with the decent health conditions in Goldfield given the harsh winter climate and the newness of the mining camp. It is also interesting to note his observations on the rampant alcoholism found in Goldfield, and speculate on the relationship between violence, crime, and death on the frontier and the pervasive use of intoxicants.

Following Lee's recommendations in the report, the newly-created Esmeralda County Board of Health established standards of public health in the

jurisdiction and supervised an extensive cleanup of Goldfield in late April 1905. The lack of any major epidemic in the town's formative years may be in part a result of Dr. Lee's public health efforts in the community.

LETTER OF TRANSMITTAL

CARSON CITY, NEVADA, January 2, 1905.

To His Excellency, JOHN SPARKS, Governor of Nevada:

SIR: I have the honor to transmit herewith a report of the Nevada State Board of Health for the years 1903 and 1904.

S. L. LEE, M.D., Secretary.

BIENNIAL REPORT

To make a report for the State Board of Health without material or data with which to construct it, is a most difficult feat, and yet, such is the dilemma in which I am placed.

During the session of the Legislature of 1901-2, I strongly urged the necessity of some legislation in this direction, mainly that of making it compulsory for physicians to report to the State Board of Health quarterly, semi-annually, or annually, all deaths, and the causes thereof; all births; all contagious diseases, and their type; but nothing was done and we are as ignorant to-day of all vital statistics in the State as we were before the Board was created.

The Nevada State Board of Health was called into existence under an Act entitled "An Act creating a State Board of Health," passed during the session of the Legislature of 1893-4. This legislation was due to the threatened invasion of the State by Asiatic cholera, then ravaging the Atlantic seaboard. The enactment of the law was a wise one, and reflects credit upon the introducer, and the members of the Legislature, who, by their votes, made it an organic law, but they ceased from their labors and stopped half-way. To guard against contagious diseases is humane, in economics wise and commendable, yet almost every year, in various sections of the State, its citizens are confronted with diseases, endemic and epidemic, as grave in their character and results as those of Asiatic cholera or bubonic plague, yet no steps have been taken by the State to stay their ravages, study their phases, report their results, or even to tabulate them.

In almost every other State in the Union some work has been done along anti-tuberculosis lines, societies organized, or institutions constructed for the care of those so afflicted. I am fully aware of the reply that will be made to the above statement: "We have no fear of tuberculosis in this State." It is true that we are phenomenally blessed in this direction. The great white plague has added but little to our death rate, yet it exists, and some provisions should be adopted to prevent its ever increasing, for science has demonstrated that there are preventive means, and we would be sadly remiss in our duties did we not adopt and encourage all such measures as would prove efficacious in arresting the disease, and alleviate the suffering of the afflicted, even though impotent to eradicate it.

Another disease, now causing more deaths throughout the United States than phthisis, is pneumonia, a disease of which the profession knows as little as to drug treatment as it does of tuberculosis. An eminent physician, Dr. Arthur D. Bevin of Chicago, recently announced in a convention of physicians called together for the consideration of the cause and treatment of pneumonia, that "With our present knowledge of the disease, drug treatment amounts to nothing." This may be an extreme view as to our impotence in treating it, but we are forced to confess that we have no specific for it, and, in the majority of cases, our best efforts result disastrously.

An epidemic of pneumonia appeared in a night, as it were, at Tonopah, Nevada, in the latter part of December, 1901. It defied the skill of the physicians, and as a consequence the mortality was alarming. As to the cause and character of the disease there was a pronounced difference of opinion among the resident physicians. However, the report of Dr. M. J. White, Assistant Surgeon of the United States Marine Hospital, San Francisco, California, settled the matter beyond question. Sputum having been sent to him for examination, he replied as follows: "I wish to thank you most heartily for the pneumonic sputum sent me on January 25th. After a very thorough bacteriological and experimental investigation with it, a diplococcus and a streptococcus were demonstrated to be the cause of the disease. The pneumococcus was very virulent, killing a rabbit in sixteen hours and a rat in forty-eight."

The deaths resulting from this epidemic of pneumonia were never accurately known to the Board of Health, but it is conceded that there were thirty or more.

The history of pneumonia in Tonopah is the history of nearly every mining camp in the Sierra Nevada mountains in the winter months, in the first year or two of their existence, although Goldfield, Columbia, and contiguous camps in Nye and Esmeralda Counties have, so far, escaped the pestilence that furnished such an alarming death roll in the early life of Virginia City, Hamilton, Austin, Pioche, Candelaria, Bodie, and other mining towns of Nevada and California.

Smallpox has prevailed as an epidemic in Humboldt, Elko, Nye, Esmeralda, Churchill and Washoe Counties, and sporadically in Lyon and Douglas. Health officers have been appointed, and members of the Board of Health have visited several of the counties named, to assist the resident physicians in suppressing epidemics of various contagious diseases, where the public health was greatly menaced, but in no instance have the quarantine officers reported the number treated, the type, or severity. So far as the Board has been able to ascertain the smallpox has been mild, and predominating among the Indians. Smallpox, from the earliest knowledge the whites have had of this people, has been the scourge of the race, but from repeated, almost continuous, vaccination, the mortality from the above cause has been greatly reduced. For several years it appeared epidemically in the Carson Indian School, but every year since 1893 every new pupil has been vaccinated. There are nearly three hundred pupils enrolled in the school and no case of smallpox has developed during the past two years.

Typhoid fever is one of our most dreaded endemic diseases. For many years it prevailed to an alarming extent during the late fall, and early winter, months in and about Gardnerville in Douglas County, due, no doubt, to the contaminated surface

water used for domestic purposes, but since artesian and semi-artesian wells have been sunk, and a better water supply has been secured, a case of typhoid fever in Carson Valley is an exception rather than the rule. What is said of typhoid in Douglas County applies also to many other localities in the State, among which may be named Truckee Meadows, Smith's Valley, Lovelock and the valleys of the Humboldt River.

In 1902 typhoid and bilious remitting fever developed in the Carson Indian School, and during the months of October and November some fifty pupils were stricken down. While many of the cases were alarming in character, the percentage of fatal cases was small. The cause of the epidemic was ascribed to the impure surface water used for drinking and domestic purposes. Samples from two wells and an open cut, or reservoir, where the water supply for the school was obtained, were sent to the State University for analysis, the result of which showed the presence of albuminoid ammonia in such alarming quantities as to render the water of each exhibit absolutely unfit for domestic uses, and inimical to life. Since then water has been piped to the school buildings from Clear Creek at a point some two miles west. This water is quite free from deleterious ingredients, and not a single case of uncomplicated typhoid has appeared since its installation in the buildings.

Diphtheria has prevailed as an epidemic in Humboldt and Washoe Counties, and sporadically in Douglas County. At this writing information comes to the Board that it prevails in Lovelock. The number of cases, or severity of the disease, is unknown.

In Reno, Washoe County, it epidemically prevailed during the spring of 1903, and sporadically several times since. So far as can be learned, the recoveries exceeded the deaths by a large percentage. The cause for its frequent occurrence in Washoe County has not been even suggested by the resident physicians. Reno, being quite a railroad center, the number of people arriving and departing is large, and it is possible that the disease may have been, in most instances, brought into the city, therefore its prevalence was not due to local causes.

In Gardnerville, Douglas County, four cases were reported during the summer of 1904, one terminating fatally. Antitoxin was used in the others, to which the recovery of the patients may be ascribed.

Scarlet fever has prevailed in Washoe County, but mild in character, no deaths having been reported.

All of the foregoing diseases may have appeared in other counties in the State, but no additional information has been obtainable.

In conclusion, I would again call the attention of the members of the Legislature to the necessity of amending the present Act governing the State Board of Health.

Two important features now absent should be incorporated, to wit: All practicing physicians to report, at stated intervals, all births and deaths, and the causes of the latter; and all cases of contagious diseases treated by them. Secondly, the creation of County Boards of Health. Long years of custom has induced the public to regard the Sheriff, County Commissioners and County Physician as constituting such Board, but it has no existence legally. Therefore, I would respectfully urge the creation of such Boards by legislative enactment. If this were done, it would give legal authority to the local Boards, that is now only assumed. It would prove of benefit to both urban and rural localities, in abating nuisances, and generally protecting and promoting the public health and facilitating the work of the State Board.

Frequently this Board is appealed to from some remote locality to abate a nuisance, to quarantine a house or houses to protect the public from some existing disease or threatened invasion. To all local conditions in the premises the State Board may be ignorant, and the State appropriation is rarely sufficient to pay for any

extensive traveling that the conditions might be inquired into. All those troubles might readily be adjusted by the creation of a County Board of Health armed with a

little authority, and looking to the State Board for aid and support.

I would also call your attention to the importance of an increased appropriation for the use of this Board. The Legislature of 1893 appropriated \$1,000 for the years 1893-4. This has been reduced until the insignificant sum of \$500, covering a period of two years, has been set aside for the purpose of protecting the public health. It would seem that if a Board is worthy of perpetuation it should be liberally equipped for the worthy object it has in view.

All of which is respectfully submitted.

SIMEON L. LEE, M.D., Secretary

CARSON CITY, NEVADA, February 14, 1905.

To the Honorable JOHN SPARKS, Governor of Nevada.

Sir:-

In compliance with instructions from the State Board of Health, and from your Excellency, I started for Goldfield Esmeralda County, Nevada, on Tuesday, February 7th, 1905, to investigate the sanitary and hygienic conditions existing there, and arrived in Goldfield on Wednesday, the 9th instant.

Upon my arrival, I sought interviews with Sheriff Bradley, Mr. Lothrop, County Commissioner, and Dr. Turner, but learned they were all absent; therefore, I made my investigations alone, and, under existing conditions, I feel that it was better so, for I entered upon my work uninfluenced by prejudices or preferences of the several officials and physicians, and prosecuted my research independent of any local coloring.

I had been informed that many cases of smallpox existed in the camp; nine in the pest house, and others in private tents, and that the pest house was entirely

inadequate for the purposes for which it was designed.

Upon visiting the place I found one tent 14×16 feet in dimensions, and two annexes, each 12 × 14 feet. There was a floor in one of them, and matting or canvas covering the ground in the others. In those three tents there were four patients, although I found three of the patients sitting out on the wood pile taking a sun bath.

There can be no question as to the character of disease. It is smallpox, but of very mild type. I learned that there had been some thirteen cases treated in the pest house, and three or four in private tents, but the latter had been properly quarantined. From first to last there has not been a single death from smallpox.

Of other contagious diseases, only measles and diphtheria have developed, and of

those afflicted all recovered except one child who died from measles.

The greatest mortality has resulted from alcoholism and pneumonia, and in the order named. I ascertained from reliable authority that of the first sixteen deaths, twelve were directly or indirectly due to alcoholism.

I next visited the cemetery, which is used in common by Goldfield and Columbia. I found that thirty-seven interments had been made in this necropolis. Out of the thirty-seven, the date of death was recorded on the head-boards of thirty-two. Two having died in September, 1904, three in October, three in November, twelve in December, ten in January, 1905, and two up to and including February 9th. From this total, three should be properly eliminated from the city's mortality from disease, as two were suicides, and one death resulted from gunshot wounds.

I proceeded from the cemetery to the city and county hospital. There I found a building up to date for such purposes, and of a capacity equal to those of the older cities of the state, and superior to most of them. The building is 30 by 60 feet, contains nine rooms 10 by 12 feet, with nine foot ceiling; and a large assembly room 16 by 18 feet. The whole is well ventilated and lighted, and in this building designed

for the impecunious sick of the city, there is not one patient.

The general water supply I investigated very thoroughly. This supply is obtained from two sources: One, from surface wells ranging in depth from thirty to forty-five feet. As to the purity or wholesomeness of this water, I cannot speak authoritatively; however, it is clear, pleasant to the taste, and seems to be void of albumenoids, or at least to such an extent as would render it safe for drinking or domestic purposes. The other source of supply is obtained from springs that burst from the mountain side a mile southeast of town. It is almost a free stone water, as it runs over a base or bedrock of sandstone, and under a basaltic and limestone cap. The water here is diverted into tanks or wells, and piped into town. I took samples from both sources of supply for analysis at the State University.

The general sanitary condition of the town is not good, as much refuse in the form of straw, bottles, tin cans, etc. is thrown out of back doors, and covers, to a great extent, the vacant lots. However, I found but a small percentage of animal matter amidst the refuse. While the foregoing is not especially inimical to health, I would strongly urge vigorous warfare against such filth as obtains, and rigid enforcement of the sanitary and hygienic regulations that may be promulgated by the Health Officer, which duty will be discharged by Dr. D. A. Turner, whom I named for the performance of that most necessary work.

Reviewing, in brief, the situation in Goldfield and Columbia, with an estimated population of seven thousand, I find that the death rate amounts to about eleven to the thousand inhabitants, showing a mortality but slightly in excess of that of the concededly healthy cities of the east and west, where the sanitation is as near perfect as possible, with pure water, wholesome food, and where all are properly housed. Contrasted with the above conditions we have here a mountain town in midwinter, and in the first year of its existence, the majority of whose inhabitants are housed in tents, void of acclimatization, a large percentage addicted to alcoholic stimulants, and many too poor to provide themselves with proper food, clothing and bedding. In view of the foregoing conditions, I consider Goldfield and vicinity among the most healthful mining towns I have ever known in the first year of their existence.

I left Goldfield on the morning of February 10th, and arrived in Tonopah at 12:30 P.M. of the same day. In compliance with your Excellency's request, I remained in Tonopah until the morning of February 12th, investigating the conditions, sanitary,

hygienic, etc. existing in that camp.

I learned from Dr. J. L. Garner, County Physician of Nye County, that since November 15th, 1904, ten cases of smallpox have been treated in the camp. No death resulted from the epidemic; in fact, all were very mild cases. Four are still under treatment, but are convalescent. He also reports some twenty cases of pneumonia since November 15th, out of which number six died. The epidemic of pneumonia reached its height about January 1st, 1905. It is worthy of note that when pneumonia

prevailed here in 1901-2 as an epidemic, resulting in some thirty or forty deaths, it reached the crest of mortality, so to speak, in the first days of January, 1902.

Since November 15th, 1904, two cases of measles have been reported; no deaths. The water supply of the city for drinking purposes has been obtained from

Candelaria, being brought in by the railroad since July last, when the road was completed; and from Crystal Springs, situated three and a half miles northeast of Tonopah. The water from the latter was not of the purest, as was shown by analysis of samples I took from those springs in 1901-2; but I am informed by those in a position to know, that the water is greatly improved since then, the wells have been sunk to a greater depth, and their capacity increased.

Within sixty days, so I am credibly informed, water will be piped into the city from a series of wells located at Rye Patch, some sixteen miles northeast of the city. This water is said to be of excellent quality; however, I brought a sample of the same for analysis at the State University, which will determine its desirability for drinking and

domestic purposes.

The general sanitary and hygienic conditions of Tonopah are greatly improved over those that obtained in 1901-2, and the fact that seven physicians are more than sufficient to attend to the morbid conditions of over five thousand people speaks volumes for the health of the city, when twelve or fifteen physicians were actively engaged in their profession here during 1901-2.

Respectfully submitted,

SIMEON L. LEE, M.D. Secretary of the Nevada State Board of Health.

Book Reviews

U.S. Forest Service Grazing and Rangelands: A History. By William D. Rowley. (College Station: Texas A & M Press, 1985. 270 pp., bibliography, preface, illustrations, and index.)

THIS SMALL VOLUME IS BALANCED, judicious, and successful. Professor Rowley uses well-chosen examples and a spare, disciplined writing style to survey the Forest Service's entire experience with rangelands, livestock, stockmen, and politicians.

Rowley begins with a brief background of the range industry, then traces the emergence of grazing as a distinctive function of the Forest Service under the hands of Theodore Roosevelt, Gifford Pinchot, and Albert Potter. After considering the first years of rangeland management, he pauses to pick up the beginnings of range science which then becomes part of his story as he moves on to discuss the first World War and the 1920s. With tight control of emphasis, Rowley's book moves on to chapters examining the Forest Service's failure to take advantage of management opportunities offered by the Depression, to a renewed determination to fulfill its mandate in the 1940s, and to new approaches to traditional grazing problems in the post-World War II era. *Grazing and Rangelands* concludes with a brief chapter on the complexities of competing resource management agencies, multiple-use interests, and the conflict and changing times of recent years.

Not surprisingly, Rowley is concerned primarily with the West; however, Washington, D.C., the South, and grazing interests in other regions round out his analysis. He makes good use of secondary sources and a wide variety of primary materials to work the grazing story into conservation's broader account. Prominent personalities are used to good effect, but frequent references to rank-and-file forest officials and stockmen brighten the narrative and lend added credence. In the main, Rowley reports rather than argues. The effect is an evenhanded treatment that often avoids advocacy by presenting information as the opinion of his sources. While controversies, position papers, and acts of Congress all serve as rallying points for Rowley's organization, a major point in his development is the social mission apparent in Forest Service policies favoring small or family operators. Rowley does not say as much, but one gathers from the nature of the Forest Service confrontation with the larger grazing interests that this may have been more a strategy of "divide and conquer" than a real reflection of interest in the little man.

While Rowley's book puts much in perspective and touches most of the

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bases of the broader conservation story, it does not address the relationship of grazing and forestry as related but distinct managerial functions of the Forest Service. While there is little point to complaining about what a book does not do, this question could have been examined with profit. Much more important is the fact that *Grazing and Rangelands* succeeds admirably in making the Forest Service's role in the grazing industry understandable.

Charles S. Peterson Utah State University

Silver Hillside: The Life and Times of Virginia City. By Barbara Richnak. (Incline Village, NV: Comstock Nevada Publishing Co., 1984. xiii + 202 pp., illustrations, bibliography, notes. \$29.95.)

WHY ANOTHER BOOK on Virginia City? Is not the history of that mining town—perhaps the most famous on the Pacific Slope—sufficiently documented already in hundreds of professional and popular books and articles?

We may be tempted to answer the second question in the affirmative. There are many well-intentioned but superficial descriptions of "The Queen City of the Comstock Lode." On the other hand, we still await a contemporary work on the level of Eliot Lord's *Comstock Mining and Miners* and Grant H. Smith's *The History of the Comstock Lode:* 1850-1920. Until now, nothing produced in the past forty years challenges them as technical and social commentaries on the Comstock bonanza era.

The answer to the first question is more difficult, as the "why" questions always are. But the response may be found partly in the fact that in the lifetime of most history-oriented westerners, there has not been a serious effort to deal with the entire scope of Comstock history. Many of us have done fragments, or have touched the edges and the surface, but none, until now, has attempted a panoramic survey of the 125-year history of Virginia City and its social peculiarities.

Barbara Richnak's book is a commendable contribution to the growing list of Nevada books for several reasons. It seeks to do more than repeat the old saws. One of its primary virtues is the splendid collection of photographs, unrivalled by any previous volume on the Comstock Lode. She had access-not only to the standard institutional archives but also to several private collections, including those now in the possession of Eslie Cann, John Fulton, the Hawkins-Mackay family, Craig Fox, and her son Joel Richnak. She has undertaken to provide visual documentation of the decay of the Comstock grandeur as well as of its eras of mining prosperity and tourism.

"Without the photograph," Richnak says in her acknowledgements, "this book would not have been possible." She is, of course, correct. But it follows that the assembling of so many excellent samples of good camera work was also an admirable achievement. Happily, some pertinent photos of San Francisco buildings and distant mansions of the Comstock plutocrats, of Indian life, and of artifacts have been included.

The book is meant to be anecdotal and descriptive rather than analytical and critical. One does not find here the technical and commercial detail that make the works of Lord and Smith indispensable. On the other hand, Richnak has brought the social history of the Comstock up-to-date to the middle 1980s with an unprecedented series of illustrations and interviews. She has provided, for example, descriptions of the recent struggles for the control of the *Territorial Enterprise* and the artistic events in Piper's Opera House.

There is an exuberant tone to Richnak's prose; she writes with a gusto reminiscent of the Comstock figures whom she romanticizes. Her work will undoubtedly be admired by the growing ranks of Nevada history fans, and with good reason.

Jim Hulse University of Nevada Reno

Phil Sheridan and His Army. By Paul Andrew Hutton. (Lincoln: University of Nebraska Press, 1985. 479 pp., notes, bibliography, index, illus.)

PHIL SHERIDAN WAS PERHAPS one of the most important figures in the history of the American West in the last third of the nineteenth century. Until now, however, he has been ignored by serious biographers as a subject worthy of examination. This volume by Paul Hutton rectifies that problem. Hutton has written what will no doubt be for many years to come the definitive biography of this important military officer.

Sheridan was important for a variety of reasons. First, and perhaps most obviously, he oversaw the subjugation of the Native American people of the West. Secondly, he was the senior military commander responsible for the safety of Americans venturing into the West, and by choosing where and for whom he provided protection, he essentially shaped the economic development of the entire region. No railroad was built and no townsite was developed without military protection. Finally, if one accepts John Keegan's contention that the nature and character of the United States Army which fought in the twentieth century was shaped in the Indian Wars of the late nineteenth century, then Sheridan was the principal architect of the modern army.

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For all these reasons Phil Sheridan cannot be ignored by anyone studying the history of late nineteenth-century America and especially the American West during that time. Until Professor Hutton published his book there was no way of verifying the details of Sheridan's life. Now knowledge of Sheridan's career is available. By consulting Hutton's excellent work, it is now possible to know what Sheridan was doing and who was trying to influence him at any given time during his long career.

As one might expect, *Phil Sheridan and His Army* includes all the necessary apparatus one would expect to find in a work of this high quality. The sixty-two pages of endnotes and twenty-five pages of bibliography make it possible to follow with little difficulty the research trail paved by Hutton. In summary, it is safe to say that Hutton's work truly represents a major contribution to the history of the West, one which will stand the test of time and prove to be extremely useful to all who are interested in the history of America in the late nineteenth century and the origins of the United States Army.

Robert T. Smith Eastern Montana College

The Long Campaign: A Biography of Anne Martin. By Anne Howard. (Reno: University of Nevada Press, 1985. 220 pp., illustrations, notes, bibliography, index. \$12.95.)

THIS SCHOLARLY WORK IS A TIMELY, sympathetic study of a wealthy, educated woman who was a pioneer in the women's movement. Author Anne Howard is a skillful storyteller who portrays Anne Martin as an ambitious and often frustrated feminist. The early chapters detail Martin's girlhood in Nevada. She grew up in a large family with many comforts while her successful father doted on her athletic and intellectual abilities. After graduation in 1892 from a private girls' school, she enrolled in the Nevada State University. No raving beauty, and apparently uncomfortable in masculine company, she found solace in scholarship, her horse and a bicycle. Yet she longed, in her words, to "do something." Unlike most women of the time, Martin sought additional education and earned a Master's degree at Stanford University. She graduated with several career-oriented young women, but her own professional pursuits initially appeared ill defined. Her financial security may have produced a decade of drift which included a short, ill-fated teaching stint at the University of Nevada. Apparently, her standards were difficult to meet.

Most women in Martin's day were housewives who busied themselves raising children and making ends meet, especially in the far-flung Sagebrush State. Martin never married. Instead, she enjoyed the luxury of extensive European travel and study which introduced her to independent women anxious for social change. In London, she became involved with the English suffrage movement and learned much about feminist struggles from the Pankhurst sisters. Her experiences were useful later in Nevada when she helped organize a final, successful push for state suffrage. In the Nevada campaign it became evident that Martin was difficult to work with, demanded total devotion to suffrage, was overly sensitive to criticism, and vilified those who questioned her decisions. Campaign finances were always a problem and bitter squabbles often surfaced among the suffragists (true also in other states). Martin apparently held lifelong animosities as a consequence of some of the quarrels.

Following adoption of Nevada's suffrage amendment, Martin began working for passage of a similar federal measure. At one time she publicly battled national suffrage leaders over tactics. On another occasion, her activities on behalf of the Women's Party drew considerable attention in Nevada newspapers—criticism of President Woodrow Wilson, picketing the White House, and "obstructing sidewalk traffic" brought an arrest and a three-day sentence in a workhouse during 1917.

By the time the national suffrage amendment was adopted, Martin had gained valuable political experience. Having become a public personality, she listened to encouragement from friends and decided to run for the United States Senate in 1918. A precedent already had been established by Jeanette Rankin (who served in Congress from Montana) and Martin undoubtedly wanted to follow suit. Capitalizing on recognition gained through suffrage work, she became the first woman in Nevada to seek a national office.

The Nevada press was distinctly unfriendly throughout the 1918 campaign. Martin's age (she was 42), appearance, and frequent absences from the state all came under criticism. Generally, the newspapermen asserted that her organization was directed by non-Nevadans and claimed that her campaign money came from Easterners. Martin ran as an Independent because any possibility of securing either the Democratic or Republican nomination was out of the question under the circumstances.

The actual campaign reflected a double standard—men were accepted as genuine politicians while women were not taken seriously. The male candidates campaigned primarily through the newspapers but Martin personally canvassed the state. When the election was over she had finished third in a field of four, outpolling only the Socialist candidate. Nonetheless, she had made a major imprint in promoting political involvement for women. Undaunted by defeat, she promised to run again in 1920.

Martin's second senatorial campaign, again as an Independent, was smaller in scale but generally resembled the first. It appears that she may have deluded herself in hopes of victory. The Republican opponent was Tasker L. Book Reviews 215

Oddie, a respected politician and formidable candidate. Men and women alike in Nevada were simply not ready for an outspoken feminist in the United States Senate in 1920.

The author notes that Martin's two Senate campaigns "exhausted her funds" as well as the "patience" of friends. After the unsuccessful political races, she became less prominent but still remained devoted to ideas of "sex solidarity" and world peace.

As the excitement of campaigning faded and life began to slow, she moved to Carmel, California, and there dabbled with writing and poetry. Life became increasingly filled with reflection and loneliness following a heart attack in 1930. The efforts to advance women's rights became distant memories associated with youthful years, and her thoughts turned increasingly toward more immediate concerns, including the possibility of dependency in old age. She did, however, write several scholarly articles after returning to Nevada as life drew near the end.

Ironically, the spacious Martin family residence was no longer home in Reno. Instead, a room at the Golden Hotel offered shelter, time to write, and occasional amusement with bingo and slot machines. She was enormously pleased and felt that her many years of work finally had been suitably recognized when the University of Nevada awarded her an honorary L. L. D. in 1945. She died in 1951.

This biography is a balanced study of a complex and sometimes difficult personality, but one whose immediate successes and failures must be weighed against a much longer range of lasting influence. Although her goal of female solidarity has yet to be achieved, Anne Martin was a trailblazer and harbinger of the later ERA movement.

Ann W. Smith Henderson State University

The Story of the Hoover Dam. (Las Vegas: Nevada Publications, 1985. 144 pp., illus.)

Construction of the Hoover Dam (originally Boulder Dam) was acknowledged by contemporary observers world over as an engineering triumph. Man prevailed over time and nature. The massive concrete structure, gleaming white against the barren red canyon cliffs promised economic growth to the West and control of the raging floods of the Colorado River. The progress of construction was followed closely by many professional and trade groups as well as by a generation of fascinated, depression weary Americans. The slow emergence of the 726-foot-high dam from the dry bed of

the diverted river seemed to symbolize the emergence of a new day for the drought-ridden farmer. Within the dam's powerhouse, gigantic turbines held the secrets of hydroelectric energy.

The statistics of the dam's construction and engineering specifications, like its natural habitat, overwhelmed the senses. The magnitude of scale and effort were nearly incomprehensible to those who watched its progress. Those who were lucky enough to be employed by the Six Companies, the first heavy construction conglomerate in the West, and to participate in the building of the dam knew that their labor was significant beyond themselves and would not be surprised that their labor is part of the folk legend of the West in song and story.

Compressed Air Magazine was among the many trade and engineering journals which reported on the dam's construction and monitored its progress. The magazine's editorial staff produced five booklets between 1931 and the dam's dedication in 1935. Nevada Publications has reissued these in one volume in substantially original form. The collection is a valuable addition to the history of Hoover Dam for two reasons. First, the photographs that accompany the articles are extremely good and in some cases not available in the records of the Boulder Canyon Project. Second, the information on the details of construction adds appreciably to our knowledge of the early history of the heavy construction industry in general and of the breakthrough in engineering techniques which the completion of Hoover Dam required.

In the majority of the articles the emphasis is on how basic construction problems were solved; the details of technology, and the innovations in mining, hydraulics, transportation, and blasting. Of the twenty-four articles included in *The Story of Hoover Dam* the largest number deal with the problems of gravel mining, concrete mixing, transportation of men and equipment, tunnel blasting and concrete cooling. Many of these articles give construction details available no where else and supplement the Chief Engineer's accounts in the Project History annual reports. Sadly many of the articles are also repetitious and review archaeological and geological information which is well known and better discussed elsewhere.

Each article is signed, but identification of the author is too brief and too haphazard. The early pieces were contributed by the staff of *Compressed Air*, the later ones are the work of Bureau of Reclamation officials and the public relations staff of the Six Companies. The tone throughout is one of uncritical acclaim and no mention is made of labor disputes, living conditions, accidents or problems either human or technical. As one would expect, the jack hammer is the technology afforded the most space. The trade groups and engineers who disagreed with the technology employed by the BR or the construction policies of the Six Companies are not mentioned. Even the two articles which discuss the living conditions in Boulder City have only praise for government and company planning and policy. The uniform tone of

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acclaim is never broken by the contributing journalists who seem more impressed with technology than human endeavor. This bias, however, does not diminish the value of having these articles reprinted.

The weakness of the volume is that the publishers did not feel it necessary to edit the articles. The value of the technical information would not have been diluted by the omission of repetitive or redundant material. As it stands, the volume reveals again the magnitude of engineering achievement which Hoover Dam required.

Linda J. Lear George Washington University

Slot Machines. By Marshall Fey. (Las Vegas: Nevada Publications, 1983.)

REVIEWING THE BOOK, Slot Machines, was a lot like exploring the nooks and crannies of the Liberty Belle Saloon, a popular restaurant in Reno, Nevada, owned by Marshall and Frank Fey. Their grandfather, Charles Augustus Fey, was one of the original inventors of the slot machine and one of the major pioneers in the slot machine industry. The book is filled with a tremendous amount of information about slot machines, whose origins can be traced to San Francisco in the 1890s. It is an unusual book, presenting a number of related by slightly disjointed story lines. One facet of the book presents detailed descriptions of slot machines and other mechanical devices that have been created over the years by a handful of manufacturers. The variety and ingenuity of these mechanical devices of various vintages point out the different appeals the machines have engendered over the generations. The descriptions and the extensive photographs and drawings of the machines make this a suitable book for coffee tables, at least in Nevada; it is a fascinating book to browse through, both for the connoisseur of antique slots as well as for the layman who, as a casual visitor to gambling casinos, may have encountered only the modern versions of these devices.

In another sense, *Slot Machines* is like stumbling across a drawer full of old newspaper clippings, providing observations on an industry which, like gambling in general in the United States, has often walked a fine line between legality and illegality, often crossing over to the dark side. Fey chronicles the early inventors as they established an industry based on coin operated devices. Understandably, there is much discussion on the life and times of the author's grandfather Charles Fey and his son, Edmund Fey, who was a notable inventor of numerous mechanical arcade games.

In absorbing this book, the reader can gain an appreciation for the fascination with mechanical devices and with chance that slot machine customers have always had. Furthermore, when the recent innovations that modern manufacturers such as Bally or International Game Technology are discussed toward the end of the book, you can start to appreciate why the legal slot machine industry in Nevada and Atlantic City alone is generating nearly \$3 billion a year in casino winnings in the mid-1980s. Within the last twenty years, progressive jackpots, high denomination machines, multiple pay-line machines, multiple coin-in machines, linked carousels, and super jackpots have made the slot machine the most important revenue generator in Nevada's and Atlantic City's casinos.

Even though the book has sections on Reno, Las Vegas, Atlantic City, and Nevada's border towns, its real strengths lie in its discussions of the earlier eras. The discussion of Charles Fey's business operations in the Bay Area gives a flavor to operating a controversial business in volatile times. His fortunes were significantly altered by the San Francisco earthquake, the financial panic of 1907, and when the state of California passed legislation making slot machines illegal in 1911.

If there is a weakness to this book, it lies in its lack of cohesiveness. It is the type of book that is best absorbed in small doses; it certainly is not an academic treatise, and it lacks the bibliographic support that would make it highly useful to scholars. On the other hand, and more importantly, it does an excellent job of presenting, both visually and in discussion, the story of the evolution of the slot machine, a device that has shaped the economy and life-style of the state of Nevada more than most of the leaders and residents of Nevada would even want to admit.

William R. Eadington University of Nevada Reno

New Resource Materials

Nevada Historical Society

LAUGHTON FAMILY PHOTOGRAPHS

In 1884, Sumner Lee Laughton, who had already developed and sold several ranches in the Truckee Meadows, purchased yet another ranch site just west of Reno. Situated on the Truckee River, the land boasted several hot springs, around which, by 1886, Laughton had begun developing a resort called the Granite Baths or Granite Hot Springs.

Once the resort grew in popularity, the Central Pacific Railroad established a station there, naming it after Laughton. Ironically, when the station signs arrived in Nevada, the name on them was "Lawton's"—a misspelling that has ever since been attached to the location.

The resort became a familiar recreation spot for generations of Renoites, as well as travelers on the railroad, and continued in operation for many years following Sumner Laughton's death in 1915. Today, after extensive renovating, the old resort, with a casino now incorporated, stands deserted and awaiting yet one more enterprising proprietor.



Sumner and Nancy Laughton with their daughter and granddaughter, c. 1915. (Nevada Historical Society)



Laughton Hot Springs, c. 1895. (Nevada Historical Society)

The lively early days of Lawton's are recalled in a collection of family photographs recently donated to the Society by George Laughton, the grandson of Sumner Laughton. The photographs depict not only the resort, from the 1890s to about 1915, but also Verdi, the Laughton family ranch (Rancho Del Diablo) near Verdi, scenes along the Truckee River, the power plant at Mogul, an ox in a shoeing frame, and various members of the Laughton family. The eighteen pictures, especially those of the hot springs resort and the pioneer Laughton family, represent an important addition to the photographic holdings of the Society.

AURORA CONSOLIDATED MINES COMPANY MAPS

The Aurora Consolidated Mines Company was the leading mining company in Aurora, Nevada, during the revival that occurred there early in this century. Following its incorporation in 1907, it operated both mines and mills in Aurora until 1918. Controlled for much of this time by the Knight Investment Company and then by George Wingfield's Goldfield Consolidated Mines Company (which finally absorbed it in 1921), Aurora Consolidated was a substantial and well publicized, if not overly profitable company. Its significance lies less in the production of its mines than in its association with the old camp of Aurora, the mining excitement of the Tonopah-Goldfield boom, and George Wingfield.

A group of 212 maps and diagrams created and used by Aurora Consolidated has been acquired by the Society. Dating from 1911 to 1918, it includes

maps of surface and underground workings for several mines, townsite and water system maps, and level maps, as well as flow sheets and diagrams of mine and mill machinery and equipment.

SANBORN MAP ATLAS OF RENO

The Society has been fortunate in obtaining what is probably the latest Sanborn Map Company atlas available for the city of Reno. A 1955 publication, with corrections to 1972, the atlas enhances the Society's already substantial collection of fire insurance maps of Nevada communities, and extends the coverage for Reno to almost a century after the first such map for the city was drawn in 1879.

The atlas, which, with other papers and photographs, was generously donated by Dorman Patten, will certainly be of value to historic preservationists and anyone interested in the recent history and physical development of Reno.

Eric N. Moody Manuscript Curator

University of Nevada-Reno Library Special Collections Department

The Special Collections Department at the University of Nevada-Reno, Library recently acquired a collection of material relating to early mining activity in Nevada and California. Correspondence of Mackay, Fair, Flood and O'Brien as well as reports and correspondence from their major mining companies, the Consolidated Virginia and the California Mining Companies are included. Three Visitor's Registers in the collection contain names of visitors to the famous C & C shaft of the two mining companies in Virginia City from 1900 to 1926. The first visitor, on April 27, 1900 was F.J. Delonchant from Reno who came with his Reno High School class. He was later known as Frederic J. DeLongchamps, Nevada's best known architect. Approximately fifty photographs accompany the Visitor's Register and show tourists in mining garb. Taken by commercial photographers in Virginia City, these appear to be souvenirs of visits to the mine.

A large and valuable portion of the collection are records of the Pacific Mill and Mining Company and records of the Pacific Wood, Lumber and Fluming Company. Both companies were owned by the Bonanza Firm of Mackay, Fair, Flood and O'Brien in a successful monopoly of resources to augment their mining ventures. Material from the Pacific Mill and Mining Company

includes mainly financial and payroll records from its various mills from 1876-1886. The Pacific Wood, Lumber and Fluming Company records include early land and water rights documents, correspondence, financial accounts, Articles of Incorporation, minutes of meetings and maps dating from 1869-1887.

Some very early documents from 1855 deal with land in Eureka City, Sierra County, California and there are also three 1865 deeds from Summit City (Meadow Lake), Nevada County, California. These are of special interest since both towns were short-lived mining camps which attracted individuals from Virginia City when the Comstock showed signs of decline. Familiar names can be traced from town to town through deeds and financial records in this interesting collection.

Lenore M. Kosso Manuscript Curator

Nevada State Library and Archives Division of Archives and Records

The Nevada Secretary of State's Office has transferred several past referendum files to the Division of Archives and Records. Among those of historical interest are the 1912 certificates of nomination for the Progressive Party candidates, 1920 certificates of nomination for Paul Jones and Anne Martin, 1924 certificates of nomination for the independent candidates, 1926 Referendum for the U.S. Congress to repeal Prohibition and the Initiative Petitions for the repeal of the Right to Work Law for 1954, 1956 and 1958. Other record groups transferred include the Secretary of State's Commissions and Appointments filings from 1951 to 1982 which contains copies of governor's appointments to state boards and commissions and the appointees oaths of office. One hundred sixteen active boards and commissions are included in this records group.

The Civil War muster rolls from the records of the Adjutant General, Nevada Territory and State, 1863-1866 have been microfilmed along with a 975 card index to the rolls. These muster rolls are for the First Battalion, Nevada Volunteers, Cavalry Companies A through F and Infantry Companies A through D. They contain physical descriptions of volunteers together with information about place of birth, occupation, length of service and special assignments. The two-roll set of film is available for sale from the Division of Archives and Records.

Jeffrey M. Kintop Curator of Archives/Manuscripts

Contributors

- Clark C. Spence is professor of history at the University of Illinois at Urbana-Champaign. Along with other topics he has published books on western mining, Montana history, rain-making and Salvation Army farm colonies.
- Michael Green is beginning graduate work in history at the University of Nevada, Las Vegas, from which he graduated in May, 1986, with high distinction as the recipient of the department's John S. Wright Award for Outstanding Work by a Graduating Senior.
- Ronald M. James is Supervisor and Historian for the Nevada Division of Historic Preservation and Archaeology. He has degrees in history and anthropology from the University of Nevada-Reno. In 1981-1982, a grant from I.T.T. funded his research in folklore in Ireland and Cornwall.
- Guy Louis Rocha is the Nevada State Archivist. He is a Specialist in the history of labor and mining in Nevada and the West. His latest work, *The Ignoble Conspiracy: Radicalism on Trial in Nevada*, a book he coauthored with Sally S. Zanjani, was published by the University of Nevada Press this year.

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MEMBEDSHID CATEGORIES

• **Nevada State Museum Newsletter** — the publication of a sister museum in the Department of Museums and History, the newsletter keeps all members informed of upcoming events.

• Discount of 15% in the Nevada Historical Society Gift Shop and in the gift shops of the other museums of the Department of Museums

and History.

• Tours — Society sponsored tours take members to historic sites within reach of Reno. 15% discount on tour fares.

Special notice of all Society events and activities.

| MEMBERSHIII CALEGORIES | , |
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| □ Regular — \$25. | \square Sustaining $-$ \$35. |
| \square Family $-$ \$30. | \square Contributing $-$ \$50. |
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FOUNDED IN 1904, the Nevada Historical Society seeks to advance the study of the heritage of Nevada. The Society publishes scholarly studies, indexes, guidebooks, bibliographies, and the Nevada Historical Society Quarterly; it collects manuscripts, rare books, artifacts, and historical photographs and maps, and makes its collections available for research; it maintains a museum at its Reno facility; and it is engaged in the development and publication of educational materials for use in the public schools.