Review


Scott Andrew Johnson’s essential and fascinating study of the temporal, spatial, and economic impact of mercury mining on California and the world fills an open pit-scale omission in the history of a state where gold has always enjoyed star billing. Until the invention of the cyanide process in the 1890s, however, gold and silver mining and refining required large quantities of mercury, so both the precious metals and the fluid and deadly one also called quicksilver had a long and symbiotic relationship: whoever controlled mercury controlled the production of the precious metals to their own enrichment and the peril of their workers.

That mercury is scantily mentioned in most accounts of California’s Gold Rush and the subsequent mining booms of the West is odd since the New Almaden mercury mine in the Coast Range south of San Jose was the first and richest of the state’s hardrock mines. Its opening in 1845 more than two years before James Marshall’s discovery of nuggets at Coloma seemed providential as well as having international repercussions. Cinnabar — the ore of mercury — occurs in few places in the world; prior to 1845, the Rothschild family controlled the major suppliers of Almaden in Spain and Idria in Slovenia. Due to unusual geology, the California Coast Range is rich in cinnabar deposits; New Almaden was only the first though the richest of many such claims which Johnston details. Few of the abandoned mines and their support towns are known to any but a handful of mining historians.

Discovered by a Mexican army captain, the New Almaden mine quickly passed to the powerful British trading firm Barron, Forbes & Co. and then to American ownership after intervention by the Supreme Court and the Lincoln administration. An armed standoff between miners and US Army troops during the Civil War curtailed the production of mercury, gold, and silver and spurred prospectors to locate other cinnabar outcrops. The rich and remote New Idria mine had been located in 1854 southeast of New Almaden; both mines came under the control of the Bank of California and played a vital role in its vertical monopoly of gold and silver production in California and on the Comstock Lode, contributing to the fortunes of a small group of men known as Ralston’s Ring or the Bank Crowd.

According to Rodman Paul in *California Gold* (Lincoln, 1947), California mercury broke the Rothschild monopoly, leading the US mining commission to observe in 1869 that “the quicksilver trade of the world is substantially an armed true between Spain [the Rothschilds] and California” (p. 276.)

Johnston explains the complex and ever-shifting combinations of the California mercury syndicate as well as the machinations that allowed it to dominate the quicksilver market in the Western Hemisphere. He overstates its role as an amalgamating agent when he says that “nobody wanted mercury for its own sake; people only wanted what it could be used to create: gold and silver’ (p. 38). Mercury was in demand for scientific devices, mirrors, munitions, paint, and drugs and as cinnabar for Chinese lacquerware, so there was a substantial market for it beyond just the mining towns of the West. David J. St. Clair claims that more than half of New Almaden’s production was exported throughout the Pacific Basin (‘New Almaden and California Quicksilver in the Pacific Rim Economy,’ *California History*, 1994–5: 279–95).

Johnston hits his stride in the book’s second half as he reconstructs the spatial, racial, and gender dynamics of California’s mercury mining camps through time. It’s an impressive feat given scanty records, the vicissitudes of the mercury market, and the relatively small scale of some of the mines in the mountains north of San Francisco.

A racial hierarchy prevailed in all of the camps Johnston examines ranging from the Irish, Cornish, and other Europeans at the top through Mexicans and Chilenos to the Chinese at the bottom. The latter were provided by Chinese labor contractors in San Francisco and inhabited spatially segregated shantytowns constructed of salvaged materials. Mine owners and managers favored Chinese workers because they were both cheap and expendable — a useful feature given the well-known dangers of mercury production.

The most noxious of the mines was Sulphur Bank at Clear Lake where Chinese workers were essential because others wouldn’t work in an operation where hot springs were still actively depositing mercury and sulphur. Working conditions at the mine were literally hellish; toxic tailings were left to the EPA for remediation and an Indian tribe for a reservation.

Although mentioned throughout the book, Johnston gives too little attention to the health and environmental costs of a metal whose potency as a neurotoxin has long been known. What medical care, if any, was given to the miners, refinery workers, and residents of the mining camps, and what became of workers incapacitated by their labor? Although New Almaden is the setting for much of Wallace Stegner’s Pulitzer Prize-winning novel *Angle of Repose*, he also omitted this information.

Johnston does an excellent job of analyzing historic photographs, though he remarks of one (p. 160) that the denuded slopes near the furnaces may have been the result of toxic fumes (p. 215) without considering the mines’ voracious appetite for fuel and timbers which produced an expanding blast zone around quicksilver mines and refineries. Mercury contamination and toxicosis itself spread well beyond its native outcrops in the Coast Range to every gold-bearing stream in the Sierra Nevada and beyond as well as to San Francisco Bay. One mining engineer estimated that Nevada’s Comstock Lode’s mines and mills lost 7000 tons of mercury in 60 years, much of which permanently lodged in the Carson River. While many the mines’ owners converted mercury profits into dynastic fortunes, they passed its overhead on to subsequent generations as well as their employees.
Nonetheless, Johnston’s close study of the industry does much to restore mercury to the crucial role it once played in the world and California’s economy and to the shaping of its landscape. The cost of that metal remains for others to explore.

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