

NUGGET

For THE OBJECT AT HAND column
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IT's in a trunk or a drawer, something that belonged to your father or your grandmother. It's a small thing, a spelling medal or a cigar holder, but it spins a web of threads that tug at your memories. One by one you reel them in: the smell of your grampa's vest, hours on a porch shucking peas, the sound of an ice cream churn, a summer night's sky throbbing with heat lightning. A small thing can connect you to the past.

This is a tiny thing. David Shayt, a specialist in cultural history at the Smithsonian's Nation Museum of American History, hands me an envelope. Inside, a folded square of white vellum holding a bashed bit of bright metal. A typewritten card notes its weight: .0855 grams. Not much. But this little flake of brightness is powerful. Barring a few fatal lead slugs, it may be more powerful than anything else you could hold on the tip of your little finger.

"San Francisco, Aug. 23, 1848," the card's text begins, "This paper contains the first piece of gold ever discovered in the northern part of Upper California. It was found in February 1848, by James W. Marshall in the race of Capt. Jno. A. Sutter's saw mill about 45 miles from Sutter's Fort, on the south branch of the American Fork. It was beaten out with a hammer by Mr. Marshall, to test its malleability..."

A surge of recognition — miners forty-niners and their daughters, Clementine. This is the little glimmer that Marshall noticed in the flume that fed Sutter's mill, a glint that started the California Gold Rush. This was what the boys called "color," real gold, and a year later San Francisco Harbor was crowded with derelict ships that couldn't sail home. Their crews were gone, jumped ship, bound for the goldfields. How often can a very simple *thing* specify a time and a place and a transcontinental cultural upheaval?

In March of 1848, the village of Yerba Buena sheltered a non-native population of 575 men, 177 women and 60 assorted children. It had not become the city of San Francisco yet but it had a newspaper, the *California Star*, which published a note in its March 25th issue about gold findings on the American River. The news caused no special stir. A week later the *Star* published a special booster issue on "The Prospects of California" and sent 2000 extra issues eastward, by muleback, hoping for a trickle of settlers and investment. The stack of newspapers would take a long passage. When they were read, some prospective settlers would be intimidated by that grisly business with the Donner Party two winters earlier. But this little flake and its brothers would dismiss any queasiness about high-altitude cannibalism. On the 12th of May, trader Sam Brannan waved a bottle of gold at a Yerba Buena crowd, shouting "Gold! Gold from the American River!" The rush was on. By the end of the month many coastal Californian cities were depopulated, gone to the diggings. On the 14th of June the *California Star* ceased publication. No staff was left to run the press.

Early in July the military governor of the California territory, General Richard Barnes Mason, accompanied by his aide, Captain William Tecumsah Sherman, visited the gold fields on a fact-finding mission for a skeptical government in Washington. Yes, the El Dorado stories

were true. The *New York Herald* printed them under banner headlines in mid August. If they ever made it across the Mississippi, those 2000 booster issues were superfluous. Eighty thousand souls were on their way to California — 55,000 overland and 25,000 by way of Panama or Cape Horn.

What were they looking for? The mother lode. Paul Pohwat, a mineralogist next door at The National Museum of Natural History, explains to me that the principal ore of gold is . . . well, gold. This is the remarkable beauty of gold: it doesn't combine well with other elements. Thrown around in the geologic Waring blender it is still found as veins of pure metal, a remarkable substance in itself. Resisting oxidation or attack by anything except aqua regia (a nasty mixture of sulfuric and hydrochloric acid) it retains its sun-like glow forever. It is highly electrically conductive — your computer has gold contact points — and is so malleable that it can be beaten out to the unbelievable thinness of a few molecules. Even this whisper of material retains an extraordinary reflectivity and opacity, which is why gold is used in foil to protect satellites from sun-damage and is laminated in fliers' helmet sun shields. This stability and malleability make it ideal to work as jewelry or coinage, and make it easier to find.

The miners on the American River were following a trail of gold dust washed down by streams from mother lodes (large veins of pure gold) in the weathering mountains. These rough creeks and the malleability of gold consolidated flakes, *impact welding* them into larger and larger lumps — nuggets. Later California miners struck out for the mountains and dug in for the veins. Earlier placer miners used the weight of gold to separate it from lighter gravels: they swirled gold-laden silt in wide, shallow gold pans (the American History Museum has quite a few) until only the heavier yellow particles remain in the bottom: color. Some used rocker boxes or set up flumes with baffles — the heavy gold collected in the eddies around the baffles. They might have used the old stickum method. Jason's Golden Fleece was a metaphor for an early method of gold-gathering in the streams of Mesopotamia: sheepskins were weighted down on the bottom; gold stuck to the lanolin while finer silt washed away.

It was a hard, rough life in the goldfields. Hard on pants, too. A California sutler made his fortune selling necessities to the miners. He had an overstock of tent canvas and ran them up into bombproof miner's trousers, adding patented copper rivets at the tension points. Very practical, very popular. I'm wearing a pair of his Levi Strauss pants right now.

A lot of the prospectors and miners were crazy. It may have been simple gold fever or bad whiskey in the tent cities but it was more likely the mercury. Mercury was critical in consolidating and isolating gold. One of the odd historical coincidences of the Gold Rush is that there was a more sedate, less ballyhooed Mercury Rush a few years earlier. Significant deposits of this precious metal were found in northern California and the region was named New Almaden after the Spanish mercury mines that had supplied Europe with quicksilver since Roman times. The name was transferred as a brand to the wine valleys between its ridges. Gold was mixed with dust, then the mercury was burned away. But mercury is a seriously toxic metal: burned in tents or cabins, the mercury fumes aggressively attacked the brain.

Many miners disappeared. The preferred method of extracting gold from quartz formations used cyanide in shallow pits. If you've ever seen *Treasure of the Sierra Madre*, you'll remember how gold made Fred C. Dobbs suspicious. A lost Dobbsie might have been a little too secret about his gold claim's location and a little too careless with his deadly pit.

In December of 1848, President Polk acknowledged the gold strikes of California in his last state of the union message. The stampede toward California was by now frantic and international, but it wasn't the first American gold rush. The earliest was the big Alabama gold rush in 1813. Gold is not exotic. It's not hidden in a few places like young California, Alaska, South Africa and Siberia. It's an element. It's everywhere. There are gold rushes going on right now in Fiji, Guyana and Brazil. One of the most impressive nuggets of gold in the Gems & Minerals Hall of the National Museum of Natural History — it's bigger than a sweet potato — came from the very productive Whitehall Mine, owned by the United States Mint, about eight miles up the Potomac from the Smithsonian Mall. Kayakers can still pan color out of the Potomac River just below Bear Island, though I haven't seen any Deussenberg kayaks out there.

In May of 1849, the radical clipper *Grey Eagle* arrived after a record Cape Horn passage of 113 days, carrying 34 passengers from New York. Two years later *Flying Cloud* would make the ultimate New York-San Francisco run of 89 days, eight hours. Clippers were the fastest and most dangerous vessels that ever sailed, driven by captains in their twenties, manned the dregs of the dock, expendables. This Gold Rush was pushing marine technology to its limits and shipboard discipline beyond its limits. U.S. Navy Commodore Jones offered \$40,000 in bounty on deserters from United States Navy ships in San Francisco harbor, because by June of 1849, over 200 ships were deserted in the harbor.

So much gold was concentrated in San Francisco that there was a serious money famine. In August the banking firm of Wright & Company asked Governor Riley for permission to mint \$5 and \$10 gold coins. California's population topped 100,000 in 1850 and it became a state without going through the normal territorial stages. It's state motto, approved by the state constitutional convention in the autumn of 1849, was *Eureka*, "I have found it."

By 1851 the gold was played out and the rush was over. Thousands of disappointed miners wandered back across the Rockies. Poking about on the way, however, they found the gold and silver Comstock Lode in Nevada and handsome strikes in Colorado. The most important find, as it turned out, was a wealth of copper, plus tin and lead. Nevada became a state in 1864, Colorado in 1876.

The Gold Rush (and don't forget the big Mercury Rush) created the Golden West, settled it, civilized it. The rowdy stampede of crazed miners brought scavengers on its flanks, desperadoes, soiled doves and profiteers. Then came vigilantes, lawmen, judges, community and, finally, respectability — napkins and finger bowls.

What about John Sutter? He was a Swiss immigrant, kindly, enterprising, and surely one of the worst businessmen in history. He was constantly in debt, perennially starting new schemes with folks like James Marshall. Marshall was an eccentric but mechanically brilliant wheelwright whom Sutter commissioned to build a sawmill on the American River. True to form, Sutter's Mill was too far upstream to be financially practical. It took a certain talent to manage it but at the very nexus of the great California Gold Rush, John Sutter lost everything. "What a great misfortune was this sudden gold discovery for me! It has just broken up and ruined my hard, restless, and industrious labors...From my buildings I reaped no benefit whatever, the mill stones even have been stolen and sold...My tannery...was deserted...So it was in all the other mechanical trades which I had carried on; all was abandoned and work commenced or nearly finished was all left, to an immense loss for me...By this sudden

discovery of the gold, all my great plans were destroyed. Had I succeeded for a few years before the gold was discovered, I would have been the richest citizen on the Pacific shore; but it had to be different. Instead of being rich, I am ruined, and the cause of it is the long delay of the United State Land Commission of the United States Courts through the great influence of the squatter lawyers...”

John Sutter, one of the real pioneers of California, didn't even get the cause right. The cause is here on David Shayt's desk. The object at hand is a tiny gouged nugget, not really big enough to display, a miniscule seed of change that still glitters.