Richard Doty
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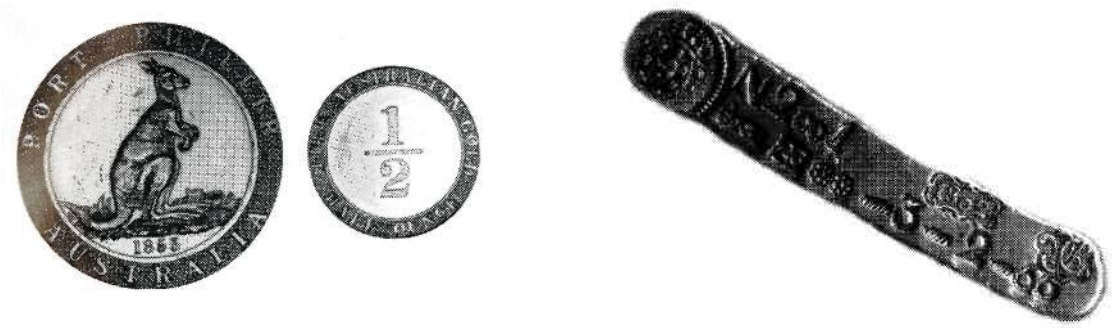
OPHIR RECONSIDERED:
THE INFLUENCE OF PRECIOUS-METAL DISCOVERIES ON NUMISMATICS AND BANKING

By Richard Doty
Numismatic Collection, National Museum of American History
Smithsonian Institution, Washington, USA



Ballarat is a most appropriate venue for a discussion of the influence of gold and silver strikes on modern history. What I wish to do today is to compare and contrast several of the better-known incidents, focusing particularly on their effects on the coinage, currency, and banking systems of the locales where they took place. I shall be speaking of five such events, occupying a period of four hundred years. In order of historical occurrence, they were findings:

- in Spanish America (sixteenth and seventeenth centuries)
- in Brazil (eighteenth century)
- in California (mid-nineteenth century)
- in Australia (mid-nineteenth century)
- in Alaska (late nineteenth - early twentieth century)

Note that the majority of these strikes took place along or around the Pacific Rim, which makes them doubly appropriate for consideration at this gathering.

As stated, I wish to discuss the effects of precious-metal discoveries on the **numismatic** and **banking** histories of the areas where their discovery took place. But we might take a few moments to consider some of the larger effects of these events on the national and even global scene; for the discovery and exploitation of precious metals in the new worlds of the Americas and Australia blazed a path leading directly to the present. Indeed, without them, the entire story of the modern era would have been a very different tale, and a lesser one. And were it not for one of them, it is highly unlikely that we would be meeting in this hall today.

The earliest of these discoveries occurred in Spanish America, and they occupied two phases. The first, lasting from the initial contact to around 1525 or 1550 depending on location, saw Columbus and his successors expropriating gold (and silver, to a far lesser extent) which had already been mined and worked into religious and trading objects by the indigenous inhabitants. These supplies were

nearly exhausted when the Spanish began uncovering the underground source of the precious metals. Gold was found, and so, to a far greater extent, was silver; and from around 1540 to the last years of the seventeenth century, the Spanish-American mining society was put into place. Precious-metal extraction continued through the eighteenth century and even beyond, but the essential consequences of the strikes were making themselves known prior to the time of the end of the Spanish Hapsburg line, in 1700.

What were these consequences? Some of them might serve as a paradigm for our discussions of the later precious-metal discoveries. That is, the finding and exploitation of gold and silver led to permanent settlement in areas ranging from Arizona to Chile. Mines attracted miners, who needed food, clothing, and supplies of all kinds. This need in turn tempted merchants and manufacturers into the new areas. Towns sprang up. Roads were built. Churches were erected. Bureaucrats arrived. One of the greatest ironies of colonial Spanish-American history is that everybody involved in the expansion of the mining frontier did well - except for the miners themselves. While a few of the latter became rich, most did not and either left the profession or the region, in search of better prospects. But the towns remained, and we find them in some surprising places. In upland Bolivia, for example, a mountain of silver appropriately called El Cerro Rico had attracted a population of nearly two hundred thousand to Potosí by the closing years of the seventeenth century - this despite the fact that the town sat three miles above sea level. Variants on this story took place across Spanish America.

The effects of the gold and silver strikes on local histories and local economies would be repeated in Brazil, California, Australia, and Alaska. But the *exterior* consequences of this first encounter with non-European precious metals were largely unique to Spain. Let us briefly consider them.

Just as Columbus was opening a new phase in Spanish history, the nation he served was moving out of an old one, a historical, mental, and religious set of circumstances which had been in place for hundreds of years. This was *La Reconquista,* the centuries-long Christian crusade to recapture the Peninsula from the forces of Islam. One of the reasons for the dramatic suddenness of Spain's occupation of Central and South America may be imputed to the zeal of the crusader: along with a series of proven political and military practices. Columbus and those who followed him carried a religious exaltation from one era to another, from an Old World to a New.

But events did not stop there. Just as Spain was discovering new worlds and new sources of precious metals (concrete consequences of religious fervor and a suggestion of divine approval) events in Europe were conspiring to create a bottomless pit into which the new wealth would be poured. A reaction against Catholicism as determined by Rome had long been building in parts of Northern and Western Europe, and just as Cortes was entering Tenochtitlán, this reaction boiled over into armed religious dissent. The Protestant Revolution began. There was no likelihood that

Spain, armed with the weapons of religious certitude and a bulging purse, would *not* enter the lists on the side of orthodoxy.

When Spain did so, she repeated on a continental scale what her miners were accomplishing on a local one. That is, the gold and silver of the New World came to Spain - and then quickly left the country for the north, to pay soldiers, middlemen, and merchants. Spain's enemies were enriched. Spain herself was impoverished. The series of religious wars lasted for over a century; by their end, Spain was a second-rate power.

But her troubles did not end there. Her initial successes led to widespread imitation. Britain, France and lesser lights became convinced that they too must have overseas domains, wherein they too would find the sinews of wealth. They soon found that the Spanish had pre-empted all of the likely areas. The envy and frustration which this engendered led to an endless series of small wars, wherein bits and pieces of the Spanish Main were eaten away, Spanish commerce was threatened, and colonial Spanish practices were codified and replicated in the concept known in England as Mercantilism.

We shall examine the numismatic effects of the Spanish gold and silver rushes in a few moments. For now, let me conclude these preliminary observations by adding two points. First, the discovery and exploitation of precious metals was directly responsible for the main outlines of Latin America's racial complexion. Gold and silver brought Spaniards to the New World. There, the native peoples were forced to produce it for their new Iberian masters. Millions died of overwork, disease, and simple despair. But millions more survived, their genetic identity complicated and enriched by both foreseeable and voluntary union with the conquerors. A new people would one day emerge, neither Indian nor European, but *mestizo* - American. And second, the discovery and exploitation of precious metals from Spanish America led to instability in the value ratio between gold and silver, an unsettledness which would continue to the present time.

The experience of Spain in Mexico, Bolivia, and Peru would be repeated a century and a half later in the Portuguese colony of Brazil. Discovered in 1500, colonization began as early as 1532. But settlement was sporadic and ineffectual until the closing years of the seventeenth century: to the Portuguese mind, the way to wealth lay *east,* not west, and the sprawling Brazilian domains were practically ignored. A case in point: the Dutch occupied the coastline around Pernambuco for over thirty years before Lisbon finally bestirred herself to dislodge them.

But near the end of the seventeenth century, a curious thing happened. The colonizers had been searching for gold since the 1540s, in hopeful emulation of their Spanish neighbors. In the early 1690s, they finally found it, in an area whose new name suggested its economic basis, Minas Gerais, 'General Mines.' Thousands of people left the coast, abandoning their farms, heading inland to try their luck. And by one estimate, no fewer than 300,000 Portuguese came to Brazil as well during the period, joining the locals in their frenzied search for the

yellow metal. What we saw in Spanish America was repeated in Portuguese America: towns were founded, the land was peopled - and discontented miners went farther and farther afield and eventually found new gold mines, in Mato Grosso and Goiás.

The human cost was great. Slaves worked the diggings, sometimes burrowing a full kilometer into the surface of the earth. Thousands died. A modern writer named Caio Prado called these years 'the blackest period in Portuguese colonial administration' - which is saying a good deal. But the land was populated, the economy was fostered - and what had once been a drowsy colony, of negligible importance to the metropolitan power, now gave that power a new lease of life. But as with Spanish America, the true beneficiary of the new gold strikes would be the colony itself: it now became a going concern, would one day become a great nation.

I have spoken of the instability in the value ratio between gold and silver. Events in the American West would also contribute to this instability. When gold was discovered in California in 1848, it shortly led to a lowering in that metal's value against silver. The Australian discoveries, coming on the heels of events in California, depressed the value still more, as did strikes in Colorado a decade later. But the pendulum did not stop there. The discovery of enormous *silver* deposits in Nevada at the end of the eighteen-fifties and in other Western locales in the sixties and seventies would soon drive down the value of the white metal against the yellow. Among other consequences, silver's fall would precipitate a contest for power between Western silver mining and agrarian interests (who supported a fully bimetallic, gold/silver monetary standard, wherein an artificially-maintained parity between the two metals would secure respect for miners and greater ease in paying off debts for farmers) and Eastern business interests (who supported a monometallic standard, based on gold, which they saw as better, and safer, for their business enterprises).

As with Spanish America, the discovery and exploitation of precious metals in the American West led to rapid settlement across wide regions, prosperity for many, wealth for a handful. Three new states were created directly because of the mid-century gold and silver strikes (California, Colorado, and Nevada), while the fortunes and success of no fewer than six more (Oregon, Utah, Idaho, Arizona, New Mexico, and Montana) were greatly accelerated by the mining discoveries.

But there was rather more than that to the consequences of the mid-century American gold and silver strikes. California had come to the United States as a result of a war with Mexico. Most of those who had fought on the American side were Southerners, who naturally hoped that the lands they won would prove receptive to the South's 'peculiar institution,' slavery. If the newly-won lands could be made into slave states, the South's political role in the national government (which had been eroding of late) could be strengthened. But gold was discovered in California just as the peace treaty with Mexico was being

signed; and it soon became apparent that the region would shortly become a new state, a powerful state - and a free state, for the mining population feared the extension of slavery into their economy. Southern anger over this turn of events led to increased tensions with the North, and, in 1861, to a doomed Southern bid for independence. We can thus say that the new source of precious metal contributed to an armed conflict between the two sections of the country. But it also gave one of those sections the means to win it.

The Australian gold rush's consequences were altogether more peaceable. European colonization of this distant continent had begun in the late 1780s. The initial reason for settlement, giving convicted felons a second chance or at least getting them out of England, had generally yielded to more normal patterns of immigration by the 1840s, wherein settlers came to Australia to farm and to herd cattle and sheep. Wool dominated the economy. Urbanization remained modest, confined to lands along the coast. There were several colonies scattered across the land, whose dependence on Great Britain far outweighed their connections to each other. Victoria did not yet exist, nor did Queensland. Melbourne had been established in the mid-thirties, but it remained an overgrown village.

Then came the gold. Oddly enough, events in California helped determine events in Australia. Penniless adventurers had left the island continent for the California fields; many had returned by the opening of the fifties. The tales of instant wealth which they brought back inspired a concerted effort to find gold in Australia, to investigate stray finds from earlier days. The California veterans had the expertise for the job. By early 1851, they were hitting pay dirt. They called the most promising of their new strikes Ophir, after the Biblical land of gold.

What happened next is what we might expect. Settlements along the coast were depopulated as small farmers, tradesmen, and any discontented elements in the neighborhood dropped everything and headed for the gold fields of the interior. During 1851–1852, tens of thousands of Australian miners were feverishly rushing to such places as Ballarat, Bendigo, and Castlemaine; tens of thousands more were coming to Australia from Great Britain, the Orient, and even California. The alluvial wealth of Victoria came on the heels of that region's separation from New South Wales, its establishment as a separate colony named after the current reigning British monarch. The two events occurred within a few days of each other, and the gold strikes would give the new jurisdiction a very strong economic base: along with wool, gold would ensure Victoria a position of Australian leadership, one she still enjoys. In this, there are parallels with the contemporaneous California experience.

Gold fever continued through the eighteen-fifties, even as new discoveries became less frequent after the first few years. In this, too, there were parallels with what was taking place in California. There were other likenesses. As with California, the discovery of gold in Australia led to an increase in population, to the founding of new

villages and towns, and to a dramatic growth in the economy and a shift in and broadening of its makeup. It also appears that, as with California, the Australian strikes led to envy between various sections of the future nation, feeding the traditional disunity between the colonies and fostering a continued dependence upon the mother country. But the gold also helped the colonies pay their own way, and that in turn fostered the coming of self-government. As with most other events, the Australian Gold Rush had both good and bad consequences; here, the good far outweighed the bad.

The same could be said about the fifth and final precious-metal strike under examination today, that which took place in and around Alaska during the closing years of the nineteenth century and the opening years of the twentieth. The Americans had purchased the region from Russia in 1867 for $7,200,000. Many derided the deal then and later, for it was generally assumed that the vast wilderness contained little if anything of value. A few Russian-era settlements clung to the southern portion of the territory; to the north and to the east, there was virtually nothing. The region remained under military rule for the first seventeen years of American occupation, to be followed by a modest civil administration more fitted to a county than to an area larger than most of Western Europe. These practices rather neatly reflected a lack of concern on the part of the new masters of the land, based on the land's assumed worthlessness.

And there matters might have rested, were it not for events to the east, in Canada. Deep in the Yukon Territory, in an area adjoining Alaska and as desolate as anything the latter had to offer, gold was discovered in 1896. The region where the strike took place was known as the Klondike, and it quickly attracted the attention of many in the United States and elsewhere, people yearning for relief from the economic hard times of the mid-1890s. The only practicable route into this remote domain lay through Alaskan territory; miners by the thousands were soon following this route, and a number of them began wondering whether the gold fields extended into American territory too. Their curiosity was soon answered: gold was found at Nome in 1898 and at several other sites in the interior over the next few years. A culmination would be reached in 1902, with the establishment of the city of Fairbanks on the site of rich placer deposits, several hundred miles in the interior of the territory. Fairbanks might stand as a symbol of the effects of the Alaskan Gold Rush. Cities and towns followed the mining frontier, just as they had before in Spanish America, Brazil, California, and Australia. But the changes seemed and perhaps were more dramatic in Alaska than elsewhere, because the transition from wilderness to settlement took place over a very short period of time, and almost without warning. Between 1890 and 1900, the territory's population doubled, and most of the increase took place during the final two years of the decade. The rise in population spurred the need and demand for more adequate government, and the American Congress was soon forced to take action. A greatly expanded criminal code was quickly provided (of great importance, considering the

lawlessness of many of the new inhabitants), while a better civil code in turn led to an improved territorial government, instituted in 1912. In time, Alaska would become a state. And it is unlikely that any of this would have taken place in the way that it did without the gold strikes of the late nineties.

I have attempted to discuss the consequences of precious-metal strikes over the past half millennium. But I have omitted mention of their numismatic effects, to which I now turn.

The discovery and utilization of gold and silver in Spanish America occupied two distinct phases - an early one, wherein other peoples' metal was simply taken and sent home, and a later one, wherein the subterranean sources of the metal were discovered and exploited. The numismatic effects of the Spanish-American story also took place in two stages. During the first, the booty obtained from indigenous peoples was reprocessed into coinage in Europe. We may begin seeing the first results as early as the 1490s: in 1497, new Spanish gold coins were proclaimed and struck, and the raw material for their elaboration may have had an American origin. Nor was Spain the only European country to strike new coins from American metal: mints on and near the Atlantic coast of France may have been employing silver from Tenochtitlán to strike new coins as early as the 1520s. They would probably have gotten the metal from raids on Spanish shipping from the Indies, attacks which we know were taking place by the middle of the decade.

By the 1530s and 1540s, attention was shifting from commandeering other peoples' silver and gold to finding one's own. The new metal was soon being shipped back to Iberia for elaboration into coinage. Much of it was sent in the form of ingots - handy for Spanish authorities, who could easily calculate and extract the King's share, or *quinto,* as it entered Spain at Sevilla. Refined and struck into coins, it could then benefit Spanish and European commerce. But an ingot would be of little use to the people who actually found the metal. They, and their growing towns and local economies, needed something which they, too, could immediately use for exchange. By the mid-1530s, an obvious but momentous solution had been found: mints would be established in Spanish America to strike coins on the Spanish model. It was obvious because those who controlled the metal on the American end were after all Europeans, who equated money with coinage. The current state of minting technology was also favorable, because it was as easy to make a coin in Tenochtitlán as in Toledo. But the decision was momentous as well, because *it marked the first time in human history that the making of coin spread from Europe and Asia, the areas of its birth, and became a world-wide phenomenon.* So a simple and obvious decision had a global importance.

In time, there were no fewer than eleven Spanish mints in the Americas, scattered from Mexico City to Santiago de Chile. They tended to follow the path of mining and commerce, and the most successful of them, located at Mexico City, Lima, and Potosí struck gold and especially silver coins by the millions. The three main players all dated from the sixteenth century,

having opened for business in 1536, 1568, and 1575, respectively. Other early coiners included Santo Domingo, established in the early 1540s, and La Plata and Panama, both of which started minting in the 1570s. But the careers of most other mints were sporadic or brief, reflections of a diminution in the necessary raw materials or casualties of changing Spanish policy. All of the mints, unsuccessful and successful ones alike, struck coins of a very similar type. And it is this aspect of the coinage which I wish to briefly discuss.

In the beginning, the coins were creditable copies of the European originals - that is, they were essentially round, thin, and reasonably well-struck. But their appearance soon changed: round pieces became the exception to the rule (so much so that present-day collectors will pay large premiums for well-struck examples). The coins grew thicker, less artistic, acquiring the name by which hobbyists know them today - *cobs* - a word perhaps derived from '*cabo de barra,'* end of a bar. The name suggests the technology behind the coinage. A rough ingot was cast, and planchets or flans were literally hacked from it, like pieces from a sausage. The flans were then filed into legal tolerance and struck by hand, in a fashion which would have been familiar to the ancient Greeks, but with far less artistic success. But the sixteenth- and seventeenth-century minters would have observed that any coin, however crude, was more useful than an ingot. And this was the key to the type of technology employed: the cob coin was a coin for *now.* Strike it quickly, get it into circulation in Mexico or loaded on a vessel bound for Spain; and let someone else worry about the aesthetics of the thing. We see similar coinage at the mint of Sevilla, and for good reason: that port was the point of entry for the gold (and silver) of Ophir. And we shall see comparable coinages in several other places touched by precious-metal fever: as in so many other cases, the Spanish example will serve us well as a model for the future.

The numismatic effects of all of those homely gold and silver cobs cannot be overestimated. They were used across Europe and the Americas exactly as they were. They were also melted down and re-coined, made into local issues ranging from the Leeuwendaalder to the Pine Tree Shilling. They were also countermarked, cut into pieces, and otherwise recycled and revalidated for use in those parts of the Spanish Empire prized away by envious Britons, Frenchmen, Dutchmen, and Danes. And the numismatic precedent represented by those coins would be replicated elsewhere, as present and future competitors found the wherewithal to strike new coins of their own.

The first to do so were the Portuguese. The Brazilian version of the gold rush began in 1693. This was not the first time anybody had found the yellow metal in that locale: back in the 1640s and 1650s, the Dutch (who were currently occupying much of the north-eastern coast) struck their own gold coins in three denominations. The coins were simple affairs - and the coiners had to make square pieces rather than round ones, due to a lack of equipment. But my point is that they were getting the raw materials for their coinage from

somewhere, and the most likely source was a local one.

The Dutch example left no immediate descendants; and the first true Brazilian coins came on the heels of the gold strikes of the early 1690s. A mint was set up in the colonial capital, Rio de Janeiro, and it was making its first coins by 1695. Unlike the mints producing Spanish-American cobs, the Brazilian coiners were able to secure coining machinery for the work, and the work to be done (which was not overwhelming during the first few years) gave them the leisure to learn their new craft. Spanish America would not see minting machinery for another forty years, by which time much of the sheer drive to coin, inspired by the combination of vast new sources of precious metal and the desperate need for its use in America and its translation to Europe in a convenient form, had diminished. The Rio mint's activities quickened after 1700, and it was soon joined by other colonial coiners, one at Bahia and the other at Minas Gerais. The latter is especially interesting, because it was deliberately located near the mines after which it was named. It struck enormous gold pieces but no silver, an accurate reflection of the metal being taken from the ground.

One of the salient aspects of Brazilian numismatics in its connection with precious-metal discovery is that the products being struck and employed were not limited to coins; nor were they limited to orthodox mints. From the first days of the eighteenth century, smelting operations in Goias, Mato Grosso, Rio das Mortes, Sahará, Villa Rica, and a number of other places were creating a special type of small ingot, a gold bar with a carefully-stipulated weight, fineness, serial number, and governmental seal. As with the Spanish-American ingots, the Brazilian bars were created in part to ensure that the taxes due to the King got paid. After having paid the tax due, the bars were supposed to be taken to the Rio or Bahia mint, to be exchanged there for gold coins (upon which a further tax would be paid, in the guise of a seigniorage fee ranging from $6^2/_3$ to 18%, depending on denomination. Inevitably, a notable percentage of the bars never reached the mint but were directly smuggled to Europe, where they could be sold at a premium. And just as inevitably, many of them stayed on in cities and towns across Brazil, pressed into local commercial use just as they were. After 1750, none of the bars could circulate unless accompanied by an official certificate as to weight and fineness, and, after 1803, a stated monetary value. In time, these printed certificates came to form a species of paper currency, the earliest in all of Latin America. And so a gold rush might have effects in one branch of numismatics which would lead to effects in others.

As we move closer to the present, the varieties of numismatic consequences of precious-metal discoveries widen. The Spanish-American and Brazilian strikes led to widespread coinage, and in one case, a sort of paper money. But the strikes in California and Australia would commonly lead to coinage, official currency, and banks and bank notes.

The Californian example was the more complex of the two. Gold

was discovered there in January 1848. By December, the first of twenty makeshift mints was being set up to process the metal (which was currently being used in commerce in the form of dust) into articles more suitable for trade. And we see a curious parallel between what was being done in the 1840s and 1850s and what had been done four centuries before: many of the minters began with ingots, and then branched off into coins; and everyone's coins were far cruder than orthodox issues from the United States Mint. Here again was a rough-and-ready monetary expression: strike the gold into something everyone can use, *now,* and let the bureaucrats back East worry about the details.

The California Gold Rush had still other effects on numismatics. In the first place, it inspired the making of coin in two other areas where gold was *not* found, Utah and Oregon. In both instances, footloose locals had gone to the fields to try their luck and had returned with enough gold dust so that temporary mints made sense. The Mormons of Utah set up their mint in Salt Lake City at the end of 1848, and Oregonians joined them a few months later. Neither facility was particularly long-lived, but the Utah one was revived at the end of the fifties for a final foray into coining, striking gold which had just been uncovered in another western venue, Colorado. This final Mormon issue was joined by a spate of local coinages in Colorado itself. The outstanding coiner there was Clark, Gruber & Company, which would in time turn into a federal branch mint, doing business in Denver.

And it was inevitable that the national government would have a response to the Gold Rush in its various incarnations. Several things happened. First, the output of gold coinage at federal mints tended to ascend through the late 1840s and during the entire decade of the fifties. In part, this was due to the introduction of new denominations, especially the large twenty-dollar gold piece or double eagle, first struck for commerce in 1850. But the mintages of several other, established denominations increased as well, especially the quarter-eagle and the eagle. One response, then, was an increase in coining activity. So was an expansion of the number of mints at which the coins were struck.

At the beginning of the Gold Rush, the United States had four mints - the central facility at Philadelphia, two small branches (at Charlotte, North Carolina and Dahlonega, Georgia, set up in the late 1830s in response to modest gold strikes in those areas), and a larger branch at New Orleans (set up to process the Spanish-American gold and silver coin entering the United States from the south). In 1854, these four mints were joined by a fifth, at San Francisco. The new player had begun its career as a quasi-official coiner, using privately-supplied machinery and personnel, and it started its days by striking huge 'slugs', ingots worth fifty dollars each. This provisional facility was closed at the end of 1853, refurbished and reopened in the spring of 1854 as a normal federal mint; after a few growing pains, it settled down to an enormous and sustained output, one which would outstrip its parent at Philadelphia within a few years' time.

The discovery of vast reserves of gold (and later silver) happened to coincide with a radical improvement in the United States Mint's coining technology. Together, they would embolden the American government to take a step which had been the dream of every national leader since George Washington. In February 1857, foreign (largely Spanish-American) gold and silver coinage, which had fueled our growth since colonial days, was demonetized. Such coins were no longer needed: we had enough money of our own making.

If the discoveries and exploitation of precious metals changed the nature of United States coinage, it had even more dramatic effects on United States currency. It provided the backing for several new types of paper money - gold certificates, silver certificates, and national gold bank notes. The latter are the most interesting. They were a direct result of the enormous expansion of gold coinage. By 1870, so many double eagles were being struck at San Francisco (and at another mint inspired by mining, set up at Carson City, Nevada, that very year), that they were becoming a hindrance to commerce. National gold bank notes were a way of dealing with the glut, a partial solution to the problem of handling large amounts of gold coin. The notes are arguably the most beautiful American paper money ever printed; they also serve to remind us of another effect of the California Gold Rush, and indeed, all precious-metal strikes of the nineteenth and twentieth centuries.

That is, that banks were set up in the immediate wake of the mining frontier, and their fiscal paper was soon providing a safe and sensible alternative to private and federal gold coins. The banks were strictly private at first; the earliest of them, the Miners Bank, appears to have struck its own coins *and* circulated its own notes (a distinction of sorts for a business!). Other fiscal institutions followed, both in California and in adjacent areas where gold was found or Western gold circulated. By the 1860s, such banks were receiving federal charters, giving them the right to emit *national bank notes* of a distinctive design - and that included a specialized variety, the national *gold* bank note. The point I wish to make here is that in America, the discovery of gold led directly to an expansion of banking and banks; and this pattern would be repeated in the final two cases under consideration, Australia and Alaska.

The first Australian bank was set up in 1817, to be followed over the next three decades by twenty or so similar institutions, most of which failed within a few years of their creation. By the end of the forties there were five surviving banks in Australia and a sixth in Tasmania. While each issued paper money, each apparently did so in very small quantities, and few notes have survived from this early period.

The Australian Gold Rush quickly led to an increase in the number of note-issuing banks. Six were set up between 1851 and 1853 alone, to be joined by two more during the remainder of the decade, six in the 1860s, six more in the 1870s, and a total of eleven in the 1880s. Beyond the sheer increase, two points might be made. First, the majority of these banks survived for many years, many of them into

recent times, even though they lost the right of currency issue in 1910. And second, the fact that new banks were being set up decade after decade suggests that the Australian economy had reached a 'take-off' stage: that the first generation of successful banks had helped create so many new businesses that more banks were now needed. And the discovery and exploitation of Australia's gold lay at the bottom of it all: the banks of the 1850s and all that followed would have not been created without the strikes of '51.

The gold discoveries had an immediate effect on coinage too. Prior to 1850, Australia had not had true coinage; after that date, it would have a very great deal. In this, there was a parallel of sorts with events on the other side of the Pacific, in California. Just as there, a rough-and-ready, provisional coinage was first struck, centering on issues from the Government Assay Office in Adelaide, South Australia. Round pieces representing the value of a British pound were struck in 1852, as were rectangular ingots. The latter are extremely rare, but more than twenty-five thousand of the pounds were struck, and a goodly number survive. Shortly thereafter, dies were prepared for an ingot production at a provisional mint to be set up at Melbourne, but the status of the patterns struck from these dies is unclear. What *is* clear is that Australia and the world were about to receive a plentiful, normal gold coinage, another parallel with events in the American West.

The expansion of coinage in Australia occupied two steps, just as it did in America. The first stage saw local gold being shipped to Great Britain in mounting quantities, to be struck into sovereigns and half-sovereigns at the Tower Mint. The output of those two denominations doubled between 1851 and 1852, and production continued to be high through the remainder of the decade and well beyond. Since no new sources of gold had been uncovered in Great Britain (and the strikes in South Africa and the Klondike were many years in the future), we may safely conclude that Australian metal was fueling this increase in output.

By the middle of the 1850s, the second phase in the Australian story was taking place. That is, just as the United States established branch mints in the American West, Great Britain repeated the process in Australia. The first of them was set up in Sydney a year after the creation of the San Francisco mint. Melbourne received its British branch mint about the same time as Carson City received its facility, and the century closed with the establishment of a third branch at Perth, in Western Australia. These coiners provided essential service into the twentieth century; after 1910, they became responsible for a distinctive Australian coinage for local consumption.

In California, the requirements on the lowest level of the monetary scale were met by a number of expedients during Gold Rush days. Tokens were occasionally pressed into service, but 'fractional' gold coins - tiny pieces struck by dentists and jewellers, tariffed at fifty or even twenty-five cents - were more common, and they were made in fair quantity until the San Francisco mint entered the minor coinage arena and did away with

the need for them. Since the Australian mints struck only gold for many years (and gold fractional pieces were never minted and apparently never considered), the role of the trade token was proportionately larger during the Australian Gold Rush than in the days of its Californian counterpart. Dozens of merchants issued copper pence and halfpence, and while most of them sought their coinage from private mints in the old country, a few issues were actually struck in Australia, as early as 1852. And John Sharples reminds me that, just as in California, dentists and jewelers in this new land struck small precious-metal tokens; but the Australian pieces were created in silver rather than in gold.

An unofficial coinage would have come to the island continent even without the economic boom engendered by the discovery of the yellow metal; but there is no question that the latter encouraged more, and larger, issues.

Finally, Alaska. The series of strikes in this northern domain led to results which paralleled those in Australia and the other areas to a degree, but only to a degree. We must remember that precious-metal discoveries here did not occur in a total vacuum, any more than had the other four strikes we have examined. Rather, each took place in a larger setting, a setting at a particular stage of economic, technological, and political development: and the ways in which the new metal would be utilized were a direct reflection of this larger set of circumstances. So we would expect the introduction of coinage and the establishment of mints in Spanish America and Brazil, in California and Australia, because the isolation of these regions from the normal suppliers of coin, coupled with booming local economies, would demand as much, and more. But by the time the Alaskan fields were discovered, the rules of the game had changed. Communication with the fields was difficult - but they were still far more accessible than their earlier counterparts. And so, while the gold flowed out as dust or ingots (and trickled back in as coin, when needed), the coins in question would be struck at established facilities rather than at a new one, specifically called into being for the purpose. The same held true for the precious metal mined on the Canadian side of the line: and the only local reminders of the Klondike and Alaskan Gold Rushes are tiny souvenir tokens, which were indeed made from native gold but struck in the Lower Forty-Eight. Several dozen varieties are known, ostensibly minted between 1862 and 1911; it is doubtful whether any actually functioned as coins - or even reached Alaska.

But Alaskan gold certainly entered orthodox American coinage. The across-the-board increase in every denomination between 1897 and 1902 may be ascribed to many causes (among them the return of prosperity in the late 1890s); but one of the reasons for the approximate doubling in gold coin production must have been due in part to the fact that there was simply more of the metal now available for coinage, metal coming from Alaska. A similar rise in the production of the British sovereign during the same period may, I think, be imputed, at least in part, to similar causes on the Canadian side of the border, in the Klondike

District. But the new mines in Western Australia would have also had much to do with the expanded mintage figures for the sovereign during these years.

The Alaskan Gold Rush had two final effects on the story of numismatics. First, the coming of new businesses and the establishment of new towns inspired the incorporation of new banks - and these, in turn, if they received federal charters under the national banking system, could issue their own currency. Four such institutions obtained federal charters, and three of them actually went into operation. All were set up because of the Alaskan Gold Rush: the First National Bank of Juneau opened its doors in 1898, the year of the first strikes, the First National Bank of Fairbanks followed in 1905, and was inspired by the rich discoveries in that region, and the third appeared in 1924, at Ketchikan, the port of entry for those wishing to try their luck in the gold fields. The three banks circulated notes ranging in denomination from five to twenty dollars, and while none was an economic power-house, all acted as further spurs to commerce, to continued and accelerating development, replicating a pattern seen earlier in Australia.

The discovery and exploitation of Alaska's gold had a final effect on the area's money and a last, curious parallel with events in Australia half a century earlier. We noted the popularity and necessity of tokens for small change on the Island Continent. They enjoyed an even greater vogue in Alaska - for while the federal government might find it worthwhile to send gold coinage north, it was disinclined to bother with small change. So merchants from Alakanuk to Yes Bay issued money of their own, and a surprisingly large percentage of these stopgaps were denominated, not as five- or ten-cent pieces, but as twelve-and-one-half cent pieces. That was the value, in cents, of the old Spanish-American real, a coin which still represented 'real' money to a majority of people in the northern outpost. A circle was completed between one mining frontier and another, separated by nearly half a millennium and thousands of miles, joined nonetheless by the color of magic, the color of gold.