

CONSERVATION v. RESTORATION

Not All Preservation Methods Are Considered Equal

by Amy Drew Thompson

Some coins need more, some less—but if it's done right, feel free to say it in mixed company. And please, try to keep your hands to yourself.

It is as inevitable as tomorrow's sunrise, I have found, for given collectors—whether novices or seasoned or lifelong numismatic professionals. Once I get them waxing nostalgic about the first coin their grandfather gave them or a prize plucked from a paper route collection or even a

coin from a favorite era in history, be it the bustling bazaars of ancient Rome, the foam-capped swells of Blackbeard's lawless oceans or the blood-stained Gettysburg battlefield, it always comes up: the enormity, the humbling awe of “holding a piece of history” in their hands.



This 1955 Washington quarter had traces of rust and oxidation prior to the conservation process.



This is the same Washington quarter that is pictured on the facing page, after conservation.

In fact, I feel entirely justified using those quotation marks generically.

And so, as a relative numismatic novice, I am often befuddled when these same people, during the same conversation, will warn me emphatically about not touching the coins. Yes, yes, I know—hold by the rim if you must, fingers off the obverse and reverse, *yada-yada-yada* ... I get it. But I just cannot imagine that the aforementioned depth and breadth of emotion—that otherworldly Ouija-like connection to history, to the birth and life and death of empires—can quite materialize when the coins are only ever being handled with latex gloves and calipers.

My unscientific hypothesis: Some of you are touching your coins. Tsk. Shame on you.

But really, it can't be *that* bad, can it? After all, many of these pieces have already endured far greater insult and managed to endure through *millennia*. Others, salvaged from a century or more spent in Davy Jones' piggy bank, have survived not only a watery grave, but the lengthy and largely top-secret process of resurrection.

And so I went to some experts to find out what it takes to preserve these items, to maintain and protect them so that we—and generations behind us—can enjoy them similarly and continue to unite us with what once was.

BASICS & BICKERING

Broadly speaking, "conservation" means the correction of environmental damage. According to Dan Sedwick of Winter Park, Florida, a full-time dealer specializing in the colonial coinage of Spanish America, damage could mean encrustation, oxidation or plain old, ordinary dirt. "But usually," he said, "it means chemical correction—acids and the like—and is generally followed up with retoning. The controversy comes from when the preservation is so good that you cannot tell it was altered."

Jeff Garrett, founder of Mid-American Rare Coin Galleries in Lexington, Kentucky, is no stranger to the often ill-informed rants that swirl around the idea of conservation. In most cases, he said in a recent newsletter article for the Bluegrass Coin Club, dealers who have a coin conserved are simply giving the public what it wants.

"Everyone wants original, bright white, uncleaned (sic) coins that are, in many cases, 150 years old. Some rare coins survive in this state of preservation, but not many," Garrett said. Collectors want what they want, he explained, "and [especially in the past] gave little thought to how they got that way."

Let's draw the line in the sand, shall we? Conservation and restoration are two very different things. The latter, while perhaps nice for aesthetics (depending on your idea of what makes a piece beautiful, of course), is nothing if not controversial.

"Redrawing details? That kind of thing opens the door for deception," Sedwick said.

Garrett would likely agree.

"Coin restoration," he said, "would be like plugging a hole or fixing previous damage." In other words: *doctoring*. "Conservation," he said, "is stabilization, removal of potentially harmful residue on the surface of a coin." He believes conservation is the flip side: "It's effectively anti-doctoring."

Conservation, he said, can be as simple as dipping a silver coin in jewel luster to remove tarnish. "And, of course, this can be much more complex for coins that have been in the ocean or buried underground, which can have significant deposits of minerals or other material ... and most people involved in the process of coin conservation consider the techniques for removal to be trade secrets. Little information is available on the actual methods."

FATHOMS DEEP

"There are many ways to conserve," said shipwreck-coin expert Sedwick, "and really, the most complex are not necessarily required for the best results."

Major conservators, he noted, use a reverse electrolysis process.

"The coins are dangled by alligator clips in an electrolytic bath through which a low current is sent. It is a slow process that is most effective in reversing the oxidation and is best in terms of long-term removal of salts."

While it is absolutely critical for treasure such as cannons or cannonballs, Sedwick said, it's not actually that big a problem with silver coins.



An inquisitive crab climbs aboard the recovery container holding gold coins from the SS Republic shipwreck site 1,700 feet deep. The excavation of this site was conducted entirely by robotics and was the first of its kind performed at such depths.



Gold coins are inspected upon recovery from the wreck of the *SS Republic*. The excavation yielded over 51,000 gold and silver coins, believed to be the largest hoard of Civil War-era currency ever discovered.



A team of numismatic experts conserve and inspect gold coins excavated from the wreck of the *SS Republic*.

"Really, just bathing them in acid and/or lye, followed by a baking soda rub, will make most shipwreck coins look nice again," he said. "Any metal that has been lost to corrosion is gone forever, so we are really just talking about making the remainder look as pleasant as possible."

Tools that are abrasive, he said, are not generally used. "But do note that some of the best-known shipwreck treasure folks have been infamous for 'tumbling' their coins—a process that makes numismatists cringe, as it effectively removes all evidence that the coins were struck."

With the exception of gold, most metals left in the ocean for long periods of time will be changed, said Frederick Van de Walle, director of conservation for Odyssey Marine, the world's preeminent company engaged in deep-ocean shipwreck exploration.

"In the case of the *SS Republic*, for example, some of the silver coins became embedded with microscopic coral while underwater for 140 years," he said. "Many of those coins retained full detail and the conservation process stabilized the coins."

The process of what Van de Walle called "first-aid conservation" begins immediately upon recovery, to extract salt and prevent

further damage to the piece due to the severe change in environment. The coins then head to a specialized facility to continue the journey. "Once stabilized, the coin is then encapsulated for long-term preservation."

When you're talking about silver shipwreck coins, Sedwick said, conservation can only be a good thing. "Well," he added with a chuckle, "except for the nice 'clumps' of coins—or what I call 'greenies'—which are sold more as artifacts than coins." It's actually when conservation work is done on non-shipwreck coins, he said, that things get controversial.

"It can be detrimental because it means the coins cannot be graded accurately," he explained. "Third-party graders do not give their usual numismatic grades on any coins that have been conserved ... or at least, they *shouldn't*. If conservation work means that a slabber will put a number on the slab without mentioning the conservation, then that is not fair."

Although exceptionally high surface quality can be seen in some shipwreck-recovered silver coins, Van de Walle said, silver will often retain signs of exposure to salt water regardless of the conservation methods used.

"Since some recovered coins will show the shipwreck effect, NCG [the Numis-

matic Guaranty Corporation of America] has adopted a grading convention to certify and authenticate shipwreck coinage."

The Shipwreck Effect Designation allows for an accurate description of a coin's condition by noting surface disturbances that result from its preservation history. A number of criteria must be met in order for a coin to qualify for a grade, not the least of which is that it is conserved by the least invasive means possible to ensure its stability.

It is a philosophy shared by the curators at the world's largest museum and research complex—the Smithsonian Institution in Washington, D.C.

NO TALKING, PLEASE.

Only a fraction of the Smithsonian's numismatic collection—made up of more than one million objects—is on display, but the bulk still needs to be stored and cared for correctly. And today's museum standards differ greatly from the common practices of just a short time ago.

"It is our philosophy to do the most proven—the least invasive—object treatments," said Karen Lee, curator of the National Numismatic Collection at the Smithsonian's National Museum of American History. "Centuries of collective museum experience around the world point to the benefits of minimizing exposure to mechanical or chemical treatments."

Not long ago, the prevailing philosophy was far different. "Fifty years ago, the museum practice—on an ancient Greek vase, for example—would be to put it back together and try to blend it all in so you didn't see where they repaired it," Lee said. "Now, we do the least—and the most reversible."

Today, if that same vase were incomplete, the curatorial staff might fill in the missing pieces—but more likely in a different color and material. "They'll *want* to draw attention to the fact that they've repaired it," Lee said, "that it's missing those pieces."

In the case of paper money, no restoration is ever made. "We wouldn't fill in a hole, but if the money was printed on low-grade paper that is naturally deteriorating because the pulp was perhaps highly acidic—we would do something called backing and wrapping," Lee said.

Essentially, that means placing the note in an inert Mylar sleeve and then wrapping it, so that it is supported by a bracket. "Probably a piece of Plexiglas that we'd cut precisely to its shape—it wouldn't be adhered, just supported." Visitors to the gallery would see every tear, every mark. Faded inks would remain as-is. Light levels would be set accordingly.

"Additionally," Lee said, "one of the things we've learned over many years is that you can't put a fragile paper object on display for long periods. Even in ambient light. You'd have to rest it. Swap it out for

something else. Conservation is a process that involves different combinations of different strategies.”

Lee also made the point that conservation is in the figurative eye of the beholder. The Smithsonian staffers come at their objects, numismatic or otherwise, from what she says is “a museum perspective, not a dealer perspective.”

Simply put, the objects’ worth is thought of in terms of history, not dollars and cents (no pun intended).

“The Smithsonian concept of value is connected with historic events: *Is it money from the Civil War? Was it made in an unusual way? At a mint using interesting technology?* We look at the things that allow us to teach history from the object ... Every layer, every aspect of a coin that is part of its patina—the gorgeous skin that the coin grows adds to its history, from our perspective.”

That said, museums still need to call on conservationists to help from time to time—most recently to undo damage caused by those aforementioned early museum practices.

“In the 1900s” Lee said, the standard way museums mounted small objects—whether a coin or a piece of stone or bone—was with a little piece of wax on the back.”

And over the years, NCS has helped them to remove wax from as many as 100 coins, Lee said, adding: “We couldn’t put them back on display with the new techniques until the wax was gone. A coin that was on display for 40 years using a piece of wax, depending on the metal, ages differently. If copper, the rest of the coin has toned around the circle where the wax was.”

Once removed, the lighter spot is permitted to catch up to the rest—a process that could take many years.

Professionals at the Smithsonian use gloves when handling their objects, of course. They are, after all, clinicians of a sort. Yet Lee said that some of their coins *do* have fingerprints. “Some are super shiny,” she said. “They have a mirror finish and we can see in our collection that probably 100 years ago, somebody put their finger on the surface of the coin instead of holding it by the edges.”

Practices were different then, she noted. Today, gloves are a must—as they should be for private collectors. And Lee’s been paying attention to more than just finger oils.

“Think about it,” she said. “You’re in the hobby environment, passing a coin around, and what do we all do? If you’re looking at it under a loupe, you have to bring it very close to your face. Even if you’re wearing gloves, I tell everyone who’s handling coins now, ‘No talking when you are looking at the coin.’”

Why?



An 1861-D gold dollar, before and after restoration.

“There’s a lot of moisture coming out of our mouths,” she said. “You’re examining it under the loupe, you’re talking about the details—I know it’s extreme—but what’s coming out of your mouth creates this little micro-humid environment on the surface of the coin.”

She buttresses the theory with evidence that’s been proven in Egypt, where tourist walk-throughs of many tombs have been suspended or curtailed due to extra humidity from the human activity—breath and sweat that have caused mold to grow.

“A 30-year study found that it created 80-percent relative humidity in an environment that wanted to be zero,” she related.

So resist, numismatists. Be strong when it comes to your own collections. Leave conservation to the professionals. And look, but don’t touch. Hold that piece of history in your hand *while* it’s in its proper case. Or, at least, wear gloves.

And maybe—while you’re at it—you should practice holding your breath, as well. ☺



NGC has adopted a grading convention to certify and authenticate shipwreck coinage.