

The Color of Morgan Dollars

What do terms such as rainbow, crescent, mottled, patina, bulls-eye, and iridescent have to do with numismatics? All are terms used by the collector to describe the look of the natural toning process that occurs on all coins. Certainly by numbers and in my view, the most spectacular and beautiful of all toned coins are Morgan dollars. Therefore, the purpose of this article is to describe the toning process with an emphasis of describing the type and color patterns that naturally occur on Morgan dollars. It should also be noted that since coins are struck from different medals and alloys all toned coins do not exhibit the same colors or patterns.

In order to recognize the “look” of naturally toned Morgan dollars, I believe it is important to understand the toning process and how it takes place. Natural toning is where a very thin film of oxidation forms on the coin’s surface as a result of a chemical combination of the metal in the coin with oxygen and other contaminant elements such as sulfur. This natural phenomenon generally occurs over a long period of time and once on the coin’s surface restricts certain wavelengths of light from reaching the eye. The thicker the layers of oxidation the less reflected light from the coin’s surface reaches the eye. Hence, as the layers of oxidation get thicker from one edge to the other, one can observe a gradual and predicable transition of colors across the surface of the coin. These colors are often referred to as the “colors of autumn” varying in a sequence from the yellows, to the magentas (reds), to cayenne (blues/greens) and finally to black in color. Black is the thickest film of oxidation as essentially no or very little light is allowed to reach the eye.

Toning on silver dollars can occur in several ways. For example, soon after striking, many Morgan silver dollars were stored in mint sealed bags impregnated with sulfur. In some cases these bags were stored at the mint, banks, and other places for many years without being disturbed or moved at all. As a result, an arched rainbow toning pattern occurred on some of the coins that were adjacent to the burlap in the mint sealed bag. This rainbow or crescent effect occurred because some of the dollars overlapped with others thus allowing the bands of autumn colors to form in the sequence of colors previously described. Because of the shape and the color of toning, sometimes these dollars are simply called “rainbows”. When beautifully colored, rainbow toned dollars are some of most highly sought after, often commanding very high premiums in today’s market.

Another type of toning that occurs on dollars stored in mint sealed bags is known as “textile” toning. This is noted by a crisscrossing pattern of color formed from the cotton threads in the mint bag holding the coins. This type of toning is much more difficult to find as only a small portion of toned dollars found in the bags developed this checkerboard effect. Rainbow toned dollars with textile toning are exceedingly rare often commanding prices in the stratosphere.

In addition to mint bag toning, there are other types of toning that can occur on silver dollars. “End wrapper” or “end roll” toning occurs when a coin is stored at the end of a bank paper roll for many, many years. Over time, the sulfur in the wrapper reacted

chemically with the coin at the end of the roll. Coins toned in this manner have geometric patterns that show the folded parts of the paper wrapper on one side of the coin. Coins in the interior part of the roll are many times toned only along the edges. This is because the rims were stored touching the paper wrapper and yet there was not enough air between the coins to allow the toning to migrate towards the center. End-roll toned coins are not as common as bag-toned dollars and when found tend to have less bag marks than those stored in mint bags. For these reasons they are also very popular with the advanced toned dollar collector.

Bulls-eye toning is when multiple bands of color emulate from the outside of the coin towards the center. Many times the center of the coin can be stark white as the toning has not had time to migrate to the center of the coin. This type of toning occurred when the coin was stored in one of the older holders such as the Wayte Raymond or Whitman holders. Many of these older holders were impregnated with sulfur thereby providing the necessary environment for toning. This type of toning can be very spectacular and is therefore popular with the toned collector as well.

Monochromatic toning refers to a coin that exhibits one color over the entire surface on one or both sides of the coin. On dollars as well as most other silver coins, this color is one of the "autumn colors" previously discussed. Monochromatic toning formed because the coin was placed in a Craft envelope or next to wood, felt, velvet, or some other contaminant for many years. It developed in a uniform manner because the surface of the coin was even or parallel to the contaminant thus allowing for even exposure of the coin to the sulfur source. Coins that toned in a Craft envelope are usually toned on both sides.

Coins do not necessarily need to be stored directly or adjacent to a strong sulfur source such as paper or a mint-sown bag to tone. Some coins tone naturally in the air simply because of the environmental conditions in which they were stored. For example, storage of coins in warm, moist conditions or storage of coins in conditions with an excessive amount of air contaminants encourages the natural toning process. Coins toned in this manner are usually toned over the entire face either on one or both sides. In addition, many may have a mottled or spotty appearance that appears to be blotched with different shades of autumn colors. This is because the coin did not react to the changing atmospheric conditions in a consistent manner.

Toning itself does not change the "technical grade" of a coin. It does, however, enhance the look or eye appeal of a coin and thereby affects the "market grade" of a coin. Depending on the particular type of toning, location and vibrancy of colors, some toned coins can trade at multiples over established bid sheet prices. In fact, I have seen common date toned Morgan dollars sell in the \$2000 to \$2500 range, which even I feel is ridiculous. It is because some toned coins command such high prices that unscrupulous people, known as "coin doctors", artificially tone a coin in an attempt to fool the collector and make more money. This is usually done with the use of some sort of liquid or gas transfer mechanism such as dipping or using smoke. In most cases toning is done with some sort of sulfur product and this process takes place over a very short period of time. It has been my observation that one of the most common types of toning that "coin doctors" try to emulate is bulls-eye toning.

Determining if the toning on a coin is natural or artificially done can be very tricky. The fact of the matter is that the "coin doctors" are very good these days and getting better all the time. A coin where the color seems to lay on top of the coin with abrupt changes in color is an indication that a "coin doctor" has been at work. In addition, toned Morgan dollars that don't have the previously described autumn colors or colors not in the proper sequence are signs for concern. The color on artificially toned coins sometimes has an unnatural iridescence where mint luster cannot be seen through the layers of color. Some doctored coins may have a blotchy appearance often showing water marks similar to what might be seen on a newly waxed car. I believe that this effect is due to the liquid product that has been used to artificially tone the coin. Instead, the right look for naturally toned dollars, or any coin for that matter, is where colors have not destroyed the natural patina or luster of the coin's surface. In addition, usually the toning in the recessed areas of the obverse and reverse designs is lighter in color than the toning in other areas of the coin. This is because these areas were more protected than the areas of the coin that rested directly on or was closer to the contaminant itself. Also keep in mind that many times coins are toned by the "coin doctor" to hide or cover up some other problems on the coin. Look for those problems.

Having said all this, it should be noted that it is sometimes very difficult for even the experts to determine if a coin is artificially toned. Look at as many toned coins as you can and soon you will get that sense about what looks right. Recognize that certain denominations and types of coins will tone in similar ways and if you look at enough toned coins you will begin to see the similarities. Even though the certification services don't always get it right, I believe when purchasing any coin whether toned or not, one should insist on the coin being certified by one of the major certification services. I do not recommend one of the alphabet certification services, but instead insist on coins certified by PCGS, NGC, or ANACS. With understanding of the toning process, market pricing, and use of certain safeguards such as the certification services, you too should be able to get your money's worth.

The above is not intended to give the reader a comprehensive or all encompassing understanding of toning on silver dollars. Instead it is being presented to introduce you to one phase of collecting that I have enjoyed over the years. Later this month I will be traveling to the ANA summer coin show in Chicago with my friend, Bob Shanks. Though I will not be looking specifically for toned Morgan dollars, you can believe that I will be looking for some "color" to spice up my collection. You might consider a few toned pieces for your collection as well.

John B.