

An Overdue Update on the Survival Rates of Liberty Seated Dollars

by Stephen Petty, LSCC #2077

As a long-time collector of Liberty Seated dollars and given that the rarity of Liberty Seated Dollars is well recognized, it is noteworthy the last comprehensive rarity evaluation for this series was published in 1993, 24 years ago, by Q. David Bowers in his Silver Dollars of the United States books. Several attempts have been made to update the rarity of the four Carson City dates (1870 through 1873) by both Weimar White and Rusty Goe since then, but a comprehensive evaluation of the rarity of Liberty Seated dollars has not been completed to my knowledge. With all the obvious limitations associated with making such estimates, this article updates these old estimates.

Why are Liberty Seated Dollars Rare? Background on Mintage of Liberty Seated Dollars

A plot of circulation strike mintages for Liberty Seated Dollars from 1840 to 1873 is shown in Figure 1 below.

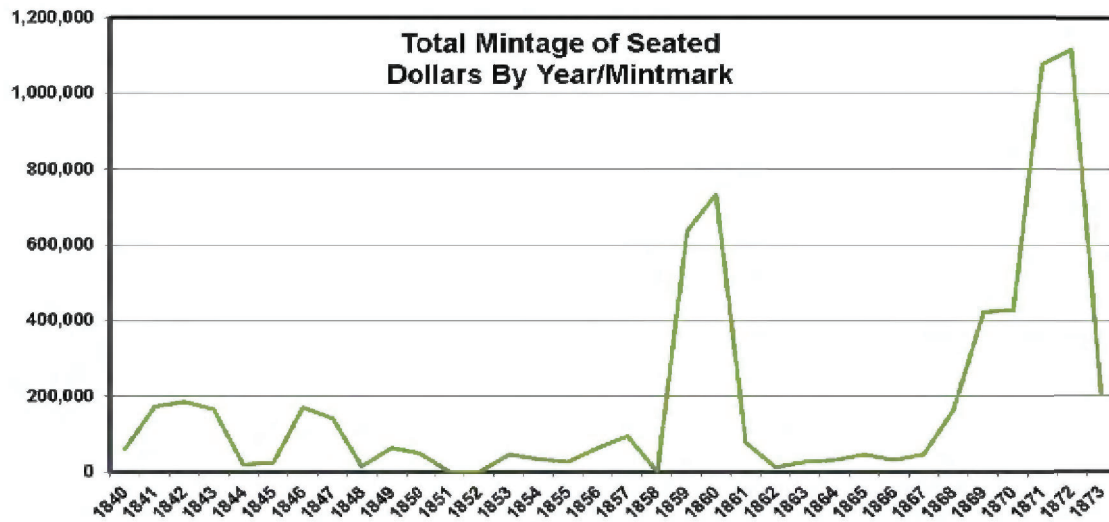


Figure 1. Liberty Seated Dollar Circulation Strike Mintages by Date.

Total circulation strike Liberty Seated dollars produced (44 issues) totaled 6,487,056 coins. The two highest mintage dates/mintmarks (1871 and 1872) account for 2,179,300 (or 33.4%) of the total mintage. Subtracting out these two totals, the average mintage of the remaining issues was just 102,566 coins per date/mintmark.

Making this situation worse was the fact that for much of this time interval, the silver content of the Liberty Seated dollars exceeded their melt value (see Figure 2), thus many were exported and melted.

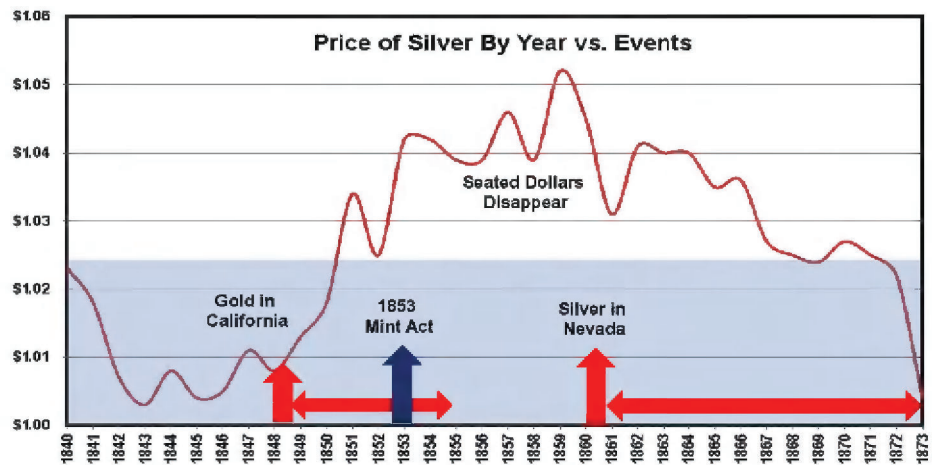


Figure 2. Value of Silver versus Time. (Continued on next page)

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The combination of the dollar not being devalued in 1853 coupled with the increased supply of gold from California resulted in the silver content of Liberty Seated dollars exceeding their face value from the 1850s until nearly 1870. Mintages were small simply because if minted, the coins would be melted; moreover no-one would provide silver at a loss. These factor all contributed to low mintages and thus low survival numbers for this series.

One final note, much has been written about the 700 1873-S Liberty Seated dollars reportedly minted; however, relatively recent research has shown, with the exception of perhaps one assay coin, that all the 1873-S Liberty Seated dollars were melted. In June 28, 2008, Nancy Oliver and Richard Kelly wrote in *Coin World* that they had found documents showing all these coins were apparently melted (shown below). Thus, the issue of the fate of the 1873-S Liberty Seated dollars appears to have been resolved.

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Telegram reveals fate of 1873-S Seated \$1 Researchers find Mint director's order to melt dollars

BY NANCY OLIVER AND RICHARD KELLY SPECIAL TO COIN WORLD

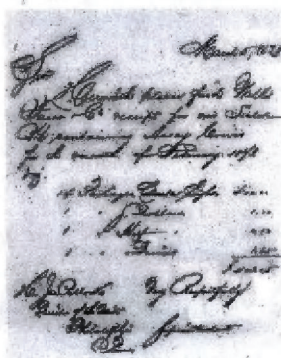
Documents recently found in the National Archives in San Bruno, Calif., may at long last solve one of the great mysteries in U.S. numismatics: the whereabouts of 700 1873-S Seated Liberty dollars.

It has been known for decades that U.S. Mint records state that 700 1873 Seated Liberty dollars were struck at the San Francisco Mint. However, no examples are known to exist in any collection.

For more than 100 years it has been generally accepted that the entire San Francisco Mint issue was melted, as well as many of the same year issues of both the Philadelphia and Carson City Mints because their melting was indirectly mandated by the Mint Act of Feb. 12, 1873.

However, because no documentation had been found to confirm a melting of coins at the San Francisco Mint and because no one seemed to have an 1873-S Seated Liberty dollar, some researchers questioned whether the 1873 issue was ever struck.

Recently, official Mint telegrams have been found that prove 1873-S Seated Liberty silver dollars were struck and reveal what happened to them and when.



Letter dated March 5, 1873, lists assay coins sent to the Philadelphia Mint from the San Francisco Mint, including a single 1873-S Seated Liberty silver dollar. The letter proves the dollars were struck.

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retained its original weight in silver throughout the 1853 to 1873 period as it was considered a "prestige" coin.

Before the Mint Act of Feb. 12, 1873, became law on April 1, the three operating Mints had produced silver dollars with the date of 1873.

During the first three months of the year, the Philadelphia Mint struck 293,000 silver dollars; the Carson City Mint produced a mere 2,300 1873-CC silver dollars; and the San Francisco Mint struck just 700 pieces.

Six pairs of dies were sent to the West Coast facility in anticipation of a large coinage for the export trade in the Far East.

Some California newspapers reported the San Francisco Mint had made 9,000 1872-S Seated

Liberty dollars specifically for export to Asia.

However, not even one example survives of San Francisco Mint's 700 1873-S Seated Liberty dollars, while many survive of the Philadelphia Mint issue, along with a few from the Carson City Mint issue.

This had led some to believe that no 1873-S Seated Liberty dollars were ever struck at the San Francisco facility.

However, numismatist Harry X. Boesel in his "1873" column in the June 20, 1957, issue of *Numismatic Scrapbook* magazine reported finding in the National Archives during a research session in 1956 critical correspondence including a letter from the San Francisco Mint that lists coins sent for assay. Boesel provides the text of the letter in his June 1957 column. A photograph of the Wells, Fargo & Co. receipt for the shipment of the coins by express is illustrated with the 1957 article.

These assay coins were struck during the first quarter of 1873. One of the coins listed in the letter is a single example of the 1873-S Seated Liberty dollar.

The documentation Boesel found attests to the fact that assay coins were not sent unless there was a period of coinage of the same issue.

For silver coinage, the rule was that at least one piece was to be retained and sent to the Assay Commission for each 2,000 coined.

This documentation in itself is proof of the coinage of that dollar.

What happened to them?

In addition, with the recent discovery of the text of three Mint telegrams, it is possible to finally answer the remaining questions: Were the silver dollars melted? If so, when?

In early May of 1873, San Francisco Mint Superintendent Oscar LaGrange sent a telegram to newly appointed Mint Director Henry Linderman, asking: "What is the mint to do with the silver coinage of the old standard?"

On May 23, Linderman responded that it had not been decided as of yet what to do with the old standard silver coinage.

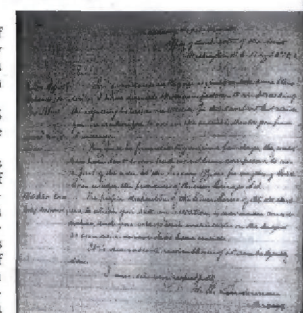
But on June 13, director Linderman sent a very interesting telegram to Superintendent LaGrange. In that telegram, Linderman instructed LaGrange, "to melt and recoil all silver coinage of 1873. If the recoinage of the old issue silver dollars in particular give a profit in the recoinage, then the difference is to be credited to the 'Silver Profit Fund.'"

Thus, this June 13th telegram (as well as the two previous telegrams) found in Record Group 104, Section 1.7 Letter and Telegrams received - 1872 to 1874, verify that 1873-S Seated Liberty dollars were indeed struck. They also show that in June 1873 there was a wholesale melt of the entire issue of 700 pieces of the Seated Liberty silver dollar.

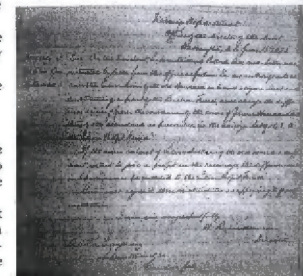
Were there any survivors?

As to the thoughts about whether any of these coins still exist, one story continues to circulate in numismatic circles. The theory is that the lone assay coin was directed to be destroyed during testing but that it may, in fact, have escaped such a fate after the commission met in 1874.

This theory may have been based on a story



Telegram dated May 23, 1873, from Mint Director Henry Linderman to Oscar LaGrange, superintendent of the San Francisco Mint, indicates that no decision had been made on what to do with the silver coinage struck under the old weight standards before the February 1873 act went into effect.



In a June 13, 1873, telegram, Mint Director Linderman ordered the melting and recoinage of 1873 silver coinage. This is the first direct evidence that Mint officials melted the 1873-S Seated Liberty silver dollars, although that fate had long been suspected.

that a collector in Nevada reported seeing an 1873-S Seated Liberty dollar in 1971. The coin in question had been damaged but was supposedly still clear enough to read the date and Mint mark. However, the report of this damaged coin (apparently used as a baby teether), which was believed to have once been in the hands of a descendent of a former Mint employee, can no longer be proven conclusively because the man who was the source of the announcement is deceased.

Other accounts reported that the owner of the coin later denied it ever existed.

If the report is true, then the only remaining coin from a mintage of just 700 must exist somewhere.

A final detail: There has been little mention in numismatic literature that 5,000 1873-S Seated Liberty, No Arrows half dollars also were reported to have been struck. Again, like the 1873-S Seated Liberty dollar - no pieces are known to exist. Presumably they were also melted.



The Philadelphia Mint struck 293,000 1873 Seated Liberty silver dollars, many of which survive, top. The Carson City Mint struck 2,300 1873-CC dollars, a few of which survive, not shown. No 1873-S Seated Liberty dollar is known today.

Legislation approved in February 1873 terminated production of the 2-cent coin, the silver 3-cent piece, the half dime and the standard silver dollar, but the legislation provided for the coinage of the Trade dollar. The act also added weight to the dime, quarter dollar and half dollar, which had been reduced in weight 20 years before in 1853. However, the silver dollar had

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Oscar LaGrange was superintendent of the San Francisco Mint when the 1873-S Seated Liberty dollars were struck. He asked the Mint director for instructions on what to do with the 1873 silver coinage in early May. The order to melt the coins arrived in June.

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Rarity Determinations Gradable Circulation Strike Liberty Seated Dollars

The first step taken in my rarity analysis was to assemble the reported populations of the four reporting third-party grading services (i.e., ANACS, ICG, NGC, and PCGS); often one sees counts just from NGC and PCGS but this analysis is different in that it considers population data as of June 2017 from all four services (Table 1). Note that SEGS, as a major grading service, is not included because they do not yet post population data.

In terms of graded coins (i.e., not including those graded genuine or “bagged”) the total number of coins graded for all 44 issues was found to be 31,741. The overall survival rate based on “graded coins” from these four services was 0.49%; the lowest rate was 0.11% for the 1859 date and the largest was 100% for the 1870-S. Other observations from Table 1 for graded coins are:

- ▶ The number of graded coins by third-party grading services were 15,441 (48.65%), 9,441 (29.74%), 5,664 (17.84%) and 1,195 (3.76%) coins respectively for PCGS, NGC, ANACS, and ICG.

This is not surprising as Liberty Seated dollars are relatively expensive and a typical collector would candidly prefer to have their coins in NGC or PCGS holders.

- ▶ The issue with the highest total number of graded coins from the four services was the 1860 with 3,082 coins; then next highest total was the 1871 with 2,650 reported graded.
- ▶ The issue with the lowest total number of graded coins from the four services was the 1870-S with nine coins; then next lowest totals were the 1851 with 63 and the 1852 with 66 coins reported graded.
- ▶ The 1870-CC is the most available of the four Carson City issues with 887 coins graded. This coin is relatively expensive, given its rarity, but reflects the desirability of Carson City issues.

Data from Table 1 were sorted by rarity and these results are shown in Table 2.

Interestingly, based on my own collecting history putting together a complete date/mintmark set, the last coin obtained was an 1859. As shown in this table, the 1859 and 1869 have the lowest survival rates for mint state graded Liberty Seated Dollars.

Similar data just for uncirculated (\geq MS60 grades) was broken out and is presented in Table 3:



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Table 1. Raw Data on Circulation Strike Liberty Seated Dollars Graded by Date/Mintmark for the Four Reporting Grading Services

Year / Mintmark	Third Party Grading Service - # Graded				Total Graded - All Four Services	Mintage	Survival % (Graded)
	PCGS	NGC	ANACS	ICG			
1840	398	268	175	24	865	61,005	1.42%
1841	436	271	180	36	923	173,000	0.53%
1842	32	622	327	79	1,860	184,618	1.01%
1843	695	515	332	73	1,615	165,100	0.98%
1844	278	162	126	24	590	20,000	2.95%
1845	304	188	141	26	659	24,500	2.69%
1846	763	512	302	73	1,650	110,600	1.49%
1846-O	334	179	141	19	673	59,000	1.14%
1847	734	527	357	54	1,672	140,750	1.19%
1848	209	98	46	7	360	15,000	2.40%
1849	424	304	167	39	934	62,600	1.49%
1850	203	116	51	6	376	7,500	5.01%
1850-O	218	145	101	14	478	40,000	1.20%
1851	35	26	1	1	63	1,300	4.85%
1852	36	19	4	7	66	1,100	6.00%
1853	235	148	71	25	479	46,110	1.04%
1854	109	46	18	11	184	33,140	0.56%
1855	118	58	19	5	200	26,000	0.77%
1856	137	54	33	10	234	63,500	0.37%
1857	139	89	32	6	266	94,000	0.28%
1859	158	79	49	7	293	255,700	0.11%
1859-O	1,049	652	384	83	2,168	360,000	0.60%
1859-S	258	145	73	16	492	20,000	2.46%
1860	216	12	60	10	406	217,600	0.19%
1860-O	1,492	924	516	150	3,082	515,000	0.60%
1861	159	76	41	17	293	77,500	0.38%
1862	162	89	48	11	310	11,540	2.69%
1863	165	81	44	11	301	27,200	1.11%
1864	190	90	48	13	341	30,700	1.11%
1865	192	77	61	5	335	46,500	0.72%
1866	216	113	72	9	410	48,900	0.84%
1867	178	72	49	5	304	46,900	0.65%
1868	197	115	88	9	409	162,100	0.25%
1869	258	135	90	13	496	423,700	0.12%
1870	379	245	147	20	791	415,000	0.19%
1870-CC	526	223	116	22	887	11,758	7.54%
1870-S	5	4	0	0	9	9	100.00%
1871	1,203	805	503	119	2,630	1,073,800	0.24%
1871-CC	114	46	20	2	182	1,376	13.23%
1872	54	594	434	103	1,985	1,105,500	0.18%
1872-CC	234	8	32	7	361	3,150	11.46%
1872-S	234	111	70	9	424	9,000	4.71%
1873	277	184	80	14	555	293,000	0.19%
1873-CC	88	2	15	1	130	2,300	5.65%
Totals	15,441	9,441	5,664	1,195	31,741	6,487,05	0.49%

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Table 2. Raw Data on Circulation Strike Liberty Seated Dollars Graded by Survival Rarity for the Four Reporting Grading Services.

Year / Mintmark	Total Graded - All Four Services	Mintage	Survival % (Graded)
1859	293	255,700	0.11%
1869	496	423,700	0.12%
1872	1,985	1,105,500	0.18%
1860	406	217,600	0.19%
1873	555	293,000	0.19%
1870	791	415,000	0.19%
1871	2,630	1,073,800	0.24%
1868	409	162,100	0.25%
1857	266	94,000	0.28%
1856	234	63,500	0.37%
1861	293	77,500	0.38%
1841	923	173,000	0.53%
1854	184	33,140	0.56%
1860-O	3,082	515,000	0.60%
1859-O	2,168	360,000	0.60%
1867	304	46,900	0.65%
1865	335	46,500	0.72%
1855	200	26,000	0.77%
1866	410	48,900	0.84%
1843	1,615	165,100	0.98%
1842	1,860	184,618	1.01%
1853	479	46,110	1.04%
1863	301	27,200	1.11%
1864	341	30,700	1.11%
1846-O	673	59,000	1.14%
1847	1,672	140,750	1.19%
1850-O	478	40,000	1.20%
1840	865	61,005	1.42%
1846	1,650	110,600	1.49%
1849	934	62,600	1.49%
1848	36	15,000	2.40%
1859-S	492	20,000	2.46%
1862	310	11,540	2.69%
1845	659	24,500	2.69%
1844	590	20,000	2.95%
1872-S	424	9,000	4.71%
1851	63	1,300	4.85%
1850	376	7,500	5.01%
1873-CC	13	2,300	5.65%
1852	66	1,100	6.00%
1870-CC	887	11,758	7.54%
1872-CC	3	3,150	11.46%
1871-CC	182	1,376	13.23%
1870-S	9	9	100.00%
Totals	31,741	■,487,056	0.49%

Table 3. Raw Data on Uncirculated Liberty Seated Dollars Graded by Survival Rarity for the Four Reporting Grading Services.

Year / Mintmark	Total Graded UNC Coins- All Four Services	Mintage	Survival % (Graded)
1872	236	1,105,500	0.02%
1869	106	423,700	0.03%
1859	79	255,700	0.03%
1868	58	162,100	0.04%
1871	390	1,073,800	0.04%
1870	166	415,000	0.04%
1856	36	63,500	0.06%
1873	167	293,000	0.06%
1850-O	27	40,000	0.07%
1841	119	173,000	0.07%
1860	167	217,600	0.08%
1843	131	165,100	0.08%
1846-O	48	59,000	0.08%
1842	186	184,618	0.10%
1847	173	140,750	0.12%
1857	116	94,000	0.12%
1865	65	46,500	0.14%
1861	118	77,500	0.15%
1840	93	61,005	0.15%
1846	182	110,600	0.16%
1854	56	33,140	0.17%
1855	45	26,000	0.17%
1867	84	46,900	0.18%
1864	59	30,700	0.19%
1845	51	24,500	0.21%
1866	104	48,900	0.21%
1859-S	47	20,000	0.24%
1848	36	15,000	0.24%
1859-O	932	360,000	0.26%
1849	163	62,600	0.26%
1872-S	24	9,000	0.27%
1860-O	1,469	515,000	0.29%
1844	60	20,000	0.30%
1870-CC	39	11,758	0.33%
1873-CC	8	2,300	0.35%
1853	165	46,110	0.36%
1863	117	27,200	0.43%
1871-CC	8	1,376	0.58%
1872-CC	28	3,150	0.89%
1850	83	7,500	1.11%
1862	140	11,540	1.21%
1852	28	1,100	2.55%
1851	40	1,300	3.08%
1870-S	1	9	11.11%
Totals	6,450	6,487,056	0.10%

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For space reasons, the breakdown of the 6,450 uncirculated circulation strike coins by grading service was not presented; however the number of coins by service was found to be 3,191 (49.47%), 2,516 (39.01%), 557 (8.64%) and 186 (2.88%) for PCGS, NGC, ANACS, and ICG respectively. Even more, with all the graded circulations strike coins, NGC and PCGS dominate the coin counts for uncirculated Liberty Seated dollars.

Somewhat surprisingly, the 1872 Liberty Seated dollar in uncirculated condition has the lowest survival rate based on coins graded by the four third-party grading services. On the other hand, it took me nearly 10 years to find an acceptable uncirculated example for this date for my personal collection.

While the reader may find the previous data interesting as I did, it is not a determination of overall Liberty Seated dollar survival rates; they may be a reasonable reflection for gradable Liberty Seated dollar rarity. The basis for this opinion is that:

- ▶ Re-grading (cracking out) of coins to the same service results in elevated gradable counts.
- ▶ Re-grading (cracking out) of coins between services also results in elevated gradable counts.
- ▶ Ungraded raw coins results in an undercounting of gradable counts.
- ▶ Given grading services have been in place for over 30 years, *it is highly likely that most gradable coins have been graded and it is also likely that the number of graded coins is best estimated by the values presented in Tables 1 through 3.*

Liberty Seated Dollar Survival Determinations All Circulation Strike Liberty Seated Dollars

A determination of the overall survival rates of Liberty Seated dollars is more difficult than simply determining how many Liberty Seated dollars have been graded. On the other hand, the number of graded Liberty Seated dollars can, in my opinion, at this point serve as the starting point for overall survival determinations.

Overall survival rates are a combination of

net coins graded plus those either not gradable or not ever graded. These last two terms are the two items that make these estimates difficult. However, in reviewing information available from the four grading services with population data, it was found that ANACS maintains accessible data with a Grade of 0 (i.e., Genuine) and those graded "Details." In discussions with ANACS, they noted that they recognize the reality that they are a grading service that receives more than their share of questionable coins from owners hoping to get marginal coins in a holder. Thus, the ANACS counts for genuine and details coins likely represent a large portion of the non-gradable coins, especially for relatively expensive Liberty Seated dollars.

So, my hypothesis is that reasonable estimates (midpoint and range) of survival rates for Mint State Liberty Seated Dollars is:

- Midpoint Estimates: Gradable Counts + 2 times ANACS Genuine and Details Counts.
- Range of Estimates: Gradable Counts + 1 times ANACS Genuine and Detail Counts to Gradable Counts + 3 times ANACS Genuine and Details Counts.

As shown in Table 4, the total number of ANACS coins either graded genuine or graded details mint state Liberty Seated dollars was 7,830 coins, 24.7% of the total number of graded coins. I found the fact that 7,820 mint state Liberty Seated dollars were submitted to ANACS and determined not to be gradable was somewhat surprising. Together, the total number of graded mint state Liberty Seated dollars plus non-graded ANACS Liberty Seated dollars totaled 39,571 Liberty Seated dollars.

Following my hypothesis regarding surviving mint state Liberty Seated dollars, the totals calculated are summarized in Table 5.

As shown in Table 5, my estimates for the survival of the total number of circulation strike Liberty Seated Dollars is:

Midpoint: 47,401
Range: 39,571 to 55,231.

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Table 4. Input Data on Liberty Seated Dollars for Determining Survival Rates.

(Continued from previous page)

Year / Mintmark	Total Graded - All Four Services	ANACS Genuine + Details Populations	Total Graded + ANACS Non-Graded Populations
1840	865	212	1,077
1841	923	195	1,118
1842	1,860	409	2,269
1843	1,615	385	2,000
1844	590	123	713
1845	659	163	822
1846	1,650	416	2,066
1846-O	673	189	862
1847	1,672	415	2,087
1848	360	97	457
1849	934	194	1,128
1850	376	97	473
1850-O	478	145	623
1851	63	2	65
1852	66	11	77
1853	479	77	556
1854	184	44	228
1855	200	57	257
1856	234	57	291
1857	26	46	312
1859	293	65	358
1859-O	2,168	486	2,654
1859-S	492	122	614
1860	406	86	492
1860-O	3,082	620	3,702
1861	293	57	350
1862	310	63	373
1863	301	57	358
1864	341	88	429
1865	335	77	412
1866	410	111	521
1867	304	85	389
1868	409	100	509
1869	496	149	645
1870	791	245	1,036
1870-CC	887	274	1,161
1870-S	9	0	9
1871	2,630	796	3,426
1871-CC	182	52	234
1872	1,985	589	2,574
1872-CC	361	88	449
1872-S	424	114	538
1873	555	130	685
1873-CC	130	42	172
Totals	31,741	7,830	39,571

The results sorted by midpoint survival percentages is presented in Table 6.

As shown in Table 6, the 1859 (0.17%) and 1869 (0.19%) have the lowest survival rates for circulation strike Liberty Seated dollars.

To check against earlier survival estimates by Bowers, a comparison of results in Table 6 against the 1993 Bowers data, and for the Carson City issues only (Rusty Goe estimates), was completed. These results are summarized in Table 7.

Observations from Table 7 are:

- ◆ Overall, the Petty Midpoint survival estimate is 47,401 (0.73%) Liberty Seated Dollars, less than the 60,486 (0.93%) estimated by Bowers in his 1993 Silver Dollar book.
- ◆ In looking at individual issues, Petty's midpoint estimates both exceed and are less than those proposed by Bowers.
- ◆ Some of the largest disparities are with the four Carson City issues; these revised estimates are much greater than those published by Bowers and Goe. The reason for this is the relatively large number of details coins reported by ANACS for the four Carson City dates.

DISCUSSION.

The author welcomes your thoughts and criticisms. My hope is that this paper will provoke one or the other.

THANKS and DEDICATION.

Thank you to the four grading services for access and use of their population data.

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Table 5: Survival Estimates of Circulation Strike Liberty Seated Dollars (Midpoint and Range).

Year / Mintmark	Survival Rate – Pops. (Midpoint Estimate)	Survival – % (Midpoint Estimate)	Survival Rate – Pops. (Range)	
			Low	High
1840	1,289	2.11%	1,077	1,501
1841	1,313	0.76%	1,118	1,508
1842	2,678	1.45%	2,269	3,087
1843	2,385	1.44%	2,000	2,770
1844	836	4.18%	713	959
1845	985	4.02%	822	1,148
1846	2,482	2.24%	2,066	2,898
1846-O	1,051	1.78%	862	1,240
1847	2,502	1.78%	2,087	2,917
1848	554	3.69%	457	651
1849	1,322	2.11%	1,128	1,516
1850	570	7.60%	473	667
1850-O	768	1.92%	623	913
1851	67	5.15%	65	69
1852	88	8.00%	77	99
1853	633	1.37%	556	710
1854	272	0.82%	228	316
1855	314	1.21%	257	371
1856	348	0.55%	291	405
1857	358	0.38%	312	404
1859	423	0.17%	358	488
1859-O	3,140	0.87%	2,654	3,626
1859-S	736	3.68%	614	858
1860	578	0.27%	492	664
1860-O	4,322	0.84%	3,702	4,942
1861	407	0.53%	350	464
1862	436	3.78%	373	499
1863	415	1.53%	358	472
1864	517	1.68%	429	605
1865	489	1.05%	412	566
1866	632	1.29%	521	743
1867	474	1.01%	389	559
1868	609	0.38%	509	709
1869	794	0.19%	645	943
1870	1,281	0.31%	1,036	1,526
1870-CC	1,435	12.20%	1,161	1,709
1870-S	9	100.00%	9	9
1871	4,222	0.39%	3,426	5,018
1871-CC	286	20.78%	234	338
1872	3,163	0.29%	2,574	3,752
1872-CC	537	17.05%	449	625
1872-S	652	7.24%	538	766
1873	815	0.28%	685	945
1873-CC	214	9.30%	172	256
Totals	47,401		39,571	55,231
% Mintage	0.73%		0.61%	0.85%

An Overdue Update on the Survival Rates of Liberty Seated Dollars

Table 6: Survival Estimates of Circulation Strike Liberty Seated Dollars (Midpoint and Range) – Sorted.

Year / Mintmark	Survival Rate – Pops. (Midpoint Estimate)	Survival Rate – % (Midpoint Estimate)	Survival Rate – Pops. (Range)	
			Low	High
1859	423	0.17%	358	488
1869	794	0.19%	645	943
1860	578	0.27%	492	664
1873	815	0.28%	685	945
1872	3,163	0.29%	2,574	3,752
1870	1,281	0.31%	1,036	1,526
1868	609	0.38%	509	709
1857	358	0.38%	312	404
1871	4,222	0.39%	3,426	5,018
1861	407	0.53%	350	464
1856	348	0.55%	291	405
1841	1,313	0.76%	1,118	1,508
1854	272	0.82%	228	316
1860-O	4,322	0.84%	3,702	4,942
1859-O	3,140	0.87%	2,654	3,626
1867	474	1.01%	389	559
1865	489	1.05%	412	566
1855	314	1.21%	257	371
1866	632	1.29%	521	743
1853	633	1.37%	556	710
1843	2,385	1.44%	2,000	2,770
1842	2,678	1.45%	2,269	3,087
1863	415	1.53%	358	472
1864	517	1.68%	429	605
1847	2,502	1.78%	2,087	2,917
1846-O	1,051	1.78%	862	1,240
1850-O	783	1.92%	623	913
1849	1,322	2.11%	1,128	1,516
1840	1,289	2.11%	1,077	1,501
1846	2,482	2.24%	2,066	2,898
1859-S	735	3.68%	614	858
1848	554	3.69%	457	651
1862	435	3.78%	373	499
1845	985	4.02%	822	1,148
1844	835	4.18%	713	959
1851	67	5.15%	65	69
1872-S	652	7.24%	538	766
1850	570	7.60%	473	667
1852	88	8.00%	77	99
1873-CC	214	9.30%	172	256
1870-CC	1,435	12.20%	1,161	1,709
1872-CC	537	17.05%	449	625
1871-CC	285	20.78%	234	338
1870-S	9	100.00%	9	9
Totals	47,401		39,571	55,231
% Mintage	0.73%		0.61%	0.85%

An Overdue Update on the Survival Rates of Liberty Seated Dollars

Table 7: Survival – Comparison of Petty vs. Bowers & Goe (Carson City only) Estimates.

Year / Mintmark	Bowers Survival Estimates				Petty Pop Survival (Midpoint)	Petty % Survival (Midpoint)	Ratio of Survival (Petty vs. Bowers)	Goe - From Curry's Chronicle's – Fall-Winter 2011	Goe - From Curry's Chronicle's – % vs. Bowers %
	Low	High	Mid-point	Bowers % Survival (Midpoint)					
1840	1,250	1,850	1,550	2.54%	1,289	2.11%	0.83		
1841	1,000	1,500	1,250	0.72%	1,313	0.76%	1.05		
1842	3,500	5,000	4,250	2.30%	2,678	1.45%	0.63		
1843	3,500	5,000	4,250	2.57%	2,385	1.44%	0.56		
1844	700	1,000	850	4.25%	836	4.18%	0.98		
1845	900	1,400	1,150	4.69%	985	4.02%	0.86		
1846	2,000	4,000	3,000	2.71%	2,482	2.24%	0.83		
1846-O	1,000	1,500	1,250	2.12%	1,051	1.78%	0.84		
1847	3,000	5,000	4,000	2.84%	2,502	1.78%	0.63		
1848	600	1,000	800	5.33%	554	3.69%	0.69		
1849	1,400	2,000	1,700	2.72%	1,322	2.11%	0.78		
1850	350	500	425	5.67%	570	7.60%	1.34		
1850-O	800	1,200	1,000	2.50%	768	1.92%	0.77		
1851	26	52	39	3.00%	67	5.15%	1.72		
1852	30	80	55	5.00%	81	8.00%	1.60		
1853	750	1,100	925	2.01%	633	1.37%	0.68		
1854	160	250	205	0.62%	272	0.82%	1.33		
1855	180	340	260	1.00%	314	1.21%	1.21		
1856	210	370	290	0.46%	348	0.55%	1.20		
1857	240	400	320	0.34%	358	0.38%	1.12		
1859	380	525	453	0.18%	423	0.17%	0.93		
1859-O	4,300	6,900	5,600	1.56%	3,140	0.87%	0.56		
1859-S	750	1,260	1,005	5.03%	736	3.68%	0.73		
1860	600	1,000	800	0.37%	578	0.27%	0.72		
1860-O	9,000	10,500	9,750	1.89%	4,322	0.84%	0.44		
1861	240	400	320	0.41%	407	0.53%	1.27		
1862	380	525	453	3.92%	436	3.78%	0.96		
1863	325	500	413	1.52%	415	1.53%	1.01		
1864	325	500	413	1.34%	517	1.68%	1.25		
1865	310	500	405	0.87%	489	1.05%	1.21		
1866	340	525	433	0.88%	632	1.29%	1.46		
1867	170	300	235	0.50%	474	1.01%	2.02		
1868	250	360	305	0.19%	609	0.38%	2.00		
1869	300	475	388	0.09%	794	0.19%	2.05		
1870	1,300	2,000	1,650	0.40%	1,281	0.31%	0.78		
1870-CC	280	390	335	2.85%	1,435	12.20%	4.28	556	0.63
1870-S	9	10	9.5	105.56%	9	100.00%	0.95		
1871	3,200	6,400	4,800	0.45%	4,222	0.39%	0.88		
1871-CC	80	130	105	7.63%	286	20.78%	2.72	140	0.77
1872	2,625	5,250	3,938	0.36%	3,163	0.29%	0.80		
1872-CC	150	230	190	6.03%	537	17.05%	2.83	254	0.71
1872-S	265	410	338	3.75%	652	7.24%	1.93		
1873	310	700	505	0.17%	815	0.28%	1.61		
1873-CC	60	95	78	3.37%	214	9.30%	2.76	100	0.77
Totals	47,545	73,427	60,486	0.93%	47,401	0.73%			