

A STUDY INTO DIE NUMBERS FOUND ON BRITISH

HALF SOVEREIGNS IN THE PERIOD 1863-1880

PART 3 1876-1880

Introduction

The period 1876-1880 is far less complicated than the previous period but still has a few complications which need to be covered. In the year 1876 a new obverse started to appear although the reverse die was not changed and continued in use until 1880. Coins using the new narrow ribbon obverse die were minted along with coins that used the previous wide ribbon obverse die for the years 1876 and 1877. This new obverse die continued until 1880, when a new obverse die of 136 denticles bearing the fifth head started to be used.. The half sovereign is the only denomination on which die numbers can be found on coins bearing the date 1880. The various types of half sovereigns that were minted in 1880 will be explained later.

S-3860E Fourth Portrait – 1876 to 1880

Obverse - Bust again enlarged with narrower first ribbon, if you extend the second ribbon it touches the end of the E in DEI and space between E and I. Approximately the width of one denticle between the G in Gratia and the back of the bun. Denticles 146

Reverse – Garnished shield with die number crenulated denticles top of cross on orb touches the border. Denticles 147

1878 Half Sovereign die number 65



Year	Mintage	Rarity	Best	Grading body
1876	2,804,000	N	MS63	PCGS
S3860D Die Nos. WR	None (i), 1, 9, 11, 13, 14, 16, 17, 18, 20, 21, 27, 29, 30, 32, 33, 34, 35, 36, 37, 44, 45, 49, 50, 51, 52, 53, 55, 69, 73, 74, 75, 76, 77, 78, 79, 80,			(37)
S3860E Die Nos. NR	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 21, 22, 23, 24, 25, 29, 30, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 46, 48, 50, 51, 52, 53, 55, 56, 57, 58, 60, 62, 63, 64, 65, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 92, 96, 97, 98,			(74)
Multi-version dies	WR: 49A,			(1)
	NR: 22A, 29A, 71A, 74A, 78A, 82A, 83A,			
	84A, 84B, 87A			(10)
Total	122			
Annual Report	143 (Percentage completion 85%)			

Comment – It should be noted that the same die number in this year appears with both wide and narrow obverses. When I have compared the alignment of the die numbers, I can confirm the reverses are different as well, so for example with die number 1, the 1 matched with a wide ribbon obverse the 1 is clear of the tip of the garnishing, whereas the 1 matched with a narrow ribbon obverse, the 1 is punched onto the tip of the garnishing meaning that there are two unique reverses bearing this die number in this particular year. From the study the die number range would finish before 100 however Royal Mint records show that a total of 143 reverse dies were used during the year and therefore some duplication of die numbers must have occurred.

As well as there being two versions of the same die number being used with wide and narrow ribbon obverse, different versions of the same die number can be found with the same type of obverse, for example with die number 84 there are 3 unique reverses each a variation bearing this die number which all have the narrow ribbon obverse, which further complicates this particular year,

An explanation for why this duplication occurred is that these reverses were the leftover numbered stock dies from previous years. The extremely low mintage of 486,494 produced in 1875 probably exasperated the situation.

(i) The coin with no die number was sold at the Reserve Bank of Australia Auction in November 2005. It subsequently appeared for sale at St James Auction 18 in September 2011. For all intents and purposes it is a normal third portrait half sovereign, having the wide ribbon obverse, but is the only one of its type so far not to have a die number, and would merit a R7 rarity rating.

Reserve Bank of Australia Auction

The coins offered by Downies in this auction came from the Reserve Bank holding which was accumulated during the period from 1929 to 1976 when Australian law required that gold held by the public be sold to the central bank. At the start of the 21st century it was decided that the coins did not serve any purpose for the bank's policy and those coins which were appraised to have a significant interest to the community of collectors were offered for sale in this auction. A total of 287 individual London mint half sovereign lots were offered at the time.

Year	Mintage	Comments	Rarity	Best	Grading body
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1877	N/A		R4	N/A	N/A
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The 1877 London Mint half sovereign with the third portrait obverse S3860D is an incredibly rare coin. I have only been able to confirm its existence on two separate die numbers which are given below. These die numbers also appear with the narrow ribbon obverse but in each case the same reverse die has been matched with both narrow and wide ribbon obverse dies. Please be aware that many auction houses and grading bodies mis-list 1877 coins as having the wider ribbon obverse. Please see below two 1877 half sovereigns of the wide and narrow ribbon variety for comparison purposes.

Die Numbers : 63, 69 (2)



Above are the two obverse portraits to be found on the 1877 coin, the first is the wide ribbon variety (DN69). The main differences are that the first type has a wider first ribbon, the second ribbon if extended points directly at the E in DEI, whereas the narrow ribbon variety (DN16) the second ribbon if extended points to the end of the E and the gap between E & I.

Year	Mintage	Rarity	Best	Grading body
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1877	1,962,800	N	MS64	NGC
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Die Numbers: 1, 2, 4, 5, 9, 10, 11, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24,
25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42,
43, 44, 45, 46, 47, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59,
60, 61, 62, 63, 64, 66, 67, 68, 69, 70, 71, 73, 74, 75, 78, 79,
80, 81, 82, 83, 84, 85, 86, 88, 89, 90, 91, 92, 93, 94, 95, 96,
97, 98, 99, 100, 101, 102, 103, 105, 108, 109, 110, 111, 113,
114, 118, 119, 122, 123, 124, 125, 126, 127, 129, 130, 132, 133,
134, 135, 136, 137, 139, 141, 143, 144, 145, 146, 147, 148, 149,
150, 151, 153, 154, 155, 157, 159, (127)

2 Version dies 39A, 40A, 56A, 67A, 70A, 74A, 94A, 97A, 143A, (9)

Total 136

Annual Report: 167 (Percentage completion 81%)

Comment: I have seen 9 coins on which there are two distinct versions with the same die number. More versions will undoubtedly be found in the future.

Year	Mintage	Rarity	Best	Grading body
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1878	2.317,506	N	MS65	NGC
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Die Numbers: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 18, 19, 20,
21, 23, 24, 25, 26, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38,
39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 51, 52, 53, 54, 55,
57, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72,
73, 74, 76. 77, 81, 83, 85, 96, 97, 98, 99, 100, 102, 103,
105, 106, 107, 113, 139, 147, 149, 153, 156, 159, 162, 404, (88)

2 Version Dies: 15A, (1)

Total 89

Annual Report 89 (Percentage completion 100%)

Comment

Only one die number with 2 versions has been found in this year, this is die number 15, including one version which has a most unusual number style with a remarkably thick 1 and a stylised 5 compared to the other version of this number.

I am of the opinion that the last series of die numbered dies for half sovereigns were numbered during 1878. Die numbers that appear in 1879 and 1880 come from this series and fit perfectly into the gaps with a few exceptions.. For instance the die numbers from 1879 i.e. 87, 88, 89, 95 & 112 would fit perfectly into this series. Whereas die number 77 probably utilises the same die from 1878. With the 1880 die numbers 12, 75, 78, 104, 108, 111, 114, 115, 118, 119, 120, 121, 122, 123, 124, 129. 131, also fit the gaps in the 1878 sequence. Die number 103 appears in both 1878 and 1880 and I am convinced the same reverse die has been used in both years.

Note the existence of a coin bearing the die number 404, totally out of sequence to the rest of the series. This coin was mentioned in a Dix Noonan Webb (now Noonan's) catalogue in 2006, without an image, an example appeared for sale in November 2023. This die probably comes from the stock numbered in 1873, five years earlier.

Year	Mintage	Rarity	Best	Grading body
1880	1,008,362	R	MS64	NGC

Die Numbers: 12, 75, 78, 103, 104, 108, 110, 111, 114, 115, 118,
119, 120, 121 122, 123, 124, 125, 129, 131,

Total (20)

Annual report: (42) (Percentage complete N/A - Report includes non-die numbers)

Coins with 4th portrait obverse 146 denticles: 114

Coins with 5th portrait obverse 136 denticles: 12, 75, 78, 103, 104, 108, 110, 111, 115,
118, 119, 121, 122, 123, 124, 125, 131,

Coins with both obverses: 120, 129,

There seems to be some confusion over the which 1880 half sovereigns exist. I will endeavour to try to clear this up, giving a listing of which coins exist.

Type 1 – Spink Ref 3860E. Fourth portrait with die number. A coin that is exactly the same as the previous years with the fourth portrait obverse of 146 denticles and a reverse of 147 denticles.



SINCONA British Collection, Part 5 (October 24, 2023), Lot 1683

Type 2 - Spink Ref 3860F. The larger fifth portrait obverse of 136 denticles matched with the die number reverse of 147 denticles.



© NOONANS - British Coins (September 18, 2012) Lot 2698

Type 3 – Spink Ref 3861 1880/1883-1885). This has the fifth portrait obverse (136 denticles) together with the new beaded reverse of 148 denticles without a die number.



I have not been able to find any examples of an London mint 1880 half sovereign without a die number, that does not have the fifth portrait obverse and the 148 die reverse. However with the Australian series the earlier reverse can be found on half sovereigns up to 1887. It appears that the Australian mints continued to use undated dies to use them up, a practice that continued with the Jubilee head series.

Conclusions

Can we say with any conviction why die numbers were added to most gold and silver coins starting in 1863, the simple answer I am afraid, would have to be a no. Let us examine some of the possible reasons.

Die wear – As previously stated, usually for most denominations, far more obverse dies were consumed in the minting process than the number reverse dies consumed, analysis of the half sovereign die account books for the period 1853 to 1867 shows that 5 times as many obverse half sovereign dies were destroyed compared to the number of reverse dies destroyed, so why mark the reverse? Also why would a die wear exercise take so many years to complete. Mr Robert A Hill Superintendent of the Operating Department in his report which forms part of the 1871 Royal Mint Annual Report, while discussing the reduction in average pieces coined per pair of dies in that year compared to 1870, made the following comment.

“ I should mention also that equally good results cannot always be expected as it is *well known* that each bar of steel may differ considerably in quality and that the metal requires constant watching, and often some variation of treatment in the processes of annealing and hardening. Some of the steel used during the year appeared to work very well and went through the various operations without exhibiting any defect; notwithstanding which, in the process of tempering, small cracks appeared on the surface of some of the dies and it became necessary to condemn them. In some cases the defect became evident as soon as the dies were put into the coining presses, while in others the dies were so sound that as many as 200,000 pieces were struck by a single pair”³

So if the Royal Mint knew that this why would the exercise continue for another 8 years.

Die management – In the late 1850's James Wyon, the cousin of William Wyon and the Resident Engraver after the death of William Wyon, made suggestions to Thomas Graham the Master of the Mint to increase the efficiency of the die and coining departments. In a letter dated 8th January 1858 he makes the following comment,

“The system of keeping the accounts of the die office which I have adopted, will render it easy for any schoolboy to give an account of every die from the time it is forged to the time of its going into the waste bin.”

Basically James Wyon's system was very rudimentary. Starting with brought forward figure the clerk would log the date and quantities of dies produced split between Obverse and Reverse. Occasionally the clerk would deduct the amount of dies destroyed giving a carried forward figure. At no point does the account book detail die numbers, In fact the half sovereign reverse dies that were used in 1863 came from stock that had been produced in 1859 and prior.

³ 2nd Annual Report of the Deputy Master and Comptroller of the Royal Mint p30

Resident Engraver

The duties of the Resident Engraver in the coining process, were described in the Royal Mint Annual Report for 1879 following the death of Thomas Joseph Minton in April of that year. Minton was promoted to the role in March 1865 but had worked in the die department at least as early as 1862. In the 1861 census his occupation is given as die and seal engraver and medallist.

“The more responsible part of the work entrusted to the Resident Engraver has consisted in the examination of all dies coming from the presses in which they are sunk, and in “punching in” the letters of the inscription and the figures of the date. After careful experiments it has been found preferable to complete all letters and figures on the “matrix” from which the working dies are reproduced the examination of the matrices and of the punches being entrusted, as heretofore to Mr Leonard Wyon the Chief Engraver”⁴

It seems likely that the die numbers were also “punched in” by the resident engraver or somebody working under his instruction. After Thomas Joseph Minton’s death die numbers ceased to be used, the die numbers found on the reverse dies in 1879 and 1880 in all likelihood had been die numbered in 1878 and earlier.

Worker remuneration

A far better reason for the use of die numbers would be worker remuneration. In the 1860s payment for piecework made up most of the remuneration that workmen in the coining department received. When the department was in full work the average that men working in the coining department earned, on a weekly basis was about £2 15 shillings which was made up of a subsistence payment of 10 shillings and the rest from the piecework system which was paid at a rate of about 2 shillings and 8 pence per 1000 good pieces for gold and silver. Perhaps the use of die numbers could help to establish the earnings for the individual teams that operated their respective screw or lever presses that were used during the period. The system was amended in 1867 when the subsistence payment was increased to 24 shillings to prevent good workers obtaining alternative work when the Mint was not working. The system was further reformed in 1870 when the rate for piecework for gold and silver coining was reduced to 1 shilling 9 pence together with a reduction to £1 in respect of the subsistence money. It should be noted that the piecework rate for bronze coinage was paid by weight and not by good pieces coined.

As fewer reverse dies were used than obverse dies for most denominations, the placement of the die number on the reverse die would make more sense as it would make it easier to allocate good coins to individual teams especially if records were kept to identify which dies had been issued to which teams. The notable exception to this being the florin, where the die number appeared on the obverse, however with the florin the number of obverse dies and reverse dies was evenly matched. (904/888 in the period 1868-1878). Further research into the piecework system is required.

Finally I hope the reader finds this study informative, but please remember this study is a work in progress and may contain errors. I have extensive records for most coins that I have recorded and would welcome the addition of any new die numbers to the study, providing of course, that they can be verified.

⁴ 10th Annual Report of the Deputy Master and Comptroller of the Royal Mint p14

APPENDIX 1

Half Sovereign Production Data Timetable 1863-1880 & Dies Used

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL '000	Dies Used	
														Obv	Rev
1863		421	624								327		1372		
1864			897							140	701	22	1760		
1865			841		140			152				701	1834		
1866			1503	556									2059		
1867				280	421	284		8					993		
1869						1262	421	179					1862	84	30
1870										841	140		981	61	22
1871	140	841	310	561	85							280	2217	174	93
1872			110	84	237			1402		701		701	3235	140	402
1873		701	140	561	561	41							2004	521	352
1874						1546			337				1883	340	83
1875										66	420		486	118	41
1876	981	1262		140	280	140							2803	476	143
1877											701	1264	1965	395	167
1878	421		1332	565									2318	206	89
1879												35	35	8	6
1880			981			27							1008	55	42

