

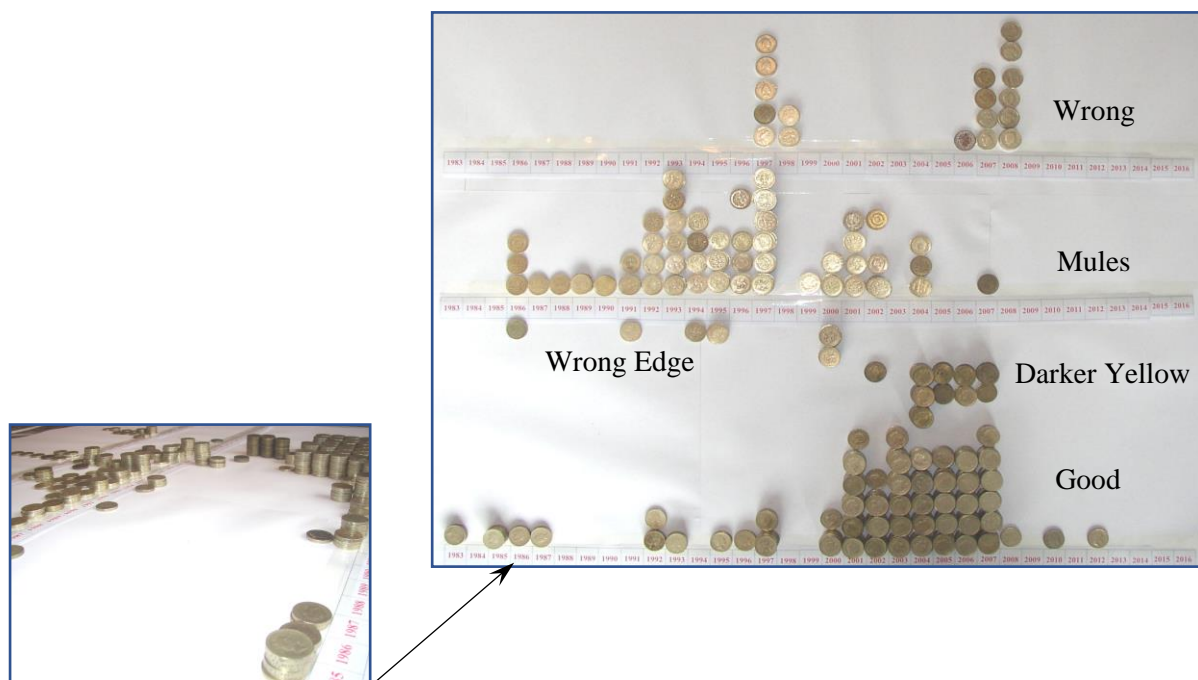
# Counterfeit Round Pound Coins (iii) Brass Issues

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In this third instalment the forgeries made in brass will be presented. Manufactured in vast numbers, these were by far the commonest counterfeits and would ultimately result in the issue of the dodecagonal pound coin in 2017. The large scale manufacture of brass counterfeits started sometime between 2000 and 2006 by which time there were a significant number of official reverse designs, edge readings and three different portraits.

With the use of harder brass alloys, the counterfeiting technology also changed to include striking as well as casting. There are significantly more muled designs in the brass issues, as compared to the lead alloy, as well as custom made dies, especially obverse dies with portraits that aren't quite right. With the brass counterfeits, the alignment of the dies is rarely correct.

Once again, data from the SN and EN collections is presented (611 and 1452 pieces respectively). The image below shows the SN collection divided into three classes (i) Good – just a copy with obverse and reverse correct and a reasonable attempt at the edge (ii) Good – but wrong edge (iii) Mules – faithful obverse and reverse but incorrectly paired, edge usually incorrect for one or both faces or completely garbled (iv) Wrong – one or both of the dies is not a faithful copy, either being CNC machined (with e.g. recut hair or wrong typefaces) or engraved by hand or an incorrect die. Whilst carrying out the sorting a further subgroup was identified where the metal was a much darker yellow. For the purpose of counting, they are added to the appropriate group.



**Fig. 1.** The SN collection of brass counterfeit round pound coins.

The latest date in the EN collection is 2006. It was not noted if the dies were wrong, so a few of these are likely included in the other three types for the dates 1997, 1998.

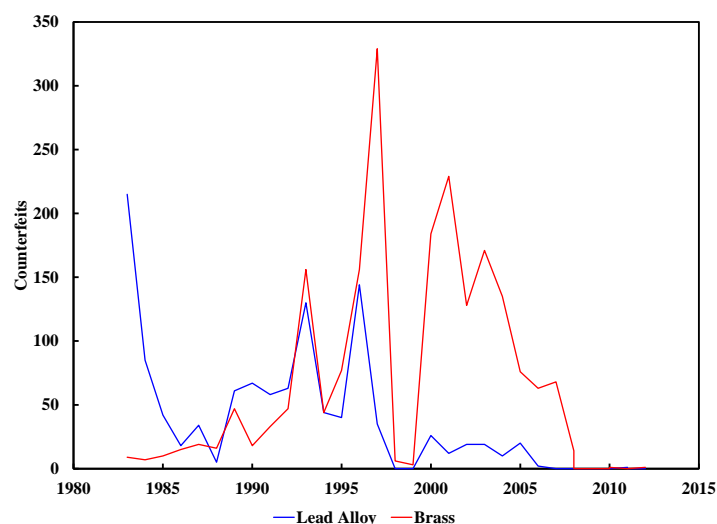
The table below summarises the SN and EN collections.

Date	Official Rev Design	SN Collection				EN Collection			
		Good	Edge	Mules	Wrong	Good	Edge	Mules	Wrong
1983	Royal Arms	3				6			
1984	Thistle					7			
1985	Leek	6				4			
1986	Flax Plant	2	1	3		5		4	
1987	Oak Tree	2		1		10		6	
1988	Shield			1		2		13	
1989	Thistle			3		1	2	43	
1990	Leek			2		10		6	
1991	Flax Plant	1	1	3			4	24	
1992	Oak Tree	4		4		12		27	
1993	Royal Arms	5		12		63		76	
1994	Lion Rampant		1	4		2	18	19	
1995	Dragon	2	3	8		11	16	37	
1996	Celtic Cross	3		5		83	4	61	
1997	Three Lions	15		32	5	112	12	153	
1998	Royal Arms				4	1		1	
1999	Lion Rampant			1				2	
2000	Dragon	12	14	19		22	96	22	
2001	Celtic Cross	51		6		140	2	30	
2002	Three Lions	33		12		75	1	7	
2003	Royal Arms	55				116			
2004	Forth Bridge	76		5		49	1	4	
2005	Menai Bridge	50				26			
2006	Egyptian Arch	58			1	4			
2007	Millennium Bridge	63		1	4				
2008	Royal Arms				13				
2008	Dent Shield	1							
2009	Dent Shield								
2010	Dent Shield								
2010	London Arms								
2010	Belfast Arms	?							
2011	Dent Shield								
2011	Cardiff Arms								
2011	Edinburgh Arms								
2012	Dent Shield	?							
Totals		442	20	122	27	761	156	535	n/a

**Table 1.** Summary of SN and EN collections of brass counterfeit pound coins.

Whilst in the first note in this series there was a significant decline in the production of lead alloy counterfeits<sup>(1)</sup> after about 2000, here the brass copies are scarce before about 1997.

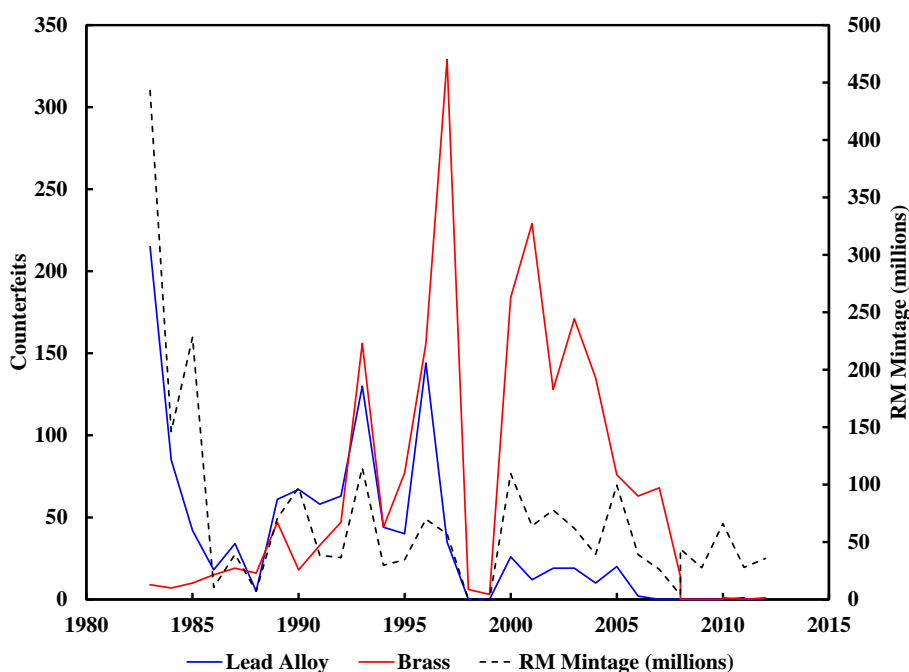
To quickly check this transition from lead alloy to brass counterfeits, Figure 2 plots the totals for each metal for each year as stated on the counterfeit.



**Fig. 2.** Totals for lead alloy and brass counterfeits presented in this study.

Whilst the latest definite brass counterfeit is dated 2008, the brass counterfeits continued to be produced in increasing quantities all the way up to 2016 and 2017, with the regular appearance of fresh, uncirculated counterfeits in change.

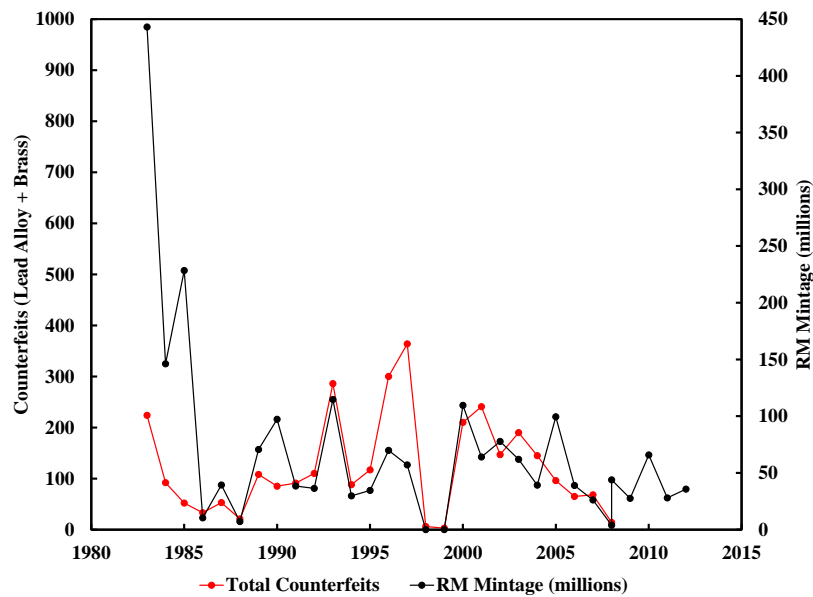
For interest, the mintage data for the official coins issued by the Royal Mint is also superimposed in Figure 3.



**Fig. 3.** Superimposing the numbers of officially issued coins.

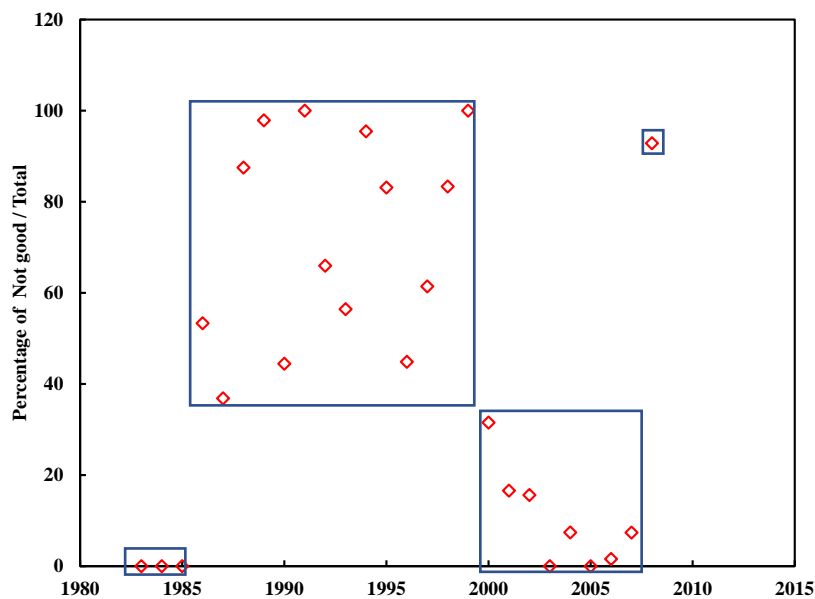
This plot confirms the usual suggestion that a counterfeiter copies the commonest coins to hand. Thus the peaks in official coin production in 1983, 1993, 1996, 2000 etc. also produced peaks in the dated counterfeits manufactured at the time or subsequently.

The correlation between the number of counterfeits and Royal Mint output becomes even clearer when the total counterfeits in this study are considered, lead alloy plus brass.



**Fig. 4.** Comparing the dated counterfeits with the Royal Mint annual production.

The transition from lead alloy counterfeits can be further probed by considering the muled designs. Figure 5 plots the ratio of the “not good” counterfeits (incorrect edge + mules + wrong dies) to the total of the brass counterfeits for that year.



**Fig. 5.** Determining the proportion of “not good” brass counterfeits.

Working chronologically, as yet all of the brass counterfeits 1983-86 are good copies. For the period 1986-99 there is a significant proportion of incorrect edge, mules and wrong dies. The quality of the brass counterfeits improves significantly from 2000-2007, with the majority being good copies of obverse, reverse and edge. The year 2008 is unusual in that almost all of the counterfeits come from false dies that are all die linked. The 2008 counterfeits also come from a very small sample of just 14 pieces which will be discussed in the next instalment.

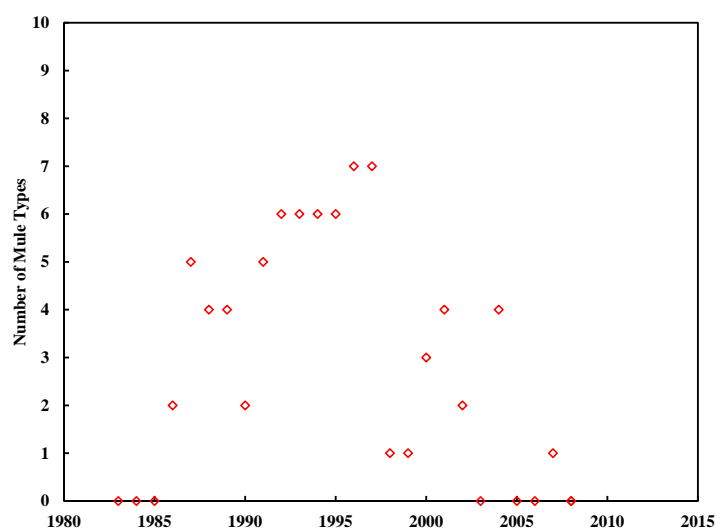
## Mules

The table below summarises the brass counterfeits in the SN and EN collections. The shaded cells contain the counterfeits that have the correct obverse and reverse, all of the other cells refer to the numbers seen of that particular muled design.

Date	Official Rev	Royal Arms	Thistle	Leek	Flax Plant	Oak Tree	Shield	Lion Rampant	Dragon	Celtic Cross	Three Lions	Forth Bridge	Menai Bridge	Egyptian Arch	Millennium Bridge	Dent Shield
1983	Royal Arms	9														
1984	Thistle		7													
1985	Leek			10												
1986	Flax Plant	3			7			3								
1987	Oak Tree	2	1		2	12		1			1					
1988	Shield	2	2		4	5	2									
1989	Thistle	23	3	2	14	7										
1990	Leek		7	10	1											
1991	Flax Plant	5	8		5	4		2			8					
1992	Oak Tree	5	12		9	16		3	1		1					
1993	Royal Arms	68	22		12	16		11		5	24					
1994	Lion Rampant	4	9		2	0		20	2		2					
1995	Dragon	7	2		2	9		17	29		8					
1996	Celtic Cross	8	2		6	6		7	16	90	21					
1997	Three Lions	23	1		16	3		33	32	77	139					
1998	Royal Arms	1							1							
1999	Lion Rampant							0	3							
2000	Dragon	5							130	4	23					
2001	Celtic Cross	14							12	193	10	1				
2002	Three Lions	13								6	109					
2003	Royal Arms	171														
2004	Forth Bridge	3									2	126	3	1		
2005	Menai Bridge												76			
2006	Egyptian Arch													62		
2007	Millennium Bridge													1	63	
2008	Royal Arms	0														
2008	Dent Shield															1

**Table 2.** Summary of SN and EN collections of brass counterfeit pound coins.

Thus of the counterfeits dated 1986, there are seven with the correct Flax Plant design, plus six mules, three with the Royal Arms and three with the Lion Rampant reverses. Note that this table does not include the “wrong” dies in the SN collection which will be discussed later.



**Fig. 6.** Number of mule types per year for the brass counterfeits.

For the enthusiasts this means that there are at least 76 muled reverses to be found amongst the brass counterfeits.

## Metals

The pieces presented here fall into two distinct groups. The majority of the brass counterfeits are the correct light yellow colour, very similar to the Nickel-Brass alloy used by the Royal Mint for the official issues



2006	9.487 g
Cu	$72.98 \pm 0.25 \%$
Zn	$20.98 \pm 0.14 \%$
Ni	$5.92 \pm 0.06 \%$
Traces of Fe, Mo < 0.06 %	

**Fig 7.** Brass counterfeit.

There is a small group of counterfeits where the metal is a much darker yellow. The SN collection has 56 such pieces dated 1996-2007.



2006	9.377 g
Cu	$65.05 \pm 0.22 \%$
Zn	$34.11 \pm 0.16 \%$
Si	$0.434 \pm 0.042 \%$
Traces of Fe, Pb < 0.03 %	

**Fig 8.** Dark yellow brass counterfeit.

The absence of the Nickel accounts for the dark colour and the alloy is commonly referred to as Yellow Brass which is used extensively in manufacturing and engineering.

## Conclusions

This note has presented an analysis of 2063 counterfeit brass round pounds. The majority of counterfeits are Nickel-Brass and about 9.2% are Yellow-Brass. The dates range from 1983 to 2008, with a few later pieces which may turn out to be genuine productions of the Royal Mint. Within this sample of definite counterfeits 76 muled designs have been identified. There would appear to be a transition in the manufacturing process sometime around 2000, when the proportion of muled counterfeits significantly declines.

A further observation is that the total number of lead alloy and brass counterfeits in this sample closely follows the official mintage figures for that date.

## References and Acknowledgements

- (1) G. Oddie. Jan-2021, Counterfeit Round Pound Coins (i) Lead Alloy Issues, British Numismatic Society Research Blog, accessed 29 Jan 2021, <<https://britnumsoc.files.wordpress.com/2021/01/132-counterfeit-pounds-gary-oddie-001.pdf>>.

Many thanks to EN for sharing details of pieces in his collection.

