

Some Magadha Series I overstrikes from Sasaram

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In this short paper, I present a group of forty seven silver punchmarked coins of Magadha, with some interesting features. The group includes 15 types unlisted in Gupta and Hardaker's standard reference for this coinage² (hereafter referred to as GH). Of these, two carry fifth marks that are unlisted anywhere in GH. In addition, there are 12 coins, all belonging to GH's Series I, which are overstruck. Finally, 36 of the coins carry a sixth mark, which may or may not be a banker's mark, but which bears closer inspection.

Thirty three coins of the group came to me as part of a larger lot of 50 coins, which reportedly came from two separate finds. Approximately thirty of the coins were said to come from a hoard found at Sasaram, in the district of Rohtas in western Bihar.³ The remaining (approximately) twenty coins were of less certain provenance. Unfortunately, the coins were mixed up and so it is somewhat conjectural as to which coins came from which hoard, although the coins do divide neatly into two groups of "early" and "late" coins of about the correct sizes. Of the two groups, the "Sasaram" group of 33 coins is the more interesting one, containing all the overstrikes and all the coins with the sixth symbol, and this is the group I am publishing here. The coins are illustrated in Table 1 and are numbered 1-33. It is worth underscoring the fact that there may be a few coins in this group that were actually not from the Sasaram hoard.⁴ Four more coins, known to be from the Sasaram hoard, have been kindly contributed by Prashant Kulkarni; they are numbered K1-K4 in the Table below. Six coins (labeled B1-B6) come from the collection of Bryan Birch and the last coin comes from the collection of Wilfried Pieper. These 7 coins came from two lots in a Baldwin sale (Sale 39, October 11, 2004). Coins B1-B5 constituted Lot 2494 of that sale and coins B6 and the Pieper coin came from Lot 2495. The coins share some of the characteristics of the other coins, and it is therefore likely that they too came from the Sasaram hoard, which reportedly consisted of close to 200 coins, all of roughly the same type or sub-series.

Finally, there is a group of three more coins from the Birch collection (labeled B7-B9) which were acquired from a CNG electronic sale. I suspect these coins do not belong to the Sasaram hoard, and will discuss them in due course.

The coins are presented in Table 1 and a discussion follows. In the comments on each coin, I have included information on the presence of the sixth mark referred to above. The mark is of a bow and arrow on a triangular punch, perhaps best seen on the obverse of coin 12 in the Table below. In the comments, I have referred to this mark as *B&A*, and have indicated whether it is present on the obverse or the reverse.






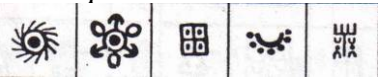



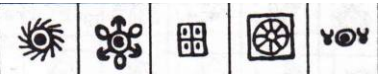
¹ I would like to thank Bryan Birch, Wilfried Pieper and especially Prashant Kulkarni for their assistance and helpful comments and for permission to publish their coins.


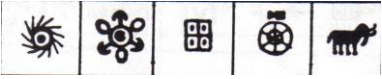

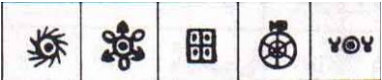

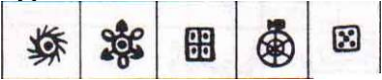




² P.L. Gupta and T.R. Hardaker: *Indian Silver Punchmarked Coins: Magadha-Maurya Karshapana Series*, Nashik: Indian Institute of Research in Numismatic Studies, 1985.












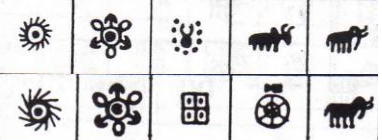
³ The findspot is interesting in itself, as Sasaram is the place where Sher Shah Suri is buried. The finding there of a large hoard of Magadha punchmarked coins therefore seems to suggest that the site may have been an important urban centre for a period of two millennia.






































































































































⁴ Prashant Kulkarni, who has seen many of the Sasaram coins, has told me by private email that he believes all the Sasaram coins carried the extra bow and arrow symbol which I allude to as the "sixth mark." If that is the case, then eight of the coins presented here (coins 1, 3, 4, 5, 8, 32, K3 and B5) would not belong to the Sasaram hoard and should be excluded. However, they may well belong to the hoard anyway.




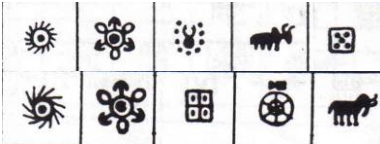

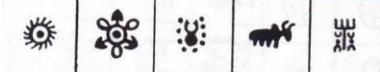




Table 1: The 47 Magadha silver punchmarked coins




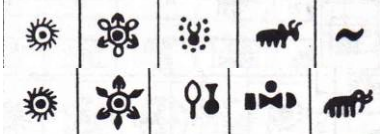

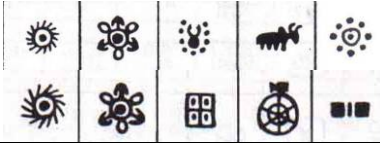


Coin # (Inv #)	Photo	Details and Comments
1 (591.41)		<p>Var of GH 9? 3.38 gm. 28 x 25 mm. <i>Multiple bankers' marks</i> <i>Uncertain attribution</i></p> 
2 (591.42)		<p>Var of GH 16? 3.10 gm. 26 x 25 mm. <i>Numerous bankers' marks</i> <i>B&A on obverse</i></p> 
3 (591.10)		<p>GH 41 3.25 gm. 27 x 23 mm. <i>Has duplicate third mark</i></p> 
4 (591.11)		<p>GH 48 3.10 gm. 30 x 19 mm.</p> 
5 (591.12)		<p>GH 49 2.87 gm. 23 x 23 mm.</p> 











6 (591.13)		<p>GH 60 3.45 gm. 25 x 23 mm. <i>B&A on reverse</i></p> 
7 (591.14)		<p>GH 61 3.48 gm. 27 x 26 mm. <i>B&A on reverse</i></p> 
8 (591.15)		<p>GH 61v4 (i.e. GH Type I VI D 4) 3.35 gm. 28 x 25 mm. <i>Type unlisted in GH</i></p> 
9 (591.16)		<p>GH 85 3.48 gm. 32 x 19 mm. <i>B&A on reverse</i></p> 
10 (591.17)		<p>GH 86 3.35 gm. 29 x 22 mm. <i>B&A on obverse</i></p> 


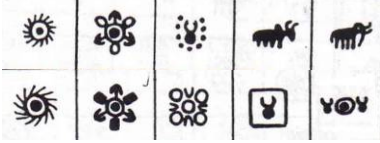



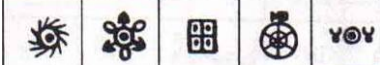





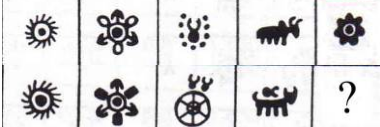
11 (591.18)		GH 86 3.48 gm. 31 x 23 mm. <i>B&A on obverse</i> 
12 (591.19)		GH 86 3.43 gm. 27 x 25 mm. <i>B&A on obverse</i> 
13 (591.20)		GH 86 3.42 gm. 30 x 25 mm. <i>B&A on obverse</i> 
14 (591.21)		GH 86 3.36 gm. 28 x 25 mm. <i>B&A on obverse</i> 
15 (591.22)		GH 86 3.54 gm. 27 x 25 mm. <i>B&A on reverse</i> 
16 (591.23)		GH 86 o/s on GH 60 3.33 gm. 27 x 27 mm. <i>B&A on (new) obverse</i> 


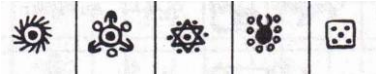










<p>17</p> <p>(591.24)</p>		<p>GH 86 o/s on GH 62v34 (undertype is I VI D 34) 3.31 gm. 27 x 26 mm. <i>B&A on (new) obverse</i> <i>Undertype is a new type, unlisted in GH</i></p> <table border="1" data-bbox="1015 449 1395 590"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										
												
												
<p>18</p> <p>(591.25)</p>		<p>GH 86 o/s on GH 79 3.31 gm. 30 x 25 mm. <i>B&A on (new) obverse</i></p> <table border="1" data-bbox="1015 743 1395 884"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										
												
												
<p>19</p> <p>(591.26)</p>		<p>GH 86 o/s on GH 81v35 (undertype is I IX A 35) 3.37 gm. 31 x 25 mm. <i>B&A on (new) obverse</i> <i>Undertype is a new type, unlisted in GH</i></p> <table border="1" data-bbox="1015 1163 1395 1304"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										
												
												
<p>20</p> <p>(591.27)</p>		<p>GH 86 o/s on GH 162 3.21 gm. 27 x 25 mm. <i>B&A on (new) obverse</i></p> <table border="1" data-bbox="1015 1457 1395 1598"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										
												
												
<p>21</p> <p>(591.28)</p>		<p>GH 86v2 (i.e. GH Type I XI A 2) 3.51 gm. 26 x 25 mm. <i>B&A on obverse</i> <i>Type unlisted in GH</i></p> <table border="1" data-bbox="1015 1829 1395 1894"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										
												

22 (591.29)		<p>GH 86v4 (i.e. GH Type I XI A 4) 3.48 gm. 29 x 27 mm. <i>B&A on obverse</i> <i>Type unlisted in GH</i></p> 
23 (591.30)		<p>GH 86v4 o/s on GH 60 (overtyping is I XI A 4) 3.44 gm. 30 x 24 mm. <i>B&A on reverse (original obverse)</i> <i>Overtyping is a new type, unlisted in GH</i></p> 
24 (591.31)		<p>GH 87 3.44 gm. 28 x 25 mm. <i>B&A on obverse</i></p> 
25 (591.32)		<p>GH 88 3.52 gm. 27 x 25 mm. <i>B&A on reverse</i></p> 
26 (591.33)		<p>GH 88v30 3.30 gm. 29 x 22 mm. <i>B&A on reverse</i> <i>Type unlisted in GH</i></p> 

<p>27 (591.34)</p>		<p>GH 89v42 (i.e., GH Type I XI A 42) 3.43 gm. 29 x 24 mm. <i>B&A on obverse</i> <i>Type unlisted in GH</i></p> 
<p>28 (591.35)</p>		<p>GH 89v43 o/s on GH 144v1 (i.e. GH Type I XI A 43 o/s on GH Type I XX A 1) 3.38 gm. 27 x 26 mm. <i>B&A on obverse</i> <i>Both over- and undertype are new types, unlisted in GH</i></p> 
<p>29 (591.36)</p>		<p>GH 89v o/s on GH 63 (A type belonging to Sub-series I XI A, but with a new fifth mark) 3.21 gm. 31 x 23 mm. <i>B&A on (new) obverse</i> <i>Overtyping is a new type, unlisted in GH, with new 5th mark at 9 o'clock</i></p> 
<p>30 (591.37)</p>		<p>GH 99 3.48 gm. 29 x 20 mm. <i>B&A on reverse</i></p> 

31 (591.38)		GH 112v52 3.44 gm. 30 x 23 mm. <i>B&A on reverse</i> <i>Type unlisted in GH</i> 
32 (591.39)		GH 120 3.22 gm. 29 x 19 mm. <i>Note the bow and arrow punch is the normal official punch, not the sixth mark on many other coins.</i> 
33 (591.40)		GH 146v (i.e. a type belonging to GH sub-series I XX A but with new fifth mark) 3.43 gm. 27 x 25 mm. <i>B&A on reverse</i> <i>New 5th mark is at 6 o'clock</i> 
K1		GH 67 3.46 gm. 24 x 26 mm. <i>B&A on reverse</i> 
K2		GH 78v2 3.34 gm. 24 x 28 mm. <i>B&A on reverse</i> <i>Type unlisted in GH</i> 



















































K3		<p>GH 86 o/s on GH 78v2 3.25 gm. 22 x 30 mm.</p> 
K4		<p>GH 86v4 3.43 gm. 24 x 25 mm. <i>B&A on obverse</i> <i>Type unlisted in GH (as 22)</i></p> 
B1		<p>GH 61 3.4 gm. 33 x 21 mm. <i>B&A on reverse</i></p> 
B2		<p>GH 78v1 3.4 gm. 31 x 25 mm. <i>B&A on reverse</i> <i>Type unlisted in GH</i></p> 
B3		<p>GH 86 3.5 gm. 24 x 27 mm. <i>B&A on obverse</i></p> 
B4		<p>GH 89v35 o/s on GH 82-85 3.3 gm. 28 x 28 mm. <i>B&A on (new) obverse</i> <i>Overtyping is a new type, unlisted in GH</i></p> 

B5		<p>GH 92 3.2 gm. 30 x 28 mm. <i>No B&A</i></p> 
B6		<p>GH 6 3.5 gm. 25 x 28 mm. <i>B&A on reverse</i></p> 
Pieper		<p>GH 86 o/s on GH 67 3.19 gm. 28 x 19 mm. <i>B&A on (new) obverse</i></p> 
B7		<p>GH 34-36 3.3 gm. 24 x 24 mm. <i>B&A (?) on obverse</i></p> 
B8		<p>GH 34-36 3.2 gm. 29 x 22 mm. <i>B&A (?) on obverse</i></p> 
B9		<p>“Donkey-rider” type o/s on “Donkey-rider” type 3.4 gm. 28 x 24 mm. <i>B&A (?) on obverse</i></p> 

New Types































There are 15 types within this group that are unlisted in GH. They are listed in Table 2. Two coins (numbers 29 and 33) show fifth marks unlisted in GH. All of these types are also unlisted in Rajgor's catalogue of punchmarked coins.⁵ At the end of the table, I also provide drawings of the four basic punches of the so-called "Donkey-rider" type, which has been published by Mitchiner without drawings.⁶

Table 2: New Types

Coin #	GH #	GH Type	Obverse Marks				
8	GH 61v4	I VI D 4					
17 undertype	GH 62v34	I VI D 34					
B2	GH 78v1	I IX A 1					
K2	GH 78v2	I IX A 2					
19 undertype	GH 81v35	I IX A 35					
21	GH 86v2	I XI A 2					
22	GH 86v4	I XI A 4					
26	GH 88v30	I XI A 30					
B4 overtyp	GH 89v35	I XI A 35					
27	GH 89v42	I XI A 42					

⁵ Dilip Rajgor: *Punch-marked Coins of Early Historic India*, California: Reesha Books International, 2001. The one exception might be Rajgor 206, which might be intended to be the same as what I am calling GH 144v1, the undertype of coin 28. However, the fifth mark on Rajgor's listing appears to be a horse, not an elephant.

⁶ Michael Mitchiner: *Ancient Trade and Early Coinage*, London: Hawkins Publications, 2004, Volume 2, coin numbers 2927-2933 (pp. 847-48).

28 overtyp	GH 89v43	I XI A 43					
29	GH 89v-new	I XI A new					
31	GH 112v52	I XVI A 52					
28 undertype	GH 144v1	I XX A 1					
33	GH 146v-new	I XX A new					
B9	Donkey-rider	GH Unlisted					

Overstrikes

The most interesting aspect of these coins is that twelve of them are overstruck: coins 16, 17, 18, 19, 20, 23, 28, 29, K3, B4, B9 and Wilfried Pieper's coin, all show undertypes on the reverse of the coin and an overtype on the (new) obverse. Although restrikes of Series II coins by Series III types are quite well-known, there are very few known restrikes of Series I coins by Series I types. GH list 13 Series I restrikes,⁷ and Mitchiner adds 8 more,⁸ for a total of 21 known Series I overstrikes. In Table 3, I present a list of all the Series I overstrikes, including those listed by GH and by Mitchiner, and adding the ones presented here.

There are 12 new overstrikes to add to the previously listed 21 coins. Eleven of the new overstrikes have as overtypes coins from the sub-series I XI A (GH 86-89), which also provided the overtypes for 3 out of the 21 previously listed overstrikes. Thus 14 out of the 33 listed overstrikes use GH 86-89 coins as their overtypes. Another 14 use overtypes from two other sub-series: 6 use GH 90-94 as overtypes and 8 use a GH unlisted "donkey-rider" type as overtypes.⁹ This suggests that it may well be that the donkey-rider types may belong in the same chronological "window" as sub-series I XI A (GH 86-89) and sub-series I XII A (GH 90-94).

The most important observation to be made as a result of the new overstrikes is that the chronological sequence proposed by GH may need some reconsideration. Mitchiner, in his review of the Series I overstrikes, finds that all overstrikes involve an overtype "later" in the GH sequence than the undertype, thus supporting the sequence proposed by GH. However, coins 20 and 28 in the present paper involve coins where the overstrikes are "earlier" in the GH sequence than the undertypes. Coin 20 involves GH

⁷ See Gupta and Hardaker, *op. cit.*, page 9.

⁸ Michael Mitchiner: *Ancient Trade and Early Coinage*, London: Hawkins Publications, 2004, Volume 2, p. 827 and pp. 847-48.

⁹ Referred to in footnote 6 above.

86 being overstruck on GH 162 and coin 28 involves GH 89v43¹⁰ overstruck on GH 144v1. This would suggest that sub-series I XX A (GH 144-147) and sub-series I XXIII A (GH 160-164) should be earlier in the sequence than proposed by GH.

A natural question to ask is: might it not be the case that coins 20 and 28 are actually overstrikes of GH 162 on GH 86 and GH 144v1 on GH 89v43 respectively? However, I feel quite sure that this is not the case and that I have identified the over- and undertypes correctly. There are three clear pieces of evidence in favor of the identification suggested. First, in both cases, the punchmarks on the overtypes I have proposed are far sharper than the punchmarks on the reverses, indicating they were added to the coin later. Second, the reverses show a flattening at several points. These would have occurred as the coin was placed on the anvil to receive the new punches on the new obverse, thereby creating a flattening on the new reverse as the coin was struck sharply against the anvil. Third, under re-punching, the coins acquire a slightly scyphate shape, with the obverse being the “inside” of the “cup” thereby created. In each case of coins 20 and 28, it is the new obverse I suggest that is on the “inside” of the cup shape of the coin.

It is therefore quite clear which side is the one that was punched later. The consequence of this observation is that the GH types 144 and 162 (and their close cousins) need to be placed earlier in the coin sequence.

Table 3: Series I Overstrikes

Coin # ¹¹	Overtyp e		Undertyp e	
	GH #	GH Type	GH #	GH Type
M 2940	GH 72-77	I VIII B -	GH 60	I VI D 1
16	GH 86	I XI A 1	GH 60	I VI D 1
17	GH 86	I XI A 1	GH 62v34	I VI D 34
GH 13	GH 86	I XI A 1	GH 64	I VI D 70
Pieper	GH 86	I XI A 1	GH 67	I VIII A 29
K3	GH 86	I XI A 1	GH 78v2	I IX A 2
GH 12	GH 86	I XI A 1	GH 78	I IX A 4
18	GH 86	I XI A 1	GH 79	I IX A 29
19	GH 86	I XI A 1	GH 81v35	I IX A 35
20	GH 86	I XI A 1	GH 162	I XXIII A 4
23	GH 86v4	I XI A 4	GH 60	I VI D 1
B4	GH 89v35	I XI A 35	GH 82-85	I X A -
GH 1	GH 86-89	I XI A -	GH 82	I X A 1
28	GH 89v43	I XI A 43	GH 144v1	I XX A 1

¹⁰ My numbering of types previously unlisted in GH is intended to permit easy interpolation of the new types in GH’s system. Thus GH 89v43 would follow GH 89 and differs from it only in that the fifth mark is GH mark 43 rather than the mark 34 that is present on GH 89.

¹¹ Simple coin numbers without letters refer to coin numbers from Table 1 of this paper. Numbers starting with M refer to numbers from Mitchiner, *op. cit.*, page 847-49. GH numbers refer to overstrikes listed on page 9 of GH.

29	GH 89v-new	I XI A new	GH 63	I VI D 42
GH 2	GH 90	I XII A 1	GH 34-36	I IV C -
GH 3	GH 90-94	I XII A -	GH 69	I VIII A 35
GH 4	GH 91	I XII A 2	GH 86	I XI A 1
GH 5	GH 93v29	I XII A 29	GH 60	I VI D 1
GH 6	GH 93v35	I XII A 35	GH 62	I VI D 33
GH 7	GH 94	I XII A 72	GH 82-85	I X A -
GH 8	GH 96	I XIV A 4	GH 72-77	I VIII B -
GH 9	GH 116-118	I XVIII A -	GH 88	I XI A 29
GH 10	GH 118	I XVIII A 35	GH 115	I XVII A 36
GH 11	GH 116-118	I XVIII A -	GH 113-115	I XVII A -
M 2928	GH ---	“donkey rider”	GH 60	I VI D 1
M 2929	GH ---	“donkey rider”	GH 99	I XIV A 36
M 2927	GH ---	“donkey rider”	GH ---	“donkey rider”
M 2930	GH ---	“donkey rider”	GH ---	Uncertain type
M 2931	GH ---	“donkey rider”	GH ---	“donkey rider”
B9	GH ---	“donkey rider”	GH ---	“donkey rider”
M 2932	GH ---	“donkey rider”	GH ---	Uncertain type
M 2933	GH ---	“donkey rider”	GH ---	New type

The Bow and Arrow punch

Another very interesting feature of the Sasaram coins is that 31 of them carry what would normally be considered a banker’s mark. The mark is of a bow and arrow on a triangular punch, seen best on the obverse of coin 12 in Table 1.¹²

What is the significance of this mark? Normally we would assume this is a banker’s mark. I have often wondered why it is that we don’t find many coins with the same banker’s mark. After all, there must not have been so many “bankers” who would assay the purity of silver coins. And it would seem likely that such a banker might have assayed a large group of coins, marked them, and then stored them, with subsequent events unfolding in such a way that the group of stored coins would become a lost “hoard” only to be discovered in modern times. So my first inclination was to think that perhaps the Sasaram hoard represented such a collection of coins, the property of a banker who had assayed a large number of the coins that subsequently were buried. It would also be possible that such a banker may have made a large payment with marked

¹² Note that three other coins (B7-B9) also carry a B&A “banker’s mark,” which might or might not be considered to be the same mark as the one on the other 31 coins. I have elected to omit these three coins from the analysis. They came from an electronic sale at CNG as part of a group not known to contain Sasaram coins. More important, the form of the bow and arrow seems quite different on these three coins. The bow part of the punch is a smooth semi-circular shape, while on the other coins, there is a “dent” or “kink” at the center. I therefore suspect these three coins may not be from the Sasaram hoard and this B&A symbol may be a genuine banker’s mark. However, I thought it useful to publish the coins in case this symbol is related to the B&A symbol on the other coins.

coins to a trader who then mixed those coins with others in his possession to form the lost hoard. Thus the hoard may have been the property of the assaying banker or of a trader only one or two transactions “removed” from the assaying banker.

If this theory is correct, we would expect to find the bow and arrow punch (B&A) to be the last punch affixed to each coin. But there are several coins in the group where this is distinctly not the case. On coins 10, 16, 18, 27, 28, and K4, the bow and arrow punch is *underneath* other punches, mostly of the new overtype. On coin 10, the six-arm symbol appears to be on top of the B&A. On coin 16, it seems that the large triangular banker’s mark in the center of the coin was affixed after the B&A. On coin 18, the sun symbol has clipped an edge of the B&A. On coin 27, the B&A is under the punch for the fifth mark, mark 42 (double squares with a divider between). On coin 28 it is very clearly under the bull right (mark 58, here as the fourth mark), and, on coin K3, the B&A punch is underneath the 6-arm symbol. Thus, on five coins the B&A is over-punched by other official punches and on one (coin 16) by a banker’s mark.

Of all of these coins, perhaps the most telling are coins 10 and K3, neither of which is an overstrike. On coin 10, the suggestion that the B&A is overpunched by the six arm symbol on this coin is not absolutely certain, but coin K3 is very clear: the six-arm symbol was punched *after* the B&A. This would suggest quite strongly that the B&A punch was an official punch and not a banker’s mark.

All of the other coins I have mentioned are overstruck coins. On one of these coins (coin 16), the B&A is overstruck by a banker’s mark and, on the other three, it is overstruck by official punches. Coin 16 is not so difficult to explain even if the B&A is a banker’s mark. Many coins have banker’s marks overstruck by other banker’s marks. The only slightly anomalous aspect of this coin would be the coincidence that it found its way back to a group of coins carrying the B&A after having left the hands of the B&A banker and being assayed and counter-struck by a different banker.

For the remaining three coins (numbers 18, 27 and 28), the fact that the B&A symbol is overstruck by official marks of the new overtype would be consistent with the assertion that the B&A symbol was a banker’s mark that was affixed to the coins during their initial period of circulation (i.e., before they were restruck). But this suggestion is difficult to reconcile with two other observations. First, how did so many coins with the same banker’s mark come to be in one hoard if the hoard was buried at a time far removed from the original punching of the banker’s mark? Second, how likely is it that these coins would come to be in the same hoard as other coins on which the same banker’s mark is clearly affixed *on top of* the official marks? For example, coins 21 and 24 show quite clearly the B&A symbol on top of the official marks. Also, one overstruck coin (number 23) has the B&A symbol on the reverse (the original obverse), the only overstruck coin with this characteristic. Clearly the B&A punch was struck after the original official marks, as it lies on top of them, but it is difficult to say whether it was struck before or after the second set of official marks, since it is on the other side of the coin. However, close examination of the coin suggests to me that it was punched after the new obverse had been struck, as the flattening caused by the B&A punch seems to be on top of the new obverse punches.

In short, there appear to be some coins in the hoard where the B&A symbol was punched on top of the new obverse, while there are others where it appears the new official marks were punched on top of the B&A symbol. The simultaneous existence of both these types in the same hoard renders somewhat tenuous the theory that the B&A

symbol was a banker's mark affixed sometimes between the first and second official strikes, and sometimes after the second official strike.¹³

It seems to me that another, perhaps simpler, theory to explain all of these disparate observations is that the B&A symbol was an official mark that was punched on the coins at the same time as they were either being overstruck or being struck for the first time. If this were the case, it would be quite normal for the B&A punch to be sometimes under and sometimes over other official punches, in much the same way that the sun symbol, say, sometimes appears under and sometimes over the other official marks. It is worth noting that no bow and arrow symbol had been used in the Magadha series up to this point, at least if the GH sequence is followed. Rather, it made its first appearance in sub-series I XVIII A (GH 116 onwards). Might it be that a new ruler initially started counter-marking the existing coinage with a new bow and arrow symbol, then started to overstrike old coins with a new set of 6 symbols, including a bow and arrow punch, and then eventually settled on a new five-punch combination which included the bow and arrow as one of the five punches?

It is worth noting that the number of official marks may not have been quite settled at this time.¹⁴ Several of the Golakhpur hoard coins (see GH 1-37) had only 3 or 4 punches. Thus the idea of having six official marks, at least as an experiment, may not have seemed so unusual. However, clearly this experimental phase did not last long, as the series settled into the standard five punch format shortly thereafter.¹⁵ But it could be that, for a while, there were six official punches on the Magadha series.

Obviously this sort of theory is highly speculative and it is impossible for anyone to have much confidence in it. It remains something to keep in mind as we continue to learn more about the enigmatic punchmarked coins of the Magadha-Maurya series.

¹³ Prashant Kulkarni has pointed out one other coin where banker's marks were found to be affixed to the coin before an "official" mark. Nupam Mahajan and R. Balasubramaniam: "Scanning Electron Microscopic Study of an Ancient Silver Punch-marked coin with Central Pentagonal Mark," *Numismatic Digest*, vol. 21-22 (1997-98), pp. 153-167, examined a coin of the so-called "Narhan" type and found that the central pentagonal symbol seemed to be the last punchmark applied to the coin; several banker's marks were applied first. To the naked eye, the overlap seems difficult to observe, so one would have to rely on the authors' methodology (based on electron microscopy) to reach this conclusion. If it is true, what light might this shed on our analysis of the B&A symbol? Mahajan and Balasubramaniam do not attempt to offer any explanation for their finding. As this was one isolated coin, it is not clear that there is any real connection between the two situations. One simple explanation that comes to mind for the Narhan coin might be that the practice of assaying bits of metal may have been carried out privately by bankers, and that the verified "coins" may have been brought to the official "mint" for further verification, perhaps by someone receiving the coins in payment. The official mark may then have been the certificate from the official mint that the silver content was at the appropriate level. What makes the group examined here so different is that the B&A symbol is found sometimes over and sometimes under the official marks, so the idea that the B&A was applied more or less simultaneously with the official marks seems most plausible. In addition, the Narhan coin belongs to a series that is very early in the coinage of the region; that is, it was probably produced at a time when the activities of an official mint may not yet have become very institutionalized. The Magadha coins we are examining obviously were produced in well-established mints, where it would be hard to imagine coin blanks arriving with pre-existing banker's marks before being worked on by the mint.

¹⁴ I am indebted to Prashant Kulkarni for calling this point to my attention.

¹⁵ Indeed, it is possible to argue that there was a sense in which the series was, for quite a while, a four-punch series. Bryan Birch, in a private communication, has argued that there seems to be a fine line between the fifth official mark and some banker's marks. There are many fifth marks that appear with regularity in successive sub-series, such as marks 1-4, 28-30 and 35. On the other hand, there are many fifth marks that seem to appear on only one GH type (most of marks from 48 onwards).