

Roman counterfeiters' moulds from Scotland

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ABSTRACT

Three clay moulds for making cast counterfeits of third-century coins are discussed in terms of their relationship to items of similar type found elsewhere and of their possible significance in a Scottish context.

INTRODUCTION

Clay moulds for use in counterfeiting Roman coins are not uncommon as finds from Britain south of Hadrian's Wall, but only three have so far been recorded from Scotland. Of these, two have been published before (Couotts 1971; Boon 1994), but the third, although found some 60 years ago at Newstead, has only recently come to light. Since all three belong to the period post-dating the Roman military withdrawal from Scotland at the end of the Severan campaigns, their presence may be regarded as having some significance beyond the simple evidence for counterfeiting, and this paper will discuss them with reference to historical, archaeological and numismatic evidence for cross-border contacts in Britain in the third century AD.

BACKGROUND

The use of clay moulds in the production of counterfeit coins is well attested throughout the Roman Empire, and published accounts of both the techniques involved and the surviving evidence, including a substantial paper devoted to Britain (Boon 1988), make it unnecessary for this to be repeated here. It will suffice to say that all three of the moulds found in Scotland belong to a class characterized as roughly disc-shaped, with the imprint of the obverse of a coin on one side and the reverse of a different coin on the other, and with a slot in the edge to allow molten metal to be poured in. Such moulds were stacked up into columns of three or more, allowing casts of a number of coins of different types to be manufactured together.

THE MOULDS FROM SCOTLAND

These are listed in chronological order of the later of the two coins from which the impressions on each were taken, although this does not necessarily represent the order in which they were made.

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ILLUS 1 Mould from Brighthouse Bay. Obverse to left. Scale 1:1



ILLUS 2 Mould from Beechwood, Dundee. Obverse to left. Scale 1:1

- 1 From Brighthouse Bay, Kirkcudbrightshire; found on a shell midden during limited excavation work in connection with a gas pipeline project (Boon 1994), and now in the collections of the National Museums of Scotland (X.1997.770) (illus 1).

Diameter 25 mm.

AQVILIA SEVERA AVG; bust to right.

P M TR P COS P P; Mars standing left, holding branch and spear.

The impression on one side is taken from the obverse of a *denarius* of Aquilia Severa, one of the wives of the emperor Elagabalus, struck in AD 220 (as RIC 388–98). The other impression is of the reverse of a *denarius* of Severus Alexander, minted in AD 222 (RIC 7). There is an ancient chip at the point where the metal entered, presumably caused when the mould was broken open to remove the casts.

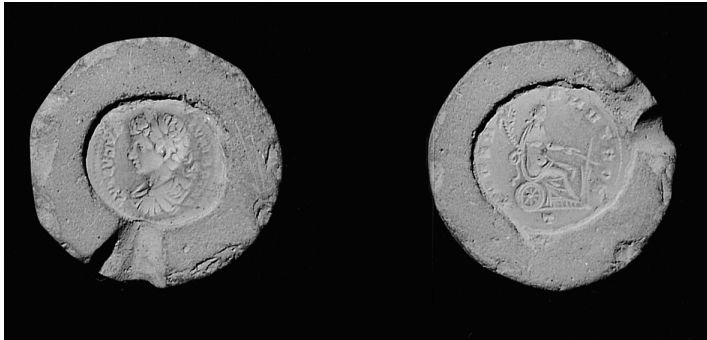
- 2 Found at Beechwood, Dundee, and now in the collections of Dundee Museum (Coutts 1971) (illus 2). Contemporary records of the find seem to be confined to an article in a works newsletter (*NCR Factory Post*, Vol 12, no 9, October 1960), in which J Barwick, then Assistant Curator at Dundee Museums and Art Galleries, contributed a short account with identification and discussion. The mould was apparently found ‘in a pile of rubble near the “hole-in-the-wall”, which is the old gateway leading from Beechwood to the Industrial Estate’. There is no indication as to the source of this rubble, which certainly allows the possibility that both it and the coin mould could have come from some distance away. It is often all too convenient to explain away awkward discoveries as ‘modern losses’, but in this case it does seem reasonable to suggest that the coin mould should be regarded as redeposited at the location from which it was recovered.

Diameter 35 mm.

ANTONINVS AVGVSTVS; laureate draped cuirassed bust to right.

LAETITIA AVG N; Laetitia standing left, holding wreath and anchor.

The first impression is from the obverse of a *denarius* of Caracalla, elder son of Septimius Severus, minted in AD 199–200 (as RIC 31–51). On the opposite side is the impression of the reverse of an *antoninianus* (double *denarius*) of Gordian III, minted in AD 241–3 (RIC 86). The ‘obverse’ side bears a



ILLUS 3 Mould from Newstead.
Obverse to left. Scale 1:1

lump of extraneous clay, presumably from the adjacent mould, overlying part of the impression in the upper right area. The two moulds presumably became fused together during casting.

- 3 Found on the site of *Trimontium* (Newstead), Roxburghshire, around 1940 by Mr Keith Allison, then of Newton St Boswells, who subsequently took it to Australia. After reading about the *Trimontium Trust* in a magazine, he donated the mould to the Trust in 1998 (illus 3).

Diameter 33 mm.

ANTONINVS AVGVSTVS; laureate draped cuirassed bust to right.

FORTVNA REDVX; Fortuna seated to right, holding rudder and cornucopiae; wheel beneath seat; T in exergue.

Here an obverse impression from a *denarius* of Caracalla, of the same period as that used for mould number 2 and from a very similar die, is placed back to back with that from the reverse of an *antoninianus* of Aurelian, minted at Milan during the period AD 270–5. There are chips at the entry hole from opening of the mould.

DISCUSSION

Two aspects of these three moulds now need to be considered. First, what is the significance of the evidence that coins of different types were being counterfeited in the same mould? Second, all three moulds were clearly made after the withdrawal of the Roman army from Scotland, so who was using them and for what purpose?

In his discussion of the Brighthouse Bay mould, Boon (1994) stated, ‘The mould belongs to the main period of *denarius*-counterfeiting, associated with the reintroduction of the double-*denarius* (*antoninianus*), when the restriking of old *denarii* as *antoniniani* shows that a premium attached to the former. Nearly 20 instances of mould-debris of this period are recorded from Britain alone (Boon 1988, 107–10, 125–7).’ The coins of Aquilia Severa and Severus Alexander, minted only two years apart, would certainly have been among the types still in circulation throughout the Empire in the late 230s, and since the originals were made of debased silver, it would not have been particularly difficult to introduce counterfeits into circulation.

Initial assessment of the mould from Dundee might suggest that it also belongs to this period. The obverse impression is from a Severan *denarius*, somewhat earlier than those represented on the Brighthouse Bay mould, but again of debased silver and of a type which would still have been in circulation in large numbers when *antoniniani* were reintroduced in AD 238. The reverse impression is from a coin of Gordian III of just that period. However, the comparison breaks down on the grounds that the reverse impression is itself from an *antoninianus*. The same

design also appears on *denarii* of Gordian III, but the size of the impression clearly indicates that a coin of the higher denomination was used. It seems very unlikely that a forger would have been sufficiently incompetent to attempt to make a counterfeit coin using obverse and reverse moulds from coins of different sizes, and it must therefore be concluded that *antoniniani* as well as *denarii* were being deliberately counterfeited in the same stack of moulds. This conflicts with Boon's explanation that it was the comparatively high metal content in relation to face value that made the *denarius* desirable and consequently a target for forgers during Gordian III's reign. (Early *antoniniani* were struck at one and a half times the weight of contemporary *denarii*, but were tarified at double.) The mould could in theory, therefore, date from somewhat later.

This suggestion derives support from the combination of coin types represented on the mould from Newstead. Here the impression of a *denarius* of AD 199–200 is paired with that of the reverse of a coin which was minted 70 to 75 years later. Moulds for coins of Aurelian are not unknown in Britain (Boon 1988, 126, 165, note 150), but for such pieces to have been counterfeited alongside early Severan *denarii* seems odd, to say the least. In the intervening period between these two coinages had occurred the great debasement of the Roman coinage, leading eventually to the abandonment of any attempt to mint coins in anything recognisable as silver and the production of *antoniniani* during the 260s in almost pure copper, often with a thin silver wash. Aurelian attempted to reform the coinage in the course of his reign, but the coin used in the making of the Newstead mould dates from the period before this took place.

Although Severan silver *denarii* would still have been available to some extent in the 270s, they would not have been part of the circulating coinage and would have been retained by those lucky enough to own them, purely for their silver content. The forger who used the Newstead mould must therefore have wished to direct his wares at two entirely separate markets, with false silver to defraud the investor and counterfeit base metal *antoniniani* to infiltrate normal circulation. This in itself is perhaps not that surprising, but on the surface it seems odd that both sorts of counterfeit should have been produced in the same stack of moulds, since this would have necessitated the use of a metal which would produce convincing imitations of two very different coin types — base silver *denarii* and copper alloy *antoniniani*.

The absence of silver need not have been a problem. Boon (1988, 108) states that: 'False *denarii* may be cast in an alloy totally lacking in silver, such as three of Severus from Caerleon which proved on recent analysis to be composed of a high-tin bronze (25%); the appearance of the polished metal was far different from the greyish-green that meets the eye, a warm colour within, resembling quite closely silver such as the alloy of the originals, which would have been little more than 50% fine. Others again may be cast in base metal, and plated.' Either of these techniques might also have been employed to produce false *antoniniani* of Aurelian, since the originals would have been silver-washed when new, but on balance it seems more probable that base metal was being used, with plating being applied to the '*denarii*'. The appearance of the '*antoninianus*' side of the mould suggests that coins produced from it would have had the appearance of having circulated for some time, and the forger might therefore have been able to get away with applying little if any silver wash, since this soon disappeared from genuine pieces once they were in circulation.

To throw light on the metal used for casting, the surfaces of the Newstead and Brighouse Bay moulds were analysed by X-ray fluorescence (XRF). Because of the casting conditions moulds often preserve only faint traces of the metals involved, and these were no exception. However, both showed evidence of base copper alloys, with no sign of any precious metal content. Both contained lead, for ease of casting; the Brighouse Bay alloy also contained zinc, which was absent from that from Newstead.

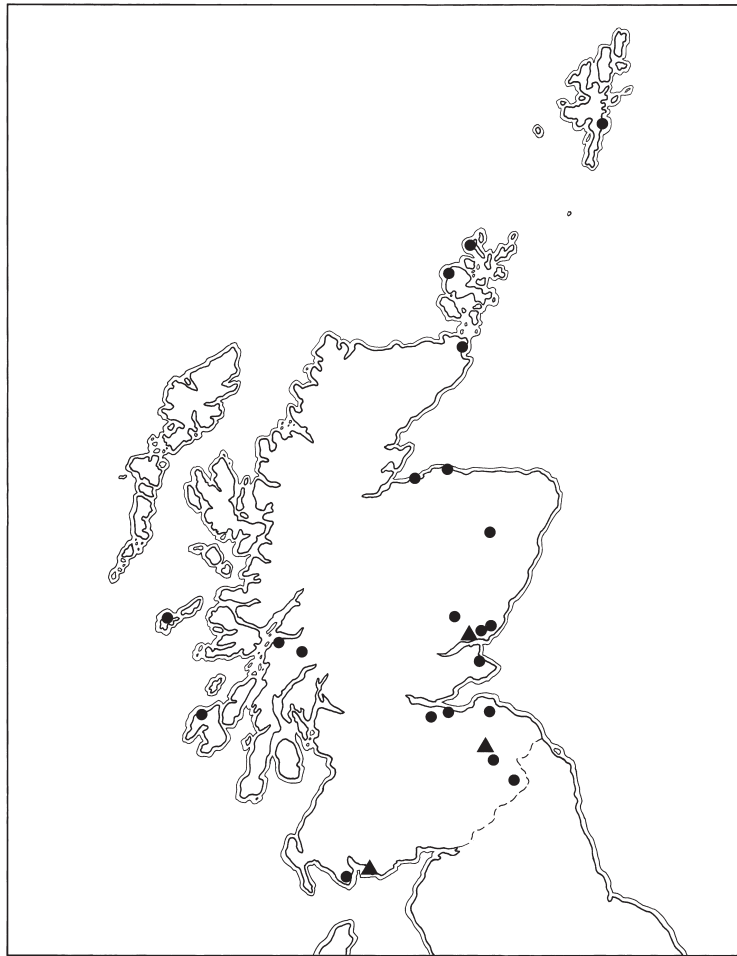
From the largely numismatic discussion of the moulds, it is now necessary to consider their implications as finds from Scotland. The first and most obvious question concerns their acceptance as ancient losses at all. The Brighthouse Bay mould is perfectly acceptable. It was found during excavations, associated with a spread of cultural debris including shells and burnt stones, and securely stratified under a deep layer of blown sand. Roman pottery was also recovered from the excavations, although its context is unclear from the report (Maynard 1994). The clearly datable material is from the second century, but there is no reason why the coarse wares could not equally date from the third century. No other evidence of metal-working was recovered, but the scope of the excavations was very limited. The other two finds are more problematic. In neither case was there any associated material, and the Beechwood mould was described when published as 'probably modern loss' (Coutts 1971, 78). This certainly appears likely if applied to its actual find-spot, although 'modern redeposit' might be a more advisable interpretation.

There was certainly no other metal-working debris to confirm that counterfeiting actually took place at any of the three locations, but this does not in itself necessarily imply that the moulds were deposited in recent times. Forgers were probably itinerant craftsmen, who for obvious reasons preferred to ply their trade in out-of-the-way places and move on frequently in order to avoid detection: for instance, Branigan and Dearne (1992, 30–2) note finds of counterfeiting material in caves which probably served as hideaways. Under such circumstances it would not be surprising if pieces of composite moulds were occasionally discarded or lost in locations without surviving evidence of contemporary activity. In the case of Brighthouse Bay, the character of the shell middens suggests that they accumulated over a short period of time (Maynard 1994, 19), consistent with a number of temporary uses of the site.

If the moulds are to be accepted as genuine ancient losses, the question which must be asked of each is why should a counterfeiter — even an itinerant one — have been in that location at the appropriate time. In the case of the Brighthouse Bay specimen, Boon (1994, 21) opines that: 'The findspot ... should most probably be understood in relation to affairs on the south side of the Solway, rather than its own hinterland, which is almost devoid of Roman material nearer than Glenloch, let alone anything of late Severan date.' In other words, the counterfeiter may be considered to have been producing false coins for placing into circulation south of Hadrian's Wall, which by that time again marked the northern frontier of the Roman province. This is entirely consistent with the idea that such a person would choose a location which was unlikely to lead to detection but still relatively close to the 'market' for his wares.

This argument might also be applied to the Newstead mould. Although it was apparently found within the area of earlier Roman military occupation, there is nothing to suggest that there was any Roman presence there as late as the 270s, which is the earliest date for the manufacture of the mould. The system of outpost patrols along the line of Dere Street to the north of Hadrian's Wall, considered to have functioned throughout most of the third century, may or may not have extended as far as Newstead, but access to the Roman road network would have allowed the distribution of the forgeries. However, carrying them across the militarized zone of the frontier would have involved some risk.

An alternative theory might be that the intended recipients of forged coins were not within the province at all, but were in fact the inhabitants of the Scottish Lowlands. We do not know to what extent, if at all, these people may have used coinage in the third century. It has been suggested on various occasions that the hoard from Falkirk, Stirlingshire (found in 1933), comprising *denarii* to the reign of Severus Alexander, probably represents payment by the Romans to a chieftain of one of the native peoples of Southern Scotland (Reece 1980; Robertson 1982), and the present writers have proposed (Holmes & Hunter 1997) a similar function for the



ILLUS 4 Distribution of coin moulds (triangles) and third-century Roman artefacts (circles) in Scotland

hoard from Edston, Peeblesshire (found in 1994), comprising *denarii* up to Elagabalus. It is less certain whether the recipients of these coins regarded them as currency, possibly for use in cross-border trading with people within the province, or simply as high-value status objects to be retained and even included in ritual deposits (*ibid*, 156). The almost complete absence from the Scottish finds record of any stray examples of *denarii* minted later than the death of Septimius Severus in AD 211 does, however, suggest the latter, and that there was not a coin-using economy in the Scottish Lowlands in the decades immediately following the military withdrawal.

The Newstead mould belongs to a later period, however, and there have been numerous finds of base metal *antoniniani* of the 260s and early 270s in southern Scotland (Robertson 1983; Bateson 1989; Bateson & Holmes 1997). Many of these have been concentrated in a few specific locations, notably Traprain Law, East Lothian, and Springwood, Roxburghshire, but stray specimens have also been found in recent years in such locations as Cramond, Edinburgh (in soil removed from above the Roman bath-house), Carrington Barns Farm, Midlothian, and Airth, Stirlingshire. These finds have comprised mainly official issues and barbarous copies of the ‘Gallic

Empire' rulers, Victorinus and the Tetrici (268–73), together with a few central empire *antoniniani* of Gallienus and Claudius II (260–70). Coins of Aurelian, such as that used in the making of the Newstead mould, are notable by their absence, although a few later pieces of Probus (276–82) and the 'British Empire' rulers, Carausius and Allectus (287–96) have also been recovered, mostly from Traprain. It has usually been accepted that many of the post-Severan coins found in Scotland, especially those found away from identified occupation sites, are probably modern losses. This may indeed be the case, and of some 140 such finds (excluding the traditionally suspect Alexandrian *tetradrachms* and other provincial issues), many are from heavily populated areas of the central belt, but the site-finds show that some coins of this period were entering Scotland at the time, whether in the pockets of traders or Roman patrols.

The owner of the Newstead mould could, therefore, have been making counterfeit *antoniniani* at the instigation of an individual, or even the members of a local community, to be used in making purchases from traders visiting the area from within the province, but the false *denarii* being made at the same time are unlikely to have been intended for this purpose. A coin of this type being tendered in payment by the 270s is sure to have attracted careful scrutiny, and counterfeits would have run a high risk of identification. Indeed it is difficult to understand why silver *denarii* should have been counterfeited at that time and place, unless they had taken on some secondary, non-monetary, purpose, eg as tokens for inclusion in ritual deposits. Although there is no evidence that this was the case, it may be recalled that 10 imitation *denarii*, cast in tin, were among the finds from a well at the fort of Bar Hill, on the Antonine Wall, and that these are generally accepted as replicas made for ritual purposes (Macdonald 1905; Macdonald & Park 1906, 107–10; Robertson *et al* 1975, 169–73). From the same well came a mould made of shale, which could conceivably have been used for making similar replica coins (Robertson *et al* 1975, 48 & fig 13, 60). XRF analysis of this item did not reveal any metal traces, but this is not surprising given the fairly impermeable surface of the shale and does not constitute an argument against its use as a mould.

So far no mention of the Dundee mould has been made in this section of the discussion. Whereas it is at least reasonable to suggest that the finds from Brighthouse Bay and Newstead could have been associated with either cross-frontier trade or the supply of counterfeit coins to the province of Britannia, it would seem very difficult to make a case for a counterfeiter as far north as the Tay in the late 230s or after being involved in the same activities. This area must have lain well beyond the range of Roman *exploratores*, and was almost certainly within the territory of the *Maeatae*, the nearest of the hostile tribes whose presence was seen as a threat to the security of the frontier. However, among the many records of post-Severan third-century coins in Scotland (Robertson 1983; Bateson 1989; Bateson & Holmes 1997) is a scatter of finds from isolated areas north of the central belt, and although some are likely to represent modern losses, it would be unwise to assume that this is true in every case.

Here it is worth reviewing the non-numismatic material, as third-century artefacts have received little attention. They lack the precision of the coin dating, and with the decreasing availability of Samian (Marsh 1981) closely datable pottery is rare. However there is an appreciable spread of broadly third-century material throughout Scotland (illus 4; details in Appendix). Some will be contemporary with the Severan campaigns, some later; although they cannot be tied accurately to historical events, they demonstrate that both during and after the campaigns Roman material was coming into local hands, even in areas where supposedly hostile tribes were located. Given this interaction, it perhaps becomes less surprising to find evidence of counterfeiting up to the Tay. The distribution does not show the concentration in southern Scotland found in the earlier Roman period (Robertson 1970, fig 2), which arises largely from

the presence of the Roman army. Its diffuse nature is more typical of the pattern seen beyond the Antonine Wall at earlier times and suggests intermittent but wide-ranging contact, whether directly with Roman traders or through contact with other tribes.

The nature of the material is interesting. Much of it comprises good quality drinking vessels of pottery and glass, suggesting that there was a preference for certain types of material among the local tribes. Although we can only speculate about the mechanisms and motives behind this, similar selectivity in Roman material is seen in the earlier Roman Iron Age (Robertson 1970, 200). It is best interpreted as the deliberate choice of material that was most useful in local societies — in this case, perhaps fine vessels for feasting and drinking. In a later context this is exemplified by the fourth-century hoard of bronze drinking and serving vessels from Helmsdale, Sutherland, well beyond the frontier. (Spearman 1990 suggests a late second- to fourth-century date for burial, but a *terminus post quem* is given by bowl 2, a fourth-century ‘Irchester’ type (Kennett 1968, 36)).

Given this evidence of contact, there is a range of mechanisms in which coinage could have been used and counterfeits exploited: these contacts would, for instance, have provided mechanisms for a counterfeiter to get his goods into the province. The coin moulds do, therefore, fit into a broader historical perspective, although it seems clear that there was no circulating coinage within native society.

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APPENDIX: THIRD-CENTURY ARTEFACTS FROM NON-ROMAN CONTEXTS IN SCOTLAND

The criterion for inclusion is that most of the potential date range of the object falls within the third century. The amphorae, glass and brooches have all been the subject of recent studies, updating Robertson (1970); the other pottery is in need of specialist examination and doubts linger about some identifications. Where no specific reference is given, it can be found in Robertson (1970). Pre-1975 counties are used. All are settlement site finds unless stated. It is often claimed there is another burial with an Airlie-type cup from Kingoldrum, but the record is confused: see Hunter 1997, 123, note 2 for further discussion.

County	Findspot	Artefacts	Notes / references
Aberdeenshire	Waulkmill (burial)	‘Snake thread’ glass?	D Ingemark, pers comm. Roman glass gaming pieces also found.
Angus	Airlie (burial)	Glass drinking cup	Such cups are given a variety of dates in the older literature, but are best seen as later 2nd–mid 3rd century AD (Price & Cottam 1998, 99–101); they seem rare in Antonine Scotland, suggesting their regular appearance post-dates this.
Angus	Carlungie I	Gauloise 12 amphora	Identified by Fitzpatrick 1992; the only Scottish parallels are Severan.

Angus	Carlungie II	Enamelled plate brooch	Such brooches are most likely to be 3rd century, although there is a single Scottish Antonine example (Christison <i>et al</i> 1901, 404).
Argyll	Ardnave, Islay	P-brooch	Ritchie & Welfare 1983, 341, no 62 (not recognized as Roman).
Argyll	Dun Mor Vaul, Tiree	Glass cup of Airlie type	Mackie 1974, 148–9.
Argyll	Dunollie	Painted glass cup	Alcock & Alcock 1987, 142.
Argyll	Port Sonachan (stray)	Coarse ware sherds	
Caithness	Keiss	Rhenish ware	
East Lothian	Traprain Law	Glass, pottery, metalwork, jet	
Fife	Hallow Hill (burial 51B)	Glass cup of Airlie type	Proudfoot 1996, 420–2; the Roman finds in burial 54 are 2nd–early 3rd century rather than the late 2nd–4th-century date suggested.
Midlothian	Edinburgh Castle	Fine ware, inc. Nene Valley	Driscoll & Yeoman 1997, 133–4.
Midlothian	Kaimes Hill	Grey ware jar	
Moray	Covesea (ritual deposit in cave)	'Snake thread' glass	D Ingemark, pers comm.
Moray	Culbin (stray)	'Snake thread' glass	D Ingemark, pers comm.
Orkney	Okstrow	Samian	
Orkney	Westray (burial)	Glass cup of Airlie type	
Roxburghshire	Hownam Rings	Coarse ware	
Roxburghshire	Eildon Hill North	Coarse ware	
Shetland	Clickhimin	Painted glass cup	Dating as for Airlie type.
Wigtownshire	Whithorn	Nene Valley ware; possible glass	Hill 1997, 294.

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