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EXAMINATION AND ANALYSIS OF COIN PELLET MOULDS FROM ROCHESTER, KENT

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Ten fragments of iron age coin pellet moulds were examined (AM620881-87 and 3 unnumbered samples). A X-radiograph of each fragment was obtained (X-ray A5261) and suitable surfaces of each piece were analysised qualitatively using energy dispersive X-ray fluorescence (X.R.F) where possible the diameters and depths of the individual impressions were measured. The results are summarised in the appendix.

All the mould fragments had a similar fabric which was porous, unrefractory and contained only a few, fairly small, inclusions. They had all been reduced fired. No evidence for the presence of residual metal on the moulds was found by visual examination or x-radiography, However, significant levels of elements which may have been contained in the metal melted in the moulds were detected on some fragments by X.R.F.

Silver was detected on 3 fragments (AM620885, AM620887 and 11), lead was present on (AM620883) and copper was found on fragments (97) and (98) (excavator's numbers).

Apart from (98), all the impressions on the moulds were similar, although a wide variation in depth was observed but this was even found between impressions on the same fragments. The impressions had a diameter at the mouth of about 9mm and their sides sloped to a flat bottom of slightly smaller diameter. Fragment (98) included part of one shallow impression which had a much larger diameter at the mouth than the impressions on other moulds. The bottom of the impression was rounded and it is possible that this fragment was not intented for the same purpose as the others. Pellets produced from mould (98) would certainly have been considerably larger (in diameter at least) than those produced from other moulds.

Although coin pellet moulds have been found on several sites of this period, their original use is not entirely clear, and it is possible that pellets from similar moulds were used in producing a variety of objects using various metals (Tournaire et al, 1982). However the most probable use for the moulds examined, with the possible exceptions of (98), would seem to be to produce silver pellets for striking into coins as traces of silver were present on 3 of the fragments. The presence of traces of copper or lead on some fragments does not rule out the possibility that silver was the major component of the alloy being cast, as both copper and lead could have been minor elements in the silver alloy and the X.R.F method used is relatively insensitive to silver. The variation in depth of the impressions would not have been important as control of the weight of the pellet was presumably achieved by placing a known amount of metal in each impression. When melted the silver would have formed a spheriod shape suitable for striking (Tournaire et al 1982), unlike copper alloys which would take the shape of the impresssion (Sellwood 1976).

Like moulds from other sites, some of the fragments examined were vitrified on their upper surfaces, although several showed no signs of vitrification at all, and they were probably heated from above. The details of how coin moulds were used are, however, largely still a matter of conjecture. A discussion of the current position is given in Tournaire et al, 1982.

References

J Tournaire, O Buchsenschutz et al, "Iron Age Coin Moulds from France", Proceedings of the Prehistoric Society, 48, 1982, pp 417-435.

D Sellwood, "Minting" in Roman crafts, eds Strong and D Brown 1976.

Appendix

> = greater than
n.m. = not measurable
n.d. = nothing significant detected

No	Elements detected by X.R.F. - all of trace leads	No. of impressions partial	complete	Diameter of mouth of impressions (mm)	Depth of impressions (mm)	Comment
AM620881	n.d.	2	0	> 8	6-7	Edge fragment
AM620882	n.d.	3	0	> 9	4-8	Flattened towards one side
AM620883	Pb	4	1	9	8-9	-
AM620884	n.d.	4	0	9	7-9	-
AM620885	Ag	4	0	9	7-8	-
AM620886	n.d.	2	0	> 7	6	-
AM620887	Ag	1	0	n.m	n.m.	-
11	Ag	6	1	9	9	-
97	Cu	4	0	> 8	9	-
98	Cu	2	0	> 12	5	Edged fragment