18

'Why are there always so many spoons?' Hoards of precious metals in Late Roman Britain

by Richard Hobbs1

Introduction

Although Catherine is more commonly associated with her hugely successful *Sex or symbol?* publication and her work on Roman jewellery, and in earlier years her research on samian ware, her contribution to the study of late Roman 'treasures' is equally important. Catherine has published a large number of individual finds and assemblages, thus providing the raw materials for future integrative research, and has also contributed vigorously to the debate on how British treasures might be studied and interpreted (Johns 1994; 1996a)².

Both of these papers were in truth a response to a lecture given by Martin Millett at the fourth Theoretical Roman Archaeology Conference entitled 'Treasure!'³. Catherine took great exception to Millett's paper and eagerly penned a response, having had sight of a draft of Millett's paper which was being circulated prior to publication (Johns 1994). For the present writer, the invitation to write for this Festschrift seemed like a good opportunity to revisit these two papers, and in particular to focus on one aspect of these articles both authors made observations on, but were unable to explore in detail: namely the fact that there are clear regional differences in the nature of precious metal deposits across Britain, in terms of both size and content.

'Millett versus Johns' was hugely influential on my own academic pursuits. I had just embarked on my PhD looking at precious metal deposits in the late Roman Empire, in what was – somewhat vaguely at the time – an attempt to use them as an index of economic patterns of 'boom and bust'. This in itself was inspired by the work of Chris Going, using the decline and fall of British pottery industries, which Going argued were underpinned by economic 'waves' as a natural feature of the economies of developing societies (Going 1992). The papers in question, however, influenced me greatly because they steered me away from an area which was far too ambitious for my thesis. They highlighted fundamental differences in attitudes towards the study of late Roman 'treasure' – a word in itself which attracted some debate – which provided a catalyst for the direction in which my own studies moved.

A summary of Millett v. Johns

Millett argued that the way in which precious metal hoards had been studied in the past left rather a lot to be desired. He objected to the imposition of modern value systems onto hoards: both how a hoard should be defined, and the reasons behind burial. Millett argued that there was a 'widespread belief amongst those studying the Roman period that ancient values were similar to or identical to those of the modern world so their interpretation is unproblematical' (1994, 100). Millett strongly disagreed with this perceived viewpoint.

Millett's main objection – and implicit in the view that modern value systems were being imposed on the past – was that Roman hoards were almost invariably explained away as response to a threat or perceived threat – buried in an emergency – and that there was little 'general discussion of the contextual or possible ritual significance of hoarding' (*ibid.*, 102-3).

Perhaps more controversially Millett argued that the 'virtual monopoly' the British Museum had on studying these finds had stifled debate within the archaeological community. Millett admired the 'nuts and bolts' work which the museum had done – namely publishing hoards which it had acquired, and exploring aspects of the material like style and iconography – but felt that the wider picture had been ignored, because the material was in the hands of too few specialists. 'The curse is not specialisa-

¹ Dept. of Prehistory & Europe, The British Museum, London WC1B 3DG. e-mail: rhobbs@thebritishmuseum.ac.uk.

² Her review article on research on Roman plate is also invaluable (Johns 1990).

³ Given a more sober title in the subsequent publication (Millett 1994).

tion itself but the failure to reintegrate results once studies have been completed to create an overall understanding' (*ibid.*, 103). Millett also mused – hence the title of this paper – 'am I alone in wondering why so many spoons occur in 4^{th} and 5^{th} century hoards?' (*ibid.*, 104).

Catherine was clearly incensed by Millett's paper, particularly as he was one of a number of scholars who had previously 'shown scant interest in Romano-British treasure' (Johns 1994, 107). A list of international scholars who worked on and regularly consulted The British Museum's collection countered Millett's accusations of a British Museum monopoly. And she disagreed strongly that modern value systems had been imposed on the interpretation of British treasures, saying that in some cases people would behave the same as they would nowadays, as after all, 'we are studying human beings in a different time and environment, not an alien species' (ibid., 109). But the meat of the paper was an exploration of the alternative explanations for why hoards may have been deposited, for example those found in temple sites or in waterlogged areas. Catherine developed these themes further in her 1996 paper (Johns 1996a), which listed a number of possible ways of interpreting the deposition of precious metals, both pragmatic reasons of safekeeping and saving and the more sacred reasons of votive and ritual activity. And finally, Catherine pointed out to Millett that the reason for large numbers of spoons was very simple: it was, in her opinion, purely related to the fact that in any dinner service with a reasonable number of vessels there would need to be larger numbers of spoons to go with it, in the same way that cutlery sets now tend to be larger than sets of dining plates and bowls.

New treasure finds of the last ten years

So where are we now? Has much changed in the last ten years? Are archaeologists still arguing about these issues? The simple answer to that is yes; the issues remain the same. We are still not any clearer on why large numbers of hoards were deposited in Britain at the end of the Roman period, and arguments still range between what you might term the 'sacred and profane'. The only significant published paper on the British finds (Painter 1997) concerned itself with an attempt to estimate the number of silver table services which may have been in the province and the epigraphic evidence for ownership. In addition, consideration was given to the religious use of silver vessels, and further discussion of the reasons why hoards might have been deposited (for example as 'savings'). Continental scholars continue to include British finds in their research and consult the British

Museum collections, for example in the superb recent publication of new material from the Kaiseraugst hoard (Guggisberg & Kaufmann-Heinimann 2003).

What about new finds? New hoards dating to the late Roman period have continued to emerge – most of these however are hoards containing coins and nothing else. There have not been any large 'treasures', i.e. ones containing silver plate and jewellery (with or without coins), since Hoxne emerged in 1992. For the earlier period there have been some significant finds, most recently a silver and gold temple treasure from near Baldock in Hertfordshire (Jackson 2004). This demonstrates that, as we might expect, such finds are a rarity, although there are rumours that a hoard of late Roman silver plate was allegedly found in East Anglia recently and not declared as treasure, which, if true, is somewhat distressing news.

As for coin hoards, for Roman Britain as a whole these come up with regularity, and there is no sign that the rate of discovery is falling⁴. The Portable Antiquities Scheme, introduced in 1997, in combination with the revision of the old law of Treasure Trove to form the Treasure Act has undoubtedly increased the level of reporting of finds all across England and Wales, simply because awareness of reporting requirements, amongst, in particular, metal detectorists, has improved dramatically. The publication of An inventory of Romano-British coin hoards (Robertson 2000) finally brought to fruition a 50-year research project, sadly published just after the author's death. In combination with the Coin hoards from Roman Britain project, overseen by curators in the Department of Coins and Medals at the British Museum but with contributions from all over the country, these publications provide an invaluable source of research data. As for significant finds of coin, that from Patching, West Sussex, found in 1997 certainly stands out from the crowd, because it is the first hoard to contain material dating to the mid 5th century AD (White et al. 1999).

Chronological and regional distribution of treasures

Millett and Johns were both offering contrasting viewpoints on how 'treasure' deposits in Roman Britain ought to be interpreted. Both also pointed out some patterns in the distribution of precious metal hoards which they were puzzled by: 'I have long wondered why the supposedly poor areas of East Anglia, largely devoid of villas, have the main concentrations of late Romano-British silver plate hoards' (Millett 1994, 104). Catherine is generally dismissive⁵ of the value of scrutinising distribution patterns but did admit that 'It may be significant that late

⁴ There have been about 14 late Roman precious metal coin hoards since 1994.

⁵ 'The finds which have been preserved and studied must be a tiny sample, and their geographical distribution may, therefore, be seriously misleading' (Johns 1996a, 6).

Roman gold and silver coin hoards.... do not reveal a concentration in East Anglia; if anything, there is a slight emphasis on the West Country' (Johns 1994, 111). Both agreed that the idea that there may have been a 'tradition' of hoarding precious metals in East Anglia from prehistoric until late Roman times required further consideration.

My own doctoral research addressed head-on the issue of geographical and chronological variations in the deposition of precious metals in late Antiquity (Hobbs 1997). I was particularly interested in 'the bigger picture' of hoarding across Europe and beyond the frontiers. I hoped that this might tell us more about the wider social and economic changes at this time. Britain was included in my study, and some of the results are presented here; a publication of the thesis, including finds which have been made since my doctorate was submitted, is currently in preparation. The chronology of hoarding is addressed first and then the regional differences in the deposition of precious metals. Finally, an attempt is made to interpret these observed patterns.

Deposition rates per year: well dated hoards

To date there are 117 well-dated hoards of precious metals of the 4th and 5th century recorded from the British Isles. Fig. 1 represents these in terms of deposition rates per year, in relation to nine subdivided periods (based upon the periods developed by Reece for the study of coin finds, e.g. Reece 1972). The trends in terms of rates of deposition are quite clear. Up until about AD 364, rates remain very low in Britain, with less than half a hoard deposited for each year represented. Things begin to pick up during period 5 (365/95), when over half a hoard on average is deposited per year. But it is in the next period when things really take off: during the latest 'Roman' period, from 395 until the 'official' end of Roman Britain in 411, the rate increases dramatically to five hoards for every year represented. This is clearly a very significant trend. Of course, we have to bear in mind that the data represents latest datable material in each deposit, not the date of burial, which means that often hoards will have been secreted some time after their latest piece. But despite this, there is clearly a major peak of hoarding right at the end of the period in Roman Britain, and very low levels of deposition before. As for the subsequent period, this continues to be represented by a solitary hoard from Patching, West Sussex, the only hoard so far discovered in Britain which we can definitively date to the latter half of the 5th century.

Deposition rates per year, all hoards

Fig. 2 shows what happens when all hoards of this period are added together, a total of 133 deposits. Obviously it is not possible to date these additional deposits accurately, as they are finds without coins; it has to be

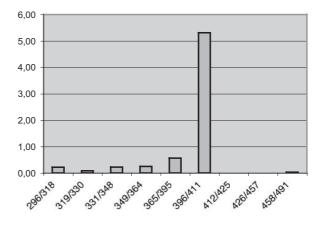


Fig. 1 — Deposition rates of well dated hoards of the fourth and fifth centuries AD.

done on the basis of style of the individual pieces and the presence or otherwise of Christian symbolism. For instance, the dish from Mileham is considered as being more likely to be early 4th century than later, largely because it does not have any features, either stylistically or iconographically, which might push its date later, whilst the Risley Park lanx, with its chi-rho symbol and despite its classical imagery, has been pushed into the latter half of the 4th century⁶. Periods have also been grouped together into four blocks which broadly correspond with the first half of the 4th century, second half, and likewise for the 5th.

This figure shows that in the second half of the 4th century AD, there were large numbers of hoards containing precious metals being buried in Britain, with almost two hoards for every year covered in this study (i.e. between AD 349 and AD 411). And the more refined work outlined above, for hoards which can be more closely dated, shows that this hoarding reaches a crescendo at the end of the 4th and beginning of the 5th century AD. As

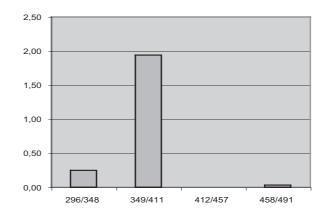


Fig. 2 — Deposition rates of all hoards of the fourth and fifth centuries AD.

⁶ This dating of the vessel is also suggested by Painter (1997, 98).

18 - R. Hobbs

ending AD 296/318				
Cardiff (Sully Moors), Glamorgan(4)	1899	AV jewellery, AV/AR coins	93.7-97.1 g	Kent & Painter 1977, nos 123-26; Robertson 871
Clapton in Gordano, Somerset (4)	1922/24	AR coins	57.4-686.5 g	Robertson 837
Evenley, Northamptonshire (4)	1854	AR coins	8.5-34.2 g	Robertson 990
angtoft, East Yorkshire (1)	2000	AR coins	5.3-53.5 g	CHRB XII (forthcoming)
nding AD 319/30				
Hambledon, Buckinghamshire (4)	1912	AR/AE coins	0.1-0.2 g	Robertson 1081
	1012	ATTAL CONS	0.1 0.2 g	
nding AD 331/48				
Appleford, Berkshire (4)	1954	AR/AE coins	0.3-1.3 g	Robertson 1261
lolyhead, Gwynedd (4)	c. 1820	AV coins	54.0-59.9 g	Robertson 1066
lanbethery, Glamorgan (4)	1957	AR/AE coins	0.0 g	Robertson 1254
Richborough II (Pit 204), Kent (3)	c. 1930	AR/AE coins	0.1-0.4 g	Robertson 1263
irst half of 4th century AD				
areat Horwood, Buckinghamshire (3)	1872	AR plate, jewellery	?	Waugh 1966
fileham, Norfolk (2)	1839	AR plate	143.2 g	Archaeologia 1841, 239; Kent & Painter 1977, no. 103
Vincle, Cheshire (1)	1870-80	AV jewellery	?	Johns et al. 1980
pennymore, Co. Durham (1)	mid 1970s	AR plate	3.33 g	Johns & Pickin 1993
nding AD 349/64 Oldcroft, Gloucestershire (4)	- 1070	Hacksilber, AR/AE coins	1.8 g	Debasters 1005
ortsmouth, Hampshire (4)	c. 1973 1897	AR coins	136.4-206.1 g	Robertson 1365 Robertson 1368
Ater Newton I, Cambrudgeshire (2)	1974	AV coins, Hacksilber	201.4 g	Durobrivae 3, 1975, 10-12; Carson & Burnett 1979, 99-102
/illersey, Worcestershire (4)	1968	AR coins, AR finger-ring	7.5-11.9 g	Carson 1971
nding AD 365/95				
Idworth, Berkshire (4)	1987	AR coins	4.3 g	Robertson 1378A
vlesbury, Buckinghamshire (3)	1979	AV coins	8.9 g	Robertson 1477
romham, Wiltshire (4)	1981, 1985	AR coins	32.7 g	Robertson 1426
hippenham, Cambridgeshire (2)	1997-98	AR coins	1.3 g	CHRB XII (forthcoming)
orbridge (Site XII), Northumberland (1)	1908	AV coins, AV finger ring	213.6 g +	Robertson 1473
ast Harptree, Somerset (4)	1887	AR coins, ingots, ring	214.7-333.3 g +	Robertson 1424
empston I, Bedfordshire (3) ittle Smeaton, N. Yorkshire (1)	1976	AR coins	7.0 g	Robertson 1470
ttle Smeaton, N. Yorkshire (1) lelton Mowbray, Leicestershire (3)	1997 1863	AV/AR coins AV/AR coins, jewellery fragments	30.2 g 13.4g +	CHRB XII (forthcoming) Robertson 1397
ewton Mills, near Bath, Somerset (4)	1863	AV/AR coins, jewellery tragments	13.4g + 34.0 g	Robertson 1397 Robertson 1474
lockbourne, Hampshire (4)	1986-89	AV coins	89.0 g	Robertson 1474
pringhead, Kent (3)	1964	AV/AR coins	74.5 g	Robertson 1472
ewkesbury, Gloucestershire (4)	c. 1846	AV coins	22.3 g	Robertson 1372
hetford (Gallows Hill), Norfolk (2)	1978-82	AR coins	9.9-15.7 g	Robertson 1478
redington, Worcestershire (4)	1861	AR coins	0.7-1.0 g	Robertson 1484
phill, Somerset (4)	1846	AV/AR coins	21.6 g	Robertson 1443
/est Bagborough, Somerset (4)	2001	AR coins, Hacksilber	190.1 g	CHRB XII (forthcoming)
Vood Norton, Norfolk (2)	2001	AV coins	8.97 g	CHRB XII (forthcoming)
nding AD 396/411				
Icester I, Warwickshire (4)	pre 1671	AV/AR coins?	644.8-844.6 g approx?	Robertson 1622
Ilington, Hampshire (4) arrow-upon-Humber, Lincolnshire (1)	1869 1979-81	AV/AR coins	10.4-11.4 g 29.2-34.3 g	Robertson 1536 Robertson 1556
Bishops Cannings, Wiltshire (4)	1979-81	AV/AR coins, AV/AR jewellery	29.2-34.3 g 141.8-155.1 g	CHRB X, 426-62
Boscombe Down, Wiltshire (4)	1990	AV/AR coins	35.6 g	Robertson 1498A
owerchalke, Wiltshire (4)	1998-2002	AV/AR coins, AV rings	32.2-33.3 g	CHRB XII (forthcoming)
urgate, Suffolk (2)	1991	AV/AR coins, AR jewellery, plate	24.1-30.1 g +	CHRB X, 463-7
urtle, Somerset (4)	c. 19th century	AR coins	2.7-5.4 g	Kent 1994, clxxvi
amerton, Somerset (4)	1814	AR coins	1.7-3.4 g	Robertson 1579
anterbury, Kent (3)	1962	AR coins, bullion, plate	112.9 g +	Painter 1965; Johns & Potter 1985; Britannia 17 (1986), 449
arleton St. Peter, Norfolk (2)	1807	AV/AR coins	18.5-19.1 g	Robertson 1566
Caston, Norfolk (2)	1816	AR coins	0.1 g +	Robertson 1567
attal, Yorkshire (1)	1993/8	AR coins	1.2 g	CHRB X, 424-5; CHRB XII (forthcoming)
leeve Prior, Worcestershire (4) olerne, Wiltshire (4)	1811 1941	AV/AR coins	2202.3-3070.0 g approx. 8.1 g	Robertson 1600 Robertson 1596
olerne, Wiltshire (4) ompton Downs, Berkshire (4)	1941 1981	AR coins	8.1 g 18.9 g approx.	Robertson 1596
eopham, Norfolk (2)	1993	AV/AR coins	116.2 g	CHRB X, 468-9
orchester, Dorset (4)	1898/89	AR coins, plate	5.9-6.7 g +	Robertson 1523
dington, Somerset (4)	1838	AR/AE coins	5.7-6.3g	Archer 1979, 41, no.19; Kent 1994, clxxvi
ye, Suffolk (2)	1781	AV coins	2670.0 g +	Robertson 1620
incham, Norfolk (2)	1801	AR coins, plate	2.5 g	Robertson 1568
adbury, Worcestershire (4)	1935	AR coins	0.4 g	Robertson 1601
leetwood?, Lancashire (1)	1840	AR coins	26.0 g approx.	Robertson 382/1553
/est Row, Freckenham, Suffolk (2)	1980	AR coins	20.9-23.8 g	Robertson 1587
iood Easter, Essex (3)	1992-2003	AV coins	66.7 g +	CHRB X, 480; CHRB XII (forthcoming)
avnes, Bedfordshire (2)	1906 1997	AR coins, rings AR coins, AV/AR jewellery, AR plate	34.1-39.9 g + 67.7-105.6 g	Robertson 1597/8 CHRB XII (forthcoming)
aynes, Bedfordshire (2) linton Down, Wiltshire (4)	1997 1990	AR coins, AV/AR jewellery, AR plate	67.7-105.6 g 0.5 g	CHRB XII (forthcoming) Robertson 1498B
olway (Taunton), Somerset (4)	1821/30	AR coins	57.4-65.3 g +	Robertson 1498B
Ioniton, Devon (4)	c. 1923	AR coins	2.1-2.4 g	Robertson 1489
ovingham Park, Yorkshire (1)	1980	AR coins	4.7-5.4 g +	Robertson 1604
oxne, Suffolk (2)	1992	AV/AR coins, AV jewellery, AR plate	5213.7 g +	Bland and Johns 1993; 1994b; Guest 2005; Johns forthcom
klingham I, Suffolk (2)	1874	AR coins	37.7-44.1 g	Robertson 1588
klingham II, Suffolk (2)	1902	AR coins, plate, jewellery	8.4-11.1 g +	Robertson 1590
klingham III, Suffolk (2)	c. 1880/90	AR coins	25.0-29.1 g	Robertson 1589
empston II, Bedfordshire (3)	1978	AR coins	3.4 g	Robertson 1513
ddington I, Oxfordshire (4)	1921	AR/AE coins	1.4 g +	Robertson 1576
ddington II, Oxfordshire (4)	pre 1935	AR/AE coins	0.2 g?	Robertson 1577
akenheath (Palmers Green), Suffolk (2)	1982	AR coins	22.8-26.8 g	Robertson 1591
anyon Quoit, Cornwall (4)	1850	AV coins	8.9 g	Robertson 1501A
eicester, Leicestershire (2) etcombe Regis, Berkshire (4)	1906 c. 1750	AR coins AV/AR coins	4.1-8.1 g	Robertson 1462
	c. 1750 1998-9	AV/AR coins AR coins	4.6 g +	Robertson 1656 CHRB XII (forthcoming)
ndsell, Essex (3) ondon (Tower of London) (3)	1998-9	AR bullion	1.5 g 33.4 g	Painter 1972; Archaeologia V (1979), 291-305
ondon (Tower of London) (3) ondon (St Pancras) (3)	1958	AR coins	0.6-1.2 g	Archer 1972; Archaeologia V (1979), 291-305 Archer 1979, 53, no.42
aiden Castle, Dorset (4)	1934	AV coins, jewellery	17.8 g +	Robertson 1524
anton Down, Wiltshire (4)	c. 1884	AR coins	2.1-2.2 g	Robertson 1524
elcombe Horsey, Dorset (4)	1999-2002	AR coins	9.9-11.5 g	CHRB XII (forthcoming)
lidenhall II, Suffolk (2)	c. 1942	AR coins	1.4-1.7 g	Robertson 1592
ilverton, Somerset (4)	c. 1847	AR coins	3.0-6.0 g	Robertson 1496

Table 1 — Summary of 4th- and early 5th-century precious metal deposits from mainland Britain. AE...copper-alloy; AR...silver; AV...gold. 'Robertson' refers to Robertson 2000, and relates to her unique reference numbers for the hoards. The entries have useful summaries of the find circumstances and of the content; for more information on individual finds, additional references are also included (to be followed next page).

'Why are there always so many spoons?' Hoards of precious metals in Late Roman Britain

Findspot/Region	Year of discove	ery Broad context	EGW	References
North Mendip, Somerset (4)	.< 1867	AR coins	235.8-275.5 g	Robertson 1578
Osbournby, Lincolnshire (2)	1979-83	AR coins	33.9-39.4 g	Robertson 1559
Otterbourne I, Hampshire (4)	1978	AR coins	62.3-72.8 g	Robertson 1559
Otterbourne II, Hampshire (4)	1980	AR coins	16.0-18.2 g	Robertson 1533
Paulton, Somerset (4)	1955	AR coins	5.1 g	Robertson 1583
Reading I, Berkshire (4)	1895	AV/AR coins	12.4-20.4 g	Robertson 1516
Reading II, Berkshire (4)	1895	AR coins	3.3-6.6 g approx.	Robertson 1500
Richmond, Yorkshire (1)	1720	AR coins	40.0-79.9 g	Robertson 1606
Samson, Isles of Scilly (4)	c. 1874	AR coins	0.4-0.8 g	Robertson 1522
Shanklin, Isle of Wight (4)	1833	AR coins	0.4-0.8 g	Robertson 1539
Shapwick I, Somerset (4)	1936	AR coins	13.1-15.2 g	Robertson 1584
Shapwick II, Somerset (4)	1937	AR coins	8.3-16.6 g	Robertson 1497
Silchester, Hampshire (4)	1985-7	AV rings, AR coins	29.9 g	Fulford et al. 1987; 1989
South Ferriby, Humberside (1)	1909	AR coins, ring	20.9-22.9 a	Robertson 1557
Sproxton, Leicestershire (2)	1811	AR coins	10.9-12.6 g	Robertson 1555
Stanchester Hill, Wiltshire (4)	2000	AV/AR coins	155.3-178.5 g	CHRB XII (forthcoming)
Stancrester Hill, Wiltshire (4) Stanmore, Middlesex (3)	1781	AV/AR coins AV coins, jewellery, AR coins, bullion	233.3 q +	Archaeological Journal 1933, 300; Henig 1974, nos 703 & 791
Stockerston, Leicestershire (2)	1799	AR coins	40.0-79.9 g approx.	Robertson 1506
Stratford on Avon, Warwickshire (4)	1786	AV/AR coins	4.6 g +	Robertson 1482
Sturmer, Essex (3)	1793	AV/AR coins	6.4-8.3 g	Robertson 1527
Stuston, Suffolk (2)	1999	AR coins	1.7 g	CHRB XII (forthcoming)
Terling, Essex (3)	1824	AV coins, jewellery, AR coins	167.3-173.1 g +	Robertson 1528
Thetford, Norfolk (2)	2000	AR coins	0.4 g	CHRB XII (forthcoming)
Traprain Law, East Lothian (1)	1919	AR coins, Hacksilber	1453.8 g	Curle 1922
Tuddenham St. Martin, Suffolk (2)	1938/9	AR coins, AV ring	8.3-8.6 g +	Robertson 1593
Whitchurch, Hampshire (4)	c. 1989	AR coins	4.7-5.2 g	Robertson 1536A
Whitwell, Rutland (1)	1991-92	AV/AR coins, AV ring	126.3-143.7 g	Bland & Johns 1994a; CHRB X, 470-79
Whorlton, Yorkshire (1)	1810	AR coins, plate, bullion, jewellery, Hacksilber	845.8 g approx.	Elgee 1923, 8-9; Burnett & Johns 1979
Wilton (Guisborough), Yorkshire (1)	1856	AV/AR coins	9.7-15.0 g	Robertson 1609
Wittering (Cakeham), Sussex (4)	>1847	AV coins	53.4 g +	Robertson 1481
Wiveliscombe, Somerset (4)	1946	AR/AE coins	0.2 g	Robertson 1498
Worlington, Suffolk (2)	2001-2	AR coins	2.0 g	CHRB XII (forthcoming)
Zennor, Cornwall (4)	1702	AR coins	5.3-10.6 g	Robertson 1521
second half of 4th century AD				
Biddulph, Staffordshire (1)	c. 1885	AR plate	1.85 g +	Painter 1975
Corbridge, Northumberland (1)	c. 1731-60	AR plate	328.5 g +	Haverfield 1914
Dorchester-on-Thames, Oxfordshire (4)	1872	AR plate	5.5 g	Proceedings of the Society of Antiquaries, 1870-73
Mildenhall I, Suffolk (2)	1942	AR plate	1735.4 g	Brailsford 1947; Painter 1977a
Risley Park, Derbyshire (2)	1729	AR plate	302.1 g approx.	Johns 1981
Thetford (Gallows Hill), Norfolk (2)	1979	AV jewellery, AR plate	453.5 g +	Johns & Potter 1983; Watts 1988
Water Newton II, Cambridgeshire (2)	1975	AR plate	269.4 g +	Kent & Painter 1977, nos 26-53; Painter 1977b; Painter 1999
Kent, location unknown (3)	c. 1970	AR bullion	21.3 g	Painter 1972, 84
London (Tower Hill) (3)	1898	AR bullion	55.8 g	Painter 1981
Reculver, Kent (3)	1980	AR bullion	21.1 g	Painter 1981, 201 ff; Britannia 17 (1986), 444
Richborough, Kent (3)	< 1900	AR bullion	42.1 g	Guggisberg & Kaufmann- Heinimann 2003, 340, no. 61
Wingham, Kent (3)	c. 1972	AR bullion	40 g approx.	Painter 1972, 87
			1 · 0 · FF ·	
ending AD 457/91	1			
Patching, West Sussex	1997	AV/AR coins, AV finger ring, AR/base metal fragme	ents 147.3 a	White et al. 1999
		,		

Table 1 — (following / end).

expected for the 5th century, there is a hiatus in hoarding (with the exception of Patching), which does not pick up again until rather later.

Regional variations in deposition rates and size

We have already seen that there is a gradual increase in hoarding in Britain up until about AD 395, after which the level of hoarding increases dramatically. Figures 3-9 show how these levels of hoarding vary regionally, and also provide an index of the size of these hoards and their broad content. All the hoards are summarised in Table 1.

Before describing the patterns observed, it is necessary to say something about how the hoards have been subdivided, and how assessments have been made of their relative sizes. Essentially, it is possible to divide precious metals into four key artefact groups:

Jewellery – items of personal adornment in gold and silver for the body (e.g. finger-rings) and dress accessories (e.g. buckles). Bullion – either precious metal in its most basic form, invariably silver, for instance ingots; or *Hacksilber*, which comprises pieces of silver deliberately cut from larger objects, such as plate or sometimes jewellery⁷.

Plate – invariably silver (gold plate has never been found in Britain) in the form of tableware (bowls, spoons, and so on) and toilet implements.

Coin – gold and silver coins, both official issues and non-official copies. Clipped *siliquae* are a common feature of British coin hoards (King 1981; Burnett 1984).

There are some artefact types which do not necessarily fall neatly into these groups, particularly objects which we might associate with religious practice, such as the votive silver leaves from Water Newton (II). But because these form a relatively small group of objects at this time, these have been included under the category of 'plate' for the sake of simplicity.

On the maps (Figs 8-9), these different types of finds can be represented visually; open shapes represent gold, closed silver, and half and half mixed. Obviously some of

⁷ Catherine herself wrote a paper on the whole issue of the nomenclature of *Hacksilber*; I have followed her recommendation in this paper (Johns 1996b).

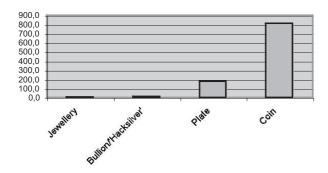


Fig. 3 - Region 1: 'The North' (excuding Traprain Law).

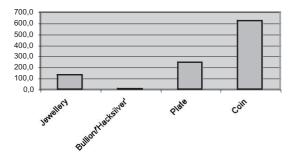


Fig. 4 - Region 2: 'East Anglia'.

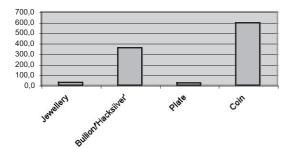


Fig. 5 - Region 3 'Thames'.

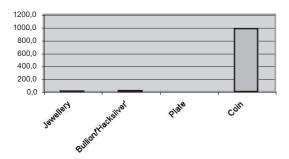


Fig.6 — Region 4: 'The West'.

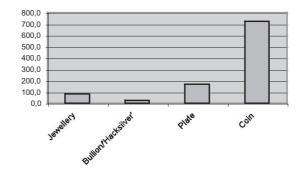


Fig. 7 — The whole of Britain (excluding Traprain Law).

the hoards consist of a variety of object, so these are simply represented by more than one relevant symbol (stars, squares, triangles and circles respectively).

As regards size, both Table 1 and Figs 8-9 assign to each hoard an index of its precious metal content or 'EGW'8. This abbreviation stands for 'Equivalent Gold Weight', and was a method for comparing mixed hoards of gold and silver developed for my doctoral research (Hobbs 1997). The method will be published in more detail elsewhere (Hobbs forthcoming), but essentially is designed to overcome the problem of comparing sizes of hoards which not only comprise two types of precious metal - gold and silver - but can also consist of a whole range of different object types. To provide an example, there is no simple way to compare the relative sizes of Mildenhall, Suffolk, with its 23 pieces of silver plate, with a hoard of 600 gold coins from Eye in the same county. Are they of similar size in terms of their precious metal content, or is one much larger than the other? The reasons for wanting to do this are quite straightforward: some indication is given of the comparative wealth tied up in different finds, and thus some reckoning of the status of the owners. And in wider terms, each find can be compared against a background provided by all other finds of a similar nature, allowing us to decide if a deposit should be considered 'normal' or 'exceptional', particularly useful when new discoveries are made.

The way in which EGW is calculated is based upon a theoretical exchange rate of 1: 15 between gold and silver in the late Empire. Although this figure is hypothetical, it is drawn from a number of written sources describing variations in the price of gold and silver, and what we know about the denominational structure of coinage at different times, from the late Republic until the early 5th century AD. Over this 400 or so year period, the relation-

⁸ Where there is a range of values, this is due to the fact that the number and nature of pieces in the deposit is not known exactly – for instance, the proportions of base silver and good quality silver coins. In these cases, the lowest EGW figure has been used to make the calculations in figs 3-9.

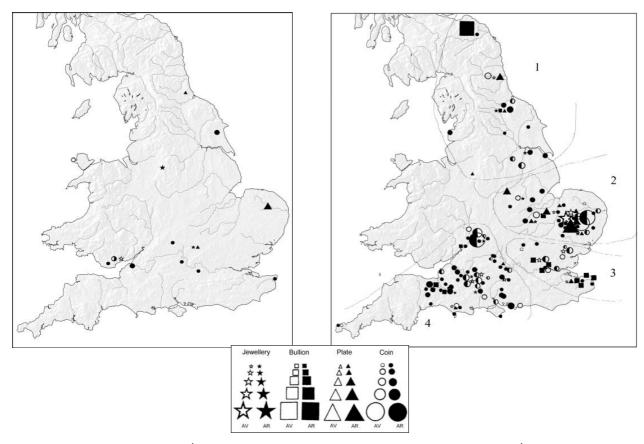


Fig. 8 — Précious metal hoards in Britain, early 4th c. AD (up to AD 348).

Fig. 9 — Précious metal hoards in Britain, late 4^{th} c. AD (from c. AD 349 to c. AD 411).

ship between gold and silver seems to have fluctuated between about 1:12 and 1:18, thus not a huge margin of variation. Much of this comparative work was conducted by Bolin (1958), who provides the following example of the relative values of gold and silver from documents dating to the early 4th century AD:

'There are two accounts of tax payments made about the year 310 in both gold and silver. In one of them dated 312, the amount of silver was 264 scruples and the amount of gold 17 $^{1/2}$ scruples; in the other.... the amount of silver was 867 scruples and the amount of gold 58 scruples. The proportion of silver to gold paid in the papyrus dated 312 is 15.08:1 and in the papyrus dated 307 is 14.94:1'. (Bolin 1958, 313).

So it can be seen that a theoretical relationship of 1:15 is logical, not only because it is the median between 1:12 and 1:18, but also because for the 4th century there is evidence that (in Egypt at least) this can be taken as a reasonable figure for the relative values of gold and silver. In any case, as long as the same formula is applied to each find, then consistency is maintained. It must be remembered that these figures are only designed to give an impression of the relative sizes of hoards at this period, as we do not know for certain what the exchange rate between gold and silver was specifically in Britain. Also none of this work is able to take into account other values tied up in precious metal objects, such as the level of craftsmanship involved in making an object, or sentimental value of finds, the subject of another paper (Hobbs forthcoming). Nevertheless EGW gives some indication of the size of deposits being secreted in different parts of Britain.

First half of 4th century AD

There are only thirteen hoards of this period (Fig. 8), so a brief commentary is all that is needed because this number can hardly be considered statistically significant. In terms of content, most of the hoards consist of coins, but even these are extremely small and insignificant amounts of precious metal. For example, the hoard from Clapton-in-Gordano had almost 3,500 coins in it, but it is not clear how many of these are good quality silver argentei, or the poor quality radiates of the late 3rd century, and there are probably far more of the latter. As for silver plate - a subject closer to Catherine's heart - there are very few finds of any note. The dish from Mileham in Norfolk is a single isolated find and might in any case have been buried, if not manufactured, at a later date; and the collection of jewellery and one or two items of silver plate from Great Horwood is hardly the stuff of front page tabloid news. And this too may be of later date. So there is frankly very little of note at this period, except perhaps that it might be significant that gold is restricted to two finds from Wales.

Second half of the 4th and early 5th centuries AD

Clearly the late 4th century (and, as noted above, particularly the very late 4th and early 5th century) is a time when a huge amount of precious metal was being deposited in Britain. For comparative purposes, Figs 3-6 and 9 divide this data up into four regional groupings: 'The North', 'East Anglia', 'Thames' and 'The West'9. These regional groups are simply based, somewhat subjectively, upon how the groups of hoards cluster. The set of hoards in 'The West' seems to be divided from the 'Thames' group by a corridor in which no hoards have been discovered to date, broadly conforming to the line of the upper Thames Valley. Likewise there seems to be a gap between some outlying hoards of the 'East Anglia' group in Lincolnshire, and all the hoards to 'The North' which begin south of the Humber. And finally, there seems to be a narrow gap between the dense 'East Anglia' group and the set of finds which appear to cluster around the lower reaches of the 'Thames' and the south-east.

Overall patterns in hoarding

Taking the country as a whole, a number of observations emerge. As might be expected, because it is a pattern repeated with many categories of Romano-British material, the heaviest concentration of finds is broadly southeast of a line from the Bristol Channel to the Humber. There is a corresponding scarcity of finds from the upland regions of Wales and the south-west, and the western side of the country north of Staffordshire. This must be partly related to archaeological factors, i.e. recovery of material, where there is a stronger likelihood of hoards being discovered in areas which have been more heavily cultivated¹⁰. It also broadly mirrors the areas of higher settlement concentrations in Roman times.

As regards the types of material being buried, this information is presented in Fig. 7 ¹¹. Overall the equivalent of more than 18 kg of gold has been discovered in Britain to date¹². The vast majority – almost three quarters - is in the form of coin, followed by silver plate (about 17%) with far smaller quantities of jewellery and bullion. This comes as no surprise, as coinage by this stage in Britain's history was well established as the principle means of storing and moving wealth around and vast numbers of coins were circulating (although there was, as is to be expected, far less gold and silver circulating than base metal copper coinage, which was produced in substantially greater quantities). As for the other catego-

ries of material, their general presence in hoards is very low in comparison to coins, and their overall presence is often bolstered by one or two significant finds, as discussed below.

Regional variations

Figures 3-6 and 9 show that there are strong regional variations in both the concentration of deposits and types of metalwork contained in them. **Region 1** ('The North') is dominated by assemblages of coin with a small amount of plate and little else. The situation is somewhat complicated by the massive hoard of *Hacksilber* from Traprain Law, which is so different in nature from the rest of the material from Britain, not only because it came from beyond the northern frontier, but also because it may well be of somewhat later date, that it has been excluded from Fig. 3. The North is an area which overall only produces about 1/10th of the total finds across the British Isles.

Region 2 ('East Anglia') is once again dominated by coins, but also has large amounts of silver plate and jewellery as a particular characteristic of finds from this region. Within the region as well there is clearly one area which we might term a 'hoarding hotspot', namely the region roughly encircling Thetford in Norfolk. This is far from being new information - as was noted, Millett amongst others pointed it out previously - but at least here it can be placed against the background of other categories of precious metal finds. Of course, two large hoards dominate the data here, those from Mildenhall and Hoxne, which between them account for much of this plate and jewellery. Nevertheless there are eight finds from this region which have some silver plate in them, and six finds which have gold or silver jewellery. Although jewellery is represented from deposits elsewhere in Britain, silver plate rarely is, with all three of the other regions only producing five hoards containing plate between them, and usually in very insignificant quantities.

Region 3 (The Thames) produces the lowest amount of material overall, but it should be borne in mind that this is also the smallest area encircled on the map, so not too much should be read into that. Once again, the assemblages are dominated by coins, roughly the same amount as in Region 2 in fact; but what is clear is that there is a large peak of bullion finds from this area. This can be refined further in that these consist entirely of finds of silver ingots, more often than not with official stamps. None of the other regions produces a single silver ingot of

⁹ Region 1, 'The North': parts of Lincolnshire, Humberside, Staffordshire and all areas to the north; region 2 'East Anglia': Norfolk, Suffolk, Cambridgeshire, parts of Lincolnshire, Bedfordshire, Derbyshire & Leicestershire; region 3 'Thames Valley': Kent, Essex, Middlesex, Greater London, Buckinghamshire, parts of Bedfordshire & Leicestershire; region 4 'The West': Wales, Dorset, Somerset, Devon, Cornwall, Berkshire, Gloucestershire, Hampshire, Sussex, Oxfordshire, Worcestershire, Warwickshire, Wiltshire, parts of Buckinghamshire.

¹⁰ As discussed, Catherine feels strongly that this is the overriding factor governing the distribution of treasure finds.

¹¹ The data is provided as raw figures for the Equivalent Gold Weights, with all the different categories of metalwork added up, regardless of the different internal structures of individual finds. This is additionally expressed as a 'Gold per 1000' figure, because this is the standard method of comparing coin finds (e.g. Reece 1972), and also because as opposed to standard percentage figures, small numbers are at least given a whole number value as a result.

¹² Excluding Traprain Law.

this nature, although finds from Whorlton and East Harptree have uninscribed examples. The possible reasons behind this are explored below.

Finally, Region 4 ('The West'), has as dense a concentration of finds as in parts of East Anglia - more hoarding hotspots - but unlike East Anglia, and in fact any other region, these consist almost entirely of coin deposits. Thus Catherine's earlier published observation has been vindicated. In fact, coinage accounts for significantly more of the assemblages than in any other region – about 98% – with only the north even coming close to that figure in comparative terms. And many of these individual deposits are sizeable finds, if often poorly documented discoveries (e.g. Cleeve Prior) and often mix together gold and silver coins. And although a number of the deposits from this region contain jewellery, this is more often than not nothing more complex than a single finger ring. There are only two finds which produce silver plate, both of the Dorchesters (in Dorset and Oxfordshire).

Interpreting patterns of late Roman precious metal deposition

So to summarise: two regions, 'East Anglia' and 'the West', produce large numbers of precious metal deposits some of which are very sizeable. 'East Anglia' produces the most silver plate and some finds with a variety of jewellery, whilst 'the West' produces almost exclusively coin hoards. Hoards are much dispersed in the north, and in the Thames basin and Kent there are a number of hoards which produce 'official' silver ingots.

How might these patterns be explained? The first point to address is whether or not it is felt that the sample is statistically large enough to make these patterns 'real'. As has already been stated, Catherine herself feels that the number of finds recovered must be a tiny fraction of what was buried, and is thus quite dismissive of the value of studying distribution (see Footnote 5). My problem with this is that it implies that there needs to be a certain unspecified - number of deposits available for study before we will accept that their distribution forms a 'real', and thus distinctive, distribution pattern; but who is to say when this point will be reached, if, as Catherine believes, it has not been reached already? The fact remains that year upon year, it is a virtual certainty that if a hoard is found which contains late Roman silver coinage, this will probably come from the west of Britain or East Anglia; and if a find contains any silver plate, this is more likely to come from the latter region. Prehistorians might warn that recent finds which have been made dating to the Late Iron Age show that unexpected assemblages can come up from areas which were previously thought to be 'sterile' regions - I am thinking in particular of the gold jewellery from Hampshire (Hill et al. 2004) and the large number of coin hoards from East Leicestershire (Hobbs 2003, 65-8; Clay 2004). Nevertheless, although these Iron Age finds might have come from areas which are unexpected, they

at least support an identifiable pattern of deposition which suggests that high points in the landscape often produce precious metal assemblages (e.g. Hutcheson 2004). (This is not, incidentally, a pattern repeated with late Roman hoards). And in any case, there is no value in dismissing these patterns of hoarding in late Roman Britain as worthless; if in 100 years time, they are completely overturned by a series of new discoveries from other parts of Britain - for instance, if northern Britain suddenly produces a dozen silver plate hoards and innumerable silver ingots then any theories I have expounded will have simply been proved incorrect. But I would suspect that in fact, future discoveries will only accentuate the patterns. Finds like Patching demonstrate that new discoveries can buck the trend, in this case because it is a mid 5th-century hoard and thus extremely rare, but this is a one-off and likely to remain so for a very long time. Since then, about a dozen more precious metal coin hoards have been discovered and these all behave chronologically and geographically like most which have been found before.

So if we accept that there is a significant pattern in the data, what might it tell us? That in the East they were predisposed to acquire silver plate and jewellery, whilst in the villa zone in the West they only kept their wealth in the form of coin? The issue of villas is an interesting one, because it is certainly the case that in the West there are far more of them, they seem to be more opulent, and they do not seem to be burying silver plate. Does that mean that they did not own plate? This is always an area which becomes extremely tricky; does the presence of a certain artefact type in one particular area, and a corresponding absence in another, really reflect what was going on at the time? It is not as if they were not hoarding in the West, after all; it is just that we do not seem to have evidence that they were burying much silver plate. Did they prefer to invest any disposable income in mosaics and wall paintings, and leave the silver plate owning to the occupants of houses in the East (which we are struggling to locate)?

There is also the issue of whether or not we can be sure that the places of burial of hoards can be linked directly to the places of residence of the owners. Perhaps the reason why we find silver plate in the East is that it was an area in which the population was so sparse that the secretion of precious metals was far easier, out of sight of prying eyes. So should we think of the owners of these deposits as living in London or Colchester instead, and simply using rural backwater East Anglia as a good place to bury things when the time came? Or maybe they were living in the villas in the West, and choosing East Anglia as a place of burial for certain types of object but not others. That, however, is probably overstretching the evidence somewhat.

Nevertheless, we should perhaps pay more attention to the sizes of different deposits and think harder about the amount of time and effort invested in the burial act. For instance, it would be hard to believe that a small hoard of a dozen coins placed in a household pot was then transported many miles distant from the owner's place of resi-

dence and buried in a carefully chosen place. Far more likely it was placed in the wall cavity of a nearby outbuilding or underneath a distinctive tree in a nearby wood. The total time and effort invested was probably less than an hour. In contrast, a huge amount of time and effort was invested in the burial of Hoxne - perhaps more like two or three days. We know that individual objects were wrapped; ladles and bowls were carefully stacked, and even separated with straw; and once done, a large box was carefully filled with all these objects and further packed with textile and straw to ensure everything was protected. Having made such an effort, is it that far-fetched to think that the casket was not transported by cart some miles distant from the home of the owner, to a carefully chosen spot in the middle of nowhere? After all, in the most celebrated account of the burial of a coin hoard - that of Samuel Pepys - we learn that the hoard was transported a whole night's coach ride away from London before being buried in the garden of a family member (Latham & Matthews 1974). If Pepys had never retrieved his hoard, and it had been re-discovered in modern times, would we have envisaged that it had belonged to someone whose principal residence was in London? The owners of a local house would have probably been very quickly associated with it, which would not, of course, have been further from the truth.

These issues aside, there is undoubtedly a split between what is being buried in the East overall in comparison with that of the West. If we look at Regions 2 and 3 as a group, i.e. 'East Anglia' and the 'Thames' region, then certainly more silver plate and officially stamped ingots are being buried in this area than in 'The West' of Britain. Both these categories of material have been linked with official donatives: we know that the army and civil service in the late Empire often received stamped ingots as forms of payment (for a discussion see Painter 1972, 85), and there is overwhelming evidence that silver plate too was often presented by the emperor to high ranking officials. Examples include vessels from Naissus (Nis) in Yugoslavia, which commemorate the decennalia of Licinius in AD 317¹³. Although none of the British finds of silver plate have either stamps or inscriptions which can link them directly with the imperial court, the mixing of stamped ingots with 'unofficial' silver plate does occur, and thus implies that 'unofficial' plate could have been presented as gifts. Examples come from Canterbury, Kent (stamped ingots and spoons) and Kaiseraugst, Switzerland. The latter find is particularly important in this regard, because it has stamped ingots of Magnentius, at least one official donative (a silver bowl with an imperial stamp), and other vessels which have graffiti inscriptions naming Marcellianus (Guggisberg & KaufmannHeinimann 2003, 301). Marcellianus is important because his military rank is also known: another graffito tells us he was a *tribunus*, a high rank in the late Roman army. Kaiseraugst thus demonstrates that it is very difficult to divide silver plate into 'official' and 'non-official' categories, because here it is all mixed up together.

Returning to the British finds, it can perhaps be postulated therefore that a substantial level of gift-giving to the army was taking place in late Roman Britain, which was attempting to maintain a system of coastal defences, and civil servants, who were trying to run an ailing and increasingly unstable frontier province. Some of them buried their ingots, silver plate and the ubiquitous coinage because the province was in crisis, and naturally quite a few did not make it back to recover their wealth. And noone in 'The West' received official patronage, so no-one buried silver plate or ingots. Coinage was a different matter because it was so useful for making payments, and had been the preferred means of exchange in settled parts of Britain for hundreds of years. So everyone everywhere was burying their coins, because they did not want either Rome or outsiders to get their hands on them, and some, naturally, did not come back to recover them. And higher rates of coinage deposition simply reflect more heavily populated areas.

So finally, we come to the question of why. What was happening at the end of the 4th century that caused a sudden and dramatic increase in the burial of precious metals across Britain? Should we be looking for answers from outside the province or from within, or a combination of both? Usually we tend to think that peaks of hoarding are a response to outside threat, i.e. invaders from across the North Sea. Perhaps less attention is paid to the idea that this hoarding relates to circumstances within the province itself. Perhaps there was widespread civil unrest, with large parts of the population, incensed by the fact that they saw wealth in the hands of a few landed gentry, wanting their share. Those owning this wealth thought it best to hide it, and perhaps even felt vulnerable enough to abandon their homes and move to a different part of Britain or even leave the island entirely. Maybe it was rather a tug-of-war between Rome and a wealthy and successful mercantile class, who themselves grew resentful of an increasing burden of taxation by squirreling away as much accumulated wealth as they could.

As for the chronology, I believe these hoards were being buried over at least two decades if not as much as half a century, from AD 390 onwards. The support for this is the clipping of coinage and the creation of contemporary copies, in addition to the chopping of silver vessels into smaller chunks to create *Hacksilber*. Both these activities must have been a localised response to the cessation

¹³ Other pieces might also be argued to be imperial gifts: for instance Reece (1997) in his review article on the work on Schneider (1983) and Raeck (1992) argued that the Madrid *missorium*, which depicts the emperor giving a codicil to an official, could itself be considered as an official gift, i.e. art mirroring reality; the *missorium* is the gift, and the craftsman has been asked to show this gift giving on the vessel itself.

of new supplies of coinage and, if you accept the argument, of official donations of silver bullion and plate. These locally produced forms of currency must have been circulating for a reasonably long time before finding their way into hoards, which means that any hoards containing them must have been buried some time after Roman Britain's 'official' end in AD 410.

It should also be borne in mind that the cutting up of silver vessels into more manageable chunks demonstrates a change in attitude towards precious metals: large bulky plate items were no longer considered to be viable as objects. More importance was now attached to having hand-sized pieces of silver which could be easily transported and exchanged. And returning to the central question of spoons, the large number of these which survive might also be linked to an increased demand for portable wealth, spoons already being readily available sources of manageable precious metal chunks. Thus in late Roman Britain when coin supplies dried up, spoons became a medium of exchange alongside contemporary copies of official coins, and pieces of silver hacked from bulky pieces of silver plate.

There are a huge number of issues which arise from the patterns of hoarding presented here, and I have only been able to address some of them. I hope, however, they provoke thought and that I have, like Catherine before me, stimulated debate on a poorly-understood period of Britain's history.

Acknowledgements

I would like to thank J.D. Hill, Ralph Jackson and Richard Reece for their comments on earlier drafts of this paper, and Richard Abdy and Jonathan Williams for providing me with information on recent coin hoards in advance of publication.

Bibliography

CHRB Coin hoards from Roman Britain, X-XII.

- Archer, S. 1979. 'Late Roman gold and silver coin hoards in Britain: a gazetteer', in P.J. Casey (ed.), *The end of Roman Britain*, BAR British Series 71, 29-64 (Oxford).
- Bland, R.F. & Johns, C.M. 1993. *The Hoxne treasure. An illustrated introduction* (London).
- 1994a. 'A Roman hoard from Whitwell', *Rutland Record* 14, 151-7.

- 1994b. 'The Hoxne late Roman treasure', *Britannia* 35, 165-73.
- Bolin, S. 1958. *State and currency in the Roman Empire*. (Stockholm).
- Brailsford, J.W. 1947. *The Mildenhall treasure*. A provisional handbook (London).
- Burnett, A.M. 1984. 'Clipped *siliquae* and the end of Roman Britain', *Britannia* 15, 163-8.
- Burnett, A.M. & Johns, C. 1979. 'The Whorlton hoard (1810)', in Carson & Burnett 1979, 110-16.
- Carson, R.A.G. 1971. 'Willersey (Glos.) Treasure Trove of fourth century imperial silver coins', *Numismatic Chronicle* 134, 203-6.
- Carson, R.A.G., & Burnett, A. (eds.) 1979. *Recent coin hoards from Britain*, British Museum Occasional Paper 5 (London).
- Clay, P. 2004. 'South Leicestershire' in Britannia 35, 288.
- Curle, A.O. 1922. The treasure of Traprain (Edinburgh).
- Elgee, F. 1923. *The Romans in Cleveland* (Middlesborough).
- Fulford, M.G., Burnett, A., Henig, M. & Johns, C. 1989. 'A hoard of late Roman rings and silver coins from Silchester, Hants.', *Britannia* 20, 219-28.
- Fulford, M.G., Henig, M. & Johns, C., 1987. 'A late Roman gold finger ring from Silchester, Hants.', *Britannia* 18, 279-81.
- Going, C. 1992. 'Economic 'long waves' in the Roman period? A reconnaissance of the Romano-British ceramic evidence', *Oxford Journal of Archaeology* 11.1, 93-113.
- Guest, P.S.W. 2005. *The late Roman gold and silver coins from the Hoxne treasure* (London).
- Guggisberg, M. A. & Kaufmann-Heinimann, A. 2003. Der spätrömische Silberschatz von Kaiseraugst. Die neuen Funde (Augst).
- Haverfield, F. 1914. 'Roman Silver in Northumberland', *Journal of Roman Studies* 4.1, 1.
- Henig, M. 1974. *A corpus of Roman engraved gemstones from British sites*, British Archaeological Reports British Series 8 (Oxford).
- Hill, J.D., Spence, A.J., La Niece, S. & Worrell, S. 2004. 'The Winchester hoard: a find of unique Iron Age gold jewellery from Southern England', *Antiquaries Journal* 84, 1-22.
- Hobbs, R. 1997. *Late Roman precious metal deposits, c. AD 200-700: changes over time and space* (unpublished PhD thesis, University of London).
- 2003. Treasure: finding our past (London).
- forthcoming. 'Mine's bigger than yours: comparing values of late Roman hoards', in R. Hingley & S. Willis (eds.), *Promoting Roman finds: context and theory* (Oxford).

- Hutcheson, N.C.G. 2004. Later Iron Age Norfolk. Metalwork, landscape and society, BAR British Series 361 (Oxford).
- Jackson, R.P.J. 2004. 'Baldock area, Hertfordshire: about 25 votive finds, including statuette, 19 plaques and jewellery', *Treasure Annual Report* 2002, 38-43 (London).
- Johns, C.M. 1981. 'The Risley Park silver lanx: a lost antiquity from Roman Britain', *Antiquaries Journal* 61, 53-72.
- 1990. 'Research on Roman silver plate', *Journal of Roman Archaeology* 3, 28-43.
- 1994. 'Romano-British precious metal hoards: some comments on Martin Millett's paper', in S. Cottam, D. Dungworth, S. Scott and J. Taylor (eds.), *TRAC 94*, *Proceedings of the Fourth Annual Theoretical Archaeology Conference Durham* 1994, 107-117.
- 1996a. 'The classification and interpretation of Romano-British treasures', *Britannia* 27, 1-16.
- 1996b. 'Hacked, broken or chopped? A matter of terminology', *Antiquaries Journal* 76, 228-30.
- forthcoming. *The late Roman gold and silver jewellery and plate from the Hoxne treasure* (London)
- & Pickin, J. 1993. 'Late Roman silver spoons from Spennymoor, County Durham', *Britannia* 24, 258-61.
- & Potter, T.W. 1983. The Thetford treasure (London).
- 1985. 'The Canterbury late Roman treasure', *Antiquaries Journal* 65, 312-52.
- Johns, C.M., Thompson, F.H. & Wagstaff, P. 1980. 'The Wincle, Cheshire, hoard of Roman gold jewellery', *Antiquaries Journal* 60, 48-58.
- Kent, J.P.C. 1994. *The Roman imperial coinage, Vol. X. The divided Empire and the fall of the Western parts AD 395-491* (London).
- Kent, J.P.C & Painter, K. 1977. Wealth of the Roman world. AD 300 700 (London).
- King, C.E. 1981. 'Late Roman *siliquae* hoards and the problem of clipped *siliquae'*, *British Numismatic Journal* 51, 5-31.
- Latham, R. & Matthews, W. (eds.) 1974. *The diary of Samuel Pepys*, vol. VIII, 1667 (London).

- Millett, M. 1994. 'Treasure: interpreting Roman hoards', in S. Cottam, D. Dungworth, S. Scott and J. Taylor (eds.), *TRAC 94, Proceedings of the Fourth Annual Theoretical Archaeology Conference Durham* 1994, 99-106.
- Painter, K.S. 1965. 'A late Roman silver treasure from Canterbury', *Journal of the British Archaeological Association* 3rd. series, 28-29,1-15.
- 1972. 'A Late Roman silver ingot from Kent', *Antiquaries Journal* 52,4-91.
- 1975. 'A Roman Christian silver treasure from Biddulph, Staffordshire', *Antiquaries Journal* 55, 62-69.
- 1977a. The Mildenhall Treasure. Roman silver from East Anglia (London).
- 1977b. *The Water Newton early Christian silver* (London).
- 1981. Department of Greek and Roman antiquities. New acquisitions I (1976-1979), 21-25 (London).
- 1997. 'Silver hoards from Britain in their late Roman context', *L'Antiquité Tardive* 5, 93-110.
- 1999. 'The Water Newton silver: votive or liturgical?', Journal of the British Archaeological Association 152, 1-23.
- Raeck, W. 1992. *Modernisierte Mythen. Zum Umgang der Spätantike mit klasischen Bildthemen* (Stuttgart).
- Reece, R. 1972. 'A short survey of the Roman coins found on fourteen sites in Britain', *Britannia* 3, 269-76.
- 1997. 'The myths and messages of silver plate', *L'Antiquité Tardive* 5, 145-152.
- Robertson, A.S. 2000 (edited by R. Hobbs & T.V. Buttrey). *An inventory of Romano-British coin hoards* (London).
- Schneider, L. 1983. Die Domäne als Weltbild. Wirkungstrukturen der spätantiken Bildersprache (Wiesbaden).
- Watts, D.J. 1988. 'The Thetford Treasure: a reappraisal', *Antiquaries Journal* 68, 55-68.
- Waugh, H. 1966. 'The hoard of Roman silver from Great Horwood, Bucks.', *Antiquaries Journal* 46, 60-71.
- White, S., Manley, J., Jones, R., Orna-Ornstein J., Johns, C. & Webster, L. 1999. 'A mid-fifth Century hoard of Roman and pseudo-Roman material from Patching, West Sussex', *Britannia* 30, 301-15.