BETWIXT SCEATTAS AND OFFA'S PENCE. MINT-ATTRIBUTIONS, AND THE CHRONOLOGY OF A RECESSION

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In the 690s Frisian merchant-seamen began visiting England in numbers, and various English regions from Yorkshire southwards were for the first time drawn into international trade. Their regional economies became geared to export towards the Netherlands, and monetized to an extent that had not been true before the 690s. The evidence for this consists of single finds of Frisian sceattas accidentally lost. These and other stray losses of sceattas are the index of regional monetization, about which the documentary sources for the early eighth century have absolutely nothing to say. England's monetary economy grew for half a century, as testified by the local issues of sceattas at coastal wics and probably at some other mintplaces too. In the third quarter of the eighth century, however, the monetary economy went into a severe decline, as we see from a massive reduction in the statistics of stray losses of sceattas. Was this what we should call a depression, or a recession? Modern terminology, based on the gathering of quarterly statistics, is not an appropriate comparison. Eighthcentury people bought and sold without the benefit of statistics; and the downturn in the third quarter of the eighth century was much worse and longer-lasting than a modern 'business cycle', which seems to be a kind of wave-motion generated (if not exactly triggered) by the dynamics of supply and demand, and of commercial risk-taking. We shall speak of an eighth-century recession, without giving the word the technical meaning of present-day economic science.

As long ago as 1968 in a survey of the numismatic evidence – of which at that time there was none too much for the purpose – I concluded that 'The volume of production [of Offa's coinage] seems to have remained very modest until c.785. Thereafter, the monetary economy revived rapidly . . . to take in again most of the territory in the English midlands where sceat-tas had circulated half a century before'. This assessment, from forty years ago, corresponds fairly closely with the general conclusions of the present paper, which seeks to set out the evidence more circumspectly (and at considerably greater length): a severe monetary recession in the third quarter of the eighth century, followed by a swift recovery.

Just twenty years ago, in 1988, I returned to the same theme of monetary expansion and recession, in a wider-ranging survey which pointed to fluctuations in the quantities of coinage in circulation in the English midlands, and which placed the recovery under Offa into its European historical context.² As a way of accurately charting the chronology of the recession, the distribution-maps of single finds on which the article relied can now be seen to be not the best of arguments. They could not be precise, for two reasons: one does not know how long the latest issues of sceattas had remained in circulation before these particular specimens were accidentally lost; and the relative chronology of the many varieties of Offa's coinage was – and still is – partly conjectural. In particular, the place in the sequence of his prestigious portrait coins is unclear and is open to debate.

The last twenty years have witnessed an enormous increase in the numbers of provenanced single finds available for study, thanks to the very popular pursuit of metal-detecting. This splendid accession of material, especially in the sceatta series, but also for the reign of Offa,

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- ¹ Metcalf, Merrick and Hamblin 1968, 9.
- ² Metcalf 1988, 230–53.

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makes it possible to establish the randomness of the sample, and hence its historical reliability, as well as thickening up the statistics towards a point where the margins of sampling variation become less daunting.

Hoards, paradoxically, make much less of a contribution from the mid-eighth century onwards. Apart from the Middle Harling hoard and the more recent Aiskew hoard, from North Yorkshire, there are just three or four instances of 'mini-hoards', where two coins found at the same time were probably deliberately concealed together.³

Although the depth and duration of the recession are now, in broad terms, obvious enough, the task of describing it more exactly, and in regional detail, turns out to be quite difficult and complicated. Dating the coin types, and assigning them correctly to their mints, often requires good judgement. Assessing the velocity of monetary circulation, and the geographical directions in which coins tended to be carried, depends partly on our knowing where they were minted. One cannot say how far a stray loss had travelled from its mint of origin, nor in which direction, until its mint-attribution has been established. In the sceatta series, part of the material is securely attributed, but there are still many uncertainties on the margins, not least because imitative sceattas could have originated almost anywhere. For the coinage of Offa, the picture is simpler, but again there are some remaining uncertainties which should not be relegated from one's thoughts. As regards chronology, the technical problems are different for the beginning and the end of the recession. At the beginning, there is the question of how long coins (including the ubiquitous Low-Countries porcupines) remained in circulation in England after their issue. At the end, it is the relative and the absolute chronology of Offa's richly varied coinage that is the key. The volume of his issues grew dramatically as the commercial economy recovered, and this phase of a steep trend defines the ending of the recession – although there are individual sites, such as that near Royston, where the recovery does not come until the early ninth century.

An attempt to set out the evidence in a rounded way soon reveals that there were political as well as economic aspects to the currency. Puzzlingly, the recession was much worse in the regions of Mercian hegemony. In Northumbria at the beginning of the recession, and in East Anglia towards its end, there were new royal initiatives to improve the coinage, and the maritime trade of the North Sea coastlands continued to support a monetized regional economy. And in the years when Kent rebelled against Mercian overlordship, the early pennies minted in Kent met some sort of barrier to their circulation north of the Thames.

Indeed, this political impediment to monetary circulation, connected to Mercian hegemony, may perhaps already be discerned in the secondary phase of the sceattas, when the coins minted at Hamwic and in East Anglia show a restricted regional distribution, even in the reign of Æthelbald (716–57). One had always assumed that this was a harbinger of the recession, a drawing-back, geographically, of inter-regional trade in England. That assumption now needs to be tested.

We shall examine each of these rather specialized questions separately, in sixteen numbered sections, before trying to harmonize them all, in a synthesis of English monetary history ranging over the years c.735 to 792.

An immensely distinguished medieval historian, having set out some new ideas on this very subject of Offa's coins and foreign trade, continued, 'Whatever we make of this (and coins are tricky). . .'.⁴ He was expressing a sentiment not often voiced in our hearing, but held privately by many of his historian colleagues. If numismatists wish to be heard outside their own fraternity, it is up to them to express their arguments with the greatest possible care and clarity, because handling the evidence of coins is indeed tricky. Questions of historical interpretation interact with the numismatic detail. And sometimes, the clinching argument may lie, not in the broad sweep, but in local circumstances.

Wallace-Hadrill 1965, 687.

³ The Aiskew hoard is included, and indexed, in Chick's monograph (Chick forthcoming), as are the mini-hoards (which are mentioned in the text below). On the hoards in general, see Blackburn and Pagan 1986.

1. Determining the mint-attribution of coins with no mint-signature

When the Royal Mint was relocated from Tower Hill to Llantrisant, there was no corresponding shift in the regions of the U.K. where the coins were used. Monetary circulation today is simply a matter of local demand, which the high street banks meet by moving bags of coins to and fro as required, for the convenience of their customers. The function of our coinage and bank-notes is of secondary importance to electronic transfers. Their use is purely commercial, to facilitate everyday monetary transactions wherever they take place. In the eighth century the regional location of the work of minting was not quite so detached from questions of the availability of bullion, nor from policies regarding the reminting of foreign coin, nor indeed from political and social considerations. But once they had been minted and issued, eighth-century coins also went where they were needed. Merchants and other users carried coins with them to those regions of England where they wished to spend them. For the most part, coins were minted in the eastern coastlands and in the south-east, but from there they were carried inland, often over quite long distances. We do not know with certainty how many mint-places produced sceattas, nor how many produced Offa's pence. We may think that we can make a good guess at both, but it is not the same as in the later Anglo-Saxon period, when all the coins bore the name of their mint-town. We do not know with certainty: at the margins, we could be wrong.

By the early ninth century we can speak confidently of minting at Canterbury, London, and Rochester, with East Anglia fourth, and Wessex as a poor fifth – this thanks to a classic paper by Blunt, Lyon, and Stewart in this *Journal*. Next, we can to some extent trace the careers of individual named moneyers from the early ninth century (where the picture is reasonably clear) back into the reign of Offa, when they were presumably working at the same mint-place as later in their careers. This was worked out by Lord Stewartby in the foundational paper on Offa's coinage at the London mint published in the Michael Dolley memorial volume.⁶ He showed that about half Offa's moneyers could be firmly attributed to London, Canterbury, or East Anglia. With that established, one is in a good position to examine how far the coins of the three regions mingled in circulation. The answer is, very extensively. The same is true of Offa's immediate successors in the ninth century, where mint-attributions are again clear enough. Three or four more moneyers have since been added to the 'secure' list, while the rest have been shared out among those same mints, on rather less certain evidence. That tends to beg the question of how many mint-places there were. Because the velocity of circulation was so great, one cannot unfortunately hope to localize the coins of any other mints that there may have been, from the distribution-pattern of their single finds. The picture of just three may well be correct, but there are complexities of stylistic development and there are still quite a lot of individual moneyers who could, hypothetically, have worked elsewhere, at much smaller mints - a pattern similar to what we see in the preceding phase of sceattas, when there were undoubtedly more than three mints south of the Humber – perhaps many more. Thus, for example, we cannot rule out by distributional evidence that the coins of Offa given (quite correctly) to East Anglia might have been produced at two mint-places within that kingdom rather than one – as has been demonstrated by regression analysis for East Anglian sceattas.⁹

It looks as if Mercian overlordship of England south of the Humber was reflected at some point fairly early in Offa's reign by the first, rather tentative, stage of a royally controlled coinage reform, which saw Offa's name and title placed boldly on all the coins – probably in imitation of the Carolingian coins of Pepin (751–68). In a later stage, the coins often also bore

⁵ Blunt, Lyon and Stewart 1963.

⁶ Stewart 1986.

Metcalf 1998.

⁸ In Chick forthcoming.

⁹ Two mints have been postulated for the East Anglian coins of Beonna, and two mints certainly struck the sceattas of Series R, as has been demonstrated by regression analysis. One wonders whether the coins of Botræd, Eadnoth, and Ecbald (which share a distinctive panel design) might not be from a secondary (Norfolk?) mint. They seem to be a little lighter than the proper weight, unlike the production of the other East Anglian moneyers.

his portrait. 10 Moreover the new pennies almost all carried the name of their moneyer, who was probably in some sense an independent business-man, but who conformed to a single national (i.e. royally decreed) weight-standard and alloy-standard for the coins he produced. To that extent he was no doubt personally accountable to the royal power. There were close precedents for this, in the very extensive series of Merovingian 'moneyers' coins' and, much nearer in date, the proto-pennies issued by several named moneyers for King Beonna of East Anglia. The moneyers of the primary-phase sceattas may of course have been equally accountable, even if their names were not on the coins: it was after all public knowledge who they were. 11 And one may mention that King Æthelbald, Offa's predecessor, had also come to exercise hegemony south of the Humber. Although it cannot be proved, it is well within the realm of the politically possible that he should have taken an interest in some parts, at least, of the work of minting. 12 The old-fashioned view that Offa's pennies were manifestly a royal coinage, whereas the preceding sceattas, which lacked a royal title, were therefore not, is at best an incomplete view. It now looks too much like an argument from iconography alone, without much or indeed any historical or monetary background offered in support. Historians should at least understand that there was no such institution as 'the royal mint': moneyers worked independently out of their own houses, with the furnace in the back yard.

In the secondary phase of the sceattas, a major fraction of the currency was produced in the usual four or five mint-places, namely London and somewhere in the vicinity of Canterbury (Fordwich?), 13 and at least two mint-places in East Anglia, and of course Hamwic in Wessex. About the minting of sceattas at Rochester (where there was a mint in the early ninth century), nothing has yet been established. ¹⁴ At a time when the division of Kent into East Kent and West Kent was still a political reality, the minting of sceattas there seems theoretically possible. Stenton reviews the charter evidence for an obscure King Sigered, who in c.763 describes himself as king of half Kent (rex dimidiae partis provinciae Cantuariorum); and Barbara Yorke has placed joint kingship in Kent into a longer historical framework.¹⁵ But in any case that leaves many more sceatta types in the secondary phase than could be fitted into just four or five mint-places. In particular the (scarce) eclectic types are at present unaccounted for. There was also a significant amount of copying of the main 'official' types. Where the copies were minted is virtually unknowable. It could in principle only be worked out from distribution-patterns. One has the impression that even if, say, two-thirds or threequarters (by volume) of the secondary sceattas were produced in the main coastal wics, the minting of the rest may have been small-scale, more diffused, and certainly less politically organized, than the system eventually became under Offa.

I shall not attempt to discuss the mint-places of the primary phase of sceattas here, except to say that they cannot be used straightforwardly as evidence for the minting arrangements under consideration here. The pattern was no doubt basically similar, but there seems to have been some discontinuity between the primary and secondary phases. The earlier period, including the debased thrymsas, needs to be considered in its own terms.¹⁶

2. As between sceattas and Offa's pence, the volume of the currency fell

There are substantial similarities but also some differences, then, in the distribution of minting, between sceattas and Offa's pence, and there remains a margin of uncertainty about

- The preliminary phase is convincingly recognized and described in Chick forthcoming.
- ¹¹ This point has provoked long-running disagreement, based in part on the difference in the general appearance of the coins in question.
- ¹² A similar argument is deployed in Stahl 1982, namely that the king cannot have been unaware of what was going on under his nose, and would have seen advantages, financial and other, in exercising some control over it.
 - ¹³ Possibly Fordwich, on the Wantsum Channel.
 - ¹⁴ A peculiarity in the behaviour of Series B in West Kent is discussed in Metcalf 2001, 36f.
 - ¹⁵ S 33; Stenton 1971, 206–7; Yorke 1983, 1–19.
- ¹⁶ Primary series such as F and Z, as well as BII and R1-2, have to be found homes. Because of the velocity with which they circulated, any residual localization is quite hard to detect.

various scarce types or about some individual moneyers. The similarities are surely what we should expect. The economic and commercial life of England, which the currency facilitated, did not change overnight because there was a reform of the coinage, any more than it changed overnight when the mint moved from Tower Hill to Llantrisant. Indeed, one will suspect that the decisive change was commercial, and that it had already occurred, some decades before the depression in England, through the Merovingian conquest of Frisia,¹⁷ which evidently resulted in some dislocation of trade across the North Sea. This was a process rather than a single event. The death of Radbod in 719 resulted in the definitive control by the Merovingian Franks of the great river-port of Dorestad and of the 'Big Rivers' region of the lower Rhine and Meuse (even though it doubtless remained ethnically largely Frisian). Where previously the Rhine had been the frontier, Utrecht passed into the hands of Charles Martel, who went on to push Merovingian rule further into Friesland, conquering its central region (Noordholland) in 734.

Substantially later in date, the well-known incident of the closing of Frankish ports to English merchants, and Offa's reciprocal closing of his ports to Frankish merchants cannot be exactly dated, but it was probably after Ecgfrith's consecration as king of the Mercians in c.787 – too late to be of any relevance to the recession. ¹⁸ The onset of the recession in England, in about the 740s, remains to a large extent mysterious. It seems that it was reflected in serious debasement of the coinage during the secondary phase of sceattas, followed apparently by a cessation of minting in the south-east. Both in East Anglia and at the London mint the last of the sceattas are only around 10 to 20 per cent silver or even less. ¹⁹ The commercial economy was heading for insolvency, and there was a slowing-down of monetary circulation in England as a result. It is the numismatist's job to see how that decline is reflected in the pattern of the coin-losses.

One relatively minor problem is that the interval between the dates when a coin was minted and when it was lost can usually only be guessed approximately from wear and tear. Sceattas occasionally show heavy wear, but not often. The last issues of coinage may have remained in circulation for a decade or more after their minting had ceased. For that reason among others, it is easier to observe the economy subsequently climbing out of the recession than to be sure just when it was dipping into it.

It has been observed that Offa's pence have much smaller traces of gold than the English secondary sceattas, and this has been interpreted as showing that Offa's pence were not made out of recycled sceattas, but from some new silver supply.²⁰ A dozen coins of Offa were analysed by Dr J.P. Northover, using electron probe micro-analysis (EPMA), i.e. exactly the same procedures and equipment as he used to analyse a large number of sceattas. The proportion of gold in 100 parts of silver was less than 0.3 in all except two specimens, and the median value was 0.09. For the secondary sceattas, the corresponding median value is close to 1.5, with very few results under 1.0 – and those, interestingly, tending to be East Anglian: an exceptionally clear-cut contrast.

Single finds – which are for the most part accidental losses, the property of individuals with a hole in their pocket – are far more reliable evidence of the shifting patterns of monetary circulation than hoards, which were put together in unknown circumstances, possibly far away from where they were lost. Moreover we have far too few hoards for the particularities to be averaged out and for the trends to emerge. The day when, building on an earlier series (1984–6) of annual reports on single finds by Mark Blackburn and Mike Bonser,²¹ the British Numismatic Society launched the annual Coin Register, printed in its *Journal*, was a big step

¹⁷ Op den Velde and Metcalf 2003, 115–19.

¹⁸ This is fully discussed by Wallace-Hadrill 1965. Charlemagne's letter (translated in *EHD*, no. 197), which addresses a variety of topics, is quoted extensively and discussed in Wormald 1982, 101.

¹⁹ Northover 1993, e.g. nos. 324ff. (Series L) and 423ff. (Series R, Wigraed and Tilbeorht). Note that this does not, so far as is known, extend to any part of Series K.

Northover 1993, 649.

²¹ Blackburn and Bonser 1984, 1985, 1986a and 1986b (the Royston site).

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towards establishing the relevance of numismatics to the general history of Anglo-Saxon and Norman England. It is team-work at its best, and I would call it a jewel in the Society's crown. We now have on record well over 2,000 provenanced single finds of sceattas from England, a big majority of them being metal-detector finds, and we have recently acquired a splendid resource in Derek Chick's monograph on the coinage of Offa and his contemporaries, also published by the Society.²² The fruit of his long devotion to Offa's coinage, it is a magnificent achievement, and beautifully presented by Mark Blackburn who, with Rory Naismith, has edited it and seen it through the press.²³ Derek Chick's corpus catalogues and illustrates *inter alia* some 350 provenanced single finds from this country. There are, of course, a great many more nineteenth-century finds, and also various Italian and other continental finds, of Offa's coins which are known to us, but of which the provenances have been lost – in all, another 350 to 400. Similarly there have also been a great many sceattas found, of which the find-spots have escaped record. The numbers of sceattas at present being offered for sale on eBay, alas

without provenance, amounts to at least two or three hundred a year. Coins of Offa, on the other hand, are far fewer, and have a certain cachet, which probably means that they enjoy a better chance of being recorded. A straight comparison, therefore, between 2,000+ and 350 will be decidedly rough and ready, but we shall not be seriously adrift if we say that, between the sceattas and Offa's pence there was a drastic decline in the numbers of stray losses, down to something like one-sixth.

Can this ratio of very roughly six to one (2,000 divided by 350) really be a fair reflection of a free-fall decline in monetary circulation? As it stands, definitely not. The single finds of sceattas were lost over a period of seventy or eighty years, whereas if Offa's coinage was not issued in any volume until quite late in his reign, it was current for a much shorter period, of only twenty years or so. Expressing the contrast in terms of the average loss-rate per decade would diminish the ratio straight away, from 6:1 down to perhaps 1.5:1.²⁴ Possibly even more important as a technical factor, Offa's new pence, while weighing only a little more than the old sceattas, were of very good quality silver. Their fineness, judged by eye, has always appeared to numismatists to be self-evident, but the question has now been put on a scientific footing by the accurate non-destructive analysis of a usefully large sample of specimens.²⁵ Their intrinsic value and presumably their purchasing power (unless, improbably, there was severe inflation) were several times greater than those of the debased sceattas of the secondary phase, and that could well have affected their loss-rate, as might, perhaps, their larger flan size. We should remember that the purchasing power of silver in the eighth century was more like that of gold today. It is only surprising that the new pennies were not cut in half, like later Anglo-Saxon pennies. Probably the monetary sector of the economy did not reach so far down into low-value transactions.

3. The consistency of Offa's first and second weight-standards

The weight-standard of Offa's pence was increased in 792 or closely thereabouts. A belief that this was so has been accepted for half a century and more, but with the much-enlarged corpus in Derek Chick's monograph it is now possible to put reliable numbers on the change, and to re-assert it as a fact beyond dispute. Previously one knew that it was broadly true, but one was not in a good position to discuss minor uncertainties around the edges of the proposition. One can now state, quite precisely, that the earlier coins generate a classic bell-shaped histogram

²² Chick forthcoming.

²³ It is fair to mention that Derek Chick handed over his very valuable part of the work simply in the form of a card index; the rest is the achievement of the editors.

²⁴ If the coinage of the lighter phase remained in circulation alongside the heavy-phase coins (but there is no evidence that it did), that would shift the arithmetic, and will tend to indicate an even later start-date for the light phase.

Metcalf and Northover 1989, 101–20 presents EPMA analyses of 13 coins, which are uniformly close to 94–6 per cent 'silver' (silver plus gold plus lead). Chick no. 153b, with 99.24 per cent 'silver' is a die-duplicate of a coin of Jænberht excavated at Canterbury in 1866. It contains appropriate trace-elements. Most of the analysed specimens belong to the light coinage. There is no difference between the alloy at London and Canterbury, nor (on limited evidence) in East Anglia, nor for Cynethryth.

(with remarkably little negative skewness, if one excludes chipped or broken specimens) with a modal value of 1.18 or 1.19 g. From this they went, in the heavy phase, to 1.31 or 1.32 g, which is a clean, one-step increase of between ten and twelve per cent. The coins of Archbishop Jænberht are on the lighter standard, also with a bell-shaped distribution-curve, and with a median value corresponding closely with the national average (Fig 1a). Whatever animosities there were between the Mercian king and his primate or former primate, Jænberht's monetary policies were in line with those of the king. The coins of Jænberht's successor Æthelheard, who became archbishop in 792, are on the heavy standard, generating a less regular histogram of weights, of which the central values again match the national sample quite closely, with a median of 1.32 g, although without a sharp peak (Fig. 1b). Untidy as it is, there is no obvious reason to think that particular varieties tend to fall in the upper or the lower part of this histogram. In any case there is very little overlap with the earlier histogram; and there is almost no evidence of a subsidiary lighter peak (which would perhaps have suggested that the

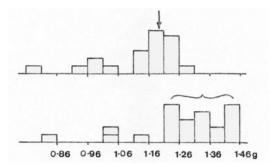


Fig. 1. Histograms of weights of the coins of Archbishops Jænberht (Fig. 1a, N = 19) and Æthelheard (Fig. 1b, N = 23). Fragments and 'chipped' (defective) specimens are omitted. The steps are positioned at 1.01-1.05 g, 1.06-1.10 g, and so on, and the two histograms are aligned on the page so that the same values, e.g. 1.16 g, are directly above/below each other. Source: Chick forthcoming.

revaluation or reform occurred some time later than Æthelheard's election). A possible minor exception is Chick Type 244 (Blunt 135), where the two known specimens weigh 0.85 g and 1.01 g. Assuming that they are genuine, which is the opinion of those who have handled them, the low weights of these two coins could be a matter of chance (which looks unlikely), or they could be from very early in Æthelheard's pontificate, although even on that explanation they would be very sub-standard – off the lower edge even of Jænberht's 1.18/1.19 g bell-shaped curve. For both known specimens to be so low in weight greatly increases the probability that it is not mere chance. Moreover, the type reads *pontifex*, which seems to put them fairly early in any case. Perhaps they were struck specially for some ceremonial purpose. Otherwise all Æthelheard's coins appear to be on the heavy standard. Thus it seems that in all probability the national increase in weight-standard (to which the archbishop was expected to conform, and did so) was made just when, or just after, he began to issue coins. If Type 244 were an anomaly for some other reason, the date of the reform would not be knowable quite as

²⁸ Note that both specimens of Chick Type 150 (Blunt -) are well below the norm, at 1.04 and 1.03 g. That could be just by chance; or could that type stand early among Jænberht's issues?

²⁶ The data from Derek Chick's corpus can be used to generate histograms of weights, which show the text-book bell-shaped curve very well, on the whole, with remarkably little negative skewness, except for a blip at 1.12 g in the heavy coinage. See Chick, Table 6.

The smaller sample size makes the median the best available central value, rather than the mode.

²⁹ Sir John Evans suggested that the title was used between the death of Jænberht and Æthelheard's receiving the *pallium* the following year (Evans 1865, 357–8). The writer is not aware that this practice can be demonstrated from documentary evidence. Jænberht's (at present unique) coin reading *pontifex*, and without the name of Offa, adds to the interest of this question. He became archbishop in 765, and the coin is surely considerably later. It is known that Ecgberht, archbishop of York received the *pallium* in 735 (at much the same time as Nothelm at Canterbury?). Could Jænberht's coin in his sole name be from as early as the period when Offa was unable to exercise power in Kent?

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precisely, because Jænberht's issues could in theory have ceased some time before his death, and Offa could have begun to strike heavy coins already before 792. Or Æthelheard could have delayed minting. Both these hypotheses are special pleading. Christopher Blunt attached importance to a variety of Jænberht's coinage (Blunt 132), unique in 1961, with a three-line reverse appropriate to the heavy phase. He described it as transitional between the two phases, implying that the weight reform was already being planned before Jænberht's death.³⁰ The coin in question was found at the Martyrs' Memorial in Oxford. Its weight however is exactly average for the lighter phase. Three similar specimens have since come to light (Chick 150–1), two with weights of only 1.03 and 1.04 g, i.e. rather low, and certainly offering no encouragement for Blunt's suggested interpretation, which was based just on typology.³¹ All that needs to be said is that the three-line design, which is characteristic of the heavy phase, had been tried out at Canterbury in the light phase, probably but not certainly right at the end of the phase. It is not a complicated design concept. It had a precedent, also, in the early papal denarial coinage of Hadrian I, which *MEC* volume 1 dates to 772–81.³²

4. The dating and internal chronology of Offa's light-phase coinage

But how long had the lighter weight-standard been in use? Crucially, historical evidence for its start-date (which has a bearing on the end of the recession) is lacking. Probably the best guess we can make is based on the volume of the heavy phase issued in just four or five years, c.792-96, and specifically on the number of stray losses that it generated. If we make an estimate pro rata (and it is a flimsy argument), the light phase, with two and a half times as many stray losses, need not have lasted more than two and a half times four or five years, i.e. about a decade, or possibly twelve or thirteen years. Thus it may not have begun until the early 780s – unless the volume of monetary transactions was growing strongly during the light phase, in which case it will probably have lasted for rather longer than a decade. This ratio, of two and a half to one, which is our best guide, is not arithmetically precise information, because the light coins may to a significant extent have remained in circulation after c.792 (with a similar chance of being accidentally lost, for both light and heavy coins) for some years after their issue had ceased. If our tally of single finds of light coins includes quite a few that were lost after 792, the arithmetic shifts in favour of an estimated start-date a little later than 780. But this is, frankly, little better than a guess.

Various attempts have been made, over the years, to refine the chronology of Offa's light coins, e.g. by recognizing an earlier and a later part of that phase. These attempts have nearly all been to some extent speculative, and disputed, and they will not be rehearsed here, except to mention that a die-link for the moneyer Winoth, linking a light and a heavy coin,³³ is very good evidence to anchor the said light coin to the end of the phase.

The most, perhaps, that one can usefully do at present is to recognize an earlier and a middle-to-later part of the phase. The middle-to-later part comprises the great bulk of the surviving specimens, and it tends to show larger or much larger numbers of each particular design, whereas the earlier part is characterized by singletons and oddities, and by designs best understood as experimental. (Note that several adjacent Chick numbers may be of essentially the same design, with only minor differences.) There are no significant metrological differences between the two parts (see Fig. 2), such as might have made it difficult to think that the varieties in question were minted concurrently. The later coins include the artistically accomplished

³⁰ Blunt 1961.

³¹ Chick Type 150 (Blunt -), two specimens found at Cambridge and Winchester.

³² Serafini 1910, 5–6.

³³ Chick 213a (Blunt -), weighing 1.40 g, is a mule from the same reverse die as Chick 75b (Blunt 83), 1.16 g.

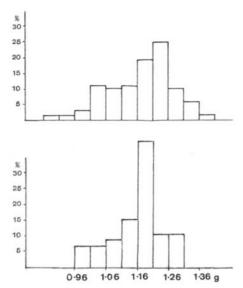


Fig. 2. Metrological differences in the work of four London moneyers who worked in both parts of the light phase, namely Æthelweald, Dud, Alhmund, and Winoth. Fig. 2a, the suggested early part (Chick 11–15, 23–30, 35–6, 37A, 38–42, 75–6. N = 73 coins). Fig. 2b. the later part (portrait coins) (Chick 8–10, 19–22, 37, 71–3. N = 65). The positioning (but not the width) of the step interval has been adjusted empirically to maximize the height of the central step. The same values, e.g. 1.16 g, are vertically aligned. The corresponding Blunt variety numbers are: 2a: B.55–6, 25–9, 43, 8 + 40–1, 83. 2b: B.57–8, 30–2, 42, 81–2. Source: Chick forthcoming.

portrait dies. These show rather more die-links and die-chains, mainly because the sample is so much larger but also, perhaps, because their dies were more heavily used (and not because of any difference that one can detect in the ways that they circulated). Stewart Lyon, in a presidential address a long while ago, expressed the very tentative view that the portrait coins stood chronologically at the beginning of the middle-to-later phase.³⁴ The writer is inclined to reserve judgement about that, if only on the grounds that it can now be seen that it would entail a sudden change in the volume of mint-output, i.e. it does not sit well with the broad view of a gradual recovery from recession. He would point out, again tentatively, that certain moneyers in the middle-to-later phase are known to have produced both portrait and nonportrait coins (e.g. at London the four moneyers Æthelweald, Dud, Alhmund, 35 and Winoth) while other London moneyers working in the light coinage produced, so far as we know, only portrait coins. If there was a (short) period when only portrait coins were being struck, might not one understand the situation in terms of the recruitment of additional moneyers, as the commercial opportunities increased?³⁶ It is easy to see how speculative this whole argument is. The evidence of the Ilanz hoard is ambiguous: it looks to be generally early in its composition, but perhaps with a few subsequent additions to the treasure. Thus the portrait coin of Alhmund which it includes is not certainly from the earlier portion.³⁷ A more robust case can be made by looking at the careers of moneyers, and at whether they continued into the heavy coinage of 792–6 (and beyond). In practice this argument is hampered, as regards London,

³⁴ Lyon 1966, 219. Dr Lyon offers detailed evidence from certain coins of the moneyers Osmod and Udd, involving for example a worn die, which deserve to be looked at afresh in the light of Chick's new corpus.

³⁵ The writer's instinct has always been that Alhmund and Ealhmund were two separate moneyers. The very productive moneyers such as Æthelweald and Alhmund each have their own distinctive portrait of the king, replicated on a lot of dies. The writer was taken to task by Stewart Lyon for seeming to suggest that these moneyers made their own dies (Lyon 1966, 219, n.1). He is very willing to accept this correction, while standing by the point that active moneyers were able to commission their own 'trade-mark' style of portrait. As he sees it, the exceptions prove the rule.

³⁶ Because the coins of the early part of the light phase are often known only in ones and twos, it is possible that some of the 'new' moneyers may one day turn out to have worked right through the phase.

³⁷ There is (only) one coin of Charlemagne's heavy coinage, 793/4 onwards, from Pavia; and a dirham of 789/90 which does not look fresh.

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by the much reduced output in the heavy coinage. Lord Stewartby has identified eight of Offa's moneyers who went on to work for King Coenwulf, evidently at London.

5. The origins of Offa's coinage reform: the earliest issues

Derek Chick has recognized a few harbingers, which he designates the 'early reformed coinage' (preceding the early phase). The tiny handful of just six coins which belong to it are evidently earlier than e.g. 780, and Wilræd, who contributes two of the six, is presumably the same moneyer who had previously worked for Beonna.³⁸ Assuming that he is one and the same, Chick suggests that 'it seems politically unlikely that Wilred's coins can be considered as innovative and therefore inaugurating a new Mercian coinage'. The copying, he deduces, was in the other direction, and we therefore see 'a [London] coinage whose inaugural stage predated the East Anglian Wilred's'.³⁹ Now, Chick has demonstrated beyond any possible doubt that 'many of the East Anglian coins were stylistically influenced by the design of London and Canterbury coins, but that the interpretation of those designs transformed them into a very distinct and idiosyncratic local series'. He gives a perfect illustration of this from two recent discoveries, Chick 26a and its East Anglian counterpart 172a. The die-cutter of the early penny of Wilræd was arguably not very familiar with the Latin alphabet (see Fig. 9, below), and that is a supporting argument for saying that the coin is East Anglian. But its style is not manifestly East Anglian, and the assumption that there could not be two diecutters called Wilræd is the weak link in the chain. It is worthwhile, therefore, to repeat the simpler argument that there was no continuity of moneyers' careers, as far as we know, between the 'early reformed' and the light coinage (with the possible exception of what seem to be the earliest productions of the long-lived Eoba). Mang, for example, is known from just two coins, a mini-hoard from the productive site at East Tilbury, Essex (Fig. 3). There is another moneyer apparently called Odd- (cf. Udd?). The discontinuity of moneyers' careers is the key evidence; it is thin, but looks reasonably secure. The only reason to think that Eoba's career began already in the 'early reformed' phase is typological (again, see Fig. 3).



Fig. 3. Early reformed coins of Offa, by the moneyers Mang, and Eoba (Chick 6a and 102c, Blunt – and 10). The die-cutting of this coin of Eoba betrays various hesitations and inconsistencies, suggestive of a lack of practice and a lack of literacy. (A general question: were die-cutters literate?) Enlarged \times 1.5.

No specimens of the 'early reformed' phase have yet been chemically analysed. (Could their alloy be more like that of Beonna's coins? If it turned out to be so, that would suggest a second, important administrative step, introducing the light phase.)

It seems probable, then, from the evidence of moneyers' careers that after the demise of the sceattas and after the 'early reformed' phase, but before the main volume of Offa's light coinage there is a hiatus. It is, in the nature of the evidence, difficult to judge how long it

³⁸ See below, section 12, p. 21.

³⁹ Chick 1997, 49 and 56.

lasted, and the gap may have been longer in some regions of Offa's kingdom than in others. And the later one pushes the start-date of Offa's light coinage (e.g. towards c.782), the bigger the gap. The extreme contrast in volume of output is beyond question.

6. The Canterbury mint's contribution to the chronology of recession

Cross-Channel trade by the short crossings made landfall in east Kent, and shipping was able to sail along the Wantsum Channel, past Richborough, almost to within sight of Canterbury. The city was the location of the mother church of Roman Christianity in England, and no doubt a residence of the kings of Kent. But its importance as a mint was due largely to the foreign trade which passed through east Kent, and to the consequent demand for the moneyers' services. These men will have worked independently from their own houses, as described above, but whether they were based in the *wic* of Fordwich, or within the walls of Canterbury, is unknown. Perhaps they retired from Fordwich to Canterbury (or started up again in Canterbury?) at the beginning of the recovery, in *c*.780?

Chick attributes to 'the Canterbury mint' in the phase of Offa's light coinage, i.e. up to c.792, the coins of the kings of Kent Heahberht (1 specimen) and Ecgberht II (22 specimens), of the archbishop of Canterbury Jænberht (23 specimens, of which 22 jointly with Offa), of Offa himself (61 specimens) and of his consort Cynethryth (42 specimens). Stenton's observation, based on charter evidence, that Offa was dominant in Kent as early as 764, but lost power there through Kentish hostility towards him, and was unable to control the benefactions of the Kentish kings between 776 (date of the battle of Otford) and 786 has always been taken to imply that he was unable to strike coins, i.e. to cause the moneyers to put his name on their coins, at Canterbury in those ten years. (This is a neat illustration of what 'royal coinage' amounted to at that time.) That suggests an approximate date-bracket of a decade for the coins of Heahberht and Ecgberht (although the last exactly dated charter issued independently by Ecgberht is from 779). If, improbably, more charters were ever to turn up, the ten-year gap could only grow, not shrink. Jænberht's unique coin in his name alone (Chick 149) could well belong to those same years, but the rest of the archbishop's coin types do not look early in style and presumably belong to the years after Offa's recovery of power, up to 792. As for Offa's own coins struck at Canterbury, e.g. by the moneyers Babba, Eoba, and Udd, who all three worked for King Ecgberht as well, their style likewise suggests that they are post-Ecgberht, except for a few of Eoba (Chick 102–11) which could, on grounds of style, be supposed to be early. Their plentifulness and regularity (40 specimens), however, argue against it. Queen Cynethryth's coins are, with very little doubt, from after the interlude of independence from Mercia. Why she should have exercised the right of minting at Canterbury is a mystery: should one ask oneself whether Eoba was in fact a peripatetic moneyer, loyal to Offa? Cynethryth's coins do not show a south-of-Thames distribution.

The best judgement that one can make, then, is that at Canterbury just one coin (that of Heahberht, by Eoba) might be from the 760s or early 770s – but is more likely to be from 776 onwards, twenty-three are from the period 776–86, and 125 are from the final years of the light phase, i.e. definitely after 779 and perhaps after 786.

7. Bishop Eadberht

Remarkably little is known about Bishop Eadberht, whether for good or ill. The personal name occurs on fourteen specimens together with that of Offa. It is followed by the familiar cursive **M** for *Merciorum*, cleverly modified into a monogram, surely deliberate, and which has been read as Ep (Fig. 4), but which should perhaps be read as Ep M, for Episcopus Merciorum. If Eadberht had been merely another moneyer, he would not have added the **M** after his name. The median weight of these coins is 1.17/1.18 g.



Fig. 4. Eadberht's monogram, for *Episcopus Merciorum*.

There was an Eadberht, bishop of London, whose election was somewhere between 772 and 782, and who died 787xc.789.⁴⁰ Thus he was in office at the time of the legatine commission of 786 and the 'contentious' synod at nearby Chelsea in 787. The style of the coins would harmonize with a date of issue at about that time. Is it possible that, before the election of Hygeberht as bishop of the Mercians, with his see at Lichfield, Eadberht held that title, at London? The coins could perhaps be in some sense a counterpart of Offa's joint issues with Jænberht. In both cases, a moneyer's name was unnecessary, because the bishop himself could be held accountable. For our present purposes this is all too vague to contribute to solving the problems of chronology. But if Eadberht died in 787x789, it may very well be that his coins antedate the appointment of Hygeberht to Lichfield in 787; and if the monogram is correctly read as *episcopus Merciorum*, they certainly will.

A reminder that, although Lichfield had no place as a see in the original Gregorian scheme, it was not a political novelty devised by Offa. Bede informs us that Chad had his see at Lichfield, and that several subsequent bishops of the Mercians likewise had their see there. Hygeberht's appointment revived an old tradition – but perhaps after a gap.

8. How can we date the gap between sceattas and Offa's pence?

It is difficult to observe with scientific accuracy something that isn't there, and there are two problems about describing the gap. As already hinted, its duration may have been longer in some regions of England than others. Secondly we need to be alert to the possibility that the last of the old could have been in use at the same time as the first of the new. Translating that idea into something measurable, we need to ask whether the last of the old coins have a peripheral distribution, to an extent that is statistically significant.

Which types of sceattas were the latest to be issued? Those with very low silver contents were presumably among them – Series L (other than L12), and Series R, 8–12. But were the closely related 'standing figure' types in Series K, such as K20, equally late, in spite of being of somewhat better silver? We should not assume that the alloy was exactly the same in all regions of England concurrently. The Woodham Walter hoard, which seems to belong fairly late in the secondary phase, gives us some hints, but it has quite an extended age-structure, and may therefore give a misleading impression of the continued use of old coins towards the end of the sceattas. In any case it is merely late-ish: of twenty-three porcupine sceattas from the hoard, now in the British Museum, none is of the Francker phase. The little Cambridge hoard is clearly late, but it is confined to the East Anglian series, Q and R, and is thus not as informative as it might have been. Best of all is the magnificently published Middle Harling hoard, consisting of coins of Beonna, but with half a dozen very late East Anglian sceattas (Types R11 and R12) which were still in circulation at the moment when the hoard was concealed. Not a lot is known about Beonna. It seems that he became king in 749, and was still in power in 760, if we may believe the post-Conquest *Historia regum* on these dates. The hoard had been scattered by the plough, and the site also yielded six other coins which could have formed part of the hoard but which were probably separate stray losses, namely three of Beonna, one late Series R, a Series L Type 12, and an 'Archer' coin. 42 These last two might have been lost at an earlier date. Miss Archibald's judgement is that Beonna's coining began (opportunistically) after the death of Æthelbald in 757. She is thus inclined to the view that they were minted within three or four years either side of 760. Even allowing some leeway for error, that seems to be well and truly in the middle of the recession.

It seems, then, that even as late as c.760, a few stray sceattas were still in circulation, at least in East Anglia. The only strategy that one can think of is to make an arbitrary list of probably late types, and then to see how they occur geographically among the stray finds. They may

⁴⁰ Fryde, Greenway and Porter 1986, ad loc.; Page 1966, 2-24.

⁴¹ Bede, *Historia Ecclesiastica*, IV, 1; IV, 12 (mentioning Sexwulf as 'bishop of the Mercians'). The first bishop of the Mercians was Trumhere, in the time of King Wulfhere.

⁴² Archibald 1985. The exact find spot of each coin was plotted on a plan, a splendid archaeological achievement. See Rogerson 1995.

not be the whole of the late currency: no optimistic claims are being made for the list. It is just a pointer. The suggested list is as follows: K20 and 20/18, L15–19, QIII and Q/R, R8–11, and S. Together these generate only about 150 single finds, out of our grand total of 2,000+⁴³ – quite a small share, even if we add in the porcupine sceattas still in circulation. Thus in spite of their uncertainties they offer a strong hint that the numbers of stray losses (reflecting the numbers of transactions?) fell away severely in the late stages. Within that overall picture, one sees that various productive sites decline or even close down. Most, but not all of them resumed trading as England recovered from recession. The duration of the gap varied from place to place: the details are discussed below. The dominant fact in any regional analysis is that East Anglia (including of course Ipswich) fares better than other regions. That paves the way for Beonna's coins.

The second problem is that we have no firm date, and in the nature of the case there is very little prospect of acquiring any firm dates, for when the last of the English sceattas fell out of circulation (as distinct from when the last of them were minted). The Cambridge hoard and the Middle Harling hoard seem to show that all but the very latest sceattas had disappeared by the time that Beonna's coinage was in use – but when was Beonna's coinage struck? We can make a guess, but it is essentially just a guess. We assume (but why?) that Offa did not strike sceattas (or, if one prefers, that sceattas were no longer struck in the early part of Offa's reign). But from his accession in 757 there is a period of perhaps as much as ten or twelve years within which to locate his first named coins. With his 'early reformed coinage' we are still deep in recession, as the tiny numbers testify, and it seems that even the south-east of England did not climb out of that recession until (as we have just argued) the 780s.

Across the gap of the recession there was some resumption of commercial activity, picking up the threads, e.g. in September 733 Æthelbald had granted remission of toll on one ship at London, for the benefit of the church at Rochester, and this grant was confirmed by Berhtwulf early in his reign. Does that imply continuity, or merely a long memory on the part of the community at Rochester? Religious communities had long memories, especially for legal privileges. Similarly a remission of toll was granted to the abbess of Minster (in Thanet) in 748, and similarly confirmed by Offa. But the number of ships that came to London early in Offa's reign, enabling the beneficiaries to exercise their grants, lay outside the control even of that powerful king. London and east Kent were the places with the best chance, one might have thought, of weathering the recession, because they were geographically closest to the short seacrossings, and so to any cross-Channel trade. But there is contrary evidence (which we shall address shortly) that seems to be political in character, and not simply commercial.

After all possible allowance has been made, and in spite of the uncertainty about the start-date of the series, it seems that the annualized loss-rate of Offa's coins was much lower than for the sceatta series. One might jump to the explanation that that was because far fewer of them were minted. One could try to work out global estimates of the numbers of dies, but the margins of uncertainty attaching to such estimates remain wide, and stray losses are in any case probably much better evidence, because it is they that are a function of the number of transactions taking place (and the whereabouts of such transactions). The volume of the currency, which mint-output reflects, is more to do with the balance-of-payments situation, and the resultant size of England's stock of currency. Nevertheless it is clear, as we have seen, that

⁴³ Figures from the writer's database. The totals could be updated, but the proportions are unlikely to change appreciably – indeed the out-dated version could be more reliable, if the proportion of finds being reported is nowadays in any way selective as regards type.

⁴⁴ An attempt to attribute an extremely interesting sceatta-like coin in Archibald and Dhénin 2004 has met with scepticism, and the authors would, I understand, wish to retract. The coin was found in France, and the alternative is that it is a late Merovingian coin. There are, after all, a number of coins from the Nice-Cimiez hoard which are fairly close imitations of English sceattas, e.g. in Series W. The supposed Mercian coin has a legend around the image of a long-legged wading bird. A diamond-shaped O is fully visible, followed by a dotted annulet as a spacer, and then what is very probably the bottom of a (seriffed) F, and then almost certainly another F. Any further legend is off-flan. If the legend is correctly expanded as *Offa rex* the chronological implications remain just as astonishing even if the coin is a French imitation. It is of base alloy, roughly 25 per cent silver.

⁴⁵ S 88 (EHD no. 66); confirmed by Berhtwulf, 844x51

⁴⁶ S 87 and Offa's confirmation, S 143 (761x764). See *EHD*, introduction to no. 66; also Birch 1885–93, nos 149 and 188.

the decline in the currency, like the decline in mint-output, had already occurred well before Offa's main reform. It was acute at the time of his 'early reformed' coins; and it never recovered its earlier levels. Since c.695 and until c.735x745 the English currency in the sceatta period had been fed by very large inflows of coinage from the Rhine mouths area – the Continental runics of primary Series D, and the primary and secondary-phase porcupines of Series E, which together made up something like a quarter of all the sceattas that were ever lost in England – a reflection and, as we may suppose, an accurate reflection of the fact that they made up something like a quarter of the English currency. Moreover it is clear that Low Countries money was carried by merchants not just to the ports of entry, but directly to inland sites as far west as the Cotswolds (with a strong hint that what they were buying there included English wool).⁴⁷ England had a highly favourable balance of payments with the Continent, from as early as the 690s, until the 730s (or even the early 740s?). The inflows of porcupines into England were very large in both the primary and secondary phases. But they had virtually ceased by the beginning of the tertiary or Francker phase.⁴⁸ There appears to be a sharp cut-off in the inflows. Kloster Barthe-phase porcupines, of all the known varieties including late ones, are extremely plentiful in England, running into many hundreds; Franeker-style porcupines, which we will next document, are extremely scarce.⁴⁹

9. Franker-phase porcupines in England

A careful search⁵⁰ has located only a dozen Franeker-phase porcupines with specific English provenances, plus another nine or ten sold in England⁵¹ or in old collections formed in England. The latter could be English finds, but will not necessarily be so. The provenanced coins are as follows:

Variety B	Market Rasen, Lincs.	0.88 g	Abramson E119
	Stamford, Lines.	1.09 g	CR 1996–95
	London		EMC 1991.0204
Variety E	Spalding, near, South Lines.	1.12 g	Author's card index, LXXXV
-	Spalding, near, South Lines.	-	The Searcher, 2003, and author's card
			index, CXLVII
	Southampton, Hants.	0.52 g	EMC 1988.9009
	Stanton Št John, Oxon.	_	Author's card index
	Wetheringsett, Suffolk	0.97 g	CR 1987–57
Variety Af	Grimsby, Lines.	0.7 g	EMC 1986.0104
Variety F	Reculver, Kent	0.70 g	MEC 660
	Spalding, near, South Lincs.	_	Author's card index, CLI
	Bidford on Avon, Warks.	0.86 g	Author's card index

Of the twelve it is curious, to say the least, that no fewer than six should be from Lincolnshire. From the South Lincolnshire productive site there is one other coin with an obverse which one would judge to be tertiary in style, and with a reverse reminiscent of the 'stepped cross' type. Of the four regular varieties, F is the latest. The most puzzling aspect of the evidence of these English finds is their tendency to be light-weight, and not simply because they are chipped or corroded. Whereas Varieties B, E, and F (Fig. 5) each generate a quite compact histogram around c.1.05 to c.1.35 g, with a secondary, very minor peak at

⁴⁷ It is not (just) that coinage from the Rhine mouths area is very plentiful in certain inland districts of England, but more exactly that it makes up an exceptionally high proportion of all the sceatta finds from those districts, e.g. over 40 per cent. See Metcalf 2003. The map of primary-phase porcupines at p. 42 is reproduced in Metcalf 2004.

⁴⁸ For an explanation of the scheme of classification of the so-called 'porcupine' sceattas, see Metcalf 1993, vol. 2, 197–242. A monograph on the porcupines, with a large corpus of sepcimens, is in preparation by Metcalf and Op den Velde (for publication in the *Jaarboek voor Munt- en Penningkunde*).

⁴⁹ If the cessation of inflows began late in the Kloster Barthe phase it might not be very visible to us.

Work in progress by Dr W. Op den Velde and the writer. See n.48.

⁵¹ For example in the fixed price list Finn 7 (1996), no. 31, a badly chipped coin that Patrick Finn would hardly have bothered to buy from a continental source.



Fig. 5. The three main kinds of Francker-phase porcupines (Varieties B, E, and F), to show their distinctive designs and styles. Minor variations occur. Actual size.

c.0.85 to c.0.95 g, in the English plus ?English material, eleven weights out of fourteen recorded are light.⁵² That is statistically a small sample, but not to be ignored. One's first thought might be that these were largely English imitations of the true Franeker coins, but it seems that that cannot be the case, as there is extensive die-linking to the Franeker hoard itself, or to finds from Dorestad or Domburg. Prima facie that might suggest the deliberate minting in the Netherlands of light-weight coins for the English market (rather than the selective export of culled coins) but one hesitates to reach such an unexpected conclusion until the sample of English provenances is larger. (Culling, which is demonstrable from a comparison of the Franeker and Föhr hoards, is normally in the other direction, i.e. heavy specimens were chosen for payments by weight.)

There is a theoretical possibility that Franeker-phase porcupines continued to reach England in quantity but were melted down at the point of entry, to be re-coined into Eadberht's Northumbrian, or Beonna's East Anglian proto-pence. The latter is unlikely, for it seems that the minting (at least) of the porcupines had come to an end well before the time of Beonna's issues. But the curious concentration of Franeker-phase single finds in Lincolnshire, but not north of the Humber, makes one wonder whether there was reminting under King Eadberht. At the mid-century there was no mint-output in England which could have absorbed even modest quantities of Franeker silver entering the country.

But how do we establish their date-bracket? In principle, evidence could only be expected to come from hoards containing Francker-phase procupines alongside other, more dateable types. Nothing useful is available. There is, however, a hoard from Dorestad itself, consisting of twenty-five coins all of Pepin, and nearly all of the well-known types without a mintsignature but with a battle-axe, reading PIPI / RP or occasionally RF. So far as one can see, there are no die-duplicates among them.⁵³ These were very probably minted at Dorestad.⁵⁴ Taking into account that Dorestad had been under Frankish control since 719, it would seem that Pepin's reform had swept away the late (i.e. Franeker-phase) porcupines which had previously circulated freely in the port (and indeed would also seem to have been minted there). Conversely, the Goting Kliff hoard from the island of Föhr, which lies just off the coast of Schleswig, some 75 km south of Ribe, is dominated by Francker porcupines. It was put together while they were still in issue (it terminates with Variety E1, and lacks E2 and F), and it contains no coins of Pepin, although it seems to be miscellaneous enough and large enough to have included a few if they had been around. On a prima facie reading of the strong evidence from Dorestad, and of these two hoards, the minting of Francker-phase porcupines was over (with the possible exception of a few imitations) by c.754. Pepin's reform swept them away, and replaced them with coins of better silver. It looks virtually certain that they had disappeared from the currency of Dorestad by the date of the Hoogstraat hoard. Their original introduction, therefore, allowing a sufficient time for the use of the numbers of dies

This offers some sort of guarantee that mostly they are indeed English finds.

⁵³ The variety of their dies precludes their being from very early in the reformed coinage.

⁵⁴ Enno van Gelder 1980. The pattern whereby Dorestad-minted coins are relatively more plentiful at Domburg than they are at Dorestad itself is seen clearly in the pre-reform coins of Charlemagne from the two sites, and in later Carolingian issues.

involved, and depending on the pace of output, will have been in the early to mid-740s or thereabouts. By that start-date, whatever it was exactly, the inflows of porcupines into England had drastically declined. The inflows may have been declining already in the latter part of the Kloster Barthe phase.

This date-bracket may perhaps correspond, in England, merely with the beginning of the end: the minting of sceattas in England, such as the very debased Series R, 10–12, could have limped on for some years or even, on a very small scale, for two or three decades longer. The moment of change in the volume of inflows, however, could hardly be sharper, and the date of transition in the minting of porcupines, from the Kloster Barthe to the Franeker phase, seems therefore to be quite a key date for English monetary history. The early to mid-740s is as close a guess as we can make for the new beginning of the Franeker-style porcupines.

A few more words about the Föhr hoard, concealed mid-way during the issue of the Franeker porcupines. Many of the coins are test-marked with a knife-cut, indicating local exchange.⁵⁵ Föhr included a Merovingian or very early Carolingian coin of a certain Milo, which has been seen as crucial for the dating of the hoard (Fig. 6). Possible attributions have





Fig. 6. The coin of Milo from the Föhr hoard. Enlarged \times 1.5. (After Hatz.)

been discussed at length by Hatz.⁵⁶ The Milo best known in numismatic circles is Milo of Narbonne (fl. 782x791). His coins have *rev*. NRBO. Could the Föhr hoard be so late? – Surely not. The Föhr coin uses a reverse that has been read (incompletely?) as TRE, doubtfully attributed to Caunes (*Trencianum*), in the south of France.⁵⁷ Both coin-types use a lozenge-or diamond-shaped O, and both are of interest as bearing non-royal names. Milo was, however, not such an unusual name that a second individual is out of the question, and the fabric of the Föhr coin would be decidedly small for a date in Charlemagne's reign. Hatz has pointed to a bishop of Trier (722/3–761/2), and suggests that the reverse of the coin in fact reads PTRE for *Petrus*. St Peter was the patron of the cathedral of Trier. (TRE could also be read as *Treveri*.) Complete certainty will perhaps have to await the discovery of a second specimen, or of an obviously related variety, hopefully from somewhere closer to Trier,⁵⁸ but meanwhile Hatz's is by far the most sensible conjecture.⁵⁹ If the attribution to the bishop of Trier is correct then the coin contributes nothing additional to the dating of the Föhr hoard. Bishop Milo's long pontificate leaves all reasonable options open. On the basis of what has been said above about the Franeker coins, one might suggest *c*.748 x *c*.752.

Archaeological evidence from Ribe, in Jutland, shows that the locally-minted Wodan/monster sceattas (certainly a controlled currency, into which inflows of porcupines, etc., were recycled) remained in use there until late in the eighth century. The absence of later porcupines at the site is therefore uninformative; but to suggest a date in the 780s or thereabouts for the Föhr hoard, on the basis of an implausible attribution to Milo of Narbonne, would entail that the Franeker phase was still in production (because Variety F is absent), and would, in effect, mean that Franeker porcupines were in use concurrently with Pepin's reformed deniers, and even with Offa's pence. It would close the monetary gap or commercial recession

⁵⁵ It had fallen out of the cliff, and was recovered, scattered, on the beach. That leaves a (small) uncertainty whether all the coins were associated, cf. what has been said about the Middle Harling hoard.

⁵⁶ Hatz 2001, 41–3, with bibliography.

⁵⁷ For a judicious statement of the facts, see MEC, vol. 1, 643f.

Nothing obvious in Lafaurie and Pilet-Lemière 2003.

⁵⁹ Hatz 2001, 42.

which we detect in southern England by creating an extremely 'late' chronology – one might even say an impossibly late chronology – for the English find-material. If one seeks to push the end of the Kloster Barthe phase much beyond $c.740 \times 745$, the following decades become crowded with conflicting tendencies. A 'late' chronology would be an elaborate structure to erect on one small coin (literally small) of uncertain attribution, and general historians will be better advised to follow Hatz.

Franeker-phase porcupines were minted in far smaller quantities than those of the preceding Kloster Barthe phase, but still some 400 or 500 pairs of dies were used. From England, however, as we have seen, the tally is at most about 20, compared with some hundreds of stray finds of the Kloster Barthe phase. A fifteen- or twenty-fold decline in the inflows into England is worse than recession: considered in isolation it would be tantamount to monetary collapse. The discrepancy is much sharper than it is among the single finds from the Netherlands. It seems, therefore, that porcupines were no longer carried to England, or only in relatively trifling numbers. But we need to look at that proposition carefully: is it possible, for example, that Franeker porcupines were recycled in Eadberht's Northumbria but not in Lindsey or Kesteven? The Lincolnshire find-spots listed above hint as much. There was an abrupt change of royal policy, both in Northumbria, and in Beonna's East Anglia, and eventually in Offa's Greater Mercia: whereas foreign coins had been perfectly acceptable if their alloy was appropriate, now they were compulsorily reminted, and inflows disappear from the numismatist's sight, except in so far as large volumes of mint-output raise the question of the source of the silver.

10. The survival of early Carolingian coins in circulation in England

As regards Carolingian coins (which never reached England in anything like the quantities of Low Countries money), note that if compulsory re-minting occurred in Offa's light phase, that would still leave ample scope for all the deniers of Pepin, dateable with certainty to the years 751–68, and indeed also some twelve or fifteen years' worth of those of Charlemagne, minted from 768 onwards, to circulate unmolested and to occur as stray losses in southern England, other than East Anglia. Until the early 780s, one cannot identify any Mercian coinage that could have absorbed significant amounts of foreign silver, by reminting. Nor is there any documentary evidence of a policy of reminting. The very few single finds of early Carolingian coins that are known thus seem to imply that very few ever arrived, in the period up to c.782. Early Carolingian coins (i.e. minted before Charlemagne's reform in the 790s) are high-profile collectors' items, and we may be reasonably sure that extremely few if any English finds have escaped the net. As regards the quantities in which they were issued, Völckers⁶⁰ lists some 400 provenanced specimens for the period up to 790 – out of which nearly 100 are of Pepin (a similar story of monetary recovery?). A check for die-identity in the early Carolingian series (including all the unprovenanced coins) has yet to be undertaken, but one's distinct impression is that die-duplicates are far from common. The original total of dies will therefore have been considerable. The rarity of English finds is not because the coinage was on a small scale in its home territory, but because trade between Francia and England was very limited. Nor does the balance of trade explain the rarity: movement of English coins to Francia was just as limited. The only question will be whether the regional distribution of the early Carolingian coins in England is to any extent peripheral, i.e. whether they were found in districts a long way from a mint-place. There are just three recorded coins of Pepin, one found at Richborough in or before 1880, and doubtless the specimen now in the Fitzwilliam Museum, 61 another minted at Verdun and excavated at Repton, 62 and a third (Fig. 7) minted

⁶⁰ Völckers 1965.

Metcalf 1966, 379–92 and pl. 17, 8. There need be no real doubt that this is the specimen now in the Fitzwilliam Museum, *MEC* 1.719, as Mr Gent lived locally. See the row of three dots aligned with the tail of the R. The type is scarce enough: see Völckers 1965, pl. N, II,9 and zu II,9.

⁶² Grierson 1986.



Fig. 7. The Bere Regis find. Enlarged \times 1.5. (After Biddle 1986.)

at Angers, in the Loire valley, and found near Bere Regis, Dorset, just north of the line of the Roman road from Dorchester to the hill-fort of Badbury Rings. 63 There are a couple of coins of Charlemagne from Hamwic,⁶⁴ both of them being from the westerly mint-place of Melle; a coin of the Dorestad mint found at St Albans;65 and a pre-reform coin of Charlemagne of the (Rhineland) DMAGCS mint found on north Humberside, at the productive site of Sancton/South Newbold.⁶⁶ A coin of Charlemagne has recently been reported from Princes Risborough, again of the Dorestad mint. There is a clear pattern of coins reaching England via the Rhine mouths area, or from the Frisian settlement area, rather than direct from Carolingian territory. Equally clearly the coins of Melle and Angers will have come directly from western France. The ratio of coins of Pepin to those of Charlemagne is roughly what one might expect. The main point for the historian is that the extent of trade between England and the Carolingian kingdom seems to have been minimal in the years 751 to c.782, or certainly any favourable balance of payments was minimal, and that situation is unlikely to have changed radically in the last ten or fifteen years of Offa's reign. Even if inflows of Carolingian money began to increase, Offa's coinage is thus unlikely to have been made to any significant extent out of recycled Carolingian silver. That leaves us with the conundrum where the silver came from. One's thoughts turned briefly to the fabulous treasure of the Avars, which fell into Carolingian hands in c.793. It becomes visible in the West as sumptuary material rather than as cash. Offa personally received a belt and a sword, and two silk gowns; and Charlemagne also sent gifts to the English bishops.⁶⁷ Silver from that treasure may in due course have been turned into coin, and widely diffused. As a source for Offa's light coinage, however, the chronology is impossibly tight.

11. A control-group: Merovingian deniers in England

Merovingian silver deniers, which figure occasionally among the stray finds of the sceatta period, were evidently permitted to circulate, and are not as rare in England as pre-reform Carolingian coins, but they are still scarce. Alongside 2,000+ sceattas there are about forty, i.e. roughly two per cent of the English currency. Most of them can be traced in the Coin Register. They are mostly difficult to date exactly, but they range from 683–6 for the Ozengell find to very late and debased, e.g. a coin of Angers from the south Lincolnshire site, or one of Rouen from Benson, Oxfordshire. There were five Merovingian deniers in the Aston Rowant hoard, as against some 260 sceattas from the Low Countries. Aston Rowant apart it is, unfortunately, very unusual for us to be able to date individual pieces with any useful precision. The best we can do is to make a map of the English find-spots (Fig. 8) – from which we can see that the overall distribution does not differ much from that for sceattas

⁶³ Biddle 1986, 32–3, and illus. at Pl., 14, p. 34. A coin of Offa was found nearby (now Chick, Type 28d) – evidence of continuity in the use of the routeway? Both coins were originally published by Keen 1983. The attribution to Angers (*Andecavis*) should not now be doubted, and indeed the cross-Channel location of this find only reinforces it. Not (of course) in Völckers 1965, where a find of this type from Bonn is catalogued.

⁶⁴ Pagan 1988, 64, para. 9.

⁶⁵ Dolley and Metcalf 1957.

⁶⁶ Booth and Blowers 1982.

⁶⁷ EHD, nos 197-8.



Fig. 8. Stray finds of Merovingian silver deniers in England. Coins from known productive sites are marked by a square symbol, and the Aston Rowant hoard by a cross. (The find-spots are listed in an Appendix, p. 30 below.)

generally. In more detail, there are strong hints that they stood a better chance in regions remote from a mint-place. Thus, they are rather more numerous in Essex and likewise in Wessex than one might have expected; and conversely there are unexpectedly few in east Kent or in London. Their scarcity in the south-east may be merely because they were outnumbered by a copious currency of English coins, rather than because there was prejudice against them or because they were melted down. Whatever the correct explanation, their occurrence on the fringes of the general circulation area suggests that they were carried to those districts direct. That is so, for example, at the South Lincolnshire productive site. Even if it were the case that Merovingian coins (but not porcupines?) went into the melting-pot in east Kent and London, the proportion in our corpus of eighth-century finds may be an understatement – but still a very small percentage of the whole. The Merovingian coins originate from mint-places widely scattered through France, and by no means just from the northern coastlands of Francia. There is, however, an interesting concentration from the Paris region and from

⁶⁸ This is discussed more fully in Metcalf forthcoming.

Neustria generally. There were Merovingian mints all over France, Belgium, the middle Rhinelands, and western Switzerland, producing in total massive amounts of coinage. Alas, metal detectorists in France have not transformed our understanding of the Merovingian mints in the way that has happened in England. Beside the Frankish coinages, the Low Countries porcupines, ample as they are, were probably a mere appendage; and yet very few silver coins from Merovingian Gaul were carried to England, a situation quite unlike the arrival of Low Countries money among the sceattas. That might in theory be because the balance of payments was in the other direction, but it has to be said that secondary-phase sceattas are very scarce among French finds (except as money in long-distance transit, carried by pilgrims to Rome, for example), and equally scarce in the Netherlands. Trade between England and France was not on a large scale. The North Sea trade was in the hands of the Frisians – characterized in the title of Lebecq's book⁶⁹ as 'merchants and sailors' – and in the other direction Frisia, it seems, was the gateway to the Rhine valley. Merovingian deniers may be slightly more plentiful in the English wics than in the countryside at large, for example there are two alongside about 120 sceattas from the Southampton excavations.

There are also finds from Winchester, and from the Isle of Wight, which are understandable enough in terms of the direct crossing of the Channel from the mouth of the Seine. A similar explanation suggests itself for a denier of Poitiers found at Avebury, Wilts.

Again, some of the Merovingian deniers could have arrived via the Low Countries, as they are rather plentiful at Domburg.⁷⁰ There are six finds from the South Lincolnshire productive site, among 150+ finds – four per cent, or double the national average. But their mints of origin do not appear to be more easterly than usual.

12. Precursors to Offa's reform: new coinages in Northumbria and in East Anglia

To return to the main question, there seems to be a large gap, then, both in mint-activity and in stray losses in England south of the Humber, from a date probably as early as the 740s, until Offa's moneyers begin to work on a substantial scale, at an uncertain date close to or soon after 780. The third quarter of the century is the low period. Within that gap of as much as thirty or forty years, the merest handful of finds are recorded from south of the Humber. North of the Humber, however, the monetary picture seems to have been very different. King Eadberht, 738–57, struck an elaborate series of issues, with legends consisting of the royal name – Classes A to G, and also coined jointly with his brother the archbishop.⁷¹ The coins do not bear moneyers' names, but one could imagine up to half-a-dozen moneyers, each with his distinctive symbols beside the fantastic beast, serving as a mark of personal identification. We do not know exactly when in the twenty-year reign the reform was launched, nor whether these issues were spread chronologically right through its end – one's instinct is that they are mainly from the 740s, and that by the 750s mint-output had declined, because the issues of Eadberht's successors are far more scarce – but in any case they seem to fall squarely into the gap in southern England. Even if we stretched the chronology for the last of the sceattas as far as possible, we would be looking at Northumbrian coins of reasonably good-quality silver (often approximating to two-thirds silver, but reducing later to about half), 72 contemporary with southern English coins of decidedly poorer quality, e.g. East Anglian sceattas of only 10–15 per cent silver. It is difficult to imagine what was happening in terms of trade. Were merchants avoiding southern England, and sailing right up the east coast to the Humber? The Frisians had a suburban settlement at York, where plenty of porcupines have been excavated, but none of the Francker phase. In total there are just about enough of the site finds for the absence of Franeker porcupines to be noticeable, and thus to offer a clue to the early begin-

⁶⁹ Lebecq 1983.

Op den Velde and Klaassen 2004 syllogizes 71 deniers from Domburg.

⁷¹ Although this may look like a precedent for Offa's joint issues, there may have been a still earlier precedent in east Kent in the sceattas of Series K.

See a dozen EPMA analyses in Metcalf 1993, 676–9.

ning of Eadberht's reformed issues. In any case, and whatever the date, he instigated a controlled currency within the confines of his northern kingdom, from which foreign coins were excluded. That is the picture not just from York, but from the whole of the East Riding, including the heavily monetized north Humberside.

There is a similar anomaly in East Anglia, where Offa's reform had another precursor in the coinage of King Beonna. Like Eadberht and like Offa, Beonna restored a decent alloy standard (which in East Anglia settled down at around half-silver) in place of the severely debased late sceattas of Types R9–12. Beonna's coins have been studied thoroughly and in a most exemplary manner by Marion Archibald, in the light of the Middle Harling hoard.⁷³ The hoard had been scattered by the plough, through the years and up and down the furrows, over many metres. It is wonderful to have the whereabouts of each coin in the field accurately plotted, with its identity tied into the catalogue. Beonna's coins which are already half-way to being deniers in their fabric, are historically and economically 'betwixt sceattas and Offa's pence'. Like Offa's coins, they already bear both the royal name, and a moneyer's name. Beonna became king in 749, in all probability. How long his reign lasted is unknown: he was eventually subdued by Offa. All that we can point to is the coin of Wilræd in Offa's 'early reformed' coinage, which is presumably by the same moneyer who had worked actively for Beonna (Fig. 9). On this flimsy evidence, and on not much more, it is judged that Beonna's coinage as a whole dates from the 750s and 760s - perhaps quite narrowly from the years around 760.74 Thus it seems to be some years later than the bulk of the coins of Eadberht, but in any case still to sit unambiguously into the chronological gap that has been identified. Yet there were, as we have seen, a few very late East Anglian sceattas in the Middle Harling treasure, still available for hoarding, at a date perhaps in the early 760s.









Fig. 9. Coins of Wilræd for Beonna and Offa respecively. The coin of Beonna illiustrates the dies used to strike coins of only c.25 per cent silver – presumably the last of Wilræd's issues. Notice the dotted limb of the runic e. On the coin of Offa, the die-cutter has had difficulties with the letter R, on both obverse and reverse. Notice the S-shaped contraction-mark. Enlarged \times 1.5. After Archibald, and Chick.

(Much less certain, but worth mentioning, while we are clutching at straws: might the late Series L sceatta excavated at Repton, and perhaps even the denier of Pepin from Verdun, have been lost when Æthelbald was buried there in 757? The paucity of coin finds at Repton can be seen as illustrating the depth of the recession: the low earthen mound over the mass burial of 873–74 contained many middle Saxon finds – silver and copper-alloy pins, fragments of vessel and window glass, and pottery sherds, but just the one coin, of Series L. It seems that the old ground surface was scraped up to form the mound. The Carolingian coin was found immediately to the west of the mound. ⁷⁵)

What was the source of the bullion, and what was the commercial context, of Beonna's quite extensive coinage, for which some forty-six upper dies are known? Was there a renewal of trade between the Rhine mouths area and specifically the kingdom of East Anglia, but not with

⁷³ Archibald 1985.

⁷⁴ The chronology is carefully discussed in Archibald 1985, 33f., subject to corroboration by what one thinks in the light of Chick's work about the date of the 'early reformed' phase. One may accept the narrow dating to c.760, without being willing to build too much on it.

⁷⁵ Biddle *et al.* 1986. It is possible, but by no means certain, that the crypt was constructed for the burial of Æthelbald. The *Anglo-Saxon Chronicle* records that 'he was slain at Seckington, and his body is buried at Repton': *EHD* no. 1, *sub anno* 757.

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(Mercian-controlled) Kent or London? The circulation of Beonna's coins was very largely confined to East Anglia, possibly because of a lack of goodwill between Mercia and East Anglia – not to mention an apparent lack of goodwill between Offa and Charlemagne. The moneyer Wilræd, who was very active under Beonna, apparently struck some of that king's latest coins, when the alloy standard was halved, to about 25 per cent silver (Fig. 9a). As in Northumbria, it seems that there was persistent downward pressure on the coinage alloy, possibly for fiscal reasons, but reflecting, one must suppose, inadequate inflows of bullion into the region. It is assumed that when Wilræd (if he was the same individual) subsequently worked for Offa (Fig. 9b), it was in his home territory of East Anglia, of which Offa had taken political control. Only two specimens by Wilræd for Offa have survived.

13. What was coinage used for? Economic versus political factors

The broad arguments that have been considered so far do not yield much specific information about how sceattas were used in England (although there is plenty that can be said on that subject), nor do they tell us whether those same uses of money revived under Offa. To put the question into context, it is worth comparing the overall distribution-patterns in England for sceattas and for Offa's pence (Figs 10 and 11). If there was a drastic monetary recession consequent upon a recession in trade with the continent, one might expect that the marginal areas, furthest from the eastern and south-eastern coasts of England, would suffer most, and that a distribution-map would show a retreat. Be that as it may, Offa's pence swiftly came to serve the whole of southern England. It seems that there is very little difference in the maximum area over which stray finds of sceattas and of Offa's pence occur, with one exception: coins of Offa are not found north of the Humber. The reason for that is clearly political. Offa's writ did not run in the kingdom of Northumbria. The Aiskew hoard, from the outskirts of Bedale in Wensleydale, and concealed fairly late in the light phase of Offa's coinage, i.e. in the 780s, is the exception that proves the rule. Offa's coins did not circulate in Yorkshire, and the Aiskew coins were on their way to the melting-pot or perhaps (if opportunity offered) to be recycled southwards by some other traveller.

Offa's coins did, however, circulate in East Anglia. When the province was conquered and, in effect, incorporated into the Mercian empire, Mercian money flooded in. That makes the regional restriction of the preceding coinage of Beonna (which is found in East Anglia, but very rarely beyond) all the more curious. The situation under Offa is best appreciated from another map (Fig. 12). It allows us to attempt a more detailed regional analysis, by dividing England up into smaller regions, and comparing the currency in each of them. To make potential comparisons easier, we can use the same eleven regions that have been used in several published studies of sceattas. 76 The 352 provenanced coins in Derek Chick's monograph have been distributed, in Table 1, according to their proposed mint-attribution, and whether they are light or heavy. The Table shows, quite dramatically, that the pennies minted at London, Canterbury, and in East Anglia crossed regional boundaries freely, supplying an intergrated currency everywhere south of the Humber. Millions of coins became mingled in circulation. This is not a figure of speech. We are talking literally about millions of coins with a high velocity of inter-regional circulation. As an example of how the Table can be exploited, the map, Fig. 12, using the boundaries of the eleven regions, shows the percentage of the stray finds from each region which were minted in East Anglia in Offa's light coinage. On their home territory in Norfolk and Suffolk, the East Anglian coins (the correct attribution of which is not open to doubt) made up in the lighter phase 40 per cent of the currency in Norfolk and 44 per cent in Suffolk. Taking the light and heavy phases together those figures fall even lower, to 31 per cent for Norfolk and 37 per cent for Suffolk. In other words more than half the currency had entered East Anglia from the London and Canterbury mints. But East Anglian mint-issues have been found throughout England, especially northwards in

⁷⁶ E.g. Metcalf 2004.

BETWIXT SCEATTAS AND OFFA'S PENCE

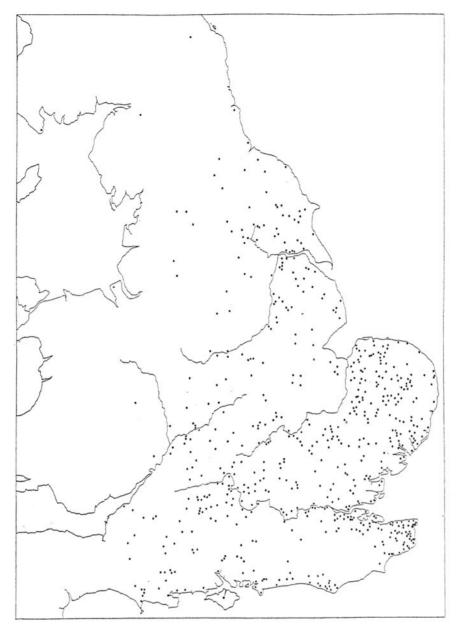


Fig. 10. Stray finds of sceattas, to show the maximum extent of the area over which they circulated.

TABLE 1. Numbers of stray finds from the 11 regions, attributed to the London, Canterbury, and East Anglian mints, in the light (L) and heavy (H) phases of Offa's coinage.

Total		Lond	lon	Cante	erbury	Eas	t Anglia	Ratio
		L	H	L	H	L	H	
22	Lindsey	7	4	3	6	2	_	50-41-9
26	Norfolk	4	1	5	8	6	2	19-50-31
24	Suffolk	4	1	6	4	8	1	21-42-37
26	Essex (N)	8	2	11	1	2	2	38-46-15
100	South-East	37	5	38	14	3	3	42-52-6
12	Sussex	5	3	4	_	_	_	67-33-0
42	Surrey, Wessex	11	3	22	2	4	_	33-57-10
29	Thames	9	1	13	4	2	_	34-59-7
43	Middle Anglia	14	3	11	14	_	1	40-58-2
28	Severn/Trent	7	3	9	6	2	1	36-54-10

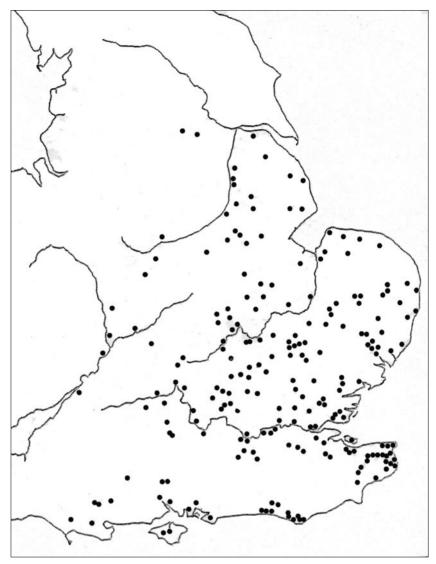


Fig. 11. Stray finds of Offa's pence, to show the maximum extent of the area over which they circulated. (After Chick, Fig. 2.)

south Lincolnshire and in Lindsey, but also as far afield as Wessex. East Anglia was monetarily a semi-detached part of Offa's overlordship. Elsewhere a distinctive regional flavour is lacking. It has been noted that in the secondary phase of the sceattas Canterbury coins tended to dominate south of the Thames, while London-related sceattas dominated north of the Thames, although only to the tune of about 60:40 in either case. Thuch the same is true of Offa's pence. South of the Thames, Canterbury leads, with a ratio of 60:40. North of the river, the balance is close to 50:50. Given that the coins were of a uniform intrinsic value, whatever their mint, this is clear evidence of an integrated currency, with only a small tendency towards regional variation. In the South-East region, i.e. Kent, south Essex, and London, the pennies minted at London and Canterbury mingle. It is not a sufficient explanation to think of Canterbury coins being carried along the North Downs and onwards into the Thames valley and the east midlands. London coins were evidently carried in the reverse

⁷⁷ Metcalf 1993, 370–3.

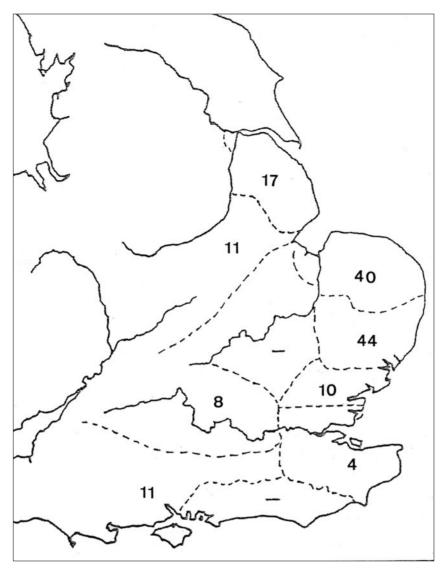


Fig. 12. The percentages of the stray finds of Offa's light coinage from each of eleven regions, which were minted in East Anglia. (In Norfolk 6/15 = 40 %, in Suffolk 8/18 = 44 %.)

direction. Even in the little triangle of east Kent, Canterbury coins only achieve a roughly 60:40 ratio. (Here we see the necessity of correct mint-attribution of Offa's pence, which was our starting-point.) Could taxation have been a mechanism for the mixing of coins from different mints? – Money was gathered into the king's coffers, and then spent in various places. But whether this would have resulted in such an even mixture in all regions is debateable. From this we should conclude that the uses of coinage were dominated by long-distance transactions. There will surely also have been a local economy, in which people from the surrounding villages came into Canterbury on market-day, but that seems not to have influenced the wider pattern of stray losses, or at least, not to be visible in the wider pattern. Regional analysis of this kind offers the historian very secure evidence, in effect because the single finds on which it is based are doubtless a random sample as regards their mint of origin. Moreover the final balance was achieved swiftly, because the average age of a penny of Offa when it was lost cannot have been more than ten years or so.

14. The evidence of productive sites: continuity or resumption

Next we should focus down onto the topographical distribution of the finds in more detail, in the hopes of picking up a few clues about the local uses of Offa's pence. These will not necessarily change the big picture, because local particularities may be absorbed into the average for the region. The main point is that some of the productive sites which have yielded so many sceattas continued into the time of Offa, or perhaps it would be more accurate to say resumed activity on their traditional sites after a gap of a couple of decades – or in some cases longer. Remembering that sceattas are six times as plentiful as Offa's pence, even a few of the latter on a smallish productive site may be enough to demonstrate that the site enjoyed a similar relative importance under Offa as in the secondary phase. Bidford-on-Avon is a good example of renewed activity: even though inflows of Frisian money into the west midlands ceased, the local region was again producing goods which attracted merchants engaged in inter-regional trade.⁷⁸

Blackburn has given us a very useful and thorough survey of some thirty 'productive sites', nearly all in eastern England. 79 East Tilbury, Essex continues to perform very strongly, and from an early date, 80 and there are several finds of Offa from Coddenham (Suffolk), 81 Bawsey (Norfolk), 82 and almost certainly from the productive site on the Isle of Wight. 83 The major site near Royston is especially informative, in that apart from just one coin of Beonna its recovery or resumption is delayed until about the year 800 – one coin of Archbishop Æthelheard, 84 and none of Offa alone, but five of Coenwulf and two of Cuthred.85 There is also a significant number of coins of Offa from the notorious Hollingbourne/Leeds Castle site in west Kent.⁸⁶ On the other hand, the major south Lincolnshire site closes down completely with the last of the sceattas – possibly because Mercian trade no longer needed an outlet to the sea by way of the Wash. The 'Flixborough' finds, the sceattas and stycas among which were published in summary by Bonser, are now known to be from north of the Humber (stycas are not common in Lindsey). Controlled excavations at Flixborough, 1989-91, meanwhile, yielded no fewer than 53 Anglo-Saxon coins, all of the eighth to ninth centuries. Their provenance and the completeness of the record are, thankfully, secure. 87 There were 23 sceattas, just one penny of Offa, by Osmod, one of Archbishop Ceolnoth, and 22 stycas. These await detailed publication, and we shall then see how many of them are of Eanred - or even of Æthelred I. The date when losses resumed on any scale will have to be judged from the proportions.

The finds from East Tilbury include two of the three known coins of Offa by the improbably named moneyer Mang, which Derek Chick identifies as very early. Both fragments came from the same detectorist in April 1989 and one presumes that they are a mini-hoard. There is an equally early coin by a moneyer called Odd or something like that from near Sledmere, on the Yorkshire Wolds, another productive site which, like Hollingbourne, is unfortunately shrouded in obfuscation. 88 Is there a hint here that when the recovery began, it touched first the old productive sites?

⁷⁸ Chick nos 17d, 95d, and 227a (Blunt 22, 49, and -).

⁷⁹ Blackburn 2003.

⁸⁰ Chick nos 5a, 5b, (these two very probably a mini-hoard, both found by Mr H. Norris in April 1989), 11d, 147b, 170a, 214b, and 251e. (Types as Blunt -, -, 55, 120, 110, 105, 114.)

Chick nos 72c and 106b. (Types as Blunt 81 and 17.)

⁸² Chick nos 61b, 130a, 177Aa, and 219d (Blunt 69, -, and 85).

⁸³ Chick nos 130e and 230g (Blunt 73 and 25). The site where many sceattas have been found is well testified, but it is conjectural whether the Offas also came from the same site.

⁸⁴ Chick no. 240b (Blunt 133).

⁸⁵ Blackburn and Bonser 1986b

⁸⁶ Chick nos 13n, 17h, 143b, and 243b (Blunt 56, 22, -, and -).

⁸⁷ Blackburn 1993, 87–9, lists the Lindsey finds including the Flixborough excavation finds for 1990–91. The Flixborough excavations are now being published in four volumes, of which three have appeared. Volume 2, Evans and Loveluck forthcoming, chapter 13, by Miss Archibald, will include the coins.

⁸⁸ Bonser 1997, 43f., naming the site as 'North of England'. It was previously conjectured to have been at Flixborough, but is now securely known to have been near Sledmere. There are over 90 sceattas (including, one suspects, an undeclared hoard of Series G and J), plus 19 Northumbrian stycas of various dates.

The extreme scarcity of the coins of the early reformed phase suggests that monetary activity resumed at first in a very small way. Statistically their occurrence at East Tilbury and at Flixborough is well over the odds. Although we do not know how long the phase lasted, these six coins (out of which two are a mini-hoard) tend to confirm that there was a gap, specifically at London, during which monetary activity was moribund.

An interesting corollary of the above is that at the South Lincolnshire productive site (where even the later secondary sceattas are almost completely lacking) three finds of Franeker-phase porcupines are perhaps the first (abortive) hint of the new rather than the last of the old: their use in Kesteven seems to lie on the later side of the recession. Perhaps we should see this in connection with King Eadberht's new coinage: shipping brought these late porcupines to the Humber; in Northumbria they were melted down and recycled, whereas at ports reached via the Wash they were allowed to pass into use.

15. Anomalies of monetary circulation: Ecgberht of Kent

When we come to the 780s, the velocity of circulation under Offa and the regional transfers of his coins were such that there is very little to be gained through looking for evidence of residual localization of the coins of individual moneyers. Any thought that one might discover additional minor mint-places on the basis of local clusters of single finds by the same moneyer is disappointed. Our 350 single finds are thoroughly mixed, geographically. All the more striking, therefore, is the coinage of the Kentish king Ecgberht II, where the distribution of the English find-spots is intriguingly loaded towards west Kent and Surrey. Indeed there is just one find from east Kent, where his coins are presumed to have been minted. Even if there was some sort of embargo on their use north of the Thames, a couple of more northerly finds from beyond the South-Eastern region are not really surprising, given that most people were illiterate. The find-spots for Ecgberht in Fig. 13 are as it happens all of coins by the moneyer Udd, and the map also shows one other coin by Udd for Offa which falls within the frame, from Shalford Mill, near Guildford. The two coins of Udd from Stamford Hill are evidently another mini-hoard, offering us a glimpse of money being put into circulation by being issued to a customer by a particular moneyer. The Shoreham find is from just down the road from Otford, site of the famous battle in 776. Sir Frank Stenton's assessment, from charter evidence, that Offa was unable to exercise power in Kent between 776 and 786,89 may help to explain the

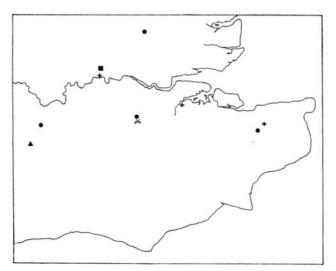


Fig. 13. Single finds (and a mini-hoard) of coins of King Ecgberht of Kent. Dots: coins of Udd; triangle, coin for Offa by Udd. Crosses mark the location of Canterbury and Rochester, and crossed swords the Battle of Otford. (Source: Chick forthcoming.)

⁸⁹ Stenton 1971, 207ff., remains valuable.

unexpected degree of localization of Ecgberht's coins. These are the years, presumably, when Ecgberht minted most or all of his coins. Heahberht's lone coin is stylistically close, and one would not wish to make it significantly earlier. Alas, we have so little documentary information about Ecgberht or Heahberht, or even about the exact dates of their issues of coinage, that one hesitates to say more. Was the frontier between Kent and Mercia difficult to cross in the years 776–86? Some explanation is certainly required for the inconsistency between, on the one hand, the restriction of Ecgberht's coins to the south, and on the other hand the 60:40, 40:60 mingling of Offa's coins described above.

Ecgberht, like other kings (including his father or senior colleague Heahberht), also used his coinage for purposes of diplomacy and for pious donations. There was one specimen in the Ilanz hoard, from the Alpine region, and another in the Vatican collection, doubtless an Italian find. A third is in the Aiskew hoard, which perhaps gives a clue that the owner of the money had set out from the south of England.

16. Anomalies of monetary circulation: Archbishop Jænberht

If the monetary interpretation of the restricted spread of Ecgberht's coins is less than transparent, it is clarity itself compared with that of the coins of Archbishop Jænberht. The venerable prelate, who held the see of Canterbury from 765 until 792, nearly thirty years, was a supporter of Ecgberht and a kinsman. It was well known that Offa and Jænberht detested each other.⁹⁰ And yet all except one of Jænberht's coins bear his name jointly with that of Offa (the exception being the astonishing early coin in the Aiskew hoard in his sole name, reading *Ienberht pontifex*). As well as the Northumbrian coins of Eadberht with Ecgberht, there was a southern precedent for a joint issue by king and prelate: a certain number of sceattas have been attributed to the archbishop of Canterbury. A variant of Series K, Type 33, at present unique, shows a bust with hand raised in benediction. 91 But Jænberht's issues were on a substantial scale, struck from something like 65 dies (plus or minus margins of statistical variation). Was the arrangement intended to give him a cash income? Would Offa have been so generous? Was it a quid pro quo or a sweetener for his acquiescence in the decision of the Council of Chelsea in 787 to split Jænberht's province by creating another archbishopric, for Mercia, at Lichfield? – One is doubtful whether Jænberht's coins can begin quite as late as 787. Hygeberht received the *pallium* as archbishop of Lichfield in 787, and promptly consecrated Ecgfrith. Wallace-Hadrill has sketched a possible sequence of events in which Jænberht refused to fall in with Offa's dynastic plans, declining to anoint his son. (Charlemagne's two sons were anointed kings in 781.) Offa may have appealed to the pope to depose Jænberht, which the pope refused to do.92

Why (if one may ask an idiot question) did not Offa strike coins jointly with Hygeberht too? The question is even more pressing as Offa had allowed Bishop Eadberht to strike coins. It would make far more sense politically than sharing coinage-rights with the detested Jænberht. The only explanation that comes to mind is that minting was in some sense customer-driven, although that hardly meets the case. If it had been a matter of prestige, Offa could have found a few pounds of silver for some token issues in the new archbishop's name. And another idiot question: when there were coins for Cynethryth, why not for King Ecgfrith? Jænberht's coins were doubtless minted at Canterbury (and not beginning until well into Offa's reign), probably by the moneyer Æthelnoth, with whose coins there is a die-link. The distribution-map of single finds (Fig. 14) is decidedly interesting. Other than a mini-hoard from Cobham

⁹⁰ The pope was persuaded to abandon the scheme of a Lichfield archbishopric after Offa's death, on the grounds that it had been promoted by Offa out of 'enmity against the venerable Jænberht and the people of Kent' (*propter inimicitiam cum venerabili Ianberto . . .*) (*EHD*, 860). On Offa's seizing lands belonging to Christ Church, Canterbury, see Campbell, John and Wormald 1982, 125–6.

⁹¹ Metcalf 1993, 390.

⁹² Wallace-Hadrill 1965, 685.

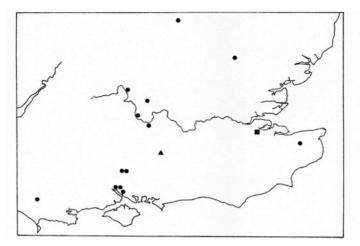


Fig. 14. Single finds of coins of Archbishop Jænberht (dots). The square symbol marks a mini-hoard from Cobham Hall. The triangle refers to a die-linked coin for Offa by Æthelnoth.

Hall, near Rochester, there is only one find from Kent, which was excavated at Canterbury cathedral itself. On the other hand there is a distinct concentration of finds near Winchester, at Southampton, and at Netley Abbey, on Southampton Water. Had Jænberht sent a monetary gift to the Old Minster at Winchester? It will be remembered that there are essentially no sceatta finds from Winchester, in sharpest contrast with Hamwic. We may imagine that by spending the money they had been given by Jænberht, the monks created a local, a very local monetary economy, reflected now by single finds from North Hill, Winchester and from Winnall Down, with other coins of Offa from Pitt, two miles to the west of Winchester, and from St Cross, just down the road. Thus Jænberht's gift, if such it was, seems to have seeded a money economy in the immediate vicinity of Winchester. There are signs of another little cluster of Jænberht's coins at Oxford and along the Thames to Reading. One recalls the remark by Sir Frank Stenton, that 'in 735, the traditional date of St Frideswide's death, the land on each side of the Thames at Oxford seems to have been under the direct rule of Æthelbald . . . During the next 100 years every powerful West Saxon king asserted a claim to this territory . . . it was not until the middle of the ninth century that the debateable land was finally divided between [Mercia and Wessex]'.93 This long-running trial of strength may offer a context for the local finds of Jænberht's coins. In short this is a heavily south-of-Thames distribution, with only a couple of finds of Jænberht from further north (from Raunds and from Saffron Walden) to soften it – again, illiteracy seems an adequate explanation for the outliers. Once coins were in circulation, they would pass from hand to hand. The distribution of Jænberht's coins is so much at variance with the over-all pattern for Offa's light coinage that one asks oneself whether the moneyer supplied them directly to the archbishop, who used them for diplomatic payments or for the support of other churches.⁹⁴ Meanwhile, the bulk of Offa's issues were presumably issued to merchants and other private customers.

17. Summary of the argument

In the eighth century, the activity of minting was concentrated mostly at London, in or near Canterbury, and at one or two centres in East Anglia. The secondary-phase sceattas were struck probably also at a variety of other, less active mint-places. Monetary circulation was normally so brisk, and so fully integrated throughout southern England, that the coins of all mints became quite thoroughly mingled. That is true especially for the coinage of Offa. It is

⁹³ Stenton 1936, 108.

⁹⁴ Metcalf 2002, 167-9.

not normally practicable, therefore, to detect additional, smaller mint-places through the residual localization of single finds. Nor is it ever likely to be.

The free circulation of coinage was nevertheless dependent on political good-will. The issues of King Ecgberht of Kent, and of Archbishop Jænberht were largely confined to south-of-Thames. Beonna's coins did not find their way very much into Mercian-held territory; and Offa's coins likewise are rarely found north of Humber. The proof that the barrier was political rather than 'natural' is in the contrast: when Offa had taken control of East Anglia, his coins circulated there freely, dominating the currency, and the coins minted in his name in East Anglia were carried into Mercia. Primary-phase sceattas and foreign issues such as porcupines had been plentiful in Northumbria, but Eadberht enforced the sole use of his own currency.

The third quarter of the eighth century witnessed a severe recession in the volume of minting and also of monetary exchanges; and, even more severe, in the net inflows of coinage from the Continent. Money from the Low Countries, which had in the first half of the century been a major component of the English currency, disappeared dramatically. Merovingian silver had never entered England in quantity. The date of the downturn is difficult to specify, but the minting of sceattas appears to have declined as early as the 730s and to have dwindled in the 740s. It is not obvious how this might relate to political or military events in Frisia or the Rhine mouths area.

The recovery in monetary circulation was certainly delayed and gradual. Offa began to impose a stronger royal control on the minting of coinage, probably in the 760s, following the examples of King Eadberht and King Beonna, but the volume of mint-output remained trifling until as late as c.780. Early Carolingian coinage reached England only in the tiniest quantities, and even then, mostly in peripheral regions. Of the productive sites which had been prominent in the sceatta period, some seem to have resumed trading activity at a very early stage (East Tilbury, and perhaps Humberside), and others after a much longer hiatus ('near Royston' and 'near Sledmere'). Others again never recovered (South Lincs.). Merovingian coins were in some cases carried direct from the continent to productive sites.

It is significant that two regions of England produced reformed coinages, of better-quality silver alloy than the last of the sceattas, at a time when Offa's realms were in the depths of recession. They anticipated Offa's coinage reform. The Northumbrian king (and also the archbishop of York) instigated a strong mint-activity in the 740s and 750s, which fed a controlled currency from which other types of coinage were excluded. Similarly King Beonna of East Anglia struck coins of respectable quality in the years around 760. The find-spots of these two regional currencies seem to imply that the political frontiers of Mercia were closed to trade, or inimical to trade.

Something similar seems to have been true for Kent in the time of King Ecgberht (c.775–c.779), and also for Archbishop Jænberht in the same years and through the 780s. The distribution of single finds of their coins is to a considerable degree restricted to south of the Thames – in contrast with the free movement of the bulk of Offa's (later) coins north and south of the Thames. Queen Cynethryth's coins are attributed to the Canterbury mint, but their use seems to have been mainly north of the Thames. Stenton's observation that Offa was unable to exercise power in Kent between 776 and 786 tallies well with the numismatic evidence. It is curious that no coins are known of Archbishop Hygeberht (but Bishop Eadberht was perhaps the Mercian counterpart of Jænberht, so far as minting-rights were concerned). Nor are there any coins in the name of King Ecgfrith.

APPENDIX. MEROVINGIAN SILVER COINS FOUND IN ENGLAND

This is a provisional list, but it is reasonably complete and unbiased, and should therefore serve the purposes of the argument. The author has since 1984 maintained an updated manuscript version of the check-list published in Rigold and Metcalf 1984. Abbreviations: B. = Belfort 1892–5; CR = Coin Register; P. = Prou 1892.

BETWIXT SCEATTAS AND OFFA'S PENCE

		- 4			
Find-spot	Mint or region of origin	Reference			
Avebury, Wilts	Poitiers, cf. P.2196	Abramson collection			
Badingham, Suffolk	?	CR 2003–4			
Barham, Suffolk	Quentovic, Daculfus	?2005, Author's card-index			
Benson, Oxon.	Rouen, Saint-Ouen	1997, Author's collection			
Bicester, Oxon.	NW France	CR 1991			
Congham, Norfolk	Paris region	CR 1999			
Dry Doddington, Lincs.	B.5723–31 NW France (Paris region?)	CR 2002			
Dunton Green, Kent	?	Ashmolean Museum			
Essex, north	· ?	CR 2006			
Essex, north	Rennes	Abramson collection			
	Rouen	CR 2006			
Eyke, Suffolk					
Good Easter, Essex	?	CR 2005			
Hamwic, Hants.	?	Metcalf 1988b, 52, no. M126			
Hamwic, Hants.	Nevers?	Metcalf 1988b, 52, no. M127			
Hamwic, 2000, Hants.	Marseilles	Birbeck 2005, 135, no. C.17			
Humberside, north	? (B.5671–2)	2004, Author's card-index			
Irchester, Northants	NW France. B.5723–31	CR 1996			
Isle of Wight	?Seine-Maritime. P.2845	Author's card-index			
Kempston, Beds.	Paris region? A/swastika	c.1988. Inf. courtesy of Mr M. Bonser			
Kent	Clermont-Ferrand	CR 2005			
Kent	Marseilles, P.1613–14.	Abramson collection			
Kidmore End, Berks	? AS in monogram	1997, Author's card-index			
Melton Ross, Lincs.	Saint-Julien de Brioude. Cf. B.1018–19	c.1995, Author's card-index			
Narborough, Norfolk	Porcupine/croix ancrée	CR 1994			
Newark, Notts.	Bourges region	1989, Author's card-index			
North Waltham, Hants.	Rennes?	CR 2003–4			
Old Buckenham, Norfolk	Chalon-sur-Saône	CR 2003–4 CR 1998			
Oxborough, Norfolk	? Transport Children's H	CR 1999			
Ozengell, Kent	Tours, Childeric II	Fitzwilliam Museum			
Royston, Herts.	Limoges region, ecclesia racio	Fitzwilliam Museum			
Royston, Herts.	Sens? B.5714	Fitzwilliam Museum			
St Albans, Herts.	Poitiers	CR 2007			
Saffron Walden, Essex	?	CR 2003–4			
Shalfleet, Isle of Wight	?	CR 2007			
Sledmere, East R Yorks.	Brioux (Deux Sèvres). Cf. P. pl. IX, 177	Metcalf forthcoming (SiEMC 2)			
Sledmere, East R Yorks.	?	Metcalf forthcoming (SiEMC 2)			
Spalding, near, S. Lincs.	Paris region	Author's card-index, LVIII			
Spalding, near, S. Lincs.	Chalon-sur-Saône	Author's card-index, LIXB			
Spalding, near, S. Lincs.	Angers	Author's card-index, LX			
Spalding, near, S. Lincs.	Chalon-sur-Saône	Author's card-index, CVII			
Spalding, near, S. Lincs.	? Chartres. Porcupine/+CARNOTI	Author's card-index, CLX			
Spalding, near, S. Lines.	? (FSEMOIX/DOSL ENAS). Cf. P.1708.	Author's card-index, CLXI			
Suffolk	Jublains (Mayenne). B.1736–7	CR 1997			
Telscombe, Sussex	Marseilles	CR 2007			
Watton, Norfolk	Marseilles. P.1613–14	2002. Inf. courtesy of Mr T. Abramson.			
Winchester, Hants.	?	CR 1998			
Aston Rowant	IN PALACIO/NADREBERTO	British Museum, acq. 1971. Kent 1972, 171			
Aston Rowant	Devolved monogram	British Museum, acq. 1971. Kent 1972,			
Aston Rowant	Devolved croix ancrée/cross and pellets	172 British Museum, acq. 1971. Kent 1972,			
		173			
Aston Rowant	Porcupine/croix ancrée and pendants	British Museum, acq. 1971. Kent 1972, 174			
Aston Rowant	Radiate head/long cross	British Museum, acq. 1971. Kent 1972, 175			

The list includes two or three pairs of similar coins, found at different localities. These raise intriguing questions. When the coin of Marseilles from Watton, for example, was discussed in the context of Series W, one wondered whether it could be an English piece. The recent discovery of another specimen, from different dies, in Kent, might be thought to reinforce that doubt. The balance of the argument is still in favour of a Merovingian origin.

REFERENCES

Archibald, M.M., 1985. 'The coinage of Beonna in the light of the Middle Harling hoard', BNJ 55, 10-54.

Archibald, MM., forthcoming. 'Chapter 13', in D.H. Evans and C. Loveluck (eds), *Life and Economy at Early Medieval Flixborough*, c.AD 600–1000: the Artefact Evidence. Excavations at Flixborough, vol. 2 (Oxford).

Archibald, M.M., and Dhénin, M., 2004. 'A sceat of Offa of Mercia', BNJ 74, 20-7.

Bede, Historia Ecclesiastica. See Colgrave and Mynors 1969.

Belfort, A. de, 1892-5. Description générale des monnaies mérovingiennes, 5 vols (Paris).

Biddle, M., 1986. 'A third find of a denier of Pepin the Short from England', BNJ 56, 32-3 and Pl., 14, p. 34.

Biddle, M., et al., 1986. 'Coins of the Anglo-Saxon period from Repton, Derbyshire', in M.A.S. Blackburn (ed.), *Anglo-Saxon Monetary History. Essays in Memory of Michael Dolley* (Leicester), 111–32.

Birbeck, V., et al., 2005. The Origins of Mid-Saxon Southampton (Salisbury).

Birch, W. de G., 1885–93. Cartularium Saxonicum, 3 vols (London).

Blackburn, M.A.S., 1993. 'Coin finds and coin circulation in Lindsey, c.600–900', in A. Vince (ed.), *Pre-Viking Lindsey*, Lincoln Archaeological Studies, 1, 80–9.

Blackburn, M.A.S., 2003. "Productive" sites and the pattern of coin loss in England, 600–1180' in T. Pestell and K. Ulmschneider (eds.), *Markets in Early Medieval Europe. Trading and 'Productive' Sites, 650–850* (Macclesfield), 20–36.

Blackburn, M.A.S., and Bonser, M.J., 1984. 'Single finds of Anglo-Saxon and Norman coins – I', *BNJ* 54, 63–74. Blackburn, M.A.S., and Bonser, M.J., 1985. 'Single finds of Anglo-Saxon and Norman coins – II', *BNJ* 55, 55–78. Blackburn, M.A.S., and Bonser, M.J., 1986a. 'Single finds of Anglo-Saxon and Norman coins – III', *BNJ* 56, 64–101.

Blackburn, M.A.S., and Bonser, M.J., 1986b. 'Finds from a Middle Anglian site near Royston, Herts.', BNJ 56, 65-80

Blackburn, M. and Pagan, H., 1986. 'A revised check-list of coin hoards from the British Isles, c.500–1100', in M.A.S. Blackburn (ed.), *Anglo-Saxon Monetary History. Essays in Memory of Michael Dolley* (Leicester), 291–313.

Blunt, C.E., 1961. 'The coinage of Offa', in R.H.M. Dolley (ed.), Anglo-Saxon Coins. Studies Presented to F. M. Stenton on the Occasion of his 80th Birthday, 17 May 1960 (London).

Blunt, C.E., Lyon, C.S.S., and Stewart, B.H.I.H., 1963. 'The coinage of southern England, 796–840', BNJ 32, 1–74.

Bonser, M.J., 1997. 'Fifteen years of coin finds from productive sites', The Yorkshire Numismatist 3, 39-47.

Booth, J., and Blowers, J., 1982. 'Finds of sceattas and stycas from Sancton', NC 143, 139-45.

Campbell, J., John, E. and Wormald, P. (eds.), 1982. The Anglo-Saxons (Oxford).

Chick, D., 1997. 'Towards a chronology for Offa's coinage: an interim study', *The Yorkshire Numismatist* 3, 47–64. Chick, D., forthcoming. *The Coinage of Offa and his Contemporaries*, edited by M.A.S. Blackburn and R. Naismith, British Numismatic Society Special Publication, no. 6 (London).

Colgrave, B., and Mynors, R.A.B., ed. and trans., 1991. *Bede's Ecclestiastical History of the English People*, revised ed. Oxford Medieval Texts (Oxford).

Dolley, R.H.M., and Metcalf, D.M., 1957. 'Two stray finds from St Albans of coins of Offa and Charlemagne', BNJ 28, 459-66.

EHD. Whitelock, D. (ed.), 1979. English Historical Documents c.500-1042, vol. 1, 2nd edition (London).

Enno van Gelder, H., 1980. 'Coins from Dorestad, Hoogstraat I', in W.A. van Es and W.J.H. Verwers, *Excavations at Dorestad*, I. *The Harbour: Hoogstraat I*, Nederlandse Oudheden, 9 = Kromme Rijn Projekt, 1 (The Hague), 212–24.

Evans, Sir John, 1865. 'Coins of Archbishops Jaenberht and Æthilheard', NC n.s. 5, 351-60.

Fryde, E.B., Greenway, D.E. and Porter, S., 1986. Handbook of British Chronology, 3rd ed. (London).

Grierson, P., 1986. 'A denier of Pepin the Short (751–68)', in M.A.S. Blackburn (ed.), *Anglo-Saxon Monetary History. Essays in Memory of Michael Dolley* (Leicester), 127–30.

Grierson, P. and Blackburn, M.A.S., 1986. Medieval European Coinage, vol. 1, The Early Middle Ages (5th-10th Centuries) (Cambridge).

Hatz, G., 2001. Der Münzfund vom Goting-Kliff/Föhr, Numismatische Studien, 14 (Hamburg).

Keen, L., 1983. [Untitled note], Proceedings of the Dorset Natural History and Archaeological Society 105, 151.

Kent, J.P.C., 1972. 'Notes and news. The Aston Rowant Treasure Trove', Oxoniensia, 243-4 and pl. 26.

Lafaurie, J., and Pilet-Lemière, J., 2003. Monnaies du haut Moyen Âge découvertes en France (Ve – VIIIe siècle), Cahiers Ernest-Babelon, 8 (Paris).

Lebecq, S., 1983. Marchands et navigateurs frisons du haut moyen âge, 2 vols, (Lille).

Lyon, C.S.S., 1966. 'Historical problems of Anglo-Saxon coinage (1)', BNJ 36, 215-21.

Metcalf, D.M., 1966. 'Artistic borrowing, imitation, and forgery in the eighth century', *Hamburger Beiträge zur Numismatik* 20, 379–92 and pl. 17, 8.

Metcalf, D.M., 1988a. 'Monetary expansion and recession: interpreting the distribution patterns of seventh- and eighth-century coins', in J. Casey and R. Reece (eds), *Coins and the Archaeologist*, 2nd ed. (London), 230–53.

Metcalf, D.M., et al., 1988b. 'The Coins', in Andrews, P. (ed.), 1988. The Coins and Pottery from Hamwic (Southampton), 17–59.

Metcalf, D.M., 1993. Thrymsas and Sceattas in the Ashmolean Museum, Oxford, 3 vols (London).

Metcalf, D.M., 1998. 'The monetary economy of ninth-century England south of the Humber: a topographical analysis', in M.A.S. Blackburn and D.N. Dumville (eds), *Kings, Coinage, and Alliances. History and Coinage of Southern England in the Ninth Century* (Woodbridge), 167–97.

Metcalf, D.M., 2001. "As easy as A, B, C": the mint-places of early sceatta types in the south-east', BNJ 71, 34-48.

Metcalf, D.M., 2002. 'Financial support for outlying churches? A perspective on the uses of money in eighth-century Northumbria', BNJ 72, 167–9.

Metcalf, D.M., 2003. 'Variations in the composition of the currency at different places in England', in T. Pestell and K. Ulmschneider (eds), *Markets in Early Medieval Europe. Trading and 'Productive Sites'*, 650–850 (Macclesfield), 37–47.

Metcalf, D.M., 2004. 'Monetary circulation in England, c.675–c.710: the distribution patterns of Series A, B, and C – and F', BNJ 74, 1–19.

Metcalf, D.M., forthcoming. 'English money, foreign money. The circulation of sceattas in the east midlands', Studies in Early Medieval Coinage 2.

Metcalf, D.M., Merrick, J.M., and Hamblin, L.K., 1968. Studies in the Composition of Early Medieval Coins. Minerva Numismatic Handbooks, 3 (Newcastle).

Metcalf, D.M., and Northover, J.P., 1989. 'Coinage alloys from the time of Offa and Charlemagne to c.864', NC 149, 101–20.

Northover, J.P., 1993. 'Chemical analyses', in D.M. Metcalf, Thrymsas and Sceattas, vol. 3, 609-79.

Op den Velde, W., and Klaassen, C.J.F., 2004. Sceattas and Merovingian Deniers from Domburg and Westenschouwen, Werken uitgegeven door het Koninklijk Zeeuwsch Genootschap de Wetenschappen, 15 (Middelburg).

Op den Velde, W., and Metcalf, D.M., 2003. The Monetary Economy of the Netherlands, c.690 – c.715 and the Trade with England: a Study of the Sceattas of Series D (= Jaarboek voor Munt- en Penningkunde 90).

Pagan, H.E., 1988. 'The older coin finds from Southampton', in P. Andrews (ed.), *The Coins and Pottery from Hamwic*, Southampton Finds, vol. 1 (Southampton), 60–70.

Page, R.I., 1966. 'Episcopal lists, Part III', Nottingham Medieval Studies 10, 2–24.

Prou, M. 1892. Les monnaies mérovingiennes (Catalogue des monnaies françaises de la Bibliothèque Nationale (Paris).

Rogerson, A., 1995. A Late Neolithic, Saxon, and Medieval Site at Middle Harling, Norfolk, East Anglian Archaeology, Report no. 74 (Norwich).

S See Sawyer 1968.

Sawyer, P.H., 1968. Anglo-Saxon Charters: an Annotated List and Bibliography (London).

Serafini, C., 1910. Le monete e le bolle plumbee pontificie del Medagliere Vaticano, vol. 1 (Rome).

SiEMC. Studies in Early Medieval Coinage.

Stahl, A.M., 1982. The Merovingian Coinage of the Region of Metz, Numismatica Lovaniensia, vol. 5 (Louvain-la-Neuve).

Stenton, F.M., 1971. Anglo-Saxon England, 3rd ed. (Oxford).

Stenton, F.M., 1936. 'St Frideswide and her times', Oxoniensia 1, 103–12.

Stewart, I., 1986. 'The London mint and the coinage of Offa', in M.A.S. Blackburn (ed.), *Anglo-Saxon Monetary History. Essays in memory of Michael Dolley* (Leicester), 27–43.

Völckers, H.H., 1965. Karolingische Münzfunde der Frühzeit (751–800) (Göttingen).

Wallace-Hadrill, J.M., 1965. 'Charlemagne and England', in *Karl der Grosse*, vol. 1, *Persönlichkeit und Geschichte* (Düsseldorf), 683–98.

Wormald, P., 1982. 'The age of Offa and Alcuin', in J. Campbell, E. John, and P. Wormald (eds.), *The Anglo-Saxons* (Oxford), 101–28.

Yorke, B., 1983. 'Joint kingship in Kent, c.560 to 785', Archaeologia Cantiana 99, 1–19.