

# COINAGE IN THE AGE OF BURGRED

*By* H. E. PAGAN

BETWEEN 852 and 874 England south of the Humber and north of the Thames was dominated by Burgred of Mercia. Like all Offa's successors he is a shadowy figure, but his reign was long and the coinage that bears his name is commoner and more widely circulated than any struck in England from the Roman occupation up to his time. The first part of this paper is an attempt to see this coinage and the reasons for it in perspective, the second part an attempt to indicate the broad lines of classification; an exact arrangement must be deferred until we see the 9th century more clearly.

Of the man himself not much is known. He may have been the son of his predecessor Berhtwulf, who is not heard of again after his defeat by a Viking raid in 851. We can guess that the transition between the two was peaceful from the continuity in the membership of the Mercian court at Tamworth in Staffordshire. In 853 (A.S.C) he called in the military assistance of Wessex for a spring campaign against the Welsh, which met with success, and the alliance was cemented that summer by his marriage to Aethelwulf of Wessex's daughter Aethelswyth. His signatures to charters provide the only evidence of his activities over the next 15 years; the A.S.C. is silent until in 868 the great Viking army that had landed in East Anglia two years earlier and had already conquered Northumbria settled deep in Mercian territory at Nottingham. Burgred summoned help from his brother-in-law Aethelred, king of Wessex and Southern England since 866, and although they could not achieve military success they induced the invaders to withdraw. A lull followed, but in 871 Wessex too was attacked and Burgred, who failed to send support all through a year of battles, found himself isolated at the end of it. Viking armies wintered in Mercia for the next three years, and they finally ousted Burgred in 874. He fled abroad and died in exile in Rome. A successor, Ceolwulf II, maintained Mercian independence for a few more years by reaching an agreement with the Vikings, but he disappears before the end of the 870's, and when Mercia is next mentioned it is administered by Ealdorman Aethelred for Burgred's surviving brother-in-law, Aelfred of Wessex.

In the middle of the 9th century four major coinages circulated in England. North of the Humber a copper coinage, issued from York in the names of the kings of Northumbria and the archbishops of York, was used as far north as Hexham and Carlisle. It had only recently been revived, and the model it employed was not the penny coinage as used in the other kingdoms but the previous Northumbrian coinage discontinued about 790 and unaffected by Offa's reforms. Its influence did not extend outside the Northumbrian borders. To the south there were coinages in the names of the kings of East Anglia, Mercia, and Wessex and of the archbishops of Canterbury. The area these served was roughly that supplied by the coinage of Offa; although coin was now used further into Wessex, a line drawn from Gloucester to the Wash still represented the northern limit of the spread of the silver penny. The organization was also much on the same lines as it had been in the closing years of Offa, and the reign of Coenwulf. Four mints were employed: one in East Anglia, standing apart from the rest and primarily supplying its immediate neighbourhood, London, Canterbury, and Rochester. The largest was Canterbury, where the king and archbishop

employed some eight moneyers between them, and where the bulk of the Wessex/Kent coinage was produced. The dies were cut by one hand, and there is a general if not complete uniformity between them. At Rochester the establishment was shared between Aethelwulf of Wessex and Kent and Berhtwulf of Mercia; but a few years before 851 (Mr. J. J. North has suggested 848; cf. *N. Circ.* Oct., 1961, p. 213) the designs of Berhtwulf's coins diverge from those of Aethelwulf, and it is possible that he transferred his mint elsewhere, more likely perhaps that he acquired a separate die-cutter for his issues. Of London of this period there exists one coin, assigned to it with some probability by Brooke; the style is not that of Rochester, and it is reminiscent of London coins of Wiglaf. The moneyer's name is Tatel. Nowhere in England (outside Northumbria) had coinage been on a large scale at any time since the Mercian kingdom collapsed in the 820's.

In 851 the balance of power altered. The expedition that defeated Berhtwulf and sacked Canterbury and London was completely defeated by Aethelwulf and his sons, and the predominance of Wessex became more marked. When coinage was resumed after the Viking threat had receded, it was on a very different basis. The mint at Rochester was gradually run down; Mercia did not continue to coin from there, and, after a period in which the Rochester die-cutter supplied his moneyers with dies identical except in the punches employed with those made at Canterbury, dies were sent to Rochester from Canterbury. How long this truncated existence continued is doubtful; there is no evidence for Rochester again in this century. At the same time the archiepiscopal coinage was brought into line with the regal, and made similar in all respects except for the retention of a facing portrait on the obverse. So Wessex achieved a single design (obv. head of king or archbishop; rev. moneyer's name on limbs of cross) and stronger control over its manufacture. The next development, probably not envisaged in the original plan, took place under Aethelberht after his father Aethelwulf's death in 858. The issue of the type was continued, only the king's name being altered, and it was produced in very large quantities by a mint personnel expanded to 30-40 moneyers—the object presumably to drive all pre-851 coins out of circulation and secure a monopoly not only of issue but of currency. There may too have been a need simply for more coins. Not surprisingly the Mercian mint at London became practically extinct in the face of competition on this scale. Where one would expect an expansion after the closure of the Mercian part of Rochester, none occurs; Berhtwulf's moneyer Tatel continues to operate under Burgred, but on a level of output so small that the Dorking hoard (found 1817) contains only one coin of his although deposited midway through Aethelberht's reign (It contains no specimen of Aethelberht's second type). The actual coin is now not known, but from other examples (one of these is ill. pl. I, 1), which provide 4 obverse and 3 reverse dies, it is clear that it was a coin of *BMC* type A, moneyer's name on rev. between two whole lunettes, of large diameter and weight, and a flowing but coarse style. These coins are linked only to those of the moneyer Dudecil, a prolific moneyer later on, and if London was a one-moneyer mint likely to have been Tatel's successor. Until well into the 860's London's role was symbolic rather than useful; the London traders were quite content to use the coins of Canterbury, the type of which was in fact imitated on the continent.

They were not allowed to be content for ever. Just after the deposit of the Dorking hoard Aethelberht changed the type. His father's head was replaced by a new portrait with a double horizontal diadem and a distinctive arrangement of six pellets at the neck over three vertical bars. On the reverse was a floreate cross. 7 moneyers, of whom 6 had struck the first type and 3 were to strike later, are known for it. This need not represent quite as small an issue

as it sounds, for the only hoard deposited between 865 and 870—Aethelberht died in 866—that we know much of is the Trewhiddle hoard (found 1774), not strong on coins of Wessex. But there was a slackening of activity, and some time about now the London mint began to operate seriously for Burgred. It suffered at first from a very unskilled die-cutter, whose products Keary and public opinion have condemned as 'Viking'; then, dramatically, 'six-pellet' obverse dies of fine style, in Burgred's name, are used by the moneyers Cenred (pl. I, 2), Cethellulf, Duda, and Eanred, in conjunction with reverse dies of lunette types A and C (lunettes broken at the corners). They were part of the London personnel, Duda and Eanred in other coins forming a close-knit group with Dudecil, Dudeman, Tata, and Wine, (pl. I, 3, 5, 8) moneyers of rough style either not known for six-pellet dies or only known for derivatives. Since the London mint does not otherwise imitate Canterbury, and the imitation of these dies is as nearly photographic as an Anglo-Saxon could make it, I think that this is a consignment of dies sent from Canterbury to set London on its feet. This is partly borne out by the fact that the reverse dies Cethellulf and Duda used are of the rough London style. Obviously a man operating at Canterbury would not provide reverse dies for each and every of Burgred's moneyers. Thereafter the London mint flourished.

Aethelberht died in 866 at a time of illusory peace. His brother Aethelred (866–871) retained the portrait of the six-pellet coins, although he dispensed with the pellets, for a short time, coupling it with a 'four-line' lunette reverse, i.e. moneyer's name in two lines instead of one in the middle of the reverse. This gave way (c. 867/8) to a normal 'three-line' reverse, Burgred type A, and a simpler bust, which lasted the rest of the reign. Brooke believed that Aethelred was the first to strike a lunette type; but the Dorking and Trewhiddle hoards and the evidence of Tatel and six-pellet busts, show that the earliest lunette coins were those of Burgred. The type was a Mercian one, used by Wiglaf at London and by Ceolwulf I at Canterbury and in East Anglia. Its great advantage was that it required little technical skill to reproduce and advertised the name of its moneyer in an unequivocal way. Now lunette types were being issued at both London and Canterbury; London, which had spent the years 865/6 to 868 striking large amounts for Burgred of lunette coins of types C and D went over to A roughly when Canterbury adopted it, and once more a single type was achieved.

An astonishing volte-face in coinage policy had taken place. Just when Aethelberht had swamped the country with a massive centrally issued type, the London mint revived and the Canterbury mint decayed, until London produced, say, 60% to Canterbury's 40% of the lunette coinage. The reasons we can only guess at; establishment of a more equal relationship between Wessex and Mercia? increasing difficulties in the supply of bullion to Canterbury and the protection of it there? exploitation of a new source of silver in Wales by Burgred? What remained was a desire to have an uniform coinage—it is worth mentioning that the only Mercian coin earlier than the reign of Burgred in the Gravesend hoard, deposited c. 871, is a lunette coin of Ceolwulf I, a pleasing reflection of 9th century illiteracy.

For some years (868–874) the union was maintained. Lunette type A was struck by Burgred at London (average staff of 15 moneyers), Aethelred and Aelfred successively at Canterbury (12 moneyers), and Archbishop Ceolnoth at Canterbury (1 or 2 moneyers). The coinage gradually became more debased, the supply of silver proving unequal to the amount of coin required; a coin of the archiepiscopal moneyer Hebeca for Aelfred, found as long ago as 1747, *BMC* 163, has lost all traces even of a silver wash. About 871 the diameter of the coinage was reduced, but it is doubtful whether the silver content was increased by this step. Gradually, too, the London mint began to supply a wider area. A scatter of finds from

Monmouthshire north to Corbridge on the Roman wall, for the most part connected with churches and graveyards and not with Viking loot, mark the spread into Old Mercia and the north of the use of coin, a process accelerated when the Northumbrian styca coinage was abandoned. The processes of debasement and expansion are linked. There must also have been a drain on silver stocks by payments to Viking raiders; these are unlikely to have been in coin *qua* coin, but coins are likely to have been included in such payments for their weight in silver.

Burgred's deposition halted operations at London for a time, London perhaps passing into Viking hands, but before long his successor Ceolwulf II is found operating with a group of Burgred's moneyers and sharing a mint with Aelfred (as had possibly Burgred right at the end of his reign). That the mint was still at London is shown by the discovery in 1838 in St. Paul's Churchyard of a lead block with impressions of the obverse and reverse dies of a coin of Aelfred *BMC* type V (his second substantive) by Eadulf, a moneyer for Burgred and for the 'Two Emperors' coin of Ceolwulf. *BMC* type V was the type Ceolwulf and Aelfred shared. The coins were of increased size and much purer silver. Canterbury struck *BMC* type V for Aelfred and the archbishop only. This arrangement continued until the end of the Mercian kingdom.

*Summary of suggested coinage 852—880.*

LONDON:	Burgred only until c. 873/4; Burgred and Aelfred (?) c. 874; Ceolwulf and Aelfred c. 875—880 or later. Lunette A until c. 863; Lunette A and C 863—866; Lunette C and D 866—868; Lunette A 868—874; <i>BMC</i> V and 'Two Emperors' 875—880.
CANTERBURY:	Aethelwulf until 858; Aethelberht 858—866; Aethelred 866—871; Aelfred from 871. Archbishop Ceolnoth until 870; Archbishop Aethe(l)red from 870. Name on cross until c. 863; Six-pellet 863—866; Four-line Lunette 866—867/8; Lunette A 867/8—c. 875 and miscellaneous Lunette types c. 873—875; <i>BMC</i> V with the ephemeral types <i>BMC</i> II and III 875—880 or later.
ROCHESTER:	Aethelwulf and (?) successors. Name on cross (own dies) until c. 854.

Hoard evidence—in particular the Gravesend hoard, which contained 429 coins of Burgred, 57 of Aethelred, and 1 of Aelfred, and the Croydon hoard, which contained about 95 coins of Burgred, 25 of Aethelred, and 31 of Aelfred—enables it to be said that the period 868—873 saw issues of Lunette type A alone from London and Lunette type A alone from Canterbury. All lunette coins for Burgred of varieties C and D belong before 868; all B, C, and D coins of Aelfred date at any rate after 872. This is shown by the absence of these coins of Aelfred from all finds up to and including Croydon, deposited 872/873, and their appearance in the Beeston Tor hoard, which looks altogether later and contains coins of Burgred and Aelfred in equal numbers.

The summary I have given is a considerable simplification of existing works of reference. There are coins which claim to represent (i) a lunette type D for Aethelberht, (ii) a lunette type D for Aethelred (iii) a London coinage of type A for Aethelred. Most of these are genuine 9th century pieces; to exclude from the canon genuine coins which are not Viking imitations requires a fresh examination of what is or is not an official product. The total of coins involved is not large. There are four groups which I think obscure the true picture:



### I. MODERN FORGERIES

These do not affect the immediate issues, but there exist two groups of lunette forgeries. Coins of Aelfred by the moneyers Lude, Osric, Oeamer, and Tata were condemned by Blunt and Thompson in *BNJ* 1956, pp. 21–22. One coin of Tata, *BMC* 172, acquired by the BM from the Higgs sale in 1830, is not included in this group, and in fact served as the forger's model. All are of type A and were probably made after publication of Hawkins' *English Silver Coins* in 1841. The other group consists of three lunette A coins of Burgred by the moneyer Beranh, from a single pair of dies; these are in the BM and are blatantly false. The coins of Beranh in *BMC*, on the other hand, are genuine. So are coins of the moneyers Beagstan and Hugerod for Burgred now in the forgery trays in the British Museum.

### 2. MODERN IMPROVEMENTS

The temptation of altering the common coins of Burgred into rarer specimens of Aethelred is obvious, especially because this could be achieved merely by the alteration of four letters in the obverse legend. *BMC* 12 of Aethelred, a coin of the Burgred moneyer Diga of Burgred style, acquired with the Bank of England collection in 1877, has had the flan cut away at this point and three new letters inserted on a lower level, giving +EDLRED REX—for BURGRED REX—. Similarly a coin of Husa at Copenhagen, one of three apparent examples of Aethelred type D, has been doctored from a classic Burgred obverse die. Both these coins were the only known examples of the work of these moneyers for Aethelred, and their names should be removed from the lists.

### 3. CONTEMPORARY ILLITERATE COPIES

Two are known for Burgred. The legend on one (*BMC* 355 ex Gravesend) indicates its moneyer was called Idiga, but it is in fact a barbarous copy of a coin of Diga omitting the cross-bar on the cross that invariably precedes Diga's name. The other is a barbarous imitation of Husa (Lockett sale). For Aethelred there exists a problematic coin with an illiterate obverse die and a reverse die of Burgred style, moneyer Dudda (*BMC* 16).

### 4. UNOFFICIAL ISSUES

Thornier ground. In this category I would include not only culpable contemporary fakes, but coins issued in an interregnum and periods of political uncertainty and on any occasion when supplies from the proper issuing centre were disrupted. Their existence is not evidence either for the types they bear or for their moneyer's claims to be moneyers for a given king. A definition of unofficial coins in the name of the Wessex kings is that they have in common dies not cut by the Canterbury die-cutter and moneyers not working at the Canterbury mint, yet do not form a group associable with the regular product of any other mint. Where they differ from what has been previously accepted as a contemporary forgery is that they can be and often are of good workmanship and weight. To give an example of how this readjusts our views on the coinage: the Gravesend hoard contains one coin of Aelfred, moneyer Deigmund, lunette A. It is in the same idiom as other coins of Aethelred and Aelfred, but it does not satisfy any of the criteria that would specifically associate it with Canterbury. It is the only recorded coin of this moneyer and the only coin of Aelfred in the hoard. When the beginning of Aelfred's reign is considered, it becomes very easy to see why his only coin is an unofficial one; the Vikings remained in Wessex throughout 871 and the difficulties of coining at Canterbury must have been insuperable. The field would have been open for

the independent operator to produce coins of Aethelred's lunette type with the name of the new king, or still with the name of the old king. Which latter frolic is suggested by the hoard evidence; Gravesend, deposited in the autumn after his death, contained 1 or perhaps 2 unofficial coins out of 59 of Aethelred, Croydon, two years later, 5 out of 25. The moneyer Denewald, who strikes coins of Burgred style in Aethelred's name, showing their unofficial nature by mis-spelling *AEDELRED*, uses on them a bust of Burgred represented by only one not typical example in Gravesend; this suggests the bust was not in circulation and available to copy in Aethelred's lifetime.

Coins in Aethelred's name of Burgred style, lunette A, are known for Berheah, Dealla, Denewald, Dudd, Dudda, Lulla, Man, Wine, and probably Wulfearð (cf. *SNC* Nov. 1919, Nov. 1923, and Gantz sale 1027). Be(a)rheah and Wine are also known for coins, one apiece, of Aethelred in Aethelred style. Yet none of these constitute a regular London type for Aethelred; among the Burgred style moneyers only Wine is known for more than one obverse die; of his three one has a mis-spelt legend (as also the coins of Denewald, Dudda, and Man) and one gives Aethelred the Mercian title (as does the coin of Dealla). The proportion of error is too high to accept the coins as regular. No coin struck for Burgred at London—and 600 exist—ever has an incorrect legend, and the same can be said for Aethelred at Canterbury. The coins of Berheah (ill. *BNJ* 1906, no. 23) and Lulla are fairly convincing, but they are not in the least similar. The coin of Tirulf (BM ex Beeston Tor) is likely to be a coin of Aelfred, reading *ELBERED* for *ELDERED*; the legend is faulty anyway.

It is much easier to repudiate the coins of lunette type D for Aethelberht and Aethelred. The first is represented by a single coin of the moneyer Dudda. It is agreed that it is not a cast and the obverse is attempting the name Aethelberht. It cannot belong to anyone else. Equally, the style of the obverse would have been abominable even if violent double-striking had not occurred. Blunt has called attention (*BNJ* XXVII, pp. 54–56) to a floreate cross coin of Aethelberht by Dudda in the Hunterian Collection at Glasgow, very elegant and assured, showing that a Dudda was working under Aethelberht and could have struck this. But he did not. Compare *BMC* 13–15 of Aethelred with the unspeakable assortment of Burgred Duddas, and the conclusion is inevitably that two men of the same name, one at Canterbury, one at London, were working c. 865–870. The coin under discussion is a London product by a Burgred moneyer; the mis-spelling of Aethelberht's name shows once more that this is not a coin of Aethelberht. Nor need it have been issued in his lifetime.

Lastly, Aethelred type D. It is first reported in Grueber's volume of *BMC A/S Series*, on the basis of a coin he may not have seen, the coin of Hussa then in the Montagu collection and now in Copenhagen. Since then its existence has been faithfully reported without any attached list of coins. The total appears to be three: Hussa (tooled Burgred), Ethered (BM ex Beeston Tor), and Ealhmund (BM ex Lawrence). The coin of Ealhmund is, or was, in the Aelfred trays in the British Museum. The last two are by the same hand and carry the same distinctive head with a mass of curls, wide flans, and bold lettering; both read *AEÐERED* on the obverse for *AEDELRED*. Although they are in their way distinguished, their maker offends against the convention that the reverse die has *MON* in the top lunette and *ETA* in the bottom with the moneyer's name between, by writing *EALHMY NMON DETA*. Neither is known for Aethelred from any other coin or for Burgred. Theirs is a private aberration.

I do not think that I am trying to create an artificial system of order in this part of the A/S coinage. The number of moneyers to be disregarded sounds large, but the total of coins is small. The coinage was in a bad state both in content and authority—when a large issue

of higher silver content was made in the 880's, lunette coins immediately disappeared from circulation—and the need for coin seems to have outstripped supply. The London die-cutter may have produced dies with the name of the king of Wessex to meet a special demand. This does not mean that the general distinction between the coinages of Wessex and Mercia should be blurred, or that type sequences should be needlessly confused.

The subjoined list of Canterbury moneyers includes those whose coins clearly mark them as receiving dies from the Canterbury die-engravers.

FLOREATE CROSS: AETHELBERHT

Cenweald, Cunefreth, Degbearht, Dudda, Herebeald, Oshere, Torhtmund.

FLOREATE CROSS: CEOLNOTH

(?Cenw)eald.

FOUR-LINE LUNETTE: AETHELRED

Biarnmod, Cuthelm, Torhtmund.

LUNETTE A: AETHELRED

Biarneah, Biarnmod, Biarnwine, Burgnoth, Diarulf, Dudda, Dunn, Elbere, Ella, Ethelred, Herebeald, Hereulf, Lang, Liabinc, Lifinc, Mann, Manninc, Oshere, Torhtmund.

LUNETTE A: CEOLNOTH

Hebeca, Tocga (facing head and head to r.).

LUNETTE A: AELFRED

Bosa, Cialmod, Diarelm, Dunn, Eadulf, Ealhere, Elbere, ?Etheleah, Ethelmund, Ethelulf, Ethered, Heaberht, Hebeca, Herebeald, Heremod, Hereulf, Liabinc, Luhinc, Manninc, Osguard, Oshere, Sefreth, Sigestef, Tidbald, Torhtmund.

LUNETTE A: AETHERED

Not known. Hebeca works for Aelfred at this time.

LUNETTE B: AELFRED

Biarnwald, ?Denemund, Dunn, Ethelmund, Sigestef, Tidbearht. It is possible that the Ethelmund coin (Ryan 712) is from the Dunsforth find; if so, Dunsforth falls into the post-Croydon group with Hook Norton and Beeston Tor.

LUNETTE C: AELFRED

?Etheleah, Manninc.

LUNETTE D: AELFRED

Diarulf, Ethered.

NOTE: Omissions from Aelfred. Two main London groups: one akin to the single respectable coin of Berheah for Aethelred, Burgred 'horizontal' style, legend AELBRED REX, moneyers Biarnred, Dudd, Dudinc, Ethelere, Wulfearð. The other is related to the bulk of unofficial Aethelreds, with mis-spelt and inaccurate legends, ELFERED REX or similar, Burgred 'vertical' style, moneyers Denewald, Dudd, Elelaf, Tata, Tilefeine, ?Tirulf, Wine, Wulfearð. I have said above that Burgred and Aelfred shared London on a regular basis c. 874; this is because of the growth in the number of respectable coins. But perhaps the better coins were issued over the whole period 871–874, and in that case a solution is:

Die-School A strikes coins on a regular basis right at the end of Aethelred's reign (Berheah) and under Aelfred.

Die-School B, which Burgred's coins show to be closely related to A, starts striking for Aethelred contemporarily with A, but takes pains to show that whatever A thinks the arrangement is not official. I do not like this solution much, but the alternative, accepting London Aethelreds as in every sense official, does not square with the deliberate errors on the coins.

Three other coins I omit from Aelfred. These are the unique coins of Cialulf and Deigmund in the BM, the former of which has no links of a substantial nature with either mint, and the Fitzwilliam coin of Dudda, which looks like an illiterate copy although its existence might suggest an original Dudda.

### BURGRED

An examination of the dies of 592 coins of Burgred has shown that they were struck from 521 obverse dies and 558 reverse dies. Of the reverse dies 316 were of type A, 143 of type D, 80 of type C, 17 of type B, 2 of type E. This represents perhaps a third of the coins of Burgred in circulation now, and a tiny proportion of those actually issued. No survey of a comparable 9th century coinage's dies has been undertaken, but compared for instance with the St. Eadmund coinage the number of die-links and die-duplications is uncommonly small. It should not be surprising if few coins are assignable to an individual category.

Broadly speaking, the coins are of three kinds: an early group (pl. I, 1-8) of which the easiest identification is given by the king's eye, always represented by a pellet within a complete circle. After this period the eye is indicated by a pellet with a crescent underneath or merely by a pellet. The coins are large, the legends clear. The king's name is invariably preceded by a cross, the legend often begins above the king's head, the letter O is often diamond-shaped, the letter U is a plain V. I have found 16 moneyers striking in this group, 14 using reverses of type C, 8 using type A, 10 using type D, and 1 type B. The two other groups run from the end of the first to the end of Burgred's reign; the same moneyers strike both, and although parallelism in their issue is not complete, the evidence of the Gravesend and Beeston Tor hoards shows that the difference between them is not chronological. The evidence of these hoards also provides a starting-point for the arrangement of the coinage as a whole.

Beeston Tor is mostly composed of coins of a reduced diameter, the styles of which are only represented by 2 coins out of over 400 of Burgred in Gravesend. They fall into 2 categories, which could best be described by saying that the busts are respectively *horizontal* and *vertical*. The horizontal coins (pl. I, 9-12, 14, 17, 19, 21) have a double headband going slantwise across the head, dividing the hair from the face; the wedges representing the mouth have their points directed inwards; there is one curl on the forehead; the letter U has a wedge where the two sides join at the bottom; the reverses have up to six pellets in the bottom right-hand corner. The vertical coins (pl. I, 13, 15, 16, 18, 20, 21, 23) have a single vertical headband, a dash after the king's title, and the x of REX formed like a x and not like a cross as on the horizontal coins; the wedges of the mouth point outwards; the reverse never has more than three pellets in each corner; there are two curls on the forehead. The essentials of the difference, which are the nature of the headband, the number of curls on the forehead, the direction in which the wedges of the mouth point, and the presence or absence of a dash after the king's title, can be traced backwards from the Beeston Tor coins to the coins being issued immediately before the deposit of the Gravesend hoard, and from these back to the coins of type D issued up to c. 868 when Burgred permanently adopted A. All coins that do not have the pellet-in-circle eye are divisible into horizontal and vertical.

That the order of events I have given is correct can be seen from the progressive development of the pellets in the corners of the reverse. The most complicated arrangements occur in Beeston Tor, with coins of Burgred and Aelfred in equal numbers; here there are horizontal



coins with three pellets in three corners and six in the fourth, and vertical coins with three pellets in each corner (a coin of Beeston Tor vertical style is ill. pl. I, 20). Gravesend, with only one coin of Aelfred, contains a large number of horizontal coins with three pellets in each corner, and only one with six in the fourth; there are many vertical coins with three pellets in each corner, but more with three pellets in the bottom right-hand corner and no others. There is no issue of horizontal coins of type A with only three pellets—the horizontal die-cutter seems briefly to have experimented with no corner pellets—but all the coins of type D classifiable into horizontal and vertical have three pellets in the bottom right-hand corner and no others, if they have pellets. The exceptions, *BMC* 340 and *BMA* 147 of Hugerred, serve to prove the rule. Before the horizontal/vertical issues pellets are hardly found, and when they occur their distribution is irregular. There is also positive hoard evidence for the early date of the early group and horizontal/vertical D apart from their outnumbering by horizontal/vertical A in Gravesend; the Reading hoard, the Trewhiddle hoard, and the hoard illustrated by Fountaine<sup>1</sup> from the collection of Dr. George Hickes, the pioneer of Anglo-Saxon studies, do not seem to have contained a single three-pellet-in-each-corner. Nor was Taylor Combe aware of more than one such, and a poor one at that<sup>2</sup>; the hoard circulating about 1800, of which Tyssen secured a parcel recognizable by patina, was composed mainly of coins of type D. These hoards containing what I would call earlier Burgreds did not contain coins of Aelfred (See, *contra* Blunt, *Archaeologia* XCVIII (1961), the statement in Hawkins, *English Silver Coins*, 1841, that the hoard from Trewhiddle ended with Aethelred. Since the latest coins of Wessex, leaving aside the single coin of Aelfred lunette A, are coins of Aethelred's first, rare, type, the four-line lunette, Hawkins is probably right; the Aelfred coin can be disposed of by the impressive arguments Blunt deploys against the coin of Aelfred of late type by the moneyer Franbald).

A division of moneyers between these groups is now presented. There is a certain overlap from 'Middle'—i.e. pre-A horizontal/vertical—style to 'Late' (horizontal/vertical A), which is confusing; and the position of the moneyer Wine, which casts doubt on the chronology I present as well as on the role of the London mint, really deserves an article to itself. Suffice for the moment to say that Wine strikes coins for Aethelred of London style of type A, but strikes coins for Burgred of all types but A.

EARLY: Beranh A, Cenred CD, Cethellulf/Cethliaf C, Ciallaf ACD, Cunehelm C, Duda ACD, Dudda ACD, Dudecil ACD, Dudeman CD, Eanred AC, Framric C, Ethelulf CD, Liafman CD, Tata ACD, Tatel A, Wine BCD.

MIDDLE C and D: Berthelm D, Burghelm D, Cenred D, Cunehelm D, Diarulf D, Duda D, Dudda D, Dudeman D, Dudwine D, Ethelulf D, Heawulf CD, Hereferth D, Hugerred CD, Hussa CD, Huthere C, Liafman D, Ludig CD, Osmund D, Tata D, Wine D, Wulfear D.

MIDDLE A and LATE A, B, and C: Beagstan AB, Berheah A, Berhtelm A, Biornoth A, Cenred A, Cunehelm ABC, Cuthberht A, Cuthulf A, Dagelte/Dealge A, Dealinc A, Dela A (perhaps not a true coin, but Dealla is known for London-style Aethelreds), Denewald A, Diarulf ABC (the C coins might be Middle or home-made), Diga A, Duda A, Dudda AB, Dudwine A, Eadnoth A, Eadulf A, Ecgulf A, Ethelheah A, Ethelstan A, Ethelulf AB, Guthere AC (the C coins unsatisfactory), Guthmund A, Heawulf A, Hereferth A, Hugerred A, Hussa A, Huthere A, Lefle A, Liafwald A, Lude A, Lulla AB, Osmund A, Tata A, Tidehelm A, Wulfear AB, Wulfred A.

<sup>1</sup> *Numismata Anglo-Saxonica*, &c., 1705, pub. in Hickes' *Thesaurus*, pl. III and p. 166.

<sup>2</sup> Cf. his plate of Burgred in Ruding.

How was the mint organized? I have taken a large group of coins definable enough to make statistics worthwhile. The coins of the Middle group are divisible into horizontal and vertical; the vertical coins are broadly one style, the horizontal of three. What is their relationship to one another? Can anything be said about mint organization? I list (i) all coins of types C and D that are not early, (ii) coins of type A that have at least one die of Middle date.

#### BEADED HORIZONTAL:

Beaded inner circle on obverse, beaded cross-bars on reverse. Bottom of T in ETA on the reverse invariably slopes to *right*. Obverse legend +BURGED REX. Drapery on chest two vertical bars surmounted by two horizontal bars or by one horizontal bar and three pellets. Two head-bands.

#### PLAIN HORIZONTAL:

Plain inner circle on obverse, plain cross-bars on reverse. Bottom of T in ETA invariably slopes to *left*. Obverse legend as above. Drapery usually two vertical bars surmounted by one horizontal bar, sometimes by two, never by pellets. One headband. The lines that define the shoulders are carried up to form the neck, and curl at the top. A different fount of lettering: the letter R is continuous instead of having a separate tail, the letter V is not a plain V, but has a wedge at the bottom of the V turning it into a Y.

#### PELLET HORIZONTAL:

Plain inner circle and cross-bars. Both pellet reverses (Ill. pl. I, 10, 11) have beaded cross-bars, not typical. Bottom of T to *left*. Obverse legend BURGED REX or BURGED RE M, hardly ever preceded by cross. Drapery one or two vertical bars under one horizontal. The feature that distinguishes this above all from Plain is the lettering; the letter V has a pellet underneath, not a wedge, and the general style is more impressionist, the R's having one firm stroke and only a L-shaped attachment to represent the rest of the letter. Another criterion: the hair tends to be represented by straight lines, not curls, and these have knobs at the ends. One head-band.

#### VERTICAL:

Beaded inner circle and cross-bars. Bottom of T *flat*. Obverse legend BURGED REX-, sometimes pellets after the dash. Drapery six pellets over three vertical bars. Different lettering, the V's plain V's, the M's with a curl forming the top and resting on top of the downstrokes of the M, not very elegant. One head-band. Immense nose and eye a circle without a pellet inside. Some coins have plain cross-bars on the reverse, and a habit of having the O of MON with four wedges, point inwards, attached on its sides; they also have the tops of the T and A of ETA composed of wedges. I cannot however produce a satisfactory criterion for locating obverse dies to go with these reverse dies, obverse dies with plain inner circles not forming a group. There are also coins with plain inner circles and cross-bars with a row of beading alongside on obverse and reverse, as if to make plain coins beaded.

#### MIDDLE COINS.

##### Reverse D:

BERTHELM	Pellet O.1 R.1 RCL.
BURGHELM	Pellet O.1 R.1 BMA 137 ex Croydon (21.8).

- CENRED Beaded O.7 R.6 *BMC* 183 ex Gravesend (19.8); *BMC* 184 ex Cureton (20.5); *BMC* 185 ex Southgate (20.7); *BMC* 186 ex Gravesend (16.0); RCL ex Ready; RCL ill. *BNJ* 1906; Ashmolean ex Waterloo Bridge ill. pl. I, 9, *obverse die* (18.8).  
Plain O.1 R.1 BM, close to Pellet.  
Pellet O.1 R.1 RCL.  
Vertical R.1 Ashmolean *reverse die*.
- CUNEHMELM Plain O.2 R.2 *BMC* 206 (21.0), *BMC* 207 (20.1), ex Gravesend, same *reverse die*; RCL *reverse die*.  
Pellet O.2 R.2 Ashmolean ex Gambier-Parry ill. pl. I, 10 (20.3); RCL.  
Vertical O.2 R.1 *BMC* 208 ex Gravesend (20.6) same *obverse die* as Hunter 372, rev. C; *BMC* 205 ex Gravesend (19.3) *obverse die*.  
Unclassified O.1 R.1 RCL *obverse die*; *BMC* 205 *reverse die*.
- DIARULF Beaded O.2 R.2 *BMC* 221 before 1838 (20.0); *BMC* 223 ex Gravesend (22.5), same *obverse die* as *BMC* 222 before 1838 (20.1).  
Plain O.2 R.2 RCL; CEB *obverse die*; *BMC* 222 *reverse die*.  
Vertical O.3 R.4 *BMC* 220 ex Gravesend (21.3); BMA 140 fnd. Bury St. Edmunds (14.0); RCL; CEB *reverse die*, same as that of *BMC* 224 ex Tyssen (20.1).  
Late A Vertical O.1 *BMC* 224 *obverse die*.
- DUDA Plain O.1 R.1 *BMC* 244 ex Gravesend (20.1), same *obverse die* as *BMC* 243 ex Gravesend (19.2).  
Vertical O.3 R.3 *BMC* 246 ex Gravesend (19.3); RCL; Baldwin.  
Unclassified R.1 *BMC* 243 *reverse die*.
- DUDDA Plain R.1 BM *reverse die*.  
Vertical O.1 BM *obverse die*.
- DUDEMAN Plain O.1 R.1 Baldwin.  
Vertical O.1 R.1 Baldwin.
- DUDWINE Vertical O.2 R.3 *BMC* 268 before 1838 (19.3); BM; RCL *reverse die*.  
Late A Vertical O.1 RCL *obverse die*.
- ETHELULF Plain O.5 R.7 *BMC* 299 ex Gravesend (22.0), same *obverse die* as HEP; CEB; CEB; CEB; Copenhagen 71 ex Serrure (17.7), same *obverse die* as HEP.  
Vertical O.1 R.1 BMA 144 ex Hasluck (21.3).
- HEAWULF Beaded O.2 R.2 *BMC* 319 ex Gravesend (21.2); *BMC* 320 ex Gravesend (20.0), same *obverse die* as *BMC* 318, rev. C.  
Late A Vertical O.1 RCL ill. *BNJ* 1906, No. 5 on plate, *obverse die*.  
Unclassified R.1 RCL *reverse die*.
- HEREFERTH Beaded O.1 R.1 *BMC* 325 ex Gravesend (18.0), *die duplicate* of CEB.  
Plain O.3 R.4 *BMC* 326 before 1838 (18.2); *BMC* 327 ex Abdy (20.2); RCL; *BMC* 323 ex Gravesend (19.5), *reverse die*.  
Pellet O.2 R.1 *BMC* 324 ex Gravesend (21.0); *BMC* 323 *obverse die*.
- HUGERED Beaded O.5 R.5 *BMC* 335 ex Gravesend (18.9), *die-duplicate* of RCL; BMA 147 ex Croydon (20.8) is from the same *obverse die*; *BMC* 336 ex Tyssen (16.8); *BMC* 337 ex Gravesend (19.5) same *obverse die* as *BMC* 329, 330, rev. A; *BMC* 338 ex Gravesend (20.0) *obverse die*; *BMC* 340 ex Gravesend (20.5), same *obverse die* as Fitzwilliam 426 before 1909 (21.3) and Nottingham Castle Museum, rev. A. *BMC* 335 is ill. pl. I. 12.  
Pellet O.4 R.5 *BMC* 334 ex Gravesend (20.0), *die-duplicate* of RCL and JCA; Copenhagen 74 ex Gartz (21.0); BM Forgeries ex T. Cannon Brookes (19.9); Baldwin; Fitzwilliam 426 *reverse die*. *BMC* 334 is ill. pl. I, 11.  
Vertical O.1 R.2 *BMC* 339 ex Gravesend (21.8); *BMC* 338 *reverse die*.
- HUSSA Beaded O.3 R.4 *BMC* 350 before 1838 (20.0); BMA 148 ex Croydon (20.7); Baldwin; *BMC* 348 ex Gravesend (20.7) *reverse die*.  
Plain O.2 R.3 Copenhagen 667 ex ? Crowther (22.7); RCL *obverse die*; *BMC* 347 ex Gravesend (20.2) *reverse die*; Baldwin *reverse die*.

- Pellet O.1 R.1 RCL *die-duplicate* of CEB.  
 Vertical O.6 R.4 BMC ex Southgate (19.0); BMC 351 ex Gravesend (20.5); RCL ill. BNJ 1906; BMC 347 *obverse die*; BMC 348 *obverse die*; Baldwin *obverse die*, same as BMC 346, rev. C; RCL *reverse die*.
- LIAFMAN Vertical O.2 R.2 AEB ill. BNJ 1906; RCL prob. ex Rashleigh 69 and Trewiddle (patina).
- LUDIG Plain O.1 R.1 BMC 360 ex Gravesend (19.8).
- OSMUND Beaded O.1 R.1 BM.  
 Plain O.6 R.6 BMC 371 ex Gravesend (22.5); BMC 372 ex Gravesend (22.6); BMC 373 before 1838 (20.7); RCL (*obverse* close to Pellet); CEB; Hunter 378 before 1783 (20.7).  
 Vertical O.1 R.1 BMC 370 ex Gravesend (23.0).
- TATA Beaded O.1 R.1 BMA 150 ex Croydon (16.0).  
 Plain R.1 BMC 384 before 1838 *reverse die*.  
 Vertical O.5 R.6 BMC 380 ex Gravesend (21.5); BMC 381 ex Southgate (21.5), same *obverse die* as RCL, ill. BNJ 1906; BMC 382 ex Gravesend; BMC 383 ex Gravesend; Baldwin.  
 Late A Vertical O.1 BMC 384 *obverse die*.
- WINE Vertical O.2 R.2 BMC 392 ex Gravesend (20.8); RCL.
- WULFEARD Beaded O.3 R.5 BMC 398 before 1838 (15.8); BMC 402 ex Gravesend (21.2), same *obverse die*; BMC 400 ex Gravesend (20.0); RCL; BM *reverse die*.  
 Plain O.2 R.2 RCL, same *obverse die* as BM; RCL.  
 Pellet O.5 R.5 BMC 399 ex Gravesend (21.0); BMC 401 ex Sloane (17.9); Hunter 380 ex Coats (19.3); Fitzwilliam 427 ex PWCB 291 (21.3); Copenhagen 80 ex Serrure (23.9).
- Reverse B:  
 DIARULF Beaded O.1 BMC 216 ex Tyssen (20.0) *obverse die*.  
 Sub-Beaded R.1 BMC 216 *reverse die*.
- Reverse C:  
 CUNEHMELM Vertical O.2 R.2 Hunter 372 before 1783 (17.5), same *obverse die* as BMC 208, rev. D; BMC 202 ex Gravesend (19.8).  
 Late A Vertical O.2 BMC 201 ex Gravesend (18.6) *obverse die*; CEB *obverse die*;  
 Late A Horizontal O.1 R.1 BMC 204 ex Gravesend (21.3).  
 Unclassified R.2 BMC 201 *reverse die*; CEB *reverse die*.
- DIARULF Beaded O.2 R.2 BMC 219 ex Cureton (18.1); RCL ex Ready.  
 Plain O.1 R.1 RCL.  
 Sub-Beaded (? Late) O.3 R.5 BMC 217 ex Gravesend (18.4); BMC 218 ex Gravesend (19.2) same *obverse die*; Hunter 373 before 1783 (18.9), same *obverse die*; CCC Cambridge ex Croydon (18.8); Copenhagen 67 ex Serrure (22.2).
- DUDDA Pellet (or a relation) O.1 R.1 BMC 237 before 1838 (21.1).
- ETHELULF Vertical O.2 BMC 295 ex Gravesend (19.5) *obverse die*; BMC 296 ex Gravesend (20.2) *obverse die*. Neither far removed from Late A Vertical.
- GUTHERE Sub-Pellet (very) O.1 R.1 BMC 309 ex Gravesend (17.6).  
 Late A Horizontal O.1 R.1 BMC 310 ex Gravesend (18.8).
- HEAWULF Beaded O.1 R.1 BMC 318 ex Gravesend (19.9), same *obverse die* as BMC 320, rev. D.
- HUGERED Beaded R.2 BMC 333 ex Gravesend (21.5) *reverse die*; RCL (and *die-duplicate* CEB) *reverse die*.  
 Plain O.2 R.2 BMC 332 ex Gravesend (19.7); BMC 333 same *obverse die*; RCL/CEB same *obverse die*; Baldwin *ind.* Northumberland Avenue before 1889.

<sup>1</sup> It may no longer exist.



HUSSA	Beaded R.1 <i>BMC</i> 346 ex Gravesend (20·7) <i>reverse die</i> . Plain O.1 R.1 RCL. Vertical O.1 <i>BMC</i> 346 <i>obverse die</i> , same as Baldwin, rev. D
HUTHERE	Beaded O.1 R.1 <i>BMC</i> 354 ex Gravesend (21·8).
LIAFMAN	Vertical O.1 R.1 CEB ex Trewiddle.
LUDIG	Beaded R.1 <i>BMC</i> 359 ex Gravesend (20·7) <i>reverse die</i> . Late A Vertical O.1 <i>BMC</i> 359 <i>obverse die</i> .
TATA	Vertical O.5 R.4 (all from odd dies) <i>BMC</i> 376 ex Gravesend (20·6); <i>BMC</i> 377 ex Gravesend (19·8); <i>BMC</i> 378 ex Gravesend (22·3); <i>BMC</i> 379 ex Gravesend (21·5); Ashmolean ex Browne Willis (21·9), ill. pl. I, 7, same <i>reverse die</i> .

## Reverse A:

BERHEAH	Vertical O.2 (neither classic) <i>BMC</i> 160 ex Gravesend (22·0) <i>obverse die</i> ; CEB <i>obverse die</i> . Late A Vertical R.2 <i>BMC</i> 160 <i>reverse die</i> ; CEB <i>reverse die</i> .
BERHTHELM	Pellet O.1 R.1 RCL.
CENRED	Pellet O.2 R.2 <i>BMC</i> 173 ex Gravesend (22·0); <i>BMC</i> 175 ex Gravesend (19·7).
CUNEHHELM	Plain O.1 <i>BMC</i> 195 before 1838 (20·1) <i>obverse die</i> . Vertical O.1 RCL <i>obverse die</i> . Late A Vertical R.1 RCL <i>reverse die</i> . Unclassified O.1 R.2 RCL (Middle, but indefinable); <i>BMC</i> 195 <i>reverse die</i> .
DIARULF	Pellet O.1 R.1 <i>BMC</i> 214 ex Gravesend (20·8). A most interesting <i>obverse die</i> , with head and legend of Pellet style, but shoulders and drapery of Late A Vertical, as if the die-cutter changed in the middle.
DIGA	Plain O.2 R.2 RCL; Hunter 365 before 1783 (20·8). Vertical O.1 R.1 BM. Pellet O.1 <i>BMC</i> 227 ex Gravesend (21·2) <i>obverse die</i> . Late A Vertical R.1 <i>BMC</i> 227 <i>reverse die</i> .
DUDDA	Pellet and Sub-Pellet O.5 R. 4 <i>BMC</i> 231 ex Gravesend (19·9); <i>BMC</i> 232 ex Gravesend (20·0); <i>BMC</i> 233 ex Gravesend (19·3); <i>BMC</i> 234 ex Gravesend (19·6); Baldwin <i>obverse die</i> . Late A Horizontal R.1 Baldwin <i>reverse die</i> .
DUDWINE	Vertical O.1 (not classic) <i>BMC</i> 260 ex Cotton (18·0) <i>obverse die</i> . Late A Vertical R.1 <i>BMC</i> 260 <i>reverse die</i> .
EADNOTH	Sub-Pellet O.1 R.1 <i>BMC</i> 270 ex Gravesend (20·8).
GUTHHERE	Pellet and Sub-Pellet O.6 R.5 <i>BMC</i> 301 ex Gravesend (19·8); <i>BMC</i> 302 ex Gravesend (20·6); <i>BMC</i> 303 before 1838 (20·7); <i>BMC</i> 304 ex Gravesend (18·5) <i>obverse die</i> ; BM ex Beeston Tor (21·2); Edinburgh ex Talnotrie. Late A Vertical R.1 <i>BMC</i> 304 <i>reverse die</i> .
HEAWULF	Pellet O.1 R.1 <i>BMC</i> 317 ex Gravesend (20·3).
HEREFERTH	Pellet O.2 R.1 <i>BMC</i> 322 ex Gravesend (21·2) <i>obverse die</i> ; BMA 146 ex Croydon (17·5). Late A Vertical R.1 <i>BMC</i> 322 <i>reverse die</i> .
HUGERED	Beaded O.3 R.3 <i>BMC</i> 329 ex Southgate (17·7) same <i>obverse die</i> as <i>BMC</i> 330 ex Gravesend (18·2), and <i>BMC</i> 337, rev. D (Order of striking appears to be 329; 337; 330); Nottingham Castle Museum ex Waterloo Bridge (19·0) <i>obverse die</i> , same as <i>BMC</i> 340, rev. D; RCL. Plain O.1 R.1 <i>BMC</i> 331 ex Gravesend (20·3). Pellet O.2 R.2 <i>BMC</i> 328 ex Gravesend (19·0); RCL. The dies of <i>BMC</i> 328 are regular; a similar coin is illustrated in the MS account of the Reading hoard. Late A Vertical R.1 Nottingham <i>reverse die</i> .
HUSSA	Beaded O.1 BM ex Beeston Tor (22·4) <i>obverse die</i> . Pellet O.1 R.2 <i>BMC</i> 344 before 1838 (19·3); BM ex Beeston Tor <i>reverse die</i> .
HUTHERE	Pellet O.2 R.2 <i>BMC</i> 352 ex Gravesend (19·5); <i>BMC</i> 353 ex Gravesend (20·9).

## OSMUND

Pellet O.3 R.2 Fitzwilliam 418 ex Babington (19.4); Baldwin find. Westminster Bridge; Baldwin *obverse die*. (The only evidence for the Westminster Bridge find, as distinct from the Waterloo Bridge find, are the tickets written by Lord Grantley for coins purchased from Vienweg in 1895. Which is not very promising evidence. But to accept the identity of the finds I require explanation (a) of a differing patina, heavy green verdigris on Westminster Bridge coins, very little verdigris on Waterloo Bridge (b) the un-representativeness of C-B's plate in *BNJ* 1906 if the Westminster Bridge coins came from Waterloo Bridge. On the whole the Westminster Bridge coins are post-Gravesend in date. The subject of London hoards of Burgred can be illuminated with profit; note *ad interim* that the best account of the discovery of Waterloo Bridge is given by W. J. Andrew in a paper on the coins of Stephen *BNJ* 1911 p. 102).

Late A Vertical R.1 Baldwin *reverse die*.

I think these lists show something of the insane complexity of the coinage of Burgred. A good deal of difference exists within the groups defined here. What conclusions about chronology can be drawn? A major re-organization when type D came in is apparent from the absence of mules between 'Early' obverse dies and 'Middle' reverse dies, and the probable absence of the opposite die-combination. It also appears that Pellet, heavily muled with Late A Vertical A reverses, represents the Horizontal issue contemporaneous to Three-pellet reverse Vertical; I have already pointed out the absence of Three-pellet reverse Horizontal coins. Working back from this pair, the obvious predecessors of it are Vertical D, which is Beaded, and Beaded Horizontal D, a pattern which leaves no place for Plain. Plain reverses are stylistically linked to Early reverses, so a case can be made for dating Plain in general, in spite of its Middle/Late eyes, before the reorganization. Equally, though, Pellet reverses are akin to Plain, it being difficult to tell the difference between them when the moneyer's name does not contain the letter  $\tau$ , e.g. Hereferth and Osmund (who spells his name OSMHND).

When definite examples are broken down into styles rather than types, the number of dies of each style is curiously similar: figures refer to the number of obverse and reverse dies.

PLAIN. Cunehelm 3 + 2, Diarulf 3 + 3, Diga 2 + 2, Duda 1 + 1, Dudda 0 + 1, Dudeman 1 + 1, Ethelulf 5 + 8, Hereferth 3 + 4, Hugerred 3 + 3, Hussa 3 + 4, Ludig 1 + 1, Osmund 6 + 6, Tata 0 + 1, Wulfear 2 + 2      14 : 33 + 39.

BEADED. Cenred 7 + 6, Diarulf 5 + 4, Heawulf 2 + 3, Hereferth 1 + 1, Hugerred 6 + 10, Hussa 4 + 5, Huthere 1 + 1, Ludig 0 + 1, Osmund 1 + 1, Tata 1 + 1, Wulfear 3 + 5.      11 : 31 + 38

PELLET. Berthelm 2 + 2, Burghelm 1 + 1, Cenred 3 + 3, Cunehelm 2 + 2, Diarulf 1 + 1, Diga 1 + 0, Dudda 1 + 1 (say), Guthere 3 + 2, Heawulf 1 + 1, Hereferth 4 + 2, Hugerred 6 + 7, Hussa 2 + 3, Huthere 2 + 2, Osmund 3 + 2, Wulfear 5 + 5.      14 : 37 + 34.

VERTICAL. Cenred 0 + 1, Cunehelm 4 + 3, Diarulf 3 + 4, Diga 1 + 1, Duda 3 + 3, Dudda 1 + 0, Dudeman 1 + 1, Dudwine 2 + 3, Ethelwulf 1 + 1, Hugerred 1 + 2, Hussa 6 + 4, Liafman 3 + 3, Osmund 1 + 1, Tata 5 + 6, Wine 2 + 2.      15 : 34 + 35.

Total moneyers: 23 Obverse dies: 135 reverse dies: 146.

Allowing for a possible transfer of some Plain reverses to Pellet the relation of obverse to reverse is very nearly 1 : 1, with a slight balance but no more in favour of reverse. A 1 : 2 pattern is not possible.

There is at first sight little consistency in receipt of dies by an individual moneyer either in number or source. The commoner Horizontal moneyers, Cenred, Hugerred, Hussa and Wulfear, are all except for Wulfear represented in Vertical, in which Hussa is known for more obverse dies than any other. Scrutiny outside Middle confirms the picture. Hereferth, unknown for Vertical here, is known in Late A only for Vertical; the next known coins of

Wulfear after Pellet are Late A Vertical with three-pellet-in-each-corner reverses. *BMC* 214, moneyer Diarulf, shows Horizontal and Vertical features on the same die.

So if there are two die-schools involved, they catered for all the moneyers, and both schools supplied a moneyer more or less at the same time. To ensure that each moneyer produced his proper share of the coinage, a central control must have regulated the supply of dies, which indicates that there can have been no great physical separation between the establishments. Attempts to create two die-schools at the same mint have failed in the past (notably in reference to the Canterbury mint under Aethelwulf, *Anglo-Saxon Coins* ed. R. H. M. Dolley, p. 63 ff., and the question of regional styles under the 11th century kings), chiefly because there has proved in practice to be no connection between the series involved. Here the theory might founder because of the overpowering amount of die-links and mules connecting Horizontal and Vertical. I would accept a single die-cutting establishment with two engravers, a not impossible solution, and supported by *BMC* 214, were it not (a) for doubts whether the consistent stylistic differences over at least six years are explicable in this way, (b) for the question of Cenred.

Consider what Cenred is responsible for. In the Middle group he uses 10+9 Horizontal dies, leaving out the one Sub-Plain coin, and 0+1 Vertical dies; in Late, 13+13 Horizontal; in Early, if the 'Viking' style represents Vertical, all his coins are Horizontal. He is also responsible for two Horizontal coins (2+2) of variety E, Middle date. For Aelfred he strikes a Two Emperors coin from Horizontal dies. He is the only moneyer striking both Middle and Late who is not known for Late A Vertical; indeed, all his colleagues except Guthere are commoner in Late A Vertical than in any horizontal type. It is at least *prima facie* probable that his relationship with the Horizontal die-cutter was close; and for this we have a further piece of evidence. His dies are completely regular, but the reverses are frequently differentiated by commas in the corners of the lunettes instead of pellets, indicating a personal say in the production of the dies. Did any other moneyers owe an allegiance to a die-school? I think the answer is Yes, although no one else has quite the same record. Berheah and Diga have idiosyncratic reverse pellet arrangements and are strongly Vertical in their sympathies; Wine looks like his own master; Cunehelm also, but both Cunehelm and Wine are moneyers independent of the main organization. Liafwald is strongly Horizontal under Burgred, but as firmly Vertical under Ceolwulf II. Worth a glance is the existence of Canterbury Six-Pellet reverse dies for Cenred and Eanred alone of the London moneyers—singled out as the most important? Eanred's coins are stylistically identical with those of his contemporaries, yet differ in that they are regularly of reverse type A.

None of this goes anywhere near an explanation of why there are so many sub-groups in a coinage that lasted so short a time.<sup>1</sup> It may be that there are sub-groups at Canterbury, but on the face of it all Canterbury coins of Lunette style fall into an Aethelred group and an Aelfred group which are not subdivided.<sup>2</sup> It might be thought that the organization of

<sup>1</sup> Of the coins ill. on pl. I, which have not already been mentioned, 13 is a Berheah with individual pellet arrangement, 14 a reputable Late A Horizontal, 15, 16, 24, 23 normal Late A Vertical with serified letters, 18, 20, and 24 a late phase without serifs; 19 a Late A Horizontal with broad shoulders, 21 the same bust and a reverse of the same style (note the pellets actually on the corners of the lunettes) but with no corner pellets, 17 is a very late Horizontal coin, perhaps issued as late as

873, akin to those of Ceolwulf II.

<sup>2</sup> Dolley's second die-school for Aethelwulf at Canterbury is in fact the Rochester mint. His case rested on the assumption (now proved wrong) that the Rochester mint was a one-moneyer establishment. DORIBI/CANT coins of Rochester style are explicable if DORIBI is DOROBREBIA abbreviated. Mr. C. S. S. Lyon will, I hope, soon expound this solution (his) in print.

Burgred is analogous to that of Aelfred after 886, but in the latter case stylistic groups are related to different sets of moneyers. Clearly it is only by the accumulation of more material and the detailed investigation of hoards like Croydon and Waterloo by criteria other than lunette variety that progress is going to be made. If there is one fact that emerges, it is the comparative unimportance of lunette variety. Basically coins of C are early, D are middle, A are late; but rules are never kept. Types B and E are respectively a variety of Late A Vertical three-pellets-in-each-corner, and a cross between Plain and Pellet Horizontal (Middle). They are no more important than interesting stylistic groups like the 'Framric' variety of Early—four coins, moneyers Framric (*BMC* 300, only coin known for him, ex Southgate, 18.2), Dudda (*BMC* 236 ex Gravesend, 22.8, and *die duplicate* RCL), ill. pl. I, 4, and Wine (RCL), as handsome as anything produced at Canterbury.

I would like to express my thanks to all those who have made available to me coins of Burgred, whether in the flesh or by photograph; and to Mr. J. C. Allen, of Lewes, for considerable advice and criticism.

J.C.A.:	J. C. Allen, Esq.
A.E.B.:	A. E. Bagnall, Esq. (collection dispersed 1964).
Baldwin:	A. H. Baldwin & Sons (1965).
C.E.B.:	C. E. Blunt, Esq.
C.C.C. Cambridge:	Corpus Christi College, Cambridge (S. S. Lewis collection, ill. <i>BNJ</i> 1961).
Copenhagen:	Sylloge of Coins of the British Isles, the Royal Danish collection. Ancient British and Anglo-Saxon Coins, part I, by Georg Galster, 1964.
Fitzwilliam:	Sylloge of Coins of the British Isles, Fitzwilliam Museum, Cambridge, part I. Ancient British and Anglo-Saxon Coins, by Philip Grierson, 1958.
Hunter:	Sylloge of Coins of the British Isles, Hunterian and Coats collections, University of Glasgow, part I. Anglo-Saxon Coins, by Anne S. Robertson, 1961.
R.C.L.:	The late R. C. Lockett, Esq. (A photographic record exists of his coins of Burgred)
H.E.P.:	The author's collection.
B.N.J.	Plate illustrating Nathan Heywood's article on the coinage of Burgred in <i>BNJ</i> 1906. The coins for it were supplied by P. W. P. Carlyon-Britton and were mainly from the Waterloo Bridge hoard.

#### APPENDIX A: LONDON AFTER 874

(a) The corpus of Ceolwulf II given by Mr. Dolley in *BNJ* 1963, pp. 88–90, is a salutary reminder that the London mint continued to operate. Of his six moneyers, four are known for Burgred's last issues, one, Dudecil, only being known for Early coins of Burgred and perhaps being a different person; the remaining moneyer Dunna is new. (Note: Cuthulf is now known for Late A Horizontal Six-pellets-in-fourth-corner, London Museum ex Wands-worth find). Four other Burgred moneyers (Cenred, Guthere, Hereferth, and Lulla) are known for contemporary coins of Aelfred struck at the London mint. Five or six more are not known for *BMC* V but are known for the 'Guthrum' type. None of this suggests a major break in continuity caused by Viking occupation. An argument *ex silentio* from the absence of the signature of the Bishop of London from Ceolwulf's charters seems to lie behind assumptions of Viking occupation. This is not valid. Charters of Berhtwulf and Burgred signed by more than one bishop are signed in these proportions: Worcester 21; Lichfield 20; Lindsey 17; Hereford 16; Leicester 14. The bishop of London never signs.



(b) Why if London was a one-moneyer mint during 'LONDONIA monogram' do the old Burgred moneyers Beagstan, Cuthberht, Heawulf, Hereferth, Ludig, and others recur after this in the 'Guthrum' type? I think we should be chary of accepting the absence of the moneyer's name on the bulk of these coins as an indication that Tilewine only was at work, especially since there exist 'monogram' coins with the names Aelfstan and Heawulf, not dissimilar to some of the Burgred moneyers 'Guthrum' coins in lettering.

(c) There is a belief that between 880 and 885 English coinage consisted of the Two Emperors issue, the Archbishop Aethred issue, and the Quatrefoil issue. Four and a half coins are known of the three together. I am reluctant to admit the late date of the first and the substantive nature of the others. If *BMC* V is preceded by Two Emperors (which is stylistically probable), between 880 and 885 there would be no coinage at all from London, since Archbishop Aethred and Quatrefoil are so far only known of Canterbury. Why not extend the issue of *BMC* V right up to 886? We have only an embroidery by Florence of Worcester to indicate that the Vikings were in possession of London between Ceolwulf's death and Aelfred's seizure of the city. The carry-over of Burgred moneyers to the 'Guthrum' type should again indicate continuity of production. Once this dating is accepted the situation at Canterbury falls into line. The significant feature of the two coins of the Archbishop Aethred type is that though one is of Aelfred and one of the Archbishop, both are struck by the same moneyer. The correct inference from this is surely that he is the only moneyer of the type, and that it is therefore not substantive. Moreover, the affinities of style and lettering are with Lunette rather than *BMC* V or 'Guthrum'.

#### APPENDIX B: THE MOUTH

One of the principal criteria adduced for the separation of the coins of Burgred into die-schools is the representation of the mouth, on Vertical coins by two wedges with the pointed end outwards, on Horizontal coins by two wedges with the pointed end inwards. This does not exhaust the usefulness of the 'mouth-test'. All Canterbury coins of lunette types have a mouth composed of two semi-circular 'lips', the straight sides to the middle, and positioned so that the upper semi-circle is slightly to the right of the lower. And since this is not a detail that the forger, and more important the irregular die-cutter, would take care of, the potential value of it for distinguishing die-cutters is immense. For instance, the general habit from 796-830 was to use two wedges, points inwards; sometimes two straight lines were used, but it is difficult always to separate this on photographs. A visible divergence comes at the 'East Anglian' mint, where a count of coins with a mouth indicated by two pellets reveals:

COENWULF: Hereberht, Wihtred, Woddel.

CEOLWULF: Eadgar, Wihtred.

BEORNWULF: Eadgar, Werbald.

LUDICA: Werbald.

Not that this is a chronological group, just interesting in that it is the only pellet-mouth group in the 9th century, and so presumably the product of a single hand. On the sceatta coinage of the 8th century a pellet-mouth is the normal mouth.

