

THE COINS FROM ELMS FARM, HEYBRIDGE¹

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1 INTRODUCTION

The excavations at Elms Farm produced 2,910 Roman and 16 post-Roman coins in total. Of the Roman coins 2,842 were classified as site-finds, while a further 68 were found together as a hoard. Not all of the coins were cleaned and, of those that were, not all of their surfaces were necessarily eventually cleaned (revealing a particular area of a coin, such as the exergue or obverse legend, usually enabled the coin to receive as complete an identification as was possible under the circumstances). A consequence of this method of cleaning large numbers of coins is, however, that detailed studies of particular coin types are not possible for the Elms Farm assemblage. There was little point weighing the Claudian imitations, for example, because any corrosion products would have been included in their weights. The Elms Farm coins will be deposited at Colchester Museum and thus are available for further cleaning and study in the future.

The majority of the coins from Elms Farm were found in unstratified contexts (59.6%), particularly from the topsoils layers that were usually removed by machine. At Colchester it was suggested that the machining of certain layers, often those associated with the later Roman period, caused the loss of many of the latest coins and thereby biased the site histograms in favour of earlier coins (Crummy 1987: 5-7). At Elms Farm, however, metal-

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detectors were used at all stages of the excavation and the assemblage is much less likely to be biased towards one period of coinage than another. Fig. 1 shows that the coins from topsoil layers are very similar to those from stratified deposits, indicating that the topsoil coins are a representative sample of the total assemblage. This is more likely to occur on a site that was either seriously disturbed by later activity, or was not deeply stratified (like many Romano-British rural settlements the latter was clearly the case at Elms Farm).

The 1745 coins from the topsoil are allocated with the site code, Area A (consisting of A1, A2 and A4). Where these coins could be identified they were included in the chronological analysis of the assemblage. They were not included, however, in the spatial study of coin loss at Elms Farm as it was not always possible to allocate an unstratified coin to a specific enough Area of the settlement. A further 195 Roman coins were recovered from other machining layers (17000) and allocated to Area Q. This context extended across the entire excavation and it is not possible to locate most of these coins to particular parts of the site. For this reason, Area Q coins (like those from Area A) were included in the chronological discussion but not the spatial analysis of the Elms Farm assemblage. Other Area codes were given to coins recovered during the detecting of off-site spoilheaps (B, C and X), though these groups have been included in the spatial study as their original find-spots can be relatively closely located within the settlement at Elms Farm.

2 SURVEY AND SUMMARY (DENOMINATIONS & TYPES)

(insert Table 1)

2.1 Pre-Invasion Coins

The only coins of the Republic are two worn *denarii* of Marc Antony, struck immediately before the battle at Actium in 31 BC. These coins were struck at a far lower silver standard than contemporary *denarii* and we can see from hoards that they circulated in Britain throughout the first and second centuries AD. They had disappeared from circulation by the end of the second century, by which time the standard of officially produced *denarii* had fallen significantly below that of these legionary issues.

The six coins of the early Principate struck before the invasion include four *asses*, a *semis* and a Tiberian *denarius*. Although none of the pre-invasion coins were recovered from stratified deposits, it is most likely that they entered Britain either with the invading army, or immediately afterwards. Two of the *asses* and the *semis* were struck at Lugdunum, the mint that had supplied the military campaigns of Augustus but ceased to strike large quantities of bronze soon after AD 14. These Lugdunum *aes* show the famous Altar of the cult of Rome and Augustus erected at the colony and inaugurated by Augustus himself in 10 BC. One of these coins was countermarked with TIB on the obverse [3673], an abbreviation for the emperor Tiberius. These countermarks are not entirely understood, but it is assumed that such marks emphasised the source of the imperial donatives distributed to the army on a number of occasions (Sutherland 1984: 11). The Altar at Lyons is also shown on the *semis* of Tiberius Caesar from Lugdunum [6086], a rare coin from Roman Britain. It is well known that the small bronze fractions did not circulate in any great numbers in the north-western provinces of the empire (Reece 1973: 234 and Tables IA-ID), and only one other example of an Augustan *semis* from Lugdunum is known from Roman Britain (found at Richborough which produced over 51,000 site finds, Reece 1968: 203).

2.2 Claudian Coins and Imitations

In the period immediately after the invasion in AD 43 the Roman bronze coinage in Britain consisted of a small quantity of pre-Claudian denominations and a very large body of Claudian copies. Like almost all Romano-British sites, Elms Farm produced a far greater number of imitations than official *aes* of Claudius (the ratio of official to unofficial *asses* is 1:7, and for the *dupondius* 1:3). The copying of Claudian *asses* and *dupondii* began on the continent before the invasion of 43 and continued soon after the Roman army established itself in Britain. Pre-Claudian bronze coins were in short supply in the northern provinces of the empire, particularly after Claudius had demonetised the coins of Gaius in 44 (coin 3365 is an overstrike of an unidentified *aes* of Gaius). It is believed that the production of Claudian copies was an officially sanctioned practice to balance the short-fall in official supply and provide the small change needed by the army in Britain. In fact, it is likely that between only 10% and 20% of the bronze coinage in circulation during this period was genuine, the rest were ‘copies’ struck at local centres in the military provinces of the north-western empire (Boon 1982: 11; Walker 1988: 285). Evidence from Colchester indicates that Claudian copies were being prepared and struck in the legionary fortress there. Brass-making crucibles found during the excavations at Culver Street may well have been for the production of orichalcum *dupondii*, while numerous die-links between copies make it clear that the fortress was a major minting centre (Kenyon 1987: 33-4). George Boon’s survey of the coins from the fortress at Usk showed that Claudian copies were still in production after 55 (Boon 1982: 11). Most numismatists would now agree that these coins continued to be struck until *c.*64, when Nero reopened the mint at Lugdunum and the systematic striking of official *aes* coinage began again.

Over the two decades during which Claudian copies were being struck, the module and weight of these coins were gradually reduced (Boon 1982: 4). Robert Kenyon suggested that the imitations were struck to a regular, albeit reduced, standard, not on an *ad hoc* basis. He was able to identify a sequence of three main issues based on approved, controlled, reductions in the weights of the both the imitated *as* and the *dupondius* (Kenyon 1988: 36-9). Boon’s ‘ladder’ principle suggests that a gradual reduction in the weight of imitations over time is anticipated during any episode of counterfeiting, whether officially sanctioned or not (Boon 1988). This theory of counterfeiting also extended to the style of copying, proposing that the quality of the die-cutting would have experienced a similar decline. As the Elms Farm coins were only partially cleaned it was not possible to study the weights and styles of the Claudian copies, and we cannot say with any certainty whether those from Heybridge belong to Kenyon’s earlier or later groups. Given that these coins were being used until the early 70s, however, it is likely that any pattern of production will have been blurred by their later circulation anyway (Boon 1982: 12-3).

The majority of the Claudian copies from Elms Farm are imitations of the *as*, which is a characteristic common to most Romano-British assemblages. Twenty-one of the twenty-four copies are *asses* (87%), with three further imitations of *dupondii* (13%) and no examples of copied *sestertii* (see Kenyon 1987: 40 for similar figures from Colchester). The most commonly copied reverse for the *as* was the ‘Minerva’ type (RIC 100), accounting for seventeen coins. In this respect the Elms Farm group of ‘Claudian copies’ follows the Romano-British norm once again as the ‘Minerva’ type was the most frequently copied reverse throughout the period of production (Constantia - RIC 95, and Liberty - RIC 97 are present in smaller quantities at Elms Farm). Copies of Claudian *dupondii* are always less

common than *asses* and Elms Farm produced only three of these imitations. The prototypes for these coins are the 'Antonia' obverse bust (RIC 92) and the 'Ceres' reverse (RIC 94), both of which were commonly copied types.

The overwhelming quantity of Claudian copies compared with official coins is suggestive of increased activity towards the end of the counterfeiting epidemic, before Neronian *aes* were introduced. The Claudian copies from Elms Farm indicate that coins were circulating relatively freely, in Essex at least, between Roman military installations and rural settlements probably very soon after the invasion. Although Claudian copies have been found in contexts as late as the third century, it is now certain that the small quantities of such coins circulating beyond the 70s were the exception rather than the rule (Kenyon 1987: 30-1). The seven stratified Claudian copies from Elms Farm support this dating scheme. Six were found in contexts dated to Period III (later first to mid second centuries), while the seventh was recovered from a Period II deposit and probably dates to the years immediately after 43.

2.3 Neronian and Flavian Coins

In 64 the mint at Lugdunum was reopened and soon came to supply the vast majority of bronze coins to Roman Britain (Walker 1988: 285-6). Most bronze coins of Nero, Vespasian and Domitian recovered from Britain were struck there, although individual years saw varying levels of production. Almost all of Vespasian's coins were struck in one short episode of intensive output; of those from Elms Farm that could be closely dated, eight were struck between 71-3, while only one was from 77-78. At this time the Rome mint was the sole producer of *denarii* and, although they comprise a relatively high proportion of Vespasian's coins at Elms Farm, this silver coin is much less common than bronze denominations from most Romano-British settlements. The Lugdunum mint was largely dormant under Domitian, but despite this Rome did not increase production of bronze coinage and Roman Britain received few new coins during most of Domitian's reign - except during 86-87 (65% of Elms Farm's Domitianic coins were struck during these two years). Typically for a Romano-British site, those coins of this period that reached Elms Farm were mainly *asses*. Of Domitian's forty-six coins, thirty-one were *asses* and another seven were *dupondii*. Elms Farm is unusual, however, as it produced two *semisses* of Nero [4111 and 6100], an uncommon denomination in Roman Britain that did not appear once at the Sacred Spring at Bath, although two examples were identified at Richborough. Even though bronze coinage was supplied to Britain only episodically, the years of low supply produced only a single copy at Elms Farm; an *as* of Nero showing Victoria on the reverse [1722].

2.4 Coins of the Second Century

During the reigns of Nerva, Trajan and Hadrian bronze coinage was supplied more regularly to Britain. The excavations at Elms Farm did not produce many coins, however, from issues that are known to have been sent exclusively to Britain under Hadrian (probably with the army that accompanied the emperor on his visit in 122). This pattern is in contrast to the situation at Bath where these issues are common. From Trajan's reign we see the increasing importance of the *sestertius* and *dupondius*, while the volume of new *asses* in circulation declined. Not all Romano-British sites followed the same patterns, however, and Elms Farm produced considerably more *sestertii* than the Sacred Spring at Bath (59% compared to 36%). Coin 3930 is an example of an orichalcum *semis* or *as* of Trajan thought to have been

struck at Antioch in 115-6 and brought to Britain during Hadrian's visit. These coins are often very worn, suggesting a long period of circulation.

Coins of the Antonine emperors from Elms Farm mainly consist of the bronze denominations and the *sestertius* remained the most common coin. *Sestertii* represent 43% of Antoninus Pius' coins, a proportion that increases to 53% and 63% under Marcus Aurelius and Commodus respectively (a similar pattern was observed at Richborough). It is thought that the bulk of Antoninus Pius' bronze coinage was struck during a short period between 153-5; the Britannia *asses*, as well as Britannia and Libertas *dupondii*, that all circulated almost exclusively in Britain and must have been delivered directly to the province without being introduced into circulation elsewhere. Other so-called 'Britannia' issues include *dupondii* of Marcus Caesar with Mars on the reverse (RIC 1322), and 'Aeternitas' *dupondii* and *asses* struck for Diva Faustina I (Hobley 1998: 65-70). Of the sixteen *asses* of Antoninus Pius from Elms Farm whose reverse types were identified, only nine were from the Britannia issues (56% compared to 71% from the Sacred Spring at Bath). On the other hand, coins of other 'Britannia' types account for all four identifiable *dupondii* and *asses struck* in the name of Diva Faustina I.

2.5 Coins of the Severan Period

The 190s witnessed two events that would dramatically affect the coins available to the population of Roman Britain. The first was Severus' debasement of the *denarius* in 194/5 that reduced its fineness to approximately 50%, and the second was the end of virtually all supplies of bronze coinage to provinces north of the Alps after 197. Bronze denominations continued to be struck in considerable quantities until c.260, although their use was restricted to the central parts of the empire (Walker 1998: 300-301). In Britain a period of almost 40 years followed during which the supply of bronze coins quickly dried up to no more than a trickle and new coins comprised mostly the debased silver *denarius*. Of the sixty-nine coins struck between 193 and 238 from Elms Farm, fifty-six are *denarii* and three are *denarius* forgeries. Coin [5162] is a plated *denarius* (a forgery of an original struck for Caracalla as Caesar between 196-8), while [1853] is a copy of a *denarius* of Severus Alexander. The remaining Severan coins comprise eight *sestertii*, an interesting copy of an Elagabalan *as* with the reverse VICTOR ANTONINI AVG [646], and a silver *quinarius* of an unidentified Severan emperor [3639]. It is interesting that a significant number of Severan *denarii* have been broken or deliberately cut. Four coins are broken, while [1580] appears to have been cut or clipped and [456] was cut into a quarter. *Denarius* [3015] is a hybrid, combining an obverse of a Septimius Severus *denarius* with the 'Adventui Aug Felicissimo' reverse of a Severan *aureus*. Coins [2947] and [3035] are also hybrid *denarii* of Caracallan obverses with Concordia and Mars reverses.

2.6 Third Century Coins

Only twenty-five coins from Elms Farm were struck during the years 238-60. Of these, twenty-three are radiate *antoniniani*, a silver coin introduced by Caracalla in 214 and struck in preference to the *denarius* from the death of Maximinus in 238. A radiate of the short-lived emperor Balbinus, showing Concordia on the reverse, is an unusual coin from Roman Britain [6852]. Two of these early radiates are copies: an imitation of a coin struck for Gordian III [1653], and a copy of a radiate of Gallienus [3581]. One of the two coins of Volusian is a hybrid combining his obverse with a later reverse of Valerian [2480].

The later years of the third century in Britain were dominated by the radiate to the exclusion of every other denomination. Successive debasements and reductions in weight reduced the radiate to little more than a silvered bronze coin containing less than 2% silver by 270. Postumus, the first 'Gallic' emperor, attempted to reintroduce a bronze currency reminiscent of the second century, although these coins were never struck in large quantities and rarely reached Roman Britain. Elms Farm produced a single example of one of these Postuman *sestertii* [3904], as well as a more unusual double *sestertius* of the same emperor showing Victory on the reverse [3641]. This attempt to revive the Augustan currency system north of the Alps did not last long and the Gallic emperors, like those in Rome, quickly reverted to producing vast quantities of poor quality radiates.

The massive increase in the volume of coinage during the later third century must have led to widespread coin use across the western Roman Empire, including Britain. However, reform of the coinage by the emperor Aurelian in 274, which increased the silver content of the radiate and probably reduced the volume of production, did not curb the provincial appetite for small change. Instead the years after Aurelian's reform saw the introduction of vast quantities of barbarous radiates - locally produced copies most probably intended to make up the shortfall in supply from the official mints. The assemblage from Elms Farm contained 218 barbarous radiates struck between c.275 and 290, compared to only a single official coin of Tacitus and a group of 48 Carausian and Allectan coins from the same period.

2.7 Fourth Century Coins

The fourth century coins from Elms Farm reflect the pattern already seen from many other Romano-British sites, with the coins available to the population at that time mainly consisting of low value bronze coins. Large quantities of small change were produced during the 330s, between 347-8, from 350-4 and again from 364 to 378. Three silver *siliquae* were recovered from Elms Farm, though these coins are common in late fourth century hoards from eastern England and must have circulated in considerable numbers. Coins from the London mint are relatively well represented until its closure in 326, after which the vast majority of bronze coins in Roman Britain were supplied by the continental mints at Trier, Lugdunum and Arles. A significant proportion of the coins circulating during the middle decades of the fourth century were once again locally made copies, presumably struck to supplement dwindling supplies of official coins. This was particularly the case in the years up to 364, and Elms Farm produced a greater number of 'Fel Temp Reparatio' copies than official coins (a common feature of Romano-British site finds).

2.8 Post-Roman Coins

Only sixteen coins post-dating the Roman occupation were found at Elms Farm, including a silver short cross penny of Henry III [4548]. A handful of bronze coins and jetons derive from the modern period, including three Nuremburg jetons of the seventeenth century, several pennies, halfpennies and farthings of the nineteenth and twentieth centuries, as well as a Five New Pence piece dated to 1979.

2.9 Coin Hoard (6382)

A hoard of seventy-three small bronze coins was recovered from the fill (6382) of a pit (6383) in Area L (five coins were mislaid and the catalogue lists only sixty-eight coins in the hoard). Identifiable details on forty-four coins showed that these were small barbarous

radiates, copying obverses of the Gallic emperors Victorinus, Tetricus I and his son Tetricus II, together with a single example of the Consecratio type for the deified Central emperor Claudius II. The reverses of these coins copied types common to official radiates of the time, showing personifications of Fortuna, Fides, Pax, Comes, Spes and Salus, as well as the sacrificial implements of Tetricus II's Pietas type. The reverse design of coin [4611] was most unusual in that it consisted of a cross within a wreath with a legend around it; a motif that cannot have been copied from the contemporary repertoire of official types. The obverse and reverse legends were frequently blundered, making exact identification of these coins difficult. In a number of cases the obverse radiate busts were clearly bearded, but the garbled legends did not permit closer identification.

The modules of the barbarous radiates in this hoard varied from between 6mm and 17mm in diameter, although most were struck on flans between 10mm and 14mm. It is believed that the endemic production of barbarous radiates occurred after Aurelian's currency reform of 274 when new radiates were tariffed at twice the value of the old pre-reform coins. There seems to have been widespread reluctance on the part of the coin-using population to exchange old coins for new, as a result of which the production of barbarous radiates increased dramatically in order to fill the gap in official supply (Cheeseman 1997: 177; Reece 1987: 72). It is believed that barbarous radiates were being struck continually until the late 280s when Carausian coins appear in greater quantities (or perhaps as late as the currency reform under Diocletian in 294/6) and that throughout this period these copies became gradually smaller in size and increasingly barbarous in style. Consequently, the coins in the Elms Farm hoard were probably struck towards the end of the barbarous radiate period, most likely during the 280s (or early 290s). Evidence from other hoards suggests that old radiates quickly went out of circulation after Diocletian's reform, indicating a date of burial prior to 300. This fits well with the stratigraphic phasing of the pit containing the hoard (Period V), dug and filled between the late third and the mid-fourth centuries.

Missing coins:

48 coins were not available for final identification, either because they were not coins, never made it off site, or because they had been issued with two small-finds numbers etc. These are:

SF0a, 0b, 184, 291, 300, 373, 435, 454, 455, 487, 507, 567, 584, 604, 605, 1047, 1389, 2174, 2938, 4108, 4109, 4124, 4246, 4370, 4385, 4614, 4631, 4663, 4840, 4860, 4861, 4862, 4864, 4992, 5027, 6733, 7079, 7112, 7114, 7115, 7116, 7117, 7196, 7497, 7523, 7524, 7600, 7682, 8024.

3 ANALYSIS AND INTERPRETATION

In this part of the report the Elms Farm coins are considered as an assemblage of excavated artefacts. The first section explores the deposition of coins at the settlement during the Roman period, attempting to identify distinctive patterns of coin loss that might be of help in understanding how coins were used. The second and third sections compare the Elms Farm coins to assemblages from other sites in Roman Britain. The purpose of these statistical studies is to isolate those factors that caused the Elms Farm coins to arrive, circulate and become lost at the settlement. In other words, did Heybridge receive and lose particular coins because of its geographical location, its position within wider systems of exchange (whether economic or social), or a combination of these?

This analysis shows that, in terms of coin loss, the settlement at Elms Farm is most similar to a number of sites in East Anglia and southern Britain that seem to have been religious *loci* in the later Roman period. Furthermore, it is shown that, to a large extent, this is due to those coins recovered from the area of the temple (Area J) dominating those from other parts of the site. However, the extensive nature of the Elms Farm excavations also means that it is possible to refine this picture by an inter-site study of the coins, which is used to discuss how coin loss varied across the settlement throughout the Roman period.

3.1 Context & Deposition

The theory of applied numismatics rests on two clearly defined principles. The first asserts that coins that changed hands most often were lost most frequently, while the second principle states that the coin with the greatest chance of being picked up again was the most valuable (Casey Casey 1986; Reece 1987: 29). Site assemblages almost always consist of the most commonly used, low value, coins, even though the evidence from hoards shows that gold and silver denominations were available to the population throughout the Roman period. Therefore, the notion that there was a direct relationship between coin use and loss underpins the study of site-finds from Roman Britain. On the other hand, it is becoming increasingly apparent that where a coin was used and where it might have been lost were not necessarily the same places. Even when a coin was lost accidentally during a transaction, it is unlikely that it will have remained where it was dropped for very long. For example, the analysis of Roman coins from Cirencester indicates that these objects were being continually swept up and deposited with other refuse (Reece 1998: 254), although where they ended up depended on which part of the town was being used as the rubbish dump at that time (Guest 1998: 265-8).

In other cases the word loss is misused to describe coins that were deliberately deposited. What this means is often ill-defined and poorly understood, but here it is taken to mean the non-accidental deposition of coins as part of contemporary ritual practices. If the circumstances of deposition were deliberate then it is a mistake to describe that process as leading to an object's loss. Instead, the object being deposited was actively fulfilling a function and, therefore, was being used, albeit in a manner that means it was effectively 'lost' from circulation. The deposition of coins as votive objects in a temple, river or well for example, was merely another act in their continuing biographies, even though they were never intended to be recovered by their owners (for the deliberate deposition of coins in the river Thames, see Rhodes 1991: 183-5). It is unclear, however, how commonplace the deliberate deposition of objects in Roman Britain actually was. This is because these activities are only visible through the identification of structured assemblages; that is groups of objects whose composition appears unusual within the surrounding archaeology. On a number of occasions the excavations at Elms Farm produced coin assemblages that appear not to have been lost accidentally, but perhaps were deposited deliberately. In some cases the quantity of coins recovered from a feature was unusual, while in others the association of coins with additional objects suggested a structured assemblage that might be indicative of deliberate deposition.

(insert Table 2)

Table 2 shows the number of coins that, it is suggested, were deposited deliberately within negative features at Elms Farm. It is immediately obvious that such deposits were

concentrated at the centre of the site, particularly in the vicinity of the temple precinct in area J, and that in the majority of cases they are dated to the later Roman period. This is not to suggest that the deliberate deposition of coins was limited exclusively to the temple or to the fourth century, as Table 2 indicates that such activity also occurred in many areas of the settlement right through the Roman period. Nevertheless, there is no doubt that the concentration of deliberately deposited coins around the late Roman religious centre of the settlement is significant, and it is difficult to avoid concluding that this activity was intimately associated with contemporary ritual practices. Whether or not coins were used as votive objects throughout the fourth century at Heybridge remains to be seen, but the recovery of large quantities of Roman coins from the fills of ditches, pits and disused wells is certainly striking. The deposition of sixty-three coins in the pool of standing water that filled the top of disused well (22210) in front of the temple precinct's entrance was surely not accidental. It is difficult to imagine how the incidence of so many coins from this feature might be explained other than as a deliberate deposit closely associated with the nearby temple.

(insert Table 3)

Table 3 shows how these coins from the pool in Area J compare with two other large fourth-century groups from negative features at Elms Farm; the major boundary ditch (25027) of the late settlement to the north of Area J, and the pits that appear to have defined the northern limit of the temple precinct. In all three instances the composition of the coin groups are slightly different. Coins from the boundary in Area F included a number from the second and third centuries, a peak of coins struck in the 330s, but very few from the later fourth century. Pool (22210) in Area J produced a substantial number of radiates and barbarous radiates (but virtually nothing earlier), as well as a strong showing of bronze coins from the entire fourth century. The pits in the north of Area J (including the layers above them) produced mainly fourth century coins and the last decades of the Roman period are particularly well represented. This supports the suggestion that the boundary in Area F was open for far longer than the boundary pits in Area J (which do not seem to have remained open for very long), although other explanations are certainly possible. Perhaps the settlement's boundary was considered a more appropriate place to deposit old heirlooms than the pits within the temple precinct (hence the appearance of worn second century *sestertii* in the former). What ever the precise reasons for the deposition of these coins, the Elms Farm material shows that coins became increasingly popular as ritual / votive objects in the later Roman period.

3.1 Form and Function

In the chronological analysis of the Elms Farm assemblage the first task was to arrange the coin assemblage according to four broad Phases of production (A to D). This has been done on Table 4 and, although the identification of the Roman coins did not always allow their close dating, in the majority of cases it was possible to allocate a coin to a specific emperor or particular period of production. The Table itself is split into two sections (1 and 2) to show how the allocation of those coins dated less precisely can affect the pattern of coin loss. The first column allocates coins that can be assigned to an emperor's reign or fourth century period of issue, leaving 373 coins that are certainly Roman but which could not be identified to emperor or issue period (13% of Roman coins). 139 of these 'Roman' coins (4.7% of the total assemblage) can be allocated to the four coin Phases, particularly Phase A which includes all coins struck during the first two centuries of the Roman period (coins described as late third or fourth century cannot be allocated to one of these Phases as they might have

been struck during C or D). The second columns show the difference that these 139 coins make to the overall pattern, and it can be seen that Phase A benefits most from their reallocation. Nevertheless, this group has been excluded from the chronological study so that these site-finds can be compared with other assemblages without over-emphasising the proportion of early coins from Elms Farm. Table 4 shows that the majority of these coins were struck during the later fourth century (Phase D = 49.9%). It is significant that coins of the early Roman period are more common than coins of the later third century, including radiates and their copies (A:B = 26.3%:16.4%).

(insert Table 4)

2453 coins could be allocated to the series of twenty-one Issue Periods (IP) that cover the Roman period in Britain (Table 5). All copies, with the exception of barbarous radiates, are assigned to the same IP as their official prototypes (barbarous radiates were produced during the period from *c.*275-296 and therefore have been allocated to IP XIV). A technique for studying Roman coin assemblages has been developed over the last few years that allows any group of site-finds to be compared against the background of coin supply to Roman Britain, emphasising the significance of episodes when an assemblage deviates from the provincial mean (Reece 1995: 182-8). The Elms Farm coins have been subjected to the same statistical manipulations (see Table 5) and the resulting graph gives a good idea of the overall chronological distribution of the Heybridge coin assemblage (Fig. 1).

Elms Farm produced slightly fewer coins than the British average for the first century up to 69. After the Flavian period, however, the pattern is consistently upward until *c.*260, after which Elms Farm suffers a steep decline, with significantly fewer coins of the early radiate period than the average Romano-British site. For the remainder of the third century Elms Farm produced almost the same quantities of coins as the British mean and the graph moves horizontally between 275 and 317. A slight increase in the proportion of coins from 317 to 330 is followed by another steep decline that lasted until *c.*364. Coins of the House of Valentinian (364-78) are represented at Elms Farm in much greater numbers than the average British site and the graph rises steeply for Issue Period XIX. The last decades of the fourth century see the Elms Farm graph follow the British mean almost exactly, indicating a relatively normal Romano-British site. The profile of the Elms Farm coin assemblage is complex but can be summarised by the following ‘episodes’ of coin loss:

- above average loss, period by period, for the first two centuries of Roman rule
- a significant drop in coins lost sometime around *c.*260.
- average coin loss between 275 and 317, with a slight increase in loss rate up to 330
- another steep decline in the proportion of coins lost from 330 to 364
- much greater loss of Valentinianic coins (364-378).
- average coin loss between 378 and the end of the Roman period

(insert Table 5)

The coin assemblage from the settlement at Heybridge is of considerable importance to the study of site-finds as it consists of an amalgamation of different patterns of coin loss that are associated with different parts of the site. In order to view the development of the settlement more clearly this complicated picture of coin loss needs to be untangled and studied on an Area by Area basis. The Elms Farm assemblage has been sorted according to excavation Areas and the resulting coin profiles arranged according to their distinguishing

characteristics. Figs. 2-5 show the coin-loss graphs for these Areas and reveal how the overall Elms Farm pattern is made up of four separate groups of similar coin assemblages.

The first group consists of profiles identified by a rate of coin loss that is considerably greater than the British mean for the period up to 260, after which coin loss falls off throughout the remainder of the third and fourth centuries (Fig. 2). These graphs indicate that Areas away from the centre of the settlement produced the earliest coin loss profiles (Area W is the earliest of all and the furthest away from the centre). Areas B, R and E lie between W and the centre and also produce early profiles, although not so extreme as W (Area R was located within B, which was machine-stripped only, and the profiles for both coin groups are almost identical). Finally, Areas K and I also produced relatively early coin-loss profiles, yet they are on the southwestern edge of the centre of the site (K's location to the south of the centre might explain why its profile begins after 138, much later than the other early areas). Both K and I differ from the other early Area profiles by producing significant quantities of late-fourth century coins (presumably related to their location next to Area J in the centre of the excavated settlement – see below).

The second group of profiles from Elms Farm consists of two Areas just to the north of the centre, H and F (Fig. 3). Both of these are characterised by average coin loss during the first and second centuries, followed by a strong rise in the numbers of coins lost during the first half of the third century. This part of the settlement experienced a steep decline after this date, which lasted for the remainder of the third century (much like the Areas in the first group), while the fourth century never deviates much from the mean. The only difference between these two Areas occurs at the tail end of the fourth century when F produces fewer coins than the average, while Area H produces more. This might be explained by the proximity of Area H to Area J where late coins were lost in great quantities, or by the similar natures of the two areas as religious *loci*.

Areas M, G, L, and D comprise the third group of coin loss profiles, identified by a shared decline sometime during the early fourth century (although only Area M produced more than twenty coins). Three Areas close to the centre of the settlement (M, L and D) all show a steady decline from 138 to 260, while coins from G show small, sporadic, increases up to this date (Fig. 4). Unlike the Areas discussed so far, the profiles of the third group all show increasing coin loss during the period from 260 to 330. The collapse of coin loss occurs late in these Areas, during the early fourth century in M, between 330 and 348 in Areas G and L, while the profile for Area D manages to hold on until 330 to 348. The late influence of Area J can be seen on the profile of the neighbouring L, which experienced a slight return of coin loss at the end of the fourth century.

The final figure in this sequence of charts (Fig. 5) shows only one Area; the profile for Area J represents a unique pattern of coin loss at Elms Farm. While every other part of the settlement produced a profile showing a trend of above average coin loss for the first two centuries of the Roman period, Area J does exactly the opposite with a steady below average rate of loss over this time. J then follows most of the other Elms Farm Areas with a further drop in the number of coins lost after 260, though this downward trend continued until the mid fourth century. The fourth century after 364 is very strongly represented in Area J, particularly the years from 388-402.

These observations regarding the changing pattern of coin loss at Elms Farm can be tested by looking at the assemblage from another perspective; this time focusing on the inter-site

distribution of securely stratified coins from the site. This is easily done by using the numerous excavation areas of the site as the categories into which each chronological subdivision is divided. The distribution of Elms Farm's 679 stratified coins between the sixteen excavation areas is shown on Table 6, which immediately illustrates the great variation in the quantities of coins recovered from different parts of the site (Area J consistently produced large assemblages of Roman coins, while fewer than twenty coins from the whole Roman period were recovered from each of eight areas). In some instances this is an effect of the different methods of excavation, so that certain areas produced smaller assemblages because limited excavation took place after machine-stripping (Areas C and D for example). However, other Areas were more extensively excavated and in these cases the variation in coin recovery cannot be explained so simply. Instead, this disparity probably reflects real differences between levels of coin recovery that need to be interpreted in terms of varying coin loss around the settlement.

(insert Table 6)

During the early Roman period up to 260 coin loss was relatively evenly distributed across the site (Fig. 6), with four or five Areas producing relatively high proportions of coins (between 10 and 20%). If the pattern of coin loss up to the mid third century can be described as relatively dispersed across the settlement at Heybridge, then Figs. 7-9 show that this changed during the third century when coin loss became increasingly restricted to certain areas of the site. Almost half of the Phase B coins (radiates from 260-296) were recovered from Area J (Fig. 7) and even Areas such as B, G, R and W, where coin loss had been relatively common during the first and second centuries, produced very few coins by the late third century. This general pattern is repeated for the early fourth century (Fig. 8) when more coins struck between 296-330 were recovered from Area J than any other. The increasing nucleation of coin loss became even more exaggerated during the middle and second half of the fourth century by which time Area J accounts for over half of all coins lost (Fig. 9).

Studies of Romano-British site-finds have shown that sites with different functions exhibit different characteristics so that, for example, a temple in the countryside might be identifiable from its site-finds, or the coins from *coloniae* are generally distinguishable from those from small towns. Figs. 10 and 11 show the two groups of Romano-British sites that are most similar to the profile for Elms Farm / Heybridge. The first series of sites shares a higher than average rate of coin loss up to 260, followed by a decline sometime during the later half of the third century (Fig. 10). Reece suggested that these profiles tell a story of early activity (Sea Mills, Caerwent Pound Lane, Chichester) followed by late-third century disuse (Reece 1995: 192). After the early fourth century, however, the Elms Farm profile differs radically from these other sites, showing a reduction in the numbers of mid-fourth century coins rather than an increase. Fig. 11 compares Elms Farm with a second group of sites and it appears that there is a greater degree of similarity across the entire Roman period than with the first group. All sites in this graph share a slightly higher than average rate of loss up to the mid-third century, the steep decline after 260, a decline again from 330 to 364, and finally the sharp increase in coins lost during the late-fourth century, particularly between 364 and 378. The Elms Farm coin loss profile fits best with a group of sites that includes the late provincial capital at Cirencester, two important late Roman 'small' towns at Dorchester on Thames and Water Newton (Ashton and Thistleton Dyer lie very close to Water Newton), a small settlement in Hertfordshire, and, perhaps significantly, the temple at Chelmsford. The feature that identifies Heybridge from these other sites is the degree of

deviation from the British mean. Although the Elms Farm coin-loss profile does deviate from the average, it is less pronounced than at all of the other sites.

Those coins from Areas of the first group (W, B, R, E, K and I) are similar to site-finds from other sites with strong early profiles and a decline after 260. These include the military sites at London (Guildhall Museum), Southwark, Richborough, Brecon and the palace at Fishbourne. The second group's profiles (from Areas H and F) are not like any other recorded site (perhaps similar to the coin list from Reculver – Reece pers. comm.), while the third group of Elms Farm Areas is most similar to sites such as Braintree, Housesteads, Manchester, Whitton, Exeter and London (leap after 260, decline after 330). Finally, Area J, with the very late peak, is similar to Cirencester (St Michael's Field), Somerton, Sapperton and Colchester Butt Road (Reece 1995).

3.2 Regionality and Economy

Numismatists are aware that the supply of Roman coins to the various provinces of the empire has left an identifiably provincial pattern of coin loss against which assemblages can be compared in order to explore their coin-using histories. Regionality of coin supply has been explored in detail for the counties of Norfolk and Suffolk and these studies form the basis for this analysis of the Elms Farm coins (Davies and Gregory 1991; Plouviez 1995). This section asks whether the Elms Farm coins reflect the settlement's function and role within the local and wider economy, or whether they indicate that Heybridge was a settlement within an East Anglian region of coin supply, probably located towards the south?

To determine whether these differences might be connected with the economy at the regional level or not, coin-lists from 100 other Romano-British sites have been collected for comparison with Heybridge (Table 7). Norfolk provides twenty-four coin lists including some excavated groups, though most were recovered during field-walking or by metal-detectorists. The site-finds from forty-seven sites in Suffolk include six small towns, while the remainder are mainly surface finds from rural settlements whose extent and form are imperfectly understood. Coins from a further thirteen sites from Essex have been published and are available for comparison with Heybridge. They are generally from the Roman end of the settlement spectrum, including the *colonia* at Colchester and the small towns at Braintree, Kelvedon and Great Dunmow. Finally, another sixteen sites from Bedfordshire and Hertfordshire were included to extend the survey westwards from Essex and into the south Midlands.

(insert Table 7)

Comparing the quantities of sites-finds from the late third century and the period from 330-402 has been shown to be a very useful method for distinguishing different groups of sites. Richard Reece has suggested that sites favouring the earlier coins are typically urban settlements, while those that produce greater numbers of fourth century coins were more rural in nature (Reece 1987b: 17). In their study of the coins from Norfolk, Davies and Gregory found a similar pattern in which rural settlements, and temple sites in particular, produced assemblages with large quantities of fourth century coins (Davies and Gregory 1991: 75-77). The ratios of coins from 260-96 (Phase B) and those from the middle and later fourth century (Phase D) are shown for the 101 sites on Fig. 12 where each site is shown according to its home county. While we cannot expect obvious divisions between sites dependant on their location within modern counties, some differences might be anticipated at

the extremes, for example between Norfolk and Essex perhaps. It is difficult, however, for the eye to pick out significant constellations from the mass of information on Fig. 12 and the plots for the three counties and one region are shown separately as Figs. 13-16.

Norfolk

Coins from within the walls at Venta are urban according to their position on Fig. 13 where they lie in close proximity to the site-finds from the Saxon Shore forts at Brancaster and Caistor-by-Yarmouth, as well as the small town at Brampton. Coins from outside the walls of Venta and Caistor, however, have the characteristically rural trait of more fourth century coins. This phenomenon has been well documented in the past and suggests that extramural areas were linked more closely to the countryside than to the adjacent towns and forts. The extramural group from the south of Venta, for example, is very different from the other Venta coin lists, yet is more similar to the rural sites at Billingford and Brettenham as well as the temple sites at Great Walsingham, Thetford Fison Way and Hockwold-cum-Wilton (Leylands Farm). Others have previously suggested, from the discovery of 'horse and rider brooches', that Brettenham may be the site of a temple (Gurney 1986: 89), while the limited range of metalwork from Billingford (overwhelmingly coins with some items of jewellery) is probably significant (Gurney 1995: 61). Norfolk also produces sites with very early coin lists, some of which are anticipated (such as the fort site at Swanton Morley), as well as others that are more unexpected (like the extramural temple to the northeast of Venta or the rural temple at Crownthorpe). In general, however, the distribution of Norfolk site-finds can be described as tending towards the lower half of the scattergram, though without occupying the lower right-hand corner where Phase D coins dominate.

Suffolk

This pattern is in contrast to the distribution of Suffolk sites that is spread more diagonally between the ends of the two main axes (Fig. 14). The six Suffolk small towns tend to position themselves in the centre of the graph, though the site-finds from Coddham and Wenham are pulled towards the bottom left by higher proportions of early Roman coins (35% and 27% respectively). Apart from these two small towns, and the rural settlement at Ilketshall St John and the Ipswich villa, sites in Suffolk do not produce the same quantities of early Phase A coins that have been found on a number of Norfolk sites. Settlements thought to be rural in nature, such as Little Cornard, Hitcham, Alderton and the possible rural temple at Charsfield, are found at the extreme end of the urban part of the graph in the upper left-hand corner. Sites with overwhelming concentrations of Phase D coins are often those with a religious function and in Suffolk this part of the graph is occupied by the rural sites at Mildenhall and Freckenham, both of which have produced coin hoards and objects with votive significance from the late Roman period (Plouviez 1995).

Essex

By contrast the pattern for Essex sites is not dominated by later Roman coins (Fig. 15). Site-finds from inside the *colonia* at Colchester and the civitas capital at Chelmsford all cluster together above the B:D mean line as expected for urban sites. Their position towards the bottom left corner of the graph indicates that their coin-lists contain significant proportions of early Roman coins, although surprisingly not to the same extent as the small towns at Braintree and Kelvedon or the temple at Harlow. The settlement at Heybridge is located near the B:D mean, but is rather isolated in terms of the overall distribution of Essex sites. Previously, the Heybridge assemblage was described as consisting of four separate numismatic groups, or 'zones', distinguishable by their individual characteristics of coin loss. The earliest Heybridge group (H1 on Fig. 15) consists of Areas that together produced 195

coins, of which 56% were struck before 260 (areas W, B, R, E, K and I). The second group of areas from Heybridge (H2, Areas H and F) lies, like Heybridge overall, in isolation just below the B:D mean line. The third group (H3, Areas M, G, L and D) resembles the site-finds from Colchester and Chelmsford, with a strong showing of radiates after 260 but a sudden decline in the number of coins after 330. The final Heybridge zone (H4, Area J) consists of the coins from the temple and enclosure situated towards the centre of the settlement, and the coins from this area are consistent with the site-finds from the temples at Chelmsford and Great Dunmow, as well as Colchester's extramural cemetery at Butt Road.

South Midlands

Turning to the site-finds from Hertfordshire and Bedfordshire it is interesting that the early Roman coins of Phase A are of only limited influence in the south Midlands region (Fig. 16). The small towns of Sandy, Baldock, Magiovinium and Braughing congregate as a group very close to the B:D line and cannot decide if they are urban or rural settlements. A group of Hertfordshire villas in the upper left corner clearly suffered a decline some time between the late third and early fourth centuries and they produce very few coins from the entire fourth century. Wheeler's excavations at Verulamium provided a similar numismatic history, though this might be explained by the excavation tending to focus on the earlier stratigraphy. The site-finds from Frere's excavations at Verulamium are more what we might expect from a major urban site and are similar to the coins from Colchester and Chelmsford. Verulamium's Theatre behaves like a small town, while the fourth century extreme is occupied by the Mausoleum and associated villa at Bancroft.

If we return to Fig. 12 it is apparent that there is indeed some regional variation within the overall distribution of East Anglian coin assemblages. Early Roman coins are most common from major settlements in Essex and Norfolk, including the Essex small towns of Kelvedon and Braintree. The Suffolk sites are more confined towards the centre of the graph indicating the absence of these early coins in any quantities. That the site-finds from Suffolk are more strung out between the upper left and lower right corners suggests that settlement occupation here was more episodic than in other regions. Sites such as Little Cornard, Hitcham and Alderton lost most coins during the late third and early fourth centuries, while late fourth-century coins are far more common from the settlements at Hinderclay, Edwardstone and Barham. The majority of Norfolk site-finds are found in the centre of the graph and towards the bottom right-hand corner. This indicates that Norfolk received more fourth century coins than late third century radiates, which could be a result of relatively depressed radiate supply, or increased use and supply during the later years of the fourth century. Essex sites, other than temples, experienced a decline in coin loss during the first quarter of the fourth century, though the abundance of later-fourth century coins from religious sites shows that coins must have been available to be used in Essex, and that the decline was a result of restricted coin use rather than problems with their supply. Site-finds from the south Midlands region are spread diagonally across the graph indicating, as in Suffolk, a general paucity of Phase A coins and a further division of sites between those with very few Phase D coins and those where these fourth century issues were most common. There is good evidence, therefore, to support the notion that Romano-British settlements in East Anglia produce coin assemblages whose characteristic features were determined by location within the region. In other words site-finds from Essex, when viewed as a group, form a different pattern from the coins recovered from Norfolk sites.

If we now expand the plot of site-finds from East Anglia to show each settlement's function, or type, it should be possible to begin to identify any economic links that might have existed

between sites (Fig. 17). Two groups of sites are immediately identifiable in the centre of the resulting graph. The first consists of large urban sites such as the *colonia* at Colchester, the *municipium* at Verulamium and the civitas capitals at Chelmsford and Venta Icenorum. As expected these sites lie above the B:D mean line and are closely associated with the Saxon Shore forts at Brancaster and Caistor-by-Yarmouth. The second group of sites is situated along the B:D line and comprises several small towns and four extramural sites. Small towns from Suffolk and the south Midlands together form a relatively tight group suggesting that function could also determine a settlement's coin-list, even within a region the size of East Anglia where geography was also a determining factor. The comparison of the Saxon Shore forts and their extramural sites is interesting as the forts' site-finds are more erratic. While the intramural sites tend to produce coin assemblages with greater quantities of Phase B radiates as well as Phase D fourth-century coins, the extramural coin-lists show a more even distribution between the four coin phases, particularly early coins of Phase A. Of course this method can only identify general trends and there are a number of sites whose coins put them outside the main clusters of settlements. The Culver Street site in Colchester declined too early in the fourth century to fit with the main large town group, while Braintree and Kelvedon in Essex produced more first and second century coins than other small towns in East Anglia. Two extramural sites, Colchester Butt Road and Venta South, are situated at the bottom right-hand corner of the graph together with a group of temples and rural sites in Suffolk with religious significance.

Overall the Heybridge site-finds fit neatly with the group of small towns and extramural sites, lying close to the assemblages from Baldock, Magiovinium, Hacheston and extramural Venta. It is instructive, however, to see how the four 'zones' of coin-loss at Heybridge also compare with the overall picture from East Anglia. The first Heybridge zone finds itself with sites that have a majority of early Roman coins and a decline of coin loss before 260 (for example, the temple at Venta and the small town at Braintree). Those Areas of Elms Farm that comprise the third zone produced a coin list that is very similar to large town assemblages, with relatively consistent coin use throughout the Roman period but an urban-like ratio of late third and fourth-century coins. The fourth Heybridge zone, on the other hand, is surrounded by religious sites and it is significant that the temples at Great Dunmow and Chelmsford produced similar coin-lists.

Comparison of Figs. 12 and 17 shows that, while there was certainly some geographically determined variation of coin use in East Anglia during the Roman period, a more significant factor was the similar coin-using histories of specific groups of settlements. Coins of the first and second centuries only appear to have circulated among a small number of sites in the region, typically the urban and military centres in Norfolk, the south Midlands and especially Essex. The monetisation of East Anglia involved an increasing use of coins in the more outlying areas of Suffolk and Norfolk during the latter half of the third century and most settlements began to lose coins during this period. After this high point of East Anglian monetisation it becomes a question of when coin use declined at specific sites. By the middle of the third century, just when coin use was becoming increasingly common, certain important settlements, particularly in Essex and the South Midlands, were among the first to experience a decline in the use of coins. This includes two small towns in Essex (Braintree and Kelvedon) and the temples at Venta, Harlow and Crownthorpe. The group of villas close to Verulamium made it to the early fourth century before decline set in, while the large towns in the region lasted until the middle of that century. Coins were still being used in small towns, extramural sites and Saxon Shore forts for rather longer than in the civitas capitals and *colonia*. By the very end of the Roman period, however, coin use was restricted largely to

religious and temple sites, though these might be located within the walls of towns as well as the countryside.

The coins from Elms Farm suggest that Heybridge exhibits a pattern of continued coin loss because different parts of the settlement used coins at different times throughout the entire Roman period. The peripheral areas of Heybridge saw the earliest use of coins at the settlement, as well as the earliest decline. Unlike the pattern for Braintree, however, this did not mark the decline of Heybridge as a whole (it must be borne in mind that Braintree has not been as extensively excavated as Heybridge). Instead, coin use extended to other parts of the town becoming increasingly centralised and concentrated during the later third and fourth centuries. The third zone of coin use at Heybridge exhibits strong similarities with the group of large towns in the region and we can speculate whether that was because coin use in this part of Heybridge was linked to the economic fortunes of the nearby civitas capital at Chelmsford and the *colonia* at Colchester.

A feature of the end of the Roman period in East Anglia, as elsewhere in southern Britain, is the apparent restriction of coin use to religious sites. The presence of the Heybridge temple in Area J resulted in the continued arrival of coins at the settlement even during the late fourth and early fifth centuries. It is possible that spaces around such temples were being used as markets at the end of the Roman period (having replaced earlier marketplaces elsewhere). For several reasons, however, this is unlikely and it seems more appropriate to understand the coinage of the late fourth century as something other than a means of exchange. Firstly, the use of coins in a market would lead to their dispersion beyond the place of exchange, not an overwhelming concentration precisely in that place. Secondly, and more significantly, late Roman bronze coins found on religious sites are frequently recovered from wells or pits and are often associated with a limited range of other artefacts, particularly toilet implements and bracelets of various types (see section 3.1 in this report and pp. xx-xx).

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