COIN-LOSS AND THE ROMAN OCCUPATION OF NORTH-WEST 
ENGLAND

DAVID SHOTTER

For more than half a century the recording and publication of Roman coin-finds in Scotland has provided a body of evidence of immeasurable importance to all who are concerned with the study of the Roman occupation of Scottish sites.\(^1\) Elsewhere in Britain, however, whilst such work may have been undertaken with respect to individual sites, it has rarely been published on a regional basis. Over the last two decades an attempt has been made to collect all information on Roman coins found in north-west England – an area covered by the historic counties of Cumberland, Westmorland and Lancashire.\(^2\) The purpose of this compilation has been to maximise the contribution of the coin-evidence to our understanding of the Roman occupation of north-west England through which we may hope to see not just the chronology of occupation of individual sites, but also the nature of that occupation, and look further afield for evidence of the social and economic effects on the region of the concentrations of Romanised activity in the forts and their extra-mural settlements.

It is, however, important to recognise the shortcomings in the evidence itself and the difficulties inherent in its interpretation. It is self-evident that we need site-samples which are as large as possible and to achieve this, we must call upon coins found at different times and in a variety of circumstances, and which have been recorded with variable levels of completeness, and even of accuracy. At most sites in north-west England, the number of coins recovered during controlled excavations has been relatively small, although Carlisle, probably the most significant site in the region, is an exception to this, with the majority of its sample of two thousand coins deriving from the work undertaken since the mid-1970s by the city’s Archaeological Unit. In other cases, however, coins lie in the collections of local museums or have been reported by metal-detecting enthusiasts and in both instances provenances are often only tenuously established.

The antiquarian tradition in the north-west has been strong, and considerable numbers of coins are recorded in such sources. However, with such material, in addition to the expected problem of variable standards of recording, we have the added difficulty of assessing sampling-criteria, which obviously have their roots in the motives of the antiquarians themselves. Some, at least, were collectors or ‘agents’ for collectors, and were therefore attracted by the better-produced and better-preserved pieces. This has probably led to a bias in many such records towards coins of the first two centuries AD, with less attention paid to the often scrappy and visually unrewarding coins which dominated from the middle of the third century AD.

The final destination of many such coins may have been the coin-cabinet of the lord of the

Acknowledgements. My thanks are due to Peter Lee of Lancaster University Archaeological Unit for drawing the maps which appear as figs. 1–6. I am also grateful to Adrian Olivier and Rachel Newman (of Lancaster University Archaeological Unit), to Mike McCarthy and Ian Caruana (of Carlisle Archaeology Unit), and to Tony Wilmott (of Central Excavation Unit) for allowing me to make use of information about Roman coins from their sites in advance of their full publication.

\(^1\) The work was pioneered in *PSAS* by Sir George MacDonald, continued by Anne Robertson, and is currently in the charge of Donal Bateson.

\(^2\) D.C.A. Shotter, *Roman Coins from North-west England* (Lancaster, 1990); it is intended that quinquennial supplements to the original compendium will be published by the Centre for North-west Regional Studies at Lancaster University. My compilation contains the detailed find-references, which will not be repeated here.
manor. Over a period of generations this often resulted in the effective disappearance of site-collections, leaving no opportunity for modern re-examination of the coins concerned. An example in the north-west is provided by the three hundred or so coins collected from the fort at Ambleside by and for the Braithwaite family. It was recorded in the late seventeenth century that these coins were to be left as a bequest to the Ashmolean Museum, but there are strong reasons for believing that the coins went elsewhere, and have subsequently disappeared. A happier story is provided by Lancaster where two local antiquarians of the nineteenth century - Thomas Dalzell and Corbyn Barrow - made meticulous records of what they found. The rediscovery of their notebooks in Lancaster Museum has enabled a good part of the Museum's collection of Roman coins to be provenanced, and has allowed the partial reconstruction of a hoard of republican and early imperial denarii, found in the city in 1856.

A distinct problem which arises out of the use of antiquarian evidence concerns the question of determining the status of recorded coins - whether they were casual losses of the Roman period, hoards, votive deposits, or even subsequent redepositions. Few sites in the north-west were fortunate enough to benefit from a determined attempt at an early stage to resolve such difficulties. In the case of Manchester, however, Professor R.S. Conway made a significant effort to bring order to the large number of coins reported in the industrial upheavals of the eighteenth and nineteenth centuries.3 Even so, it clearly proved impossible to eliminate completely the distortion of the record of casual losses at the site caused by the dispersal of hoards, particularly the large hoard of fourth-century coins found at Knott Mill in 1849. Such confusions continue to occur, as is shown by the two similar groups of denarii recorded from the fort at Birdoswald in 1930 and 1949,4 and by a small group of denarii found during excavations at Ribchester in 1978,5 and judged by a coroner's inquest - almost certainly incorrectly - to have represented a casual loss.

The long time-spans covered by many savers' hoards alert us to the length of time over which coins might remain legal tender. It can be seen, for example, from the Standish (Wigan) hoard of 1926 that a worn denarius of Nero might represent a loss as late as the reign of Severus Alexander, and the legionary denarii of Marcus Antonius appear to have been still more resilient.6 However, whilst it is clear that the date-of-loss is more significant in many cases than the date-of-issue, it is rare, except in modern excavation-reports, to find any indication of a coin's state of wear. Even though the estimation of wear must be a very subjective matter, depending on individual and incalculable considerations, a broad sense of whether a coin is little worn or very worn represents an important piece of information, which will clearly affect interpretation of that coin's significance.

In some cases, we may know of political or monetary decisions which had a major impact on the circulation of particular types of coin. For example, what might be the fate of coins issued by an emperor who suffered the posthumous damnatio memoriae? Some decisions are reasonably clear in their effect: the historian Cassius Dio, for example, records that in c. AD 110, the Emperor Trajan recalled old silver coins.7 Reece's study in this matter has demonstrated that as a result republican denarii (except for those of Marcus Antonius) and pre-Neronian imperial denarii ceased to circulate.8 Moreover, it is clear that in the case of

---

3 In F.A. Bruton, *The Roman Fort at Manchester* (Manchester, 1909).
4 The group found in 1930 was clearly a hoard (I.A. Richmond, 'Excavations on Hadrian's Wall in the Birdoswald to Pike Hill sector', *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* Series 2 (henceforth *CW*), 31 (1931), 122-34), whilst the 1949 group represented a casual loss (I.A. Richmond, 'The Birdoswald hoard and its composition', *CW* 54 (1954), 56-60).
5 The coins and the circumstances of discovery are discussed in D.C.A. Shotter, 'Six Roman hoards from Lancashire', *Lancs Arch J* 2 (1982), 39-45.
7 Cassius Dio LXVIII. 15, 3.
Britain this took a little time to have effect — indeed, until the early Hadrianic period (c. AD 120). Thus, the presence of early denarii in a partly-recorded hoard, such as that of 1856 from Lancaster (see above), makes it unlikely that the full hoard contained coins later than the early years of Hadrian’s reign.

Again, Casey has demonstrated the effect on circulating coinage of the decision in the mid-third century AD to issue a double-sestertius which, apart from the radiate obverse, was very similar in size and appearance to the ‘single’ sestertius.9 It is evident that this gave a boost in circulation-life to old, often very worn, sestertii — as is clearly shown by a small hoard from Flaggrass (Cambridgeshire), now in Wisbech Museum, which contained eight very worn second-century sestertii and a single radiate-sestertius of Postumus.10 A different kind of issue is raised by Constantine’s decision for political reasons to claim Claudius II (Gothicus) as an ancestor.11 We may wonder how this should affect our interpretation of finds of coins of Claudius II, and particularly those of the posthumous DIVVS CLAVDIVS issues, which could well refer to the period in the early AD 320s, when Constantine was trying to justify and establish a unitary imperial authority.

As a general monetary consideration we should not overlook the effects of inflation. Although this was to cause chaos in the third and fourth centuries, its less dramatic, though still significant, effects in the second century need to be kept in mind. Just as we have witnessed denominational disturbance in our own money in the last quarter of a century, we should note that in Rome the second century saw the progressive disappearance of the quadrans, semis, as, and even the dupondius, so that by the end of that century, the denarius and sestertius were the chief coins in circulation. As Casey has shown, this will have had an impact in terms of site-totals, and perhaps the zeal with which a lost coin may have been pursued.12 It also suggests that comparisons of sites and periods have to be based on something other than simple numbers of coins lost, and that the ‘recovered face-value’ may provide a more meaningful basis for discussion.

Two further practical points may be made: first, we need precise find-spots for coins, since it is becoming clear that at some sites in the north-west different parts of the same site may present a different chronological ‘face’. This is, for example, very pronounced at Ribchester, where the chronological span of coins recovered from fort-locations continues into the middle of the fourth century, but where extra-mural locations have so far failed to produce coins later than the late Antonine period.13 The cause of this is so far elusive. It follows, however, that we should be unwise to draw too binding conclusions concerning the military occupation of a site where, as at Watercrook (Kendal), the bulk of known coins have derived from excavations in the extra-mural settlement. The paramount need for such precision of find-spot has been clearly highlighted in recent years by the discussion of coin-finds from the Antonine Wall, and their contribution to the debate on the termination of the Wall’s occupation.14

Second, we should note the variable sizes of site-samples (see Appendix). Some sites have yielded a mere scatter of coins, or even none at all, whilst Carlisle has produced in excess of two thousand. A few sites have samples of between one hundred and three hundred, but we should be very unwise to place too much reliance on trends which appear to emerge from samples significantly smaller than one hundred coins. It should be noted that in general small samples indicate sites at which little excavation has taken place, but even at those sites which

---

11 E.g., _Inscriptions Latinae Selectae_ 699; Trebellius Pollio, _Scriptores Historiae Augustae_, _Divus Claudius_ 13, 1–4.
12 Casey, ‘The interpretation of Romano-British site-finds’ (note 9), p. 44.
13 D.C.A. Shotter, _Roman Coins from North-west England_ (Lancaster, 1990), pp. 35f.
have produced the larger samples the percentage-area of ground-space tested will represent a very small proportion of the whole site.

We have seen that for a variety of reasons discussions of occupation-patterns at sites in north-west England are most fruitful for the period up to the reigns of Antoninus Pius and Marcus Aurelius. Within that period, we may look for evidence concerning the initial occupation of sites, troop-movements dictated by changing frontier-policies, and, to an extent, types of garrison.

Interpretations of the Roman conquest of north-west England have naturally been much dependent on Tacitus' accounts and comments in the *Agricola, Histories and Annals*;\(^{15}\) the broad purport of these accounts has been taken as indicating that the major contributor to conquest was Agricola, and that, after his recall in AD 83, little happened in the region until the arrival of the Emperor Hadrian in the early 120s. The evidence provided by coin-loss has helped in releasing the Agricolan 'stranglehold' and showing that the adjective, 'Agricolan', has been used far too lightly in the past.\(^{16}\)

The earliest events described by Tacitus (in the *Annals*) date from the time when the Brigantes of northern England still lay outside the province of Britannia. It is clear that, from time to time, relations between the main Brigantian leaders were fraught, necessitating the use of the Roman army to restore the equilibrium. What mark has been left in north-west England by such military activity in the 50s and 60s? There are certainly no known forts north of Chester to which so early a date can be ascribed. But there are – mainly from coastal locations – a considerable number of pre-Neronian *aes* coins, including a significant number of Claudian copies. Since such coins have very rarely been reported from stratified deposits in site excavations relating to the Flavian period or later, we may reasonably infer that finds of these coins may be taken as indications of pre-Flavian activity.\(^{17}\)

There is currently no suggestion that permanent occupation was undertaken at this stage at any site north of Chester, so these coins provide our only clue to what Tacitus may have meant. It would seem reasonable to suppose that troops based at Chester were taken by ship up the north-west coast and landed at appropriate points. The coin finds suggests that these points included the estuaries of the Mersey, the Ribble and the Lune, each of which will have provided access into the interior, together with coastal locations in southern Cumbria and around the Solway Plain (fig. 1).

The client-kingdom of the Brigantes finally broke down in AD 69, and the full-scale intervention was required of Vespasian's first governor, Petillius Cerialis. His progress east of the Pennines, leading to the establishment of the legionary fortress at York, is well known. It is probable also that he crossed the Pennines by way of Stainmore, although the forts on that route have not yet yielded sufficient coins for us to be able to use them as evidence of this. Tacitus also indicates that Cerialis split the available troops with Agricola, then commander of Legion XX, with the implication that he was allowed to pursue a route on the western side of the Pennines parallel to that of Cerialis in the east. In recent years, the extension of dendrochronology into the Roman period has shown that at both Ribchester (fig. 7) and Carlisle (fig. 8) there is evidence of timbers cut in the late 60s and early 70s.\(^{18}\) It cannot be regarded as accidental that whilst neither of these sites has produced much pre-Flavian *aes*, both have very high Flavian coin assemblages, in which significant groups are constituted by coins of Vespasian's early years, and which exhibit little wear. Further, both have produced a

---

\(^{15}\) Tacitus, *Annals* XII. 40; *Histories* I. 2, 1 and III. 45; *Agricola* 8 and 20.


\(^{17}\) A full discussion will be found in my forthcoming article 'Rome and the Brigantes: early hostilities', in *CW* 94 (1994).

\(^{18}\) For summaries, see *Britannia* 21 (1990), 330 (Carlisle) and 328 (Ribchester); also Shotter, *Romans and Britons* (note 16), pp. 13-15.
Fig. 1 North-west England: Find-spots of pre-Neronian aes coins
Fig. 2 North-west England: Early Flavian sites
COIN-LOSS AND THE ROMAN OCCUPATION OF NORTH-WEST ENGLAND

good many republican denarii, and Ribchester has denarii of Augustus and Tiberius, which are
not particularly worn. Pottery derived from field-walking has extended the list of early Flavian
forts to a new one at Blennerhasset in north-west Cumbria, an apparently single-phase site
which has so far yielded no coins at all (fig. 2).

The coin samples at a number of other sites (figs. 9 and 10) have shown a clear
preponderance of coins of the Flavian period over Trajanic issues. These must be Flavian
sites, though established a little later in the period than either Ribchester or Carlisle. It would
not be unreasonable to accept these sites as Agricolan, presumably belonging to the campaign
of AD 78. If so (and the evidence of coins will have made a significant contribution to this),
we can postulate an early Flavian advance from Chester, following the foothills of the
Bowland Fells, and the Lune and Eden valleys, to Carlisle, and possibly winning control of the
good agricultural land of the Solway Plain. This was then consolidated in the late 70s by
Agricola, perhaps, as later, employing amphibious operations. Unfortunately, other sites
relevant to this hypothesis – Burrow-in-Lonsdale, Low Borrow Bridge and Brougham – have
yielded insufficient coins or other evidence to allow them to be firmly included. It is worth
noting in passing that whilst there was evidence of pre-Flavian activity in the area of Walton-
le-Dale, this site does not seem to have figured in the Flavian scheme, but rather to have been
replaced by Kirkham on the north side of the Ribble.

It would appear, therefore, that the coastal plain of Lancashire and the Lake District of
Cumbria were left largely untouched by this early Flavian campaigning. The impression left
by Tacitus in the Histories is that Agricola’s recall in AD 83 precipitated a period of neglect in
the north. However, the volume of Domitianic coinage from Carlisle suggests that there at
least activity was pursued positively, and no Agricolan or pre-Agricolan sites in the north-west
show any sign of slackening activity in the late Flavian period.

Although most Cumbrian sites have seen little excavation, and have therefore produced
little artefactual evidence, a picture is emerging of a group of sites with some pre-Trajanic
coinage, but at which Trajanic coin-loss enjoys a preponderance over Flavian. In this group
we can include Watercrook (fig. 11), Maryport, which stood at the end of a new road running
from Carlisle through Old Carlisle (fig. 12), and Ravenglass, which was established at the end
of a route penetrating the Lake District from Ambleside by way of the Hardknott Pass. The
sites at Old Penrith (fig. 13) and Papcastle (fig. 14) probably also belong to this period for,
although they show a preponderance of Flavian over Trajanic coin-loss, the Flavian coins,
which in these cases derive mostly from the excavations respectively of 1978–79 and
1984–85, exhibit a considerable degree of wear and can thus be regarded as largely residual in
circulation (fig. 3).

Thus, coin evidence allows us to postulate that through the later years of Domitian and the
regimes of Nerva and Trajan, a positive programme for establishing the policing network was
undertaken. Further south, we can also see the development of the infrastructure: a road was
laid out running northwards from Chester along the Lancashire plain. Along it two major sites
were established in the late Flavian years: the industrial complex at Wilderspool (fig. 15) and
the military depot at Walton-le-Dale (fig. 16). The coin-evidence from these sites resembles
that from the depot of Legion XX at Holt in one important respect: none of them appears
significantly to outlast the second century AD. Clearly, military supplies must have been
organised on a different basis from the Severan period (fig. 4).

The second century AD was obviously dominated by the changing frontier policy, which
must have necessitated considerable movements of troops. We certainly do not have the
evidence to produce a comprehensive picture of this, but coin loss helps to fill the vacuum. By
Fig. 3 North-west England: Pre-Hadrianic sites
Fig. 4 North-west England: Sites occupied at the death of Hadrian.
the early second century AD, we can accept the proposition that an emperor's coins saw their freest period of circulation in the early years of his successor's reign. Thus, a depressed Trajanic sample may point us not to a factor in Trajan's reign itself, but rather to one in the reign of Hadrian. Ribchester, where Trajanic and Hadrianic coin-loss are (unusually) almost identical, appears to be a case in point. Here, there is some supporting epigraphic evidence which indicates that the fort's early garrison of Asturian cavalry moved to Hadrian's Wall, thus giving a break in occupation – probably of short duration – in Hadrian's reign. A similar phenomenon at Ravenglass, however (albeit on a small overall sample), almost certainly indicates a site which was not established until well into Hadrian's reign. That a large-scale decommissioning of forts in the north-west at this time might, however, have proved risky is suggested by a small, but not insignificant, group of hoards whose termination dates appear to lie in the late Trajanic/early Hadrianic periods.

By the time that the Antonine Wall was constructed in the 140s, it appears on the evidence of depressed Hadrianic samples at some sites that more garrisons may have been wholly or partly spared from forts in north-west England – Lancaster and Watercrook, and possibly also Old Penrith, Old Carlisle and Papcastle. In addition, we may include some Hadrian's Wall forts – for example, Castlesteads (fig. 17) and Birdoswald (fig. 18), though in the latter case we must await full publication of the 170 or so coins which were recovered in the excavations of the late 1980s.

The make-up of the coin population in denominational terms is clearly also of significance, although unfortunately too often in the past coins have been recorded simply in terms of their issuing emperors. It is clear, however, in the cases of sites for which full information exists, that some have produced noticeably larger proportions of denarii and sesterces than others, which is reflected by calculating a figure of 'as-value per coin'. Sites such as Ribchester, Papcastle and Carlisle may on this basis be thought of as having supported garrisons enjoying higher rates of pay – legionaries or auxiliary cavalry. Lancaster, a known cavalry-fort, has to be omitted from this group simply because the denominational breakdown of most of its coin-sample is unknown.

It is harder to use coin-loss of the third and fourth centuries for detailed discussion of occupation-trends in the period, because of doubts which continue to surround the circulation patterns of much of the coinage. Few reformed radiates or tetrarchic issues are found, and not many coins of the Carausian rebellion. Generally, however, radiate copies make up approximately 30 per cent of the samples of north-west sites, with a preponderance of copies of extremely poor quality. In these circumstances attention should obviously be drawn to sites (or parts of sites) with a significantly smaller sample of radiate copies. The fact that this small group includes Castlesteads (on Hadrian's Wall) serves to highlight problems of interpretation of the frontier in the third century. The inclusion of Wilderspool and Walton-le-Dale in this group has already been noticed.

Coin loss in the fourth century is equally difficult to interpret, not least because of the uncritical use of the term 'Constantinian' to cover a period of c. AD 310–360. At many sites, coins of AD 330–346 are almost as prolific as radiates. At Carlisle, where military and civilian sites can be differentiated, there is no significant difference in the incidence of these coins at the two types of site. Further, since presumably such coins continued to circulate through the fourth century, we can pick up in the coin evidence differing levels of activity at sites as the century developed, though for reasons stated earlier we have to be cautious before believing that we have necessarily received a complete picture.

20 Roman Inscriptions of Britain, 1462–6 (Chetham).
21 Shotter, 'Six Roman hoards from Lancashire' (note 5).
We may observe, then, a decline in activity in the first half of the fourth century at sites such as Bewcastle (fig. 19), Kirkby Thore, Old Carlisle, Old Penrith, and Watercrook. Ribchester does not appear to extend much beyond the middle of the century, whilst at Maryport, Ravenglass, and perhaps Brough-under-Stainmore, a slackening in the middle of the century may have been followed by a later revival. A relatively small number of sites retain strength in coin-loss through the Valentinianic period, and have also yielded coins down to the end of the fourth century. Lancaster and Carlisle are amongst these, whilst a Theodosian solidus was found beneath Muncaster Castle, near Ravenglass. In other words, sites with the latest coin-evidence appear to be those situated on or close to the coast – Carlisle, Maryport, Ravenglass and Lancaster – and if we are correct in putting Brough-under-Stainmore in this group, then it probably points to the continuing significance of the route from York to Carlisle (fig. 5).

Coins of the late fourth century may, of course, also provide pointers to activity significantly later than their date of issue; for example, a 'strip-house' on the Blackfriars Street site in Carlisle, established in the Flavian period, yielded a worn coin of Honorius embedded in its wall-structure. Again, a solidus of Valentinian II came from a hypocaust in Scotch Street in Carlisle, stratified beneath two phases of reconstruction of the hypocaust. Similarly, a full discussion of the significance of the late coins from Birdoswald is awaited with interest. We may also point to two north-west hoards – from Brindle (Lancashire) and Denton (Greater Manchester) – which contain worn Theodosian issues.

This paper has concentrated upon aspects of the military occupation of the north-west. We should not, however, lose sight of the fact that the presence of the Roman army in a regularly-spaced policing network offered opportunities to a substantial civilian population. The available evidence suggests that, whilst most military sites supported extra-mural settlement, we should not assume that in chronological terms these settlements were of necessity closely similar to the neighbouring forts. As has already been noted, at Ribchester the disparity between the coin-evidence from the fort and that from the civilian settlement is sufficiently large to leave us with an unanswered question. Work on a number of non-military sites in Carlisle has also shown up disparities within the group while at Lancaster, where occupation of the coastal fort appears to have continued into the fifth century, those parts of the civilian settlement which have been left undamaged by eighteenth-century cellaring appear to terminate nearer to the middle of the fourth century, prompting the suggestion that latterly soldiers and civilians may have occupied the fort together.

Finds of hoards and individual Roman coins indicate that good land close to Roman sites and in major river valleys was at a premium – perhaps reserved for local farming 'magnates' or for discharged veterans. The small number of excavations that have taken place on more remote Romano-British rural sites suggest that most, though part of the economic system, were probably not coin-using. However, just as in the south the rich measured their wealth and status perhaps in the ownership of a villa, in the north such people appear to have preferred money to an ostentatious life-style (fig. 6).

In conclusion, we must not, of course, forget that our picture of site-distribution is not yet complete. New major sites continue to be discovered, and distributions of hoards and casual coin-losses suggest strongly that further sites await discovery in places such as Colne, Aughton, Fleetwood, and on the Cumbrian coast between Ravenglass and St Bees Head. Coin evidence also suggests that those who have consistently denied the existence of Roman sites in the Furness and Cartmel areas of south Cumbria may be wrong, and that here possibly may lie the site of Ptolemy's elusive Portus Setantium.26

24 See Britannia 20 (1989), 245f.
25 NC Ser. 6, 8 (1948), 216–18 (Brindle); M. Neville, Tameside before 1066 (Manchester, 1992), p. 99 (Denton).
Fig. 5 North-west England: Sites occupied after AD 367
Fig. 6 North-west England: Find-spots of Roman Coin-hoards
Fig. 7 Ribchester

Fig. 8 Carlisle
Fig. 9 Lancaster.

Fig. 10 Manchester.

Fig. 11 Watercrook.
Fig. 12  Maryport

Fig. 13  Old Penrith

Fig. 14  Papcastle
Fig. 15 Wilderspool

Fig. 16 Walton-le-Dale
Fig. 17 Castlesteads

Fig. 18 Birdoswald
APPENDIX: SAMPLES OF IDENTIFIED COINS FROM ROMAN SITES IN NORTH-WEST ENGLAND

The following site-totals include only those coins which can be regarded as having derived from casual loss.

<table>
<thead>
<tr>
<th>Lancashire</th>
<th>Blennerhasset</th>
<th>Low Borrow Bridge</th>
<th>Bowness-on-Solway</th>
<th>Maiden Castle-on-Stainmore</th>
<th>Brampton</th>
<th>Stainmore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burrow-in-Lonsdale</td>
<td>27</td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castleshaw</td>
<td>21</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirkham</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lancaster</td>
<td>370 (fig. 9)</td>
<td></td>
<td></td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manchester</td>
<td>224 (fig. 10)</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribchester</td>
<td>373 (fig. 7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walton-le-Dale</td>
<td>107 (fig. 16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wigan</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilderspool</td>
<td>154 (fig. 15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carlisle</td>
<td>2053 (fig. 8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cumbria</th>
<th>Castlesteads</th>
<th>Stanwix</th>
<th>Drumburgh</th>
<th>Trouheck</th>
<th>Carlisle</th>
<th>Ravenclaw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambleside</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beckfoot</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bewcastle</td>
<td>50 (fig. 19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birdoswald</td>
<td>204 (fig. 18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Periods used in the histograms:

I 54-AD 41  VI 117-38  X 192-222  XIV 275-94  XVIII 346-64
II 41-54  VII 138-61  XI 222-35  XV 294-324  XIX 364-78
III 54-68  VIII 161-80  XII 235-59  XVI 324-30  XX 378-88
IV 68-96  IX 180-92  XIII 259-75  XVII 330-46  XXI 388-