White Castle and the Dating of Medieval Pottery

By J. G. Hurst

Inspectorate of Ancient Monuments, Ministry of Public Building and Works

For the past twenty-five years the material from White castle, Monmouthshire, has provided the main evidence for the contention that, though highly decorated medieval jugs are usually late thirteenth-century in date, they in fact started well before 1250.\(^1\) This evidence, however, remained unsupported from other sites and the difficulty seemed to be resolved when A. J. Taylor found later documentary evidence from White castle, previously unnoticed, which not only showed that the occupation continued after 1243, but that the last main building-period was likely to have been in the third quarter of the thirteenth century.\(^2\)

The first documentary evidence for building at White castle is between 1184 and 1187. It is, however, likely that the first castle belongs to an earlier period than this. Whatever the date, none of the pottery found can be justifiably given a date before 1200. Most of it appears to be of the thirteenth or early fourteenth century, and the bulk is from after the time of Hubert de Burgh (1201-1243), hitherto held to have been the last occupant of the castle.

The individual jugs and their date, together with drawings of important jugs which were not published in the original report, are discussed at the end of this paper. This new historical evidence makes it necessary to discuss the whole question of the evidence for dating medieval pottery, as it shows that caution is needed in using stylistic architectural evidence for precision-dating, while other recent work has shown the care that needs to be exercised in using coin-dating and in correlating archaeological deposits with building-documentation.

EARLIER WORK ON MEDIEVAL POTTERY

Until thirty years ago it was not possible to be very precise about the date of most medieval pottery; some of it was, in fact, thought to be Roman or iron-age. This subject, like so many others, was first explored by Pitt-Rivers at his excavations, the reports on which contain some of the earliest drawn profiles of medieval pottery.\(^3\) At the same time in East Anglia, T. McKenny Hughes

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was watching building-sites in Cambridge and over a period of thirty years (1885-1915) he published quantities of pottery from forty such sites and recognized the first late Saxon pottery. He was also one of the first to publish, and try to date, late and post-medieval pottery. Chaffers, Jewitt, Church, and Hobson laid the foundations of the subject in general surveys, but there was not really sufficient stratified material at the time to use as a basis. Almost all the finds in museums were collectors' pieces, or had been obtained from building-sites with no record of their stratification or association. It is fair to add, however, that it was these early students and collectors who built up the large collections of medieval pottery in our museums on which modern research relies so much and without which it would have been gravely hindered.

It was not until after the first world war that any serious attempt was made to obtain stratified pottery from medieval sites. Even then there was little advance until G. C. Dunning started his work in 1932. All the reports of the 1920s, regardless of their area and their date, based their conclusions on the same limited series of excavations at Folkestone, Castle Neroche, etc., where the dating was never very precise in the first place.

Since 1932 G. C. Dunning has written many articles, often contributed to excavation reports, each helping to establish local sequences of medieval pottery. This has been a work of the very greatest importance, for which all medieval archaeologists are deeply in his debt. Since 1938 E. M. Jope has produced an important series of reports, especially on the Oxford region and the west country, which survey the development of medieval pottery in these areas. The work by these two scholars has shown the broad outlines of the development, and also the regional character, of medieval pottery. This was the preliminary collection of the basic material which is necessary in any new subject; but the time has now come to reassess some of the evidence, especially as excavations and documentary research during the past two or three years have thrown doubt on many beliefs at one time widely held. What is needed now is a programme of selective excavation in various regions of sites whose occupational history is well documented and where the deposits should therefore be correspondingly closely datable.

7 L. Jewitt, Ceramic Art of Great Britain (1878), i, 76-87.
8 A. H. Church, English Earthenware (1884), pp. 10-14.
12 Report Oxfordsh. Archæol. Soc., 84 (1938), 85-93; Oxoniensia, v (1940), 42-50; most numbers of Oxoniensia since then have added to the picture; see also E. M. Jope, 'Medieval pottery in Berkshire,' Berks. Archæol. J., i (1947), 49-76.
METHOD OF DATING

The validity of the methods used for dating medieval pottery requires careful assessment. The five main criteria are, in order of reliability:

1. Coins, or small finds.
2. Documentary evidence.
3. Architectural evidence.
4. Comparison with datable sequences or examples elsewhere.
5. Typology.

If each of these criteria is examined critically, it will be seen how unreliable any one of them is apt to be. This is not to blame previous workers. In the state of knowledge available in the formative period, their methods were the only ones by which provisional sequences could be worked out. But today, in order to get closer and more correct dating, students of medieval pottery must begin to think afresh and not take for granted the dating of any group of pottery without carefully examining the evidence for it. Many qualifying statements in excavation reports are ignored and the theories of one worker are transmuted into facts by later writers.

1. DATING BY COINS OR SMALL FINDS

A. Coins. Although considered here the most reliable of our five criteria, coins must nevertheless be treated with caution. The only really acceptable associations are coin-hoards found in pots, and unfortunately few of the coin-dated pots found are helpful for basic dating. Most of the coin-hoards in pots have been found by chance by workmen, rather than by excavators, and with some nineteenth-century finds it is not even certain that the coins and the pots were, in fact, associated. But if there is a coroner’s inquest the fact that particular coins came from a pot is relevant to intentional concealment and is investigated by the coroner. The sort of evidence given on these occasions is impressive so that it is possible to be sure of such associations when inquests have been held.

Work by E. M. and H. M. Jope on the site of the Glenluce, Wigtownshire, hoard illustrates very clearly the dangers and traps which may befall the unwary. The hoard was deposited c. 1495, but excavation showed that this was some time after the desertion of the building. It was not, in fact, hidden under the floor while the floor was in use, as might have been supposed, or even just after the destruction of the building, but deposited after the site had been heath-covered for some time. If this had not been observed, it is very likely that the latest pottery associated with the building, which seems to be early fifteenth century, would have been put fifty years too late in the light of the coin evidence.

Coins found in pits or wells, with large quantities of associated pottery, are the most certain dating evidence, but these are very few. Good examples are

16 I am grateful to Mr. R. H. M. Dolley for pointing this out to me.
Old Sarum, Wiltshire, and St. John's College, Oxford. Of the numerous kiln-sites found only Potterspury, Northamptonshire, had coin-evidence to help in dating. This was provided by a much worn silver halfpenny of c. 1300-7 which was found in the filling of the stokehole. On medieval sites one coin is as much as can be expected. The medieval penny was worth much more to its owner than the modern penny is to us, so if dropped it would be searched for carefully and not abandoned. It is very different on Roman sites where dozens, often hundreds, of coins are found.

A pit filling, or other sealed deposit, cannot of course be exactly dated by a coin; it only gives a date after which deposition must have taken place. The amount of wear on the coin, and how long it has been in use have to be taken into account. Early finds from the reigns of Eadgar to Stephen are the best evidence, as the coinage was demonetized at frequent intervals; originally every six years, later every three years. During the thirteenth century and later, however, demonetizing was carried out less frequently, so that the assumption that coins were lost within a very few years from the earliest possible date at which they could have been struck becomes less certain the later the find. By the early sixteenth century, hoards are found with coins as much as one hundred years old. The fact that the coins may have been hoarded and therefore be in mint condition after quite a long period must also be taken into consideration.

Much more uncertain is the evidence of coins in a layer, especially in old excavations. There are many sites which have been considered as dated because coins of a certain date have been found on the site, while in fact the material covers a wide range of date. These dangers have been pointed out before, but a much more subtle danger has only recently been fully realized. A coin is found on a certain site closely associated in a stratified layer with a specific type of pottery. This type of pottery has, therefore, quite rightly, been given this date, but the false assumption has developed that in future all pottery of this type, wherever found, is of this same date; even on the same site this need not be so. Recent work has shown how wrong this can be and it is now clear that many of our apparent gaps in the pottery sequence have been caused by attempts to date sites too closely and a failure to recognize that certain types of pottery may have a long life of a hundred years or more.

For example, until recently all scratch-marked pottery in Wessex was assigned to the late eleventh and early twelfth century on coin-evidence from a pit at Old Sarum. In 1959, however, scratch-marked pottery was found by

19 Oxoniensia, xv (1950), 44-62.
20 Archaeol. News Letter, x (1950), 156. In 1962 a coin of c. 1300 was found in the stokehole of the Toynton kiln, Lincolnshire, by Mrs. E. H. Rudkin.
21 Stone and Charlton, op. cit. in note 18.
J. W. G. Musty in association with highly-decorated jugs of the second half of the thirteenth century at the Laverstock kilns near Salisbury. Musty has shown, therefore, that scratch-marked pottery was still being made well into the thirteenth century. It is now possible to distinguish this developed scratch-marked pottery from the earlier material, but previous workers have regarded any sherds which were scratched as being of the eleventh or twelfth centuries. There is no reason why all the other pits in the Old Sarum east suburb should be early just because of one coin find.

In a second case the Selsley Common type of pottery had been assigned in the Cotswold area to the first quarter, and the middle, of the thirteenth century on three grounds: first, a cooking-pot was associated with a tripod-pitcher at Frampton-on-Severn, Gloucestershire; secondly there was supposed documentary evidence of mid-thirteenth-century date from Selsley itself; and thirdly such pottery was found with a coin of 1248-50 at Stratton St. Margaret, Wiltshire. It is now known to last at least into the first quarter of the fourteenth century and possibly later, as a result of recent finds by P. A. Rahzt and K. J. Barton, in Bristol, where Selsley Common ware was associated with French polychrome and rich green-glazed wares, which belong to the early fourteenth century; and by M. Biddle at Seacourt, Berkshire, where a Selsley Common cooking-pot was associated with pottery which should be after 1300. It must also be emphasized again that, whatever the date-range of the pottery associated with a coin in a layer, pit, or well, this coin only gives a date after which the deposit was made. It is very easy for a coin to be disturbed while alterations are being made and for it to be incorporated into a slightly, or very much, later level. If this is only fifty years later it could lead an excavator to give too long a life to a group of pottery.

b. Small Finds. What has been said about coins also applies to other objects associated with pottery in layers. As most medieval small finds are not very closely datable per se, they are less often likely to be significant; indeed it has been more usual to date small finds from the pottery than vice versa. In the Saxon period, however, closer dating often seems possible and the three main types of loom-weights, for example, are a major help in differentiating pagan, middle and late Saxon hand-made pottery in many parts of the country.

The same danger applies, however, in dating a site from a single object. The pagan Saxon village of Sutton Courtenay, Berkshire, for example, has been dated fifth and sixth century—and no later—because of the very early equal-arm brooch; but the loom-weights and other objects found, many of which are unpublished, show that the site was occupied well into the seventh if not into the

26 P. A. Rahzt, 'Excavations by the town wall, Baldwin Street, Bristol, 1957,' and K. J. Barton, 'Excavations at Back Hall, Bristol, 1958,' Trans. Bristol and Glo.s. Archaeol. Soc., lxxix (1960), 221-286; and for Seacourt see Oxoniensia, xxv/xxvii (1961-2), 70-201 (the find was in area 4).
eighteenth century. Dating the whole occupation of a site from a single object in this way, though an obvious fallacy, has happened elsewhere also.

2. DATING BY CORRELATION WITH DOCUMENTARY EVIDENCE

Similar dangers apply where a group of pottery, which may have been closely, and correctly, dated by association with a reliably-dated building, is subsequently used as evidence for giving the same date to similar finds from other sites. Close dating by correlation with documents is not common and is at its best at sites which had a short life; examples where short life can be proved are, however, rare. The Castle Dykes, Kirkcudbrightshire, has been often cited as having a short occupation closely dated 1280-1308, but although on the face of things this Kirkcudbrightshire site might be regarded as one of the clearest examples for a brief occupation, even this must be treated with caution, for its masonry, as can be seen in photographs taken during the excavation, does not look quite like the work of masons working for the English crown. Although clearly used by Edward I as a supply base, the castle was not necessarily built for him; it might have been used (and even built) by the Douglases after (or before) the period 1288-1308. The pottery could, however, perfectly well belong to the period 1288-1308, as much of it is of English style, and the finds included examples of continental imports. Brockhurst castle, Shropshire, seems to belong to the period 1154-1225 and is, therefore, very useful for the dating of west-midland pottery. The main period at the bishop's hunting-lodge at Cambokeels, Durham, is assigned to the period 1430-1460, but there are sherds of German stoneware of the early sixteenth century, showing that occupation on the site went on. Bodiam castle, Sussex, should be important as it was not begun until 1385, so all the pottery ought to be late fourteenth-century or later: but the previous manor house might have been on the same site.

There are various other sites where documentary evidence gives a terminus post quem but many of them are by no means secure. For example Dunstanburgh castle, Northumberland, was being built in 1314 and this should suggest that the decorated face-jugs found there belong at earliest to the second decade of the fourteenth century, but there may have been earlier occupation on the site and none of the pottery was sealed in castle building-levels. The same applies to

29 Hurst, op. cit. in note 27, p. 17.
34 J. Charlton, 'Excavations at Dunstanburgh castle,' Archaeologia Aeliana, xiii (1936), 279-292.
35 M. G. Jarrett and B. J. N. Edwards in 'Medieval and other pottery from Finchale priory, county Durham,' Id., xxxix (1961), 230-234, give a useful summary of the dating evidence for northern sites. They point out the dangers at Dunstanburgh and Cambokeels, but, as stated above, the foundations of the dating for Kirkcudbright are rather shaky. The sealed deposit of 1210 at Knaresborough castle, Yorkshire, is also suspect; information from Mrs. J. Le Patourel.
Beaumaris castle, Anglesey. The start of building is firmly dated 1295, but the medieval port of Llanfaes near by was an important trading-centre before Edwardian times, so the face-spout, polychrome jugs, etc., while presumably after 1295, could be from this earlier occupation. On any site, in fact, even when there is explicit documentary evidence that building of a castle, manor, etc., was sanctioned or begun at a given date, there may have been some form of earlier domestic occupation, and if so the pottery, even if in sealed well-excavated layers, may, at least in part, be derived from it.

Sometimes pottery can be associated with specific building works, as, for example, the building erected in 1294 at Bungay castle, Suffolk, and that erected at Leicester castle in 1422. But in all cases the nature of the evidence for assigning a particular date to a particular piece of construction needs to be clearly understood before consequential inferences about dating are drawn from it. Where such evidence is unassailable, structures so dated provide a useful *terminus ante quem* for everything found underneath them. Three good examples of this are (1) the pottery found under the castle mound at Oxford, constructed c. 1070, which provided the first real evidence that early medieval pottery began before the Norman conquest; (2) Weoley castle, Warwickshire, where the buildings following the licence to crenellate in 1264 caused all the earlier buildings to be sealed by the clay dug from the new enlarged moat, and so have provided us with the only firmly-dated early thirteenth-century group of pottery in England, the dating being made secure by coins of John and Henry III; and (3) the More, Hertfordshire, where the licence to crenellate in 1426 forms a clear dividing line between the earlier and later levels.

In using documentary evidence particular care must be taken that the documentation does, in fact, refer to what it is supposed to refer. Take, for example, E. T. Leeds's excavation of the castle at Faringdon clump, near Oxford. Here was a site apparently closely dated by documentary evidence 1144-5, when Robert of Gloucester erected an adulterine castle. But it yielded pottery which, by comparison with that of other sites in the area, should be late thirteenth-century. Leeds suggested that all this decorated pottery belonged to the twelfth century, but this would clearly make nonsense of the whole interlinked scheme of pottery dating, which, however indefinite in detail, cannot be as far out as this. As only two or three possible pieces of twelfth-century pottery were found, 36 37 38 39 40 41 42 43

38 See *Med. Archaeol.*, v (1961), 276, for this type of evidence from Northolt, Middlesex, where a large proportion of the finds from the mid fourteenth-century levels was derived thirteenth-century material. This important point is also stressed by M. G. Jarrett and B. J. N. Edwards, *op. cit.* in note 35.
39 *Proc. Suffolk Inst.* *Archaeol.*, xxii (1934-6), 334-8. It is, however, disconcerting to examine this material and find it not only unmarked by the excavator but mixed in the same box with later sherds.
it appears that the castle referred to in the documents of 1144 may not have been on this site and that what Leeds excavated was an undocumented late thirteenth-century building.\(^{44}\) This shows that not only does the excavator have to make sure that the structures he has found are directly and indisputably linked with the documentary evidence, but, much more fundamental, that the site being dug is, in fact, the one to which the documents refer.

Another serious danger in using documentary evidence is to assume that when documentation stops, occupation also stops, thus providing a firm \textit{terminus ante quem} for all the pottery on the site, and conversely that, when there are no documents earlier than a certain date, this date constitutes a \textit{terminus post quem}. Brandon castle, Warwickshire, is supposed to have been destroyed in 1266,\(^{45}\) yet a large part of the pottery consists of highly decorated jugs which are accepted as being later than this. Medieval documentation is so extensive and so uneven in its coverage that there is always the possibility that references to a particular site have yet to be discovered, or that the relevant documents may not have survived or may lie outside the classes that have in the main been preserved, namely, the papers of large estates, the crown and the church.\(^{46}\)

However, some of the beginning- and end-dates suggested by documentary evidence are doubtless reliable. Thus Dyserth castle, Flintshire, destroyed in 1263, has plain undecorated jugs and only one single bridge-spout,\(^{47}\) as would be expected in the first half of the thirteenth century, if highly decorated jugs start \(c.\ 1250\). Nonsuch palace, Surrey, has a firm date-range between 1538 and 1685; most of the pottery, in fact, belongs to the last twenty-five years of that period. At Weoley castle, Warwickshire, there is a series of stratified levels from the late twelfth century onwards, and this is most useful for giving a sequence in the region, as it has been related very satisfactorily to documentary evidence.\(^{48}\) English medieval pottery exported to Scandinavia can be dated through excavations at Bergen, Norway, where A. E. Herteig found a sequence of levels which he suggests can be tied very closely with the documentary evidence for several disastrous fires which destroyed the port.\(^{49}\)

Unfortunately recent attempts to excavate on sites thought to be closely dated have had disturbing results and reiterate the danger of accepting documentary evidence without critical examination, or equating known historical events, knowledge of which happens to survive, with archaeological deposits which may well belong to no less important occasions of which we know nothing.

\(^{44}\) \textit{Oxoniensia}, iv (1939), 140-144; \textit{Berks Archaeol. J.}, L (1947), 70.
\(^{46}\) Cf. Ascot Doilly, Oxfordshire, where E. M. Jope has skilfully blended the surviving historical documents with the archaeological evidence: \textit{Antiq. J.}, xxxix (1959), 219-273.
\(^{47}\) \textit{Med. Archaeol.}, iv (1960), 120; T. A. Glenn, \textit{‘Prehistoric and historic remains at Dyserth castle,’} \textit{Archaeol. Cambrensis}, 6 ser. xv (1915), 47-86.
\(^{48}\) \textit{Med. Archaeol.}, i (1957), 157; ii (1958), 195. Excavation here in 1960-1 illustrates the danger of assuming that the occupation on the site started with the licence to crenellate in 1264. Underneath the make-up thrown out from the moat important early thirteenth-century levels were found: see pp. 109-134 above and \textit{Trans. Birmingham Archaeol. Soc.}, lxxviii (1962), 61-85.
\(^{49}\) The sequence of dated levels, however, seems to be one fire too early throughout, for it is not possible to regard the glazed jugs as being twelfth-century, nor the face-jugs as before 1248: \textit{Med. Archaeol.}, iii (1959), 177-186.
Since 1956, the Aberystwyth Archaeological Society under C. H. Houlder has been excavating old Aberystwyth castle at Tan-y-Bwlch, Cardiganshire. It has been assumed that this was the site of the castle mentioned in the Brut y Tywysogion, which was held by the Normans between 1110 and 1135 and by the Welsh between 1136 and 1143, that occupation ceased after this date, and that the thirteenth-century castle was built at new Aberystwyth. The pottery, however, includes hard, well-developed cooking-pots with infolded rims of west-midland type which are unlikely to date before 1150. It is fairly certain that the two periods are not 1110-1135 and 1136-1143 but 1110-1143 and c. 1200, see p. 325 below.

At Hen Domen, Montgomeryshire, the motte and bailey, which preceded the construction of the castle at 'new' Montgomery in 1223, is known to have been besieged in 1095. P. Barker cut a section across the ditch between the motte and the bailey in 1960-1 in an attempt to obtain eleventh-century pottery. He found a thick layer of charcoal which it might be reasonable to relate to this eleventh-century siege, but underneath it there were hard, well-fired cooking-pots and glazed sherds, which should belong to the latter half of the twelfth century or the early thirteenth century. The ditch was recut at least five times and this destroyed most of the eleventh-century evidence.

Sometimes, however, the documentary, coin and pottery evidence ties in convincingly, as, for example, in the case of the deserted medieval village of Hangleton, Sussex. There is a record which suggests that the village was decaying by the middle of the fourteenth century, but that in 1428 there were still two householders. Most of the houses excavated contained pottery that was generally of thirteenth-century character but house 5 contained a coin of the early fifteenth century, an early Siegburg jug and a lobed cup. Here is presumably one of the two houses which survived into the fifteenth century.

Even with the royal castles the surviving accounts often do not specify what structures were built, but only the amount of money that was spent. Recent work at Kenilworth castle by P. A. Rahtz for the Ministry of Works has thrown doubt on the idea that the £1115 3s. 11d. King John spent between 1200 and 1215 was on the curtain wall, as this seems more likely (for part of its length, at least) to be mid-thirteenth-century, being built over a ditch which is unlikely to be earlier than c. 1200. This money may, on the contrary, have been spent on the top story of the keep, which has generally been considered to be temp.

51 Ibid., v (1961), 322; and see p. 326 ff. below.
52 Feudal Aids, v, 165.
55 Mr. H. M. Colvin suggests to me that the arrow slits in the top story of the keep, set in their curious chamfered recesses, are identical with those in Lunn's tower, which is attributed to John, therefore suggesting that John also altered the top of the keep. If Lunn's tower is John's work it does not make sense unless he also started work on the wall of the outer bailey. This does not necessarily mean that the whole outer curtain is the same date, and in fact the excavation draws attention again to the danger of sweeping statements that either the whole curtain was built by John, or that none of it was.
Henry II on architectural evidence, or perhaps on some other building, since destroyed, on the site of either John of Gaunt's or the Earl of Leicester's later building.\(^{56}\)

3. \textbf{DATING BY ARCHITECTURAL EVIDENCE}

For the most part only royal castles and monastic houses can be closely dated from surviving building accounts. By far the larger number of castles were built by private lords and, especially in the period before licences to crenellate were required (about the middle of the thirteenth century\(^{57}\)), their dating rests almost entirely on architectural features. But architectural dating is very much a received doctrine handed down from the antiquaries and architects of the Gothic revival and, though no doubt broadly sound, the date-ranges of particular styles will always be open to modification as new documentary evidence brings further dated examples to light.

As with pottery, architectural features have often been cited as evidence of date with very little appreciation of their limited reliability for the purpose. For example round keeps have been considered to date from the end of the twelfth century and the beginning of the thirteenth century\(^{58}\) but few of these occur at documented royal castles. Although a few may be early, by far the larger number seem likely to belong to the second quarter of the thirteenth century\(^{59}\) and there is no reason why some should not be of the third quarter. In fact round keeps were still built in the time of Edward I, as is shown by the building of the great tower at Flint between 1277 and 1281. It follows that architectural features might have a long vogue just as we can show that pottery types had. The time is now opportune for a reappraisal of the dating of more than one important thirteenth-century castle, and for an examination of the traditional dating of some, at least, of the buildings cleared by the Ministry of Works during the last thirty years.\(^{60}\) The definitive \textit{History of the King's Works}, (H.M.S.O., 2 vols., 1963) should provide a solid basis for such a study.

It is important to bear these possibilities in mind when excavating castles of this period. Recent excavations at Skenfrith, Monmouthshire, by O. Craster for the Ministry of Works seem to provide evidence that the round keep here is indeed mid thirteenth-century in date, as highly decorated pottery appears to be associated with its building. As we have seen, there is no reason archi-


\(^{59}\) C. A. R. Radford has recently suggested that both Tretower, Breconshire, and Launceston, Cornwall, have round keeps of this period, Tretower being as late as c. 1245: \textit{Brycheiniog}, vi (1960), 30-1. For recent excavation showing that the Launceston keep is later than the shell keep, see p. 320 f. below.

\(^{60}\) Dr. C. A. R. Radford points out to me that attributions of date made in Ministry of Works official guide-books (including some of his own) should be used with care. Often written hurriedly, and from secondary sources, in order to provide information for visitors as soon as possible after a site is taken over, they cannot always reflect a full assessment of the information made available as work on the monument proceeds. Thus, in citing dates from these guides, it should not be forgotten that they do not claim to have the authority of a primary source.
It is sometimes difficult to reconcile the architectural and archaeological evidence even when the former is apparently secure. For example, during the clearing of Kidwelly castle, Carmarthenshire, in 1930 a large number of crested ridge-tiles were found on the site of the hall. These were of the hand-moulded wave type which is usually ascribed to the middle of the thirteenth century. No cut cockcomb-tiles were found and on other sites these are usually ascribed to the closing decades of the thirteenth century. Sir Cyril Fox and C. A. R. Radford considered the hall to have been built after 1298, following the minority of Matilda de Chaworth, when her marriage to Henry, earl of Lancaster, was celebrated. It has been assumed that these ridge-tiles were from the roof of the hall and that they must, therefore, be dated c. 1300 or soon after. This is twenty-five years later than would be expected from the archaeological evidence on other sites. Fox and Radford suggest that the inner ward, with its four towers and curtain, was built c. 1275 after the return of Payn de Chaworth from the crusades. The hall is clearly a later addition and there must have been a change of plan, which is what accounts for the straight joints, and apparent differences of build, rather than just a separate contract, which is the case at Conway, Caernarvonshire.

There is no reason why the inner ward should not be dated as early as the third quarter of the thirteenth century, since many of the architectural features would still be in order twenty-five years earlier. But the surviving trefoil window in the hall is not likely to be much earlier than 1290 and is very similar to the windows in the chapel, which also has large pyramid spurs, another typical late thirteenth-century feature. On these grounds, therefore, it does not seem pos-

61 Cal. Liberate Rolls, ii (1240-5), 327. This tower creates a problem, since my contention is that highly decorated pottery does not start until c. 1250 and I am in this article using the reinterpreted documentary evidence from White castle in support. Between 1239 and 1254 Skenfrith was in the hands of the crown. During this period there is a record of expenditure for the roofing of the keep with lead (1245). The amount is, however, so small as to suggest the repair of an old roof, rather than the building of a new one. Since the royal accounts have no other record for the Skenfrith keep, it seems likely that its building falls before 1239 during the time of Hubert de Burgh. It may, therefore, be suggested that the highly decorated pottery found inside the keep, as low as 7 ft. below the floor, did not get there while the tower was being built, but in the course of some later work. The late twelfth- and early thirteenth-century pottery found underneath the keep, and in the mound heaped up round it, suggests that the tower was built not later than c. 1230.


64 As Radford points out, the hall is a different build from the curtain and not only is the original passage from the NE. tower to the wall partly blocked and rebuilt to form an entrance to the later fourteenth-century mantlet, but in addition the bottom of an embrasure on the second floor of the SE. tower is blocked by the S. gable of the hall, which also partly covers the N. jamb of the entrance from the SE. tower to the wall walk on the S. curtain.

65 Caernarvonshire, i, East, (Royal Com. Ancient Mon., Wales, 1956), p. 47.

66 Marten's tower, Chepstow castle, Monmouthshire, has a fine spurred base and is the nova turris begun in c. 1287 (P.R.O., Ministers' Accts., 928/1). Other pyramid spurs are to be found at Goodrich castle, Herefordshire, where there is no direct documentation of works; but everything points to the great rebuilding, including the very fine spurred towers, being the work of the king's uncle, William de Valence, during the last fifteen years of the thirteenth century. The gatehouse at St. Briavels castle, Gloucestershire, has spurred towers that can be dated 1292-3 (History of the King's Works, H.M. Stationery Office, ii 1969, 822). I am greatly indebted to Mr. A. J. Taylor and Mr. H. M. Colvin for these references.
possible to put the date of the building of the hall back to 1275 and the inner ward to the 1260s.

Here the architectural and archaeological evidence are not in accord and of this there may be three possible explanations:

1. The ridge-tiles used in building the hall may have been designed in an archaic manner, twenty-five years out of date. This seems unlikely in view of the importance of Kidwelly castle and its maritime connexions with Bristol. The highly decorated pottery, and the imported French polychrome ware, show that this was no backwater.

2. The ridge-tiles may have been reused from some earlier building, perhaps the mid thirteenth-century hall. This would, however, be rather surprising, since at least a few replacements of late thirteenth-century cut cockcomb-type tiles would have been expected and none was found on the site.

3. The ridge-tiles may not have come from the hall at all, but from some earlier building on the site which was demolished when the hall of c. 1300 was built. This would, however, involve the unlikely assumption that when the site was cleared by the Office of Works in the 1930s none of the material recovered related to the occupation of the hall itself but was derived from the levels sealed by its floor. Theoretically, therefore, they could have come from the destruction of either the earlier or the later hall, but are more likely to be from the later one.

Dr. Radford informs me that there was a ridge-tile of Sutton stone on the site. As the only period since the twelfth century in which Sutton stone was used was during the building of the c. 1300 hall, this might explain the lack of ridge-tiles with cut crests proper to a building of this period. My opinion in the light of these considerations is that the moulded ridge-tiles must have been originally made for the hall c. 1250 and that they may have been reused on the hall of c. 1300 together with replacements of Sutton stone. So, whether they were found at the destruction level of either the 1250 or the 1300 hall, they are mid thirteenth-century in date. In addition Mr. G. C. Dunning informs me that there is also the base of a ventilator from the castle which would be much more at home in a 1250 context than in one of 1300.67

This is an extreme example of the difficulties that may be encountered in correlating architectural, documentary and archaeological evidence. It does not mean that architectural evidence can be ignored; but that it always has to be examined critically and that even a long-established and reputable dating based on architectural features alone may be susceptible of reassessment.

On the other hand the process of correlation may sometimes be much more straightforward. Thus at the twelfth-century manor house of Wharram Percy, Yorkshire, there was hardly any pottery evidence for dating, but a waterleaf capital and water-holding base from the fireplace were assigned by E. A. Gee to

67 It has not been possible to locate the excavation records either in the Ministry of Works or the National Museum of Wales. Unfortunately many of the week by week reports of work in progress on guardianship monuments before 1939 were destroyed during the second world war.
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the decade 1180-1190. There may be some scepticism at this close dating but documentary evidence suggests that building was going on between 1177 and 1196.68

At Deddington castle, Oxfordshire, there were seven floors containing pottery usually attributed to the late eleventh or early twelfth century sealed by the building of the twelfth-century hall which contained carved stonework stylistically dated third quarter of the twelfth century. A similar terminus ante quem is provided by the mid twelfth-century vaulted cellar on the Clarendon hotel site, Oxford. Here the documents suggest a date between 1140 and 1180 and the architectural evidence a date between 1150 and 1170. Although this gives some latitude, the pottery beneath it must be, in general terms, of the first half of the twelfth century or earlier,69 to which time it belongs on the evidence of stylistic development.

4. DATING BY COMPARISON WITH OTHER DATABLE SEQUENCES OR EXAMPLES OF POTTERY

A. Coarse wares. Coarse pottery (cooking-pots, bowls and jugs) was rarely traded more than about twenty miles.70 It is dangerous, therefore, to draw conclusions from similarities of pottery types between regions more widely separated than this, except where it has been shown that over a wider area a number of kilns were producing pottery of the same type at the same time, as, for example, the northern type of twelfth-century cooking-pot.71 Regional variation in pottery types is well marked in medieval Britain.72 Square developed rims, for example, are twelfth-century in the north,73 thirteenth-century in the south,74 while simple everted rims may be eleventh-century in Sussex,75 thirteenth-century in Gloucestershire76 and fourteenth-century in Devon.77 It is not until the fifteenth century that there is any tendency to uniformity throughout the country as a result of the increasing industrialization of pottery-making.78 In the seventeenth century there is some evidence of a tendency to revert to regional variations.79

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68 Payments recorded in the Pipe Rolls.
69 Oxoniensia, xxiii (1958), 54-5 and 24.
70 Jope, op. cit. in note 15.
72 This regional variation is a very important factor: cf. E. M. Jope, 'The regional cultures of medieval Britain' in Culture and Environment: essays in honour of Sir Cyril Fox (ed. L. Alcock and I. L. Foster, 1963) 327-50.
73 Cf. Jope, op. cit. in note 71.
74 E.g. Bungay castle, Suffolk, op. cit. in note 39.
76 E.g. Selsley Common, Gloucestershire, op. cit. in note 25.
78 Bifid rims are widely found over most of England during the fifteenth century. Cf. Swainston, Durham, information from Mr. J. C. Booth; Yorkshire, Scarborough and District Archaeol. Soc. Res. Rept., no. 3 (1961), p. 145, fig. 8; Oxfordshire, Oxoniensia, xiv (1949), 78-81; East Anglia, Norfolk Archaeol., xxx (1952), 910, fig. 12, no. 8; the London area, Med. Archaeol., v (1961), fig. 69, no. 75; and the southwest, below, fig. 91, no. 12. Bifid rims are, however, also found in some earlier levels so they are not a firm dating type: Antiq. J., xxxix (1959), fig. 19.
79 E.g. the brown glazed wares of SE. England, which may themselves be subdivided into regions (Canterbury, Nonnab, Cambridge and Norwich have been clearly differentiated by M. Biddle), Norfolk Archaeol., xxxi (1955), 76-85, contrast with the green-glazed wares of the north of England, Archaeol. J., cxvi (1959), 95-100. The slip wares of SE. England, Trans. Essex Archaeol. Soc., n.s. xxv (1960), 358-377, are replaced in the southwest by the reverse technique, sgraffito; C. Malcolm Watkins, 'North Devon pottery and its export to America in the seventeenth century,' Bull. Smithsonian Inst., cccxxv (1960), 19-59.
b. Finer wares. With the finer pottery (mainly decorated jugs) wider comparisons are much safer, because these were often traded over distances of a hundred miles or more. Certain common types of decorative features may have been popular at different times in different parts of the country. Combing is a twelfth- and thirteenth-century decoration in the west midlands, but a fourteenth- and fifteenth-century one in the north, and overall rouletting, a late Saxon and medieval feature, is found on some jugs of the fifteenth century (see p. 151 f. below). Another late Saxon trait, knife-trimming of the basal angle, continues through to the thirteenth, the fifteenth and even the seventeenth century. Early medieval individual stamps continue right through to the seventeenth century. Thus all comparisons must be used with caution, as many of these basic decorative motifs are found throughout the medieval period and beyond, so that the form, fabric and glaze of the jug must be taken into consideration as well.

It is the exotic examples with unusual decoration which provide the most useful dating evidence and those which are imported from abroad provide the best, as they are more easily identifiable. There are many examples of these from Saxon times right through to post-medieval times and G. C. Dunning has done much good work in bringing these to light.

5. Dating by Typology

This is one of the most hazardous methods, though an essential one when stratified finds are rare. It is especially hazardous in the medieval period, when in East Anglia there is degeneration in early medieval times from the high quality Saxo-Norman ware, both in form and fabric, while in other parts of the country early medieval pottery shows marked improvement on late Saxon wares. Rim forms in some areas become more developed and complicated, while in others they become more simple. The same difficulties apply to decoration and design. P. A. Barker has recently made some very pertinent remarks about the typology of thumbed bases.

CONCLUSIONS

It is not intended to paint too gloomy a picture of the state of our knowledge of medieval pottery. Every generation must look critically at the findings of its

80 For the wide distribution from the Brill kilns see Jope, op. cit. in note 13, p. 75, fig. 11.
82 B. Rackham, Medieval English Pottery (1948), pl. 10 and Archaeol. J., cxvi (1959), 99, fig. 27.
83 E.g. on Stamford ware, Antiq. J., xvi (1936), 407, fig. 5, no. 8.
84 E.g. in the thirteenth century at Seacoat, Berkshire, Oxoniensia, xxv/xxvi (1961-2), 150, fig. 22, no. 5; in the fifteenth century at Oxford, Oxoniensia, vii (1942), 77, fig. 20, no. 9, and in the seventeenth century at Bingley, Yorkshire, Numism. Chron., 6 ser. vii (1948), 182.
85 Med. Archaeol., iii (1959), 33, fig. 11.
87 Med. Archaeol., iii (1959), 49-71; Archaeologia, lxxxiv (1933), 124-138. Sites producing French polychrome pottery, for example, may be much more safely compared with one another than can those with a certain type of decorated English jug. That visual examination is subjective, and cannot always be trusted has been recently shown by J. W. G. Musty, Nature, cxcii (1961), 1143-4 and Archaeometry, v (1962), 38-50.
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predecessors. We must be more alive to the pitfalls and less prone to assume that a pot can be assigned to a certain date just because an earlier authority has claimed it to be so. The hypotheses of yesterday become the beliefs of today and the untruths of tomorrow. It only needs one ex-cathedra statement that a pot may be early thirteenth-century for future writers to say, not only that that pot is early thirteenth-century, but to draw further conclusions on that basis.

Whereas the basic succession of medieval pottery is secure, the complexities resulting from regional variations and the long survival of many individual types of ware and decoration have not been sufficiently realized and allowed for until recently. The sequence built up in the Oxford region over the last twenty years still holds good and shows the importance of correlating the evidence from many sites in one region. Yet the fact must be faced that, although we may be able to date precisely certain groups of pottery, we may never be able to date some types more closely than within fifty or even in some cases a hundred years. Two main kinds of excavation are required to solve these problems. First, a series of small campaigns on closely-dated, briefly-occupied, sites to date particular groups and assemblages securely for each area. Secondly, excavation on a larger scale on long-occupied sites, in which the periods are adequately documented, to give the succession and length of life of each type and the variations in fabric. Such a programme is badly needed, not only for the many regions where the pottery sequence has not yet been worked out, but even for those areas where it has been, in order to check the results in the light of modern knowledge.

This paper attempts to warn excavators of some of the dangers and traps for the unwary that can be encountered in attempts to date medieval pottery. It is hoped that the forthcoming book, Medieval ceramics of the British Isles by G. C. Dunning, J. G. Hurst, E. M. Jope and J. W. G. Musty, will provide a reasoned statement of the regional types of medieval pottery and show how general dates can be built up from a study of many sites in each area.

NOTES ON THE POTTERY FROM WHITE CASTLE
PUBLISHED IN THE 1935 REPORT9 AND ON SOME
UNPUBLISHED SHERDS

Unfortunately no stratification was recorded from the clearing of the castle by the Office of Works between 1922 and 1931. The pottery was divided into only two groups: (a) from the moat, and (b) from elsewhere. A letter from C. A. R. Radford (then Inspector of Ancient Monuments for Wales) to (Sir) Cyril Fox (then Director of the National Museum of Wales), dated 30 July, 1932, states that 'only one group from White castle has any site value, those from the moat (marked WH.M.). The other finer pieces are marked WH. The coarser fragments are not marked'. Forty of the most important finds are listed in the Office of Works finds lists but although they say 'east side inner courtyard', 'west end of barbican', etc., this is simply followed by 'fragment of pottery' which makes any identification hopeless. In fact an examination of the pottery now in the National Museum of Wales, Cardiff,90 shows that no pieces that were not drawn are marked 'moat'. Therefore, unless all the finds from the moat were of large

90 Registered under two heads, 32.429 and 32.215.
size and were drawn, it is not certain whether all the smaller fragments are from the castle itself or whether some of these too are from the moat. So, while it is reasonably certain that all the sherds marked 'M' are from the moat, the rest, except those illustrated, may be either from the castle or the moat. None of the pottery found in the bailey can be associated with any of the building periods.

A. PUBLISHED VESSELS

1. Cooking-pots. Four of these are figured, *op. cit.* fig. 4, nos. 18-21. They are straightforward cooking-pots of a type common in the area with infolded rims of typical west-midland type which stretch from Gloucestershire to Shropshire. Simple thickened rims last in this area until the end of the twelfth century and the infolded rims last with modifications until the fifteenth century. The White castle examples should all be thirteenth-century but it is unwise, with our present lack of knowledge of cooking-pots in the area, to be more definite than this. If, however, they are associated with the glazed pottery, most of them should belong to the end of the thirteenth rather than the beginning.

2. Jugs. These are discussed in the order in which they were published, *op. cit.* fig. 1 (p. 323), fig. 2 (p. 325), fig. 3 (p. 327).

   a. Fig. 1, no. 1; pl. I, no. 1. Jug with applied blobs round the neck, horseshoe decoration on the body and applied bridge-spout in the form of a human head with applied arms below. Blobs round the neck are a typical feature of the Bristol and south Wales area and were exported as far afield as north Wales and Ireland. They are usually found in associations of the late thirteenth century as, for example, at Beaumaris, where they are thought to be after 1295, with French polychrome ware. The horseshoe pattern is a feature of the material from the kiln-sites at Ashton, Cheshire, and Burley Hill, Derbyshire, but is also found elsewhere. The fish-bone slashed handle with vertical slashes at the top is another typical Bristol and west-midland feature.

   b. Fig. 1, no. 2; pl. I, no. 2. Face of a similar jug. There are unpublished fragments of another jug with horseshoe decoration.

   c. Fig. 1, no. 3; pl. xlix, no. 1. Jug with a scale pattern in triangular zones and applied rosettes over prominent girth grooves. This is not a usual west-midland feature, being more common in the Burley Hill kiln. The prominence of the girth grooves is a typical feature of the Bristol and south Wales area as is the obliquely-slashed strap-handle with vertical slashing at the top. On this jug the glaze is green, the strips and rosettes are in brown and the scales are in yellow. Polychrome

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92 Casey, *op. cit.* in note 81.

93 The most northerly site recorded is Adderley motte only three miles from the Cheshire border, *op. cit.* in note 86.

94 They are still found in the early levels at Brockhurst castle, Shropshire, which seems to start about 1150, Barker, *op. cit.* in note 31, and at Hen Domen until 1200, *Med. Archael.,* v (1961), 322.

95 *Trans. Bristol and Glos. Archaeol. Soc.*, lxxv (1956), 12, fig. 3.

96 *Med. Archael.,* iii (1959), 160, fig. 59.

97 O'Neil, *op. cit.* in note 37.


100 Trans. Bristol and Glos. Archaeol. Soc., lxxix (1960), 269, fig. 9, no. 1.


applied patterns may be regarded as a late feature copying the French imported polychrome painted jugs.  

d. Fig. 1, no. 4. Base of a jug which is frilled. This is another late development following the more usual thirteenth-century thumbing and in any case is not likely to date before 1250 and should belong to the early fourteenth century. There are similar bases from the Chew Valley lake, but they are not common in the west-midland area.

e. Fig. 1, no. 5. Jug with applied vertical fish-bone pattern alternating with a row of scales between vertical strips. Here there is again a polychrome effect of green, brown and orange. The weak form of the jug, the frilled base and the decoration all suggest the later part of the period of the highly decorated jugs during the first half of the fourteenth century.

f. Fig. 2, nos. 6 and 7. Similar squat jugs with strip arcading and applied rosettes, as no. 3. These could well be of the second half of the thirteenth century. Rod handles slit almost right through are present on many White castle jugs, both published and unpublished.

g. Fig. 2, no. 8. An unusual jug for this area with a biconical shape in which all the decoration is on the upper half, a practice typical of the Oxford region and especially of the Brill kilns. The brown blobs in triangular zones are a common feature of the London area, and are not usual in the west midlands. This jug should belong to the end of the thirteenth century. Other biconical jugs of a very similar kind may be seen in the National Museum of Wales, Cardiff, from Cardiff and Kenfig castle.

h. Fig. 2, no. 9. The top half of the neck of a jug with a parrot-beak bridge-spout. Bridge-spouts are known from the middle of the thirteenth century, but the parrot-beak should copy the French polychrome type, bringing this jug nearer 1300 than 1250. Two similar spouts are unpublished.

i. Fig. 2, no. 12. The base of a tall jug with emphatic thumbing. This could be any time in the thirteenth century. Thumbed bases are still likely to start as early as the first quarter of the thirteenth century.

j. Fig. 2, no. 13. Bottom half of a plain globular jug with fingered and tooled incisions. This is another late feature suggesting the end of the thirteenth or the early fourteenth century.

k. Fig. 3, no. 14. Top half of a globular jug with overall bands of rectangular notch rouletting, strap-handle double-thumbed at the top and the bottom. Overall rouletting is a very common pattern derived from the Saxo-Norman jug of St. Neots type of the eleventh and twelfth centuries. These spread to Oxfordshire, and by the end of the twelfth and in the early thirteenth century are fairly widespread. There is an example dated c. 1240 from Eccles in Lancashire, and the jug from White castle is one which could easily be of this same date.

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104 Dunning, op. cit. in note 98.
106 Jope, op. cit. in note 13, p. 73, fig. 10.
107 Reg. no. 35.85.
108 Reg. no. 04.341.
109 E.g. from Dyserth castle before 1263, op. cit. in note 47.
110 A jug with a thumbed base was found in a pit at Chichester, Sussex, with a worn coin of Richard I. This is, therefore, likely to belong to the early part of the thirteenth century (and certainly before 1250), op. cit. in note 75, fig. 13, no. 1. For fig. 14 in text read fig. 13 and in the caption read early thirteenth for twelfth. White castle cannot, of course, any longer be used as evidence for the early thirteenth but the evidence from the Oxford region that they start c. 1220 still holds; Oxoniensia, IV (1939), 118; Antiqu. J., xxxix (1959), 238.
111 Hurst, op. cit. in note 5, p. 55, fig. 2, nos. 1-2.
112 Berks. Archaeol. J., L (1947), 56, fig. 2, no. 10.
113 Thompson, op. cit. in note 14, pl. ii, h, hoard 152.
On the other hand the pattern is long-lived and is found on fifteenth-century jugs in the midlands, so this jug could well be late thirteenth-century with most of the other examples. The thumbed handle is unusual in the west midlands where almost all jugs have slashed handles. There is a similar rouletted jug, but overlaid with oblique strips, from Dyserth castle, dating before 1263.

Fig. 3, no. 15. Top half of a plain jug with girth grooves on the neck and a rod handle. This is the typical west-midlands plain jug with the usual emphasis on the girth grooves.

Fig. 3, no. 16. Middle half of a globular jug with girth grooves and incised wave pattern between.

Fig. 3, no. 17. Base of biconical jug, as no. 8, with a very lightly-fingered sagging base.

Fig. 3, no. 18A; pl. xlix, no. 2. Part of a jug with random circle-and-dot stamps of west-country type between erratically-applied scroll patterns of midland derivation. Stamped rosette and handle with combed waves. This should also be fairly late from the rough treatment of the scrolls. Similar jugs were found at Smethcott castle in Shropshire.

It is clear therefore that the new historical evidence enables us to place most of this pottery in the second half of the thirteenth century or the early fourteenth century, where it fits very much better with the parallels known elsewhere. The sources of the jugs are obscure. There is a great variety in ware from a hard off-white to a friable brown. No kiln sites are yet known in the west midlands and none of the White castle jugs can be paralleled from the Ham Green, Bristol, kilns. It is to be expected that they came from a kiln (or kilns) somewhere in Glamorgan, Monmouthshire, or Herefordshire, though many of the patterns show influence from many different parts of the country. These various patterns have been blended into a distinctive style which gives this pottery a character of its own.

B. VESSELS PREVIOUSLY UNPUBLISHED

In addition to the jugs that were illustrated there are several hundred sherds, mainly fragments of similarly-decorated or plain jugs. The group includes some typical rod handles slashed nearly through, as no. 8 above, and a large number of bases thumbed all round, as no. 12, more lightly impressed, as no. 13, or frilled, as nos. 4 and 5. There are also fragments of six jugs which are worthy of illustration.

Fig. 53, no. 1. Part of a large biconical jug as no. 8, in which the decoration is confined to the upper half of the vessel and consists of curved applied strips forming roughly outlined zones with erratic decoration between. This is all done with the same tool, apparently the roughened end of a piece of wood rather than a comb shaped specially for the job. The ware is soft and grey with brown surfaces. The glaze is thin, generally light green, with dark green and brown patches.

114 E.g. Weoley castle, Warwickshire (Birmingham Museum) and other examples in the Coventry and Nuneaton museums.
118 Dunning, op. cit. in note 40, pp. 236-246. The scroll style seems to have spread eastwards into Lincolnshire, where it was used in the Toynton kilns (Med. Archaeol., iii (1959), 325), south-westwards to the Bristol area, where it was also used by the Ham Green potters (op. cit. in note 120), and south to Laversstock, Wiltshire (information from Mr. J. W. G. Musty).
119 Sherds shown me by Mr. S. E. Thomas included both scroll and erratic circle-and-dot ornament. This site must now be considered to continue after 1250.
b. Fig. 53, no. 2. Sherd of a jug with two tooled applied strips in brown. The ware is as Fig. 53, no. 1, soft grey with brown surfaces. The strips are curved and suggest a scroll pattern of better definition than no. 18A above, thus providing another link with the midlands, where this design originates, or the Bristol area where it was used in the later thirteenth century.  

The other four jugs (Fig. 53, nos. 3, 4, 5 and 10) form a most interesting group, as they are decorated with a complex rouletted pattern which seems to be typical of this area.  

See note 118 and Dunning, op. cit. in note 40.

Other examples are a complete jug in the Gloucester Museum (unpublished); Blackfriars, Hereford, Trans. Woolhope Field Club, xxxvi (1958-60), 384, fig. 3, no. 19; Skenfrith castle, Monmouthshire; and Laugharne Burrows, Carmarthenshire, Archaeol. Cambrensis, 6 ser. ix (1909), 406, fig. 20.
c. Fig. 53, no. 3. Part of a jug in soft sandy grey ware with brownish surfaces in patches and dark lustrous green glaze. The fragment is the broken-off base of a bridge-spout with a rib underneath, and a horizontal rouletted pattern of interlacing arcs giving a wave effect like that of no. 16 above.

d. Fig. 53, no. 4. Small sherd from a tall thin jug with a similar pattern of rouletted interlocking arcs.

e. Fig. 53, no. 5. Small sherd from the shoulder of another jug with a complex rouletted pattern of arcs.

f. Fig. 53, no. 10. Sherd of a jug in similar ware with a complex geometric rouletted pattern in bands.

All this complex curvilinear rouletted decoration is presumably derived from the simple bands of square, rectangular and diamond-notch rouletting, which originated in East Anglia in Saxo-Norman times and continues on jugs until the fifteenth century. The complex rouletted jugs cannot therefore be a development from the simple rouletting, which continues in use until late medieval times, but is a local style shooting off from the main tradition. There are no other complex rouletted sherds known from this country. This is of considerable interest, for the only other parallels are from Denmark, Sweden and Holland. In the Roskilde Museum, Denmark, there is a jug with continuous bands of complex rectilinear rouletting and in the Lund Museum, Sweden, there is a similar jug from Skanör. In the Friesch Museum, Leeuwarden, Holland, there is an even more interesting jug which helps in an understanding of the curvilinear complex rouletting at White castle (Fig. 53, nos. 3–5).

W. C. Braat published a rather poor photograph of this jug in 1937 but I am indebted to Mr. G. C. Dunning for drawing my attention to a better photograph published by P. C. J. A. Boeles in which the form of the rouletting is clearly visible, and for allowing me to use his drawing of the jug, Fig. 54. The decoration comprises a series of scroll-like stems with leaves at the ends. An examination of the poorly-executed White castle examples shows that near rouletting, there was the same intention there, though not very successfully carried out. It is not clear at present, until more examples to link them have been found, seeing that there is a large gap between these groups, whether they are directly connected or whether the same result was produced separately in the west midlands and Holland. Scrolls are, in fact, already a feature of the local pottery, Fig. 53, no. 2.

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123 See p. 15 f. and notes 111-114.
124 Accession number 261.32. N. A. Christiansen, Roskilde Museum (1946), p. 8. I am grateful to Mr. Christiansen for showing me this jug and the other important medieval finds in his museum.
125 O. Rydbeck, 'Den Medeltida borgen i Skanör,' Skr. Kungl. Humanistiska Vetenskapsanfundet i Lund, xx (1955), fig. 88. Complex triangular rouletting is common on German and Dutch stonewares, such as those made at Siegburg, Brunssum and Schinveld, Bericht van de Rijksdienst voor het Oudheidkundig Bodemonderzoek, ix (1959), 139-88 and x-xi (1960-1). Mrs. J. Le Patourel has drawn my attention to other examples from Petergate, York, and to a sherd from Calais, but these do not have any of the curvilinear features (Fig. 53 no. 10) that are typical of this western group of rouletting.
126 Bonner Jahrb., cxxlii (1937), pl. 45, no. 1, right.
Mr. P. Ewence, who drew the sherds, has carefully worked out how the rouletting was done. He reports as follows:

‘This decoration was achieved by pressing an incised roller on to the surface of the vessel while it was rotating on the wheel and moving it down the surface to produce a spiral. The spouted jug (FIG. 53, no. 3) illustrates this. The decoration can be traced under the smoothing of the spout, showing that it was done in the wet clay before the spout was added. The form of the tools used is best understood by considering the sherds illustrated in FIG. 53, nos. 5 and 10, where enough of the patterns are present for the circumferences of the rollers used to be estimated. No. 5, FIG. 53, was decorated with a roller of \(3\frac{3}{8}\) in. circumference, no. 10 with a roller of \(3\frac{1}{8}\) in. circumference. Single units of these two patterns are reconstructed in FIG. 53, nos. 6 and 11. Nos. 7-9 show the probable stages in making the type of tool used to decorate FIG 53, nos. 3, 4 and 5. An undulating line was first cut into the surface (no. 7) and diagonal cuts were then made from the undulating line to the edge of the roller (no. 8). Finally the spaces above and below the undulations were cut away thus giving the effect on the vessel of parallel recessed lines (no. 9). The geometric pattern reconstructed in no. 11 has been made by straight knife cuts across the width of the roller to produce a series of triangles which in turn were textured alternately with knife cuts and a group of three hollows.’

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