Chapter 14

THE IRON AGE AND ROMAN POTTERY

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with a report on the ORGANIC RESIDUE ANALYSIS OF POTSHERDS FROM YARNTON CRESSWELL FIELD ***By M.S. Copley[1], R. Berstan[1],S.N. Dudd[1,2] and R.P. Evershed[1]***

GENERAL INTRODUCTION

The excavations and other fieldwork in the Yarnton area produced some 361.5 kg of Iron Age and Roman pottery, principally from the two major excavated sites of Cresswell Field and Yarnton (Worton Rectory Farm). Small amounts of pottery were recovered from a number of other locations within the Yarnton project area, some of which are referred to individually below.

Analysis focussed on the two main assemblages. These were recorded separately, all the material, including unstratified sherds but excluding the fieldwalking material, being quantified. The pottery from Yarnton was subject to a fairly detailed post-excavation assessment in 1991 in which all the later prehistoric and Roman pottery from the site was examined. The material covered a wide chronological range, with important early, middle and late Iron Age and Roman groups, the Roman material covering the entire period. The pottery from Cresswell Field was scanned much more briefly prior to detailed recording. The majority of this material was of early Iron Age date, with a smaller middle Iron Age component. Late Iron Age and Roman activity was essentially lacking here. The late Bronze Age material was recorded by another specialist. The slightly arbitrary nature of this division, particularly with regard to the distinction between late Bronze Age and early Iron Age material, is acknowledged, but was considered unavoidable. The Iron Age and Roman pottery was recorded using a unified system for such material routinely employed by the OA on a variety of sites since 1990. The object of such a recording system is to allow comparability of results between different assemblages through the use of standardised codes for fabrics, wares, vessel types and other characteristics. Such an approach is particularly applicable in the Roman period, with its more standardised products, but also has some validity for the Iron Age.

The pottery from the two principal site assemblages was recorded by individual context group. Details of fabric, ware (for the Roman period), vessel type, rim form and surface treatment/decoration were all recorded using standardised codes. Manufacture was not considered in detail beyond the simple division between wheelthrown and handmade fabrics. Data relating to condition, sooting, reuse and repair etc was also noted. Quantification was by sherd count and weight, rim count (eliminating duplicate rims of a single vessel where these could be identified) and rim percent (EVEs – strictly rim equivalents). The records were entered onto a DBase database. Detailed recording of the Yarnton pottery was carried out in 1993, and that for Cresswell Field in 1996. Attempts were made to ensure consistency of recording between the two assemblages, but given the time lag between the two phases of work there were inevitably some differences of emphasis in recording. Where significant these are referred to below.

As noted above, all the pottery from the two main excavated areas was recorded at the same level of detail regardless of the nature of its context or the size of the context assemblage. This contrasts for example with the approach followed within the region at Gravelly Guy (Stanton Harcourt), where the pottery was divided into three levels for analysis, dependent largely on group size (Duncan *et al*. forthcoming). The combined Yarnton and Cresswell Field assemblage was considerably smaller than that from Gravelly Guy and its constituent groups were also generally smaller (see below), so that exclusion of small groups from consideration would have seriously compromised understanding of the assemblage as a whole (to which even unstratified material can contribute significantly) and would have made phasing of many features, already problematical, effectively impossible.

Certain aspects of the pottery, such as fabric types, are treated on a project wide basis. Elsewhere, areas of the analysis depend on the contrast between the Cresswell Field and Yarnton assemblages, particularly with regard to discussion of the chronology of the Iron Age phases of the site.

Recovery

In both Yarnton and Cresswell Field assemblages the recorded material included pottery from evaluation trenches dug across these sites. The Yarnton assemblage included pottery from a gridded surface collection carried out during initial hand cleaning of the site, whereas material derived from the comparable stage of work at Cresswell Field was assigned to general collection numbers or, more commonly, associated with the discrete features from which much of this material could be seen to be derived. Additionally, pottery recovered from sieved soil samples at Yarnton was recorded and included in the main database for this site, while this was not done for Cresswell Field. The material from the Yarnton samples amounted to 213 early-middle Iron Age sherds (2247 g) and 115 late Iron Age and Roman sherds (749 g). While the average sherd weights for these groups are rather less than those for the site as a whole it is clear that more than just very small sherds were present in these samples. Hand recovery of sherds from the material selected for sampling was therefore not rigorous prior to sieving here (though it was in contexts which were not sieved), whereas in the material examined from Cresswell Field (but not recorded in detail and added to the database) sherds from sieved residues were almost invariably small fragments, many of which would have eluded normal recovery by hand on site. No contexts were sieved specifically to examine the question of recovery rates of artefacts. The inclusion of data from sieved residues from Yarnton and its exclusion at Cresswell Field is not considered (in view of the relatively small quantities involved, see above) to have produced significant disparities in the two data sets.

Assemblage size

As already noted, most of the individual context assemblages were quite small. Of some 2375 context groups containing Iron Age and Roman pottery from the two areas (some of which were of post-Roman date), *c* 1590 (almost 67%) were less than 100 g.

Although some context groups were interventions from the same feature, many features produced relatively small quantities of pottery, and only rarely was it possible to augment particular assemblages by complete excavation of fills. Therefore, in contrast to sites such as Gravelly Guy, where most pits were completely excavated and feature assemblages were thus often larger, there was very little scope for selectivity in terms of prioritisation of groups for examination. Only 154 context groups (6.5% of the total) were of more than 500 g, the cut-off point defined at Gravelly Guy for those Iron Age groups meriting full scale recording (Duncan *et al.* forthcoming). More groups from Cresswell Field (9.2%) fell into this category than from Yarnton (only 5.7%). It is recognised that the small group sizes pose problems for accurate assessment of the date of such groups in the study area sites, particularly with regard to the possibility that small groups could consist entirely of residual material and thus provide misleadingly early dates for some features. This presents a particular problem in the Iron Age, where questions of dating can hinge on the relative proportions of specific fabric types (see further below). The relative scarcity of statistically viable groups has meant that a number of assemblages could not be assigned specifically to the early or middle Iron Age with confidence. This problem has been considered carefully, however, and stratigraphic and spatial information has been widely used in determining the phasing of the site. While there are almost certainly instances where discrete features have been assigned on ceramic evidence to an earlier phase than should have been the case, it is believed that the broad phasing of both Yarnton and Cresswell Field can be regarded with reasonable confidence.

One further characteristic of the group sizes from Cresswell Field and Yarnton merits comment. It can be seen from Table 14.2 that the cumulative frequency of different group sizes for the two sites is almost identical. At the top of the size range, however, it is notable that more very large groups occurred at Cresswell Field, despite the fact that this site had substantially fewer individual groups (the differences between the recording systems employed in the excavation of the two sites cannot be invoked to explain this). More significantly, while the few large groups at Yarnton were all of early Roman date, the six largest context groups from Cresswell Field, ranging from 2.7-4.2 kg, were all of the early Iron Age and appear to indicate a distinct category of deposition, with abnormally large amounts of pottery. These groups are discussed further below.

Condition

The soil types in feature fills were generally fairly light, which aided pottery recovery, and were also conducive to the preservation of sherds. The pottery was therefore for the most part in good condition, with surfaces quite well-preserved and with relatively little abrasion. This was often regardless of sherd size, so that small sherds were often very similar in appearance to larger ones. While it is evident that redeposition did occur widely on the site, particularly at Yarnton, where intercutting features were more prevalent, there was little clear evidence that presumed or definitely residual material was significantly more worn than that considered to be contemporary with the fills of particular features. Increased wear was not, therefore, a helpful guide in determining the degree of residuality. The reasons for this are not clear, but it may be that redeposition, while widespread, was in most cases an occasional rather than a continual process. In a limited number of cases a marked difference in the degree of wear within individual contexts was seen, but in almost all of these examples the heavily worn sherd or sherds were *later* in date than the context group in question and had clearly become worn and been deposited in the tops of feature fills as a result of plough action, probably of relatively recent date.

Fabrics and Wares

Two distinct methods of categorisation of fabrics are employed side by side in the OA system. For prehistoric material, definition of fabrics is in terms of the two most common inclusion types (for which alphabetic codes are used, eg AS for quartz sand and shell), in order of importance, with a numeric indicator of the coarseness of the fabric (on a scale of 1 (very fine) to 5 (very coarse)).

Ware codes, which can act as labels rather than being strictly descriptive, are more appropriate to the standardised Romanised products of the late 1st century AD onwards and provide a convenient method of grouping fabrics by common major characteristics which are defined by a letter (eg S = samian ware, F = fine wares, O = oxidised coarse wares etc). These major ware groups are then divided numerically into subgroups and individual wares (eg major British colour-coated fine wares would be F50; within that group Oxfordshire colour-coated ware would be F51). The advantage of this system is that wares with common characteristics can be grouped together easily for the purposes of analysis and definition can operate hierarchically at one of a number of levels of precision, as appropriate.

The use of fabric and ware codes side by side allows flexibility in examining multi-period assemblages. The Roman ware coding system relies in part on the recognition of well known products, some of which may incorporate a wider range of material than would strictly share the same fabric definition. In contrast the fabric coding system used here is most appropriate for pottery whose production was less standardised than in the later Roman period. The two classification systems can be used side by side, however, with useful results. This approach has been followed at Yarnton for the pottery of the late Iron Age/early Roman period, which marks an important ceramic transition from traditions of generally quite localised and ill-defined production to the appearance of more clearly centralised sources with definable products. The implementation of this system was helpful in terms of understanding developing trends in fabrics in this period, a problem of particular significance for the Oxford region.

Initial sorting of fabrics/wares was done by eye, with subsequent use of a binocular microscope at x20 magnification to define the inclusion types of individual sherds and allow comparison with type sherds in the Roman ware type series. In effect, all pre-Roman and many of the Roman sherds were checked under the microscope. For the purposes of presentation of the results the later prehistoric and Roman pottery was divided into two groups; early-middle Iron Age and late Iron Age-Roman.

IRON AGE POTTERY

Some 11,006 sherds (167.438 kg, 1127 ‘vessels’, 57.93 EVEs) of Iron Age date were recovered from the excavations. Of this total, 4766 sherds were from Yarnton. In a number of respects the two assemblages were very similar, despite their different chronological emphases and the greater degree of redeposition evident at Yarnton. The latter assemblage formed a remarkably consistent proportion of the whole, by all measures (43.3% sherd count, 43.1% weight, 43.1% vessel count (based on rim sherds) and 43.7% EVEs). The Yarnton and Cresswell Field average sherd weights (15.1 g and 15.3 g respectively) and average representation of rim circumference per vessel (ie. EVEs divided by vessel count, 5.2% and 5.1% respectively) were also very close. This suggests that the patterns of use, discard and subsequent fragmentation were very similar in the two halves of the site, which is surprising in view of their rather different characters. This question is considered further below in relation to the types of contexts from which the pottery derived.

Fabrics

Fabrics were defined in terms of the two most common inclusion types and an indicator of fineness. The definition of fabrics using this system does not necessarily serve to identify production sources, since these are generally unknown for Iron Age material within the region. Nor does it automatically follow that identically coded sherds were from the same (unknown) source, merely that their makers exploited very similar clay and tempering resources, indicating a uniformity of potting tradition. The range of inclusion types utilised was broad, but most would have been widely available or have occurred naturally in common clay sources in the region. Few, therefore, and none of the most commonly occurring ones, are diagnostic of specific source areas within or outside the Upper Thames region. The range of inclusion types present, and their identifying letters, were as follows:

A - quartz sand.
B - glauconitic sand.
C - calcareous sand/grit.
F - flint.
G - grog.
I - oxide minerals, mainly iron oxides.
L - limestone.
M - mica.
N - none visible.
P - clay pellets.
Q - large angular quartz(ite).
R - rock - various (includes igneous etc).
S - shell (usually fossil).
U - ironstone ooliths.
V - vegetable/organic (sometimes voids).
W - uncertain white inclusions.
X - bone.
Z - indeterminate voids.

A substantial number of fabrics contained more than two inclusion types, but it was only rarely felt that these were particularly significant in terms of characterisation of the fabric, in which cases additional inclusion types were noted. Such occurrences were more common in the early Iron Age.

All the material recorded here was hand made, wheel throwing being introduced in the late Iron Age-early Roman phase of the site. Details of manufacture and surface treatment (apart from decoration) were not systematically recorded, but the only building technique noted frequently was coil or ring construction.. Smoothing and knife trimming were occasionally employed as finishing techniques, but only those techniques with a decorative aspect (including burnishing) were recorded systematically. These are discussed further below.

Full quantification of the Iron Age fabrics is presented in Table 14.3, together with an indication of the vessel types present in each fabric. Separate quantification of the pottery from the two component sites can be found in the project archive.

Tables 14.4-5 show clearly the principal inclusion type combinations. The two main local tempering traditions in the Iron Age were shell and quartz sand, the former broadly characteristic of the early Iron Age and the latter of the middle Iron Age. Together these constituted over 85% of all the sherds from Yarnton and over 90% of sherds at Cresswell Field. Subsidiary traditions are indicated by dominant calcareous grit and limestone tempering, both of which amounted to over 5% of the Yarnton assemblage but were only half as common at Cresswell Field, suggesting that they were essentially middle Iron Age fabrics. A small, but perhaps significant, proportion of the mainly early Iron Age assemblage from Cresswell Field comprised fabrics with a grog temper. This last fabric group was important in what appeared to be some of the earliest Iron Age or later Bronze Age-early Iron Age transitional features at Cresswell Field. After consideration of some individual fabric types the chronological development of the assemblage in fabric terms is discussed in greater detail below.

As already indicated, the great majority of inclusion types were potentially available quite locally. Shell, the most common inclusion type, was mostly, if not entirely, fossil-derived. A number of samples from shell-tempered vessels were analysed by Jonathan Dempsey (full report in archive) who concluded that the principal fossil type utilised (at several different periods in the history of Yarnton) was *Gryphaea*, which was readily available in the Thames gravel terraces of the Oxford region. Non-shell inclusions in these fabrics suggested that the associated clay was much more likely to have been of alluvial than fossil origin, the latter being much harder to work. The shell-tempered fabrics were therefore essentially composed of recent (alluvial) clay with the deliberate admixture of broken fossil shell as a tempering agent. The materials for production of shell-tempered fabrics were therefore probably readily to hand in the immediate vicinity of Yarnton. The nearest limestone source is about 8 km distant to the north-west, but this material was in any case brought to the site for other purposes and could have been exploited in this way by locally based potters. A very small number of sherds contained unidentified rock (R) inclusions. These were so scarce, however, that there was little justification for pursuing their identification. Less common inclusion types included probable Greensand (B), which could have derived from Boars Hill only a little to the south of the site. This inclusion type may have been under-represented in recording of the pottery, but the great majority of the quartz sand observed in the Yarnton pottery appeared to be typical of the gravel terraces of the Thames. Another unusual fabric component was ironstone ooliths (U), which occurred very occasionally as a secondary inclusion type at Cresswell Field (and at Yarnton in a few late Iron Age sherds). The frequency of ironstone ooliths in these sherds was relatively low, however, and might have been consistent with their secondary derivation from alluvial clays. Elsewhere within the region fabrics with a much higher representation of this inclusion type have been noted at Gravelly Guy, in south east Oxford at the Rover Paint Shop (OXROPS), and also at Abingdon Business Park (Muir and Roberts 1999, 68). In these cases a clay source close to the parent Banbury outcrop of the Lower Jurassic ironstone seems to be implied (note by Chris Doherty)*.

Bone was also used as an inclusion type, though only identified in a small number of sherds from a single feature, posthole 8147 at Cresswell Field. The frequency of bone inclusions in these sherds indicates that its use was quite deliberate. No close parallels for such usage are known within the region in this period, though bone was sometimes used as a tempering agent in earlier periods and has been observed in early Iron Age pottery from Tusmore, Northamptonshire (J. Timby pers. comm..).

A very wide range of inclusion type combinations was noted, particularly when these were amplified with the fineness/coarseness indicator. The significance of these variations is debatable. Many inclusion type combinations could have been produced by a single potter, depending on the precise mixture of clay and inclusion types, and some combinations, as would be expected, were clearly functionally determined, with coarsely tempered fabrics commonly used for large vessels and finer fabrics for smaller, thin-walled vessels. These again could all have been produced at a single source.

Chronology of Iron Age fabrics

The general predominance of shell-tempering in the Early Iron Age is well established within the region. In the Yarnton area and at Eynsham, for example, there is evidence that shell-tempering was in use in the middle Bronze Age and perhaps into the beginning of the late Bronze Age, but the most distinctive fabrics of the later Bronze Age within the region were tempered with large angular quartz or quartzite or with flint. The great majority of pottery assigned to the late Bronze Age at Yarnton was in these fabrics (flint-tempering being less common) and characteristic forms were basically bipartite. These fabrics occurred in small but significant quantities at both Cresswell Field and Yarnton. Since many of the sherds in these fabrics were small, undiagnostic fragments, however, it was not possible to assign all of them to the late Bronze Age with certainty.

Limited, but significant evidence suggests that after the middle Bronze Age the earliest use of shell tempering is encountered in vessels which may genuinely be considered to be transitional between established late Bronze Age and early Iron Age pottery styles. A bipartite vessel form typical of the late Bronze Age was found in ditch 664/A, part of enclosure 187, in a fabric tempered with shell and quartzite, an inclusion type combination which is extremely rare. There are, however, no clearly stratified occurrences of shell and quartzite fabrics in the Yarnton sites which would demonstrate conclusively their position in an evolutionary sequence of fabrics from quartzite to shell-tempered traditions. The existence of such a sequence, while plausible, remains speculative, therefore.

It is thus unclear whether the major early Iron Age shell-tempered tradition represented, with the grog-tempered fabrics already mentioned and with a few sand- (often sand and shell) tempered fine wares, the full range of early Iron Age tempering traditions. While most quartz(ite) and flint-tempered sherds have been presumed to be of late Bronze Age date and have generally been recorded as such, a few such small sherds lacking in other diagnostic characteristics have been retained within the record of the early Iron Age material. These may well have been residual late Bronze Age pieces.

The ‘absolute’ chronology of the early Iron Age sequence is based almost entirely upon the pottery. The earliest Iron Age groups, can in turn only be dated by comparison with material with similar stylistic characteristics, principally with regard to vessel form and decoration. Chronological developments in the fabric composition of assemblages are more readily dated in relative than in absolute terms.

It has long been recognised within the region that the proportion of Iron Age pottery assemblages constituted by shell-tempered fabrics declines through the period. This decline appears to have been gradual (Lambrick 1984). On continuously occupied sites, at least, there is no clear horizon from which assemblages are completely dominated by sand-tempered fabrics, though at some sites where occupation appears to begin in the middle Iron Age shell-tempered material is rare, for example, at Watkins Farm (Allen 1990, 32). The problems have always been a) to determine the point (if any) at which shell-tempered material can be regarded as residual in middle Iron Age assemblages on continuously occupied sites and b) to determine the start date of middle Iron Age sites at which shell-tempered material is essentially lacking - did these sites in fact originate in the later middle Iron Age, as suggested by Allen (ibid) in the case of Watkins Farm?

At Yarnton this problem has been approached from the starting point of the Cresswell Field assemblage. Here the great majority of the material, and by implication the feature groups, appears to have been of early Iron Age date, with shell-tempered fabrics amounting to 75% of the total sherds.

The most distinctive early Iron Age assemblage is from pit 8127 at Cresswell Field. The principal fill of this feature (8126) contained very substantial parts of three vessels (Nos *501 *502 and *505) and rim sherds from a minimum of 11 additional vessels (total sherds/wt. 135/4038 g). The upper fill (8174 - 42 sherds/526 g) produced a further eight rims. Four vessels (and a body sherd of a fifth) in the lower fill had excised grooves typical of the early Iron Age material from New Wintles Farm, Hanborough (eg Harding 1972, pl 49 B, E and K) and one of these vessels bore complex incised and impressed white-infilled decoration characteristic of the early All Cannings Cross group dated 8th-7th centuries BC (*cf* Cunliffe 1991, 555). The form of this vessel, while having a number of recognisable early Iron Age characteristics such as a simple straight upright rim and a slightly omphalos base, both noticeable on vessels from Long Wittenham, for example (Harding 1972 pl 50, Q and N respectively), is not precisely paralleled either in the region or at other sites where the early All Cannings Cross decorative style occurs. The most unusual aspect of this vessel is the very rounded shoulder. While this is occasionally seen in jar-like forms at All Cannings Cross (eg Cunnington 1923, pl 29 no 1) this feature does not tend to occur on wider (?bowl) forms of this date, which tend to be at least slightly angled or carinated at the shoulder/girth. The transformation of this aspect into a sharply angled tripartite profile, as for example at Long Wittenham (eg Savory 1937, 5), is seen by Harding (1972, 86-90) as marking a secondary phase in the early Iron Age pottery of the region. Cunliffe suggests that vessels of this type, assigned to what he calls the ‘Long Wittenham-Allen's Pit group’, may have overlapped with the early All Cannings Cross style in the late 6th century and continued to develop down to the 3rd century (Cunliffe 1991, 73-5).

The group from pit 8127 includes a tiny fragment apparently of an angled (tripartite) form in fabric SG3 from the upper fill, but otherwise sherds of this type are absent and more slack-profiled forms dominate the group. The character of the initial early Iron Age pottery at Yarnton is thus reasonably clear. Its affinities are with a group from Standlake (Harding 1972, pl 47), which includes pieces with complex decoration, slack profiled jars with fingertip impressions on the shoulder and a plain bowl (ibid. pl 47 A) which provides a generalised parallel for the decorated vessel from (8126) in terms of size (it was noted by Harding (ibid. 82) as "by far the largest of the fine ware bowls from the region" - it is a little smaller than the Cresswell Field vessel) and its orange-brown finish. Further close parallels for components of the 8127 assemblage are found at New Wintles Farm, Hanborough (see above) and at Kirtlington (Harding 1968), where slack profiled jars were characteristic. All of these groups are assigned by Harding to the primary phase of the early Iron Age. They all have slightly different characteristics, and overall the Yarnton group is closest to that from New Wintles, also the nearest geographically, but there is no difficulty in seeing all these groups as broadly contemporary. A single pit group at Gravelly Guy may also possibly belong to this group of assemblages, though the decorated sherds here are not so clearly in a style related to All Cannings Cross. No other feature assemblages (as opposed to individual pieces) have been identified as assignable to this primary phase of the early Iron Age and these thus remain scarce within the region.

In terms of fabric groupings the breakdown of the pit 8127 assemblage (both fills combined) was as shown in Table 14.6.

These figures are skewed somewhat by the presence of abnormally large portions of three vessels in (8126), two in fabric GS4 and one in SG4, which together account for 33% of the sherds and 60% of the weight of all the pottery in the feature. Discounting these vessels, which may have constituted a special deposit, does not particularly alter the apparently very early Iron Age character of the group, however. The main features of the range of fabrics in this pit are the absence (except as a subsidiary component in one sand-tempered sherd) of flint or quartzite, the presence of moderate quantities of sand-tempered fabrics (see further below) and the importance of both shell and grog-tempered groups. The great majority of sherds in the grog-tempered fabric group had shell as the secondary inclusion type. The converse was true up to a point, but sand was also an important subsidiary element in shell-tempered fabrics, and was indeed present as a further component in most of the GS4 sherds in this group. The great majority of sherds making up this group were therefore in fabrics containing a combination of grog (or clay pellets), shell and sand, in varying proportions. This broadly applies also to the fabrics of some of the finer sherds in the group. These were principally sand-tempered, the sand occurring with grog or shell (and, in a single case, with uncertain voids) in the main fill of the pit, with additional (scarce) instances of fabrics AN, AP and AV, all small, fine sherds, in the uppermost fill 8174. In summary, no sherds in the group were tempered primarily with inclusions other than sand, grog/clay pellets or shell, and sherds with other inclusion types as their *minor* component accounted for just under 10% of the sherd total and less than 2% of the total weight of the group. It is important to note that the use of sand as the principal tempering agent (usually with shell or grog/clay pellets as the secondary inclusion type) in the fabric of some fine vessels was established at the beginning of the Iron Age. This appears to have remained the case throughout the early Iron Age and later, but while sand-tempered fabrics amounted to 16.4% of the sherd total they only constituted 6.6% of weight.

The other most substantial early Iron Age groups at Cresswell Field were from pits 7057, 7787 and ditch 7346, midden (7003) and a finds reference context 7269. The presence of a small intrusive Roman sherd in (7003) may mean that it was less reliable than the other groups. The principal aspects of the fabric components of these features are summarised as follows:

These groups were dominated consistently by shell-tempered fabrics, which generally comprised between 80% and 90% of sherd count and (usually) a slightly higher proportion of the total weight. The group from pit 7787 was slightly anomalous in that it was dominated by 19 sherds (3007 g) from a single vessel in fabric SA5, but it still falls recognisably within the group of early Iron Age assemblages. Sand tempering was another consistent component of these early Iron Age groups and grog tempering also occurred regularly but in small quantities. Other inclusion types were less regular components of these assemblages. The slightly higher representation of calcareous gravel (C) and limestone (L) fabrics in midden 7003 might suggest that this assemblage is slightly later in date, or could reflect possible contamination in this group (see above). Certainly these two inclusion types were very rare in the primary early Iron Age group (pit 8127, see above) and were more common in the middle Iron Age.

The vessel forms from these features (in all, 77 vessels identified on the basis of rim sherds) represent a slight development in the early Iron Age form repertoire from that seen in the ‘All Cannings Cross pit’ group. While most rim sherds (51) were not large enough for the specific form to be determined, vessels in forms CA (bucket shaped jars - 3), CB (barrel shaped jars - 6), CS (‘slack-profiled’ jars - 6), CT (tripartite jars - 7) and HC (curving sided bowls - 2) were identified. Amongst this material the consistent, if relatively low-level, presence of angular tripartite forms (CT) is significant. Examples of this form were found in each group except that from pit 7787, in which there were only four rim sherds. Type CB is particularly characteristic of the middle Iron Age, but is also found in early Iron Age contexts, as here.

In order to trace the chronological development of the balance of fabrics further, a comparison was made between the pottery from the pits in Cresswell Field and Yarnton, contrasting the material in the features assigned to early and middle Iron Age phases. Pit assemblages were selected for examination since these were thought less likely to have suffered from intrusive material through extensive recutting, as is seen in some of the ditch contexts. Some intrusive material was evident in the Yarnton sample, but this was not thought to invalidate the general conclusions drawn from this analysis. It was inevitable that since in some cases the phasing was based entirely on ceramic criteria, there was a danger of a circular argument resulting. Again this was not thought to compromise the results significantly.

The figures show very close similarity between the early Iron Age pit assemblages in the two halves of the site, allowing for the exclusion of the earliest Iron Age group at Cresswell Field (8127) from the table, and the presence of intrusive Roman material at Yarnton. The figures for the combined pit groups from Cresswell Field are close to those for the selected largest early Iron Age groups discussed above, although the combined figures suggest a slightly higher representation of sand-tempered fabrics at the expense of shell-tempered ones than is implied in some of the largest individual groups; nevertheless these figures are closely comparable. The picture for the middle Iron Age is significantly different, however. Here the fabric proportions at Cresswell Field, while showing development of the assemblage from the early Iron Age, do not depart radically from the pattern established in that period. An increase in the proportion of sand-tempered fabrics, and a corresponding decrease in shell-tempered fabrics, is noticeable, along with increases in the proportion of C (calcareous sand) and L (limestone) fabric groups (these increases being more prominent in terms of weight than of sherd count). In the Yarnton middle Iron Age pits, however, sand-tempered fabrics have increased in importance over their early Iron Age counterparts by a factor of five (sherd count) and shell-tempered fabrics have declined to well under half their previous level. The increase in C and L fabric groups noted in the Cresswell Field assemblage is also present here, though it is much more prominent in the former group. Organic-tempered (V) sherds were also relatively significant at this time, whereas they were absent at Cresswell Field in the middle Iron Age and present on both sites in very small quantities in the early Iron Age. The significance of this is uncertain. An examination of the pottery from the middle Iron Age ditch groups at Yarnton produces a comparable picture to that from the pit groups in the same site (there were insufficient early Iron Age ditch groups here to provide meaningful comparanda). In these groups the representation of sand and shell-tempered fabrics was fairly similar in terms of sherd count (41.7% and 44.7% respectively of sherds, with a total of 1467 sherds considered), but as with the pits, sand-tempered fabrics were much better represented than shell in terms of weight (58.1% and 32.1% respectively).

In broader terms, the contrast between the middle Iron Age assemblages at Cresswell Field and Yarnton is most likely to reflect chronology rather than other factors. In essence the pattern seen at Yarnton shows a later stage in the evolution of the shell:sand-tempering ratio than is seen at Cresswell Field. The simplest explanation of this is that activity at Cresswell Field terminated or (more likely) was reduced to a very low level at a relatively early stage in the middle Iron Age, whereas at Yarnton it is likely that there was continuous occupation through the middle Iron Age. The minimal level of late Iron Age and Roman activity found at Cresswell Field is therefore unlikely to have been a new development at that time, but simply indicated low level use of the site following a pattern already established for perhaps two or more centuries.

Decoration

A variety of finishing/decorative techniques was employed, though most of these were only found rarely. The most common technique was burnishing, which was encountered on some 2682 (24.4%) of the total Iron Age sherds. Detailed analysis of decoration in relation to fabrics and forms is not attempted here, though the data upon which such an analysis could be based exist in the pottery archive. The incidence of burnishing in relation to fabric does merit further consideration, however, in view of its frequency, and is summarised in Table 14.9 below.

These figures, which simply record numbers of sherds with burnishing, disregarding details of the location of the burnishing, show a greater incidence in what may be considered the `finer' fabrics (particularly sand-tempered ones). The technique was quite common in limestone (L) and grog (G) groups of the most important major fabric groupings, though its relatively high representation in G fabrics owes much to the concentration of burnished sherds in fabric GS4 in the ‘All Cannings Cross’ pit 8127, including sherds from the large decorated bowl. It occurred less frequently in C and S fabric groups - it was almost exactly half as common in shell as in sand-tempered fabrics. Of the principal sand-tempered fabrics AN2, AN3, AS2 and AS3 were most commonly treated with burnished zones, usually covering the entire vessel. In some cases there was partial or overall burnish of the interior of vessels, usually, but not always, complementary to exterior burnish.

The only other overall surface finish/decorative technique employed was that of red-coating. A total of 23 sherds, 10 in sand-tempered (AN2, AN3 (2), AP3 (2), AS3 (4) and AS4) and 13 in shell-tempered fabrics (SA3 (2), SA4 (8), SG4, SP3 and SP4) had such a finish. The material in question was not analysed so its constituent(s) are not known. It is assumed not to have been haematite, however. Only four of the sherds with this technique came from Cresswell Field. The significance of this is not certain, since such decoration is usually characteristic of the early Iron Age, which was particularly well-represented there. It is perhaps possible that red-coated vessels were treasured for their rarity value and remained in circulation longer than other vessels, which might account for their more frequent occurrence in the later, Yarnton assemblage.

Linear burnishing, essentially a decorative feature rather than potentially combining this aspect with a functional role as in ‘zone’ burnish, was much less common than zone burnish, being recorded on only 20 sherds from the site (9 in A fabrics, 1 in C and 10 in S fabrics). On five sherds (from two vessels, in fabrics AN2 and AS3) this took the form of curvilinear motifs, otherwise simple vertical, horizontal or oblique lines predominated.

Other decorative techniques employed were excision (of grooves), incision (lines etc), impressing and stamping, frilling or notching of features such as rims and the application of cordons. Grooving was relatively rare, occurring on 93 sherds (0.8%), in A (26 sherds), C (1 sherd), G (34 sherds), L (11 sherds) and S fabrics (21 sherds). In most cases grooves were apparently horizontal, on the shoulder (or more rarely at the girth) of vessels or, most commonly, uncertainly located in relation to the vessel profile, on body sherds. The relatively high incidence of grooving on G fabric sherds (14.6% of all sherds in these fabrics had grooves), particularly on fabric GS4 (30 grooved sherds) reflects the importance of this technique in the earliest Iron Age, all these sherds occurring on vessels in pit 8127 at Cresswell Field.

Incised decoration occurred on 115 sherds. A number of subtypes of this technique were identified and are quantified by fabric as follows.

The level of confidence of the identification of some motifs is variable. In some cases, types B, C and G incised decoration recorded on small sherds may have formed parts of more complex motifs or schemes, eg of types I and J. The most common form of such motifs, rough triangles, were frequently infilled with multiple lines. The type Z (broad lattice) decoration could also have formed part of the infill of such a motif. Infill of linear patterns with other decorative types was rare, but was evident on the large ‘All Cannings Cross’ bowl, where complex curvilinear patterns were infilled with small roughly triangular incisions or impressions, both these and the lines having white inlay. The inlay was examined by Chris Doherty of the Oxford University Research

Laboratory for Archaeology and the History of Art and shown to be of bone, whereas a body sherd of an angled tripartite jar in fabric SA3 from pit 8525 (Fig. 00. 136*) had crudely executed incised decoration inlaid with calcite (chalk or limestone).

The importance of the technique in the early Iron Age is reflected in its occurrence in the 'All Cannings Cross' pit 8127 (the 24 sherds of fabric GS4 with composite incised decoration were from the highly decorated bowl (Fig. 00.1)). Shell-tempered fabrics, however, only accounted for half of all the incised sherds, despite the predominance of these fabrics in the early Iron Age. This is partly explained by the skewing effect of the decorated vessel and also by the more frequent occurrence of incised decoration on finer fabrics (though a number of coarsely-tempered fabrics did have incised decoration), with the result that there was a higher percentage of incised sherds in sand-tempered than in shell-tempered fabrics, *vis-a-vis* their relative representation in the early Iron Age. Thus using the 'average' figures established from examination of the early Iron Age pit groups at Cresswell Field (see above), shell-tempered fabrics amounted to roughly 85-90% of sherds and sand-tempered ones *c.* 5-8%, while their respective contributions of incised sherds were 54.7% and 14.2% (discounting the nine incised sherds of middle Iron Age date discussed below). While incised decoration did occur in the middle Iron Age it was uncommon then, the only certain middle Iron Age examples at Cresswell Field being on a globular bowl in fabric LV5 (Fig. 00.*145) and a body sherd of fabric AP2 (Fig. 00.*146) both from pit 8786, an incised rim in fabric CN5 from Yarnton (No *X92) was probably also of middle Iron Age date. Where the vessel form could be determined the association of incised-decorated sherds with form at Cresswell Field was as follows: form C (2 sherds), form CS (18 sherds), form CT (7 sherds), form HD - vessel No *1 - (24 sherds) and form HG - the middle Iron Age bowl No *145 (4 sherds). With the exception of this last vessel the correlation of incised decoration with specifically or predominantly early Iron Age forms is clear. The limited evidence from Yarnton is more equivocal, associations of incised sherds being with form CB (No *X92, see above) and with forms C (2 sherds), D and H, all but form CB being in shell-tempered fabrics.

Impressed decoration also tends to be characteristic of the early Iron Age, and unlike incised decoration was found as commonly on coarsely-tempered fabrics as on finer ones, thus 72.9% of the 251 sherds with impressed decoration were in shell-tempered fabrics. The principal manifestations of the technique were as finger-tip or similar impressions on the shoulder of vessels, or less commonly on the rim or both rim and shoulder. Such instances accounted for almost 80% of all impressed decoration, of which the great majority were in shell-tempered fabrics, although the technique did also occur in A, C, G, L, P and V fabric groups, albeit very rarely in most. More carefully-impressed dimples were found on vessel No *1 and small impressed oval shapes occurred rarely in sand-tempered and shell-tempered fabrics. Simple ring impressions occurred on seven sherds in sand-tempered fabrics, two in LV5 and one in SA3. These, and three sherds with white infilled dots in fabric AS3, differ in character from the cruder fingertip impressions, and may all have been of middle Iron Age date. The character of the infilled dot sherds, for example, is very similar to that of a loosely saucepan-like vessel from Compton Beauchamps, Berks (Harding 1972, 101-2 and pl 65F). Only three sherds were recorded as having 'stamped' as opposed to impressed decoration (ie probably involving the use of a specially made die). Two of the stamps were small penannular ones. These were in fabric SG4 on a type CB jar (No *42) with a very similar stamp in fabric AQ3 (not illustrated), while a different, more linear, stamp type occurred on a bowl form in fabric AN2 from Yarnton (No *X82). This last example was certainly of middle Iron Age date, but the penannular stamps, both from Cresswell Field, could have been earlier.

Finally, there were a few examples of more plastic decoration. Frilling or notching of the vessel rim, as opposed to fingertip impression on the outer edge of the rim, or fine diagonal incision, both referred to above, occurred on 35 shell-tempered sherds (30 from Cresswell Field) and one sherd each in A, C and F fabrics. The distribution of this characteristic was closely mirrored by that of cordons, although these were less common. There was a single example at Yarnton of a notched cordon in fabric AV2, the other ten examples of cordons were from Cresswell Field, all in shell-tempered fabrics, seven of these being notched or having indentations. The preponderance of this early Iron Age technique at Cresswell Field is consistent with the early emphasis of this assemblage.

Vessel Types

Some 1127 vessels were counted on the basis of rim sherds (discounting multiple sherds from the same vessel). These were also quantified by EVEs (measurement of rim percentage), which was felt to give a useful check on other measures despite the difficulties inherent in producing accurate rim percentage figures from irregular, hand-made vessels.

The definition of vessel types is based on the fairly broad classification scheme used for Roman as well as pre-Roman vessels. In this scheme the generalised form of vessels, which may be related to functional considerations, is considered to be of greater significance than minor variations in form. Nevertheless, a system of rim type classification, not dissimilar to that used for Gravelly Guy, was also employed to provide more detailed definition of rim shape which could be used in discussing certain aspects of the assemblage.

The majority of the vessels were of simple forms. In many cases, despite the good condition of the sherds and the reasonably large average sherd weight, insufficient of a rim survived to allow a detailed assessment of its form, so that often only generalised form categories could be used. The average representation of rim circumference per vessel (ie EVEs divided by vessel count) was about 5.1%. When it is considered that the duplicate rim sherds of a single vessel did not appear in the vessel count figure, it is clear that the average representation of rim circumference *per rim sherd* would have been considerably less than 5%. The degree of brokenness of the assemblage suggested by these figures helps to explain why more rim sherds were not assigned to specific types.

The vessels present were almost all assigned to one of two general classes, jars and bowls, the difference between these being defined principally on the basis of the ratio of height to rim diameter. Where this was more than 1:1 the vessel was usually defined as a jar (vessel class C); where this ratio was less than 1:1 it was defined as a bowl (vessel class H). Certainty of attribution even to these generalised classes was not always possible, however, since this depends on the presence of a substantial part of the vessel profile. In some instances, therefore, attribution was to an ‘uncertain’ jar/bowl category (vessel class D), though this was only used where there was genuine doubt about the form. In the majority of cases the 'default' option was to record rims as class C (jars) with no attempt at subdivision. This approach was felt to be justified on the basis of the known character of Iron Age vessel forms in the region, in which bowls (defined on the criteria outlined above) appear to be rare. It is accepted, however, that some uncertainty may attach to the identification of some rim sherds as class C jars. Small rim sherds, were assigned to an 'unknown' category (vessel class Z).

Comparison of the data for vessel count and EVEs reveals, as would be expected, that most of the more generalised form classes are represented by smaller sherds (ie the EVEs values per sherd are lower) than more closely defined types. Thus, for example, while otherwise undefined C class jars amounted to 65% of rim sherds, they totalled under 50% of EVEs, whereas type CS jars constituted 4.8% of the total rims but 9.3% of EVEs. In the following tables (14.12-13), the quantified breakdown of vessel forms by major fabric groups is presented.

In order to emphasise the comparisons and contrasts between the Cresswell Field and Yarnton assemblages these data are then presented in terms of percentages of the EVEs figures for the two sites as follows (Tables 14.14-15)

The data in these tables show that both assemblages were dominated by jars, which were slightly more important at Cresswell Field than at Yarnton (93.3% and 88.4% respectively). The former site had a slightly higher representation of unspecified jar forms (class C), but in both cases these vessels amounted to roughly half of the entire assemblage. There were distinct differences between the sites regarding the remainder of the range of jar forms, however. At Cresswell Field, characteristic early Iron Age forms such as the slack profiled, slightly shouldered, jar (CS) and the tripartite angular form CT amounted to 25% of the total assemblage while the barrel-shaped jar form (CB) comprised 14.8% of EVEs here. At Yarnton, in contrast, CS and CT were both poorly represented, together totalling only 5% of EVEs, whereas form CB was much more common, at 33% of the assemblage. The simple bucket-shaped form CA was also more common at Yarnton, with the majority of occurrences in sandy fabrics, indicating that this was predominantly a middle Iron Age form, though early Iron Age examples are known. Other jar forms were globular jars (CG), very scarce at both sites, and a single example of a bead rim jar (CH), presumably of later middle Iron Age date, from Yarnton.

Bowls were more common at Yarnton than Cresswell Field (6% as opposed to 3.9%), and the single 'All Cannings Cross' bowl from Cresswell Field formed a substantial component of the bowl total from that site (expressed as EVEs). Uncertain jar/bowl types (class D) were also more common at Yarnton. Each site produced a single example of an uncertain bowl/dish (class I) and a miniature vessel (class MD).

In terms of the correlation of vessel form with fabric, shell-tempered fabrics had the highest representation of unspecified jar types amongst the commonest fabric groupings in both Cresswell Field and Yarnton assemblages. There was a clear association of the early Iron Age vessel forms CS and CT with the fabrics considered most typical of this period. This is particularly noticeable at Yarnton, where all examples of the former and over 80% of EVEs of the latter form were in shell-tempered fabrics. At Cresswell Field the representation of these vessels in shell-tempered fabrics was no more than average, but was augmented by a significantly above-average representation of these forms in grog-tempered fabrics, forms CS and CT constituting well over half of the total EVEs in grog-tempered fabrics. The relatively high incidence of form CT in sand-tempered fabrics should also be noted. This reflects the use of sand-tempering for fine ware forms in the early Iron Age (generally, form CT was the only early Iron Age form to be consistently well-finished), and the majority of the sand-tempered examples of this form (7 out of 11 vessels represented by rims) were in the sand and shell fabric AS3.

It is a commonplace in the region that the middle Iron Age has fewer characteristic vessel forms than the early Iron Age, the most distinctive forms being the relatively scarce globular bowls often distinguished by elaborate decoration as well as by their form. Such types occurred only rarely in the Yarnton sites (amounting to 1.8% of EVEs). The barrel-shaped jar (CB) was the form most characteristic of the middle Iron Age here, although, as already noted, it does appear to have been present in the early Iron Age at least in small numbers. The greater prominence of this form at Yarnton as opposed to Cresswell Field has been referred to above, and is likely to represent a chronological trend rather than a functional distinction between the two assemblages. The form was always common in sand-tempered fabrics, and amounted to more than 40% of the total EVEs in these fabrics at Yarnton, but it was relatively common in shell-tempered fabrics as well, and while at Cresswell Field it only comprised 10% of all EVEs in these fabrics, these vessels nevertheless amounted to almost half the total representation of the form on this site. More striking, however, is the very clear association of this form with some of the less common fabric groups, particularly C and G fabrics. It amounted to over 36% of EVEs in both these groups at Cresswell Field, but then rose to 61.7% and 62.7% of their respective outputs (EVEs) at Yarnton. Together with single examples of (perhaps related) globular bowls in fabric LV5 at Cresswell Field and in fabric CV5 at Yarnton, form CB constituted the major part of the output of the C and L fabric groups.

The relative scarcity of bowls makes it difficult to draw general conclusions about the relationships of form and fabric in this vessel class. The majority of examples from Yarnton were in sand-tempered fabrics, exceptions being two unspecific (ie class H) bowls in shell (S) fabrics and the single type HG bowl in the surprisingly coarse fabric CV5 already mentioned. Even including the single class I bowl/dish, however, there were only 12 bowls in sand-tempered fabrics at Yarnton, although there were a further nine uncertain jar/bowl forms in these fabrics. Three quite small vessels were assigned to form HC, a slightly curving sided type defined as a bowl because its diameter was greater than its height. These vessels appear to be typologically the closest in the study area assemblages to saucepan pots and occurred in fabrics AN3, AP3 and AV3 (one each).

Aspects of vessel use

Evidence for characteristics which might have a bearing on vessel use, such as sooting, were recorded, with some 593 sherds noted as having relevant evidence, which occurred on sherds of all the major fabric groupings. This is summarised in Table 14.16. The figures exclude instances of simple burning, which were not recorded sufficiently systematically to produce meaningful data and which in any case probably relate largely to events subsequent to the primary use of most vessels. The breakdown of use evidence in relation to fabric groups reflects very closely the relative importance of those groups across the site – in other words, use evidence is found uniformly on just over 5% of the sherds in all the major fabric groups, suggesting that there may have been little significant variation in the way in which these were used. All the categories of deposits recorded presumably relate to cooking. External soot and internal burnt residues occur fairly consistently across most of the major fabric types, again in patterns which broadly reflect their relative importance in the assemblage as a whole. There is a suggestion, however, that limescale deposits, indicating the use of vessels for heating or holding water, are relatively more common in sand-tempered vessels, almost 30% of all incidences of limescale occurring on fabrics of this type, but they are still well-represented on shell-tempered fabrics as well. A small number of sherds produced both burnt food remains and limescale (a pattern also observed in some early Roman material on the site). It is not clear whether these figures indicate that the dual use of vessels for heating food and water was uncommon, or that vessels were usually well cleaned before being put to slightly different use - these sherds being the exceptions that proved the rule. Overall the evidence suggests that fabric was not necessarily an important criterion in the selection of vessels for general cooking use, though sand-tempered vessels, generally with a fairly smooth interior, might have been slightly favoured for heating water.

The correlation of use characteristics with vessel type (Table 14.17) perhaps produces more insights into the functions of the Iron Age assemblage. The relative incidence of the characteristics is rather different from that shown in the assemblage overall, because the concentration on rim sherds tends to emphasise particular types of use. Limescale and burnt internal residues are therefore less frequent because they tend to occur in the lower parts of vessels which may not be represented unless very large parts of the profile are present. Sooting, in contrast, tends to occur most commonly around the vessel shoulder and is thus well-represented on rim sherds. Type CB (barrel-shaped) jars feature particularly strongly in these figures, particularly from Yarnton, where 21 of the 33 rims included in the table are of this type. External sooting is the most common use indicator seen on rims from Yarnton (24 out of 33 examples) whereas at Cresswell Field sooting and internal burnt residues are equally common, each occurring on 41.5% of the rims with use indicators. A relatively higher proportion of external sooting at Yarnton is also recorded in the overall sherd figures (Table 14.16) – 28.6% of sherds with use indication there had external sooting, as against only 16.3% at Cresswell Field. It is possible that this represents a slight change in cooking practice from the early to the middle Iron Age, though the nature of this change is hard to judge. Two globular jars from Yarnton also had external sooting, showing that relatively fine vessels could be used for culinary purposes in the middle Iron Age.

Other potentially significant information on vessel use emerges in relation to the early Iron Age vessel types CS and CT. Rims of the former type occur with sooting and burnt internal residues in roughly equal quantities (though the overall numbers are small), but the tripartite jar type CT is hardly represented in Table 14.17 at all. One rim had limescale, and a further body sherd attributable to this type had a burnt internal deposit, but there is otherwise no indication of use on this important and relatively numerous type. Since base and body sherds, which might carry internal deposits, can often be attributed to this type even in the absence of the rim, the scarcity of such evidence from this type is particularly significant. The relative absence of deposits does therefore tend to suggest that this vessel type was not generally used for cooking purposes. Examples at the lower end of the size range in this form might perhaps have been drinking vessels, but while examination of the occurrence of particular vessel diameters reveals some clustering for this type, it is in the middle rather than at the lower end of the diameter range (see below), suggesting no clearly-defined functional differentiation based on size.

The data on vessel diameters for selected types from Cresswell Field show relatively little significant patterning. The three main types considered (CB, CS and CT) all had diameter ranges mainly from *c* 100-225 mm, a range reflected by the unspecified jars (C). Within these ranges there was a clear concentration of examples of type CT between 140 and 190 mm in diameter (69% of all examples) and of type CB jars in a similar 140 to 170 mm range (56% of all examples). It may be noted that these preferred diameter ranges are very close to those for typical Romano-British 'cooking pot-type' jars. Continuity of function to those vessels from type CB is very likely on the basis of the general similarity of vessel body shape, but the relevance of this to type CT is less clear.

A little additional light is shed on vessel use by organic residue analysis (see report by Copley *et al.* below). The most frequently occurring lipid component in the 28 of the 49 submitted samples which yielded residues were degraded animal fats. *Inter alia* these were a feature of samples taken from the 'All Cannings Cross' pit group (feature 8127) but occurred in other early and middle Iron Age groups. Two samples produced evidence for beeswax, but leaf wax components were only detected in a single sample, from a sherd also from pit 8127.

LATE IRON AGE AND ROMAN POTTERY

Some 8896 sherds (170.95 kg) of late Iron Age and Roman pottery were recovered from Yarnton, with a further 32 sherds (432 g) from Cresswell Field. The latter are dealt with separately below. The following discussion is based entirely on the Yarnton material

Fabrics/Wares

The pottery was divided initially into major ware groups, defined on the basis of significant common characteristics. These ware groups can be combined to constitute two main classes of material, fine and specialist wares on the one hand, and on the other the rest of the coarse wares (cf Booth 1991). The fine and specialist ware groups (identified by the initial letter of the fabric code) are: samian ware (S); fine wares - colour-coated, lead glazed, mica coated etc - (F); amphorae (A); mortaria (M); white wares - other than mortaria - (W); and white slipped wares (Q). The remaining ware groups are: 'Belgic type' (in the sense of Thompson 1982, 4-5), usually grog-tempered, fabrics (E); 'Romanised' oxidised coarse wares (O); 'Romanised' reduced coarse wares (R); black-burnished ware (B); and calcareous (particularly shell) tempered wares (C). An additional ware category (G) has been used for distinctive coarse gritted fabrics in middle-late Iron Age traditions which occur very occasionally within the region.

Within these classes there are hierarchically arranged subgroups, usually defined on the basis of inclusion type, and individual fabrics/wares are then indicated at a third level of precision, both levels of subdivision being expressed by numeric codes. Thus R20 is a general code for sandy reduced coarse wares, while R21 is a specific sandy reduced Oxfordshire product. For the bulk of the present assemblage fabric identification was at the intermediate level of precision. Most of the material was in fabrics the sources of which are unknown and detailed assignment to specific fabric codes did not seem to be warranted. Fabrics assigned to the E ware group, however, were subdivided further in terms of their principal inclusion types. This procedure was also employed for a relatively small quantity of hand made pottery of middle Iron Age character (but not necessarily of middle Iron Age date), for which the use of ware codes, applicable to Romanised ceramics, is not appropriate.

Quantities of the identified wares or ware groups, using all the measures employed, are presented in Table 14.19. Individual wares are not described in detail. Well-known wares are simply referred to by their common names without further reference and other wares are given summary descriptions, sufficient to define their general characteristics. Further description of some important fabrics is given here, otherwise it is contained in the project archive; relevant references are given in the text below.

For the most part the figures indicate a reasonable degree of consistency between the different measures used. The occurrence of ceramic classes which would produce systemic biases, such as the over-representation of amphorae when recorded by weight as opposed to sherd count, was at a very low level, so such biases were not usually significant (mortaria provide a minor instance, however, being significantly less well-represented by sherd count than by other measures). The principal characteristics of the assemblage in terms of wares are the generally low representation of fine and specialist wares, the importance of the 1st -century material (indicated principally by 'E' wares) and the domination of the remainder of the material by reduced coarse wares, supplemented to a lesser extent by shell-tempered wares. The ware groups are discussed in the sequence in which they appear in Table 14.19.

S Samian ware

Overall quantities of samian ware were small and consisted mostly of Central Gaulish (Lezoux) wares, with a low representation of South Gaulish material. No East Gaulish sherds were confidently identified. The South Gaulish sherds include a tiny decorated fragment and a body sherd of Drag. 27. The only rim was from a bowl or dish of uncertain form. These sherds were generally significantly smaller (average weight 7 g) than the Central Gaulish ones. The higher weights of the latter (average 20.6 g) reflect their occurrence in robust forms such as the bowl Drag 31, which accounted for 10 of the 17 rims in this fabric, along with three form 33 cups, single examples of forms 36 and 38 and two unspecified bowl types represented by small rim sherds. The Central Gaulish material also included two very small decorated fragments. The balance of fabrics and vessel types, and the relative absence of decorated material, are all indicators of the impoverished nature of the samian assemblage which reflect its rural character and generally late date – ie that the majority of the material is probably of Antonine date. This material is an extreme example of a type of collection noted in the much larger assemblage from the northern suburbs of Alchester (Dickinson 2001), which was interpreted as being of semi-rural character and in which the representation of decorated material (at *c* 6% of the assemblage) was noted as particularly low. At Yarnton the three decorated sherds amounted to just under 5% of the samian ware total.

F Fine wares

The quantity and range of fine wares at Yarnton was unremarkable. A single *terra nigra* sherd was noteworthy as it was of a cup, Camulodunum type 56 (Hawkes and Hull 1947, 226). Sherds in three distinct mica-dusted fabrics were recorded, of which F34 and F36 are unsourced, but one of which (F35) can be matched at the Oxford production site of Lower Farm, Nuneham Courtenay (Booth *et al* 1994, 138), where it is tentatively assigned to the early 2nd century. Another 2nd -century Lower Farm product to occur at Yarnton was F59, a colour-coated fabric visually very similar to the later Oxford colour-coated ware but used for bag-shaped beakers of typical 2nd -century form (ibid., 140). Late Oxford products, and small quantities of sherds from their principal contemporary regional competitors, the Nene Valley (F52), the New Forest (F53, Fulford 1975, 24-5 fabric 1a), and a probable Gloucestershire source (F61, sometimes known as 'South-western brown slipped ware', for which see Young 1980; Keely 1986, 160-1, fabric 105), accounted for almost all the remaining material. A few small oxidised colour-coated sherds were not certainly attributable to any of these sources and were assigned to a general code (F50). It is possible, but by no means certain, that these were atypical Oxford products. Discounting these, only seven of the 243 fine ware sherds are attributable to the 1st-2nd centuries. Of the remaining material even the Nene Valley products, which could have appeared on the site as early as the later 2nd century, appear all to be later (and probably all 4th century) on the basis of the vessel forms represented (an indented beaker (body sherd only), a jar and a flanged bowl). The Oxford vessel types were mostly bowls, with the two most common forms (C45 and C51) dominant (14 and 15 vessels respectively).

A Amphorae

Amphorae were very rare, the three principal sherds representing the two most common sources of such material (South Spain and (probably) Southern Gaul) found in the region. A fourth fragment was too small to be confidently assigned to a source. It is worth noting here that a further amphora sherd in an oxidised fabric (A22), possibly of South Gaulish origin and perhaps from a handle of type Dressel 2-4, came from context (13308) on the floodplain. This presumably derived from the Yarnton settlement but the fabric was not represented there.

M Mortaria

Mortaria were not particularly common at Yarnton, though they were better-represented in terms of weight, vessel count and EVEs than by sherd count. With the exception of a single body sherd from the Verulamium region industry these vessels derived entirely from the Oxford kilns, with all three main fabrics (white, white-coated and red colour-coated) represented, though the second of these was scarce. The dominance of Oxford fabrics indicates that mortarium use on the site was almost non-existent before the 2nd century, the Verulamium sherd being the only one potentially datable before *c* AD 100, the earliest date for the production of Oxford white ware mortaria. The Oxford products cover most of the period from the 2nd to the 4th century, but later 3rd and 4th -century types are much better-represented than earlier vessels, with only single examples of types M2, M6 and an uncertain hook-rimmed form assignable to the 2nd century. White ware mortaria (fabric M22) were most common in forms dated AD 240-300 (types M17 (9), M18 (4) and M20 (1)) with six vessels of type M22 with a date range from AD

240-400. Fourth century mortaria representation may have been boosted by vessels in fabrics M31 and M41, in which fabrics types WC7 and C100 (4) are thought to be exclusively of this date. A further fragment of an unidentifiable type in fabric M31 may also have been of 4^{th} -century date, since this fabric appears generally to have been much more common at this time than earlier, despite having been in production from about the middle of the 3^{rd} century. Four vessels of type C97 in fabric M41, however, are not so clearly of the 4^{th} century. The type is thought to have been in production from *c* AD 240-400, and at sites such as Lower Farm appears to have been particularly common in the later 3^{rd} century, though it is not certain that this trend was followed across the industry as a whole. The period of use of C97 at Yarnton is therefore uncertain, but is perhaps as likely to have been in the later 3^{rd} century as later, in which case mortarium use at the site will have been much greater at this time than in any earlier or later period.

W White wares

White wares only totalled 1% of sherds from Yarnton. Almost all are likely to have derived from the Oxford region, with only a single sherd attributed, somewhat tentatively, to the Verulamium region kilns. In view of the importance of Verulamium potters in establishing production of white ware mortaria (and presumably other forms) in the Oxford region in the early 2^{nd} century it is not surprising that products of the two industries can be difficult to distinguish. There seems to have been a regional tradition of production of sandy white and grey/white fabrics, most noticeable in the Abingdon area, in the later 1^{st} century, however, arguably predating Verulamium input into the Oxford region, so the exact extent of Verulamium influence in the production of sandy white wares after AD 100 is uncertain. This difficulty is reflected in the attribution of sherds to a general code W20 for sandy white wares of uncertain source, though an Oxford region origin is (subjectively) preferred. The great majority of the sandy white wares are likely to be of 1^{st}-2^{nd} -century date, the exception being the single sherd of Oxford burnt white ware (W23), for which a date range of 240-400 is proposed (Young 1977, 113).

Fine white wares are in two, probably related, traditions. One of these is represented by fabric W35, a distinctive fabric with common very fine sand temper, used for butt beakers and other forms. This fabric is found in small quantities across the region but is most common in the Abingdon area. At Abingdon itself it seems to be associated with comparable fine sandy oxidised and reduced fabrics (of which O18 and R18 are also present at Yarnton) with broadly similar ranges of vessel types. These are apparently confined to post-conquest but pre-Flavian contexts, and are currently thought to represent fine ware production, based in the Abingdon/Dorchester-on-Thames area and with parallels to similar industries at Chichester and Silchester (Timby *et al.* 1997). Here fabric W35 occurs as a two-handled flagon. It is possible that other sherds assigned to the general fine white ware group W10 are also in this tradition, but the two bowls assigned to the W10 group are not typical forms in the repertoire of this industry as understood at present. The Oxford fine white fabric W12 (to which the majority of W10 sherds may in fact be attributable) probably developed out of this early tradition. It is quite well-represented at Yarnton, though boosted by the occurrence of a number of sherds of a single vessel of Young's type W37. Again most examples are likely to be of late 1^{st}-2^{nd} -century date, but not all need necessarily have been of this date, and parchment ware sherds (fabric W11) are assignable to the period 240-400. These were scarce, though it is possible that a few sherds assigned to the W10 ware group were in fact parchment ware. The W11 sherds were notable in including a rim of the rare bowl form Young (1977) P18.

Q White-slipped wares

Very few white-slipped sherds were encountered. Given the soil conditions on the site, with generally good preservation of surfaces, the rarity of this ware group is likely to be a genuine phenomenon rather than an accident of preservation. Most of the sherds were in the Oxford white-coated fabric (Q21, Young 1977, fabric WC), and a sherd of Verulamium sandy oxidised white-slipped ware (see Davies *et al.* 1994, 54-5) was tentatively identified. Other fabrics in this group could not be assigned to known sources. Within the region fabric Q26 has only been noted at Yarnton. No vessels were represented by rim sherds in these fabrics, but the majority of sherds, at least, are likely to have been from flagons.

E Early Roman 'Belgic type' wares

These wares formed a major component of the Yarnton assemblage – just under and a little over 30% by sherd count and weight respectively, and a little less by other measures. The term 'Belgic type' wares (in the sense of Thompson 1982, 4-5) refers to vessels in a common stylistic tradition but produced in this region in a wide range of fabrics and as both wheel thrown and handmade forms. The principal sub-groups of the E ware class are defined in terms of major inclusion type. None of the material can be attributed to known sources, so further codes defining individual fabrics within the subgroups have not been used. Instead, most sherds were recorded in terms of their principal fabric components in the same way as was done for the prehistoric material. In practice this showed that there was a considerable variation of fabric within some of the sub-groups, particularly amongst the grog-tempered fabrics. There were numerous combinations of grog with a very wide range of secondary materials, of which organic, sand and shell inclusions (respectively in *c* 47%, 36% and 5% of E80 sherds) were the most common, and a continuum of degrees of fineness. Well-defined combinations of inclusions and fineness groupings were not particularly apparent, however, though it would be anticipated that such groupings were significant in indicating local variations in a much wider potting tradition. In a small assemblage from Oxford Road, Bicester, for example, grog and organic tempered fabrics were again the most common (*c* 73% of E80 sherds) with grog and sand fabrics accounting for 14% of E80 sherds and grog and shell tempering 4% (Booth 1997a, 78).

In view of the uncertainty about the significance of fabric variations within the broader fabric sub-groups of the E ware class the majority of the discussion is at the level of those sub-groups. Grog-tempered fabrics (E80) dominated the group, amounting to 73.5% of all E ware sherds (78.2% by weight), but sand, shell and limestone tempering were also regularly encountered. It was the sand-tempered aspect of this tradition which eventually developed into the typical 'Romanised' reduced wares which dominated the coarse pottery of the region from the later 1st century AD. On this basis it would be expected that the proportion of E20 and E30 wares would rise at the expense of E80 wares in the later stages of the late Iron Age/early Roman phase on the site, but the nature of the site sequence, and the paucity of good sized groups, makes it impossible to demonstrate any such development with confidence.

Jars or probable jar types formed the majority of the output in E wares, amounting to some 85% of rims in these wares, though bowls (mostly carinated), dishes and the occasional lid were also present. Three butt beakers, a girth beaker and a possible cup also occurred in E80 fabrics. The distribution of vessel types was broadly comparable across the main E ware sub classes, except that an unusually high proportion of the vessels in E20 (4 out of 11) were straight sided dishes. The numbers are perhaps to small to be significant, but they suggest a correlation between this relatively fine fabric group and the form, which was presumably intended for table use.

The principal question relating to this ware group is that of chronology, since it spans the period of the Roman conquest. The appearance of E wares is the principal artefactual marker for the beginning of the late Iron Age in the region, in the almost total absence of alternative dating media. Harding's chronology, which pushed the introduction of this pottery back into the 1st century BC (1972, 129) is not readily supported by the results of recent work (for example at sites such as Abingdon Vineyard, Stanton Harcourt (Gravelly Guy) all as yet unpublished, and Hatford (Booth 2000). At Linch Hill Corner, Stanton Harcourt (Grimes 1943), one of the key sites for Harding's late Iron Age phase in the region, examination of the material in the Ashmolean Museum shows that the 'Belgic' pottery is associated from the beginning of the sequence with Savernake ware. While the chronology of Savernake ware is itself open to debate, with an entirely post-conquest date range suggested by Swan (1975, 40) but not universally accepted (cf Timby 2001, 78-83), it is nevertheless hard to see how the date range of this material could be pushed back before the beginning of the 1st century AD, even if a pre-conquest origin were accepted. The current view in the region thus tends to see the appearance of E ware fabrics within the 1st century AD (*cf*. Booth 1997a, 81-2), though this position is not yet conclusively established. A recent radiocarbon date from Bicester Fields, Bicester, centres in the 1st century BC (NZA 9634, calibrated to 171-2 BC at 1 sigma, but 190-30 BC using Oxcal v2.18, Cromarty *et al* 2000, 223). This date, from a site producing some middle Iron Age pottery but with the assemblage principally composed of E wares, unfortunately comes from an isolated feature within the site, so its exact significance for the chronology of the E wares is uncertain. More work is clearly needed. E ware fabrics were in common use into the Flavian period on some sites at least, but not usually beyond, except as large storage jars, which continued to be manufactured in these fabrics through much of the Roman period and are recorded here under ware code R90 (see below and Young 1977, 202).

O Oxidised coarse wares

Oxidised wares formed a minor component of the Yarnton assemblage throughout the Roman period. The great majority of these wares were certainly or probably of local origin, most being assigned to the Oxford industry itself. Such fabrics included not only O11 but also very likely most of the sherds assigned to the general sub groups O10, O20 and O80. The finer oxidised wares O10 and O11 were used for a wide range of forms, while the coarser O20/O21 fabrics occurred only as jars and bowls. Much the most common individual form in fabric O11, however, was the wide necked jar, Young type O27, of later Roman date. Fabrics O15 and O18 belonged to the early Roman regional fine ware tradition discussed above which included fabrics W35 and R18, to which O18 was equivalent. The one rim sherd in fabric O18 was of a characteristic butt beaker.

Non-local oxidised wares mostly occurred in small quantities, with North Wiltshire sources probably represented by fabrics O30 and O32 and Severn Valley ware (not more closely assigned) by fabric group O40. Identification of the latter was aided by its occurrence in characteristic straight sided tankard forms of 2nd -century date, this type being absent from the Oxford repertoire, and it is possible that undiagnostic Severn Valley ware body sherds are under-represented here, though the Oxford area is very much at the limit of the south-easterly distribution of these wares (they occur, for example, in very small quantities in the northern suburbs of Alchester). The only significant non-local oxidised fabric was O81, pink grogged ware (Booth and Green 1989), which occurs regularly across the region, principally in the 3rd and 4th centuries as large jars. Here it occurred exclusively as jar forms, though the very large vessels were supplemented by other types, such as a narrow mouthed jar. A source for this fabric, though not necessarily the only one, is now known at Stowe Park, Buckinghamshire (Booth 1999).

R Reduced coarse wares

Reduced fabrics constituted the most numerous ware group at Yarnton, amounting to almost half the late Iron Age and Roman pottery. Replacing E wares as the principal coarse ware group, they dominated assemblages from the later 1st century onwards. For the most part these wares originated within the region, but in contrast to the oxidised wares, included a substantial component not derived from the mainstream Oxford industry. Both components were present at Yarnton from early in the Roman period.

The earliest Oxford products included very small quantities of the fine fabric R18 and probably vessels in the sandy fabric R21. The more numerous R20 fabric group probably consisted very largely of Oxford sandy wares, but these sherds could only be assigned to a general fabric category. These fabrics were essentially of 1st-2nd -century date and as already indicated developed out of the E30 ware tradition. The 'Belgic' tradition was also the basis of the R90 group, made up of coarsely tempered fabrics which were used for large jars of a type established in the late Iron Age but which apparently continued to be produced through the Roman period (Young 1977, 202). Two further aspects of Oxford production are represented by the R10 and R30 fabric groups. The former consisted of generic fine fabrics, with low levels of sand inclusions. These occurred throughout the Roman period, but a chronologically much more restricted sub-variant is the very fine fabric R11, generally assigned a date range of *c* AD 70-150 (ibid., 203 fabric 4). Despite the fineness of the fabric, however, it was used for a wide range of non-specialist forms, jars, bowls and dishes, though two beakers of Young type R31 also occurred. The most distinctive products in this fabric, poppy head beakers and imitations of samian forms Drag. 29, 30 and 37, were only represented at Yarnton by occasional body sherds.

Like the R10 group, R30 fabrics were not chronologically diagnostic, but represent a continuing tradition of production of moderately sandy wares through from at least the beginning of the 2nd to the 4th century inclusive. At least some minor variations within the R30 fabric group may ultimately prove to be of chronological significance, but on present evidence the grey ware output of most of the main Oxford production sites cannot be readily distinguished and detailed subdivision of these wares could not be justified within the scope of the Yarnton project. R30 did, however, appear to be the most important coarse ware grouping in the 4th century. Inevitably R30 was used for a wide range of vessel types, but these were still dominated by jars, which amounted to *c* 70% of all rims in this group.

The most distinctive non-local reduced fabric was R95, Savernake ware from North Wiltshire (Hodder 1974; Swan 1975). This occurred in small quantities at Yarnton in the 1st and 2nd centuries. The identification of this fabric was complicated, however, by the presence of another fabric of quite similar characteristically lumpy surface appearance, R94, which was used for a number of the same forms as Savernake ware, in particular bead rim jars, though no examples of this type found at Yarnton were in fact attributed to the Savernake industry. R94 is mid to dark grey in colour and characteristically hard fired. It is tempered with moderate quantities of sub-rounded quartz sand, black sub-angular grog and distinctive sub-rounded white inclusions, perhaps limestone. This corresponds tolerably well with the published description of the products of kiln 2 excavated at Smiths Pit II at Cassington in 1947 (Young 1982, 146), while examination of some of the Cassington material in the Ashmolean Museum demonstrates that the fabrics appear to be identical. The range of forms found at Yarnton is also consistent with the published material (ibid, 145, nos. 112-25), with angled everted rim jars, in particular, being common to both (*cf.* ibid, nos. 112-13). These occurred alongside bead rimmed, medium necked and storage jars, with jars altogether accounting for 104 of the 110 rim sherds in this fabric. At Yarnton fabric R94 was an important component of the early Roman assemblage, not surprising in view of the proximity of the likely source, and its occurrence broadly bears out the second half of 1st century AD date originally assigned to the kiln (ibid, 146), which is also supported by the evidence of the forms, the concentration on jars to the almost total exclusion of other forms being a distinctive early Roman characteristic.

There may have been some connection between fabric R94 and the most important individual fabric at Yarnton, R37, a reduced ware with a range of surface colours from light grey to very dark grey/black, characterised by common fine sand tempering with occasional black iron and organic inclusions. This and related fabrics dominated the assemblages at Asthall (Booth 1997b, 117-19) and at nearby Wilcote (Hands 1993, 77, fabric 2), both north-west of Yarnton, though they only formed a small part of the material from Alchester, further east (Evans 2001a, 352-4). This distribution pattern prompted the suggestion of a source relatively local to Asthall and Wilcote (Booth 1997b, 117), particularly as the character of the fine sandy fabric has something in common with north Wiltshire industries (ibid). R37, however, is at one end of a continuum of fabrics with R94 (or R95) at the other, the intermediate stage being occupied by fabric R38, recognised at Asthall (subsequent to the processing of the Yarnton pottery) as similar to R37 but containing sparse to moderate grog inclusions as well as sand. Sherds of R38 at Yarnton would have been subsumed under fabric R37. Such sherds also occur among the Cassington material in the Ashmolean Museum, but in this case it is less clear that these are associated with the excavated kilns. One vessel, apparently in fabric R37/R38, is a ‘second’, however, so the possibility of production of these fabrics in this area cannot be completely ruled out. Sherds from kiln 3 at Cassington, while clearly of general R30 character, are insufficiently close for this kiln to be regarded as the source of R37 or R38, though it may of course account for some of the other R30 material from Yarnton, and on the basis of the published description the material from kiln 1 (Young 1982, 146, not located in the Ashmolean) was very similar to that of kiln 3. Either way, the distribution of fabric R37 indicates a source north-west of Oxford and a tradition which is in a number of respects distinct from that of mainstream Oxford coarse wares. R37 was certainly in production by the later 1st century if not rather earlier and continued to be important through the 3rd century, but may not have been made significantly into the 4th, when it was supplanted at Yarnton by the generalised R30 fabric group. The range of forms in fabric R37 was quite wide, though still dominated by jars (78% of 230 rims, but nearly 88% by EVEs); beakers, tankards, bowls, dishes and lids all being present in small numbers.

B Black-burnished ware

Black-burnished ware only formed a small proportion of the Yarnton assemblage, the great majority of the material being attributed to the standard Dorset source (BB1). The fabric was probably present throughout its main period of export, ie from *c* AD 120 to the mid 4th century. The main forms were all present (plus a single example of a handled beaker), but bowls were relatively much less common than 'cooking pot' jars and dishes, the majority of the latter being typical 3rd-4th -century simple straight-sided types. While these were twice as numerous as jars in terms of rim count (24 to 12) the jars were in fact better represented by EVEs, which provide a more realistic guide to the relative importance of these types.

C Calcareous (shell) tempered wares

These formed a significant part of the Yarnton assemblage – almost 11% by sherd count and weight. Three sub headings of this group were used, of which C10 was a general group for sherds with no particularly diagnostic characteristics except the presence of shell, a point indicated by the significantly lower representation of these sherds by weight than by sherd count in comparison to the principal grouping, C11. Given the importance of shell-tempering in the early Iron Age and (to a lesser extent) in the late Iron Age-early Roman period (ware group E40) the purpose of the C10 group was to distinguish material belonging to later Roman traditions but about which little else could be said.

Fabric C11 contained moderate-abundant shell-tempering, with the shell inclusions varying considerably in size. A few sherds with very coarse shell inclusions (commonly 10 mm + in length) were separated and recorded as fabric C12, but it is uncertain if this distinction had any particular significance. Sherds assigned to C11 certainly represented more than one ceramic tradition, however, though separation of these on fabric criteria alone was not possible (see below). A substantial number, perhaps a large majority, of these sherds were probably of relatively local origin, occurring exclusively as jars, all of which, where the sub-type was identifiable, were of typical 'cooking pot' form. Such vessels seem to have been particularly common at Yarnton perhaps in the late 1st and certainly in the 2nd century. Some, at least, were handmade. This fabric/form combination is quite distinct from the earlier E40 material, which consisted of a more heterogeneous group of fabrics, in which shell could be combined with sand, grog, organic material and possibly limestone, in a manner reminiscent of earlier Iron Age fabric groupings. Moreover, there was a wider variety of jar forms in E40 fabrics, and a carinated bowl was also present. There seems therefore to be no direct development of the early Roman shell-tempered tradition from the late Iron Age one.

A quite different tradition is represented by probable products of the late Roman production centre of Harrold, Bedfordshire (Brown 1994). The fabric, however, is also essentially tempered with fossil shell and was not readily distinguished macroscopically from sherds of the probable local C11 discussed above, despite the fact that the composition of Harrold fabrics (of Middle Jurassic clays in which fossil fragments were already incorporated, (ibid, 99)), was rather different. In some cases potential Harrold products could be identified on the basis of characteristic vessel forms or thin, rilled body sherds, but body sherds not treated in this way could not be separated systematically from other C11 sherds, so they were not assigned a different code. It should be noted, however, that Harrold was not the only source even of these distinctive pieces, since material from Towcester with rilled surfaces has been shown to be from an unknown source distinct from Harrold (ibid., 105). The number of sherds potentially assigned to 'Harrold' is quite small, however, including 25 sherds with rilling on the surfaces, and consisted entirely of jars, the flanged bowls and simple dishes which occur within the region in the second half of the 4th century being absent here. On this basis it may be estimated that non-local shell-tempered wares amounted to 10% at most of the C11 sherd total, and may have accounted for as little as 5% of this material, probably appearing in the region in the late 3rd century.

G Coarse gritted wares of Iron Age type

Fabrics in this ware class, consisting of sources generally located to the west of the region, are only rarely present in the Upper Thames. As far as is known the single sherd of fabric G31, Clee Hills dolerite-tempered ware (Gelling and Peacock 1970), a hard fired, very dark grey-black handmade fabric with sparse-moderate sub-angular rock fragments up to c 1 mm in size, sparse subrounded white inclusions c 0.1-0.2 mm in size and occasional mica flecks, is the first from this source to have been noted in the region. Malvernian wares do occur more commonly, though only ever in very small quantities in the Oxfordshire part of the Upper Thames. Their arrival is likely to have been associated with the transport of salt in briquetage of Droitwich origin. It is possible that fabric G25, the limestone tempered Malvernian fabric (Peacock 1968, 421-2, Group B1), is under-represented at Yarnton. It is certain, however, that the igneous and metamorphic rock-tempered Malvernian fabric (ibid., 415-21, Group A) was not present at Yarnton.

Chronology of wares

The incidence of wares in terms of the main late Iron Age and Roman phases is shown in Table 14.20. The data there demonstrate the problems of phasing on the site, with regard to the presence of both intrusive and residual material, although only certainly intrusive wares are indicated as such in the table. The late Iron Age/early Roman (LIR) phase was dominated by E wares, the presence of which is, indeed, its defining ceramic characteristic. This phase spans approximately the first three quarters of the 1st century AD. It is possible that E wares continued in use for some time into the Flavian period, as seems likely for example at Gravelly Guy. This is not demonstrable clearly at Yarnton, but the present evidence does not contradict the proposition. In the inevitable absence of a very closely defined cut off point between the LIR and ERB phases issues of intrusive material, particularly with regard to reduced wares, are difficult to resolve. Early fine oxidised and reduced wares (O15, O18, R18 and also W35) would all have been current in the pre-Flavian period and were very likely only produced at that time. The occurrence of O18 in phase LIR is therefore as would be expected, and later appearances of O15 and R18 probably represent entirely residual material. Other fine oxidised and reduced wares (particularly O11 and R11) are generally assigned by Young to a Flavian-mid 2nd century date range (eg Young 1977, 203). Again in view of the lack of real precision in defining such ranges the appearance of these wares in phase LIR may be ‘real’. The character of fabric R94, discussed above, means that it too is very likely to have been current before AD 70 and its appearance here is unproblematic, as is that of R37, since the evidence from Asthall (eg Booth 1997b, 117) and particularly from Wilcote indicates that it too was in use before the Flavian period (eg Hands 1993, 11-12, cf 82-83 nos 41-47). Some reduced coarse wares, such as R30, however, are likely to have been intrusive at this time, and it is quite possible that the same is true of some sherds of R37. Colour-coated and Central Gaulish samian wares were much more clearly intrusive. These sherds were generally small and abraded, but one Drag 31 rim was more substantial. Equally, therefore, condition could not always be used as a guide to identification of other less certainly intrusive pieces.

The reduced wares in phase LIR totalled 8.4% of sherds, many of which may therefore have been securely stratified in contemporary contexts. In addition to these and E wares, shell tempered (C) fabrics formed a significant component of the assemblage, consisting mainly of fabric C11 (in its ‘early’ form) and sherds not certainly assigned to that specific fabric (C10).

These fabrics probably remained important at least into the early 2nd century and as such were the only ware group to span the LIR to ERB progression in quantity. E wares were abundant in the ERB phase - in absolute terms they were much more common than in the LIR phase - but proportionally they were more than halved, though still comprising a third of the assemblage. Amongst the E wares the E20 (fine sand tempered) subgroup was significantly more common in this phase than earlier. This could have been fortuitous, but this group (and perhaps also the coarse sand tempered E30 group) may represent a transitional stage in the development of regional fabric traditions, from the grog dominated (E80) part of the ‘Belgic’ tradition to a new emphasis on sand tempering. E20 fabrics could thus have become relatively more important in the early part of the ERB phase. Sand tempered reduced wares of more obviously ‘Romanised’ character (particularly in terms of firing technology) became the dominant group at this time, with R37 and R94 the principal individual contributors, although the latter of these is unlikely to have been in production after the early 2nd century. Other aspects of the expansion of the range of fabrics in use include the appearance of black-burnished ware, albeit at a low level, and the occurrence of fine and specialist wares, although the most numerous element of these was Oxford colour-coated ware (F51, plus fabrics M41 and W11), which must still have been intrusive at this time. Many of these, and presumably other less readily identifiable intrusive pieces, may have come from the upper parts of ditch fill sequences which had accumulated substantially later than the original date of excavation of the features concerned, but were not necessarily isolated during fieldwork.

Non-intrusive components of the ERB assemblage attributed to the Oxford industry include white wares (particularly W12) and fine oxidised and reduced wares (O10, O11, R10 and R11). It is likely that many R20 and R30 sherds were also of Oxford origin, but these fabrics are insufficiently diagnostic for this to be certain. Savernake ware (R95) appeared in small quantities for the first time in this phase.

In terms of absolute chronology the transition from the early Roman to the late Roman phase is less clearly defined than that from LIR to ERB. The late Roman phase is most obviously characterised by the (non-intrusive) appearance of the standard suite of late Oxford products, but may have commenced rather before the mid 3rd century date of that development. The expansion of the Oxford repertoire was the principal reason for the slight but significant increase in the proportion of fine and specialist wares (to 7.2% of sherds) in this phase, although it is notable that samian ware was also much better represented now than earlier. Residual material may account for some of this increase, but the continued use of at least some samian into the later Roman period also seems likely. Minor contributors to the range of late Roman fine wares were the Nene Valley and New Forest industries and the producers of fabric F61, with an unknown source perhaps in the Cirencester area.

Reduced wares remained the dominant group, although the slight increase in their representation, to 53.5% of sherds, might reflect the continuing decline of E wares (which still accounted for 14.7% of sherds although entirely residual by this time) as much as any real increase in the importance of reduced wares. It is notable that quantities of fabric R37 increased from 20% to 25% of the assemblage in this phase, despite the fact that production of this fabric is not likely to have extended far into the 4th century. R37 must have been the dominant coarse ware fabric in the 3rd century assemblage, but was presumably in decline after that time. Oxidised coarse wares and black-burnished ware were both more important than before, and shell-tempered (C) wares recovered from their reduced level in the ERB phase to be the second most important ware class. This group must have incorporated some residual material, but late Roman shell-tempered ware accounted for a significant (but unfortunately not precisely quantifiable) proportion of the sherds assigned to C11. These would have included Harrold (Beds) products but also vessels in a fabric more recently isolated (subsequent to the recording of the Yarnton pottery) as C13, representing a sub-regional tradition of early Roman origin but continuing through into the Late Roman period (see Evans 2001a, 367-368).

Vessel types

The late Iron Age and Roman pottery assemblage included some 1313 rim sherds comprising 148.65 EVEs. Discussion of the vessel types present in the assemblage is based almost entirely on the EVEs data. The types are divided into major classes (in 14 groups, including one (Z) for unclassified vessels), extending the classification used for Iron Age vessels (see above). One vessel class, amphorae (A), was only represented by body sherds. The sequence of classes, many of which are subdivided, runs broadly from closed to open forms, and is based principally on general similarities of shape, though 'functional' labels have been applied where these are widely current. The use of such labels, for example 'beaker', 'cooking pot' or 'storage jar', should not be taken automatically as a definition of function. Many vessels could have been multifunctional and their use(s) need not have included that implied by the traditional label. In the absence of more specific data, however, these labels will be used as a matter of convenience. A rigorous distinction between the principal classes based on vessel proportions was followed as far as possible, particularly with regard to definition of the most common classes, jars, bowls and dishes. Jars were usually defined as having a height:rim diameter ratio in excess of 1:1, while bowls fell in the range of 1:1-1:3 and dishes had a height:diameter ratio of less than 1:3. Some sub-classes, particularly CE jars, do not always follow these criteria strictly and it is accepted that some type CE jars could be described as necked bowls, but the definitions followed here generally have internal consistency. Two intermediate classes (D and I - jars/bowls and bowls/dishes respectively) are used for vessels of which insufficient survived to allow confident attribution to specific classes on the basis of the height:rim diameter ratio.

Quantification of all the vessel classes and subclasses is presented in terms of major phase in Table 14.21 (residual early and middle Iron Age material is excluded). Tables Tables 14.22-3 show the correlation of wares with the major vessel classes, expressed as the percentage of vessels in each ware represented by individual classes (row percent, Table 14.22) and as the percentage of each vessel class comprised by individual wares and ware groups (column percent, Table 14.23). These data show that the assemblage was dominated by jars (76.2% of all vessels). While the representation of jars declined gradually through time, from 86.5% in the late Iron Age/early Roman phase, they still formed a very high proportion (72.8%) of the late Roman assemblage.

The great majority of jars were in E and R wares, with a significant contribution also in shell-tempered (C) wares (12.1%). It is notable that black-burnished ware comprised only a very small proportion of jars (1.2%), although these were the dominant vessel class amongst the black-burnished ware reaching the site. Ware groups whose output was largely dominated by jar production were the three main ones already mentioned (jars comprised 85.6% of all E ware vessels, 82.5% of all R wares and 98.9% of C ware vessels), but jar production was also significant in oxidised wares (55.5% of these) and to a lesser extent in black-burnished (42.6%) and white wares (36.5%).

Definition of jar sub-classes was rather restricted; 40% of jars could only be ascribed to the general class. The sub-classes are largely defined on the basis of characteristics of shape, some of which, such as CE, CH and CI, are chronologically diagnostic, the first two generally indicative of a 1st century AD date and the last characteristic of the period AD 70-150, although not exclusively confined to that range. The middle Iron Age derived types CA and CB would also be expected to be of 1st century date, but while the latter was found exclusively in E80 and shell-tempered wares, consistent with such a date, the former occurred in a fine reduced ware (R10). The occasional occurrence of anomalous 'Iron Age' forms in later contexts is illustrated for example at Alchester by a type CB jar in fabric R30 probably of late Roman date (Evans 2001a, 344-5, CB1.4). The 'cooking pot' type (CK), particularly characteristic of black-burnished ware, was also found in C and other ware groups.

There was a strikingly low correlation between the very high incidence of jars and a very small number of lids (only 0.4% of EVEs). It is uncertain if the use of organic vessel covers should be inferred, but this seems likely.

The second most important vessel class was bowls (class H), which constituted 9.4% of the assemblage. This heterogeneous class was encountered within most ware groups (it was not certainly present in C wares), but was distributed principally (and fairly evenly) between F, E, O and R wares. Fine wares accounted for 25.4% of all bowls, the great majority of these being in Oxford colour-coated ware. Fine and samian wares were the only ware groups in which bowls formed a dominant part of production (74% of vessels in both groups). Other individual fabrics in which the class was well represented were not generally sufficiently common for high figures to be meaningful. The only exception to this was fabric O11, in which 42.5% of vessels were bowls, but this was a slightly special case as the great majority of the vessels in question were of Young type O27, forming the bulk of the otherwise scarce necked bowl category HD (together with a single example of the corresponding reduced Oxford form R38).

The other main bowl sub-classes were carinated (HA), straight-sided (HB) and curving-sided (HC) types. The first were present from the late Iron Age onwards, occurring occasionally in E wares as well as forming a distinctive component of late 1st-mid 2nd century Oxford coarse ware production (eg Young type O42). Late Roman examples of the type were confined entirely to parchment ware form P24, though all three such vessels were unstratified - colour-coated ware carinated types in the C81-C85 range were conspicuously absent and the great majority of the Oxford colour-coated ware bowls were HC types, particularly C45 and C51. The relative paucity of HB types is quite striking. Such vessels were part of the black-burnished ware repertoire as well as occurring (principally) in reduced coarse wares, but at Yarnton black-burnished ware bowls were relatively much less common than cooking pots and dishes in the same fabric.

Dishes, here, as elsewhere, the third most important component of the assemblage, were nevertheless very poorly represented at only 3.1% of all vessels. The great majority were of simple rimmed straight sided types (in sub-class JA) with a wide chronological range from late Iron Age to late Roman period with relatively little typological development. These occurred almost entirely in E wares (9.8% of all dishes), black-burnished wares (25.6%) and reduced coarse wares (54.7%). Curving sided (JB) dishes included rare examples in Central Gaulish samian and Oxford colour-coated wares, in the Drag 36 and related C47 range.

The minor types are mostly remarkable for their relative scarcity. Amphorae, as already indicated, were represented by body sherds alone and flagons (class B) were also rare, particularly as over half of the EVEs total was made up by a complete rim from a single vessel. Only four vessels were present, two in white wares, one in reduced ware and an example of Young type C4. White slipped (Q) sherds were rare on site and while characteristically used very commonly for flagons, no rims were present in these fabrics.

Beakers were another relatively scarce class, and there was no evident correlation of the type with particular fabrics. A wide variety of beaker types was present, including butt beakers and ‘jar’ beakers - usually small jars in coarse ware fabrics for which a function as drinking vessels is possible (although this interpretation needs to be treated with caution, see above). It is notable that fine wares did not comprise a large proportion of beakers - forms in Oxford colour-coated ware (F51) and a single vessel in the early Oxford (Lower Farm, Nuneham Courtenay) fabric (F59) being the only examples. The only rims in Nene Valley colour-coated ware, for example, were of a jar and a straight sided bowl, both of characteristic late types. Another specialised drinking vessel class, the cup (F), was very scarce indeed, being represented by a few examples of samian ware (all Drag 33 - Drag 27 was present only as an occasional body sherd), a single example of Camulodunum 56 in *terra nigra*, remarkable in the context of the character of the rest of the assemblage, and a single fragment of an uncertain cup type in fabric E80 and therefore of 1st century date. A very different drinking tradition was represented by another scarce vessel class, tankards (G). This type did not form part of the Oxford repertoire at all, and the few examples present derived from two sources, both located west of Oxford. The precise source of fabric R37 is unknown, but the possibility that it derives from the Witney area has been discussed above, while the Severn Valley tradition was rooted much further west. It is notable that tankards from the North Wiltshire industry, rather closer to Yarnton than the Severn Valley, are absent.

Mortaria, in contrast to these various drinking vessel types, show an overwhelming dependence upon the Oxford industry. A single body sherd from the Verulamium industry presumably represents the principal regional supplier of these vessels before the initiation of Oxford mortarium production *c* AD 100. Thereafter, Oxford was the only source, though the great majority of identifiable types are dated after AD 240. Earlier forms were single examples of M2, M6 and an uncertain hook-rimmed type, while the post AD 240 period was represented by M17 (9), M18 (4), M20, M22 (5), C97 (4) and C100 (4).

Only one ‘miscellaneous’ (M) type was represented by a rim, this being a single ‘cheese press’ (type MF) in fabric R20. Body/base fragments of strainers (type MG) were noted in fabrics R21, R30 and R37. Unsurprisingly, more ‘Romanised’ special types such as tazze, candlesticks, lamps and triple vases, were completely absent.

In terms of chronological development the main trends in the evolution of the vessel type assemblage are clear. The Late Iron Age-early Roman assemblage was relatively small (12.55 EVEs) and was dominated entirely by jars (86.5%) and bowls (11.2%). Characteristic early types such as the high shouldered jar (CE) were particularly well-represented in this phase. It is likely, however, that some other types such as butt beakers and the *terra nigra* cup were in use at this time although they were only recovered in later contexts, but the addition of these would have made little difference to the general character of the assemblage at this time.

The early Roman assemblage was larger and more diverse, but still comprised 80% jars. Bowls, however, had also declined as a proportion of the assemblage (to 7.6%), with a marked drop in the proportion of carinated bowls which were well-represented in E wares in the late Iron Age/early Roman phase; it is unclear if this shortfall was made up by dishes and indeterminate bowl/dishes. The full range of minor types was now present, amongst which flagons, totalling 2.3%, were relatively well-represented. Some of the vessels in these categories were intrusive in contexts of early Roman date, however. In particular, two of the three mortarium rims in contexts assigned to this phase were from Young (1977) types M18 and C97, both dated after AD 240.

The late Roman assemblage demonstrates the continuation of established regional trends. Jars declined further in importance. At 72.8% they still dominated the assemblage, but exactly half were not assignable to a specific sub-class - a proportion which had increased steadily from the earliest phase. Medium mouthed and ‘cooking pot type’ jars were the most important identifiable sub-classes present. Bowls comprised 9.2% of the assemblage, a slight increase on the early Roman phase, and the representation of most other classes also increased slightly at this time, the main exception being flagons, which formed only 0.3% of the assemblage, significantly less than in the early Roman phase. Overall, however, it is clear that some of the sub-classes present in the late Roman phase, such as butt beakers, were largely if not entirely residual by this time, but in other cases the position may have been less clear-cut than appears at first sight. For example, the cups present in this phase include a grog-tempered vessel of probable 1st century date, but the type FC cups, samian form Drag 33, could have remained in use right through the 3rd century if not later, despite the fact that they were produced in the 2nd century. There is ample evidence for long term curation of Antonine samian ware in the region and beyond, particularly on lower status rural settlement sites.

Increases in the representation of beakers, tankards, bowls, dishes and mortaria all seem likely to reflect genuine trends in the evolution of the assemblage, corresponding with the decline in numbers of jars. The level of the latter, however, remained high in comparison with other contemporary assemblages in the region, though comparable quantified data are still relatively scarce. For example at the small town of Asthall jars formed less than 60% of the 3rd and 4th century assemblages (Booth 1997b, 122) while at Alchester jars were only just over 50% of the assemblage by the early 3rd century and had declined further to roughly 43% in the 4th century phases (Evans 2001a, 373). A 2nd-mid 4th century villa assemblage from Roughground Farm, Lechlade, contained 55.4% of jars (Green and Booth 1993, 136). It is unfortunate that there are no comparable data for the rural settlement at Old Shifford Farm (Timby 1996, 129). At a broadly similar site at Mansfield College, Oxford, however, jars comprised 54.2% of a small assemblage (14.42 EVEs). This quantity was not divided by phase, but the assemblage was principally of late Roman date and can be compared with the late Roman phase data at Yarnton (Booth and Hayden 2001, 310).

Late Iron Age and Roman pottery from Cresswell Field

A mere 32 sherds (432 g) of pottery from Cresswell Field was assigned to the late Iron Age-Roman periods. The breakdown of this material by ware groups can be found in Table 14.24.

Vessel types represented were C (jars) in E80 (2, 1 a type CN storage jar), O10 and R30, IA (bowl/dish) in R37 and JF (‘fish dish’) in B30. Bowls of Young’s (1977) types C45 and C55 were present in fabric F51, and flagons and a type C51 bowl occurred as body sherds in the same fabric.

Eighteen of these sherds (232 g) were from the fills of Anglo-Saxon sunken featured buildings. Significantly, these included all the Oxford colour-coated ware sherds (F51 and M41), the relatively substantial average weight of which suggests that these may have been deliberately collected, as is seen at other sites within the region. It was not possible to determine if this had been the case with any of the other Roman material. A very small quantity of late Iron Age/early Roman pottery (E wares) probably came from contemporary features. No features were dated to the Roman period. Occasional sherds of this date not within Anglo-Saxon features were poorly stratified or introduced into the tops of feature fills by ploughing.

Pottery from the Kilns

The quantity of pottery recovered from the two kilns excavated in the site (see p. 00-00) is very small, but for the most part the material from component contexts of the two kilns, which is quantified in Table 14.25, was quite consistent. Apart from a single clearly intrusive sherd of Oxford colour-coated ware in fill 2527 of kiln 2526 all the material was assignable to the 1st, or at the very latest early 2nd, century. The distinctions between the recorded fabrics were less clear cut than might at first appear, so in fill 2525/A/1 one sherd of fabric R94 was close to E80 in character and one E30 sherd was equally close to R20, while in context 2526/A one R20 sherd was a hybrid with R94.

The hybrid nature of some of the fabrics suggests that they belong to the period when 'Belgic type' wares were beginning to be replaced by more 'Romanised' fabrics. This is regardless of whether or not these fabrics were being produced in the kilns, though it is very likely that they were. The limited number of rim sherds present, all from kiln 2525, belonged to jars - mostly thick walled vessels of storage jar type, though a bead rim jar was present in fabric E30 - and a single small bowl with a slightly beaded rim in hybrid fabric R94/E80. Decoration on these sherds consisted of overall or zone burnishing, the use of which was quite common, with occasional horizontal burnished lines (one example each on fabrics E30 and R94) and grooves.

The kiln products have broad parallels in the region at Cassington (Case 1982, 134-6 - three kilns were discovered but only kiln 2 is directly relevant) and at Hanborough (Sturdy and Young) and the Yarnton fabrics are also in the same broad traditions represented by those kilns. The two Hanborough kilns were associated with six pottery fabrics, five of which 'belong to the heavily tempered pre-Roman tradition' (Sturdy and Young 1977, 64) while the sixth was 'a typical Roman sandy grey ware' (ibid). This parallels the situation at Yarnton quite closely, with fabric R20 falling into the latter category, though the Yarnton sample is too small for detailed comparison of the fabrics to be meaningful. The similarity of some of the Cassington kiln 2 material to fabric R94 has already been noted above and again broad comparability of tradition is certain. The published vessels from Cassington kiln 2 include forms which are entirely consistent with the repertoire of vessels in R94 and other early Roman fabrics from Yarnton (Young 1982, 145-6).

General discussion (EB)

Weighing some 167 kg and totalling over 11,000 sherds, the early and middle Iron Age assemblage from Yarnton is among the largest of its period recovered from the region. While smaller than the massive Gravelly Guy assemblage (40,000 sherds), it rivals that from Abingdon, which, combining the pottery from the Ashville and Wyndyke Furlong sites, totals in excess of 13,000 sherds (DeRoche 1978; Timby 1999). Smaller, but still valuable, assemblages have been recovered at Hardwick (3100 sherds, Wilson 1993), Watkins Farm, Northmoor (1450 sherds, Allen 1990b), Farmoor (1275 sherds, Lambrick 1979), Whitehouse Road, Oxford (630 sherds, Timby 1994), and Witney (366 sherds, Timby 1996b) among others. The late Iron Age and Roman assemblage was equally large; almost 9000 sherds, weighing 171 kg, were recovered. This total is not too behind the 14,500 sherds (207 kg) from Gravelly Guy, but is in any case well ahead of many other sites within the region. From Watkins Farm, Northmoor, just over 3,000 sherds, weighing 34 kg were recovered

(Raven 1990); Old Shifford Farm, Standlake yielded 4,000 sherds (58 kg) (Timby 1996a), while 1,000 sherds (16 kg) were found at Oxford Road, Bicester (Booth 1997). The Bicester Fields Farm assemblage of middle to (mostly) late Iron Age material totalled 3750 sherds (Brown 2000), while the largest fully published Roman assemblage from the region is that from the A421 sites at Alchester (36,800 sherds, Evans 2001a). Together, the pottery from Yarnton forms an enviable collection, not least because it is one of the largest assemblages to be comprehensively recorded. This allows comparison, not only with contemporaneous pottery, but also with late Iron Age and Roman groups, and provides a complete overview encompassing both the Iron Age and Roman period. This greatly enhances the understanding of the development and use of ceramics at the site and within the wider region.

Though the size of the pottery assemblage allows broad chronological trends to be identified, continuous occupation evident at Yarnton means that a certain amount of the Iron Age assemblage must be redeposited and residual. The problem that redeposition causes in terms of establishing a reliable chronology is one that is widely recognised. Occasionally, where the focus of early Iron Age occupation is away from that of the middle Iron Age, as at Farmoor, the extent of redeposition can be determined clearly. Otherwise, an assessment must be made internally on the basis of group composition. Well preserved pottery in reasonably large and undisturbed groups is essential. This problem of redeposition is discussed with reference to discussion of the chronology below.

Yarnton was occupied throughout the Iron Age. The early Iron Age pottery is typical of the region. Angular and slack-profiled types in shelly fabrics predominate. These fabrics contributed up to 75% by sherd count of early Iron Age pottery. This conforms to the regional pattern, though variations are evident. Limestone and fossiliferous fabrics took a large share of the early Iron Age pottery from Groundwell West, Wiltshire (Timby 2001b 20), for example, and are also characteristic of middle Iron Age assemblages in the Gloucestershire part of the Upper Thames Valley. Yarnton was more closely comparable to assemblages such as Farmoor, where invariably 80% or above of pottery in groups by sherd count was shell-tempered (Lambrick 1979, fig. 20). Such pottery takes the largest share of early Iron Age assemblages at Abingdon and Gravelly Guy, but at both the proportions are slightly lower: 66% by sherd count at the former (de Roche 1978, table IV), and 58% by weight at Gravelly Guy (Duncan *et al* forthcoming). A chronological explanation may be sought for these differences, though these are almost impossible to tease out given the necessarily broad dating of early Iron Age pottery and the paucity of large well-dated groups at some sites, including Yarnton. Given the slight reduction in the level of activity during the middle Iron Age (see below), the high proportion of shelly fabrics in part reflects the site's early Iron Age emphasis. Of additional interest, though, it was observed at Gravelly Guy that the highest proportion of shell-tempered fabrics occurred in the 'middle' period of the early Iron Age, with larger levels of sandy fabrics in the 'early' and 'late' periods. Certainly, pottery dated to the late Bronze Age/early Iron Age transition was present at Yarnton, but limited in quantity, suggesting that activity levels were not as high at the beginning of the early Iron Age compared with later in the period. The vessels associated with this early phase were in mixed fabrics of which shell was not a totally dominant component. As at Gravelly Guy the shell-tempered early Iron Age fabrics characteristic of the region were probably later in date than these 'earliest' mixed fabrics.

The distribution of pottery slightly favoured Cresswell Field during the early Iron Age. Of the Iron Age and Roman assemblage from this site, the early Iron Age contributed 68% by weight, compared with 31% for the middle Iron Age. At Worton Rectory Farm, the distribution is reversed; this site has a middle Iron Age emphasis, with 11% of the total pottery dated to the period, against 8% for the early Iron Age. Overall, a slight decline in the level of activity during the middle Iron Age is evident. This has not had an obvious effect on the range of pottery present. Following the regional trend, sand-tempered fabrics gain in importance to the detriment of shell-tempered pottery, though the latter remains a strong element of the middle Iron Age assemblage. The range of forms is wide and includes bowls as well as jars. However, globular jars (CG) were poorly represented, possibly due to a chronological, or even regional variation. The type is absent from the ‘earliest’ middle Iron Age groups at Gravelly Guy, and tends to be associated with the later middle Iron and late Iron Age at Watkins Farm and Ashville, Abingdon (Allen 1990, 45). But it is by no means certain that the scarcity of the type at Yarnton confirms an early Iron Age and earlier middle Iron Age emphasis.

Despite the paucity of large, well-dated groups, a significant degree of redeposition occurred during the middle Iron Age. Assessed by vessel forms, however, the level of residual pottery appears to be minimal. Standard early Iron Age forms - principally slack-profiled and angular jar types (CS and CT types, respectively) - were replaced by middle Iron Age types during the ‘earliest’ middle Iron Age. This is evident at Gravelly Guy (Duncan *et al*, forthcoming) and Abingdon (de Roche 1978, table IV) where the proportions of such types fall dramatically during this period. At sites where no occupation is attested before the middle Iron Age, for example Watkins Farm (Allen 1990) and Mingies Ditch (Wilson 1993, 71), such forms are absent. It is reasonable to suggest, then, that typically early Iron Age forms in middle Iron Age contexts are likely to be residual. On this basis, Yarnton offers a mixed picture. At Worton Rectory Farm, just 3% of pottery by rim percentage in middle Iron Age contexts was residual. Cresswell Field appears to have suffered from greater redeposition: it attains a level of 13%. In one respect, form is perhaps an unsatisfactory indicator of residuality. The process of redeposition causes the pottery to fragment further, resulting in a mass of small body sherds and few large rim sherds, inevitably making identification difficult. Residual pottery is, if anything, under-represented. Fabric may be deemed to be more reliable, either using sherd count or weight, so long as the fabric is unquestionably out of use in the period concerned. But again problems are encountered, since shell-tempered fabrics, while of predominantly early Iron Age manufacture, continued to be used to a lesser extent into the middle Iron Age. Mingies Ditch and Watkins Farm, both without early Iron Age precursors, yielded shelly fabrics. At Yarnton, barrel-shaped jars (CB), though not globular vessels (CG), perhaps reflecting a later introduction, were available in these fabrics. Moreover, just to the north of the Thames Valley, there is evidence to suggest that shell-tempered fabrics remained in use through the middle Iron Age (Booth 1998, 105-7). This characteristic should serve to distinguish between the ceramic traditions of the Thames Valley and north Oxfordshire, but the point at which these traditions met and overlapped remains to be defined.

Assuming continuous occupation, one might expect to encounter a visible transition between the middle and late Iron Ages which might, for example, manifest itself through the production of forms of one period in fabrics characteristic of the other. Such evidence is, however, scarce within the region. Something of the sort can be seen at Bicester Fields Farm, where forms ubiquitous in the middle Iron Age, notably CB and CG types, were available in fabric E80, albeit in small quantities. Conversely, typical late Iron Age types CD and CE were produced in 'middle Iron Age' fabrics (Brown 2000, tables 4 and 5). A similar observation was made at Gravelly Guy, where, in 'latest' middle Iron Age contexts, late Iron Age-type necked jars were produced in middle Iron Age fabrics, though it was noted that a marked changeover period was absent (Duncan et al, forthcoming). This is particularly striking, given the size of the Gravelly Guy assemblage and the level of detail at which it was studied. In view of this the limited indications of the same pattern at Yarnton are exactly what might be expected. Typical late Iron Age forms - namely necked jars and storage jars - were available in middle Iron Age (ie generally sand-tempered) fabrics as well as in grog-tempered fabrics. However, although a small amount of 'Belgic' E wares was present in middle Iron Age contexts, none was in middle Iron Age forms, and much of this material may have been intrusive. Likewise, in contexts containing mainly E wares in association with a small amount of middle Iron Age fabrics, forms typical of each period were restricted to the fabrics of those periods.

Evidently, then, pottery specifically indicative of a change from middle to late Iron Age traditions, the latter represented essentially by the south-eastern 'Belgic type ware' tradition, was scarce. None is represented at Cresswell Field, while Worton Rectory Farm yielded less than 1%. However, although most contexts lacked particularly diagnostic pottery, a small number contained 'Belgic' E wares alone, or in association with small amounts of middle Iron Age fabrics. These are perhaps the best candidates for a late Iron Age date. Around 5% of contexts (some 56 out of 1131 deposits with pottery) can thus be dated to the late Iron Age. That the majority of the E wares was found in association with post-conquest Roman wares seems to confirm the notion that E wares were essentially a 1st century AD tradition, and supports the chronology of those fabrics suggested in the discussion of E wares above.

This evidence does not, however, provide any support for the view that there was a hiatus in the occupation sequence at Yarnton in the late Iron Age (and there is no clear indication of such a hiatus in the stratigraphic sequence). Where middle and late Iron Age activity occurs in the same locations in the region, the ceramic evidence, as at Yarnton, suggests that the transition between the two was generally short. It is notable that the site with the best evidence for this transition, Bicester Fields Farm, lies in the eastern part of the region in territory that may reasonably be assigned to the Catuvellauni in the late Iron Age, territory in which the 'Belgic' ceramic tradition was relatively better established before the Roman conquest. Here the processes of transition from middle to late Iron Age, in ceramic terms, may have taken a different course from those seen further west in the Upper Thames, in Dobunnic territory.

At Yarnton, as at some other sites in the region, the definition of a 'late Iron Age' phase rests very largely upon the presence of the distinctive ceramic tradition (which was then maintained into the early Roman period - the events of AD 43 are invisible in ceramic terms) rather than upon other clear indicators of change in settlement morphology and other characteristics. What is striking is the sheer volume of pottery - late Iron Age or earliest Roman period pottery accounted for 13% of the assemblage by weight; Cresswell Field contributed just 2%. From then on, activity was restricted to Worton Rectory Farm, and Cresswell Field virtually ceased to be occupied.

Early Roman pottery (late 1st and 2nd century) accounted for 38% of the assemblage. The chronology of Worton Rectory Farm within this period is somewhat ill-defined. The lack of well dated, large groups makes it difficult to trace the changing levels of occupation through time. There are indications, however, that the settlement declined during the later 2nd century or early 3rd century, or at least shifted away from the early Roman focus. That activity continued into the mid 2nd century is indicated most clearly by the presence of Central Gaulish samian ware (S30), which forms the largest proportion of samian from the site (82% of all samian sherds, but 93% by weight). Earlier dated South Gaulish samian (S20) was poorly represented, while East Gaulish material, imported into Britain from the middle of the 2nd century and the first half of the 3rd and replacing the declining Central Gaulish industry, was entirely absent. Supporting evidence comes in the form of a 'Rhenish' ware beaker, again from Central Gaul. Arrivals from this source tended to appear from the mid 2nd century. The corresponding East Gaulish Moselkeramik was again absent from the assemblage. Some of the earliest black-burnished ware (B11) products are also present, including so-called 'jar-beakers' (EH), which probably arrived during the first half of the 2nd century.

Although a chronological gap is difficult to identify, pottery potentially available during the late 2nd century is all likely to be late 3rd or 4th century in date. Oxfordshire white ware mortaria and Nene Valley colour-coated ware forms, for example, are consistent with a late, rather than mid, Roman date. A mid Roman hiatus at Yarnton, while not entirely proven, is nevertheless a distinct possibility. Termination of or breaks in the sequence of activity in the 2nd century, can be seen at a large number of rural settlement sites in the region (Henig and Booth 2000, 106-108). Sites in the vicinity of Yarnton affected by this phenomenon include Gravelly Guy, Linch Hill (Stanton Harcourt) and Old Shifford Farm (Hey 1995, 171). A hiatus need not mean abandonment, albeit temporary, but rather the less drastic option of a shift of settlement focus. Such as shift is evidenced at Oxford, where 1st and early 2nd century settlement centred at Mansfield College relocated a short distance to the north, with occupation resuming after the late 3rd century (Booth and Hayden 2001, 311-312; Biddulph, in prep). If a break or decline in occupation can be demonstrated at Yarnton, however, then a shift of focus is probably unlikely, as no other site in the immediate Yarnton area has yielded large quantities of 3rd and 4th century pottery. It must be emphasised, however, that the existence for such a break at Yarnton is still rather speculative and the evidence is much less clear than at other sites in the area.

Late Roman pottery, dating to the 3rd and 4th century, accounts for 30% of the Worton Rectory Farm assemblage. Most of it is likely to date from the late 3rd century onwards, given the possibility of a mid Roman hiatus and the predominance of late Roman forms, especially in Oxfordshire wares.

Most pottery throughout the period of occupation at the Worton Rectory Farm site was deposited into pits and ditches. Overall, ditches yielded more pottery, though a clear chronological distinction is apparent: Pit assemblages dominated the Iron Age, while ditches yielded most of the late Iron Age and Roman pottery. The proportion of pottery recovered from pits declined rapidly. From a high point in the early Iron Age, where 83% of pottery by weight was from the feature type, the proportion drops to just 16% by the late Iron Age/early Roman period. Conversely, the proportion of pottery from linear features rises from 10% by weight in the middle Iron Age to 60% by the late Roman period.

This mirrors the general distribution of features, in which fewer pits are dated to the Roman period than the Iron Age, the converse being true for ditches. If this relates to a shift in settlement focus, with the Roman-period focus moving away from the Iron Age one, then it follows a similar pattern observed at Cresswell Field. The decline apparent in the quantities of pottery at this site is supported by the range of features from which the pottery was recovered. Early Iron Age pits yielded 90% of the pottery. This subsequently declined to the extent that, by the late Iron Age/early Roman period, no pottery was recovered from pits. Ditches became more important as places of final deposition in later periods. This may relate to a shift in the settlement, with the Roman focus moving away from the Iron Age one, but also reflects fundamental changes in the physical characteristics of the site, with a greatly increased emphasis on the use of ditches, particularly from the late Iron Age onwards.

There is no major difference in the condition of pottery between feature types, or over time. Overall, the mean sherd weight for pottery from pits is 17 g, and 16 g from ditches. The sherd weights for individual phases only deviate slightly from these averages. The 'completeness', or average rim representation, of the pottery reveals a similar picture. Rims from pits were an average of 8% complete; rims from ditches were 9% complete. Again, the deviation per individual phase is slight.

The average sherd weight of the late Iron Age and Roman assemblage, 19.3 g, is notable. It is rather higher than the figure for early and middle Iron Age pottery (c 15.2 g), despite the generally more substantial character of the fabrics of those periods and an absence of 'massive' fabrics (such as amphorae) which can inflate Roman period average weight figures. Comparative average sherd weight figures from other major mostly late Iron Age to Roman or solely Roman assemblages in the region include 16.3 g at Gravelly Guy and 12.2 g at Claydon Pike, Fairford, 12.6 g at Asthall (Booth 1997b, 105), 13.5 g at Alchester (Evans 2001a, 263), 13.4 g at Hatford (Booth 2000, 25), *c* 14.5 at Old Shifford Farm (Timby 1996, 124) and 18.6 g at Wantage (data from Timby 1997, 135). The last of these is close to the Yarnton figure, but the other values are below and typically no more than two thirds of the figure for Yarnton. The significance of this is uncertain. The amount of redeposition at Yarnton indicated by extensive recutting of features, and by the relatively high incidences of residual material in the later phase assemblages, certainly does not suggest that general site formation factors would have favoured the relatively good preservation of pottery. Equally there is no indication that the average sherd weight was inflated as a consequence of a 'coarse' level of recovery of hand excavated material. Amongst the most important ware groups E wares have a high average weight (20.5 g), which might suggest that some particular characteristic of the late Iron Age assemblage resulted in an overall higher than normal average weight across the site as a whole. It is not clear, however, what such a characteristic might have been.

Pottery is perhaps an imprecise indicator of status during the early and middle Iron Age. Occasionally, a vessel is sufficiently different from the majority of the assemblage to suggest a source of manufacture away from that of the remaining pottery. This may suggest trade or social contacts beyond the local area, thus giving that settlement a degree of regional pre-eminence. Some evidence for imported pottery was observed in the assemblage from pit 8127 from Cresswell Field. Among the group of some 14 vessels is one not readily paralleled within the region, both in terms of form and decoration. A western source is possible, but not established. The level of decorated pottery may have some bearing on status, though, again, a link between the two cannot be confirmed. Whatever the significance, Yarnton has a comparatively large proportion of decorated pottery. As observed at Gravelly Guy, Farmoor and Watkins farm, among others, burnishing was the commonest form of decoration, particularly on the finer fabrics. The incidence of the treatment slightly favours the early Iron Age overall, though Worton Rectory Farm had a greater frequency during the middle Iron Age. Burnished sherds accounted for 24% of the early and middle Iron Age pottery at Yarnton. By comparison, 5.5% of sherds from Gravelly Guy were similarly treated (Duncan *et al*, forthcoming). Some fabric groups from Watkins Farm also had high levels of burnishing (Allen 1990, table 4), though on the whole, the site is more comparable with Gravelly Guy. A virtual absence of burnished pottery was recorded among the middle Iron Age assemblage at Mingies Ditch (Wilson 1993, 72). Chronology might not be a strong factor in determining the level of burnishing, since such treatment was not a notable aspect of the early Iron Age pottery from Groundwell West, Wiltshire (Timby 2001b, 21).

During the late Iron Age and Roman period, Yarnton was demonstrably a low-status settlement in terms of its ceramic assemblages. This can be assessed in terms of the ceramic types collectively identified as fine and specialist wares (Booth 1991). Overall, a level of 5.4% by sherd count is achieved, but this can be better understood by consideration of the chronological development of Roman pottery assemblages in the region, and in particular the effects of the expansion of Oxfordshire production of fine wares and other products in the period after *c* AD 240 (see Booth forthcoming for detailed discussion). A simple division into early and late Roman assemblages gives a fine and specialist ware figure of 2.8% of sherds for Yarnton in the early Roman period. This places Yarnton right in the middle of a group of settlement sites in the bottom half of the fine and specialist ware spectrum (cf Henig and Booth 2000, 173, fig 6.11). These sites range from those with less than 1% of fine and specialist wares, including Old Shifford and Gravelly Guy, up to Hatford, with 5.1%. Early Roman sites with slightly higher fine and specialist ware levels are generally morphologically distinct (eg the ‘small towns’). Interestingly, the sites with the highest fine and specialist ware levels at this time (17-21%) are all rural settlements, either of villa or proto-villa character, with the exception of the settlement at Watkins Farm (Raven 1990, 49) which did not on present evidence have high status structural correlates. This apparent anomaly remains unexplained (Booth forthcoming).

Low status notwithstanding, the range of imports arriving at Yarnton- albeit in small quantities - was relatively wide. The 1st and 2nd century saw the arrival of *terra nigra* from Gallia Belgica, ‘Rhenish’ ware from central Gaul, white and white slipped ware from the Verulamium region, and, more locally, fine wares from Nuneham Courtenay. By comparison, Bicester received all of its fine and specialist wares, with the exception of the ubiquitous samian and an amphora sherd, from Oxfordshire kilns, together taking a 3.9% share of the assemblage (Booth 1997, 77, table 1). Indeed, expressed in terms of a simple list of sources, Yarnton resembles the Roman small town at Asthall: products from Verulamium, Spain and Gaul are represented at both.

Given the quantities of such wares recovered from Yarnton, however, it is most unlikely that the pottery arrived directly from the source, but rather was acquired through regional market centres, either Alchester or perhaps a more local centre.

Perhaps the most notable import is the *terra nigra* cup. Such pottery is rare within Oxfordshire. Conquest period fine wares tend to found at defended, high-status, sites, such as Dorchester-on-Thames, Abingdon and Bagendon. The appearance of *terra nigra* at Yarnton, a low-status rural settlement, is certainly unusual and might be seen as a one-off. Even so, the cup, and perhaps others like it, may have impacted upon the repertoire of local potters. A grog-tempered cup, albeit residual in a late Roman context, provided some relief from the usual jars and bowls produced during the late Iron Age and earliest Roman period. However, the adoption of Romanised eating habits, as these cups seem to indicate, can only have been gradual. The late Iron Age/earliest Roman assemblage, while showing a wider range of forms than the middle/late Iron Age, remains almost exclusively jar and bowl orientated, suggesting little change in overall habits of food preparation and consumption (cf Meadows 1999). Only in the later 1st century do dishes, beakers and flagons appear in significant numbers. Indeed, the *terra nigra* cup was deposited at this time, and it is not clear whether its rarity caused the cup to be curated from the late Iron Age, or whether it made a belated arrival to the site in the later 1st century, though the former seems more likely.

The sources of the coarse ware fabrics used at Yarnton are of some interest. Oxford products were inevitably important, as would be expected from their proximity, and the majority of sherds in O10, O11, R10, R11 and R30, for example, can probably be attributed to this source, but they by no means dominated the assemblage. It is probable that very local kilns were responsible for fabric R94, while the industry producing fabrics R37 and R38, perhaps in the Witney area, was clearly of considerable importance in sub-regional terms. The similarity of these fabrics to those produced in the North Wiltshire industry may mean that occasional products of the latter have been overlooked, but this is thought to be a minor problem at most. A connection between the two industries is quite likely, however, on the basis of similarities both of fabrics and also of some aspects of the form repertoire. A direct Wiltshire connection was represented at Yarnton by Savernake ware, but in small quantities only. A more distant western source was the Severn Valley industry - it has already been noted that tankards (apart from those in fabric R37) were drawn from this industry rather than from North Wiltshire. It is possible that the occurrence of Severn Valley wares, beyond the normal south-easterly limit of their distribution, provides residual evidence of the links between the Upper Thames and the Severn region indicated in earlier periods by the presence of Droitwich briquetage and Malvernian pottery, though the quantities are very small in both cases. It is notable, however, that Severn Valley ware is only recorded at Yarnton in the late Roman phase, and further east, at Alchester, it is noted from the mid 2nd century onwards (Evans 2001a, 326-328).

As expected, the proportion of fine and specialist wares rose in the late Roman period, now accounting for 13.3% of the assemblage (by sherd count - but only 6.1% by weight). This reflects the increase in the baseline level of fine and specialist wares on sites in the region as a result of the expansion of the Oxfordshire pottery industry and does not represent any clear change in status. Relatively, Yarnton remained at the lower end of the spectrum of late Roman sites considered in these terms (Booth forthcoming; cf Henig and Booth 2000, table 6.11). By way of comparison, higher status sites such as villas and nucleated settlements tended to have 20-30% fine and specialist wares, but one villa assemblage (from Roughground Farm, Lechlade) and one 'small town' group (from Asthall) had low fine and specialist ware levels (11.1% and 15.6% respectively). These values, from sites well to the west of Oxford, may suggest that in the later Roman period the relative levels of fine and specialist wares are much more dependent upon marketing factors (and reflect an aspect of Oxford distribution), whereas the variation seen in the early Roman assemblages does appear to reflect a pattern directly linked to perceived social status rather than other factors.

Another general feature of the Yarnton assemblage, its domination by jars at the expense of other vessel forms, is also demonstrably a characteristic of lower status rural settlements, as shown in evidence presented by Evans (2001a, 376), though without chronological definition. These ideas have been developed further by Evans (2001b, 27-31). The broad regional trend across sites of most types is that jar representation is high in the early Roman period and declines thereafter. The rate and extent of the decline tend to correlate with site type, and by the late Roman period assemblage compositions with less than 50% of jars are common (see above). Even in a fairly typical rural settlement context at Mansfield College, Oxford, jars accounted for little more than half the vessels, although it is possible that the figures here were skewed by the proximity of the Oxford industry with its high output of bowls and mortaria (the latter were unusually well-represented at Mansfield College, Booth and Hayden 2001, 310). The maintenance of the very high jar levels seen at Yarnton may owe something to the occurrence of residual material in the late groups, but generally it appears to reflect a characteristic conservative rural pattern of jar use.

ILLUSTRATED VESSELS CATALOGUE

Vessels are illustrated in a sequence of broad chronological periods, within which they are presented as individual feature groups, where appropriate, or in composite groups made up of material from related features. In each entry fabric is given first, followed by details of type and decoration. Reference is occasionally made to Young's corpus of Oxfordshire types (1977). Colour is only described where it is particularly remarkable. Zones of burnishing are shown with a tone. Probable residual/redeposited pieces are marked with an asterisk. These complement the range of material in use in a given period as demonstrated by pieces stratified in contexts of that period. Original drawing numbers assigned to the pottery during quantification follow the catalogue numbers. Context numbers are placed at the end of each entry.

Cresswell Field

Early Iron Age

1. Fabric GSA4, type HD. The vessel is burnished overall and also elaborately decorated with rows of tooled-line festoons infilled with triangular stabbed impressions. These were filled with white bone (apatite) inlay (analysis by Chris Doherty). Pit 8127 (8126).

2. Fabric GSA4, type CS, burnished overall with tooled lines on shoulder and at base of rim. Pit 8127 (8126).
3. Fabric GSA4, type CS with tooled lines on shoulder and at base of rim. Internal burnt residue. Pit 8127 (8126).
4. Fabric AS3, type CS with tooled lines on shoulder and at base of rim and fine vertical ?fingernail impressions on rim. External sooting. Pit 8127 (8126).
5. Fabric SGA4, possibly type CS but more angular, burnished on the shoulder and with grooves at carination. Pit 8127 (8126).
6. Fabric GAS3, jar (type C) but specific type uncertain. Burnished overall internally and externally. Pit 8127 (8126).
7. Fabric SGA4, type CS, though almost bipartite. Internal burnt residue. Pit 8127 (8126).
8. Fabric GSA4, type CS, with small indentations at the angle. Pit 8127 (8126).
9. Fabric SG4, ?type CS, angled sherd with oblique incised lines at the angle. Pit 8127 (8126).
10. Fabric GZ3, ?type CT. Fine angled sherd, burnished overall and with incised line decoration - paired horizontal lines at the carination and on upper body, linked by paired oblique lines. Pit 8127 (8126).
11. Fabric SA4, ?type CS. Pit 8127 (8126 and 8174).
12. Fabric AG3, jar, specific type uncertain. Burnished overall. Pit 8127 (8126 and 8174).
13. Fabric SGA4, small jar? burnished overall. Pit 8127 (8126).
14. Fabric SGA4, small jar? Pit 8127 (8126).
15. Fabric SG4, large jar? Pit 8127 (8174).
16. Fabric GSA4, type CA? The angle is uncertain and may be slightly more vertical. Burnished overall. Pit 8127 (8126).
17. Fabric SAG4, large jar? Pit 8127 (8126).
18. Fabric AS3, large jar. Pit 8127 (8174).
19. Fabric SA4, jar? with internally bevelled top of upright rim, decorated with fingertip impressions. Pit 8127 (8174).
20. Fabric SGA4, type CS?, but might be wide enough in relation to its (unknown) height to be classified as a bowl. Fine oblique incised lines on the outer face of the rim and on the slightly angled ‘shoulder’. Pit 8127 (8126).
21. Fabric GSA4, type uncertain but possibly a small bowl? Pit 8127 (8126).
22. Fabric SN5, type CS with rows of small oblique indentations at shoulder angle and on rim. Internal burnt residue. Pit 7412 (7410).
23. Fabric SP4, type CS, shoulder sherd with horizontal grooves cf Nos 2 and 3. Pit 7412 (7410).
24. Fabric SPG3,body sherd of fine ?bowl with curvilinear multiple grooved decoration and an impressed dimple at the intersection of two groups of lines in the style of No 1. Pit 7412 (7410).
25. Fabric SA4, body sherd with incised decoration similar to No 10, but the angle of this sherd is less certain. Pit 7412 (7410).
26. Fabric GS3, type ?CS. Burnished overall and with grooves on shoulder. Posthole 8254 (8253) associated with structure 8202.
27. Fabric SV5 ?jar of uncertain type with fingertip impressions on rim. Pit 7060 (7061) adjacent to structure 8202.
28. Fabric LS5, type CB. External sooting. Pit 7060 (7061) adjacent to structure 8202.

29. Fabric SA5, shoulder sherd, burnished overall and with horizontal grooves above top of triangular arrangement of incised lines. Pit 7060 (7061) adjacent to structure 8202.
30. Fabric SG5, internally expanded rim of large jar with impressed decoration of rim. Pit 7307 (7077), adjacent to structure 8202.
31. Fabric SA4, type CS with fingertip impressions on shoulder. Pit 7307 (7080), adjacent to structure 8202.
32. Fabric SG4, jar with fingertip ‘frilling’ of outer face of rim. Posthole 8330 (8331), part of structure 8396
33. Fabric SA5, type CS. Expanded rim has notching on the external lip and there are large finger indentations on the shoulder. Pit 7787(7788, 7790), associated with structure 8396.
34. Fabric AN2, fragment of burnished and decorated ?globular bowl of middle Iron Age type presumably intrusive in this feature. Pit 7787 (7788), associated with structure 8396.
35. Fabric SN5, heavy cordon with oblique incised decoration, from large jar. Pit 7869 (7868) associated with structure 8396
36. Fabric SV4, jar with remnant of attachment for a handle on the shoulder. Pit 8175(8176), associated with structures 8787-9,
37. Fabric SC5, possibly a bipartite form, slightly angled at the girth, with fingertip impressions there. Pit 7912 (7913, 7914), associated with structures 8787-9.
38. Fabric SC3, simple ?jar. Pit 7365 (7364).
39. Fabric SC5, type CS with fingertip impressions on shoulder. Pit 7365 (7364).
40. Fabric GS4, type CT. Burnished overall. Pit 7365 (7364).
41. Fabric AS3, type CT. Burnished overall internally and externally. Pit 7365 (7364).
42. Fabric SG4, type uncertain - everted rim with small penannular stamp impressions below tip of rim. Pit 7365 (7480).
43. Fabric SA5, everted rim of ?large jar with closely spaced fingertip impressions below rim. Pit 7365 (7364).
44. Fabric AG3, type ?CS with fingertip impressions at the girth. Pit 7365 (7364).
45. Fabric SA3, base of uncertain jar form. Pit 7365 (7480).
46. Fabric SA5, type CS/CT. The shoulder is still rounded but the angle at the base of the rim is well-defined. Burnished on shoulder. Pit 8005 (7915).
47. Fabric SP5, type CB. Pit 8005 (7915).
48. Fabric SA3,type CB. Pit 8005 (7915).
49. Fabric SG5, base of large jar with hole drilled through post-firing. This practice, particularly common in the region in the late Iron Age, clearly commenced much earlier. Pit 8005 (7915).
50. Fabric SA5, type CA. Pit 7057 (7058).
51. Fabric SG4, type CS. Internal burnt residue. Pit 7057 (7058).
52. Fabric LP4, large jar of uncertain type. External sooting. Pit 7057 (7058).
53. Fabric GA4, large jar, possibly type CS. Burnished overall. Pit 7057 (7058).
54. Fabric SG3, shoulder of ?type CS jar with oblique incised lines on the shoulder. Internal burnt residue. Pit 7057 (7058).
55. Fabric SG3, type CT, burnished overall internally and externally and with incised zig-zag decoration. 7058
56. Fabric SA5, ?type CB. Pit 7598 (7597).
57. Fabric SA4, type CS. External sooting. Pit 7598 (7597).
58. Fabric AS3, type CT. Burnished overall internally and externally. Pit 7598 (7597).

59. Fabric AP2, ?type CT. Burnished overall internally and externally and with stamped ring decoration on rim. Pit 7598 (7597).
60. Fabric CV3, jar of uncertain type. Notching on rim. Pit 7762 (7683).
61. Fabric SG4, type CB. Internal burnt residue. Pit 7762 (7683).
62. Fabric SA4, shoulder of ?jar burnished overall internally and externally and with incised fine zig-zag decoration. Pit 7762 (7725).
63. Fabric SP4, jar of uncertain form. External sooting. Pit 8195 (8196).
64. Fabric SP3, type CS/CT with burnished red 'haematite' coating. Pit 8195 (8196).
65. Fabric SA3, jar of uncertain form, perhaps bipartite. Midden 7003.
66. Fabric LA4, ?type CB with large lug with two vertical perforations. Midden 7003.
67. Fabric LS3, type CT, burnished overall and with oblique incised line decoration above the carination. Midden 7003.
68. Fabric SA4, type HC small rounded bowl or cup. Midden 7003.
69. Fabric SA3, jar of uncertain type. Pit 7039 (7040).
70. Fabric SC5, large type CB. Pit 7039 (7040).
71. Fabric SA4, type CS with finger tip impressions on shoulder. Internal burnt residue. Pit 7049 (7050).
72. Fabric SG3, type CT. Burnished overall internally and externally. Pit 7147 (7148).
73. Fabric SG4, ?jar of uncertain form, possibly type ?CS. Pit 7181 (7180).
74. Fabric SG3, type CS. Pit 7182 (7184).
75. Fabric SG3, type CS. Burnished overall. 76. Fabric SG3, type CT. Burnished overall. Internal limescale deposit. Pit 7182 (7184).
77. Fabric SG3, type CT. Burnished overall internally and externally. 78. Fabric AS3, type CT. Burnished overall. Pit 7182 (7184).
79. Fabric SG3, type CT. Burnished overall and with oblique incised line decoration. Pit 7182 (7184).
80. Fabric SA3, type CT, burnished overall. Two rows of fine, vertical oval impressions with white inlay above carination. Pit 7182 (7184).
81. Fabric SA3, ?type CS body sherd with incised line decoration. Pit 7182 (7183).
82. Fabric SA3, ?shoulder sherd burnished overall and with groove and impressed ring stamp decoration. Pit 7187 (7190).
83. Fabric LA4, large jar. Burnished overall externally and partly on the interior. Pit 7268 (7269).
84. Fabric SL3, ?type CS jar with notching on rim. Pit 7268 (7269).
85. Fabric SP4, type CT. Burnished overall internally and externally. Pit 7268 (7269).
86. Fabric SA4, ?jar type uncertain, but perhaps a bowl. Finger tip impressions on upper body wall. Pit 7268 (7269).
87. Fabric SA4, type HC. Pit 7268 (7269).
88. Fabric SA3, base, possibly of bowl form. Burnished overall. Pit 7268 (7269).
89. Fabric SI4, large jar with T-shaped rim. Fingertip impressions on outer face of rim and on neck. Pit 7397 (7473).
90. Fabric SG3, ?type CS jar with handle/perforated lug below girth. Burnished overall. Internal burnt residue. Pit 7397 (7398).
91. Fabric SG4, body sherd, burnished on shoulder and with rounded impressions on shoulder. Internal burnt residue. Pit 7397 (7398).
92. Fabric SN5, body sherd with tooled linear decoration. Pit 7397 (7398).
93. Fabric SC5, large jar of uncertain form. Pit 8023 (8022).
94. Fabric GS4, type CS jar with pronounced fingertip impressions on shoulder. Pit 8023 (8022).
95. Fabric SG3, type CS. Burnished overall. Pit 8025 (8024).

96. Fabric SP4, type CS, with fingertip impressions at girth. Pit 8327 (8326).
97. Fabric SA5, ?type CB. Pit 8327 (8326).
98. Fabric VA4, type CB. External sooting. Pit 8327 (8326).
99. Fabric SL5, type CB. Pit 8327 (8326).
100. Fabric SP5, type CA with notching on rim. External sooting. Pit 8327 (8326).
101. Fabric SG4, type CS/CT. Pit 8327 (8326).
102. Fabric AN3, type CT. Burnished overall externally and partly on interior. Pit 8327 (8326).
103. Fabric SG3, type CS with handle. Burnished on shoulder and with oblique incised lines near handle attachment. Pit 8389 (8390).
104. Fabric SA4, type CT. Burnished overall. Pit 7516 (7517).
105. Fabric SA4, ?type HC. Pit 7603 (7661).
106. Fabric SA3, type CB. Burnished overall externally and partly on interior. Pit 7742 (7743).
107. Fabric SA4, type CT. Burnished overall externally and internally. Pit 7742 (7743).
108. Fabric CN4, ?type CB. Pit 7997 (7995).
109. Fabric SP5, ?large jar with expanded rim with fingertip impressions on outer edge. Pit 7997 (7995).
110. Fabric SG4, neck of large jar with internal ledge and two pre-firing perforations through wall above the ledge. Burnished overall. Pit 7997 (7995).
111. Fabric SA4, ?type CS with handle at shoulder. Pit 8251 (8252).
112. Fabric LA4, type CS/CT. Pit 8427 (8428).
113. Fabric SA4, vertical cordon from neck of large jar, with oblique incised decoration. Ditch 8287 (8288).
114. Fabric SC3, type CT. Burnished overall externally and internally. U/S. Finds reference (7036).
115. Fabric SA4, type CT. Burnished overall externally and partly on interior and with fingertip impressions at carination. Surface (8455).
116. 638 Fabric SG4, large jar of uncertain type with internally expanded rim. Surface (8455).

Middle Iron Age

117. Fabric SG4, type CS. Burnished overall externally and partly on interior. Gully 8182 (8181).
118. Fabric AN3, type CB. Gully 7862 (7863).
119. Fabric SA4, ?type CB or bipartite form, with fingertip impression at girth. External sooting. Gully 7862 (7863).
120. Fabric AS3, body sherd burnished overall externally and internally and with incised triangle decoration. Gully 7862 (7863).
121. Fabric AN2, type CB. External sooting. Pit 7988 (7986).
122. Fabric SA3, small pedestal base with out-turned foot. Burnished overall. Ditch 7659 (7969).
123. Fabric SA5, decorated cordon from ?large jar. Ditch 7659 (7660).
124. Fabric SA3, type CB. Burnished overall externally and internally. Ditch 7512 (7514).

125. Fabric AN2, shoulder of jar or bowl burnished externally and with row of stabbed impressions between grooves, and oblique and horizontal incised lines below. Ditch 7637 (7638).
126. Fabric CS4, jar of uncertain form with incised notches on rim. Internal burnt residue. Gully 7893 (7892).
127. Fabric SA4, type HG. Burnished overall. Pit 7062 (7064).
128. Fabric CP3, type CG. Burnished overall. Pit 7353 (7352).
129. Fabric AS3, type D (uncertain jar/bowl). Burnished overall. Pit 8033 (8034).
130. Fabric AV3, type CB. Pit 8359 (8358).
131. Fabric LV3, ?type CB. Pit 8359 (8358).
132. Fabric GV4, ?type CS with fingertip impressions on the shoulder. Pit 8359 (8358).
133. Fabric SL5, type CB. Pit 8359 (8358).
134. Fabric SA3, type CB. Burnished overall. Pit 8467 (8466).
135. Fabric SN5, large jar with internally expanded rim. Pit 8525 (8526).
136. Fabric SA3, body sherd burnished overall externally and partly on interior and with incised decoration with a white calcite (limestone/chalk) inlay (analysis by Chris Doherty). Pit 8525 (8526).
137. Fabric SN4, large jar with internally expanded rim and rough vertical cordon on outer face of rim. Pit 7710 (7709).
138. Fabric LA5, type CB. Pit 8149 (8150).
139. Fabric AS3, type CB with fingertip impression on shoulder. Another sherd from this vessel appeared to have an oblique burnished line, and yet others had internal limescale deposits. The decoration might suggest an early rather than a middle Iron Age date. Pit 8437 (8436).
140. Fabric AP2, type CB. Pit 8468 (8469).
141. Fabric AV3, ?type CB. External sooting and internal burnt residue. Pit 8468 (8469).
142. Fabric LA3, type CB. Burnished overall externally and internally. Pit 8533 (8516).
143. Fabric CS4, type CB. Burnished overall externally and internally. The fabric might suggest an early Iron Age date. Pit 8533 (8516).
144. Fabric AS3, type HD burnished overall externally and partly on interior and with lightly tooled grooves under rim and linear pendant swag or festoon decoration. Pit 8645 (8644).
145. Fabric LV5, type HG burnished overall and with elaborate impressed and tooled decoration. Pit 8786 (8493).
146. Fabric AP2, ?type HG burnished overall and with poorly preserved linear tooled and ring stamp decoration. Pit 8786 (8493).

Miscellaneous post-Roman contexts

147. Fabric SA4, jar with notches on outer lip of rim. Quarry 7276.
148. Fabric SA5, jar of uncertain form with roughly T-shaped rim. SFB 8634.
149. Fabric QS3, body sherd with horizontal incised line decoration above and below rows of small oblique impressions. Ditch 7538.

All these vessels are probably early Iron Age, though the quartzite inclusions in No. 149 might indicate a slightly earlier (late Bronze Age) date.

Yarnton

Late Bronze Age/early Iron Age

150. Fabric SA5, type D. Handled body sherd with simple geometric incised decoration. Burnished overall externally. Pit 276.
151. Fabric SA3, type MD. Pit 276.
152. Fabric SP5, type CB. Combed decoration. Pit 371.
153. Fabric AP3, type D. Burnished overall externally and internally. Pit 371.
154. Fabric SA5, type C. Fingertip impressions on rim. Pit 389.
155. Fabric SA5, type C. Pit 770.
156. Fabric SA3, type CA. Pit 857.
157. Fabric SA4, type H. Pit 1465.
158. Fabric AS4, type CA. Internal burnt residue. Pit 1529.
159. Fabric SP4, type C. Pit 1540.
160. Fabric SP5, type H. Complex geometric incised decoration. Pit 1540.
161. Fabric SP5, type CB. Pit 1561.
162. Fabric SN5, type CS. Pit 1684.
163. Fabric SP4, type CT. Burnished overall externally. Pit 1695.
164. Fabric AC3. Body sherd with impressed decoration. Pit 1695.
165. Fabric SA5, type CS. Pit 1716.
166. Fabric SA5, type C. Pit 1716.
167. Fabric SA5, type C. Fingertip impressions on rim. Pit 1716.
168. Fabric SC5, type C. Fingertip impressions on rim and shoulder. Pit 1716.
169. Fabric SL5, type C. Pit 1716.
170. Fabric SN5, type C. Pit 1716.
171. Fabric SP5, type C. Pit 1716.
172. Fabric LS5, type CB. External sooting. Pit 1750.
173. Fabric SV5, type C. Pit 2515.
174. Fabric SA4, type CT. Burnished overall externally and internally. Pit 2649.
175. Fabric SP5, type CS. Grooved on rim and fingertip impressions on shoulder. Pit 2692.

Middle Iron Age

176. Fabric AN3, type HC. Enclosure 267.
177. Fabric CN4, type CB. External sooting. Enclosure 327 (369).
178. Fabric SG5, type C. Fingertip impressions on shoulder. Enclosure 327 (369).
179. Fabric AP4, type C. Enclosure 390 (549).
180. Fabric AP3, type HC. Burnished overall externally and internally. Enclosure 390 (549).
181. Fabric AN3, type HG. Burnished overall externally. Enclosure 390 (301).
182. Fabric AV3. Externally burnished body sherd with impressed, grooved, and stabbed dot decoration. Enclosure 390 (260).
183. Fabric AV2. Internally and externally burnished body sherd with grooves and a roped cordon. Ditch 450.

Late Iron Age/early Roman transition

184. Fabric GL5, type CB. Simple geometric decoration and burnished zone on shoulder. Enclosure 121.
185. Fabric CN4, type CB. Enclosure 121.
186. Fabric E80, type CD. Burnished overall externally. Enclosure 175 (386).
187. Fabric E80, type CD. Cordon at base of neck and burnished overall externally. Enclosure 175 (622).
188. Fabric E80, type CE. Enclosure 175 (208).
189. Fabric E80, type CE. Cordon at base of neck and burnished overall externally. Enclosure 175 (210).
190. Fabric R94, type CH. Burnished on shoulder and rim. Enclosure 175 (622).
191. Fabric C11, type CK. External sooting. Enclosure 175 (210).
192. Fabric C11, type CK. Enclosure 175 (210).
193. Fabric SP5. Jar with internally expanded rim. Early Iron Age. Enclosure 175 (622).
194. Fabric E80, type HA. Externally burnished bowl with cordon on body. Enclosure 175 (622).
195. Fabric AN2. Burnished rim sherd of bowl decorated with row of short incised lines on shoulder bordered by grooves. Middle Iron Age. Enclosure 236 (428).
196. Fabric E50, type CN. Groove on shoulder. Ditch 1606.
197. Fabric E40, type HA. Burnished overall externally. Ditch 616.
198. Fabric E50, type HA. Burnished externally. Ditch 359.
199. Fabric E80, type CD. Burnished overall externally. Enclosure 391A (995).
200. Fabric E80, type CE. Burnished overall externally. Enclosure 391A (973).
201. Fabric C10, type CK. External sooting. Enclosure 391A (995).
202. Fabric O18, type EA. Body sherd with notched scroll decoration and grooves around girth. Copy of *terra rubra* butt-beaker. Enclosure 391A (995).
203. Fabric E80, type HA. Externally burnished bowl with cordons on neck. Enclosure 391A (995).
204. Fabric E80, type CD. Enclosure 923.
205. Fabric E80, type CH. Burnished externally on top of and below rim. Enclosure 923 (926).
206. Fabric SA4, type CB. Middle Iron Age. Enclosure 925.
207. Fabric AS4, type CB. Middle Iron Age. Ditch 1000.
208. Fabric SA4, type CB. Exterior sooting and overall burnish. Middle Iron Age. Ditch 1000.
209. Fabric E80, type CE. Burnished jar with cordon at base of neck. Ditch 1000.
210. Fabric E80, type CH. Joins vessel in Group 86 (no. 205). Ditch 1000.
211. Fabric E80, type CH. Ditch 1000.
212. Fabric E80, type HA. Burnished bowl with cordons on body. Ditch 1000.
213. Fabric QA4. Jar with fingertip impressions on rim and shoulder. Early Iron Age. Ditch 1000.
214. Fabric SA4, type CB. Middle Iron Age. Pit 300.
215. Fabric AV3, type CT. Jar burnished overall. Early Iron Age. Pit 404.
216. Fabric E80, type CE. Burnished overall externally and at the rim internally. Pit 563.
217. Fabric E80, type CE. Pit 563.

218. Fabric R94, type CI. External sooting. Pit 662.
219. Fabric R94, type CI. External sooting. Pit 662.
220. Fabric R94, type CI. External sooting. Pit 662.
221. Fabric E80, type HA. Groove on carination and burnished on rim and neck externally and at the rim internally. Pit 697.
222. Fabric E80, type CE. Burnished overall externally. Pit 1016.

Early Roman period

223. Fabric R11, type CM. Burnished externally; grooves at girth and base of neck. Ditch 45.
224. Fabric O11, Young type O27. Necked bowl with grooves on girth. Ditch 45.

Nos 225- 43: Ditch 51.
225. Fabric R94, type CC. Externally burnished jar with rippled shoulder.
226. Fabric E20, type CD. Externally burnished jar with grooved shoulder.
227. Fabric O11, type CD.
228. Fabric R11, type CD. Jar burnished overall externally and on rim internally.
229. Fabric R37, type CD. Grooves on shoulder.
230. Fabric R94, type CD.
231. Fabric R94, type CD.
232. Fabric R94, type CD.
233. Fabric R94, type CD.
234. Fabric R10, type CE.
235. Fabric R37, type CE. Externally burnished jar with grooved girth.
236. Fabric R37, type CE. Burnished externally on rim and neck.
237. Fabric R94, type CI.
238. Fabric R94, type CK.
239. Fabric C11, type CK.
240. Fabric C11, type CK. External sooting.
241. Fabric C11, type CK. External sooting.
242. Fabric C11, type CK Burnt deposits and sooting.
243. Fabric R37. Jar or bowl burnished externally on shoulder and on rim internally.
244. Fabric E80, type CD. Ditch 55.
245. Fabric CN5, type CB. Oblique incisions on rim. Middle Iron Age. Enclosure 138 (426).
246. Fabric E80, type CN. Large storage jar burnished on rim and neck. Enclosure 138 (426).
247. Fabric R11, Young type R31. Jar-beaker with rouletted decoration. Enclosure 138 (426).
248. Fabric E80, type CN. Burnished shoulder. Ditch group 140.
249. Fabric R94, type CD. 313. Enclosure 156.
250. Fabric SV4. Burnished body sherd decorated with complex geometric motifs. Early Iron Age. Enclosure 156 (1647).
251. Fabric E80, type CG. 90. Enclosure 160.
252. Fabric SA4. Slack-profiled jar. Early Iron Age. Enclosure 187 (664).
253. Fabric E80, type HD. Bowl with rippled and burnished shoulder. Enclosure 187 (706).
254. Fabric SL2. Externally burnished body sherd decorated with simple geometric motifs. Early Iron Age. Enclosure 187 (666).

255. Fabric E50, type CH. Ditch 344.
256. Fabric E80, type CH. Ditch 344.
257. Fabric R37. Body sherd with burnished zones and motifs. Ditch 344.
258. Fabric E80, type CH. External sooting. Enclosure 391B (418).
259. Fabric E80, type CH. Burnished externally on rim and shoulder and internally on rim. Enclosure 391B (987).
260. Fabric W35, type BB. Burnished externally. Enclosure 391C (419).
261. Fabric E50, type CD. Burnished externally. Enclosure 391C (693).
262. Fabric E80, type CD. Enclosure 391C (417).
263. Fabric E80, type CD. Burnished on rim, neck and shoulder with wavy line decoration on girth. Enclosure 391C (966).
264. Fabric E40, type CE. Burnished externally on neck and shoulder and internally on rim. Cordon on neck. Enclosure 391C (693).
265. Fabric E80, type CH. Burnished externally on neck and shoulder and internally on rim. Enclosure 391C (695).
266. Fabric R94, type CH. External sooting. Enclosure 391C (419).
267. Fabric E50, type HA. Burnished overall. Groove on neck. Enclosure 391C (693).
268. Fabric E80, type HA. Externally burnished jar with cordon on girth. Enclosure 391C (353).
269. Fabric E80, type HA. Enclosure 391C (421).
270. Fabric E80, type HA. Enclosure 391C (1073).
271. Fabric R37, type CD. Externally burnished overall. Cordons on neck and girth. Ditch 591.
272. Fabric R94, type CD. External sooting. Ditch 591.
273. Fabric R37, type CD. External and internal zones of burnishing; grooves and cordons on neck and shoulder. Ditch 624.
274. Fabric O11, Young type O42. Carinated bowl, burnished overall with white dot and arc painted decoration. Ditch 624.
275. Fabric C11, type CK. Ditch 813.
276. Fabric C11, type CK. Ditch 813.
277. Fabric R37. Jar burnished on shoulder and rim. Ditch 813.
278. Fabric R37, type C. Rim burnished internally. Ditch 813.
279. Fabric O11, type CE. Externally burnished jar with cordons on neck. Ditch 859.
280. Fabric R94, type CI. Ditch 859.
281. Fabric E80, type CE. Burnished externally on neck and internally on rim. Ditch 1067
282. Fabric R94, type CD. External sooting. Ditch 2593.
283. Fabric R94, type CD. External sooting. Ditch 2593.
284. Fabric R94, type CH. Ditch 2593.
285. Fabric E80, type CN. Ditch 2593.
286. Fabric E20, type JA. Burnished internally. Pit 57.
287. Fabric E20, type JA. Pit 86.
288. Fabric E80, type CD. Pit 209.
289. Fabric R94, type CD. Pit 209.
290. Fabric R94, type CE. Externally burnished overall. Pit 209.
291. Fabric R94, type CD. Groove on girth. External sooting. Pit 308.
292. Fabric R21, type MG. Pit 308.
293. Fabric R90, type CD. Pit 816.

294. Fabric E50, type CD. Pit 836.

295. Fabric E80, type CD. Pit 836.
296. Fabric E80, type JB. Burnished overall. Pit 836.
297. Fabric R37, type GA. Burnished zone below rim and above lattice. Joins vessel in Group 140 (no. 374). Pit 1033.
298. Fabric SC4, type CB. ?Middle Iron Age. Pit 1082.
299. Fabric SN5, type CS. Fingertip impressions on shoulder. Early Iron Age. Pit 1082.
300. Fabric R37, type CC. Overall external burnish. Pit 1088.
301. Fabric R11, Young type R57. Carinated bowl with overall external burnish. Pit 1088.
302. Fabric R10, type CD. Burnished and grooved on shoulder. Pit 1144.
303. Fabric E30, type CN. Burnished externally on body and internally on rim; grooved on neck and girth. Pit 1192.
304. Fabric E80, type CK. Pit 1216.
305. Fabric R37, type GA. Burnished zone below rim overlain by lattice that extends towards base. Pit 1387.
306. Fabric O11, type HC. Burnished zone above flange. Pit 1387.

Late Roman period

307. Fabric M41, Young type C97. Vertical impressions on flange. Kidney-shaped feature 491/494.
308. Fabric R37, type CD. Burnished overall. Structure 1356 (1069).
309. Fabric B11, form CK. . Structure 1356 (1098)
310. Fabric O81, form CN. Structure 1356 (87)
311. Fabric R30, type HB. Flanged bowl with exterior burnish. Structure 1356 (87).
312. Fabric R37, type C. Burnish on top of rim. Ditch 25.
313. Fabric R94, type CD. External sooting. Sherds from this vessel in Ditch group 30 (ditches 1181 and 1182).
314. Fabric E30, type CE. Burnished zone on girth below shoulder cordon. Late Iron Age/early Roman. Sherds from this vessel in ditches 106 and 1181. Ditch group 30.
315. Fabric R37, type CE. Burnished externally overall and internally on rim. Ditch 1061. Ditch group 30.
316. Fabric C11, type CK. External sooting and internal lime scale. Ditch 1061. Ditch group 30.
317. Fabric C11, type CK. External sooting. Ditch 1061. Ditch group 30.
318. Fabric C11, type CK. Lime scale and sooting. Ditch 1061. Ditch group 30.
319. Fabric R37, type CK. Burnished zone on shoulder above wavy line. External sooting. Ditch 1061. Ditch group 30.
320. Fabric C11, type CN. Ditch 1061. Ditch group 30.
321. Fabric R37, type C. Burnished overall externally. Ditch 115. Ditch group 30.
322. Fabric R18, type EA. Early Roman. Ditch 115. Ditch group 30.
323. Fabric O11, Young type O27. Externally burnished bowl with cordon on neck. Ditch 103. Ditch group 30.
324. Fabric O11, Young type O27. Burnished on shoulder; grooved and cordoned on neck and body. Ditch 1181. Ditch group 30.

325. Fabric R30, type JA. Burnished overall; intersecting arcs on exterior. Ditch 762. Ditch group 30.

326. Fabric C10, type CD. Burnished overall externally. Ditch 34.
327. Fabric LN5, type CB. External sooting. ?Middle Iron Age. Ditch 46.
328. Fabric R37, type CD. Ditch 56.
329. Fabric R94, type CD. Ditch 56.
330. Fabric R94. Narrow-necked jar. Burnished on rim and neck; cordon on shoulder. Enclosure 82 (85).
331. Fabric O11, type EC. Large beaker with roughcast decoration. Enclosure 82.
332. Fabric F52, type HB. Flanged bowl. Enclosure 82 (85).
333. Fabric R30, type JA. Burnished on top of rim and with horizontal lines on walls. Enclosure 82 (85).
334. Fabric M22, Young type M17. Enclosure 82 (85).
335. Fabric M22, Young type M22. Enclosure 82 (85).
336. Fabric C11, type CD. Ditch 155.
337. Fabric C11. Body sherd with incised festoons and border. Ditch 155.
338. Fabric E80, type CH. Late Iron Age/early Roman Ditch 162.
339. Fabric C11. Jar base, trimmed around the break. External sooting. Enclosure 279 (505).
340. Fabric E80, type CD. External sooting. Late Iron Age/early Roman. Ditch 332.
341. Fabric E30, type CE. Overall external burnish. Cordon on shoulder. Late Iron Age/early Roman. Ditch 332.
342. Fabric R37, type CE. Overall external burnish; grooves on rim. Ditch 332.
343. Fabric R94, type CI. Internal burnt residue. Ditch 332.
344. Fabric R94, type CI. External sooting. Ditch 332.
345. Fabric R94, type CI. External sooting. Ditch 332.
346. Fabric E80, type CN. Storage jar with burnished zone and cordons on shoulder and decorated with white paint. Late Iron Age/early Roman. Ditch 332.
347. Fabric R37, type GA. Base of tankard decorated with lattice above horizontal line burnish. Ditch 332.
348. Fabric R20, type JA. Burnished overall. Ditch 332.
349. Fabric C11, type CN. Ditch 471
350. Fabric R37, type HD. Overall exterior burnish. Grooves on neck and girth. Enclosure 996.
351. Fabric R37, type CD. Overall exterior burnish. Ditch 1013.
352. 95 Fabric C12, type CK. Ditch 1027.
353. Fabric E20, type CE. Overall interior burnish. Late Iron Age/early Roman. Ditch 1031.
354. Fabric R37, type GA. Joins vessel in Group 118 (no. 317). Ditch 1031.
355. Fabric R37, type H. Burnished on to of rim and with horizontal lines. Ditch 1031.
356. Fabric C11, type CK. Rilling on shoulder. External sooting. Enclosure 1049.
357. Fabric O11, type HB. Burnished overall internally and externally with horizontal lines. Enclosure 1049.
358. Fabric R37, Young type R53. Straight-sided bowl with overall interior burnish. Enclosure 1049.
359. Fabric W20, type CC. Burnished on neck and rim. Neck cordon and shoulder groove. External sooting. Enclosure 1062.
360. Fabric R37, type CD. Burnished neck and rim. Neck cordon and grooves on girth. Ditch 2509.

361. Fabric R37, Young type R38. Burnished shoulder, neck and rim. Neck cordon and groove on girth. Lime scale. Ditch 2509.
362. Fabric R37, type EE. Burnished rim and neck; shoulder groove. Ditch 2517.
363. Fabric O81, type CC. Overall exterior burnish. Pit 48.
364. Fabric C11, type CB. Pit 49.
365. Fabric E80, type CH. Overall exterior burnish. Late Iron Age/early Roman. Pit 101.
366. Fabric E80, type CN. Overall exterior burnish. Late Iron Age/early Roman.
367. Fabric E80, type CD. Late Iron Age/early Roman. Pit 147
368. Fabric R37, Young type R51. Dish with overall internal and external burnish. Pit 1084.
369. Fabric O40, type GA. Overall exterior burnish. Pit 1095.
370. Fabric E30, type HD. Overall exterior burnish. Late Iron Age/early Roman. Pit 1318.

Other pottery from Worton Rectory Farm

Early Iron Age

371. Fabric SP5, type CB. Pit 371.
372. Fabric SP5, type CB. Internal burnt residue. Pit 1561.
373. Fabric SP5, type CS. Fingertip impressions on shoulder. Posthole 999, Structure 1754.

Middle Iron Age

374. Fabric AP3, type CA. External sooting. Pit 1142.
375. Fabric AV3, type CB. Handled jar. Pit 577.
376. Fabric AV3, type CB. Burnished overall. Pit 1142.
377. Fabric AV3, type CB. Pit 1142.
378. Fabric SP4, type CB. Fingertip impressions on shoulder. Pit 1407.
379. Fabric AG4, type CB. Exterior sooting and overall burnish. Pit 2585.
380. Fabric SA5. Large jar. External sooting. ?Residual. Pit 1189.
381. Fabric AN3. Jar/bowl. Pit 1357.
382. Fabric CA4, type HG. Perforated base. Pit 746.
383. Fabric AP3, type HG. Burnished overall. Impressed ovals bordered by horizontal grooves on shoulder. Pit 1282.
384. Fabric AS3, type HG. Burnished externally overall and internally on rim. ?Middle Iron Age. Finds reference 20.
385. Fabric SA5. Lower body sherd with roughly combed decoration. Pit 584.

Late Iron Age/early Roman

386. Fabric E50, type CD. Burnished exterior. Rippled shoulders. Pit 1458.
387. Fabric E80, type CN. Fabric E80, type CN. Burnished externally on shoulder and internally on rim. Grooves on neck and base. Finds reference 592.
388. Fabric E80, type CE. Perforated base. Pit 1189.
389. Fabric E30, type CE. Layer 116.
390. Fabric E80, type CE. Finds reference 602.
391. 328 Fabric E30, type CE. Pit 328.

392. 251 Fabric E80, type EG. Overall burnish. Finds reference 566.
393. 347 Fabric E80, type HA. Exterior burnish. Finds reference 20.

Early Roman

394. Fabric E80, type CD. Externally burnished on rim, neck and shoulder and internally on rim. Rilled body. Ditch 564, enclosure 129.
395. Fabric E30, type CD. Burnished on neck. Ditch 565, enclosure 59.
396. Fabric E80, type CD. Jar with perforated base. Ditch 1154, enclosure 166.
397. Fabric R37, type CD. Externally burnished on rim, neck and shoulder and internally on rim. Rilled body. External soting. Ditch 1157, enclosure 427.
398. Fabric R37, type CD. External sooting. Ditch 1157, enclosure 427.
399. Fabric R94, type CD. Overall exterior burnish. Ditch 1157, enclosure 427.
400. Fabric R94, type CE. Overall exterior burnish. Ditch 280, enclosure 206.
401. Fabric R30, type CE. Externally burnished on rim, neck and shoulder and internally on rim. Grooves on body. Ditch 821, enclosure 51.
402. Fabric E20, type CE. Externally burnished on rim, neck and shoulder. Cremation 2501.
403. Fabric E80, type CH. Externally burnished on rim, neck and shoulder. Ditch 355, enclosure 391C.
404. Fabric R94, type CH. Burnished rim and shoulder. ?Early Roman. Finds reference 607.
405. Fabric C12, type CK. Lime scale and sooting present. Pit 83.
406. Fabric C11, type CK. Ditch 726, enclosure 51.
407. Fabric E75. Large jar. Ditch 145, enclosure 55.
408. Fabric E80, type EA. Rouletted beaker with overall exterior burnish. Ditch 1154, enclosure 166.
409. Fabric E80. Body sherd of ?butt-beaker with rouletted decoration. Ditch 645, enclosure 206.
410. Fabric W12, Young type W37. Globular beaker decorated with red painted lines. Ditch 1157, enclosure 427.
411. Fabric R37, type GA. Base of tankard decorated with lattice above burnished zone. Ditch 821, enclosure 51.
412. Fabric R37, type HD. Jar with rilling on shoulder. Ditch 821, enclosure 51.
413. Fabric W11, Young type P18. Dish or bowl with bands of red painted decoration. Gully 641, enclosure 293.
414. Fabric R37, type JA. 2nd/3rd century. Topsoil.

Late Roman

415. Fabric C11, type CK. Probably late Roman. U/S 20.
416. Fabric O81, type CM. Probably late Roman. U/S 20.
417. Fabric O81. Wide-mouthed jar. Probably late Roman. U/S 20.
418. Fabric R37, type EH. Groove on shoulder. U/S 829.
419. Fabric R11, Young type R48. U/S 20.
420. Fabric R37, type GA. Burnished zone on rim above lattice. Layer 354.
421. Fabric R20, type MF. Cheese-strainer. ?Residual. Pit 1628.

ORGANIC RESIDUE ANALYSIS OF POTSHERDS FROM YARNTON CRESSWELL FIELD

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INTRODUCTION

Lipids are a major constituent of living organisms and are therefore present in appreciable abundances in foodstuffs. During the processing of animal and plant products in unglazed pottery vessels, lipids are absorbed into the vessel wall due to their hydrophobic properties (ie they are not soluble in water) and the use of heat during cooking. These absorbed lipids may survive thousands of years, often without any structural changes having occurred, and are thus amenable to solvent extraction and characterisation using modern analytical techniques (Evershed *et al.*, 1999; Evershed *et al.*, 2002).

The identification of ancient commodities based on lipid residues extracted from pottery is inevitably complicated by the degradative processes occurring during vessel use and burial (Evershed, 1993). Some identifications can be made based on the structures of individual components and comparison of lipid profiles with modern reference samples and degraded materials produced in laboratory simulation experiments (Dudd *et al.*, 1998). However, knowledge of how specific lipid compounds degrade/survive is an important part of organic residue analysis. Degraded animal fats are by far the most commonly identified residues found in association with pottery vessels, and are characterised by a readily recognisable distribution of free fatty acids, monoacylglycerols, diacylglycerols and intact triacylglycerols. However, identification of the particular type of animal from which the fat is derived is much less straightforward and complicated to some extent by chemical and micro-biological alteration (Evershed *et al.*, 1992; Dudd *et al.*, 1998).

Although bulk stable isotope values have been utilised for a number of years in archaeology, recently the determination of compound-specific stable carbon isotope values ($\delta^{13}C$ values) has proven to be vital in any assessment of the origins of the fat/oil (Evershed *et al.*, 1994; Mottram *et al.*, 1999; Copley *et al.*, 2003). This latter approach determines the $\delta^{13}C$ values of the principal fatty acids ($C_{16:0}$ and $C_{18:0}$) present in animal fats. Due to differences in the metabolism of different species, fat-types display specific $\delta^{13}C_{16:0}$ and $\delta^{13}C_{18:0}$ values thus enabling the origin animal to be distinguished. Importantly, the $\delta^{13}C$ values are very robust and are unaffected by decay during burial/vessel use.

Aims and objectives

The initial objective of this investigation was to screen a group of selected sherds from Cresswell Field sites in order to determine the lipid composition the organic residues. Herein, we report the results of chemical analyses of these lipid extracts. This work forms part of a larger study into dairying during British prehistory, which investigated the persistence of organic residues obtained from pottery vessels from a total of 14 sites ranging from Neolithic to Iron Age (Copley *et al.*, 2003). As part of a later study, a further 91 sherds were selected from the Neolithic phase of occupation at Yarnton Floodplain, and shall be the subject of a later publication.

Where degraded animal fat residues have been detected, further analyses comprising a combination of criteria have been considered in the determination of origin, including the characterisation of solvent extractable lipid components by high temperature gas chromatography (HTGC) and GC/mass spectrometry (GC/MS) and the application of compound-specific stable carbon isotope analysis to measure $\delta^{13}C$ values of the major *n*-alkanoic acids ($C_{16:0}$ and $C_{18:0}$).

The analysis of the Cresswell Field assemblage constitutes the most comprehensive study performed to date of organic residues in Iron Age pottery. The Iron Age features are believed to be predominantly related to domestic activity but due to the fragmentary nature of the pottery assemblage in most cases the exact form of the vessel from which the sherds derive is not known. However, two vessel types from context 8126 have been identified, with one sherd deriving from a bowl form (sherd no. CF126) which is very unusual for this region, both in form and decoration (but not in fabric). It is originally believed to have come from Wessex and not the Thames Valley where it was found. The un-specified base and body sherds from the second vessel are thought to be almost certainly derived from one of the common forms, i.e. barrel-shaped jar, slack shouldered jar or tripartite jar (Paul M. Booth, pers. comm.). These vessel forms are potentially multi-functional domestic wares, however, the tripartite jars are often made of slightly finer fabrics and better finished than other vessels and conceivably represent ‘table ware’ in the early Iron Age. The vessels are considered to be significant since they were recovered from the fill of one of the earliest Iron Age features on the site which contained an unusually large group of pottery dating to approximately 7th century BC.

The Cresswell Field site lay on calcareous gravel of the Second Gravel Terrace which affords good preservation to bone, and thus an abundance of animal bone has been recovered in excellent condition, comprising mainly cattle (64%) but also sheep and goat (27%), pig (7%) and horse (2%), but very few wild animals (Hey, pers. comm.). Butchery marks were visible on some bone.

Analytical methods

Lipid analyses were performed using our established protocols which are described in detail in earlier publications (Evershed *et al.*, 1990; Charters *et al.*, 1993; Copley *et al.*, 2003). Analyses proceeded as described below.

Solvent extraction of lipid residues

Approximately 2 g samples were taken and their surfaces cleaned using a modelling drill to remove any exogenous lipids (e.g. soil or finger lipids due to handling). The samples were then ground to a fine powder, accurately weighed and a known amount (20 μg) of internal standard (*n*-tetratriacontane) added. The lipids were extracted with a mixture of chloroform and methanol (2:1 v/v). Following separation from the ground potsherd the solvent was evaporated under a gentle stream of nitrogen to obtain the total lipid extract (TLE). Portions (generally one fifth aliquots) of the extracts were then trimethylsilylated and submitted directly to analysis by gas chromatography (GC). Where necessary combined gas chromatography/mass spectrometry (GC/MS) analyses were also performed on trimethylsilylated aliquots of the lipid extracts to enable the elucidation of structures of components not identifiable on the basis of GC retention time alone.

Preparation of trimethylsilyl derivatives

Portions of the total lipid extracts were derivatised using *N*,*O*-bis(trimethylsilyl) trifluoroacetamide (30 μl; 70°C; 20 min; Sigma-Aldrich Company Ltd., Gillingham, UK) and analysed by gas chromatography (GC) and gas chromatography-mass spectrometry (GC-MS).

Saponification of total lipid extracts

A methanolic sodium hydroxide (0.5M) and water solution (9:1 v/v) was added to the TLE and heated at 70°C for 1 h. Following neutralisation, lipids were extracted into hexane and the solvent reduced by rotary evaporation.

Preparation of methyl ester derivatives (FAMEs)

FAMEs were prepared by reaction with BF_3-methanol (14% w/v; 200 μl; Sigma-Aldrich, Gillingham, UK) at 70°C for 1 h. The methyl ester derivatives were extracted with diethyl ether and the solvent removed under nitrogen. The FAMEs were re-dissolved into hexane for analysis by GC and gas chromatography-combustion-isotope ratio mass spectrometry (GC-C-IRMS).

The pottery samples

A total of 49 sherds were provided from the Cresswell Field Iron Age assemblage with a range of fabric types represented. Several of the sherds were assigned to either jar or bowl forms, although the majority cannot be classified. Table 14.26 details the fabric type and description of the sherds submitted for organic residue analyses.

Results

GC analyses were performed on the solvent extracts of a sub-sample of each potsherd, totalling 49 analyses of this type. The results of screening by GC are summarised in Table 14.26 on a sample-by-sample basis, giving the total lipid concentration per gram of powdered sherd, a brief description of the lipid distributions and, where known, the commodities from which they originate. Extracts selected for further analysis by GC-C-IRMS are indicated by an asterisk in column 1.

Twenty-eight of the 49 sherds analysed yielded lipid residues, which ranged in concentrations of between 0.43 mg g^{-1} to 2.11 mg g^{-1} of lipid. Preservation of the extracts from Yarnton Cresswell Field is extremely variable but comparable with extracts from Yarnton Flood Plain, with 5 extracts (ie CF101, CF108, CF117, CF138 and CF147) comprising only free fatty acid components (Table 14.26). Conversely, excellent preservation of intact triacylglycerols is seen in samples CF112, CF126, CF127, CF129, CF137 and CF146.

Mid-chain ketones (C_{31}, C_{33} and C_{35}) were detected in sherds CF101, CF105, CF118, CF142 and CF149. These components have been shown to form *via* a condensation reaction which occurs when fats are heated in the present of fired clay at temperatures in excess of 300 °C (Evershed *et al.*, 1995; Raven *et al.*, 1997). The distributions of lipid components in sherd CF142 (a barrel-shaped jar) are characteristic of degraded beeswax, comprising a series of diagnostic palmitic acid wax esters. Components characteristic of degraded animal fats and mid-chain ketones (C_{31}, C_{33} and C_{35}) were also detected, indicating that this vessel was also utilised in the heating of fats/oils to temperatures exceeding 300°C.

It was possible to take samples along the profile of some of the vessels. For example, the slack-shouldered jar CF127, CF128 and CF129, which contained lipid concentrations of 44 μg g^{-1} in the base, 15 μg g^{-1} in the body and 142 μg g^{-1} in the rim. This illustrates a phenonomen detectable in many archaeological pottery cooking vessels (e.g. Charters *et al.*, 1995); namely that due to their hydrophobic nature, fats and oils are more concentrated towards the top of the vessel where the water-level would have been. Indeed, this has been demonstrated experimentally (Charters *et al.*, 1997).

The $\delta^{13}C$ values for the Yarnton Cresswell Field sherds (Fig. 14.*1) indicate that the majority of extracts plot in the region of the ruminant adipose and dairy fats, with the remainder plotting between the ruminant and non-ruminant reference fats. Table 14.27 summarises the commodities detected in the potsherds. None of the remnant fats plot close to the range for the modern reference porcine fats. Approximately half of the archaeological extracts plot within the range of the modern reference cow's milk. The triacylglycerol distributions illustrated in histograms in Figure 14.*2 show that a number of these extracts comprise the lower molecular weight triacylglycerols found in dairy fats. It is clear that the archaeological extracts with a higher abundance of lower molecular weight components exhibit more depleted $\delta^{13}C$ values, and hence reflect trends seen in the reference ruminant dairy fats. Furthermore, no apparent correlation exists between the relative abundances of the $C_{16:0}$ and $C_{18:0}$ fatty acids and other chemical characteristics of the lipid extracts. This was also seen in the extracts from Yarnton Floodplain assemblage (and other lipid extracts derived from prehistoric pottery) and suggests that the distributions of fatty acids are unreliable indicators of animal origin due to their greater natural variability and susceptibility to decay and leaching of the shorter chain components, resulting in enhanced relative abundances of the longer chain fatty acids (to unpredictable degrees, depending upon to the extent of diagenesis).

DISCUSSION

In general, the sherds comprising higher concentrations (> 100 μg g^{-1}) of absorbed lipid also exhibited more depleted $\delta^{13}C$ values (ie resembling dairy fats), possibly reflecting the way in which the vessels were used and the ease with which certain fats are absorbed within the porous pottery. There is no clear correlation between fabric types from Cresswell field and $\delta^{13}C$ values of the fatty acids, however the majority of the GSA4 and SG3 types plot within the range for reference dairy fats, as does sherd CF114 (fabric type AG3). Sherd CF144 (fabric type SP4) contains remnant fats with the least depleted $\delta^{13}C$ values in the entire assemblage.

Lipid residues from Yarnton Cresswell Field are comprised of predominantly remnant animal fat residues. The use of a combination of criteria including compound-specific stable isotope determinations and distributions of triacylglycerol components has enabled distinctions to be drawn between ruminant and porcine (non-ruminant) fats, and different types of ruminant fats (ie dairy and adipose fats). Five of the sherds (26%) yielded fatty acids with $\delta^{13}C$ values indicative of predominantly ruminant adipose fats, and a further three sherds (16%) contained mixtures of ruminant and porcine adipose fats. Furthermore, ruminant dairy fats have been clearly detected in 11 of the extracts (equivalent to 39% of the lipid-containing sherds and 22% of the all of the sherds). Although a large proportion of the lower molecular weight triacylglycerols originally present in the dairy fats have been degraded, resulting in a profile similar to degraded adipose fats, the stable isotope values provide a robust chemical signal apparently unaffected by decay.

A further two vessels were also found to contain degraded beeswax residues which were not detected in sherds from the earlier Bronze Age vessels at Yarnton; these two vessels were quite distinctive, one being decorated and the other a barrel-shaped jar. In general, no distinctions were apparent between vessel type/form and commodity detected. None of the sherds contained any plant-derived lipid components (such as *n*-alkanes, *n*-alcohols or ketones). These latter components are present in relatively high abundances in the epicuticular leaf waxes, on the stems and on the outer coating of seeds. The fact that these commodities were not present in detectable quantities suggests that the processing (ie cooking of leafy vegetables) is unlikely to have occurred in these vessels to any great extent.

The proportion of sherds containing substantial lipid concentrations (ie >5 μg of lipid per gram of potsherd) from Yarnton Creswell Fields was higher (59%) than at Yarnton Floodplain (29%). It is likely that this may in part relate to the burial time, but is also likely to be a function of burial conditions. The results from Yarnton Cresswell Field contrast with those obtained from pottery vessels from Yarnton Floodplain (Neolithic), where dairy fats from the latter site were detected in only 13% of the sherds (equivalent to 26% of the extracts). This may suggest that although dairying was an important component in local farming practices at both sites, it is during the Iron Age that either (i) dairy products become an even more important commodity, or (ii) the processing of dairy products in pottery vessels became a more important activity.