# ILCHESTER, GREAT YARD ARCHAEOLOGICAL EXCAVATIONS 1995

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## SUMMARY

Archaeological excavations prior to the construction of a new rising main across the Great Yard by Wessex Water were conducted by Bristol & Region Archaeological Services during the summer of 1995. The excavations allowed an examination of the nature and extent of the western suburbs of the Roman town supplementing previous excavations and fieldwork in the area.

## ACKNOWLEDGEMENTS

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## INTRODUCTION

During the summer of 1995, Wessex Water Services Ltd commissioned Bristol & Region Archaeological Services to undertake a watching brief during the laying of a new 0.5 km. Rising main between Ilchester Sewage Treatment Works and its pumping station adjacent to the River Yeo just to the west of Ilchester Bridge. The pipeline traversed the entire length of the field known as the Great Yard lying within that area of Ilchester deemed by the Local Planning Authority to be of High Archaeological Potential, the eastern margins of which form part of the Ilchester Scheduled Ancient Monument. As a requirement of the Scheduled Monument Consent, that area covered by statuary protection and subject to potential destruction during the laying of the pipeline was almost fully excavated by hand, affording an

opportunity to examine the suburban development of the Roman town, assumed to have extended north-westward to the banks of the river.

## The Site (Figs 1a & b)

The flood plain meadow of the Great Yard lies within a meander of the River Yeo adjacent to the western margins of the modern town of Ilchester. The field, currently grazed and which contains a number of substantial earthworks, has recently been subject to an interpretative survey by Birmingham University Field Archaeology Unit (Leach 1991b) and prior excavation by the same unit has examined its most easterly margins, now submerged beneath a modern development (Leach 1987 and 1991a). The eastern and southern perimeter of the field is marked by a substantial flood control bank, constructed by the Wessex Water Authority in 1981, also the subject of an archaeological watching brief by the Western Archaeological Trust (Leach 1994, 80). Together with observations made by James Stevens Cox in the late 1940s and early 1950s these excavations have all suggested the presence of suburban occupation beyond the western defences of the Romano-British town.

The new pipeline traversed the Great Yard from west to east and was inserted in virgin ground parallel to, but 4m to the north of an existing 6'' main originally laid in 1950. The whole was fenced inside a 15m easement within which a minimal width of 5m of topsoil was removed to facilitate excavation of the pipe trench by machine. At both its western and eastern margins the trench bisected and was disturbed by the modern flood defence bank and at its eastern end the trench also crossed the garden of the modern house known as 'Old Acres' northwards from the pumping station before assuming its more westerly course. In its central section the pipeline passed to the south of the most prominent group of earthworks within the field comprising an abandoned oxbow meander whilst just to the east it obliquely breached the visible remains of a low, wide east-west bank.

## Methodology

It was apparent from disturbed material observed during the initial stripping of topsoil from the site and from the recovery of finds from the spoil heaps that archaeological activity within the easement was confined primarily to the eastern end of the pipeline, extending only slightly outside the current limits of the Scheduled Area. Beyond this point, pipe-laying operations thus proceeded subject only to archaeological observation during the course of excavation, as they also did within the garden of 'Old Acres' where a narrower easement was topsoil stripped by hand to prevent extensive damage to the property.

However, whilst initial machining demonstrated the possible extent of archaeological activity within the Scheduled Area, the nature and concentration of this activity was far from clear. Therefore here, within the easement, an additional 2m. wide trench whose centreline was the course of the pipeline itself was machine dug through later overburden to allow the excavation by hand of earlier features beneath. An area of just over 300 $m^2$ thus became available for detailed examination and within this area, whilst total excavation was not a practical possibility by virtue of limited time or depth of stratigraphy, pre-Roman horizons of natural alluvium were reached in most cases and the majority of identified features were extensively sampled.

# THE STRATIOGRAPHIC EVIDENCE

The evidence presented below attempts to place the excavated and identifiable archaeological features and deposits into an orderly framework of sequential periods which can broadly

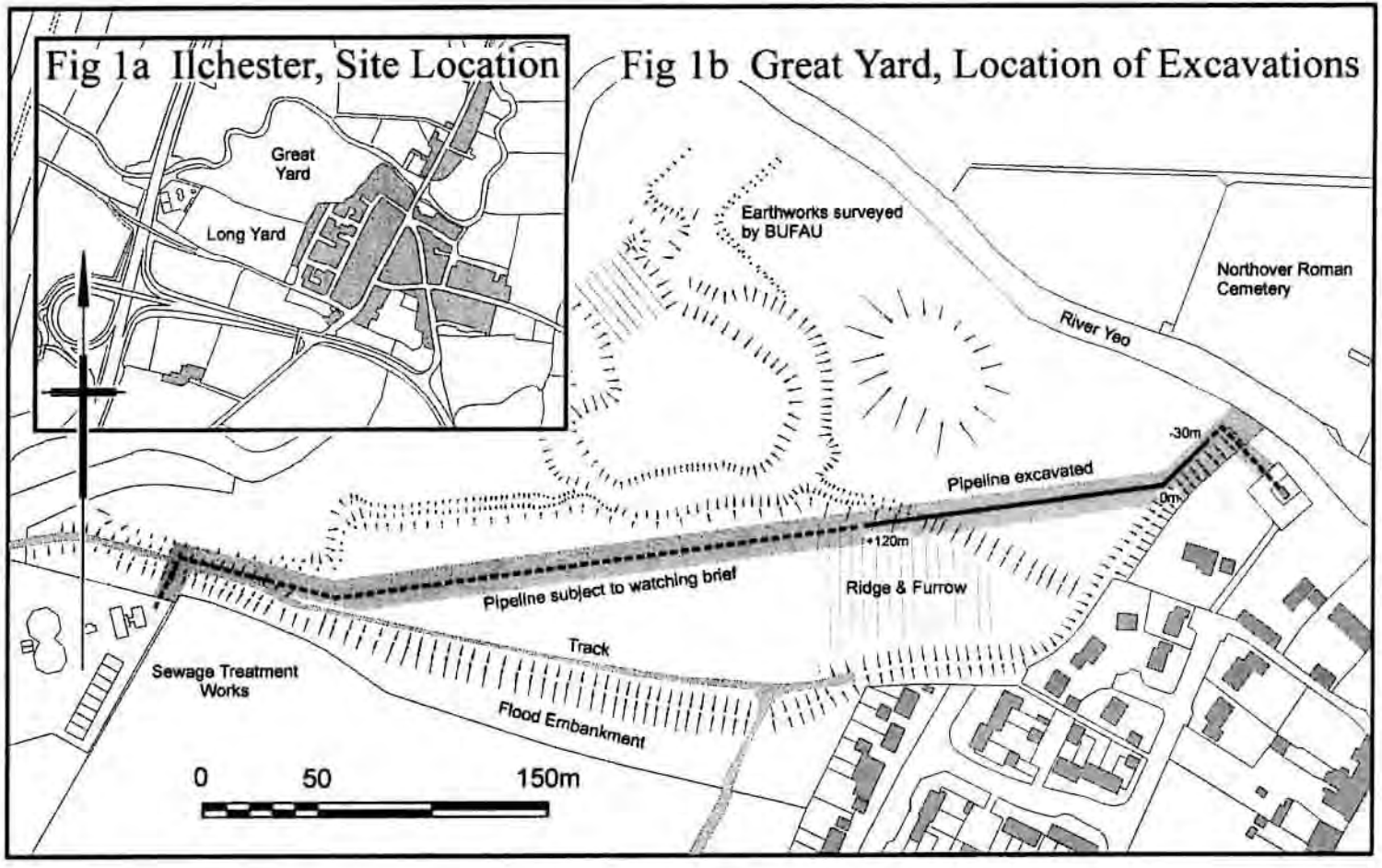
Fig 1a Ilchester, Site Location
Great Yard
Long Yard
Fig 1b Great Yard, Location of Excavations
Earthworks surveyed by BUFAU
Northover Roman Cemetery
River Yeo
-30m
Pipeline excavated
0m
+120m
Pipeline subject to watching brief
Ridge & Furrow
Track
Sewage Treatment Works
Flood Embankment
0
50
150m

Fig. 1a Fig. 1b

be related to the development of Ilchester as a whole, an aspect which has been discussed more extensively by Leach (Leach 1982 and 1992). It must however be born in mind that the identification of features was severely constrained by the linear nature of the excavation and that relationships between such features can frequently only be assumed by virtue of their assignment to particular periods based occasionally on recorded stratigraphy but largely on post-excavation analysis of the recovered material. However, despite these limitations and the lack of fine detail, by analogy with adjacent excavations, a broad picture of the areas development does emerge. Firstly with evidence of prehistoric activity followed by a phase of intensive early Roman agricultural activity possibly stimulated by a military presence. This in turn was succeeded by a period beginning with the construction of a north-south road aligned from which may have been a series of individual enclosures each potentially containing a road fronting property and within which isolated burials may suggest family groupings. Post-Roman activity is represented by the construction of the visible field bank, whilst walls, ditches, a road and drain may potentially be assigned to aspects of the towns medieval economy. A little post-medieval activity could also be distinguished but this was largely obscured by the very visible impact of the modern flood defences.

Although it was possible to recognise some elements of change within the broader Romano-British periods the extent of the exposed features was limited and it was considered impractical to further subdivide them. The following periods of activity were therefore assigned to the excavation:

| | |
|---|---|
| Period 1 | Prehistoric (Primarily pre-Roman Iron Age). |
| Period 2 | 1st–late 2nd century AD early Roman agricultural phase. |
| Period 3 | Late 2nd–4th century AD suburban occupation. |
| Period 4 | Post-Roman/early medieval. |
| Period 5 | 12th–15th centuries medieval structures. |
| Period 6 | 16th–19th centuries post-medieval pit. |
| Period 7 | Modern flood defences. |

### Period 1 (Fig 2)

Although several flint artefacts and a single, possible, Bronze Age pottery sherd were recovered during the course of the excavation none could be tied to any specific feature and their arbitrary nature renders them indicators only of periodic prehistoric activity within the area. Widely scattered though much disturbed ceramic evidence within later contexts point to increasing prehistoric activity in the pre-Roman Iron Age although a single cast bronze Durotrige coin recovered from context 270 may well have been in circulation into the early Roman period. However, only one ill-defined feature, F334, the shallow remnant of what may have been a pit containing a little animal bone and a small number of Middle Iron Age pottery shards may be ascribed to this period with some certainty being sealed by a broad, shallow, silt filled gully of Period 2 (F220).

### Period 2 (Fig. 2 & 3)

A small number of features ascribed to this period may tentatively be seen to belonging to its very earliest phase or potentially to later Period 1 by virtue of the higher incidence of pre-Roman ceramics, either within their fills or in the disturbed alluvium into which they were cut. These include F220 (above) F230 a shallow, flat-based curving gully cut by Period 3 burial F331, and F368, a truncated, U-shaped gully just west of the latter feature. Adjacent

to F368 and marked by the presence of significant quantities of South Gaulish Flavian samian was located the margins of a potentially substantial pit F235 however its designation as a Period 2 feature is uncertain due to the presence of late 3rd–4th century sherds and large fragments of *tegula* in rubble spread 387 which both partially filled and sealed it. The contextual nature however of all these features remains unclear.

Also tentatively belonging to the earliest part of this period on stratigraphic and environmental grounds in F409, a possible oven or corn drier comprising the fractured remains of a large burnt quern within a matrix of hard baked clay containing much carbonised grain, together with a number of associated features including post-hole F462 and burnt horizon 410. All were heavily cut by Period 3 ditch F250 and burials F253 and F428, the up-cast of which produced a number of 1st century and earlier shards. Grain samples from F409 including free threshing wheat, Celtic bean and pea/vetch, were generally smaller than later samples and showed evidence of different processing methods from material ascribed to later features. A second and probably later oven or corn drier, F430 survived in better condition sealed beneath Period 3 floor(?) 290 and only slightly cut by pit or robber trench F263 on the south. The oven remains comprised heavily burnt ham stone and lias within a matrix of charcoal rich clay set into a circular chamber to the north of which lay a V-profiled flue or rake out containing much burnt soil, ash and charcoal . Two further flues were visible in the southern section of the trench (*Fig 6*). An adjacent pit F437 can almost certainly be associated with the former feature containing similarly stratified fills and ceramics. Datable material from the flues of F430 and from F437 included a number of sherds of Flavian and Hadrianic samian together with other fabrics none of which need be later than the mid 2nd century. Just to the west of these features, a dense spread of charcoal rich silt 270 cut by a series of later Period 2 post-holes contained further significant quantities of later Flavian samian together with the Durotrige coin noted above.

The complex of stone lined post-holes which cut layer 20 may represent successive phases of one or more timber structures, presumably buildings (barns ?), although no coherent plan could be identified. The proximity of all these features to the oven/kiln and pit may indicate some form of relationship. Although clear dating for them is not entirely evident the limited evidence would suggest that both Period 2 and Period 3 structures are here represented. The assignment of F272 and F274 to Period 2 is based largely on the presence of late 2nd century material in their fills, their upper sections having been machined away. F443 contained a sherd of late 3rd–4th century pottery although this was almost certainly intrusive, the feature being well sealed beneath Period 3 rubble spread F275. F271 may be of either Period 2 or Period 3 containing no datable material and being truncated in section. However, whilst F276 and F442 both contained late 2nd century material in their fills the latter two were clearly visible in section to have been cut from beneath the gravel horizon 324 which sealed the excavations suggesting their origins to be of the latter rather than earlier period.

Other post-holes distant from this complex may also be assigned to Period 2 including F299 and F507 towards the western limits of the excavation. However the only boundary features thought to be attributable to this period are the curving ditch F224 cut by Period 3 burial F223 and an unexcavated ditch(?) or gully(?) F248 also cut by features of Period 3.

### Period 3 (Figs 4 & 5)

The beginning of Period 3 would appear to be marked by substantial change in the status of the area. The laying of a north-south road F283 may have preceded its penultimate suburbanisation and is almost certainly a continuation of the road identified in excavations in the eastern part of Great Yard in 1987 (Leach 1987). The road was initially cobbled with flint pebbles to a width of approximately 5m and was bounded on the west by a ditch F286.

It was subsequently narrowed, resurfaced with lias slabs F285, and relocated on the same alignment approximately 2m to the west where a second and slightly deeper ditch F479 was cut.

Potentially related to the road and to the beginnings of the suburban development of the area may have been the excavation of several substantial pits of which F279 and F544 were most extensively sampled. Elsewhere in Ilchester Leach has noted the probable function of such pits for the extraction of gravel and their characteristic distinguishing features, in particular their relatively early Roman ceramic assemblages, the frequent presence of charred plant remains interleaved with redeposited clay and their often steep or overhanging sides penetrating into natural gravel. (Leach 1991a, 35). Both the above exhibited such features although the former was dug as a single context and the latter showed evidence of multi-directional tipping and re-cutting which proved impossible to fully clarify within the limits of the excavated trench.

Contemporary(?) with the road and probably aligned to it was the laying out of a series of linear ditches, possibly property boundaries orientated approximately NNE-SSW, such features finding parallels with similar ditches excavated at Little Spittle and Pill Bridge Lane to the south (Leach 1982 and 1991a). These include a shallow stone-capped ditch F225, the more readily defined ditches F240 and F250, both with similar fills and spade cut profiles, and a mortared stone wall F265. This latter feature, constructed on pitched lias footings and orientated in the same direction is well made but would appear somewhat insubstantial for a building. It may represent an enclosure wall or the rear end of a structure which could possibly have fronted on the road which would have lain approximately 20m to the south. The wall showed clear evidence of having been partially demolished, robbed and then rebuilt to a poorer standard, lacking its former pitched footings. This may have been as a result of the removal of a return wall to the east indicated by the existence of a shallow, rubble filled pit F263 which also cut through traces of a heavily disturbed mortar floor 262. West of the road and observed only during the excavation of the pipe trench was a further ditch F242. Its exposure was too limited to confirm its precise orientation although it would appear to have been similar to the above and material from its fill would seem to place it within Period 3.

At the eastern end of the excavation, on a different east-west alignment and cut deeply into undisturbed alluvium, a further ditch F206 may represent part of a flood defensive system adjacent the river at the rear of the Roman suburbs. This interpretation is based on the existence of a parallel shallow ditch or gully F209, 4m tot he south and separated from the former by a narrow exposure of disturbed natural silts penetrated by a series of stake holes F212, F213 and F351. The lowest fills of F206 and that of F209 both contained late 3rd–4th century material suggesting their earlier coexistence.

With the exception of the wall F265 and mortared floor 262 noted above, evidence for the existence of structural features or buildings to the north-east of the road was confined to those Period 2 or 3 post holes already mentioned and which lay just to the west of the former. Also several narrow exposures of apparent demolition rubble F246 and F275, a number of shallow, partially exposed scoops filled with domestic debris F235 and F238, and a pit containing further occupational material, F245. South-west of the road structural evidence was more forthcoming in the form of two short, parallel lengths of pitched rubble footings F288and F291, possibly representing different phases of the same structure. F291 cut both traces of a mortar floor 290 and the final fills of Pit F544 indicating the redundancy of this feature by the later Roman period. A further possible length of wall(?) also parallel to the former but totally robbed of any structural material was represented by a shallow, gravel filled ditch F300 approximately 12m to the west. At the extreme western end of the excavation, secondary machining exposed an area of lias paving F557 which in places showed evidence of having been subject to intensive burning and which was sealed by

substantial quantities of building rubble containing a large number of 4th century coins many of which represented possible barbarous local imitations. A building is assumed to have lain in close proximity to this feature although no structural elements were determinable.

The absence of distinct structural features to the east of the road suggests the pipe trench to have been traversing through enclosures to the rear of any buildings which may have fronted onto the road bisecting the area. Thus the occurrence of several burials upon or adjacent to boundary features bears some parallel with previously identified cemetery complexes within the suburbs of the Roman town. Three adult male inhumations were recovered from the excavated trench although their dispersal did not allow them to be tied to any such definable complex. All were orientated NE-SW and datable evidence suggests none to be earlier than the late 3rd century. F223 comprised a shallow, crouched male inhumation, resting upon a large iron ladle and cutting Period 2 ditch F224. There was no surviving evidence of the body being lain within a coffin and the grave itself would appear to have been cut by an undated but possibly later Roman post placement F222. Of burial F331, only the femur, tibia, fibula and skull survived, the skull being buried within a separate coffin, denoted by surviving nails upon the feet. The final male inhumation F303 lay to the west of the road buried within a potentially large wooden coffin and sealed by substantial lias slabs. The grave provided a coin of Gallienus (253–68 AD) and the body a possible 1st century Flavian *As* apparently deliberately inserted between the upper (?) vertebrae. As already noted there was no indication that any of these burials comprised part of larger groupings. However, a further, well constructed grave, F253 was excavated but found to be empty, suggesting the deliberate removal of the body. This grave both cut and was cut by two further burials, F428 and F376, the former of a foetus, the latter a neonate. It is possible such a cluster represents a family grouping and that the remaining burials are also associated with similar although unidentified groupings within individual Period 3 enclosures.

### Period 4

With the exception of the most easterly and westerly sections of the excavation, the transition between the Romano-British and medieval periods was marked by a distinct discontinuity comprising an almost continuous gravel spread F324. No features could be ascribed to the immediate post-Roman period with the possible exception of the linear and still visible east-west field bank F310 cut obliquely by the line of the pipe trench. In section, the bank comprised a buried stony soil distinct from 324 by virtue only of its higher clay content and the presence of a number of early medieval pottery sherds.

### Period 5 (Fig 6)

At the eastern end of the excavation Romano-British features were cut both by modern activity and by the lower courses of a substantial, mortared, north-south wall F211 flanked on its western side by a narrow, pitched stone pavement F311 bordering a flint cobbled trackway F215 containing a stone lined drain F214 in its centre. The wall and pavement perpetuated the line of an earlier ditch F374 the fill of which contained much 12th–13th century pottery. A second, similarly mortared, east-west wall F207, largely robbed and heavily disturbed by the modern flood defence bank may represent a return of the former just to the north, following the line of the Roman ditch F206. Although the upper horizons of all the later features at the eastern end of the excavation had been largely destroyed by the construction of the modern flood defences, evidence from the silting of drain F214

would seem to suggest limited currency beyond the 14th century at latest. Elsewhere within the excavated pipe trench a small number of additional features, primarily post-holes may be ascribed to Period 5 on the basis of their fills including possibly F218 and certainly F256, however their contextual relationship to medieval activity in the area as a whole remains incomprehensible.

### Period 6 (Fig 6)

With the exception of the modern flood defence scheme whose impact on the archaeology within the Great Yard has already been noted, a single pit F394 was the only identifiable post-medieval feature of note cutting the medieval pavement F311 (above). Almost certainly, the primary post-medieval activity across most of the Great Yard has been agricultural.

## THE ENVIRONMENTAL DATA

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## INTRODUCTION

This section details the results of the analysis of biological remains recovered from the site. The site being located on a calcareous geology, produced moderately preserved bone—both human and animal—and shells from marine molluscs. The human bones were recovered articulated from five Romano-British grave cuts and examination of the skeletons provided data of the physiology of the contemporary population, the prevalence of disease and their nutritional status. Animal bone and marine molluscs found on the site almost certainly represent discarded food debris. Although found in large numbers in only a few contexts these remains also occurred as a general scatter across the site. All bones and mollusc shell were systematically collected during the excavation and are reported upon in the second part of this section. However, the first part deals with macro- and micro-biological remains recovered from bulk samples taken from several features across the site. Many of these contained large quantities of charred plant macro remains, providing indirect evidence of Romano-British diet and agricultural practice. These samples also contained non-marine mollusc shells and fish bones, both of which are also useful tools for palaeoenvironmental and palaeoeconomic reconstruction.

### Bulk Samples

A total of thirteen bulk samples of around 25 litres each were taken by Vanessa Straker for the recovery of macro and micro biological remains. Eleven—from contexts [501], [517], [297], [519], [524], [527], [508], [510], [513], [539], [537]—were from separate fills of a single large pit (F544), a single sample [552] was from a pit—F530, and the last from an oven/kiln/corn-drier—F409. The last two named features can be attributed to the 1st-mid 2nd centuries, while those from F544 are somewhat later, dating to between the 2nd and 4th centuries. F544 was an extremely large feature, that as discussed above is thought to have been originally excavated to quarry gravel. Subsequently it had been re-used as a

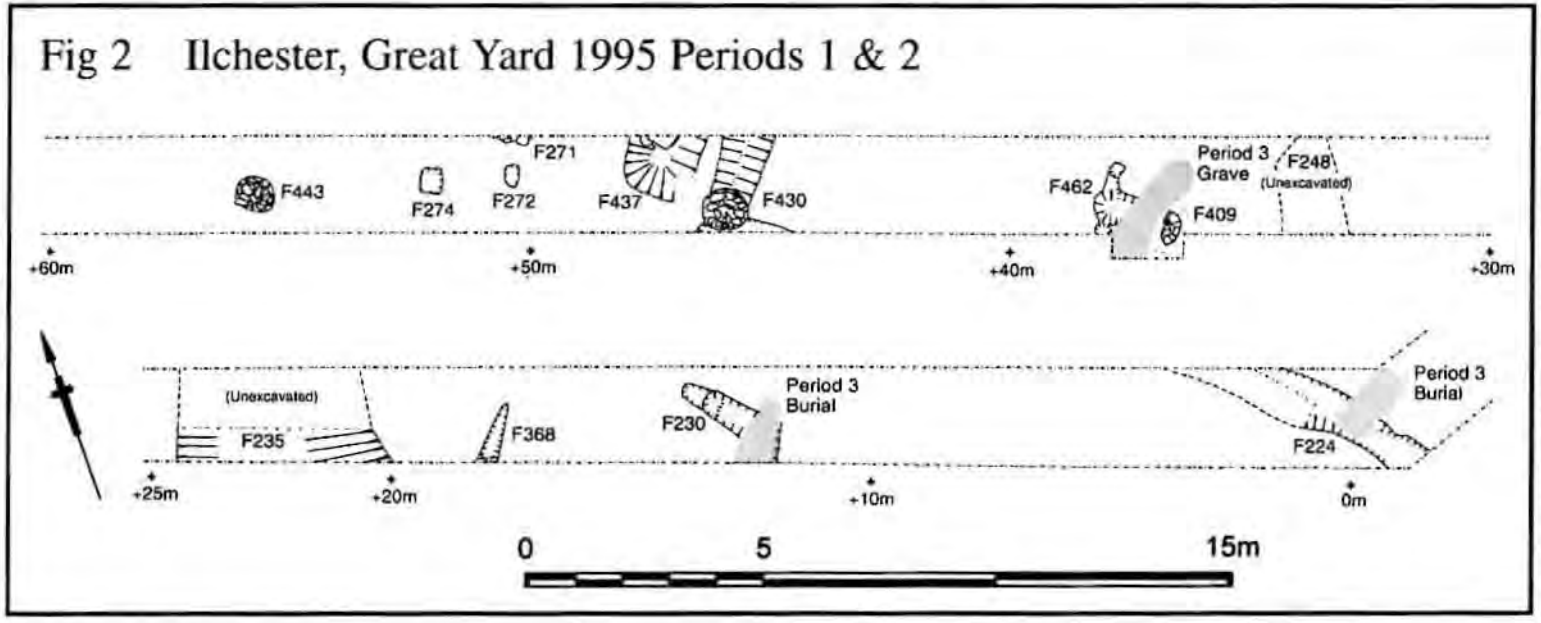
Fig 2 Ilchester, Great Yard 1995 Periods 1 & 2
F443
F274
F271
F272
F437
F430
F462
Period 3 Grave
F409
F248
(Unexcavated)
+60m
+50m
+40m
+30m
(Unexcavated)
F235
F368
F230
Period 3 Burial
F224
Period 3 Burial
+25m
+20m
+10m
0m
0
5
15m

Fig. 2

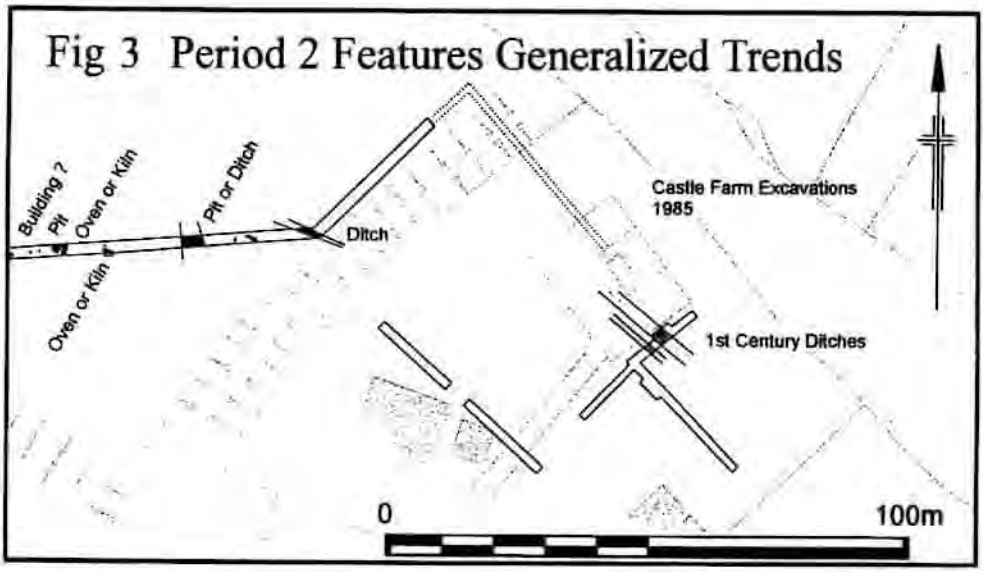


Fig. 3

depository of domestic rubbish for a period of at least two centuries. Separate phases of rubbish deposition were represented in well separated and discrete contexts (Plate 5), that do not appear to have undergone later mixing, except for at the very base, where 3rd–4th century disturbance had taken place. As the deposition episodes were so well separated, and because biological preservation was so good within the deposits, there was a so far unparalleled opportunity from the point of view of Roman Ilchester, to study variation of diet, farming practice and resource exploitation over time.

The samples were processed at the Dept. Geography, University of Bristol using the flotation technique (French 1971), with mesh sizes of 250μm mesh to catch the flot and a 500μm mesh to retain the residue. After both fractions had been air dried they were given to the present author for sorting into the various categories of biological remain reported upon below, and then passed to the individual specialists.

## NON-MARINE MOLLUSCA

### Introduction

All 13 samples were assessed for the presence of included mollusc shell in size fractions greater than 1mm from both the flots and residues. All identifiable molluscan shell fragments were removed from the residue/flot under a low power binocular microscope and identified with the aid of a modern comparative reference collection. Identification was carried out to the highest taxonomic level possible within the assessment framework, and in most cases species level determinations were possible (Table 1). As mollusc analytical work is routinely carried out on sample fractions greater than 500μm (Evans 1972) the examination—which was only carried out at the 'assessment' level (*sensu* English Heritage 1991)—was biased towards larger shelled species. Nomenclature follows Kerney and Cameron (1979) for terrestrial and Kerney (1976) for fresh water molluscs.

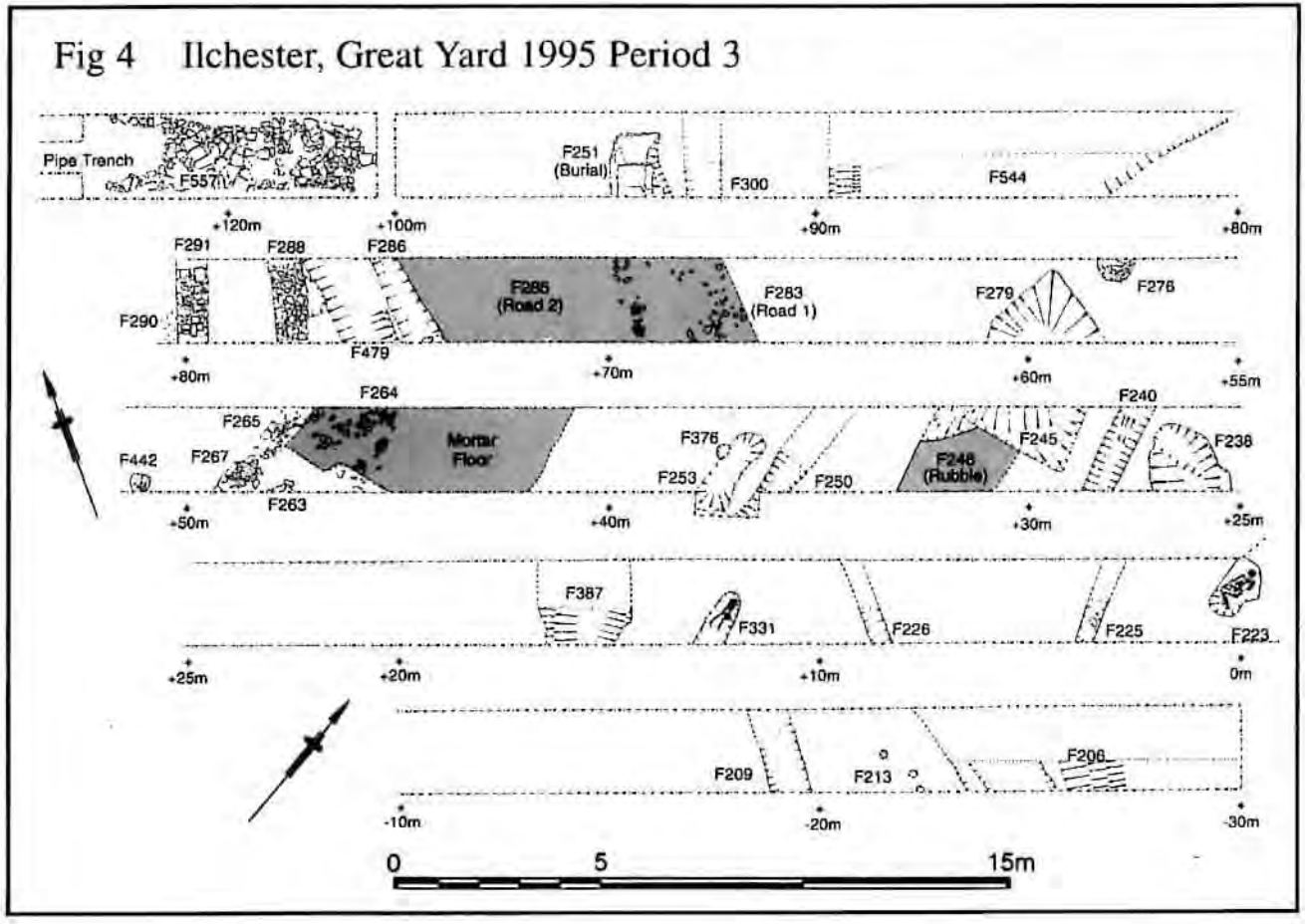
Fig 4 Ilchester, Great Yard 1995 Period 3
Pipe Trench
F557
F251 (Burial)
F300
F544
+120m
+100m
+90m
+80m
F291
F288
F286
F285 (Road 2)
F283 (Road 1)
F279
F278
F290
F479
+80m
+70m
+60m
+55m
F264
F265
Mortar Floor
F240
F442
F267
F376
F245
F238
F253
F250
F248 (Rubble)
F263
+50m
+40m
+30m
+25m
F387
F331
F226
F225
F223
+25m
+20m
+10m
0m
F209
F213
F206
-10m
-20m
-30m
0
5
15m

Fig. 4

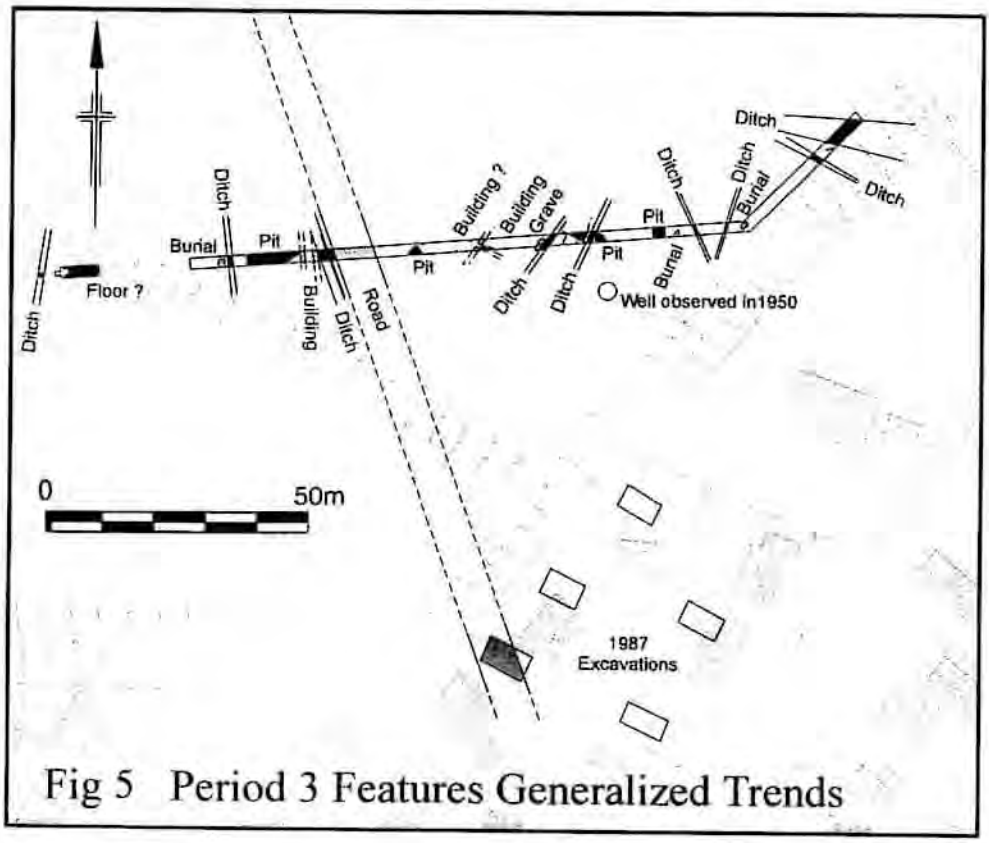


Fig. 5

Pit fills have rarely been examined using molluscan analysis, primarily because of the difficulty in interpreting the resultant data, i.e. were molluscs taking advantage of a damp and dark microenvironment and living in the pit or were they derived from outside? Secondly the environment reconstructed from molluscs in the pit fill would only be applicable to the area immediately surrounding the feature due to the restricted catchment area of the infilling sediment. However, mollusc analysis of pit fills has nevertheless provided useful information, for example on the Royal Mint site, City of London, where otherwise unrecorded flood events were demonstrated by the occurrence of river dwelling molluscs in pits on an otherwise dry site (Wilkinson unpublished data).

## RESULTS

Shell preservation at Great Yard varied greatly between contexts, which is no doubt a factor of the suitability of the individual context for mollusc colonisation, the nature (properties) of infilling sediments and other post depositional taphonomic factors (e.g. re-deposition, ground water table properties etc). Best shell preservation occurred in context [501], where due to the high shell numbers only one half of the sample was examined. Preservation was

Fig 6 Ilchester, Great Yard 1995 Periods 5 & 6

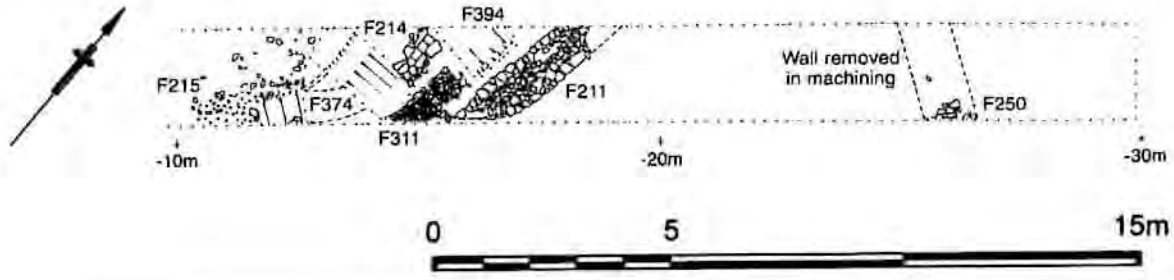


Fig. 6

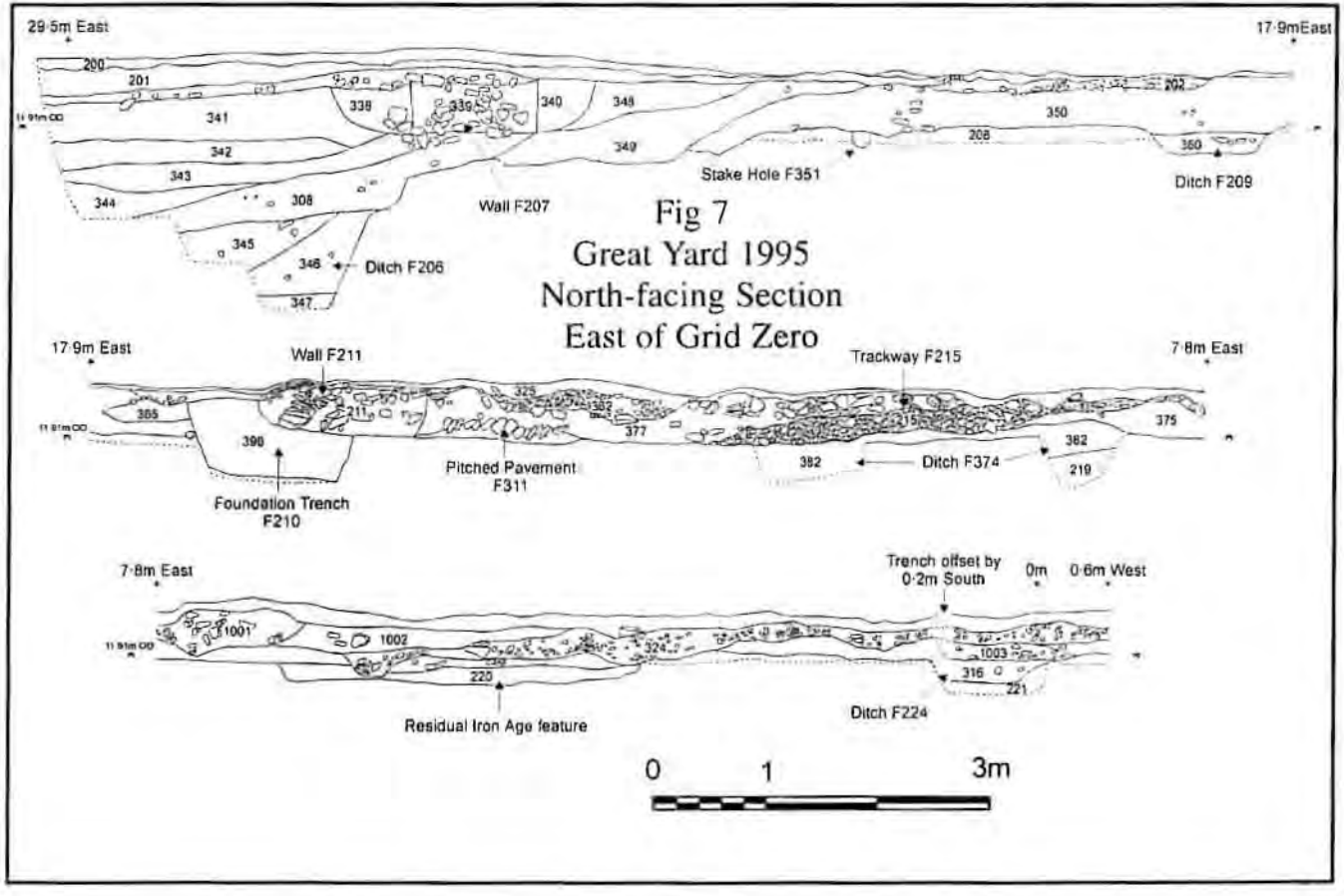
29·5m East
17·9mEast
200
201
338
339
340
348
341
342
343
344
308
345
346
347
Wall F207
Ditch F206
Stake Hole F351
349
350
208
202
360
Ditch F209
Fig 7
Great Yard 1995
North-facing Section
East of Grid Zero
17·9m East
Wall F211
Trackway F215
7·8m East
365
211
325
382
377
375
382
219
390
Pitched Pavement
F311
Ditch F374
Foundation Trench
F210
7·8m East
Trench offset by
0·2m South
0m
0·6m West
1001
1002
324
1003
316
221
220
Residual Iron Age feature
Ditch F224
0
1
3m

Fig. 7

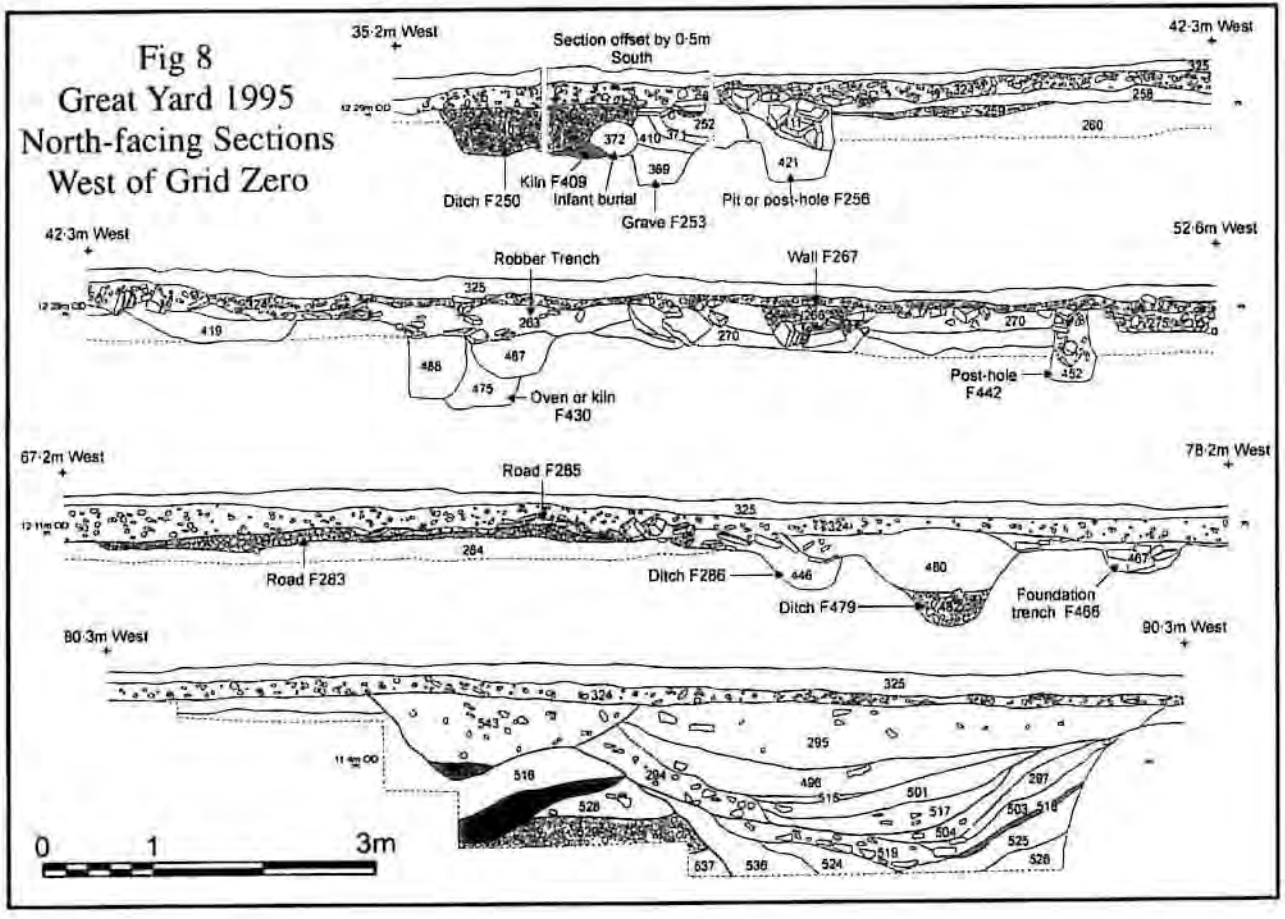
Fig 8
Great Yard 1995
North-facing Sections
West of Grid Zero
35·2m West
Section offset by 0·5m South
42·3m West
Ditch F250
Kiln F409
Infant burial
Grave F253
Pit or post-hole F256
42·3m West
Robber Trench
Wall F267
52·6m West
Oven or kiln F430
Post-hole F442
67·2m West
Road F285
78·2m West
Road F283
Ditch F286
Ditch F479
Foundation trench F466
80·3m West
90·3m West
0
1
3m

Fig. 8

also good in context [508], moderate in contexts [297], [510], [513], and [517] and poor in contexts [409], [519], [523], [527], [537], [539], and [552]. In the case of almost all samples the majority of shells are of land snails except in context [513] where fresh water species are more common. Therefore the mollusc assemblages can be divided into two basic groups: those where terrestrial shells predominate (group 1—all samples except for context [513]) and those where there are more fresh water shells (group 2—context [513]).

### Group 1

The dominance by land snails probably indicates that sediment eroding into, or being placed within the pit had a terrestrial origin. The small number of shells of fresh water molluscs probably entered the pit during flooding, were derived from flood plain deposits, or in the case of certain species (e.g. *Lymnaea truncatula* and *Anisus leucostoma*) were living in muddy pools seasonally present within the pit. The latter suggestion may also be an explanation for the presence of the diverse marsh dwelling assemblage in context [508], where water within the pit may have been rather more permanent (i.e. the fresh water component of the assemblage is also diverse). The terrestrial mollusc assemblages are predominantly of species characteristic of open landscapes (e.g. *Vallonia costata*, *Vallonia excentrica*, and *Pupilla muscorum*) combined with *Trichia hispida*—a species that lives in most terrestrial environments. Therefore it would seem that at the time sediment was accumulating in the pits the area was largely devoid of vegetation. Species more characteristic of shaded environments are also found in the samples, but were probably living within the shaded pit confines rather than indicating the presence of vegetation in the surrounding area. However, in this respect context [508] appears somewhat different as the shade dwelling component is both more numerous and diverse, and may therefore indicate the presence of vegetation surrounding the pit. There are also interesting differences in the open country species composition of certain samples. For example context [297] is dominated in this respect by *Pupilla muscorum*, a species that prefers open disturbed ground, while in contexts [501] and [508] *Vallonia costata* predominates. *Vallonia costata* is associated with stable short turf grassland (Evans 1972; 1991). In the remaining samples *Vallonia costata* and *Pupilla muscorum* co-exist with *Vallonia excentrica* and *Vertigo pygmaea*. These subtle differences in terrestrial mollusc representation may be either a result of temporal or spatial environmental differences, although generally the environment appears to have been open, and subject to occasional (seasonal?) flooding.

### Group 2

The single sample where fresh water shells outnumber terrestrial ones is context [513]. The fresh water component is characterised by *Anisus leucostoma* and *Lymnaea truncatula*, both species indicative of shallow muddy water, but which are less likely to be found in flood waters (i.e. in contrast to the group 1 fresh water molluscan components). Therefore it would seem that this particular pit was especially damp during sediment accumulation, which probably took the form of a shallow muddy pool. Conversely the absence of shade dwellers suggests a lack of vegetation. Indeed the terrestrial component is dominated by *Trichia hispida*, *Vallonia* sp. And *Helicella itala* suggesting that conditions outside the pit were open.

Table 1. Mollusca recovered from the samples

| | Context→ | 297 | 409 | 501 | 508 | 510 | 513 | 517 | 519 | 523 | 527 | 537 | 539 | 552 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Authority £ | | | | | | | | | | | | | |
| Land and Fresh water | Linnaeus | | | | | 1 | | | | | | | | |
| *Theodoxus fluviatilis* | | | | | | | | | | | | | | |
| *Valvata cristata* | Müller | | | | | 1 | | | | | | | | |
| *Valvata piscinalis* | Müller | | | 1 | 5 | | | | | | | | | |
| *Bithynia tentaculata* | Linnaeus | | | 10 | 1 | 1 | | 11 | | | | | | |
| *Bithynia* sp. | operculae | | | 1 | 1 | | | 1 | | | | | | |
| *Carychium minimum* | Müller | | | 1 | | | | | | | | | | |
| *Lymnaea truncatula* | Müller | | | | 2 | | 10 | | | | | | | |
| *Lymnaea palustris* | Müller | | | | 1 | | | | | | | | | |
| *Lymnaea peregra* | Müller | | | 4 | 1 | | 1 | | | | 1 | | | |
| *Planorbis planorbis* | Linnaeus | | | | | | | | | | 1 | | | |
| *Anisus leucostoma* | Millet | 1 | | 1 | 11 | 1 | 37 | 1 | | | | | | |
| *Bathyomphalus contortus* | Linnaeus | | | | 4 | 1 | 3 | | | | | | | |
| *Gyraulus albus* | Müller | | | | | | 1 | | | | | | | |
| Succineidae | | 1 | | | 9 | | 1 | | | | 1 | | | 1 |
| *Azeca goodali* | Férussac | | | 1 | | | | | | | | | | |
| *Cochlicopa lubrica* | Müller | | | 55 | | | 1 | 3 | | | | | | |
| *Cochlicopa lubricella* | Porro | | | 1 | | | | | | | | | | |
| *Cochlicopa* sp. | | 3 | 1 | 53 | 7 | | | 5 | | | | | | |
| *Vertigo antivertigo* | Draparnaud | 1 | | | 2 | | 1 | | | | | | | |
| *Vertigo pygmaea* | Draparnaud | | | | 6 | 3 | | | | | | | | |
| *Vertigo geyeri* | Lindholm | | | 1 | | | | | | | | | | |
| *Pupilla muscorum* | Linnaeus | 13 | | 1 | 1 | | 1 | 1 | | | | | | |
| *Vallonia costata* | Müller | 2 | | 194 | 25 | 1 | | 5 | | | | | | |
| *Vallonia pulchella* | Müller | 3 | | | 5 | 6 | 2 | | | | | | | |
| *Vallonia excentrica* | Sterki | 4 | 3 | | 3 | 1 | 2 | 3 | | | | | | |
| *Vallonia* sp. | | 1 | 2 | | 3 | 3 | | | | | | | | |
| *Ena obscura* | Müller | | | | 2 | | | | | | | | | |
| *Discus rotundatus* | Müller | | | | 2 | | | | | | | | | |
| *Vitrea crystallina* | Müller | | | | 1 | | | | | | | | | |
| *Vitrea contracta* | Westerlund | | | 1 | 3 | 3 | 1 | | | | | | | |
| *Aegopinella nitidula* | Draparnaud | | | 11 | | | | | | | | | | |
| *Oxychilus alliarius* | Miller | 1 | | 37 | 17 | 2 | | 1 | | | | | | |
| Limacidae | Müller | 193 | | 14 | 1 | 100 | 2 | 12 | | | 5 | | 20 | |
| *Cecilioides acicula* | | | | | | | | | | | | | | |
| *Helicella itala* | Linnaeus | 3 | 1 | | | | 2 | | | | | | | |
| *Trichia hispida* | Linnaeus | 54 | 2 | 122 | 73 | 33 | 12 | 14 | | | 2 | | | 3 |
| *Cepaea nemoralis* | Linnaeus | | | | | | 1 | | | | | | | |
| *Cepaea hortensis* | Müller | | | 3 | | | | | | | | | | |
| *Cepaea* sp. | | | | 8 | | | | 2 | | | | | | |
| *Helix* sp. | | | | | | 1 | | | | | | | | |
| **Marine** | | | | | 1 | * | | | | | | | | |
| *Mytilus edulis* | | | | | | | | | | | | | | |
| *Ostrea edulis* | | | | | 2 | * | | 2 | 1 | | | 1 | * | |
| *Patella vulgaris* | | 87 | 9 | 505 | 184 | 58 | 76 | 46 | 0 | 0 | 5 | 0 | 0 | 4 |
| Total (non-marine)[1] | | | | | | | | | | | | | | |

[1] Excluding the burrowing snail, *Cecilioides acicula*.

## PLANT REMAINS

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### INTRODUCTION

The flots were examined using a low powered stereo-binocular microscope and the extracted plant remains identified and quantified (Table 2). Nomenclature follows Stace (1991). All samples proved to contain extremely rich assemblages of charred plant remains, whereas no waterlogged remains were found, even from samples rich in fresh water molluscs (see below).

In some cases the frequency of glume bases from hulled wheats and seeds of *Avena*, *Bromus* and *Lolium*, proved too large for quantification of the whole sample and therefore for these the following procedure was adopted. The samples were scanned in their entirety and all identifiable plant material apart from the categories listed above were extracted and where possible identified. The remaining part of the sample was split using a riffle box in to four equal parts. One quarter of the sample was then selected and the seeds of *Avena*, *Bromus*, *Lolium* and glume bases were extracted, identified into more specific groupings and quantified. The resulting counts were then multiplied by four to give an estimated number of the respective groups for the entire sample, and these are presented in Table 2.

### RESULTS

The samples contained a wide range of different crop types. In most cases they were dominated by the grains and glumes of hulled wheats, with spelt wheat, *Triticum spelta*, being most predominant on the basis of glume base identification. However, both glume bases and possible grains of emmer wheat were also recovered, albeit in lower quantities. Of particular interest were a number of germinated grains recovered from [409], [519], [524] and [552]. Remains of further cereals were comparatively rare, grains and chaff of free-threshing wheats and barley were infrequent, although possible grains of rye, *Secale cereale*, were recovered. At least one possible floret base and several large grains from sample [552] would seem to indicate the use of cultivated oats, *Avena sativa*, although most of the other floret bases noted suggest that wild oats, *Avena fatua*, predominated. In addition to the cereal crops, several samples also contained seeds of garden pea, *Pisum sativum*, and celtic bean, *Vicia faba* var. *minor*.

Seeds of a large variety of wild species were also recovered; *Papaver argemone*, long prickly headed poppy; *Stellaria* sp. Chickweed/stitchwort; *Chenopodium ficifolium*, fig-leaved goosefoot; *Chenopodium polyspermum*, many seeded goosefoot; *Atriplex* sp., orache *Vicia/Lathyrus* sp., vetch/tare/wild pea; *Medicago lupulina*, black medick; *Raphanus raphanistrum* (seed capsule), white charlock; *Torilis nodosa*, knotted hedge parsley; *Fallopia convolvulus*, black bind weed; *Rumex* cf. *Crispus*, curled dock; *Lithospermum arvense*, corn gromwell; *Odontites verna*, red bartsia; *Veronica hederifoli*, ivy-leaved speedwell; *Veronica* cf. *arvensis*, wall speedwell; *Stachys* sp., woundwort; *Galium aparine*, cleavers; and *Tripleurospermum inodorum*, scentless mayweed are all common weeds of arable crops, and would therefore be expected within assemblages containing cereal remains.

The seeds of *Brassica* sp., cabbage, mustard rape, turnip etc. and unspecified *Avena* sp., oats, could also either represent the wild plant or the cultivated varieties. However, as noted above, the discovery of floret bases of wild oats, suggest that at least some of the latter are arable weeds. Their presence should therefore not be taken to indicate use of the cultivated

varieties by the Roman population, although the grains of *Avena* sp. found by Paradine (1994) elsewhere in Ilchester, were believed to be from the cultivated form of oats, *Avena sativa*.

Weeds of grassland and meadows were also present and include *Ranunculus sardous*, hairy buttercup; *Ranunculus parviflorus*, small flowered buttercup; *Stellaria graminea*, lesser stitchwort; *Trifolium sp.*, clover; *Chaerophyllum aureum*, golden chervil; *Rumex* cf. *conglomeratus/obtusifolius/sanguineus*, dock; *Prunella vulgaris*, selfheat; *Plantago lanceolata*, ribwort plantain; *Plantago major*, plantain; *Potentilla* sp., cinquefoil, *Leucanthemum vulgare*, ox-eye daisy; *Solidago virgaurea*; goldenrod; *Leontodon/Hypochoeris* sp., hawkbit/cat's ear; *Phleum* sp. and *Lolium perenne*, perennial rye grass.

Seeds of *Rumex* are rarely identified to species, however, *Rumex crispus* and *Rumex conglomeratus/obtusifolius/sanguineus* (type grouping) may be distinguished from each other and other species of *Rumex*, even in the absence of the perianth, on the basis of size, a smoother surface texture and more angular corners in the former, and rounded edges and a more pronounced texture in the latter group (see Jones 1984, Stevens 1996a). *Rumex conglomeratus* has previously been identified from Ilchester by presence of whole achenes (Paradine 1994). However, no whole achenes were found within the present samples and it is possible therefore that such seeds could also represent *Rumex obtusifolius* or *R. sanguineus*.

A further group of species significantly come from wetland areas. These include; *Oenanthe* sp., water tubular droplet; *Apium* sp., water celery; *Montia fontana* Subsp. *chondrosperma*, blinks; *Galium palustre*, marsh bedstraw; *Eleocharis palustris*, spikerush; *Schoenoplectus lacustris*, bulrush; *Cladium mariscus*., great fen sedge, *Juncus* sp., rush, and *Carex* sp., sedge.

The majority of the species from grassland and wetland environments, with the exception of ox-eye daisy, golden chevil, goldenrod, hawkbit/cat's ear, water tubular droplet, bulrush and great fen sedge are commonly found in association with archaeological cereal assemblages, and therefore were most likely also to be weeds of crops in the past (Knörzer 1971).

### Cereal Processing Stages

The text above has stated the types and groups of charred plant remains found in the samples, but what does this data signify archaeologically? Firstly the stage of cereal processing represented by the plant remains can be determined. The large quantity of glume bases as opposed to glume wheat grains (see Figure 2), indicates that all samples are representative of the waste product from the processing of grain taken from storage. This stage is reached after pounding to release the grains from the spikelets, and sieving to remove the glumes from the grain, but prior to the milling the grain to produce flour (cf. Hillmans stages 8 to 14 (1984, figure 4)).

### Agricultural Environments

By close examination of the weed flora it is possible to determine the types of environment where cereal crops were grown in the Roman past. If the majority of the seeds recovered are interpreted as coming from species growing as weeds of the cereal crop, they would seem to indicate the cultivation of a wide range of soil types. For example, spike-rush, *Eleocharis palustris*; white charlock, *Raphanus raphanistrum* and blinks, *Montia fontana* Subsp. *chondrosperma* are commonly associated with wet environments, the former with alkaline soils, the latter two with non-calcareous to acidic environments. While drier, perhaps more calcareous soils of nearby chalk uplands may be indicated by seeds of corn

Table 2. Plant remains recovered from Great Yard

| | Feature→ | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 409 | 530 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Context→ | 297 | 501 | 508 | 510 | 513 | 517 | 519 | 524 | 527 | 537 | 539 | - | 552 |
| | Feature Type→ | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | kiln | pit |
| | Period→ | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 4 | RB 3 | RB 3 | RB 3 | RB 2 | RB 2 |
| **Species** | **Common Name** | | | | | | | | | | | | | |
| *Ranunculus* sp. L. | buttercups | 1 | | | | | | | | 1 | | | | |
| *Ranunculus repens* L. | creeping buttercup | | 4 | | | 2 | | | | | | 3 | | |
| *Ranunculus sardous* Crantz. | hairy buttercup | | | | | 2 | | | 1 | 1 | | 1 | 1 | 1 |
| *Ranunculus parviflorus* L. | small flowered buttercup | | | | | | | 1 | | | | | 2 | |
| *Papaver argemone* L. | long prickly headed poppy | | | | | | | | | | | | 1 | |
| *Brassica* sp. L. | cabbage, mustard rape, turnip etc. | 8 | 5 | | 7 | 18 | 2 | | | | 1 | | | |
| *Raphanus raphanistrum* L. (seed capsule) | white charlock | | 1 | | | 1 | | 1 | 1 | | | 2 | 1 | |
| *Stellaria* sp. L. | chickweed/ stitchwort | | 1 | | | | | | | | | | 1 | |
| *Stellaria media* (L.) Vill. | chickweed | | 2 | 1 | | | | | | 2 | | 21 | 17 | 1 |
| *Stellaria graminea* L. | lesser stitchwort | 1 | 2 | | | | 1 | | | | | | | |
| *Stellaria/Cerastium* sp. L. | mouse ear chickweed/ stitchwort | | | | | | | | | | | | 2 | |
| *Montia fontana* Subsp. *chondrosperma* (Fenzl) S.M. Walters | blinks | | 1 | | | 1 | | 1 | | | 1 | | | |
| Chenopodiaceae (indet.) | Goosefoots | 2 | | | | | | | | | | | | 1 |
| *Chenopodium ficifolium* Sm. | fig-leaved goosefoot | | | | | | | | 1 | | | | | |
| *Chenopodium polyspermum* L. | many seeded goosefoot | | | | | | | | | | | | 3 | |
| *Atriplex* sp. L. | orache | 5 | 4 | 3 | 9 | 14 | 5 | 1 | | 4 | 4 | 10 | 31 | 9 |
| Rosaceae thorn indet. | | | 1 | 1 | | 1 | | | | | | | | |
| *Potentilla* sp. L. | cinquefoil | 1 | | | | | | | | | | | | |
| *Malva* sp. L. | mallo | | | | | 1 | 3 | | 4 | | | | | |
| Fabaceae big indet. | | | | | 1 | 1 | | 3 | 2 | | | | | |
| *Pisum sativum* | garden pea | | | 1 cf. | 1 cf. | 14 | | | | | | | | 2 |
| *Pisum sativum/Vicia* sp. | garden pea/ vetch/tare | | | 1 | | | | | | | | | 2 | |
| *Vicia* sp. L. | tare/vetch | 5 | 40 | | 4 | 5 | 20 | 7 | 9 | 19 | | | 32 | 11 |
| *Vicia cf. tetrasperma* (L.) Schreber | smooth tare | | | | | 1 | | | | | | 5 | 25 | |
| *Vicia c. sativa* L. | common vetch | | 2 | | 2 | | | 1 | 5 | 8 | | 20 | 3 | 6 |
| *Vicia faba* L. | broad/celtic bean | 1 cf. | | | 1 cf. | 1 | | | | 1 | | | 3 | |
| *Vicia/Lathyrus* sp. | vetch/tare/ wild pea | 30 | 9 | 5 | 12 | 4 | 6 | 30 | 75 | 83 | 1 | 345 | 108 | 51 |
| *Lathyrus* sp. L. | vetchling/ wild pea | | | | | 5 | | 23 | 21 | 24 | | 27 | 28 | 17 |
| cf. *Lotus* sp. L. | birdsfoot trefoil | | | | | | | | 1 | | | | | |
| *Medicago lupulina*. L. | black medick | 2 | 23 | 2 | | 27 | 2 | 4 | 1 | 7 | | 38 | 25 | 10 |

Table 2. *continued.*

| Species | Feature→ / Context→ / Feature Type→ / Period→ / Common Name | 544 297 pit RB 3 | 544 501 pit RB 3 | 544 508 pit RB 3 | 544 510 pit RB 3 | 544 513 pit RB 3 | 544 517 pit RB 3 | 544 519 pit RB 3 | 544 524 pit RB 4 | 544 527 pit RB 3 | 544 537 pit RB 3 | 544 539 pit RB 3 | 409 - kiln RB 2 | 530 552 pit RB 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Medicago/Trifolium* sp. L. | medick/clover | 5 | 10 | 1 | 6 | 5 | 9 | 1 | | | | 35 | 9 | 1 |
| *Trifolium* sp. | clover | | | | | | 28 | 4 | | | | | 9 | |
| *Trifolium* L. (small >1.5mm) | clover | 13 | 166 | 2 | 2 | 69 | 8 | | | | 2 | | | |
| *Chaerophyllum aureum* L. | golden chervil | | | | | | | | cf. 1 | | | | | |
| *Oenanthe* sp. | water dropiet | | | | | 2 | | | | | | | | |
| *Apium* sp. | water celery | | | | | 2 | cf. 2 | | | | | | | |
| *Torilis nodosa* (L.) Gaertner | knotted hedge parsley | | | 1 | 2 | | 2 | | | | 2 | 5 | 7 | |
| *Torilis* sp. Adanson | hedge parsley | 2 | | | | | | | | | | | 32 | 1 |
| Polygonaceae (indet.) | | | | | | 9 | 1 | | 1 | 1 | | | | 1 |
| *Polygonum aviculare* L. | knot grass. | | | | 1 | 1 | 2 | | | | | | | 12 |
| *Fallopia convolvulus* A. Love | black bindweed | | | | 2 | 3 | | 1 | 3 | | | 6 | 3 | 1 |
| *Rumex* undiff | dock | 7 | 60 | 1 | 2 | 18 | 5 | 3 | | 4 | 1 | 56 | 58 | 16 |
| *Rumex* cf. *crispus* L. | curled dock | 2 | 55 | 1 | 7 | 25 | 5 | 1 | 6 | 6 | | 11 | 84 | 7 |
| *Rumex* cf. *conglomeratus/ obtusifolius/sanguineus* | dock | 1 | 20 | 6 | 5 | 18 | 17 | 2 | 6 | 14 | 1 | 14 | 30 | 5 |
| *Hyoscyamus niger* L. | henbane | | 1 | | | 2 | 1 | | | | | | | 1 |
| *Corylus avellana* L. (frag.) | hazelnut | 2 | 1 | 3 | 1 | | 1 | | | | | | | |
| *Rhamnus catharticus* L. | buckthorn | | | 1 cf. | 1 | | | | | | | | | |
| *Lithospermum arvense* L. | corn gromwell | 1 | | | 3 | 1 | 1 | | | 1 | | | 4 | |
| *Odontites verna* (Bell.) Dumort | red bartsia | 2 | 5 | 1 | 5 | 4 | 1 | 3 | 1 | 5 | 4 | 25 | 34 | 8 |
| *Odontites/Euphrasia* sp. L. | bartsia/ eyebright | 1 | | | | 1 | | | | | | 2 | | 2 |
| *Veronica hederifolia* L. | ivy-leaved speedwell | 1 | | | | | | | | | | | | |
| *Veronica* cf. *arvensi* L. | wall speedwell | | | 2 | | | | | | | 1 | | 10 | |
| *Stachys* sp. L. | woundwort | 1 | | | | | | | | | | | | |
| *Prunella vulgaris* L. | selfheal | | 5 | | 1 | 4 | 1 | | | | | 1 | 1 | |
| *Valerianella dentata* | cornsalad | | | | | | | | | 2 | | 3 | | 1 |
| *Plantago lanceolata* L. | ribwort plantain | | 5 | 2 | 1 | 1 | | | | | | | 4 | |
| *Plantago major* L. | plantain | | | | | | | | | | | | 1 | |
| *Galium aparine* L. | cleavers | 6 | 1 | | 1 | 1 | 5 | 3 | 3 | 4 | | 9 | 10 | 6 |
| *Galium* sp. L. (small) | cleavers/ bedstraw | 1 | 2 | 1 | | 5 | | | | 2 | | | 2 | |
| *Galium palustre* L. | marsh bedstraw | | | | | | 4 | | | | | | | |
| *Sambucus nigra* L. | elderberry | | | | | 1 | | 1 | | | | 1 | | |
| *Tripleurospermus/ Anthemis* L. indet. | mayweed | | | | | | | | | 5 | | 1 | 20 | |
| Asteraceae (indet.) | | 1 | | | | | | | | | | | | |
| cf. *solidago virgaurea* | goldenrod | | 1 | | | | | | | | | | | |
| *Leontodon/Hypochoeris* | hawksbit/ cat's ear | | 9 | | | | | | | | | | | |

Table 2. *continued.*

| | Feature→ | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 409 | 530 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Context→ | 297 | 501 | 508 | 510 | 513 | 517 | 519 | 524 | 527 | 537 | 539 | - | 552 |
| | Feature Type→ | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | kiln | pit |
| | Period→ | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 4 | RB 3 | RB 3 | RB 3 | RB 2 | RB 2 |
| Species | Common Name | | | | | | | | | | | | | |
| *Centaurea* sp. | knapweed/ cornflower | | 1 | | | 1 | | | | | | | | |
| *Lapsana communis* | nipplewort | | | | | 1 | | | | | | 3 | | |
| *Tripleurospermum inodorum* (L.) Schultz Bip. | scentless mayweed | 5 | 1 | | 4 | 4 | 2 | 7 | | | 2 | 28 | 24 | 4 |
| *Leucanthemum vulgare* Lam. | ox-eye daisy | | 4 | | | | | | | | | | 2 | |
| *Juncus sp.* L. (stems) | rush stems | | | | | | 50 | | | | | | | |
| *Juncus sp.* L. | rush | | 4 | 1 | | | 1 | | | | 1 | | | |
| *Schoenoplectrus lacustris* L. (Palla) | bulrush | | | | | | | | | | | | | |
| *Eleocharis palustris* (L.) Roemer & Scultes | spikerush | 3 | 68 | 1 | 15 | 38 | 18 | | | 2 | | 4 | 3 | 9 |
| *Cladium mariscus* (L.) Pohl. | great fen sedge | 1 | 74 | 1 | 6 | 15 | 17 | 2 | | | | 1 | | |
| *Carex* sp. (flat) | sedge | | 4 | | | 2 | 1 | | | | | | | |
| *Carex* sp. (trig) | sedge | | 20 | | 4 | 7 | 2 | | | | | | | 1 |
| Poaceae indet. (size indeterminate) | grass seed indet | | | | 8 | | | 8 | | | | | | |
| Poaceae small (<2mm)(undiff) | | 1 | 4 | | | | | | | | | | 17 | |
| Poaceae indet. (culm node) | grass stem with node | | +++ | | | 3 | | | | | | | 2 | |
| Poaceae culm internodes indet. | grass stem | | +++ | | | 28 | 5 | | | | | | | |
| Poaceae | | 10 | | | | | | | | | | | | |
| *Lolium/Bromus/Avena* | Tuber of false | | 1 | | | | | | | | | | | |
| *Arrhenatherum elatius* subsp. *bulbosus* (tuber) | oat-grass | | | | | | | | | | | | | |
| *Festuca* sp. L. | fescue | | 10 | | | | | | | 10 | | | | |
| *Festuca* sp. L./*Lolium* sp. L. | fescue/rye grass | 4 | 147 | 1 | 12 | 11 | 21 | 18 | | 76 | 8 | 1020 | 34 | 30 |
| *Lolium perenne* L. | perennial rye grass | 3 | 56 | | 38 | 38 | 12 | 92 | 136 | 350 | 59 | 200 | 75 | 400 |
| *Phalaris sp.* L./ *Alopecurus* sp. L. | foxtail/canary grass | | | | | | | | | | | | 1 | |
| *Deschampsia* sp./*Poa* sp. | hair-grass/ meadow grass | | 5 | | | | | | | | | 5 | 34 | |
| *Poa* sp. L. | meadow grass | 5 | 35 | 1 | 15 | 10 | 6 | 6 | 2 | 1 | 2 | 15 | | 2 |
| *Poa* sp./*Phleum* sp. L. | meadow grass/timothy | | 4 | | 2 | | | 7 | | 6 | 1 | 20 | | 5 |
| *Phleum* sp. L. | timothy | | 12 | | | | 1 | 4 | | 4 | | 2 | 11 | 3 |
| *Briza* sp. L. | quaking grass | | | | | | | | | | | | cf. 2 | |
| *Avena* sp. | oats | 7 | 20 | 3 | 17 | 48 | 9 | 78 | est. 1200 | 570 | 69 | est. 2500 | 15 | est. 900 |
| *Avena* sp. (awns) | oats awns | ++ | 8 | | 21 | 2 | ++ | ++ | | +++ | 66 | +++ | ++ | +++ |
| *Avena* sp. (floret base wild type) | wild oats | | | | | 6 | | 2 | 3 | | | | | 3 |
| *Avena* sp. (floret base cultivated type) | cultivated oats | | | | | | | | | | | | | 1 |
| *Avena* sp. (floret base indeterminate) | oats floret base | | | | | | | | | | | | | 1 |

Table 2. *continued.*

| | Feature→ | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 544 | 409 | 530 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Context→ | 297 | 501 | 508 | 510 | 513 | 517 | 519 | 524 | 527 | 537 | 539 | - | 552 |
| | Feature Type→ | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | pit | kiln | pit |
| | Period→ | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 3 | RB 4 | RB 3 | RB 3 | RB 3 | RB 2 | RB 2 |
| **Species** | **Common Name** | | | | | | | | | | | | | |
| *Avena* sp./*Bromus* sp. | oats/brome grass | | | | | 5 | | 132 | 40 | 50 | 11 | 32 | 73 | est. 400 |
| *Anisantha sterilis* | barren brome | | | | | | | | | | | 1 | | |
| *Bromus* sp. L. | brome grass | 1 | | | | | | 2 | 4 | | 1 | | 16 | est. 60 |
| Seed indet (<2.5 mm) | | 2 | 12 | 1 | | 3 | | | | | | | 11 | |
| Seed indet (>2.5mm) | | 12 | | | | 3 | 1 | | | | | | | |
| Seed indet size indeterminable | | | | | | 3 | | 3 | | | | | 8 | |
| **Cereals** | barley | | 2 | | | 3 | | 1 | 1 | | | 1 | 1 | |
| *Hordeum* sp. (grains undiff) | | | | | | | | | | | | | | |
| *Hordeum* sp. (rachis fragments) | barley rachis | | | | | | | | 1 | | | 2 (6 row) | | |
| *Secale cereale/Triticum spelta* | rye/spelt wheat | | | | | | | | 3 | 1 | | 1 | | |
| *Triticum* undiff (grains) | wheat | 19 | 22 | 5 | 41 | 57 | 30 | 45 | 120 | 90 | 1 | 169 | 45 | 97 |
| *Triticum* undiff (germinated grains) | germinated wheat | | | | | 3 tail | | 3 | 12 | 41 | | | | |
| *Triticum* undiff (awns) | wheat awns | | 4 | | 36 | + | + | ++ | ++ | | 11 | ++ | ++ | ++ |
| *T. dicoccum/spelta* (spikelet forks) | emmer/spelt | 2 | 26 | 1 | 19 | 52 | 3 | | est. 50 | 20 | 3 | est. 120 | 13 | 80 |
| *T. dicoccum/spelta* (grains) | emmer/spelt grains | 6 | 9 | 5 | 9 | 21 | 7 | 36 | 90 | 57 | 5 | 172 | 25 | 33 |
| *T. dicoccum/spelta* (germinated grains) | | | | | | | | 5 | 18 | | | | 7 | 1 |
| *T. dicoccum/spelta* (glume bases) | glume bases | 63 | 148 | 26 | 320 | 705 | 72 | est. 2400 | est. 10,000 | 4100 | 153 | est. 20,000 | 450 | est. 3600 |
| *T. dicoccum/spelta* (rachis) | glume wheat rachis | | | | | | | 2 | | | | | | |
| *T. dicoccum* (grains) | emmer grain | | | | | | | | | | | | cf. 1 | cf. 3 |
| *T. dicoccum* (glume bases) | emmer glume bases | | | | 5 | | | | 6 | | | | 5 cf. | |
| *T. dicoccum* (spikelet forks) | emmer spikelet forks | | | | | | | 144 | | | | | cf. 1 | |
| *T. spelta* (spikelet forks) | spelt spikelet forks | | | | | 11 | | | | | | 1 | | 20 |
| *T. spelta* (glume bases) | spelt glume bases>t4 | 36 | 1 | 53 | 120 | 7 | est. 144 | est. 100 | 130 | 7 | est. 1000 | 76 | est. 800 | |
| *T. aestivum senso lato* (type grains) | free-threshing wheat | | | | | | | | | | | | 1 cf. | |
| *T. aestivum senso lato* (rachis) | free-threshing wheat rachis | | | | 1 | 3 | | | | | | 6 | | |
| Cereals undiff (grains) | unidentifiable cereal grains | 11 | 7 | 4 | 25 | 14 | | 30 | 60 | | 4 | | 14 | 10 |
| Cereals undiff (basal culm node) | straw roots | | | 2 | | 2 | | 1 | | 1 | | 3 | | 1 |
| Cereals undiff (culm internode) | straw fragments | 10 | | 26 | 20 | | | | | 4 | | 1 | | |
| Cereals undiff (culm nodes) | straw nodes | 3 | | 6 | 5 | 7 | 3 | 1 | | 1 | | 4 | | 1 |
| Parenchyma | soft plant tissue | | | 8 | | | | | | | | | | |

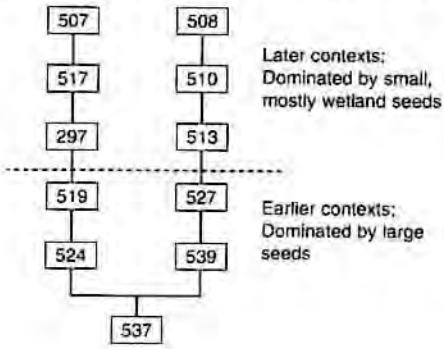


Fig. 9 Stratigraphic relationship of sampled contexts in pit F.544 and position of floral change

gromwell, brome grass, mallow, black medick, poppy, small flowered buttercup, knotted hedge parsley and ribwort plantain, which are all more commonly associated with such soil types.

One plant that is of great palaeobotanical interest is *Cladium mariscus*, great fen-sedge, whose seeds were recovered from several later Romano-British samples. The present distribution of this species is mainly restricted to the East Anglian fens, although isolated records are known from other parts of the country (Perring and Walters 1982). However, seeds of the species were recovered from prehistoric deposits in the Somerset levels (Godwin 1984), arguing for its former presence in the Somerset area. The remains found from Great Yard, represent the first (published) record from the Roman period in the south-west, and it may be that its local extinction from wetlands outside East Anglia is a phenomena of the historic period and possibly caused by habitat removal. A more intriguing question is how seeds of great-fen sedge came to be preserved on the site. The species is restricted to shallow, still, base-rich fens or slow flowing water, or areas immediately adjacent to such environments. Its use in thatch, wattle and daub structures and as a fire lighter are well attested (Horwood 1991), and it maybe that it was used at Great Yard for such purposes. Alternatively it is also quite possible that it may have been growing in arable fields in adjacent wetland areas and hence harvested and brought in with the crop. Seeds of spikerush—a species of similar ecological requirements—are also present within the samples, which because of its discovery within granaries and in stomachs of bog bodies (van de Veen 1992), is seen as an arable weed in antiquity and therefore an indicator of the cultivation of wet marshy areas (Jones 1978). The same may also be true of great fen-sedge, which has commonly been found associated with cereal remains in the East-Anglian region (Stevens 1995; 1996b), indicating that at least some of the crops were grown upon wet, peat soils within fen-like environments in the Ilchester region. The presence of seeds of spikerush, sedge, hairy buttercup, blinks, rush, tubular water-droplet and white charlock also point to similar damp to wet soil conditions. It is also notable that wetland plants, such as spikerush and sedge increase in quantity within samples where great fen-sedge was found, indicating, perhaps more conclusively that its presence was as a weed of arable fields. An ecologically similar species both in terms of habitat and reproductive technique, *Phragmites australis* (Grime *et al.* 1988; Conway 1942) has been recorded as persisting in arable fields in Scotland to the present day (Haslam 1972).

## Changes With Time

It is apparent that there is some degree of stratigraphic variation in the types, and proportion of plant remains found. The samples from pit F544—can be divided into two separate sequences, with the sample from [537] present in the lower part of both (Figure 9).

Within both sequences a dramatic change can be seen. The stratigraphically later samples [501], [517], [297], [508], [510], [513] are dominated by smaller seeds (see Figure 2), mostly of wetland species, while the earliest lower samples contain mainly larger seeds; for example *Avena* sp., *Lolium/Festuca* sp. and *Vicia/Lathyrus* sp., as well as glume bases (see Figure 2). The sample from F530 [552], dating to the 1st–2nd centuries also fits with this pattern, and shares characteristics of the stratigraphically earlier samples from F544. The other sample from a 1st–2nd century context (F409), however, does not fit the pattern so well as it contains about 50% large, compared to small weed seeds, generally has fewer seeds of *Avena* sp. and therefore, shows more similarity with the later samples. However, as with the earlier samples it contains large proportions of both *Lolium* sp. and *Vicia/Lathyrus* sp. and fewer seeds from wetland species.

The implications of these data are significant when interpreted according to Hillman's (1981) crop processing stages. They suggest that the samples represent a change in storage practice from one in which the grain was stored almost fully processed after fine sieving, to one in which the grain was stored after threshing and winnowing, but with no fine sieving.

Such alterations in storage practise may be related to changes in household structure, in which less processing (i.e. fine sieving) is carried out on a daily basis within smaller households, as compared to larger, more co-operative households (Stevens 1996a). Steven's (*ibid.*), however, found no evidence for a similar change for larger Roman households within his Oxfordshire study area. It may therefore be the case that the changes seen within the samples from Great Yard are related only to changes in the size of the households within the closest proximity to the pit, rather than the settlement as a whole. A further possibility, however, is that in the later period the harvested crop preferentially came from wetter areas, or that conditions within existing fields in general became wetter. Crops from wetter fields will often take longer to ripen than those grown upon drier soils (Cannal *et al.* 1980). If time was already limited during harvest, then it is possible that the later harvesting of crops on wet soils may have led to a reduction in the time available for processing the crop.

Previous archaeobotanical analysis carried out on samples from excavations in Ilchester have produced assemblages dominated by glume bases and which have a similar floral composition to the earlier samples from Great Yard (Murphy 1982; Paradine 1994). Therefore the presence of an earlier sample, F409, which also contains a fairly large proportion of seeds of smaller species may support the view that the differences are more likely to be related to changes individual household structure than that of households across the Roman town as a whole. In this respect the site shows some similarity to the composition of Roman samples examined from the late Iron Age *oppidum* at Abingdon (Stevens 1996a).

A second observation is that the earlier samples are dominated to a much greater extent by glume bases than the later samples, (approximately between 1 (grain): 10 (glume) to 1:100, compared to 1:10 to 1:2 in the later samples, see Figure 10). It is possible that the variation is a result of differences in preservation, where potentially fragile glume bases deteriorate before the grain. However, given that the state of preservation in the later samples was good enough to preserve many small fragile seeds, it is more likely that differences between the earlier and later samples can be linked to the variations in processing noted above.

## Roman Agricultural Practice

High proportions of perennials and species of the Fabaceae were found at Great Yard and have also been noted within Roman samples from many sites across southern England (Jones

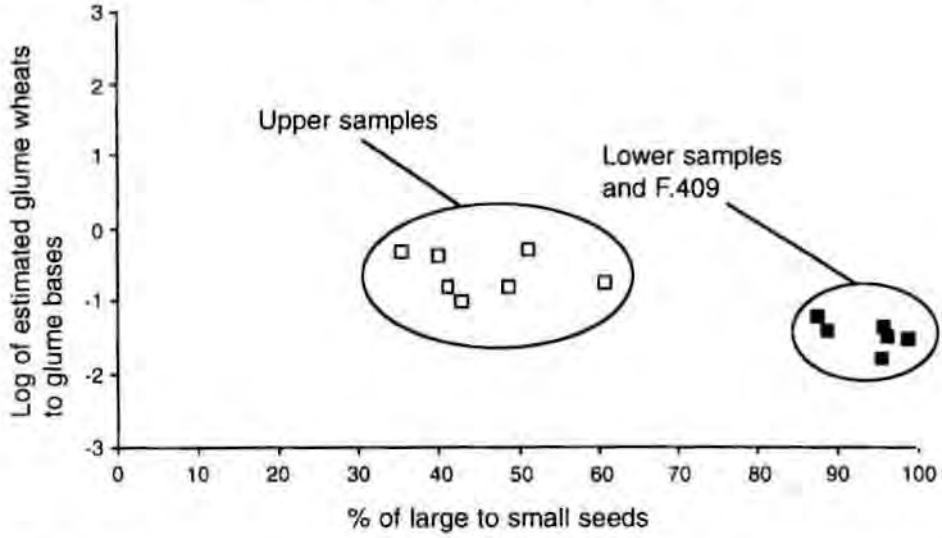


Fig. 10 Percentage of large (>2.5mm) to small (<2.5mm) seeds within the samples plotted against the logged ratio of estimated glume wheats divided by the number of glume bases[2]

1981; 1996). Such compositions have more recently been attributed to autumn sowing of crops upon flooded, nitrogen deficient soils, rather than over cropping as originally supposed (Stevens 1996a). Both the early and later samples contain low proportions of spring germinating species and much higher proportions of either autumn germinating species, such as *Vicia/Lathyrus*, *Phleum* sp., *Lolium* sp. and/or species which germinate in both autumn and spring; for example, *Avena* sp. In conjunction with the high number of perennial species noted, especially in the later samples, this would seem to imply that autumn sowing was being practised.

The presence of perennial species, such as *Lolium perenne* and *Eleocharis* sp. at Great Yard, would also seem to indicate that short term arable was rotated with, (impoverished) wet pasture, as neither species survives intensive ploughing and/or long term arable usage. The increase in wetland perennials in the later samples could therefore be associated not only with the increase in flooding suggested above, but perhaps with an expansion of short term, low intensity arable in marginal and wetter soils. In this scenario these areas had previously been characterised by species of pasture, *Prunella vulgaris*, *Plantago lanceolata*, *Stellaria graminea/palustris*, and species of *Trifolium*, as found in the stratigraphically earlier samples. Similar changes during the Roman period, including an increase of *Cladium mariscus*, have been seen at Roman sites in East Anglia (Stevens 1995; 1996b), where both increased flooding and the expansion of fields onto previously uncultivated soils were suggested as possible causes for the changes seen within the samples.

A further point of interest is the relatively large number of germinated grains found. Similar remains have been recovered from Roman samples elsewhere in Ilchester (Murphy 1982), and at nearby Catsgore (Hillman 1982), *Isca* (Helbaek 1964), York (Williams 1979) and London (Straker 1984). In the latter two towns the presence of such grains were attributed to poor storage conditions, although it was also noted by Straker (*ibid.*), that grain may sprout in the ear prior to harvest in wetter areas. As the germinated grains from Ilchester would appear to be from the base of F544 and the 1st–2nd century sample from [409] they

are therefore relatively early in the Great Yard sequence (Figure 2). Thus sprouting is less likely to be attributable to wetter conditions as it appears the later period was damper and yet no sprouted grains were found. Therefore it would seem more likely that the presence of sprouted grain in the early period is as a result of malting activity. Malting has previously been postulated for the discovery of sprouted grain in association with an oven at nearby Catsgore (Hillman 1982). At Great Yard the germinated grains were found from the kiln/corndrier/oven floor, represented by sample [409], and therefore it is quite possible that this was also used for malting.

### Conclusions

All the crop types found in the Great Yard samples are known from the Roman period in Britain (Greig 1991), and indeed the predominance of spelt wheat, and rarity of barley from both Roman towns and forts, as opposed to rural settlements is well testified (Murphy 1984; Straker 1991; Greig 1991). Diet seems to have changed little over the period represented by the samples and consisted largely of a staple of bread made from wheat, and occasionally barley or rye. Oats may have also been used, not only to feed to animals as today, but also to make oatmeal for human consumption. Few other food remains were found as is to be expected in samples that represent crop processing waste. However, the presence of both pea and Celtic bean demonstrate the usage of such legumes for culinary purposes. Members of the genus *Brassica* (cabbage etc.), may also have been utilised by the Roman population, although it is perhaps more likely that the plant remains as recovered from Great Yard are weeds of the cereal crop. Finally there is a slight hint that some of the cereal grains were used for the production of beer, at least in the earlier period, with the discovery of sprouted grains from a kiln/oven.

## FISH BONES

*Alison Locker (Winchester, Hampshire)*

### INTRODUCTION

Fish bones were recovered from samples of 10 Roman contexts of which seven contained identifiable remains. All the contexts are from Pit F544, and of 2nd–4th century date. The fish were extracted from flots and residues of samples sieved to 250µm and 500µm respectively. The following species were identified: eel (*Anguilla anguilla*), Cyprinidae, Percidae, scad (*Trachurus trachurus*), Sparidae and plaice/flounder (*Pleuronectes platessa*/*Platichthys*) (Table 3).

In the remaining samples from contexts 297, 524 and 537 the fish remains were all indeterminate species.

### Discussion

Both fresh water and marine species are represented although in many cases it was impossible to identify the remains beyond family level. The most numerous remains are the characteristic percoid scales which were present in all contexts except 519. Since no other parts

Table 3. Fish remains recovered from the bulk samples

| Context | 295 | 501 | 508 | 510 | 513 | 517 | 519 | Total |
|---|---|---|---|---|---|---|---|---|
| Eel | | 2sk, 2v | 1v | | | 2v | 1v | 8 |
| Cyprinidae | | | | 3v | | 1v | | 4 |
| Percidae | 2sc | 1sc | 30sc | 21sc | 1sc | 29sc | 0 | 84 |
| Scad | | | 2v | | | | | 2 |
| Sparidae | | | 1sk | | | | | 1 |
| Plaice/Flounder | | 1v | | | | | | 1 |
| Total | 2 | 6 | 34 | 24 | 1 | 32 | 1 | 100 |

Key: sk = skullfragment; v = vertebra; sc = scale.

of perch were identified these may be scales cleaned from fish prior to cooking as recommended in recipes from more recent history.

Perch, eels and cyprinids could all have been caught in local rivers, while the cyprinid vertebra from 517 is closest to chub (*Leuciscus cephalus*), also a fresh water species.

Ilchester is today some 22 miles from the coast, yet consumption of marine species is shown by the presence of a flatfish (plaice or flounder) vertebra, a sea bream quadrate and two scad vertebral centra. Plaice or flounder could have been caught along the local shoreline in traps or on line, while sea bream is also caught using a line. Scad is found off British shores, the adults, as represented by these vertebrae, are typically caught offshore, near the surface (Wheeler 1978, 248). Although not considered a food fish in Britain, scad has long been considered palatable in the Mediterranean. It is therefore possible that the vertebrae may be the remains of an imported stored fish product from the Mediterranean, although there is no corroborative evidence, such as amphorae, to support this suggestion. Six mature scad vertebrae and spanish mackerel (*Scomber japonicus*) were also identified from Roman deposits as Great Holt's Farm, Boreham, Essex and a similar suggestion has been made for their origin (Locker unpublished).

Other fish remains from Ilchester, but of medieval date have previously only been identified from Kingshams, Blue Cutting by Wheeler (1982) and were all marine food species; cod (*Gadus morhua*), conger eel (*Conger conger*), whiting (*Merlangius merlangus*) hake (*Merluccius merluccius*) and bass (*Dicentrarchus labrax*).

## Hand Recovered Biological Remains

As stated in the introduction animal bones and marine molluscs were recovered by hand along with artefacts during excavation. While it is possible that the excavators may have missed smaller bones from contexts that were not sampled, assessment of animals bones from the samples residues suggests that the majority of these would not be identifiable. Therefore it is probable that the hand recovered animal bone is largely representative of the complete bone assemblage as deposited on the site. It is perhaps more likely that marine mollusc remains may have been missed by the excavators as the main species found—oyster—is not robust, and its shell breaks up relatively quickly if subjected to any pressure. It is also notable that mussel was found in only small numbers. Mussel shell is extremely delicate and often fragments to extremely small pieces which are less likely to have been seen by the excavators.

## ANIMAL BONE

*Gerry Barber (Division of Medicine, University of Bristol)*

### INTRODUCTION

Just over 1700 fragments of animal bone were hand recovered during the excavation, of which 44% (752) were identifiable to the species. The material in general was poor to fair condition, and came mainly from ditches and pit fills. Several post holes also produced material. It was decided that, owing to the small number of identifiable bones available for analysis, the material would be given a selective and basic analysis.

#### Methodology

The body parts chosen for analysis were; individual teeth, mandibles, maxilla, distal humerus, proximal and distal radius, proximal ulna, proximal and distal tibia, proximal and distal femur, astragalus, calcaneum, proximal and distal metapodials, and phalanges. These were chosen as they represent different parts of the body, occur frequently and are easily identified. Ribs, vertebrae and some parts of the skull can often be difficult to identify to species, so these were counted in the unidentifiable group. Other parts of the skeleton (e.g. patellae) were identified to species separately, and listed in the Appendix. For each of the 111 contexts that produced bone, the following recordings were taken:

1. The total number of fragments present
2. The total number of identifiable fragments, by body part as outlined above
3. The number identified to species, per species
4. Evidence for cut marks, burning or utilisation
5. Standard measurements of individual bones where possible, according to the criteria of Driesch (1976)

Given the small numbers of bones identified for each context, it was not thought practicable to calculate the minimum numbers of individual (MNI's) for any species, except for one specific context (see text below) which was unusual. The material was also checked for any unusual assemblages (e.g. large numbers of one body part) or for the presence of exotic species.

#### Aims

Given the small amount of bones identified the aims of the analysis were limited to:

a. What is the range of species represented, and what are the relative proportions of each species?
b. Do the relative proportions of species change over time, i.e. from the Iron Age to Roman period, or between early and late Roman phases?
c. What was the original function of the animals present on the site (e.g. food, traction, wild fauna etc)?

Table 4. Number of bone fragments identifiable, by species

| | Phase→ | 1 | 2 | 3 | 4 | 5 | 6 | Total |
|---|---|---|---|---|---|---|---|---|
| | No. Contexts Ũ | 6 | 28 | 66 | 2 | 15 | 1 | 118 |
| Cow | *Bos taurus* | 6 | 47 | 201 | 4 | 14 | 0 | 272 |
| Sheep/Goat[1] | *Ovis aries/Capra hircus* | 20 | 80 | 229 | 2 | 28 | 0 | 359 |
| Pig | *Sus domesticus* | 6 | 21 | 29 | 0 | 5 | 0 | 61 |
| Horse | *Equus caballus* | 4 | 0 | 20 | 0 | 6 | 0 | 30 |
| Rabbit | *Oryctolagus cuniculus* | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Hare | *Lepus europeaus* | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Red deer | *Cervus elephas* | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Dog | *Canis familiaris* | 1 | 0 | 4 | 1 | 0 | 0 | 6 |
| Chicken | *Gallus gallus* | 0 | 0 | 11 | 0 | 1 | 0 | 12 |
| Other bird | | 0 | 1 | 7 | 0 | 0 | 0 | 8 |
| Unidentified | | 69 | 245 | 551 | 22 | 76 | 6 | 969 |
| Total | | 106 | 394 | 1055 | 29 | 131 | 6 | 1721 |

[1] It is often difficult to separate sheep and goat bones morphologically. Where possible this has been done, and of the 355 sheep/goat bones studied, one was positively identified as goat and five as sheep.

## Results and Discussion

A total of ten species were noted, although a large proportion of the bones were highly fragmented and could not be identified. Table 4 shows the species found in each group.

### Phase 1—'Prehistoric' (Pre-Romano-British/Iron Age)

Almost 70% of the fragments from this phase were unidentifiable and were in poor condition. The most common species identified was sheep/goat, followed by equal numbers of pig and cow. All bones from both cows and sheep that could be identified came from adult animals. This phase produced one of the highest proportions of horse bones, none of which had butchery marks on them. As so few identifiable bones were recovered little more can be said about this phase.

### Phase 2—Iron Age to Early Romano-British (1st to Late 2nd Centuries)

As with phase 1 the majority of fragments recovered were unidentifiable. Of those that were a higher proportion of cow was recovered than in the previous phase, although it is notable that most fragments are from skulls and the numbers involved are very small. For all species the body parts present were mostly from skulls and feet bones, many of them gnawed. The teeth present were mostly loose teeth and broken molar fragments, which would indicate that this was a highly disturbed or secondary burial of material.

### Phase 3—Roman (2–4th Centuries)

This phase was the only one which produced a large quantity of bone. Sheep/goat fragments outnumbered cow by over 2:1, with fragments of all body parts represented. A high pro-

portion of the material consisted of loose teeth indicating secondary burial of material. A fair proportion of the material was gnawed and some fragments showed signs of having been burnt. This would support the idea that the material, once discarded, was left open for some time (and so available to scavengers such as dogs) before being finally buried.

Eighteen fragments of bird bone were recovered: eleven of hen, one of duck and six were unidentifiable.

Three cow bones from this phase showed sign of abnormality. The first was a right mandible which had an ante-mortem loss of the first molar. The socket had resorbed almost completely, with no evidence for an abscess or other periodontal infection. The second bone was a lower third molar which was also missing its third cusp. These two cases represent a prevalence of 8% abnormality over the whole phase (given that sample numbers are comparatively low). This is similar to the findings of Stalibrass (1993) who had a prevalence of 10% for the same congenital abnormality from Roman material at the site of The Lanes, Carlisle.

This phase also produced the most interesting context of the entire sample. The post hole context 356 produced 27 fragments of very young, possible foetal, sheep/goat femora. The material was fragmented and in very poor condition, but it is estimated that at least 10 animals were represented. No other sheep/goat body part was found in the context. Given the small numbers of bones recovered in this context it is difficult to suggest what the sample represents. It may be that it is the remains of one special large meal or sacrifice, but as there are no cut marks on the bones, and the fact that the femur is not usually the body part most found in ritual deposits these suggestions can only be speculation.

One fragment of human skull, a parietal, was identified. This is likely to have been disturbed from one of the earlier burials found close by.

### Phase 4—Post-Roman (Early Medieval Contexts)

Few (7) bones were identified to species in the early medieval phase, and as such few useful comments can be made.

### Phase 5—12–15th Centuries

Of the few identifiable fragments in this phase sheep fragments out number cow by a ratio of 2:1. There is a slight reduction in the proportion of loose teeth to those in complete mandibles compared to the earlier phases for both species. This would indicate that less re-working of material occurred in this phase than in some of the earlier ones.

### Phase 6—16–19th Centuries

Six unidentifiable fragments were recovered from this phase.

### Conclusions

As so few bones are clearly identifiable from each period on the site few conclusions can be drawn from the results. The material appears to be largely the remains of adult cow and sheep, with a few younger individuals of pig. The carcasses have been subject to food preparation and consumption, and the samples studied represent the waste which has been

Table 5. Non oyster marine molluscs found during the excavations

| Context | Period | Species | Common name | Shell numbers |
|---|---|---|---|---|
| 262 | 3 | *Cerastoderma edule* | Common European Cockle | 1 |
| 294 | 3 | *Mytilus edulis* | Blue Mussel | 2 |
| 458 | 3 | *Mytilus edulis* | Blue Mussel | 2 |
| 508 | 3 | *Patella vulgaris* | Common European Limpet | 1 |

disposed of in the ditch and pit fills after some exposure (it is not possible to say how long). The presence of all body parts, especially those of the head and feet indicates that whole animals were being butchered on or near this site. Several horse bones were recovered across all phases and the lack of cut marks on these would indicate they were used for transport rather than food. In the earlier Roman phases a relatively large amount of cow was consumed, a pattern that is typical of Roman sites around the country. A 4th century post hole produced an enigmatic collection of material, but the sample was too small to suggest how and why it was placed there.

## MARINE MOLLUSCS

*Keith Wilkinson*

### INTRODUCTION

Marine molluscs were hand collected from a total of 47 contexts, representing periods 2–5, i.e. all post Iron Age phases. Of the 442 shell examined, 436 were of the coastal species *Ostrea edulis*—the common European oyster. The majority of Romano-British sites contain oyster remains even if located a great distance from the coast. Other than oyster only cockle, mussel and limpet were found in extremely low numbers (Table 5).

In this study all oysters with surviving hinges were initially identified as being either upper or lower valves so that a minimum number of individuals (MNI) could rapidly be calculated for each context (Fiche). Where the hinge did not survive no attempt at quantification was made. All complete valves were then measured along an axis from the hinge to the far (rear) edge of the shell, and then a measurement of the greatest distance at 90° to the previous measurement was taken. This quantification although simple, was intended to establish if there were size trends between oysters used at different times, and if all shells were originally collected from the same coastal area. Figure 11 displays the results of these measurements on contexts where there is a MNI of 40 or greater.

### Results

Other than contexts 294, 458, 459, and 500—all of which are from period 3—the oysters recovered from Ilchester are present only as small scale scatters in most contexts. The four contexts noted above were all pit fills (458 and 459 being separate fills of the same pit—

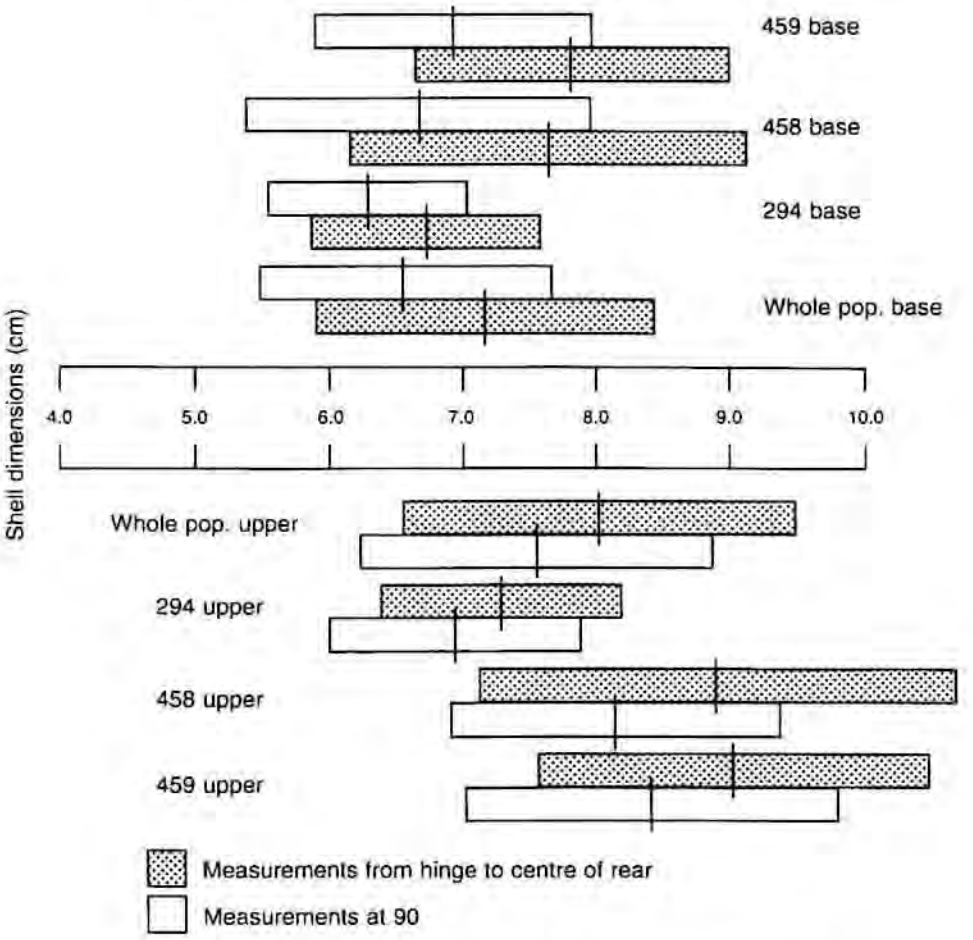


Fig. 11 Measurement of oyster valves from the three selected contexts

context 279), and therefore as the oysters obviously represent domestic food waste, this information suggests that the pits were used for rubbish disposal.

Despite the moderate number of oyster shells recovered it is unlikely that the species played a great role in diet and was probably thought of as a luxury or supplemental foodstuff. Analysis of similar shell fish from prehistoric middens has demonstrated that although large amounts of shell remains are present the total meat weight represented is extremely small and that even in coastal situations shell fish were not a staple food.

Measurements carried out on the shells suggest that the source of the collected oysters may be different for context 294 as compared to contexts 458/459 (Figure 3). Shells in the latter are notably larger than the mean for the site as a whole, while those from 294 are slightly smaller. It also appears that shells from contexts 458 and 459 cannot be separated on statistical grounds, further suggesting that the two contexts contain shells from the same source and collected at approximately the same.

Table 6. Percentage of each skeleton present

| Skeleton | Context | Bones present |
|---|---|---|
| 1 | 373 | 30% |
| 2 | 329 | 96% |
| 3 | 332 | 40% |
| 4 | 428 | 50% |
| 5 | 521 | 25% |

## HUMAN BONE

*Louise Loe (Division of Medicine, University of Bristol)*

## INTRODUCTION

The human remains from Ilchester all date from the Romano-British period, and consist of five articulated skeletons, all excavated from discrete graves. Skeleton 2, context 329, was found in association with a ladle-type object. All the skeletons were examined for age, sex, stature and evidence of pathology or abnormality, and in the case of skeleton 2, to see if there was anything on the bones that would associate the ladle with the individuals cause of death.

### Condition

The condition of the skeletons was variable, as was the percentage of bone present for each (Table 6). Skeleton 2 was the best preserved with minimum surface damage to the bone, although the skull was fragmented. Skeleton 1 was also well preserved. The remaining skeletons had bones that were friable and abraded.

All of the adult skeletons have been sexed using the methods described in Brothwell (1981, 59–63), with greatest attention given to the pelvis, the skull and the size of the femoral and humeral heads. These are the most reliable traits used and provided they are all present (especially the pelvis which is the most sexually dimorphic bone in the human body), the sex of a skeleton can be determined with 90–95% accuracy. These methods apply to grown adult bones only. Due to a lack of reliable criteria sexing was not attempted on any of the children.

For adults, where dentition survived, age was determined by recording the degree of wear on the molars and attributing an age category accordingly (Brothwell 1981, 72). Changes to the morphology of the pubic symphysis was also used and scored after the methodology of Suchey (1985).

The children have been aged by recording the growth and eruption of deciduous and permanent teeth (Ubelaker 1978), long bone length (Maresh 1955) and epiphyseal union (Bass 1987, Hutchings and McMinn 1988). These techniques are based on developmental changes that children's bones undergo from as early as four months in utero.

Of the skeletons examined three are males under 45 years of age, one is a foetus (six months in utero) and one is a neonate. Skeleton 2 had all of the above mentioning sexing traits, while skeleton 3 just had the skull and femoral heads, and skeleton 5 only the skull. Skeletons 3 and 5 were aged by tooth attrition only, but skeleton 2 had all ageing criteria.

Table 7. Age and sex of the skeletons

| Skeleton | Context | Age (years) | Sex |
|---|---|---|---|
| 1 | 372 | Neonate | Non determinable |
| 2 | 329 | 16–25 | Male |
| 3 | 332 | 25–35 | Male |
| 4 | 428 | 6 months in utero | Non determinable |
| 5 | 521 | 17–25 | Male |

As some of the epiphyses of this skeleton were not united it has been possible to estimate the age of this skeleton somewhat more accurately.

### Stature

Stature has been estimated by taking the maximum length of as many complete long bones as possible and inserting them into the appropriate regression equation as set out by Trotter and Gleser (1952; 1958) and modified by Trotter (1970). The long bone length with the lowest standard or error was used where possible. Stature estimation was not attempted on the children.

Skeleton 2 had unfused epiphyses and skeleton 5 did not have any complete long bones surviving. Therefore stature estimation was only possible for skeleton 3. This individual is estimated to have been about 1.72m (5'6") tall.

### Non-Metric Traits

These are discrete variants in the morphology of the skeleton. They occur both cranially, such as in the form of extra bones within the cranial sutures and post cranially, such as in the form of extra foramina in the humerus (referred to as a septal aperture). These are just two examples and many more have been described (e.g. Berry and Berry 1972; Finnegan 1978).

Non-metric traits are of no apparent pathological significance and they vary in frequency between populations. Their presence is thought to signify familial relationships, although it is not known to what extent they are environmentally and genetically controlled.

The presence or absence of 14 cranial and eight post cranial traits have been recorded, and these are described in Brothwell (1981, 90–100). Three types of cranial traits were found and are presented in Table 8.

Table 8. Presence and absence of cranial traits

| Skeleton | Metopism | Supra orbital foramem | Torus mandibularis |
|---|---|---|---|
| 2 | ✓ | ✓ | ☒ |
| 3 | ☒ | ✓ | ✓ |
| 5 | ☒ | ☒ | ✓ |

### Dental Health

Of the five individuals only the adults had dentition available for examination. Therefore the maximum number of teeth that could have been found is 96 (32 × 3). The actual number of teeth present was 85; three teeth had been lost before death (from skeleton 3), and two following death (also from skeleton 3). Thus six teeth are unaccounted for (five from skeleton 3 and one from skeleton 2).

Caries occurred just once on the right manibular first molar of skeleton 3. Calculus was found on all three dentitions. This results from the build up of plaque due to inadequate cleaning and gives an indication of an individuals oral health. In severe cases it may lead to periodontal disease. As its presence on all of these dentitions was only slight, it bears little significance to the dental health of these individuals. No abscesses were found on these dentitions.

### Evidence for Disease

Bony changes on a skeleton can provide an indication of an individuals health. However, not all diseases manifest themselves on bone and while some do, it is not always possible to assign them to a specific cause. It is therefore not possible to indicate the cause of death from bones alone except in rare instances where there might be associated finds that may suggest a cause, or when a fatal disease is evident. It is also not possible to infer the amount of disability and discomfort that a disease might have caused the individual. This said, pathological changes on bone do have their uses in bearing some reflection on social and economic status when populations are compared.

There were no significant signs of pathological change on the skeletal material from Ilchester. Fragments of right perietal belonging to skeleton 3 had a depression situated about mid way along it. Although this had the appearance of a wound caused by a traumatic injury the bone itself was not in good condition. The depression is therefore most likely to be a result of post mortem damage. A ladle was found in the grave cut of skeleton 2. This object had been found lying across the individual in between the third fourth lumbar vertebrae. When this individual was examined, particular attention was given to this area of thespine, although nothing abnormal or pathological was found. It is apparent that the ladle had nothing to do with the death of the individual and is instead likely to have been placed as an offering.

## DISCUSSION OF THE SITE

Despite the limited nature of these excavations and the absence of extensive contextual evidence they remain of value in providing some insights into the possible course of Romano-British suburban development to the west of Ilchester and of its physical extent. However the basis of much interpretation lies largely in evidence derived from adjacent evaluations which by their nature provide only a narrow view of the whole although parallels may also be drawn from evidence provided by those areas of the town and suburbs subject to more extensive excavation.

### Prehistoric (Period 1)

In common with many of the excavated sites within and around Ilchester, whilst prehistoric material could frequently be noted features could rarely be defined, the bulk of the evidence

for early activity being derived from disturbed material within secondary contexts. In the main the recovered ceramic evidence was poor with no well defined rim sherds, however the predominance of Ilchester fabric types A and B and their broad distribution towards the eastern end of the excavation would seem to indicate the possibility of fairly extensive Early to Middle Iron Age activity in this area. This corresponds to some extent with evidence from adjacent excavations at Castle Farm where a Middle Iron Age date has been suggested for any possible settlement which may have existed here.

### Early Roman (Period 2)

The status of Great Yard during the 1st and early 2nd centuries remains somewhat unclear. Identifiable features of the earliest part of the period are uninterpretable although of the two recorded ovens or kilns, the contents and structure of at least one hint strongly at the production of beer. That of the second and more complete example, together with its potentially associated buildings (barns?), is less than obvious but an absence of any industrial debris and the presence of further plant remains again suggest its function to be related to some form of crop processing. Leach has suggested that Ilchester may have functioned as a staging post for the distribution of foodstuffs from the later 1st century (Leach 1991a) and it is tempting to see this area outside(?) of the defensive perimeter of the early fort, to be subject to intensive activity stimulated initially by military needs and later by the demands of a burgeoning civil settlement. Such activity may well have related primarily to the processing of food prior to its distribution via the postulated port facilities on the River Yeo.

### Later Roman (Period 3)

The laying out of a north-south road across the area in the later 2nd century would appear to mark the genesis of the areas suburban development. The road is almost certainly that previously identified by Leach and thus probably the main artery into the suburb from a postulated West Gate of the Roman town (Leach 1987). The form of the suburban development would appear to parallel that identified to the south of the town with potential buildings fronting onto the road, to the rear of which rectilinear ditched or walled boundaries may have enclosed ancillary structures or contained activities related to the roadside properties. The full extent and nature of this development remains unknown but would seem to have been primarily domestic and reasonably sophisticated to judge from the fragments of painted wall plaster, quantities of tesserae, ceramic roof and hypocaust tile fragment derived from demolition spreads and pit fills. Although a late 2nd–early 3rd century date is assumed for the beginnings of this settlement it would appear to have been at its maximum in the later 3rd or early 4th centuries when buildings of stone were certainly established to the south of the road and most probably to the north. Associated with these may have been small cemeteries representing individual family groups. The full extent of these cannot at present be determined but there is no reason to think that may not be as widespread as those identified in Townsend Close to the south (Leach 1982).

### Post Roman (Periods 4–6)

No identifiable features can be readily ascribed to the immediate post-Roman period and the excavation adds little to our knowledge of the areas urban decline. Only the narrow undisturbed and virtually continuous horizon of silty gravel which sealed most of the

Romano-British features suggests the almost complete abandonment of the area, probably to agricultural usage in the centuries following the withdrawal of Rome.

The earliest indication of subsequent activity would appear to be the erection of the low, broad and still visible east-west bank which may just possibly be of a pre-conquest date. Its purpose is unknown although it may have served as an early flood defence with traces of ridge and furrow ploughing notable to the south (Leach 1991b). The most significant of the identifiable Medieval features remains the north-south road and walls at the eastern end of the excavation and thus not unduly distant from the known course of the Medieval town wall. Although the orientation of the road places it on line to bisect the Medieval walls at a position similar to that of the postulated West Gate of the Roman period, its course was not identified in earlier excavations (Leach 1991a). Whilst a hypothesis may be developed that such a road served potential medieval port facilities archaeology has yet to demonstrate the full extent and nature of the Medieval and post-Medieval town beyond the limits of its walls. However the evidence both from this and previous excavations show that the immediate vicinity of the town was an area of considerable Medieval activity.

## THE FINDS

### Introduction

The following series of reports describes the artefactual material recovered during the course of the excavations, together with illustrations of selected material. In keeping with the now established precedent set for Ilchester by Leach (Leach 1991 and 1992) a thematic approach to the majority of the material remains has been continued. With the exception of prehistoric material (none of which has been described or illustrated) and the pottery for which an alternative classification is already well established, the following Thematic Groups may be identified:

*Personal: ornaments, dress fittings and accessories* (Fig. 12 & 13)

### The Roman Brooches

*P. Insole*

Five identifiable Romano-British brooches were recovered from the site, four of these being semi-complete speciments. Three were bow brooches of Colchester derivation, the other two being penannular. In addition to the identifiable brooches there were five pin and bow fragments included with the assemblage (not illustrated). All the items were copper-alloy and in good or reasonable condition except SF42 which was badly corroded and in poor condition.

### The Colchester Derivatives

1. The head of a bow brooch with long, 30mm, cylindrical wings enclosing the axis bar for a hinged pin (now missing). The decoration was obscured but there was a central ridge running down the bow. The brooch falls into Hull's T-shaped type which has been dated to the late-first or early second century, perhaps as late as 150AD. The style is typical for the south of England and similar brooches have occurred at Exeter

(Mackreth 1991 233 fig. 100.9) and Ilchester (Mackreth 1982 241 fig.115.5).SF11 Period 2

2. Semi-complete bow brooch with small cylindrical wings enclosing axis bar and hinged pin (a stub of which remains). The centre of the bow is decorated with a diamond comprised of two triangular panels into which enamel had been set. Incised lines cross the centre of the bow and run down to the diamond. The base of the bow has a simple, small, catchplate with slight protruding foot. A close parallel was found at Marshfield, Wiltshire (Mackreth 1985 137 fig.12) although, that example had a chain loop. This may also have had a chain loop now missing. A typical Southwest form, SF19 dates from the late-first tot he mid-second century. SF19 Period 2
3. Badly corroded bow brooch. Similar to SF11 with cylindrical wings enclosing an axis bar for a hinged pin. The bowis broad across the wings and tapers to a small, narrow, foot and catchplate which may have been pierced. No other decoration was visible due to the poor condition of the brooch. As with SF11 the brooch can be placed with Hull's T-shape type with similar examples from Ilchester (Mackreth 1982) and Exeter (Mackreth 1991). Late-first to mid-second century. SF42 Period 2

### Penannular Brooches

4. A complete penannular brooch with missing pin. The brooch is an ovulate ring with knobbed and ridged terminals one of which is larger than the other. The terminals resemble flower buds with incised line decoration on the knobs. The brooch matches Fowler's Type A3 dated to the first to third century. Similar brooches have been found at Hod Hill (Brailsford 1962, 12 fig.11 E2) and Maiden Castle (Wheeler 1943, 264 fig.86.2), although, the latter was dated by Wheeler to the first century BC. SF31 Period 3
5. A complete, small, approximately 30mm in diameter, penannular brooch with broken pin. The pin is roughly folded around a near circular ring decorated with incised lines to imitate a spring or rope. The terminals are doubled back on themselves in the style of Fowler's D-Type. SF59 can be placed in Fowler's D2 class which has a long date range between the first and fourth century. Close parallels have been found previously at Ilchester (Mackreth 1982, 247 fig.117.29) and Camerton, Somerset where a similar brooch was dated 150–200 AD (Wedlake 1958, 232 fig.54.81). Other similar examples are known from Maiden Castle—dated 25–50 AD (Wheeler 1943 264 fig.86.8) and Hod Hill (Brailsford 1962, 12 E2 & E5 pl. VII). SF59 Period 2

## BONE PINS

*Rod Burchill*

The assemblage included 12 complete or part complete pins. With the exception of SF87 all the pins were associated with late-3rd or 4th century pottery. None of the pins were unusual, all fitted into Crummy's classification of Romano-British bone pins (Crummy 1979) and all were types previously recorded from the Ilchester area (Leach 1982 259 Fig.127.1–35).

6. Incomplete. Poorly finished ovoid head decorated with three double concentric circles. Length 67mm. Crummy Type 3. 294 SF88 Period 3
7. Incomplete. Multi-faceted swollen-waisted shaft with spherical head. The head has

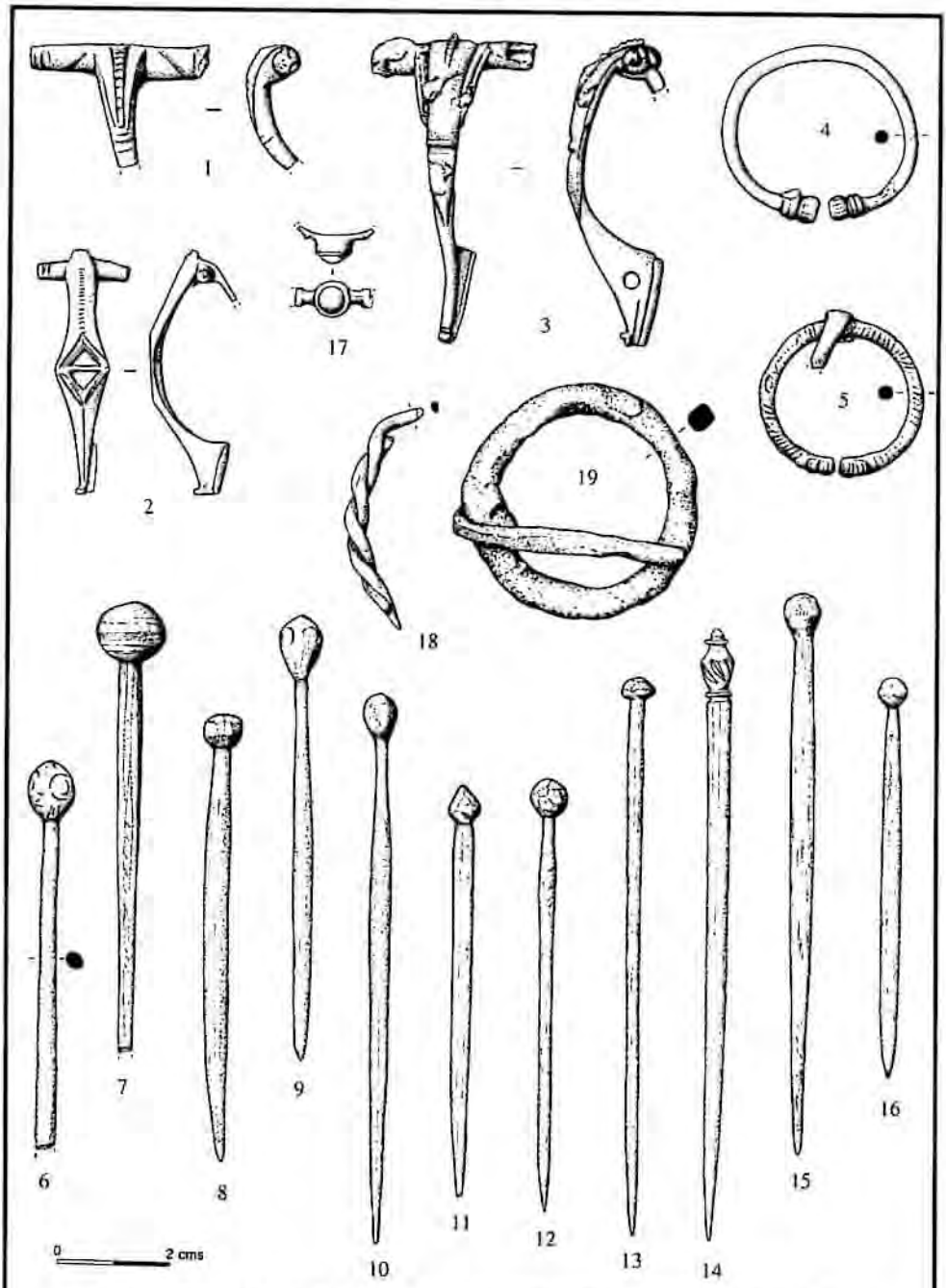


Fig 12 Artefacts of copper alloy, iron and bone

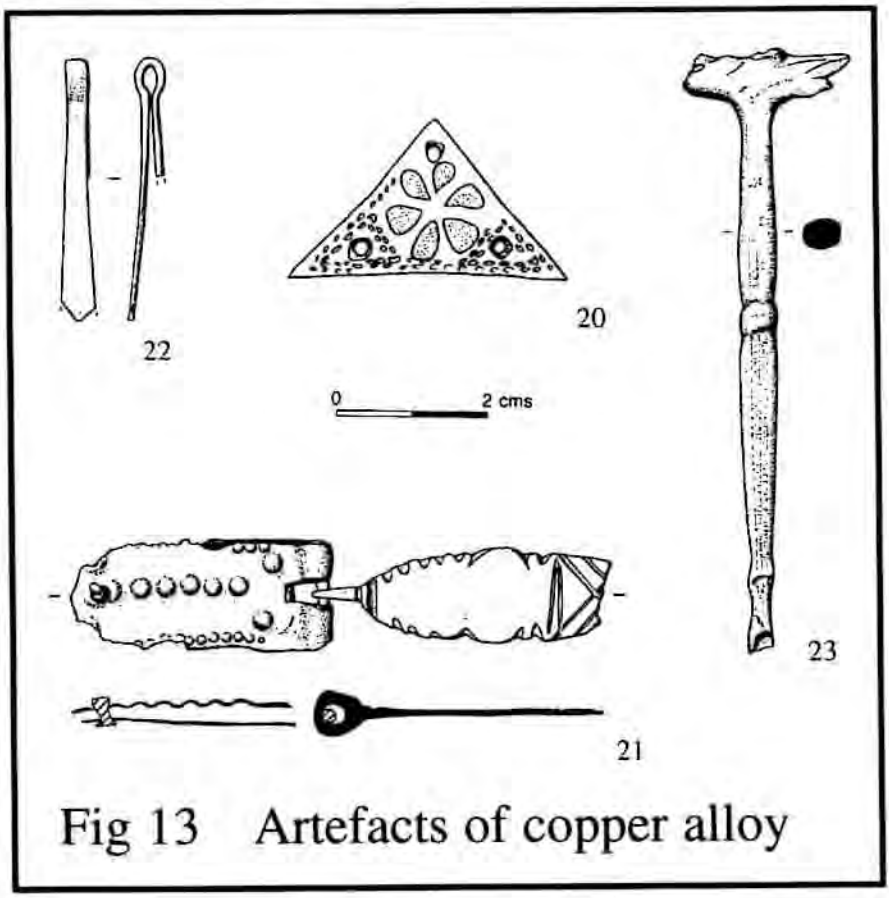


Fig 13 Artefacts of copper alloy

Fig. 13

been carved separately and is detachable. Length 79mm. Similar to Crummy Type 3. 459 SF52 Period 3

8. Swollen-waisted pin with small spherical head. Length 79mm. Crummy Type 3. 294 SF74 Period 3
9. Swollen-waisted pin with oval head decorated with four circles. Length 79mm. Crummy Type 3. 294 SF75 Period 3
10. Swollen-waisted pin with ovoid head. Length 98mm. Crummy Type 3. 294 SF69 Period 3
11. Tapered-shaft pin. Ovoid head with groove below. Length 73mm. Possibly an unfinished Crummy Type 2. 294 SF73 Period 3
12. Swollen-waisted pin with spherical head. Length 77mm. Crummy Type 3. 459 SF53 Period 3
13. Slender taper-shafted pin with reel shaped head. Length 100mm. Crummy Type 6. 459 SF58 Period 3
14. Fine tapering shaft. Grooved and slashed conical head. Length 110mm Crummy Type 5. 459 SF57 Period 3

15. Swollen-waisted pin. Spherical head. Length 100mm. Crummy Type 3. 508 D+SF86 Period 3
16. Small, swollen-waisted pin with spherical head. Length 72mm. Crummy Type 3. 511 SF86 Period 3

RINGS

17. Part of copper-alloy finger ring with raised circular bezel inset with a green glass bead. The band is narrower at the shoulders. 512 SF83 Period 3

BRACELETS

18. Fragment of a two strand, twisted wire bracelet. The wire has been flattened internally. Copper-alloy. Probable diameter 50–55mm. See Leach (1982 248 Fig.118.50,52,53,55). Leech (1982 113 Fig.79.2) also Stead and Rigby (1986 125). 304 SF62 Period 2

BUCKLES

19. A plain iron ring and pin with simple wrap-round fitting. Diameter 40mm. Probably medieval: Associated with 14th century pottery 205 SF2 Period 5 (?)

MOUNTINGS

20. Triangular copper-alloy mount. Decorated with a central flora motif inlaid with coloured glass and parallel lines of elliptical indentations. The mount has a rivet hole at each terminal. Length 37mm × 21mm high. 382 SF27 Period 5

MISCELLANEOUS

21. Double-leaf, copper-alloy, strap-end and tongue. The strap-end is made from a folded single sheet of copper-alloy, fixed with a single iron rivet and decorated with a series of pellets. The fold retains an iron pin to which is attached a tongue cut from a single sheet of copper-alloy and decorated with incised lines and a serrated edge. 205 SF78 Undated but probably Romano-British

*Toilet, surgical and pharmaceutical instruments* (Fig. 13)

22. Plain, undecorated, copper-alloy tweezers, narrow near suspension loop and flaring towards the tips. Length 36mm × max.5mm. Kenyon Type A (Kenyon 1948). For similar tweezers see Allason-Jones and Miket (1984 142 Fig.3.3436 & 3.3444), Leech (1982 115 Fig.80.26), Leach (1982), Stead and Rigby (1986 130 Fig.57.389 392). 438 SF41 Period 2
23. Beaded and faceted copper alloy handle with double 'fishtail' head. Traces of a heavily debased silver plating. This objects function is uncertain, however, it may be a stylus or part of a surgical instrument. Length 80mm. 316 SF17 Period 2

*Tools (including coins) and weapons* (Fig. 14)

Spoons and Ladles

24. Bone spoon. Elliptical-shaped bowl with an incised 'X' on reverse. The stem is stepped and decorated at the neck in the manner of metal spoons (Leech 1982 135 Fig. 94.14–15). Length 52mm. A similar but more ornate example was found at Marshfield (Geep 1985 189 Fig.60.8), previous bone spoons from Ilchester had been rather plain (Leach 1982 259 Fig. 128.55). 495 SF65 Period 3
25. Copper-alloy spoon. Shallow mandolin-shaped bowl with pointed circular section handle and keel and disc junction. The bowl and handle appear to have been case in one piece. Length 113mm. See Allason-Jones and Miket (1984 142 Fig.3.337), de la Bedoyere (1989 102 Fig.60.c) and Leech (1982 115 Fig.81.34–35). 508 SF67 Period 3
26. Fragment of copper-alloy (probably silvered bronze) spoon handle. Round section handle becoming square at neck end. Length 44mm 515 SF82 Period 3
27. Iron ladle. Round, deep bowl with plain handle. The rectangular section handle is flattened at the neck with a two pronged flesh-hook at the opposite end. Length 305mm, bowl diameter 90mm. Ladles lacking a flange between bowl and handle are less common than flanged examples. Such ladles often have a spiral twist to the handle unlike the present example. Flangeless ladles frequently terminate in a flesh-hook (Stead and Rigby 1986). Other examples come from Fishbourne (Cunliffe 1971 II, 134 Fig. 60.55), Baldock (Stead and Rigby (1986 155 Fig.67.544) and Caistor-by-Norwich (Norwich Castle Museum). SF109 was found as part of grave fill 329. The ladle lay beneath the articulated skeleton and the flesh-hook had become wedged between two of the lower vertebrae. 329 SF109 Period 3

Knife

28. Iron blade fitting with soft white metal attachment and two rivets. The white metal (?handle) contains copper corrosion products. The fitting appears to be in three layers with the central layer turning or folding on the larger rivet. Probably a clasp-knife. Such knives are known from Romano-British contexts although they would appear to be rare. Guy de la Bedoyere in his Finds of Roman Britain (1989) describes a rather ornate example (fig.60.e) citing Wheeler (1930) as his source. 558 SF(?) Period 3

Awl

29. Bone awl. Similar awls have been recorded from other Ilchester sites (Leach 1982 259 Fig.128.38). Length 79mm. 369 SF25 Period 3

Counter

30. Bone counter. Diameter 17mm 516 SF85 Period 3

Missile

31. Roughly formed torpedo-shaped object of fired clay. The ends are slightly flattened.

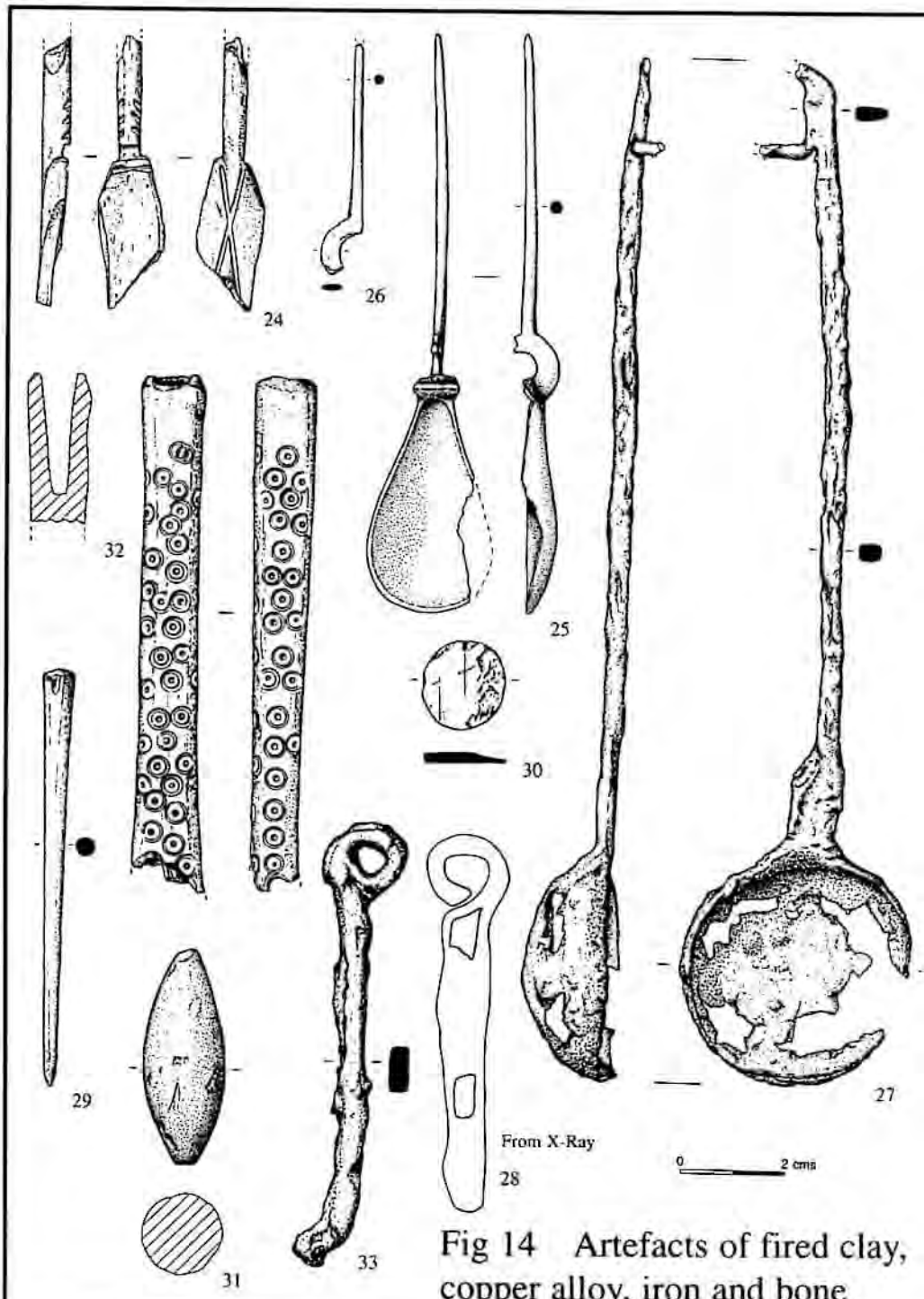


Fig 14 Artefacts of fired clay, copper alloy, iron and bone

Length 40mm × 19mm Weight 10.0g. The function of the object is uncertain, however, it is probably a sling-shot. Similarly shaped but slightly larger and cruder versions of SF20 recovered from Solsbury Hill, Bath (Bristol City Museum) have been identified as sling-shots of probable 1st century date. 207 SF20 Period 3

MISCELLANEOUS

32. Decorated bone with squared socket at one end. All smooth surfaces are covered with randomly spaced, drilled ring and dot decoration. Possibly a handle or practice piece, however, a similar bone found at Nettleton, Wiltshire was described by Wedlake (1982 199 Fig.82.3) as being used to apply decoration to pottery. 205 SF7 Undated
33. Iron eyelet spike. Rectangular section spike folded at end to form a loop. Length 80mm C 15mm wide. See Leech 1982 Fig.86.57–59 294 SF(?) Period 3

## THE COINS

*R. Clarke*

The small number of coins recovered were primarily in poor condition and typical of previously recorded assemblages from Ilchester with the majority being of the 3rd and 4th centuries. Details of the recovered coins are shown in Table 9.

The collection is generally unexceptional apart from a struck bronze stater of the Durotiges from context 270, SF10. Coins of this type were unknown until a hoard of 677 Ancient British coins were found, including 318 of cast bronze in January 1905 at Holdenhurst near Christchurch, Hants. (Mack, 97). The Durotriges occupied thew area to the west of the Atrebates and Regni, which included parts of West Hampshire, Dorset, Somerset and Wiltshire (Mack, 96). These coins were probably cast in a clay mould, the mould being made by impressing an already existing coin into the soft clay. The chief element in the design of the obverse is a Y-shaped object derived from the curls and the fillet containing the hair on the head of Apollo. The original reverse design of a horse has degenerated into a number of pellets and straight lines representing the legs (Mack, 97). The native coinage of the Durotriges cannot have been called in by the Romans, and the evidence of this find as well as finds at the Hengistbury Head excavations in 1911 prove that these base metal coins were kept in circulation with Roman coins for some considerable time after the invasion of Claudius (Mack, 99).

Two similar coins to SF 14, the AE 3/4 Constantinopolis type of Constantine I, were found during excavations at Limington Road in 1981 (Leach, table ii) and others from excavations at Little Spittle in 1975 and Kingshams Field in 1974. A similar coin of Carausius to the PAX type found in this excavation (SF 80) was found in the Church Street excavations of 1968 (Leach, table iii) and five others turned up at Kingshams Field in 1974 (Isaac, 236).

Two similar coins to SF 61 and 79, the AE 4 Gloria Exercitus type of Constantine I, were found during excavations in the rectory gardens at the South Gate in 1969, and two others from Limington Road in 1981. Excavations on the east side of Church Street in 1968 produced a further seven Gloria Exercitus type coins and a copy was found in 1982 (Leach, tables i–iv). One was also found at excavations at Little Spittle in 1975 (Isaac, 239).

Coins of Gallienus are recorded in a 3rd century hoard from Heave Acres in 1980 (Leach, table v) and another was found in the 1969 South Gate excavation (Leach, table i). Constantinian coins have been found on all excavation sites in Ilchester.

The coin-shaped objects from Context 557 are somewhat enigmatic. Several of them have

Table 9. Roman Coins From Excavations In The Great Yard 1995

| Issuer | Reverse | Mint | Denomination | Date | Ref. | Find No. | Context | Period |
|---|---|---|---|---|---|---|---|---|
| Uncertain | | ? | as | 1st century | | SF 108 | 521 | 3 |
| Gordian III | Uncertain female figure | ? | AE Sestertius | 238–240 | | SF 13 | u/s | |
| Gallienus | Panther | Rome B in ex | AE Antoninianus | 253–268 | RIC 229 | SF 70 | 498 | 3 |
| Carausius | PAX AVG | ? | AE Antoninianus | 287–293 | RIC 475 | SF 80 | 497 | 3 |
| Constantine I | Illegible | T in ex | AE 3 | C330 | | SF 71 | 497 | 3 |
| Constantine I | Illegible | ? | AE 3 | 330–333 | | SF 16 | 304 | 3 |
| Constantine | GLORIA EXE Two soldiers & One standard | ? | AE 4 | | | SF 61 | 324 | 4 |
| Constantine I | Victory on prow with shield & spear | Const. SMTSD in ex | AE 3 | 330–333 | RIC 188 | SF 14 | 294 | 3 |
| Constantine I | Two soldiers & two standards | Aries | AE 3 | C330 | RIC 341 | SF 79 | 497 | 3 |
| Uncertain | Illegible | ? | | 4th century | | SF 72 | 497 | 3 |
| Uncertain | Illegible | ? | AE Reduced follis | Early 4th century | | SF 91 | 557 | 3 |
| Uncertain | Emperordragging captive | ? | AE 3 | Mid 4th century | | SF 89 | 557 | 3 |
| Uncertain | Illegible | ? | AE 3 | Mid 4th century | | SF 90 | 557 | 3 |
| Uncertain | Standing figure | ? | AE 4 | Mid 4th century | | SF 98 | 557 | 3 |
| Uncertain | Illegible | ? | | 4th century | | SF 99 | 557 | 3 |
| Uncertain | Illegible | ? | | 4th century | | SF 100 | 557 | 3 |
| Uncertain | Illegible | ? | | 4th century | | SF 103 | 557 | 3 |
| Imitation | Illegible | ? | | 4th century | | SF 96 | 557 | 3 |

the fabric of mid-4th century AE 4 coins. However a number are of a shape and thickness that would argue against their being coins unless they are barbarous local imitations of the mid-4th century. Unfortunately the condition of all the pieces from this context precludes a more precise identification.

*Religious, funerary and votive objects*
No artefacts that could be properly attributed to these categories were recovered from the excavations with the exception of SF 109, the Iron Ladle described above sealed with burial F329 and which must be considered a grave good. Details of the human burials are described in a separate report. Of the three recovered adult inhumations two showed evidence of burial within wooden coffins the nails of which survived and are catalogued in the archive.

*Buildings, materials and accessories*
Building materials in the form of demolition rubble was widely distributed across the site and particularly evident within many of the more substantial pits. Most comprised local lias although ham stone (often burnt) was also readily evident. Fragmentary clay roof and flue tile was particularly common although evidence for the use of lias and pennant sandstone roof tile was also recovered. A small quantity of painted wall plaster or mortar was identifiable together with a number of tesserae however none were recovered *in situ* and the weathered quality of much the material rendered much of it unsuitable for illustration.

Fragments of badly corroded iron and many iron nails of all periods were recovered throughout the area of the excavation but form no cohesive pattern and all are catalogued in the archive.

*Industrial evidence*
With the exception of gravel extraction, industrial activity on the site would appear to have been primarily related to agricultural production. Several fragmentary querns were recovered the most notable being a substantial but only partially complete example utilised as the base of an apparent corn drier or oven F409. This has not been further analysed in any detail and has not been illustrated.

## THE POTTERY

*R. Burchill*
The excavations produced a total of 5,322 pottery sherds weighing 80.900kg. Of these, 368 sherds (8.3%) weighing 4.865kg were unstratified and discounted for identification purposes. The assemblage was quantified by weight and shard count and was macroscopically scanned to identify the principal fabric types present. Where necessary individual sherds were checked by the use of a hand lens (×10). All data was recorded on pro forma record sheets and is maintained in the site archive. The pottery was provisionally dated by comparison to the Ilchester Pottery Type Series (Leach 1982).

The pottery ranged in date from 15 sherds of the early–mid Iron Age to 74 sherds of the medieval period (15th century). A single shard of possible Bronze Age date was also recovered. The bulk of the assemblage was Romano-British with a clear emphasis on the latter part of the period. However there was a distinct chronological gap in the ceramic sequence with no material recorded for the immediate post-Roman, Early and Middle Saxon periods. The medieval wares included a small number of possible pre-Conquest sherds but the group comprising primarily 12th and 13th century courseware has an end date no later than the 15th century.

In general and with the exception of the Samian pottery which is the subject of a separate

report, the assemblage is unremarkable. Whilst it adds tot he corpus of information relating to Ilchester as a whole, in view of the already published material none of that recovered during the Great Yard excavations is illustrated in this report.

### Summary of Fabrics and Forms

The Iron Age pottery was not examined in detail, however, all appeared to fall into the Ilchester prehistoric fabrics A and B. Within the Romano-British group Black Burnished and Greywares dominated. The group also included Samian, both plain and decorated, Oxford and New Forest wares and a small number of sherds from the Nene Valley. The remainder of the assemblage consisted of local coarse wares and ?copies: these were not individually classified during the assessment. Black Burnished Wares accounted for 46% of the assemblage. Forms included bead-rimmed jars, beakers and plain-sided, flanged rim and samian-imitation bowls. The Greywares (17%) comprised two main fabrics—Ilchester Fabrics *Gi* and *Gii*—along with smaller numbers of fabric *CW* and a single sherd of *Giii*. Forms included jars, plain and indented beakers and bowls. Products of the Oxford kilns (2.6%) consisted of colour coat fabric *Ccviii* & *Cciv*, Parchment Ware *Pi*, and mortaria *Mii*. The New Forest pottery industry was represented by fabric Ccix (0.6%); always fired to a stoneware with lustrous purple/brown colour coat. The assemblage included 7 sherds of a Nene Valley color coat (Ilchester fabric *Cci*) and a shell tempered ware (*ST*) attributed by Leach (1982) to the 4th century. Other Romano-British fine wares included Ilchester fabrics *Cciii*, *CCv* and *CBi*. Samian, both plain and decorated accounted for 2.9% of the assemblage: this is the subject of a separate report.

The medieval wares include quartz, flint, shell and limestone tempered coursewares and Donyatt glazed jugs. The sherds were very fragmentary and none were diagnostic.

## THE SAMIAN WARE

*D. R. Evans*

The Samian came from a number of distinct features which in general did not form part of any chronological or structural sequence. The limited amount of Samian from these excavations reflects these factors and no attempt has been made to give either a qualitative or quantitative analysis of the recovered material. The character of the material however, in particular the high proportion of decorated Samian to undecorated from this limited collection makes it worthy of illustration thus adding to the group of material from Ilchester as a whole.

Although there are a small number of Neronian pieces and where present, form 29 is usually to be found in small fragments, the balance of the collection dates from the later part of the 1st century until the later half of the 2nd. Only two sherds were dated to later than AD180 and one of these had an extended life as a counter. A small number of riveted vessels were also present in the collection.

| No | Description | Context | Site Period |
|---|---|---|---|
| 1 | South Gaulish Form 37 La Graufesanque AD70–85 A large shard from the lower zone of a vessel from a poorly cleaned mould. Panelled design. Only the lower parts of the figures are present and only the gladiatorial scene to the right of a tripod is clearly visible. | u/s | |

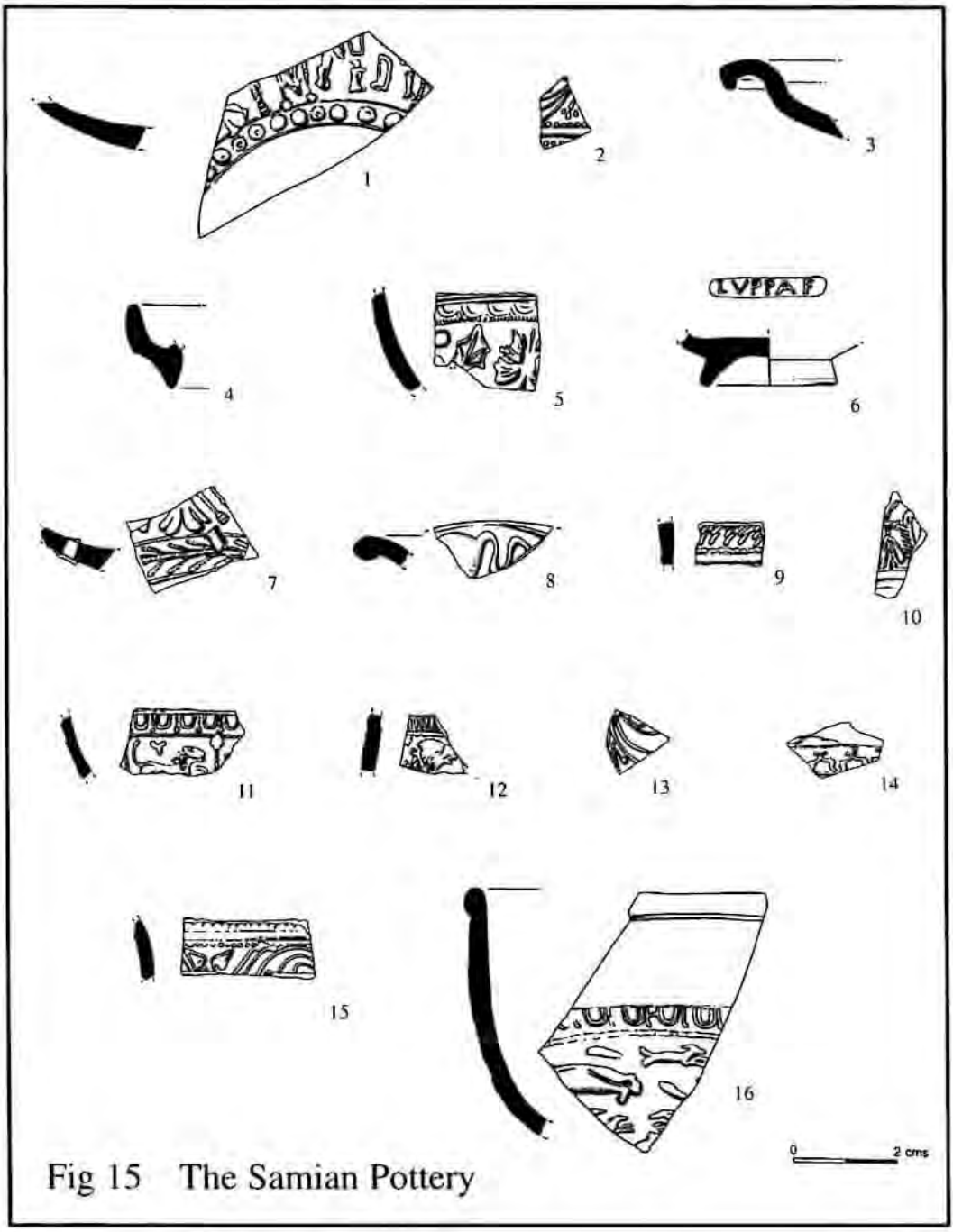


Fig 15 The Samian Pottery

Fig. 15

| | | | |
|---|---|---|---|
| 2 | South Gaulish Form 29 La Graufesanque. Flavian. Body shard | 205 | |
| 3 | Central Gaulish Lezoux. Unusual vessel, probably a crater Rim/flange cAD110/115–180. Burnt | 205 | |
| 4 | Central Gaulish Lezoux. Possibly a wide bowl related to form 31. Rim cAD110/115–180. | 205 | |
| 5 | South Gaulish Form 37 La Graufesanque. Badly worn body shard with traces of a rivet. Flavian/Trajanic. | 205 | |
| 6 | Central Gaulish Form 33 Lezoux. Base stamped LVPPA F(ecit) 2nd century | 254 | Period 3 |
| 7 | South Gaulish Form 37 La Graufesanque. Riveted body shard. Late Flavian | 270 | Period 2 |
| 8 | Central Gaulish flange possibly related to form 36. Le matres de Veyre. | 280 | Period 2 |
| 9 | South Gaulish Form 29 La Graufesanque. Body shard. Flavian | 308 | Period 3 |
| 10 | South Gaulish Form 29 La Graufesanque. Body shard. Flavian | 336 | Period 3 |
| 11 | South Gaulish Form 37 La Graufesanque. Body shard showing panel containing a lion and small leaf frond. Flavian | 412 | Period 2 |
| 12 | South Gaulish Form 29 La Graufesanque. Body shard. Flavian | 431 | Period 2 |
| 13 | South Gaulish Form 29 La Graufesanque. Body shard. Mid-late 1st century | 438 | Period 2 |
| 14 | Central Gaulish Le Matres de Veyre. Form 37 Dolphin motif of Drusus 1. Trajanic | 502 | Period 3 |
| 15 | South Gaulish Form 29 La Graufesanque. Body shard. Flavian | 510 | Period 3 |
| 16 | Central Gaulish Form 37 Lezoux. Two joining shards. Profile of freestyle vessel showing a hunting scene. Possibly by Cinnamus. Hadrianic. | 512 | Period 3 |

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