# COLCHESTER ARCHAEOLOGICAL REPORT 2: 

The Roman small finds from excavations in Colchester 1971-9


NINA CRUMMY

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with contributions from
D G Buckley, Philip Crummy, Elizabeth Fowler, Patricia Galloway,

Stephen Greep, Mark Hassall, Dr Martin Henig, Hilary Major, Dr Graham Webster, and Dr J P Wild

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Gold object
Miscellaneous iron objects
Miscellaneous lead objects
Miscellaneous lead objects
Miscellaneous bone objects
Miscellaneous bone objects
Antler object
Frit object

## INTRODUCTION *

This report, the second in the series entitled Colchester Archaeological Reports, deals with the Roman small finds from excavations and watching briefs undertaken in Colchester between 1971 and 1979 by the Colchester Archaeological Trust (formerly Colchester Excavation Committee). The examination of the small finds was begun in spring 1976 and the Roman section was completed in autumn 1981. The work has had to be done largely without the benefit of the definitive site phasing. The small finds, with full archival details, are in the Colchester and Essex Museum.

In all, more than 14,800 small finds of all periods were recorded during nine years of continuous excavations. In order to deal with such a large number of objects, the classification and methods of recording and storing small finds have been refined over the years. The methods now in use in Colchester are described in some detail in the hope that they may be of some help to finds assistants elsewhere. Indeed, it is hoped that this volume will prove to be a useful guide for finds assistants as a small finds report embracing samples of most types of object likely to be found on Roman sites. Despite the large number of finds from Colchester, these are, of course, from mainly urban contexts and so there is for example a dearth of agricultural implements here. The strength of this volume is, however, provided by the inclusion of groups of commonly-found objects from dated contexts, enhanced by treating the small finds from several large sites as one collection. This has enabled some typologies to be established. Some economies of publication have been made, and generally only the


Fig 1 Colchester. The sites marked are 1: Lion Walk; 2: Balkerne Lane; 3: Cups Hotel; 4: Butt Road; 5: Middleborough; 6: Long Wyre Street; 7: Ma/don Road; 8: Inner Relief Road site A; 9: Inner Relief Road site B; 10; Inner Relief Road site C; 11: Inner Relief Road site D; 12: St Helena's School; 13: Castle Gardens; 14: Dutch Quarter
most complete examples of the various types of object have been illustrated. Exhaustive lists of parallels for objects have not been given, but rather reference made to a specialist work or a published collection of similar finds.
A single series of catalogue numbers has been used for all the objects, whether published in the printed text or on microfiche. All the illustrated objects are described in the printed text, while the unfigured pieces are generally to be found on fiche. Exceptions are where descriptions of objects have been supplied by a specialist contributor (for example, the quernstones and the textile fragments) or where it has been felt desirable to keep informationon relatedfinds together; for example, for the Balkerne Lane area N worked bone, the catalogue entries for unfigured pieces are given in the printed text.
The format and the contents of the catalogue entries are best explained by the following example:
2945 SF LWC 3434(C), J1106 F367. Context. Date or phase code. Description of object.

| 2945 | catalogue number |
| :--- | :--- |
| SF LWC 3434 | small find number with <br> three-letter site code |
| (C) | present if object conserved |
| 11106 | site find number, prefixed <br> by an area code in the cases <br> of the larger sites, ie LWC, <br> BKC, BUC, and MID |

F367 feature number; layer number
if prefix is L; grave number if prefix is G; absent if the context is not a feature or layer
Copper-alloy objects are described thus throughout the report in the absence of analytical data to distinguish between the different alloys used. Similarly, where an object has been coated with either tin or possibly silver the term 'white-metal' is used. Where an object is described as silver it has been identified as such by analysis.

## The sites 1971-9 (Fig 1) <br> by Philip Crummy

In some instances the dates of the phases given below may need to be refined or slightly modified in the light of present and subsequent research on the associated pottery and other finds. Should any changes prove necessary, these will be set out where appropriate in future volumes of $C A R$ and (it is hoped) summarised in the last volume of the current series, which is expected to be about the Roman pottery. None of the contexts of the objects as set out in the catalogue should require alteration.

[^0]For each site or area within a large site, there are three series of consecutive numbers, namely find numbers, feature numbers, and (since 1973) layer numbers. All groups of finds are given a find number. This is in effect a context number so that all finds from the same context share the same number. Features and layers in which there were finds have at least one find number assigned to each of them.

Readers should bear in mind that for most cases the date of the context provides only a terminus ante quern for the date of loss or deposition of the object concerned. This is because most finds have been redeposited in antiquity, perhaps several times, as a result of various disturbances. Objects found in their primary contexts are rare. Most of these are the grave goods from the Butt Road cemeteries, although also included are some objects found on floors or in the overlying occupation debris (fine trampled soil) where this occurs (eg the steelyard 2508 which lay on the floor of a house destroyed during the Boudican revolt). The proportions of finds from secondary contexts and the factors affecting these proportions are difficult to quantify. Of interest here is a group of late Saxon to early medieval pits excavated on the Cups Hotel site. The contents of these features have been examined with problems of re-deposition in mind and for each pit the Roman sherds were found to outnumber the later pieces by up to ten times (Crummy \& Terry 1979, 52).
Future volumes of the series Colchester Archaeological Reports will contain descriptions of the structures and associated deposits from the sites below. These reports will list the small finds which can be ascribed to the structures found on the sites (mainly nails) and also describe objects not dealt with in detail in this catalogue (eg junction-collars from water-mains found in situ, and objects associated with metal-working).

## Lion Walk 1971-4 (LWC)' <br> <br> Sites A \& R

 <br> <br> Sites A \& R}| Period 1 | c $44-$ c $49 / 55$ | military defences and metal |
| :---: | :---: | :---: |
|  |  | working |
| 2 | c 49/55-60/1 | demolition of defences and construction of first street |
| 3 | 60/1-c275 | no substantial structures of this period excavated, mainly metalled surfaces of street |
| 4a, b, \& c Post-Roma | $\text { c } 275-c 400+$ medieval \& late | houses (three phases) |
| Site B |  |  |
| Period 1 | c $44-\mathrm{c} 49 / 55$ | military defences and via sagularis |
| 2 | c 49/55-60/1 | houses |
| 3 | 60/1-c80/90 | houses |
| 4 | c 80/90-c 100 | pits and dump |
| 5 | c $100-c 350$ | houses and pits |
| Post-Roman | medieval and later | pits and trenches |
| Sites C \& | Q |  |
| Period 1 | c 44-c $49 / 55$ | military buildings and street |
| 2 | c $49 / 55-60 / 1$ | military buildings reused for new colony, also garden |
| 3a | 60/1-c80? | houses and garden |
| 3b | c 80? - c 100(150) | houses |
| 4 | c 150-400+ | house (Building 19) |
| Post-Roman | early medieval and | pits and trenches |

Site L

| Period 1 | c 44-c 49/55 | military buildings and street |
| :---: | :---: | :---: |
| 2 | c 49/55-c 85 | garden |
| 3a | c 85-c 90 | building |
| 3b | c 90-c 100(150?) |  |
| 4a | c 150-330/5+ | two phases within Room 1 of house |
| 4b | $330 / 5+-400+$ | (Building 19) |
| 4(1) | c 150-c 200 | three phases within Room 2 of house |
| 4(2) | c 200-c 250 | (Building 19) |
| 4(3) | c 250-c 400+ |  |
| 5 | early to late medieval | pits and trenches |
| 6 | late medieval | lime kilns |
| 7 | late medieval to ?16th century | pits |
| 8 \& 9 | ?16th century 1972 | almshouses |

Sites K \& T

| Period 1 | c 44-c 49/55 | military buildings |
| :---: | :---: | :---: |
| 2 | c $49 / 55-60 / 1$ | military buildings reused for colony |
| 3 | 60/1-c 100 | house |
| 4 a \& b | c 150-c $400+$ | house (Building 19) (two majo structural phases) |
| Post-Roman | Anglo-Saxon | hut |
| Post-Roman | early medieval and later | pits and trenches |
| Site D |  |  |
| Roman | c 3rd century or later | destruction debris of house |
| Post-Roman | early medieval | pits and trenches |
| Post-Roman | medieval and later | house(s) |

Si-te.E

| Roman <br> Post-Roman <br> Post-Roman | Flavian at earliest <br> medieval and later <br> 16 th/17th century | street <br> pits and trenches <br> houses |
| :--- | :--- | :--- |
| Site G |  |  |
| Roman | c 3rd century or |  |
| later |  |  |$\quad$| street and destruction |
| :--- |

Sites J, H, \& P

| Period 1 | c 44-c 49/55 | military building(s) |
| :---: | :---: | :---: |
| 2 | c 49/55-60/1 | house and street |
| 3 | $\begin{aligned} & \text { c } 60 / 75- \\ & c \quad 100 / 150 \end{aligned}$ | house and street |
| 4a | c150-? 200 | house and street |
| 4b | ?200-c 275/300 |  |
| 5 | c 300-c 400+ | nature of activity/occupation unclear |
| Post-Roman | Anglo-Saxon | hut |
| Post-Roman | early medieval and later | lime pit, pits and trenches |
| Site M (section across rampart behind town wall) |  |  |
| Street 1 | c 100-c 125 |  |
| Street 2 | c 100-c 150 |  |
| Street 3 | c 125-c 150 |  |
| Street 4 | c 150 |  |
| Rampart 1a-e | c 150 |  |
| Rampart 2 | c 250/300 |  |

## Balkerne Lane 1973-6 (BKC) ${ }^{2}$

The following are the areas at Balkerne Lane which produced finds catalogued in this report: Areas A, B, C, D, E, G, H, J, K, M, N, P, S, T, and V. These share the following phases:
Period 1a c 43 - c 49 military defences, street and

| 1b | c 49 - c 50/55? | Icanabae associated with metal-working street, pits and Icanabae or colonial buildings associated with metal-working |
| :---: | :---: | :---: |
| 2 | c $50 / 5$ ? - 60/1 | houses and street |
| $3 \mathrm{a} \& \mathrm{~b}$ ? | 60/1-c 75/80 | houses and street |
| 4 a | c 75/80-c 80/85 | houses and street |
| 4 b | c $80 / 85$ | houses and street |
| 4 c | c 80/85-c 100 | houses, street and ?aqueduct |
| 4d | c 100-c 125 | houses, street, temple(s) and ?aqueduct |
| 5a | c 100/125-c 150 | houses, town defences, street and temple(s) |
| 5b 1 \& 2 | c 150-c 250 | houses, town defences, street and temple(s) |
| 5 C | c 250-c 300 | houses, town defences, street, temple(s) and allotment(s) |
| 6 | c 300-400+ | pits, street and defences |
| Post-Roman | c 17th century and later | pits |

(Also 'late Period 6 \&/or Anglo-Saxon' refers to the topsoil which accumulated in the town ditch for many centuries beginning in the late Roman period or immediately afterwards. With one Anglo-Saxon exception (CAR 1, 17, fig 21), all the finds in this context appear to be Roman.)
Cups Hotel 1973-4 (CPS) ${ }^{3}$
$\left.\begin{array}{lll}\text { Period } 1 / 2 & \text { c } 44-60 / 1 & \text { street, house } \\ 3 & \begin{array}{ll}60 / 1-c 2 n d\end{array} & \text { house } \\ & \text { century }\end{array}\right)$

## Butt Road 1976-9 (BUC) ${ }^{\text {a }}$

| Period 1 | 2nd century - |
| :--- | :--- |
|  | c 320 |
| 2 | c $320-$ c 450 |
|  | (at latest) |

cemetery (north-south graves), pits and ?well
cemetery (east-west graves),
?church and oven
Post-Roman modern pits and trenches
Middleborough 1978 (MID) ${ }^{5}$


| 2 | c $49 / 55-\mathrm{c} 75$ | streets, drain and water-main |
| :---: | :---: | :---: |
| 3 | c $75-c 100$ | streets and house |
| 4 | c 100 -c 150 | streets and house |
| 5 | c 150 -late 3rd century | streets and houses |
| 6 | 4 th century | streets and houses |
| Post-Roman | early medieval and later | houses, robber trenches and pits |

The dates of the contexts for finds from the following sites (all small) are given in the catalogue in the appropriate entries:

Maldon Road 1971 (MRC) ${ }^{7}$
Inner Relief Road
Site A 1972 (IRA)
Site B 1972 (IRB)

Site C 1973 (IRC) ${ }^{\circ}$
Site D 1973 (IRD)
St Helena's School 1975 (HEC)'。 Romano-Celtic temple and adjacent house
Dutch Quarter 1975 (DTC) ${ }^{n}$ Roman and later houses almost entirely post-medieval

## What are small finds?

'Small find' is a traditional blanket term often used to describe an excavated object which needs more detailed initial recording, more detailed description in publication, and possibly a more controlled environment for storage than, for example, pottery sherds or fragments of animal bone. In the past pbjegts found in Colchester and recorded as small finds have included pieces not strictly thus described, such as terra sigillata stamps, whole pots, glazed tiles, or slags. This to some extent aided the retrieval of objects for specialists, but mainly had an adverse effect by splitting- single groups of finds into two (notably terra sigillata), thereby doubling problems of storage and retrieval. Moreover, the number of small finds to be dealt with when post-excavation work began was thus artificially increased.
Objects now treated as small finds, and therefore included in this volume, are artefacts of metal, bone, pipeclay, glass, stone or mineral, tile, and pottery lamps. Finely worked stone, but not rough-hewn building stone, is classed with the small finds. Iron nails are not entered among the small finds, although they are catalogued in this volume, because they are so numerous. They are stored as a separate class of find.

The table below shows the small finds from the major Roman sites in Colchester broken down by

|  | (a) | (bj <br> Pre- and <br> post-Roman <br> objects | fc) <br> Published <br> Roman <br> objects | (d) <br> (not coins) <br> (not coins) | or not <br> included | (e) <br> Temporary <br> recordings <br> and stolen <br> objects |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Site | Coins <br> no of <br> objects | of all <br> periods | (not |  |  |  |
| Lion Walk | 4348 | $16 \%$ | $21 \%$ | $16.5 \%$ | $22.5 \%$ | $22.5 \%$ |
| Balkerne Lane | 6092 | $20.5 \%$ | $4.5 \%$ | $22 \%$ | $33 \%$ | $17 \%$ |
| Cups Hotel | 990 | $34 \%$ | $4 \%$ | $13 \%$ | $31.5 \%$ | $12 \%$ |
| Middleborough | 833 | $18 \%$ | $40.5 \%$ | $18 \%$ | $10.5 \%$ | $10.5 \%$ |
| Long Wyre Street | 241 | $21 \%$ | $37.5 \%$ | $18 \%$ | $11.5 \%$ | $8.5 \%$ |
| Butt Road | 1759 | $37 \%$ | $3.5 \%$ | $32.5 \%$ | $13.5 \%$ | $10 \%$ |

Table: small finds from the major Roman sites in Colchester
percentage into five groups: a) coins; b) post-Roman and prehistoric objects; c) objects published in this volume; d) discarded fragments (both Roman and post-Roman), and objects not considered to be worth cataloguing here for one reason or another (eg state of preservation or dubious context); e) pieces temporarily stored with the small finds subsequently relocated, and missing (stolen) objects. ${ }^{12}$ The table illustrates clearly that the objects published here form only a small proportion of the large number of small finds which had to be examined. Many factors influenced the figures in columns c) and d), of which perhaps the most important was the state of preservation of the objects.

## Soil Conditions

The natural soil within the town wall of Colchester and to the immediate south and west of the town is sand. To the north and east, on the flood-plain of the river Colne, the natural soil is alluvial silt. (A detailed description of the geology of the Colchester district is given in Hawkes and Hull 1947, 1-4.) In this volume all the sites concerned have a sandy natural soil apart from the St Helena's School and Middleborough sites, which lie on the alluvial silt. Because sandy soils are acid the state of preservation of bone and particularly of iron objects is poor(Dowman 1970,21 3 ). This is most noticeable in the cemeteries south of the town walls, where many of the skeletons were entirely decayed and the coffin nails mineralized. On the occupational levels of other sites the preservation of bone was good, but that of iron was only slightly better, despite the fact that the present-day pH value of most levels was on the alkaline side of neutral. ${ }^{13}$

## Conservation: policy and problems

No allowance specifically intended for conservation has ever been made in the Trust's budget, but a substantial part of the collection has benefited from professional treatment. When full-time excavation began in the Spring of 1971, the Colchester and Essex Museum, which will be the ultimate repository of the finds, arranged that its conservator should spend approximately half of his time on the Trust's small objects (Crummy 1975, 36). The Museum further assisted with conservation by contracting out some work on the excavated finds to the Area Museums Service. ${ }^{14}$ Despite the Museum's valuable contribution, the number of incoming small finds has far exceeded the number of objects conserved. This is in part due to the need for urgent treatment of delicate items, such as mosaic fragments and painted wall plaster, but to some extent changes in conservation techniques are responsible; for example, the move away from the use of chemical reagents in the cleaning of copper-alloy objects. While the necessity for abandoning this process in the interests of the long-term survival of the finds is evident (Merk 1978), its passing is naturally viewed with regret by anyone wishing for the quick cleaning of a large number of objects in order to benefit from the information obtainable from them (Dowman 1970, 143).

Between 1972 and 1975 the finds assistants treated
the copper-alloy objects with Benzotriazole (ibid, 142). This practice was discontinued when it was learnt that the chemical was perhaps a toxic hazard.
When the post-excavation examination of the small finds began in 1976, all incoming objects and those as yet untreated were graded into one of three categories according to the urgency of their need of conservation. Factors governing the classification of each object included the material or materials from which it was made, its state of preservation either on excavation or on re-examination during postexcavation work, and its archaeological importance. All coins and brooches therefore fell into the first (most urgent) category, while objects of bone, usually being stable, belonged to the last group, which consisted of those finds requiring no treatment.

This practice has been of value in tackling the backlog of untreated finds, but there is still a large number of items in the first category awaiting professional treatment. From the larger sites a total of 2,850 objects, both Roman and post-Roman and excluding coins (all of which have been treated), were decided to be in need of conservation; $40 \%$ of these are yet to be treated. This $40 \%$ includes finds in the first (urgent) category but does not take into account objects now discarded which may have been useful had they received early conservation. The figure of 2,850 represents $24 \%$ of the total number of small finds -from the major sites after discounting temporary recordings. This would seem to indicate that the generally-held estimate (Musty 1980, 5) that $15 \%$ of site finds are usually in need of conservation is too low, particularly when it is considered that coins alone make up over 15\% of the small finds from the sites shown in the table above.

## The method of the initial recording and the storage of small finds

Each site has a day book in which the finds assistant enters, against a consecutive run of numbers, the objects either sent in from the site as small finds or extracted from the excavated material during sorting and cleaning. Each recorded object has then both a site find number, which may or may not be unique to that piece, and a small find number jindicated here by SF), which is normally unique to that piece. Occasionally, several objects from the same context may be entered against the same small find number if they appear to be closely related, eg beads probably from the same string. There is only one set of small find numbers per site including those sites which are divided into a series of lettered areas. The small finds are stored individually in manilla envelopes, polythene bags, or small boxes of cardboard or polystyrene. They are initially kept in their consecutive runs of numbers, but as the postexcavation work progresses the finds are split into the categories described below and stored in cardboard boxes according to those categories.

## The classification system

The classification system used here was devised not only for the publication of a large number of small
finds in such a way that a particular object or group of objects could be located with ease, but also as a method of storing small finds which could be used for objects from sites of all sizes and all periods. The system is one of classification by function rather than material(s) of manufacture. It was designed specifically for Roman finds, but post ${ }^{\wedge}$ Roman and immediately pre-Roman finds also fit easily into the categories. ${ }^{15}$ With a little adjustment the system could be extended to embrace all types of finds from any small site. ${ }^{16}$ For example, pottery belongs in Category 4 (household utensils and furniture), the remains of animal bones belong in Category 12 (agriculture, horticulture and animal husbandry), and metallurgical waste in Category 15 (metal-working). For any classification system there is usually a number of objects which can be attributed to more than one category. The decision as to where to place such items will inevitably be subjective, influenced by the nature of the sites concerned and the nature of any objects found in close relationship with the ambiguous items. Thus, amulets in this report are split into three separate groups: those found on necklets or armlets in the Butt Road cemeteries are catalogued as items of personal adornment, those usually associated with the Roman army are catalogued as military equipment, and any others as items connected with religious beliefs and practices.

Other systems for the cataloguing and storage of artefacts have been published (eg Chenhall 1978), but are not ideally suited to archaeological material. For example, military equipment is, to the archaeologist, an obvious category of small finds. Under Chenhall's system the fittings of lorica segmentata would be catalogued as Personal Artefacts, a category separate to that in which military weapons are placed. Again, many of the toilet instruments of the Roman period could have been used for personal grooming, during surgical operations, or for the application of medicines. To place them unreservedly in with Personal Artefacts as Chenhall would have us do would be to obscure the wider implications of these objects.

## The categories

The fiche header title of each category (which must be restricted to six letters) is given in brackets.

1 Objects of personal adornment or dress (PERSON). Finds such as jewellery, garment fittings (eg buckles) and the garments themselves.
2 Toilet, surgical or pharmaceutical instruments (TOILET). Objects used solely for personal grooming, such as combs, and objects which have a multiplicity of uses such as spoon-probes, which can be seen as either toilet, surgical or pharmaceutical instruments.
3 Objects used in the manufacture or working of textiles (TEXTLS). Objects used for the preparation and conversion of raw materials into textiles and objects associated with the working of textiles into garments or other items.
4 Household utensils and furniture (HSHLD). Objects used in the preparation, cooking, and serving of food (other than pottery vessels), and objects used for or
associated with household illumination, and pieces of furniture.
5 Objects used for recreational purposes (LEISUR). Objects such as pieces for board or other games.
6 Objects employed in weighing and measuring (METROL). Finds such as balances, scale pans, and weights.
7 Objects used for or associated with written communications (SCRIPT). Finds such as styli or sealboxes.
8 Objects associated with transport (MOTIVE). Objects such as harness or cart fittings. Usually only the smaller pieces are recovered.
9 Buildings and services (CONSTR). This category covers objects associated with the fabric of buildings, such as worked stone, which are best examined in the light of the structure from which they derive, rather than as isolated small finds. Notes on contexts and measurements of items in this category are given on fiche only. Where appropriate, these will be dealt with more fully in the site structural reports.
10 Tools (TOOLS). Tools which cannot be assigned to one of the more specific categories, such as agricultural or military equipment. Thus knife blades, tool handles, and hones are dealt with here.
71 Fasteners and fittings (FASTEN). This category is very much a 'blanket' designed to cover those finds which form obvious groups, but which may, when used, be found in any one of several categories. Objects with a multiplicity of applications frequently have one thing in common, that is, that they are used as fasteners or fittings. If their original contexts were known it would be possible to allocate them to other categories, most commonly categories 1,4,8,9, and 10. Thus, in this, category are placed objects such as studs, nails, keys, locks, hinges, and joiner's or carpenter's fasteners such as dogs and T-staples.
12 Objects associated with agriculture, horticulture and animal husbandry (AGRIC). Only cow or other animal bells have been recovered from this category. It should however include spade-irons, sickle and scythe blades, and other agricultural tools.
13 Military equipment (MILIT). Finds such as weapons, fittings from armour, tools with military associations, and phallic amulets possibly used by the army.
14 Objects associated with religious beliefs and practices (VOTIVE). Objects such as figurines, coffinfittings, textile fragments from burials, and grave goods.
15 Objects and waste material associated with metal working (MET-W). Objects such as the tools specifically used by a smith, or crucibles and metallurgical waste products.
76 Objects and waste material associated with antler, horn, bone, and tooth working (BONE-W). Because the same tools are used to work both wood and bone etc, they could only be identified as associated with bone working if they were found with bone waste or objects. This category therefore only includes offcuts or unfinished items.
77 Objects and waste material associated with the manufacture of pottery vessels or pipeclay objects (POTFAC). Finds such as moulds or stamps.

18 Objects the function or identification of which is unknown or uncertain (QUERY). As well as unidentified objects this category includes objects with a wide range of possible uses, such as wire or chains.

## Notes

1 Summary reports: Crummy 1977; Wilson 1973, 302-4; Wilson 1974, 439. For site G: CAR 1, 53-5.
2 Summary reports: Crummy 1977, where the periods given are as set out here; Wilson 1974,440-2; Wilson 1975,263; Wilson 1976, 343-4; Crummy 1980, 266-74.
3 Summary report: Wilson 1974, 440.
4 Summary reports: Crummy 1980, 263-7; Frere 1977, 407; Goodburn 1978, 451.
5 Summary report: Goodburn 1979, 308-9.
6 Summary report: ibid, 308.
7 Summary report: Wilson 1972, 331.
8 Summary reports: CAR 1, 40-6 (post-Roman); Crummy 1974, 29 (Roman).
9 Summary report: Wilson 1974, 42 sub Crouch Street.
10 Summary reports: Crummy 1980, 256-7; Frere 1977, 407.
11 Summary report: Goodburn 1976, 344.
12 A large number of small finds were stolen from the Trust's
former headquarters at East Hill House. These included many untreated and unidentified coins from BKC area G.
13 Soil samples were taken from various levels on site A of the Culver Street excavation of 1981, a town-centre site with soil conditions very similar to those on Lion Walk. Their pH was tested by Jean Whiffing of the Colchester and Essex Museum. The results were:

| Levels | pH |
| :--- | :--- |
| natural | 7.8 |
| L277, leached natural | 7.9 |
| L202, Boudican destruction | 7.7 |
| L146, occupation level, c $75-150$ | 8.3 |
| F28, early medieval robber trench | 7.8 |
| F6, 17th-century pit | 7.9 |

14 This work was done at Norwich Castle Museum and Passmore Edwards Museum, Newham.
15 Finds from prehistoric sites earlier than the late Iron Age could fit this system, but in practice its application would not prove worthwhile as so many categories would remain empty.
16 No categories have been provided for local industries such as salt manufacture, or for prehistoric industries such as flint knapping. Extra categories can easily be added if necessary to the list given here.

## BROOCHES

A total of 103 brooches or brooch fragments were found. They are of copper-alloy except where indicated otherwise. They can be divided into three broad date-ranges as follows:

$$
\begin{array}{lr}
\text { AD 43-100 } & 75 \\
\text { 2nd century } & 20 \\
\text { 3rd to 4th century } & 7
\end{array}
$$

Though several of the types which here have been allotted to the range 43-100 first appear before the conquest, it is unlikely that brooches found within the area of the modern town centre predate 43. The excavations of 1971-9 revealed no pre-Roman features in the town centre. ${ }^{2}$ It seems safe,


Fig 2 Bow brooches: Group 1 (1:1)
therefore, to assume that, with the possible exception of the Type 19 example (found in an early medieval robber trench), all these brooches derive from post-conquest activity. The majority of the brooches belongs to the period 43-100, and most of those to 43-70. This undoubtedly reflects the presence of both the legionary fortress and the veterans' colonia. With the shifting of the military presence to the west and north, the number of brooches in use in Colchester declined. Most of the 2nd-century brooches catalogued here are enamelled plate brooches, which Hull (forthcoming) saw as being favoured by the middle classes. The low total of 3rd- and 4th-century brooches is indicative of the further decline of the brooch. Perhaps in this period the apparent popularity of the late Fowler Type C penannulars (four out of seven), could be seen as being indicative of a renewed interest in native British styles (see p 19). One of these late penannulars, 103,-was a grave deposit in an east-west oriented grave fn the Butt Road cemetery. A coin of Valens in the grave fill provided a terminus post quern of AD 367.

The brooch report for this volume was to have been undertaken by the late Mr M R Hull. I have, therefore, used the unedited typescript of his corpus. Brooches from pre-Roman and Roman Britain (forthcoming; typescript in the CM), for the descriptions, dating, and distribution of the groups and types represented here. Only the descriptions of individual brooches and comments on the unclassified examples are my own work. (Corp refers to examples in Hull's catalogue.) However, for the penannular brooches I have followed Elizabeth Fowler's (1960) classification and dating.

## BOW BROOCHES

Group 1:La Tene III and Roman brooches with no hook and no arms (Fig 2; 1-16)
Type 10. Nauheim Derivatives with a reverse curve to the bow. Nauheim Derivatives are onepiece brooches differing scarcely at all from the Nauheim brooch proper except in being somewhat smaller and in having a solid catchplate. The bow is simple with no button. Very few true Nauheim brooches occur in Britain, though derivatives are very common with a mainly southerly distrubution. Date range of Type 10: pre-Roman, dying out in the pre-Flavian period (Simpson 1979, 332-4, quoting Hull forthcoming).
a) with flat bow of some width

1 Fig 2 SF BKC 4921(C), V27 L5. Cultivated soil. Late Period 5. Length 42.5 mm . A perfectly-preserved brooch with fourturn bilateral spring. The bent pin is the only sign of use. The
bow has knurled marginal grooves and three cuts across the foot. This brooch has the distinctive glossy grey-green patina noted by Hull on several derivatives.
c) with round section or wire bow

2 Fig 2 SF BKC 4057(C), N16 LI. Topsoil. Modern. Length 41.0 mm . Brooch with three-turn spring. The end of the catchplate and the tip of the pin have been broken off. There is only a hint of a reverse curve to the bow.

Type 11. Nauheim Derivatives with a single curve to the bow. The date range is similar to that of Type 10.
a) with wide flat bow

4 Fig 2 SF BKC 5486(C), V658 L11. Dump. Late Period 5. Length 43.5 mm . A flattened bow fragment with the remains of the corroded catchplate and the beginning of the spring. The bow has grooved margins which terminate at two crossgrooves near the foot. As this fragment has been flattened it may possibly belong to Type 10a, though this is unlikely.
b) with narrower flat bow

5 Fig 2 SF BKC 2240(C), G177 F61. Clay and timber-lined pit. Period 5b. Length 26.0 mm . A distorted but complete brooch with three-turn spring. The bow is rectangular in section. The catchplate is very rudimentary.
6
Fig 2 SF BKC 2953(C), J28 L1. Site clearance. Length 28.0 mm . A fragment of a D-section bow with two turns of the spring.
c) with round or wire bow
$9 \quad$ Fig 2 SF BUC 98(C), A484 G35. Grave fill. Period 2. Length 26.0 mm . A distorted but complete wire brooch with threeturn spring. There are traces of white-metal coating on the catchplate.

Type 19. One-piece brooch with a bold angle near the head and a button placed on or near this angle. The distribution of this type is almost entirely south of the Thames, though two were found on the Sheepen site, Colchester (CM 34/18, Corp 0249; CM 34/22, Corp 0248). Date range: first half of the 1st century.
16 Fig 2 SF LWC 2190(C), J247 F119. Early medieval robber trench. Length 49.0 mm . Most of the bow survives with a hint of the open catchplate. Below the prominent button with its flanking mouldings the bow section is elliptical, above it is D-shaped. A similar example comes from Maiden Castle, Dorset (Wheeler 1943, fig 83, 9, Corp 2091) in a deposit dated 25-70.

## Group 2:Brooches with cylindrical springcover (Fig 3; 17)

Type 27. Simple rosette brooch with applied moulded plate. The type is possibly a pre-conquest import, being found mainly in the oppida. It seems to have gone out of use by the end of the Claudian period. Date range: pre-conquest to c 50 .
17 Fig 3 SF BKC 4552(C), T130 L34. Destruction debris or make-up. Period 3? Length 69.5 mm . A corroded and damaged brooch. One side of the spring-cover has been crushed, exposing the spring, and the rosette on the same side has been broken. Part of the foot is missing and only fragments of half the pin remain. The applied upper plate of the rosette has concentric circular mouldings and is attached to the main body of the brooch by a central iron rivet. The catchplate has a single triangular perforation.

## Group 4a: Eye-brooches (Fig 4; 18)

Type 43. Debased eye-brooches, with loose bowcurve, the button halfway down the bow and the shape of the foot uncertain. The distribution of this type covers the south and midlands. Date range: Claudian-Neronian.


Fig 3 Bow brooches: Group 2 (1:1)

18 Fig 4 SF LWC 1217(C), D56 F38. Large posthole. Postmedieval. A brooch in three fragments, length 44.0 mm . The pin and part of the spring are missing. The catch has been broken off. The spring has sixturns, and the external chord is held down by a small forward hook. The side-wings are tiny. The narrow bow is plain, of D-section, and has a gentle curve from the head to the button, which is represented by a single transverse moulding. The foot is plain, with a slight reverse curve and tapers slightly to a blunt end. The catchplate is - solid.


Fig 4 Bow brooches: Group 4a (1:1)
Group 4b: Early hinged brooches (Fig 5; 1936)

Type 51. Aucissa brooch. Brooches in this series have a broad flat bow arched to a semicircle and decorated with longitudinal mouldings. The flat head is broader than the bow and carries transverse mouldings and a pair of lateral notches; sometimes also a pair of stamped eyes. The head is rolled over upwards to hold an axial bar, often of iron with bronze terminal knobs, on which the pin is hinged. The knobbed foot is short and returned sharply from the bow. The junction of bow and foot can be marked by transverse mouldings. Aucissa brooches are so called because of the maker's name sometimes found inscribed across the head. A positive centre of origin for these brooches, which covered the whole Roman world during their life, is not proven. Generally dated Augustus-Nero, they were probably introduced into


32



33


35


Fig 5 Bow brooches: Group 4b (1:1)

Britain by the army of conquest, which appears to have abandoned both Aucissa and Hod Hill brooches as standard wear c 60/5 in favour of British-made brooches.
b) with a stout rib down the centre of the broad flat bow
19 Fig 5 SF BKC 3397(C), J223. Periods 2-5b. Length 53.5 mm . A well-preserved brooch, complete except for parts of the axial bar of the hinge and a fragment of the catchplate. The foot has been twisted to one side and broken. The head has two knurled cross-bands and the central rib of the bow shows traces of knurling. There are slight marginal mouldings on the bow. The junction of bow and foot is marked by three cross-mouldings and the upper part of the foot is of angular D-section. There is a large foot-knob.

Type 60. The simplest and commonest of the Hod Hill series. Hod Hill brooches have a similar hinge arrangement to that of Aucissae, but the head, often undecorated, is short and flat with a narrow neck. The curve of the bow is gentle and there is no sharp angle between the bow and the foot, which takes up approximately half the length of the brooch. There is usually a foot-knob. The decoration of these brooches shows great variety and provides a basis for subdividing the series. Because many surviving examples are coated with white metal, it is possible that all were. Though originating on the Continent in the second half of the 1st century BC, Hod Hill brooches probably only arrived in Britain with the army in 43 and went out of use $c 60 / 5$. Their absence from York (North Yorkshire) or any Agricolan site probably implies that any found in post-Neronian levels on sites in the south and midlands are either survivals or, most likely on urban sites, residual.
23 Fig 5 SF BKC 5237(C), V39. c 300 at latest. Length 39.5 mm . A well-preserved example, only the pin is missing. The bow has plain marginal mouldings and two knurled ridges. There are traces of white metal on the foot. The catchplate is solid.

## Type 61 . Brooches of Hod Hill type with lateral lugs

 at the base of the bow.Fig 5 SF LWC 1130(C), B567. Period 4 at latest. Length 64.5 mm . A large brooch with traces of white metal on bow and foot, the bow is decorated with longitudinal mouldings and a central wavy line between knurled mouldings. The knobbed lugs are small, one is damaged. There is a crossmoulding at the junction of bow and head, and pronounced cross-mouldings at the junction of bow and foot. There is a single circular perforation in the damaged catchplate. The pin is missing.

28 Fig 5 SF BKC 5720(C), V1042 L64. Dump. Period 4. Length 43.5 mm . Fragment of a large corroded brooch. Most of the foot with the catchplate is missing and the pin has been broken off. One or both of the lugs are damaged. There is a transverse moulding between head and bow. There are traces of longitudinal mouldings on the bow and lugs, which are parallel-sided and may have had terminal knobs. There are stepped cross-mouldings at the junction of bow and foot.

Type 62. Brooches of Hod Hill type with lateral lugs set in the middle of each side of the bow.
29 Fig 5 SF BKC 2943(C), J15 L1. Site clearance. Length 65.0 mm . A large brooch with the lugs slightly above the middle of each side. The bow has been flattened and the pin is broken. The catchplate is solid. The bow is parallel-sided and decorated with marginal mouldings and three central mouldings: the two outer ones finely knurled, the inner one with diagonal slashing. The lugs have traces of worn terminal knobs. The margins of the foot are slightly grooved.

30 Fig 5 SF COC 187(C), 860 L251. Dump. Period 3. Length 45.5 mm . An almost complete brooch. Part of the catchplate
part of the hinge, and the pin are missing, though most of the iron axial bar survives. There are transverse mouldings on the head, and one at both the junction of bow and foot and above the foot-knob. The short bow has two ridges at each side. The lugs have worn terminal knobs. The catchplate is solid.

## Type 63. Brooches of Hod Hill type with lateral lugs

 at the top of the bow.Fig 5 SF COC 149(C), 695 L201. Dump. Period 4. Length 49.5 mm . An almost complete brooch. The pin, one lug and part of the hinge are missing. The solid catchplate is chipped and distorted. The bow has knurled marginal mouldings and a broad central ridge. The surviving lug is moulded and knobbed. There are several transverse mouldings on the foot and one on the head. There are traces of white metal on the bow.

Type 71. Brooches of Hod Hill type with narrow bow and with bold cross-mouldings at head and base of bow.
33 Fig 5 SF BKC 1951(C), El 247. Unstratifed. Roman to modern. Length 23.0 mm . A fragment of the bow and the head with traces of white-metal coating. There are three thick cross-mouldings on the bow.
34 Fig 5 SF BKC 5121(C), V187. Periods 2 to 4? Length 44.0 mm . A corroded brooch. The hinge and the pin are missing. There are cross-mouldings at the top of the bow, two of them knurled. The centre of the bow has a slight platform and there is a single cross-moulding at the junction of bow and foot.

Type 79+. Miscellaneous brooches of Hod Hill type.
35 Fig 5 SF BKC 5326(C), V598 F8/F130. Ditch. Period 4. Length 58.0 mm . A small brooch, complete except for the axial bar of the hinge. The D-section bow expands towards the junction with the foot and has four crescentic depressions filled with niello on each side. There are two stepped transverse mouldings between bow and foot. Similar brooches come from Ixworth, Suffolk (Corp 3947) and Nettle-ton, Wiltshire \{Corp 8063).

Type 80. Brooches with tapering bow, a slight offset at the button and a terminal knob. Only two others are known from Britain, one unprovenanced, in the Colchester and Essex Museum (CM 143. 47 1, Corp 0508) and an unstratified one from Richborough, Kent \{Corp 1771; Hull 1949, fig 27, 22). On the evidence of two from the Continent (ibid, 112) and of the example published here, the suggested date range is Claudian-Flavian.
36 Fig 5 SF BKC 5376(C), V504 L67. Make-up. Period 2. Length 39.5 mm . Two pieces of a corroded brooch, complete except that the pin is broken off below the hinge and the catchplate is damaged. The bow forms a right angle with the head and is decorated with a serpentine groove filled with niello, with dots in the curves. The plain tapering foot is stepped back from the bow. This is an exact parallel to the unprovenanced brooch from Colchester cited above.

## Group 5: Early sprung brooches (Figs 6 and 7; 37-61)

Type 84. Almgren's 'strongly-profiled' brooch. This type is rare in Britain with a distribution centred on Richborough and London. It appears to be an early military import. Date range: c 43 to the end of the 1 st century.

37 Fig 6 SF BKC 3745(C), J492. Burnt sand deposit. Period 2. Length 49.0 mm . A beautifully preserved one-piece brooch, only the tip of the pin is missing. The bow is markedly arched with a pronounced button which is slightly flattened at the back. The broad head narrows to a neck before widening

again into side-wings. The external chord of the eight-turn spring is secured by a forward hook. The foot, which leans to one side, has a strong reverse curve and a large terminal button and knob. The catchplate has two small circular perforations.

Type 90. Colchester brooch. A one-piece brooch with simple curved bow, flat side-wings, and a forward hook to secure the external chord. Date range. Tiberius-Nero,

## b) undecorated bow

38 Fig 6 SF LWC 3807(C), K472 F249. Slot. Period 3. Length 83.0 mm . A large brooch of which the spring and pin are missing and the catchplate damaged. The bow is almost round in section except for a slight flattening at the back which becomes more marked towards the head. The short side-wings are grooved and part of one is missing. The catchplate has a pattern of stepped perforations.
40 Fig 6 SF BKC 2081(C), E1212 L361. Levelling. Period 1b. Length 43.0 mm . A small broooch, complete except for the tip of the pin and most of the open catchplate. The sidewings are plain, and the spring, one side of which is corroded, has six turns.

Type 92. A two-piece brooch, Colchester B. The spring is secured by passing the external chord and the axial bar through a lug with two perforations behind the head. The side-wings are semicylindrical. The forward hook of Type 90 can still be seen in the crest which runs on a flat ridge down the head to the bow. The ridge continues down the bow, flanked by cavetto mouldings, and may be decorated in various ways. Date range: 50-70.
48 Fig 6 SF BKC 3769(C), K575. Top of Claudian ditch. Beginning of Period 2. Length 53.0 mm . A corroded brooch: the outer surface of the bottom of the bow has been eaten away and the end of one wing is missing, as are the spring and pin. The bow is plain, with the cavetto mouldings characteristic of the type. The side-wings have decorative mouldings. The catchplate is pierced in two places (the hole towards the bottom is a result of corrosion). The thick edge of the catchplate has a semicircular groove for the pin.
50 Fig 6 SF BKC 4788(C), T581 F211. Pit. Period 1. Length 34.5 mm . A small brooch, the spring and pin of which are missing, but fragments of the axial bar and the external chord remain in their respective holes in the lug. The sidewings have single grooves at the ends. The bow has faint marginal grooves. The catchplate has a single triangular perforation and is grooved for the pin.
52 Fig 6 SF IRB 97(C), F89. Probably in the backfill of a 3rd- to 4 th-century grave rather than associated with the inhumation. Length 44.0 mm . The spring and pin of this brooch are missing, but a fragment of the chord remains in the perforation of the lug. The central ridge of the bow below the crest is decorated with a zig-zag line. The side-wings are plain. The catchplate is solid and grooved for the pin.

Type 93. Colchester BB brooch. Similar to Type 92, but lacking cavetto mouldings on the bow. Date range: c 65-80, but may go out of use earlier,
a) with deep groove on the upper part of the bow, the edges of the groove are incised with oblique strokes.
53 Fig 6 SF BKC 5268(C), V364 L39. Street metalling. Period 5. Length 36.0 mm . A badly-made brooch, the crest of which is off-axis. Part of the external chord remains in the upper hole of the lug: the lower hole has worn through. The side-wings are plain. The central groove on the bow is crossed by oblique strokes. The catchplate is grooved for the pin and has a circular perforation and a rectangular notch on the bottom edge.

Type 94. A two-piece dolphin brooch. The bow is comma-shaped, with a thick and rounded head, and often tapering to a point. The semicylindrical side-
wings tend to be long and may be plain or decorated. The spring is attached by a rearward-facing hook over the external chord. The catchplate is generally solid. The bow varies in section from round to square, Dshaped to $V$-shaped. The pin of hinged dolphin brooches is usually held in the centre of a thick, possibly round, cross-bar. The distribution for sprung and hinged dolphins is similar, covering the south and midlands, but petering out in the north of England. Hull's suggested date range is Claudian, though the absence of hinged dolphin brooches from the Sheepen site, Colchester suggests that these at least were current in the late Neronian or Flavian period.

## a) sprung

56
Fig 6 SF BKC 3696(C), J442 L44. Collapsed wattle-and-daub wall. Period 2 destruction. Length 43.0 mm . The spring and pin of this brooch are missing. The side-wings are grooved and moulded. The bow is $V$-shaped in section with flat margins and the central ridge is knurled. Most of the catchplate has been broken off.
$57 \quad$ Fig 6 SF BKC 5500(C), V909 L65. Sandy clay floor. Period 2. Length 70.0 mm . A corroded brooch, the spring and pin of which are missing and the catchplate damaged. There is a slight groove visible at the end of each side-wing. The bow is of D-section, the upright of the D being the outer face of the bow, with shallow marginal grooves. There is a small transverse moulding near the foot.
b) hinged

58 Fig 6 SF BKC 5011(C), V121 F18. ?Sand pit. Period 5 or 6? Length 38.0 mm . The pin of this brooch is missing below the hinge and the lower part of the bow has been broken off. The solid cross-bar is round, and may have a groove atthe end of each wing. The bow is of D -section and has two grooves running along it which form a crest.
60 Fig 5 SF MID 780, G3330 F642. Coursed rubble foundation. Period 3 construction. Length 44.0 mm . A complete hinged dolphin brooch, encrusted with mortar. The D-section bow has three grooves. The cross-bar is of D -section and the wings are moulded. The thin catchplate is solid.

## Unclassified

61 Fig 786 Lexden Road, X206(C). Pit dated 50-65. (This object was loaned to the Trust for identification and recording along with the other contents of the pit from which it was recovered and subsequently donated to the Colchester and Essex Museum by the owner, Mrs J Berry.) Length 37.0 mm . A two-piece brooch, the spring secured by the same method used for Type 92. The lower part of the lug holding the axial bar is missing, though part of the external chord remains in the upper perforation. The spring and the pin are missing. The damaged side-wings are semicylindrical and probably plain. Most of the catchplate is missing, but it appears to have been solid. The bow is shaped like a dove's tail, with the curved sides flaring out from just below the head and the bottom edge curving outwards slightly. Running from the head to the bottom edge and the same width as the lug for attaching the spring is a ridge, rectangular in section on the head and very top of the bow, but softening to semicircular on the body of the bow. A narrow cavetto moulding flanks each side of the ridge at the upper end of the brooch, widening out as the sides flare until the outer edge of each flattens out and disappears, while the inner concave segments continue downwards parallel to the ridge which gradually sinks below the line of the upper surface of the bow and is consequently invisible from the side.
The brooch has several affinities with Type 92, ie in the method of attaching the spring, the general profile and the central ridge flanked by cavetto mouldings. The distinctive crest running down the ridge of Type 92 is absent, but since the brooch is severely diseased it is possible that a small crest has been removed by corrosion.
From its association with both pottery dated 50-65 and a Type 92 brooch, and from its general affinities with Type 92, a date of $50-70$ seems likely for this brooch. A distinct parallel cannot be found in Hull's Corpus, though a slightly
similar, undated brooch with a more angular profile and the spring secured by a rearward hook comes from Icklingham, Suffolk (Corp 2430).


Fig 7 Bow brooches: Group 5 unclassified (1:1)

Group 6: Polden Hill brooches (Fig 8; 62-64) This series is characterized by the method of attaching the spring by an axial bar fixed in the returned ends of the semicylindrical cross-bar. Developed types have appendages on either side of the head and a bulge beneath the junction of head and cross-bar.
Type 95. Brooches of this type have the commashaped profile of dolphins (Type 94) but the Polden Hill arrangement of attaching the spring. The external chord may be held by a rearward hook, or by passing through a hole in the head of the bow. The head often takes the form of a crest, reminiscent of the forward hook. The date of this type appears to be pre-Flavian, as it does not occur in the north or in Scotland.
a) with elaborately moulded cross-bar

62 Fig 8 SF BKC 1695(C), E927 L270. Silt. Period 1b or 2. Length 52.0 mm . A fragmented brooch, most of which survives except for part of the spring and most of the open catchplate. Only the main body of the brooch has been illustrated. The spring had ten turns. The external chord was held by a rearward hook. The axial bar had moulded and knobbed terminals, one of which survives. Some of the mouldings of the cross-bar show traces of knurling. The rearward hook has transverse ribs which are matched on the short crest on the head. The elliptical-section bow is decorated with longitudinal ridges, the central one of which may have been knurled.

63 Fig 8 SF BKC 1859(C), E1165 F332. Large pit. Period 2. Length 67.5 mm . A corroded but almost complete brooch. The pin survives in fragments but has not been illustrated. The external chord, most of which is missing, passed through a round lug on the head, where part of it still survives. The spring had 24 turns. The ?knobbed ends of the axial bar are missing. The side-wings have knurled astragaloid mouldings. The D-section bow has a sunken central decoration of a pair of wavy lines. The catchplate is missing. The bulge beneath the head characteristic of more developed Polden Hill brooches is hinted at on this example.
b) less elaborate cross-bar

64 Not illustrated; in microfiche catalogue.

## Group 7: T-shaped brooches (Fig 9; 65-66)

Type 148. Lamberton Moor brooch. Brooches in this series are British, pre-Roman in origin and were in production in the 70s, possibly earlier. They had a long life, continuing well on into the 2 nd century. The enamelled type, 148b, is scarce in the north but well represented in the south. The head-stud cast solid


Fig 8 Bow brooches: Group 6 (1:1)
with the bow on our example indicates a date well on in the production of this type.
b) enamelled

65 Fig 9 SF BKC 3555(C), K472 L82. Dump. Period 4c. Length 51.0 mm . A corroded one-piece brooch, complete except for the pin. The spring has ten turns and the external chord is attached to the head by a forward hook. The head-stud is cast solid with the bow. The side-wings are grooved. The wire axial bar of the spring is drawn into a loop above the head and held by a small shackle which is grooved at the front but plain at the back. The bow is decorated with lozenges and triangles of champlevé enamel, most of which is missing except for traces of red in five of the lateral triangles. There are also traces of red enamel in the headstud. The base of the bow and the foot-knob have transverse mouldings. The catchplate is solid.

## Unclassified

66 Fig 9 SF BKC 3651(C), J334 F85. Pit complex. Period $3 / 4 / 5 \mathrm{a}$. Length 52.5 mm . A corroded, sprung, T-shaped brooch of indeterminate type. The pin is missing and most of the solid catchplate has broken off. The spring has an internal chord and twelve turns and is held by an axial bar in the returned ends of the semicylindrical cross-bar. There is a slight neck with transverse grooves between the cross-bar and the bow. The slightly tapering, rectangular-section bow is reeded, the inner two ribs knurled. The junction of bow


Fig 9 Bow brooches: Group 7 (1:1)


Fig 10 Bow brooches: Group 8 (1:1)
and foot is marked by a stud containing white enamel. The foot tapers sharply to a point and has fine marginal grooves Below the stud are traces of a pair of ring-and-dot ornaments. There may be another pair between these and the stud, though the brooch is too pitted with corrosion to be certain. There is no foot-knob. A late 1 st- or early 2 ndcentury date seems likely for this brooch.

Group 8: Trumpet-headed and allied brooches (Fig 10; 67)

## Unclassified

67 Fig 10 SF BKC 1854(C), C72. Unstratified. Length 76.5 mm . An extremely corroded brooch that is very like Corp 0522 from the Sheepen site, Colchester but not published in Hawkes and Hull 1947. The bow has a large button which goes all the way round, and there are mouldings above, and possibly below, the button. The trumpet-head has been squashed. The brooch was sprung. Nothing remains of either spring or pin. There is a prominent foot-knob.

Trumpet-headed brooches are British and were in production from between c 30-50 (see Simpson 1979, note 70). Manufacture of later varieties continued well on into the 2 nd century.

Group 9: Knee-brooches (Fig 11; 68-70)
Type 171. Knee-brooches with a semicircular head-plate and a long, narrow longitudinal catch. The distribution covers England, but is concentrated mainly in the west and extends as far north as Corbridge, Northumberland. The date of the type appears to be Hadrianic.

68 ' Fig 11 SF BKC 5039(C), V91 L11. Dump. Late Period 5. Length 37.0 mm . An incomplete brooch, most of the foot and catchplate are missing, as well as the hinged pin and part of one of the two lugs between which the pin was fixed (there is not enough room between the lugs for even a tiny spring). The semicircular head of the brooch is surmounted by a smaller semicircular head-loop. A hollow hemisphere marked with mouldings dominates the bow. The foot seems to be expanding slightly. A similar unprovenanced sprung brooch is in the National Museum of Antiquities of Scotland (Corp 3970).

Type 173. The bow has a rounded outline viewed both from the front and the side. The head is cylindrical and the catchplate longitudinal. Date


68


Fig 11 Bow brooches: Group 9 (1:1)
range: 140 to the early 3rd century.

## b) smaller examples

Fig 11 SF BKC 2539(C), H16 L2. Topsoil. Post-Roman. Length 28.0 mm . The spring and pin of this brooch are missing. The top of the head-loop and the catch of the catchplate have been broken off. The spring-cover is boxlike. The back of the bow is slightly cupped. There is a slight foot-knob.

Type 176. Bow of rectangular section, rounded in profile and expanding to a square foot with a transverse catch. Date range: uncertain, probably 2nd century.
$70 \quad$ Fig 11 SF BKC 5469(C), V813 L22. Dump. Late Period 5. Length 31.0 mm . An almost complete brooch, only the pin and catchplate are missing. The rectangular-section bow becomes triangular, probably through wear, just above the point where it begins to expand to the square foot. The spring of sixturns is held by an axial bar fixed in a cylindrical spring-cover which is grooved at each end. On the underside of the foot is a large impressed ring-and-dot motif.

## Group 10: Various enamelled bow-brooches (Fig 12; 71)

Type 182. Brooches with triangular bow, the foot zoomorphic or astragaloid. Date range: 2nd century. 71 Fig 12 SF IRC 8(C), 11. Dump or make-up. Approximately 2nd or 3rd century. Length 41.0 mm . A hinged brooch. The pin, part of the catchplate, and most of the cylinder which held the axial bar are missing. Very little remains of the enamel from the centre of the triangular bow; its colour is unidentifiable. There are small lateral lugs at the base of the bow. The head had ring-and-dot decoration, which is repeated as two 'eyes' on the zoomorphic foot. The junction of bow and foot is marked by transverse mouldings.


Fig 12 Bow brooches: Group 10 (1:1)

## Group 11: Sheath-footed and crossbow brooches (Fig 13; 72-74)

Type 187. Brooches with the shape of the standard late P-shaped brooch but with double bow. The type usually derives from military sites and dates to the period of the later empire.
72 Fig 13 SF LWC 2333(C), M32. Contaminated. Modern? A brooch with divided bow coated with white-metal. The foot, spring and pin are missing. The spring was held in a flattopped cylindrical spring-cover. The tips of the axial bar are still held in the ends of the spring-cover.

Type 191. The early type of crossbow brooch. Date range: c 200-50.
a) no terminal knobs on cross-bar

[^1]

Fig 13 Bow brooches: Group 11 (1:1)
bent over so that the plain cross-bar touches the base of the bow. The hinged pin is missing. There is a knob at the junction of bow and cross-bar. The foot is sheathed.

Type 194. P-shaped brooches resembling crossbow brooches but with no cross-bar. This type was popular in central Europe during the later empire, from the 3 rd century well into the 4th.
74 Fig 13 SF LWC 2094(C), J204 F103. Shallow pit. PostRoman. Length 52.0 mm . The spring and pin of this brooch are missing. The spring was held by an axial bar which passed through the lug behind the head. The head is rectangular in section. The upper edges further down the bow have been trimmed off to give a faceted $D$-section. The junction of bow and ridged foot is marked by notches between transverse grooves. There is a slight transverse rib at the end of the foot, which is sheathed.

## PLATE BROOCHES

Unless otherwise indicated, the enamelling technique used is Champlevé, and the pin is hinged, held between two lugs by a small riveted bar.

Type 214. Brooches in the shape of a sitting cock or hen (Fig 14; 75-76). The pierced projection below the tail probably held a chain. Hull considered that this type came from the same workshop as Types 153-60 (Backworth brooches). It has a wide distribution, reaching well into Scotland. There is little evidence for a date for the type other than generally within the 2nd century.
75 Fig 14 SF BKC 2775(C), H14 L2. Topsoil. Post-Roman. Length 36.5 mm . The comb, part of the breast with the catchplate and the pin below the hinge are missing. Part of the tail has been broken off. The body is hollow. The wings are decorated with panels of enamel, most of which is missing except for the red in the panels running down from the back-bone. There are traces of blue and yellow enamel in the other wing panels, and also traces of red around a central yellow spot at the eyes.

Fig 14 SF BUC 225(C), B273 G76. Grave fill. Period 2. Length


Fig 14 Plate brooches (1:1)


90

39.0 mm . The head is missing, but the brooch is otherwise complete. The body is hollow, but is thicker and more obliquely splayed than that of 75 . The wing panels contain blue, yellow and red enamel; the red has taken on a greenish tinge.

Type 224. Early plate brooches set with glass (Fig 14; 77). These brooches first appear in the Claudian period at Hofheim and were in use in Britain around the mid 1st century, but not in large numbers.
77 Fig 14 SF BKC 5741 (C), V1112 L146. Cultivated soil. Late Period 5, possibly earlier. Maximum diameter 29.5 mm . A corroded brooch in the shape of an eight pointed star. The indentations between the points are curved. The brooch consists of two copper-alloy plates soldered together, with a blue glass cabochon held between them. The lower plate is plain and carries the hinge and catchplate (the pin is missing below the hinge). The upper plate bears traces of white metal and has a convex moulding along the rim, another around the glass inset, and a row of beading along the inside edge of the outer moulding. An exact parallel for this brooch comes from Hofheim (Ritterling 1913, Taf 10, 253) and a less elaborate example from Richborough, Kent in a context dated 50-80 (Hull 1949, 110 and pl 25, 10, Corp 1759).

Type 226. Flat lozenge-shaped or rhomboidal brooches with no lugs or appendages at the angles (Fig 14;78). This type appears to centre on the 2nd century
78 Fig 14 SF CPS 46(C), 111 F46. Pit. Period 5. Length 32.5 mm . The edges of this brooch have been badly damaged. The pin and part of the catchplate are missing. The raised central field is divided by two knurled cross-ribs into two triangular divisions, each containing a sunken panel which probably held enamel (ibid. 48, fig 19, 142, Corp 6185). The step surrounding the central field has been cut with irregular strokes, as has the slightly moulded rim.

Type 248. Disc brooches decorated with mouldings only.
79 Not illustrated; in microfiche catalogue.
Type 252. Small, flat, enamelled disc brooches (Fig 14; 80-81). Date range: 2nd century.
80 Fig 14 SF BKC 2863(C), H363 L12. Destruction debris of Period 5b building. End of Period 5b. Diameter 18.0 mm. This brooch falls into subdivision b for the type; that is, brooches in which the enamelled field is diversified only by copperalloy spots set in a circle around a central copper-alloy ring in which a copper-alloy stud was probably fixed. In this example the central nippled stud still survives and round it, set at regular intervals in a continuous field of blue enamel, are six copper-alloy spots. The pin is missing.

81 Fig 14 SF BKC 3884(C), M17. Probably 150-300. Diameter 20.5 mm . This brooch belongs to subdivision d, unclassified patterns. The enamel has been applied as a mosaic of millefiori sheets. The outer band consists of eight blocks of millefiori enamel: four of black and white chessboard motif and four of a black Greek cross on a white field surrounded by a pale blue frame. In the centre of the brooch is a block of millefiori showing a white spot inside a frame of pale blue with radiating streaks of black. The pin survives between the two lugs for the hinge and on the catchplate, but the main part of the shaft is missing.

Type 255. Flat disc brooches enamelled with a triskele pattern (Fig 14; 82). This type is most commonly found in southern England, mainly within the area of the south-eastern Belgae. The dating of the triskele motif is discussed by Hull under Type 249. Date range: 2nd century.
82 Fig 14 SF BKC 4455(C), N537 L118. Make-up Period 5b2. Diameter 31.0 mm . A large disc brooch with a sprung pin held between two lugs. The pin and part of the catchplate are missing, though the three-turn spring survives. The triskele
is of red enamel, the field blue. This design differs from those illustrated by Hull in that the copper-alloy outline of the triskele touches the rim at the end of each arm and does not terminate within the field. Also, the three copper-alloy spots here set in the field are usually at the point of each arm. There is a central copper-alloy spot.

Type 257. Fairly large disc brooches with central stud, the face enamelled with concentric bands of mosaic enamel (Fig 14; 83). This type can be dated, with enamelled and umbonate brooches in general, to the 2nd century.
83 Fig 14 SF BKC 2197(C), G90 F11. Timber-lined drain. Period 5c. Diameter 32.0 mm . A heavily corroded brooch with traces of enamelling. The sprung pin is held between two lugs. The spring has three turns. Part of the catchplate is missing. Both spring fitting and catchplate are attached to thick plates soldered onto the undersurface of the brooch. There are traces of a knurled convex moulding within the rim. Within this is a band of dark blue enamel, the outer edge of which is crenated at the junction with the rim. The inner band is very corroded but the remains of twenty copper-alloy spots are visible. They appear to be set in a band of red enamel. The central nippled umbonate stud has a knurled convex moulding round the base. Corp 7152, from Icklingham, Suffolk, is an exact parallel to this brooch, except that the central stud is missing.

Type 261 . Flat disc brooches with six very small lugs (Fig 14; 84). Date range: Claudian.
84 Fig 14 SF LWC 3114(C), J887. Make-up. Period 3. Diameter 33.0 mm . Few examples of this type have previously been found in Britain; two of them are from the Sheepen site, Colchester (Hawkes and Hull 1947, pl 98, 179, Corp 0554; and Camulodunum unstratified and unpublished, Corp 0555). In view of this small number it is likely that the Lion Walk brooch belongs to this type despite its having only two lugs; in all other respects it is very like Corp 0554. The body of the Lion Walk brooch is badly pitted by corrosion. The tip of the pin and the catch are missing. The lugs lie directly over the hinge and catchplate. Each is supported by a small buttress of metal drawn up from the fitting below. It is possible that the brooch originally had six lugs, only the two thus buttressed surviving. There is a marginal groove and a moulded and knurled recess in the centre around a spot of ?yellow enamel.

Type 265. Disc brooches with scalloped edge (Fig 14; 85). This brooch was found in a 1st-century context, and would therefore seem to be an early example of the type, and possibly associated with Type 224.
85 Fig 14SF LWC 3761(C), K419. Make-up. Period 3. Diameter 25.5 mm . An umbonate disc brooch with irregularly crenate edge and two concentric convex mouldings, the inner one of which is knurled. No trace of enamel can be seen on the face of the brooch. The tip of the pin is missing. In general character this brooch belongs to Type 265, a collection defined by Hull as "loose... characterized by the indentation of the edge". However, this is the only umbonate example.

Type 266. Small wheel-shaped brooches (Fig 14; 86). This type has a distribution south of Hadrian's Wall. Date range: Claudian-Flavian.
86 Fig 14 SF BKC 3630(C), J373 L33. Dump. Period 3/4/5a. Diameter 26.0 mm . Four fragments of a simple wheel shaped brooch with four spokes. Part of the rim, the central stud, the pin below the hinge, and the catch are missing. One complete and three incomplete lugs survive on the perimeter, indicating six originally. The area around the missing central stud has a knurled, recessed concentric moulding.

## Type 275. Brooches in the shape of a sandal.

87 Not illustrated; in microfiche catalogue

## Unclassified (Fig 14; 88-92)

Fig 14 SF LWC 3175(C), J947. Make-up or dump. Period 4. Length 42.0 mm . A 'racquet'-shaped brooch with five circular lugs round the head and a sixth on the handle. Three of the lugs contain traces of white enamel. The pit in the centre of each lug may have contained a dot of contrasting enamel or copper-alloy. One of the lugs on a similar, though more heavily enamelled, brooch from Cramond, Lothian contained white enamel with 'a central brownish dot' (Maxwell 1974, 193). The date of the Cramond brooch is probably Antonine, which compares well with the context of this example. Another slightly similar brooch from Woodyates, Dorset is undated (Corp 4348).

89 Fig 14 SF BKC 2473(C), G428 Surface cleaning. Period 5c. Length 37.5 mm . A lozenge-shaped brooch with mosaic enamelling, possibly related to Type 226 (see 78 above). Within the copper-alloy rim there is a frame of red enamel around a design of nine rectangles of millefiori. The four blocks at each corner show a dark blue and white chessboard surrounded by a pale blue frame; the four between these, set in the manner of a St Andrew's cross, are of white enamel with two dark blue streaks running towards the centre. Enough of the middle block survives to show a yellow rectangle with black radiating spokes around a central red spot. The pin is missing. This brooch probably belongs to the 2nd-century floruit of enamelled brooches.
90 Fig 14 SF BKC 2983(C), J36 L4. Dump. Period 5b. Length 28.0 mm . Two fragments of a small brooch. The head, with the pin-fitting, is missing. The body consists of a rectangle framed by a single marginal moulding on a narrow foot tapering to a foot-knob with three small transverse mouldings. The rectangle on the bow probably held enamel. Similar, but more elaborate, brooches come from Nor'nour, Isles of Scilly (Hull 1968, Type 33) and date to the 2nd century.

## PENANNULAR BROOCHES

Fowler Type A (1960, 150-2). Penannular brooches with rounded bulbous terminals (Fig 15; 93-96).
95 Fig 15 SF BKC 3476(C), K386 L40. Town ditch (F125) fill. Period 4a. Internal diameter 21.0 mm . The pin and part of the ring of a Type A3 brooch. The pin has a strong hump. There is a single moulding at the knobbed terminal.
96 Fig 15 SF LWC 1873(C), H97. Topsoil. Roman?/Anglo-Saxon?/post-medieval? Internal diameter 19.5 mm . A complete Type A4 brooch in five fragments. The pin has a slight dip. There is a single moulding at the milled knobbed terminal.


Fig 15 Penannular brooches: Fowler Type A (1:1)
Fowler Type C (ibid. 152). Penannular brooches with the terminals coiled and twisted so that the coil is at right angles to the plane of the ring (Fig 16, 97-103). The first three pieces (97-99) clearly belong to this type and date probably to the 1st century AD (or possibly earlier). Elizabeth Fowler has kindly contributed a note on the next four brooches (100-103) which represent a development of the earlier type.
97 Fig 16 SF BKC 4893(C), T615. Unstratified. Internal


Fig 16 Penannular brooches: Fowler Type C (1:1)
diameter 29.0 mm . A distorted brooch with plain ring of circular section. The flattened terminals are rolled tightly into a spiral. There is a slight hump in the centre of the pin.

99 Fig 16 SF BUC 1718, H1066 G687. Grave fill. Period 1. Internal diameter 24.0 mm . The ring is of circular section. The terminals have been flattened and rolled tightly into a spiral. The pin is straight.
100 Fig 16 SF LWC 1889(C), H79 F10+F15+F32+F55. Medieval? Internal diameter 15.0 mm . The flat section ring has terminals of a single coil. There is slight notching on the outer edge of the upper face of the ring.
101 Fig 16SFLW.C2100(C), H159. Machine clearance. Modern. Internal diameter 14.0 mm . The ring is of circular section with a slightly flattened upper face. The terminals are of a single coil. The upper face is decorated with incised zig-zags.

102 Fig 16 SF LWC 3980(C), R unstratified. Internal diameter 13.5 mm . The ring is of flat section and is decorated on the upper face with deep chip-carved zig-zags and crosses. Each terminal is of one coil which has been slightly flattened and marked longitudinally by a clinching tool. The pin dips slightly in the centre.
103 Fig 16 SF BUC 1689(C), H891 G647: Grave good or item of dress; on right shoulder. Period 2. Internal diameter oval, 11.5 by 13.5 mm . Silver. The ring is of circular section and segmented. Each terminal is of one coil and is marked longitudinally by a clinching tool applied before the coil was formed. The mark runs from close to the segments of the ring all the way round the coil. The pin dips in the centre and is also marked along its midline by a clinching tool.

Of the last four brooches only one (103) was found in a Roman context. However the discovery of this brooch, either an item of dress or deposited as a grave good, in an east-west oriented grave which can be dated to later than 367 on the evidence of a coin of Valens (367-75, CK 528) in the fill does not imply that all four brooches could be given such a late date. The other three, however, do exhibit a style of decoration which suggests a late Roman date. The segmented ribbing of 103 (plus the fact that it is silver) links it to two curious Type Aa penannular brooches found in hoards of probable 4th-century date (Fowler 1964, 110, note 6).

Elizabeth Fowler writes: These brooches are particularly interesting in view of some new work on
penannular brooches. Since I wrote my original study in 1960, there have been several publications which have emended and amplified the 'family tree' there described (Fowler 1960, 151). A very brief mention was made (ibid, 167 ) of some apparently late GalloRoman brooches from Argonne. Patrick Galliou (1977, 13-34) has now published a late Roman multiple burial containing four bodies at Sables d'Or les Pins en Pléhérél (Cotes-du-Nord). With skeleton 4, (actually 90.0 mm above the body) was a plain Type C not unlike Fig 16,100 but without the slight notching. A coin of AD 266 was found between the thighs of this body. Galliou noted, from continental sources, a large number of similar brooches, most without any definite associations but some in grave fills like the Sables d'Or example which fall within a date range from the 3rd to the 6th century, but with a concentration in the 325-400 range (of particular importance here is the Colchester brooch 103). Two of the Type C brooches noted by Galliou are decorated: one, from Carnac, with a running spiral (Miln 1887, pl 13, 3); the other from Lavoye (Chenet 1926, fig 1, E) is similar to the Colchester pieces.

The question is whether these flat-sectioned, decorated Type $C$ brooches found in late Roman contexts in Britain and the Continent, are to be regarded as survivals from 1st-century or earlier times or whether they can now be seen as a genuinely new development in the 3rd and 4th centuries. Flat-sectioned and decorated Type C brooches in 1st-century BC/AD contexts are not common, while there are quite a few Type C, and similarly decorated Type D brooches, admittedly not often securely dated, from late Roman contexts in Armorica and Anglo-Saxon graves in England. ${ }^{4}$ There is, I believe, enough evidence now to suggest that Colchester Fig 16, 100 and 103 certainly, and probably Fig 16,101 and $\mathbf{1 0 2}$ also, were made in the 4th century and reflect the changing elements in Romano-British society, that is, the resurgence of Celtic art-styles, albeit in a crude form, and new techniques of manufacture, such as the chip-carving of Fig 16, 102. In other words, my original classification of Type C brooches, with a date range of 1st-century BC to the Anglo-Saxon period, should be refined into the late Iron Age type, dating to the 1 stcentury BC/AD, and the much later, often flatsectioned and frequently decorated, type. This is therefore a parallel case to penannular brooch Types E and F. I do not see all Type C brooches whenever they appear in late contexts as survivals from the true late Iron Age Type C (though see Simpson 1979, 32930). The late Roman style of decoration noted by Galliou seems to be highly significant, akin to the late buckles studied by Hawkes and Dunning (1962). Whether the development of Type C takes place in Britain and simultaneously on the Continent, especially Armorica (where the classic British Type C is not common), or whether it really is a development in the Limes area which then spreads to other regions in the 4th century (Galliou 1977) is as yet not clear (see also Fowler 1964, 114-17). It would nevertheless seem reasonable that in the 3rd century
an earlier type of brooch should be 'made-over' and given decoration at the same time as other types of penannular brooches were being elaborated. Thus these newer brooches would be available to be worn, to be buried with the dead, and to be acquired later on by the incoming settlers from the Continent (or indeed brought with them).

## HAIRPINS

Doubts have been expressed in the past concerning the identification of bone, metal, glass and jet pins as hairpins (eg MacGregor 1976, 13). The alternative use suggested was that, like brooches, pins were used to fasten garments. Any objection to this idea on the grounds that the pins were too thick and would damage the cloth can be overridden by comparison with the average diameter of the heads of bone and copper-alloy needles. As these measurements are very close ${ }^{5}$, it would appear that material which can be sewn with thick needles ( $p$ 65) will not be damaged by the use of large pins as fasteners. However, brooches are well attested as cloak fasteners (Hull forthcoming) yet their pins are slender. This would seem to imply that brooches and large pins do not share a common function.
A dozen pins of glass and metal have been found either on or close to the skulls of women buried in east-west oriented inhumations in the 4th-century cemetery at Butt Road, Colchester ${ }^{6}$, and a bone pin was discovered immediately adjacent to a woman's skull in a plaster burial, aligned north-south, belonging to the earlier inhumation cemetery on the same site.' At Yor.k, North Yorkshire two cantharusheaded jet pins were found fixing the still-surviving bun of an adolescent girl in a gypsum-filled stone coffin lined with sheet lead (RCHM 1962, 83a, 143b). ${ }^{\text {. }}$ The evidence, therefore, points to the use of large pins of all materials as hairpins, although it does not preclude their being used for other purposes. The bone ?pegs catalogued in Category 18 may be dress pins (p 162).

## BONE PINS

The large number of bone pins (342) found on excavations at Colchester from 1971-9 has enabled six predominant types to be distinguished and a chronology (Crummy 1979, 157-163) to be established for these types. Most bone pins were hand carved. There is no evidence at Colchester for the use of a lathe. ${ }^{\circ}$ The regular concentric marks found on the heads of some Type 3 pins were produced by turning the pin against a hand-held blade. The most practical method of carving a pin isto leave a large stock at the head end (Crummy 1981, fig 3 ), which enables all parts of the pin to be worked on with ease. There is no direct evidence, however, that in the Roman period pins were made in this way, but the identification of roughly-worked splinters of bone with no stocks as pin 'blanks' is far from certain (ibid, 284). The range of skill in carving shown on bone pins suggests that perhaps they were manufactured both in the home and in workshops. Fragments of partly-
worked bone and antler have been found on several of the sites excavated from 1971-9 in Colchester (4306-4395).

It would be surprising if there were no evidence of varying taste and style in bone pins: not only regional variations but, if some domestic manufacture is accepted, even between households. It is, therefore, a disappointment to see only six standard head-types in Colchester, and to see how these types recur throughout the province. Given that bone pins fall into limited head-types despite the potential of bone as a medium and the probability that some, if not most, were home-made, we should attempt to find a non-domestic factor influencing their design. Such a factor can readily be found in metal and jet pins, many of whose head-types are the same as those of bone pins yet whose manufacture must have been commercial and based in a workshop. Casting bronze requires specialist tools and equipment and specialist knowledge. Jet is a rare and expensive material found in Britain only in the area of Whitby, North Yorkshire, and there is no positive evidence for its export in the raw state. Metal and jet pins were therefore objects of some intrinsic and artistic value, and the recurrence of their head-types on bone pins suggests that the latter were copies made locally at comparatively low cost. Some early bone pins are stained green, and an early pin stained red has recently been found in Colchester ${ }^{10}$. The use of these two colours could indicate attempts at imitating copper-alloy pins.

The weakness of the simple tapering shaft of Types 1 and 2 and some examples of Type 6 is that the shaft is liable to break under pressure at any point. An advantage is that a broken pin would still be wellbalanced and reusable if repointed at any length. The swollen shaft which occurs on Types 3, 4, 5, and the majority of Type 6, was probably introduced as an attempt to strengthen the weakness of the earlier straight thin shaft. The success of this innovation can be judged by the percentage of surviving whole examples (not including repointed ones) of each type: Type 1 17\%; Type 2 6\%; Type 3 44.5\%; Type 4 43.5\%; Type 5 27\% (this low figure can be offset by the high number, $18 \%$, of pins of this type that have 2.0 mm or less of the total length missing); Type 6, of 3 plain tapering shafts none survive intact, of 12 swollen shafts $25 \%$ survive. An alternative explanation for the swollen waist could be that on pins with a head standing proud of the shaft, a counterweight was necessary to achieve a wellbalanced pin. The consequent greater strength of the shaft would therefore have been an added bonus.

Type 1. Pins with a plain conical head (Fig 17; 104155). This pin is simply a plain tapering shaft, the thicker end of which has been sharpened to a short point. The shaft is thin, with the maximum width immediately below the head varying from 2.0 to 6.0 mm (two examples meauring respectively 7.5 amd 8.0 mm are possibly not pins). Only nine complete examples survive, varying from 88.0 to 122.5 mm long. Three others have been repointed


Fig 17 Bone hairpins: Type 1 (1:1)
after breaking. These measure 79.0, 74.0 and 69.5 mm . Obviously more examples than the three recognized here could have been repointed and then broken again. As well as the two very thick examples, another five which stand apart from the general group as shorter and proportionally thicker are also possibly not pins (see bone pegs 4465-4472).
All the examples of Type 1 are well made. Slight knife and/or rasp marks are sometimes visible on the shaft which is regular, smooth and often highly polished. The short conical head is usually comparatively crude, being the result of a few strokes of a knife, though some examples are smooth and slightly rounded, probably from use. Four have been stained green, probably with a vegetable dye (104, 108, 110, 114). This staining has also been noted on a Type 2 pin at York (MacGregor 1978, 35; also note 1) and on a "plain", probably Type 1, pin at Rochester, Kent (Harrison 1972, 155)." The practice appears to be restricted to the two early types of pin.
Type 1 pins are found in deposits ranging in date from ?Flavian to 4th-century. The date of manufacture of this pin is discussed under Type 2.
113 Fig 17 SF LWC 2945. J738 F180 Road ditch. Period 4. 122.5 mm Iong. Complete. Head worn.

122 Fig 17 SF BKC 3375(C), J142 F13. Large pit. Period 5b. 74.0 mm long Probably carefully repointed.

138 Fig 17 SF BKC 5113(C), V223 L46. Make-up? Period 5. 113.5 mm long. Complete. The head shows a patch of cancellous bone.

Type 2. Pins with 1-4 transverse grooves beneath a conical head (Fig 18; 156-218). Type 2 pins are similar to those of Type 1 but have been decorated with a groove or grooves cut round the top of the shaft beneath the head. The number of grooves varies from one to four, with two predominating. Where there are two or more grooves beneath a head they almost always vary in depth and width, in some cases not extending round the circumference of the shaft, in others failing to meet and continuing in a spiral. As with Type 1 pins the weakness of the shaft is indicated by the fact that only four of the 63 catalogued examples are complete, varying from 73.5 to 125.0 mm long, and only one has been repointed to survive intact at its new length ( 82.5 mm ). Five pins have been stained green (160, 161, 170, 190, 212) (see Type 1).


Fig 18 Bone hairpins: Type 2 (1:1)

Type 2 pins are found at Colchester in deposits dating from the ?pre-Flavian period onwards (Fig 17, 159). The date of appearance for Type 2 and, by association, Type 1 pins has been put back to $c 50$ on the slightly ambiguous evidence of the find of a Type 2 pin in a beam slot of a Claudian military building at Chichester, West Sussex (Down 1978, 54, 315; Crummy 1979, 160). The absence of Type 2 pins from major late Roman deposits in Colchester implies a terminal date of c 200, which is supported by the evidence from the Church Street sewer at York (MacGregor 1976, 1 2), and by the absence of the type from Portchester, Hampshire.
156 Fig 18 SF LWC 309, B86 F43. Pit. 12th to 15 th century. 61.0 mm long. Tip broken off. Three grooves, all very wide, giving the impression of a Type 5 head. Fairly crude.
159 Fig 18 SF LWC 977, C218. Cultivated soil. ?Period 2, 3a or 3b. 82.0 mm long. Tip broken off. Four grooves.
162 Fig 18 SF LWC 2334, J325 F132. Posthole. Period 4b. 88.5 mm long. Tip broken off. Three grooves.

177 Fig 18 SF BKC 2812(C), H287 L13. Dump. Period 5b (end) and possibly into 5 c and 6.87 .5 mm long. Complete. Very thick and crude. The two shallow incised lines round the head can scarcely be called grooves.
182 Fig 18 SF BKC 3403(C), J198 F45. Timber-lined pit. Period 5b. 65.0 mm long. Tip broken off. There is a single faint incision at the very top of the head, round half the circumference only. This pin may more correctly be classified as a Type 1.
183 Fig 18 SF BKC 3371(C), J224 F13. Large pit. Period 5b. SO.Omm long. Tip broken off. Two grooves as a spiral. Fairly crude.
194 Fig 18 SF BKC 5271, V362 L39. Metalling. Period 5. 61.5 mm long. Tip broken off. Two grooves. Thin, with a very small head.

197 Fig 18 SF BKC 5269, V364 L39. Metalling. Period 5. 56.0 mm long. Tip broken off. Two very fine grooves.

198 Fig 18 SF BKC 5269, V364 L39. Metalling. Period 5. 86.0 mm long. Tip broken off. Two grooves.

Type 3. Pins with a more or less spherical head (Fig 19; 219-355). This type includes a variety of head shapes which can be divided, somewhat arbitrarily, thus: A, globular or elliptical, sometimes with a small flat area on the very top (Fig 19, 221', 243, 252); B, a semicircular or elliptical lower half with a slightly conical or low convex upper half (Fig 19, 268, 275, 288, 300, 326); C, Ienticular (Fig 19, 254, 330); and D, hemispherical (Fig 19, 309). Of the 137 recorded examples 57 fall into head shape $A, 67$ into $B, 6$ into $C$, and 7 into D . The lenticular head C is very close to the simple reel found on some Type 6 pins, the distinction being in the degree of convexity acceptable on the upper surface of the head and in the width of the straight wall of lenticular heads. In practice only two of the six shape C heads could conceivably belong to Type 6 (Fig 19, 330 and 339). The hemispherical heads, D, are all fairly crude and it is possible that these pins represent an intermediate stage in the manufacture of Types 3,4 or 6 . The remaining pins, A, $B$, and four of $C$, form a cohesive group containing all possible shades of variation between the three basic shapes.

All Type 3 pins except for two $(263,264)$ have some degree of swell to the shaft. This can be as little as 0.5 mm , with a noted maximum of 3.0 mm . Sixty-one

$\qquad$

Fig 19 Bone hairpins: Type 3 (1:1)
examples are complete, ranging in length from 52.5 to 111.0 mm . Fourpins have definitely been repointed at new lengths of $45.0,49.0,56.0$ and 61.0 mm . All these examples and the fractured ones give the impression of a type on average shorter than Types 1 and 2. Over two-thirds of Type 3 pins are quite roughly finished. In some cases the shaft is smooth and polished but the head is rough. In others both shaft and head are uneven but polished. Most of the well made and polished pins carry regular marks on the head that were formed by turning the pin against a hand-held blade. The remaining heads all show facets, varying in size depending on the degree of finish in each case.

Type 3 is by far the best represented bone pin at Colchester, but the dates of its appearance and termination are vague. The catalogue shows no pin in a context dated before 150 and only a few in contexts dated $c$ 150-250, with the remainder that can be dated deriving from deposits dated to the late 3rd to 4th century. On the evidence from Colchester, therefore, a conservative starting date of $c 200$ can be postulated, with the pin appearing to survive to the end of the Roman period (although it is absent from Portchester).

221 Fig 19 SF LWC 32, B23 F14. Boundary ditch. 17th century. 88.5 mm long. Tip broken off. Head A. The neck of the pin between head and shaft is very thin and bears several deep cuts.

243 Fig 19 SF LWC 2366, J357 (F20). Pit? 15th century +. 78.0 mm long. Complete. Head A. The shaft is very crude and has probably not been repointed. The head is elliptical in section.

252 Fig 19 SF BKC 8(C), A9 L1. Town ditch (F30) fill. AngloSaxon. 87.0 mm long. Complete. Head A.
254 Fig 19 SF BKC 115(C), A43 L5. Topsoil and town ditch (FI 6) fill. Post-Roman. 45.0 mm long. Tip broken off. Head C.
268 Fig 19 SF BKC 2292(C), G199 F190. Pit? Trench? Period 5c? 59.0 mm long. Tip broken off. Head B. There is a distinct line at the neck.
275 Fig 19 SF BKC 2411(C), G375. Topsoil. Period 5c. 90.0 mm long. Complete. Head B. The knife marks running from the lower part of the head give a twisted effect at the neck.
276 Fig 19 SF BKC 2409(C), G388 F11. Timber-lined drain. Period 5c. 62.0 mm long. Tip broken off. Head A? The head is small and very crude.

288 Fig 19 SF BKC 2830(C), H298 (F94+F167). Pits. Period 6. 102.5 mm long. Complete. Head B. The base of the head is set in from the top of the shaft.
300 Fig 19 SF BKC 3866(C), M9. Mainly Periods 5 and 6 but could include modern. 62.0 mm long. Tip broken off. Head B. The head is split. Both head and shaft are fairly crude.
309 Fig 19 SF BKC 4103(C), N83 L8. Dump. Period 6. 82.0 mm long. Complete. Head D. The head is fairly crude.

326 Fig 19 SF BKC 4642(C), T326 L67. Backfill of F25 cellar. Period 5c. 79.5 mm long. Tip broken off. Head B. The base of the head is set in from the top of the shaft.
330 Fig 19 SF BKC 5410, V727. Unstratified. 66.0 mm long. Complete. Head C. The base of the head is set in from the top of the shaft.

Type 4. Pins with a faceted cuboid head (Fig 20; 356-394). The heads of Type 4 pins were fashioned by sawing or carving a cuboid and then taking off each corner so that five lozenge-shaped and eight triangular facets were left. That this style of head presented the maker with considerable problems is


Fig 20 Bone hairpins: Type 4 (1:1)
clear. Eleven pins out of the 29 recorded here show cancellous bone on the head. Two more have a concave face on one side probably caused by the removal of cancellous bone. Three others have heads that are very thin on one axis, possibly due to the trimming of one face to remove traces of cancellous bone and the subsequent cutting down of the opposite face to balance the result. On very few heads have five lozenge-shaped facets actually been achieved, since the triangular facets often fail to meei either on the upper edge, or at the correct point on the side, or both, producing in consequence many irregular five- to eight-sided facets. Achieving flat surfaces also appears to have presented difficulties. Where a saw has not been used the surfaces produced tend to be quite uneven because the face has been worked on from varying angles. The use of a saw enabled most problems to be solved but not that
of producing an exact cuboid: on very few of the heads are the contiguous lozenge-shaped facets at right angles.

These problems, no doubt along with many others that are not immediately apparent on examining the pins, could explain why this style of head, using bone as a medium, occurs throughout the province only in low numbers. At Colchester Type 4 pins form $11.4 \%$ of the total bone pin assemblage from the excavations of 1971-9. This figure drops to $7.9 \%$ for the town as a whole when the pins in the collections of the Colchester and Essex Museum are taken into account. At Richborough, Kent Type 4 pins represent $7.2 \%$ of the total recovered and elsewhere in the country the percentages range from $0.5 \%$ to $4.0 \%$. $^{12}$ Of the 39 Type 4 pins from Colchester seventeen are complete, ranging in length from 66.0 to 102.0 mm , with three repointed at lengths of 64.0, 63.5 and 54.5 mm , confirming the impression given by Type 3 that more elaborate head-styles result in a shorter pin. All except one of these pins has a swollen shaft, the swell varying from 0.25 to 1.25 mm .
Type 4 bone pins are here present only in contexts dated post 250. A date of appearance for this type of c250 or later agrees well with the fact that the faceted cuboid is frequently used as a motif on jewellery of the late 3rd and 4th centuries. For example, as beads (Fig 35, 912); the imitation of .beads on armlets (Fig 38, 1560); and as the head of pins ef'jet (Fig 24, 450, 452), copper-alloy (Fig 29, 487, 490), and silver (Wynia 1979, 68), as well as of bone.

356 Fig 20 SF LWC 404, B31 F18. Robber trench. 12th to 14th century. 87.0 mrh long. Complete. The head is fairly regular.
364 Fig 20 SF BKC 20, A12 L1. Town ditch (F30) fill. ?Contaminated. Anglo-Saxon. There is a deep cut round the neck. The head is fairly regular.

368 Fig 20 SF BKC 465(C), A92 (L12). Post-Roman. 66.0mm long. Complete. The head is very squat and crude. The knife marks on the lower part of the head give the neck a twisted appearance.
378 Fig 20 SF BKC 2407(C), G389. Uncertain. Period 4 or 5. 86.0 mm long. Complete. The head is very thin on one axis, possibly due to the removal of cancellous bone.

381 Fig 20 SF BKC 2813(C), H297 F33. Rubbish pit. Period 5c. 74.5 mm long. Complete. The large head is very irregular.

385 Fig 20 SF BKC 4370(C), N84 L8. Dump. Period 6. 86.0 mm long. Complete. The head is very worn and mis-shapen.
386 Fig 20 SF BKC4138(C), N93. Period 5 or 6.51 .5 mm long. Tip broken off. The head is very thin on one axis. One face does not project beyond the vertical line of the shaft and shows cancellous bone.

393 Fig 20 SF CPS 423(C), 576 F115. Occupation. Period 4. 82.0 mm long. Tip broken off. Each lozenge-shaped face and each of the upper set of triangles bears a ring and dot. The head is fairly regular.

Type 5. Pins with 1-5 reels beneath a conical or ovoid head (Fig 21; 395-416). Type 5 pins are somewhat akin to Type 2, but a different approach to both shaft and head has resulted in a new style. Six of the 22 catalogued examples are complete, ranging in length from 74.0 to 97.0 mm , once again on average shorter than Types 1 and 2. Two pins have been repointed at lengths of 47.0 and 50.5 mm . All but one


Fig 21 Bone hairpins: Type 5 (1:1)
of the pins have a swollen shaft, the amount of swell varying from 0.25 to 1.5 mm and just over half the pins have a shaft that is faceted in section. The faceted section may be a reason for the loss of only the extreme tip on a high proportion of those that are broken. The heads of Type 5 pins are divisible into two main groups. In the first the reels have been formed by cutting grooves into a stilted conical head (Fig 21 , 400, 404, 406, 409, 411). On some examples the resulting conical head appears to have been trimmed after the grooves have been cut (Fig 21, 397), placing these pins between this group and the next. In the second group the head and reels have been treated as two separate motifs: most have had the head and reels shaped together, but the head has been given a more positive treatment by cutting the lower part at a slope into the groove separating it from the first reel,
thus producing an ovoid or flame-shaped head (Fig $21,395)$. On two examples the ring has a narrower diameter than the head (Fig 21, 402).

Half of the 22 Type 5 pins derive from a cellar and associated features on the Cups Hotel site that contained a series of late 4th-century occupation layers and a probable dispersed coin hoard with a closing date of c 360. A date range within the 4 th century seems therefore to be acceptable for Type 5. The few examples from Roman contexts on other sites also suggest a 4th-century floruit for this type.

395 Fig 21 SF LWC 503, A104. Unstratified. 68.5 mm long. Tip broken off. One ring. Ovoid head. Round section. Swollen shaft.
397 Fig 21 SF BKC 908(C), D301. Tile scatter in town ditch. Anglo-Saxon. 94.0 mm long. Complete. Three rings. Conical head. Faceted section. Swollen shaft.
400 Fig 21 SF BKC 1274(C), E360 L433. Town ditch (F138/317) fill. Post-Roman. 75.0 mm long. Complete, possibly repointed. Two rings. Perhaps three were originally intended, as there is a fairly broad rough area below the bottom ring. Conical head. Faceted section, ring and head. Swollen shaft.
402 Fig 21 SF BKC 1302(C), E406 L437. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 74.0 mm Iong. Complete. One ring. Ovoid head. Round section. Swollen shaft. The ring has ?worn down on one side.
403 Fig 21 SF BKC 3691(C), J435 F276. Pit complex. Period 5? 66.5 mm long. Tip broken off. Five rings. The head is missing. The lower ring runs gently into the shaft. The round shaft is thick and thickens even more towards the broken end.
404 Fig 21 SF BKC 4152(C), N118 L3. Topsoil. Period 6.50.5 mm long. Repointed. One ring. Conical head. Faceted section, ring and head. Swollen shaft.
406 Fig 21 SF CPS 219, 420 F100. Occupation. Period 4. 73.0 mm long. Very tip broken off. One ring. Conical, slightly ovoid, head. Faceted section, ring and head. Swollen shaft.

409 Fig 21 SF CPS 327(C), 560 F116. Robber trench material. Period 5. 81.0 mm long. Complete. The head is crude, and clearly demonstrates how a groove was cut into a previously-formed head to produce the ring. Slightly faceted section. Swollen shaft.
411 Fig 21 SF CPS 479(C), 576 F115. Occupation. Period 4. 91.5 mm long. Very tip broken off. Three rings. Conical head. Round/faceted section. Slightly swollen shaft.

Type 6. Pins with a reel- or bead-and-reel-shaped
head (Fig 22; 417-431). Type 6 is composed of a small group of fifteen pins whose heads are decorated with reel and/or bead motifs. The commonest head is the solitary reel, which can in some cases be so roughly made as to resemble as much a bead as a reel. Three examples of reel/bead/reel have been found, and one of reel/bead/reel/bead, the lower bead of which is almost sufficiently elongated to qualify as balustershaped. Three pins are complete, giving lengths of $83.0,66.5$ and 65.0 mm . There appear to be no repointed pins. The shafts of twelve of the group are swollen, the amount of swell varying from 0.25 to 2.0 mm . The remaining three have plain tapering shafts of which one (Fig 195, 430) is an unfinished pin associated with the bone-working industry on Butt Road (pp 152-60; Crummy 1981).

All the examples of Type 6 pins at Colchester which derive from Roman contexts are present in levels of the late 3 rd to 4 th centuries. However, though the
evidence from Colchester suggests a starting date for this type of c 250, Chichester, West Sussex and Shakenoak, Oxfordshire have each produced a Type 6 pin in a context dated to the 2nd century or later (Down 1974,46, 53; Brodribb et al 1971a, 110). In the case of Chichester the pin was associated with Antonine terra sigillata in a ditch which had startedto silt-up 'in or after the 2nd century'. Despite the uncertain nature of this evidence the date of appearance of Type 6 should perhaps be put back to at least c 200.


Fig 22 Bone hairpins: Type 6 (1:1)

419 Fig 22 SF BKC 594, A31 L2. Topsoil. Post-Roman. 37.0 mm long. Tip broken off. Reel/bead/reel.
420 Fig 22 SF BKC 1264(C), E359 L437. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 60.0 mm long. Tip broken off Reel.
422 Fig 22 SF BKC 1943, E1221 L450. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 83.0 mm long. Complete. Reel/bead/reel.
423 Fig 22 SF BKC 2325, G321. Topsoil? or dump? Period 4 or 5. 42.4 mm long. Tip broken off. A tiny head, probably meant to be a reel, but resembling more a bead.

425 Fig 22 SF BKC 2817(C), H298 (F94+F167). Pits. Period 6. 45.0 mm long. Tip broken off. Reel/long bead/reel/bead. Fairly crude head.
430 Fig 195 SF BUC 686(C), C1348 L1. End of Period 1 or Period 2. 32.0 mm long. Tip and most of shaft broken off. Reel. Unfinished. This piece is illustrated with other fragments from the bone-working industry on Butt Road.

## Miscellaneous (Fig 23; 432-445)

432 Fig 23 SF LWC 280, A45 F26. Pit. AD 1500. 77.0 mm long. Crudely repointed. The sides of the shaft not in the view illustrated have been roughly sliced down to form a broad point. The pin has a plain globular head and an irregular faceted sphere about half-way down the shaft. The sphere is covered in ring-and-dot decoration. Possibly post-Roman.

433 Fig 23 SF LWC 388, A67. Post-medieval. 103.5 mm long Complete. The head, which is rather thin on one axis, is a plain sphere surmounted by a small cone. The centre of the shaft has a very marked swell.
Fig 23 SF LWC 1127, B545 F195. Pit. Period 4. 93.0 mm
long. The head is damaged. The surviving part is a pedestal base for either a figurine or a female bust (Liversidge 1973, fig 61, b). The top of the pedestal bears an elliptical scar(see 445).

435 Fig 23 SF LWC 1880, H21. Topsoil. Late 17th century. 53.0 mm long. Tip broken off. The head is a flat kidney shape.

437 Fig 23 SF BKC 989(C), D unstratified. 65.5 mm long. Tip broken off. The head is flame-shaped.
438 Fig 23 SF BKC 2663(C), H75 F28(?). Sand pit. Period 6 39.5 mm long. A very small type 3 pin with gold foil wrapped round the head and the very top of the shaft (Bushe-Fox 1913, fig 11).
439 Fig 23 SF BKC 2799(C), H278. Unstratified. 50.0 mm Iong Tip broken off. The head is flame-shaped and bears several irregular cuts.
440 Fig 23 SF BKC 3016, J1 L1. Site clearance. 67.0 mm long. Tip broken off. The head is thick and slightly kidney-shaped, with a flat base and a ridge between the two upcurved ends.

441 Fig 23 SF BKC 5909, J158 F32. Pit. Period 5c/6. 31.5 mm long. Most of the shaft has been broken off. The head is an elaboration of a Type 2 , with a small reel and cone surmounting a larger cone beneath which are three grooves.

442 Fig 23 SF BKC 4430(C), N498 L87. Floor? Period 5b1. 52.5 mm long. Tip broken off. Similar to 441 , but without a reel separating the large and small cones, and with only two grooves.
443 Fig 23 SF BKC 5241, V451 L50. Make-up. Period 4 or 5. 65.5 mm long. Tip broken off. The head is damaged. The surviving part is the bust/base of a (probably) female bust (see 445).
444 Fig 23 SF MRC 101, 116 F70. Shallow pit. 4th century or later. 115.0 mm long. Tip broken off. The head is damaged. The surviving part, which is only 3.0 mm thick, shows an altar-like pedestal surmounted by a ?lunular element, itself with a pedestal base.
445 Fig 23 SF BUC 922, E104 F26. Pit. Modern. 38.0 mm long. A roughly carved female bust. The shaft, made separately and inserted into the base of the bust, has been broken off almost flush with the base.

Pins decorated with a female bust often have a shaft which was made separately and then fitted into the head. Whether or not these shafts were original is uncertain. However, the two fragments of bust/figurine pins 434 and 443 are made in one piece. It is possible that the heads of these perhaps comparatively valuable pins were salvaged and fitted with a new shaft when the original broke. The base of 445 shows saw marks which may be either associated with the initial work of carving the head, or with trimming the base to a flat surface to be drilled. Once a hole had been drilled in the base, the replacement of a broken shaft could have taken place frequently. Dr Henig (1977, 359) has suggested that these hairpins were used as imagines representing dead family members. They may therefore have been set up in household shrines where they were unlikely to have been broken.

## JET PINS

The jet ${ }^{13}$ pins found during the excavations of 1971-9 fall into two types, those with a spherical head, and those with a faceted cuboid head. All the jet pins and pin shaft fragments from recent excavations derive from late or post-Roman contexts. In the absence of a workshop of comparable date, the accuracy of any postulated dating for late jet pin types is wholly dependent on stratigraphic evidence, and on


432

443


Fig 23 Bone hairpins: miscellaneous types (1:1)
comparison with similar head-types in other materials.
An unusual jet pin from Colchester is illustrated in Hull 1958 (fig 77, 6). The shaft is separate from the hemispherical head, which it completely pierces, and is banded just above the middle by three grooves. A date of $60 / 1$ should be attributed to this pin, which comes from the so-called First Pottery Shop (ibid, 153-8), though no details of its context are given. ${ }^{14}$ In the collection of the Yorkshire Museum (York, North Yorkshire) are eight lengths of jet identified as roughs for hairpins (YMH 1891, 127q). They were found in 1873 on the site of the present railway station where a cemetery containing burials dated from the 2 nd to the 4th century overlay waste land formerly used for industrial purposes, including the manufacture of pottery and of jet and bone ornaments (Richmond 1947, 79; RCHM 1962, 63b). It has previously been assumed that the pins made from these roughs were the same as those found as grave goods in 3rd- and 4th-century inhumations in York, ie spherical-, faceted-cuboid-, and cantharus-headed (ibid, 143b; Lawson 1976, 258). This assumption inevitably called into question the recorded stratigraphy of the Railway Station site and the dating of both the precemetery occupation and the cemetery itself. However, recent examination of the eight lengths (Appendix 1; on microfiche) has provided a different interpretation of the type of pin produced and has thereby solved the problem of dating.

The evidence from the material in the Yorkshire Museum points to the manufacture of pins made in two pieces, similar to the mid 1st-century example from the First Pottery Shop in Colchester. An early date for the roughs would fit in with the stratigraphy and dating of the Railway Station site, and do away with the anomaly of a 1st- or early 2 nd-century workshop for 3rd- and 4th-century pin types. The roughs in the Yorkshire Museum indicate that the shafts, at least, of early jet pins were turned on a lathe. As jet pins are usually well smoothed and highly polished, it is not always possible to tell from a finished article what techniques were used in its manufacture. There is, however, sufficient information available from the examples catalogued here to prove that shafts of late pins were both latheturned and hand-carved, and that heads were carved. The top of the shaft of 448, immediately below the head, is slightly rilled, as is the shaft fragment 454. These were lathe-turned, therefore. Other shafts are irregular in section and so cannot be lathe-turned (Fig 24, 447, 450). On others the slight facets of knife strokes can be seen (Fig 24, 452). The shaft fragment 456 is so crudely finished that the section is more polygonal than circular. The heads of Type 1 pins are all slightly irregular to some extent, and the facets of the heads of Type 2 pins all exhibit the marks of a knife, or possibly, in some cases, of a saw.

Type 1. Pins with a spherical head (Fig 24; 446448). Three spherical-headed pins were found. One is complete but very short ( 46.0 mm ) and has a proportionally over-large head (Fig 24, 447). Another



450

452

Fig 24 Jet hairpins (1:1J
has been crudely repointed at a length of 61.0 mm , though this is unlikely to have been longer than 65.067.0 mm when complete (Fig 24, 446). The shaft of the third has broken off 38.0 mm below the head. The stoutness of the shaft of this pin, together with the fact that it is still increasing in diameter at the breakoff point, indicates an original length approaching 90.0 mm . Pins 446 and 448 have swollen-waisted shafts, reaching a maximum diameter of 52.5 and 6.0 mrn respectively. Pin 447 has a tapering shaft and may have been repointed so that any swell to the shaft lay below the new tip, though there is no evidence for this. The overall impression given by these three pins is of a standard size altogether thicker and shorter than that of bone pins of the same type. This type is best dated by comparison with Type 3 bone pins, which have been given a conservative date of appearance of c 200. Jet pins of this type would appear to have survived into the 4th century, though whether or not they continued in production to the end of that century or beyond is uncertain.

446 Fig 24 SF LWC 179, B45 F23. Road ditch. Period 4. 61.0 mm long. Crudely repointed, the new surfaces are unpolished. The head is fairly irregular. Not lathe-turned.
447 Fig 24 SF BKC 2780(C), H189 F94. Pit. Period 5c. 46.0 mm long. Complete. This short pin, with its large head, would serve little function as a hairpin and must have been intended to be purely decorative. Not lathe-turned.

Type 2. Pins with a faceted cuboid head (Fig 24; 449-453). Five jet pins with a faceted cuboid head were found. Two are complete, being 65.0 and 61.0 mm long respectively, and only the very tip of another has been broken off, giving a surviving length of 50.0 mm . The shafts of the remaining two have been broken off, in each case not far below the head. All the pins have a swollen-waisted shaft. The amount of swell varies from 0.75 to 1.0 mm . Unlike bone pins of the same style, the heads of Type 2 jet pins are well made, consistently achieving five lozenge- and eight triangular-shaped facets. Where irregularity does occur, it is in the overall dimensions of the head, which is not always cuboid. For example, the head of Fig 24, 450 is very narrow, and that of 453 is very squat. This variation is no doubt caused by
the size of the piece of jet used to make the pin. By comparison with both Type 4 bone pins and with the general currency of the faceted-cuboid motif on jewellery, this type can be assigned to the period from the late 3rd to the 4th century.

450 Fig 24 SF BKC 572(C), A4 L1. Topsoil and town ditch (F30) fill. Post-Roman. 29.0 mm long. Most of the shaft has been broken off. The head is very thin along one axis. Not latheturned.
452 Fig 24 SF BKC 4261 (C), N239 F2? Period 5 b2 or 6.61 .0 mm long. Complete. Very regular in shape. Not lathe-turned.

Shaft fragments $A$ catalogue of shaft fragments (454-460) has been included on $f$ iche because, since few pins with head intact are found, the dating evidence from such a list is of value. All the shaft fragments recovered are plain, and presumably therefore do not belong to the 1st-century type with grooved shaft, but to the later Types 1 and 2.

## GLASS PINS (Fig 25; 461-465)

Four glass pins were found close to a woman's skull in an east-west oriented grave (G537) at Butt Road. The grave is later than c 320. All the pins are of translucent pale green glass. Three (461,462 and 463) are of the same type, with a globular head and a barley-sugartwist shaft. The twisted shaft of the fourth (Fig 25,464 ) separates to form a ring-shaped head.
462 Fig 25 SF BUC 1539, H363 G537. Grave deposit. Period 2. 76.0 mm long. The very tip of the shaft is missing. Translucent pale green glass, with a globular head and twisted shaft.
464 Fig 25 SF BUC 1543, H368 G537. Grave deposit. Period 2. 51.5 mm long. Complete. A comparatively short pin, with a twisted shaft and ring-shaped head in translucent pale green glass.


Fig 25 Glass hairpins (1:1)

## METAL PINS

All are of copper alloy unless otherwise stated. Metal pins were generally cast. Some may have been decorated cold, such as the pin with an incised lattice pattern on the conical top element, Fig 31,504. If the head-types of metal pins were copied in bone (p 20) then the date ranges of comparable types in the two
media would probably be similar. However, metal pins are not found in large numbers and the dating available from stratigraphic evidence alone is slight and, therefore, unsatisfactory.

Type 1. Pin with a plain conical head (Fig 26;466). Only one pin of this type was found. ${ }^{15}$ It is very slight and may not be a hairpin. The pin is paralleled by Type 1 bone pins, which are dated c50-200, and should perhaps be assigned a 2 nd-century date.
466 Fig 26 SF BUC 321 , B537 G109. Grave fill. Period 2. Length 75.0 mm .


Fig 26 Metal hairpins: Type 1 (1:1 J
Type 2. Pins with heads of bead, reel and spool motifs surmounted by a flattened sphere (Fig 27; 467-474). No close parallels exist between any two pins of this group. In section the heads may be circular, or circular and rectangular. Pins with heads combining several motifs are quite common ${ }^{16}$ though none are exactly similar to this type. There is no equivalent in bone. Bead-and-reel-headed bone pins, Type 6, which date from c 200, appear to be uninfluenced by Type 2 metal pins which seem to have been introduced early in the 2nd century, and perhaps to have gone out of production in the 3rd century. The elements used on each head are listed from the shaft end up.

467 Fig 27 SF LWC 582(C), B220 F23. Road ditch. Period 4. Very tip missing, bent. 107.0 mm long. Circular-section reel/bead/spool/flattened sphere.
469 Fig 27 SF LWC 1003(C), C308. Make-up. ?Period 4. Fragment 49.0 mm long. Rectangular-section reel/bead; rectangular- to circular-section spool/flattened sphere.
470 Fig 27 SF LWC 3056(C), J810. Make-up. Period 4a. Two fragments, tip missing, bent, 70.0 mm long. Circular-section bead/spool/flattened sphere.
471 Fig 27 SF LWC 3173(C), P2. Surface clearing. Unstratified. Very tip missing, bent, 91.0 mm long. Circular-section bead/reel/bead/spool/flattened sphere.
472 Fig 27 SF BKC 521(C), A112 F31. ?Sand pit. Period 6? Fragment, 58.5 mm long. Circular-section reel/bead/spool/flattened sphere.
473 Fig 27 SF BKC 3386(C), J186 F13. Large pit. Period 5b. Fragment, 26.0 mm long. Circular-section bead/bead/bead/spool/flattened sphere.

474 Fig 27 SF BKC 5172(C), V285 L27. Make-up. Period 5. Possibly repointed, 63.0 mm long. Rectangular-section reel/reel/; rectangular- to circular-section spool/flattened sphere.


Fig 27 Metal hairpins: Type 2 (1:1)
Type 3. Pins with a more or less spherical head (Fig 28; 475-484). Ten pins of this type were found. The shape of the head varies from spherical to a conical upper and rounded lower half. Five of the ten pins were found on or close to skulls of women buried in east-west oriented graves in the later cemetery at Butt Road, which indicates production of the type in the 4th century. Pin 483 derives from a pre-Boudican context. It would seem, therefore, that the type is current throughout the Roman period. The equivalent type in bone is Type 3, which cannot at the moment be conclusively dated pre-200.

480 Fig 28 SF BUC 328, B685 G115. Item of dress; on skull. Period 2. Silver. In two fragments, 70.0 mm long. The head has a conical upper and rounded lower half.
484 Fig 28 SF BUC 1540, H367 G537. Grave deposit. Period 2. Length 94.0 mm . The head is in two parts, now broken, probably originally a hollow ellipsoid, filled with a white ?solder.

Type 4. Pins with a faceted cuboid head (Fig 29; 485-490). Six examples of this type were found, all in contexts dated post 250. A similar date range to bone (Type 4) and jet (Type 2) faceted-cuboid-headed pins can therefore be postulated. One pin, Fig 29, 486, has been made by fixing a copper-alloy shaft through the perforation of a translucent dark blue

glass faceted-cuboid bead. The heads of the other examples are regular in shape, except that of Fig 29, 490, which is quite roughly made and has ring-anddot decoration on each of the four lozenge-shaped side facets.

486 Fig 29 SF BKC 1262(C), E263 L441. Town ditch (F138/317) fill. Late Period 6 or Anglo-Saxon. Fragment, 36.0 mm Iong. Copper-alloy shaft fixed through the perforation of a translucent dark blue glass faceted cuboid bead.
487 Fig 29 SF CPS 779(C), 625 F118. Robber trench material. Period 5. Very tip missing. 47.5 mm long.
490 Fig 29 SF BUC 1682, H862 G649. Grave fill. Period 2. Bent, 73.0 mm long. Ring-and-dot decoration on each of the four lozenge-shaped side facets.


Fig 29 Metal hairpins: Type 4 (1:1)

Type 5. Pins with a groove or grooves below a flattened spherical head (Fig 30; 491-496). Six pins of this type were found. They are paralleled at Verulamium (St Albans, Hertfordshire; Waugh and Goodburn 1972, fig 34, 59, 60) and Gadebridge Park, Hertfordshire (Neal and Butcher 1974, fig 64, 21824). The type seems to belong in the 2 nd century. One example, 491, derives from material forming the town rampart. There is no direct equivalent to this type in bone, but the grooves below the head forming false cordons are reminiscent of Type 2 bone pins, which were also in production in the 2 nd century.
492 Fig 30 SF BKC 111 (C), A55 F16. Town ditch fill. Anglo-Saxon or Period 6. Bent into a hook, 118.0 mm long. One groove.
493 Fig 30 SF BKC 3018, J39 L1. Site clearance. Fragment, 42.0 mm long. Two grooves.

494 Fig 30 SF BKC 4432(C), N504 L83. Occupation? Period 5b1. Length 77.0 mm . Two grooves.


Fig 30 Metal hairpins: Type 5 (1:1)

## Miscellaneous (Fig 31; 497-513)

497 Fig 31 SF LWC 749, B323. Gravelled surface. Periods 3-5, probably 5 . Corroded, tip missing, bent, 79.0 mm long. There are three grooves round the shaft beneath a projecting conical head which has irregularly-spaced incised lines radiating from the point. This pin probably dates, with Type 5 , to the 2 nd century.
499 Fig 31 SF LWC 2087, J202 F100. Posthole. Post-Roman. Fragment. 35.0 mm long. Globular head covered with closeset radiating incised lines. An incised line spirals part of the way down the shaft from below the head.
500 Fig 31 SF LWC 3808(C), K521 F293. Pit. Medieval +? Bent, 105.0 mm long. Conical head with five radiating incised lines above two rings, the lower one of which is smaller in diameter than the base of the head.
501 Fig 31 SF BKC 1333(C), E193 F70. Pit. Period 6. Cockerel, very corroded, thin, 18.0 mm long. Probably the head of a pin similar to Hawkes and Hull 1947, pl 100, 21.
503 Fig 31 SF BKC 2715(C), G434. c Periods 3 and 4. Very
corroded, 23.0 mm long. Bust, possibly male. If so, a parallel could be Wilson 1968, pl 43, 166.
504 Fig 31 SF BKC 2828, H320 F169. Trenches. Period 5c. Bent, 98.0 mm long. Similar to Type 2, but thinner, and the mouldings surmounted by an elongated cone with incised lattice decoration. Motifs from the bottom upwards are rectangular-section reel/reel/bead/reel/reel; circularsection reel/cone.
505 Fig 31 SF BKC 4015(C), N79 L1. Topsoil. Modern. Bent, 85.0 mm long. The head is a rhombohedron set on edge on the shaft. The two upper faces are grooved, the front and back and two lower faces have a marginal groove and are pierced.
506 Fig 31 SF BKC 4444, N506 L84. Floor or make-up. Period 5b1. Silver. Fragment, 28.0 mm long. Distorted head with circular-section bead/baluster/bead.
507 Fig 31 SF BKC 4981(C), V68 L22. Dump. Late Period 5. Bent, 86.0 mm long. Possibly not a hairpin. Head plain, almost flat.

508 Fig 31 SF BKC 5024(C), V67 L5. Cultivated soil. Late Period 5. Bent, 103.0 mm long. There is a groove round the top of the shaft, which tapers below a small bead.
509 Fig 31 SF BKC 4975(C), V71. Unstratified. Bent, 124.0 mm long. Cordon below a slight globular head.
511 Fig 31 SF BUC 451, C10 L4. Modern. Bent, 83.0 mm long. Similar to Type 2 but thinner and not surmounted by a flattened sphere. Motifs from the bottom upwards are circular-section reel; rectangular-section reel/reel/bead; circular-section reel/small bead.

512 Fig 31 SF BUC 529, C1019 G342. Item of dress; on skull. Period 2. Silver. In four fragments, 60.0 mm long. The head, a flanged boss, has a moulded relief flower design surrounded by beading on the flange. The shaft and head were soldered together but are now broken apart.
515- Fig 31 SF BUC 548, C1021. Unstratified. Bent, 104.0 mm long. The head resembles a narrow-necked lidded vase.

## BEADS

Each type of bead represented is very briefly described. The classification is loosely based on that of Beck (1928). The types comprising bead necklaces and armlets from graves in the Butt Road cemeteries are listed in Appendix 2 on microfiche. Except where stated otherwise, beads are pierced once. Date ranges for types are given where possible. As the overwhelming majority of beads comes from the 4thcentury Butt Road cemetery, the catalogue does not reflect the full date range of each type.

## GADROONED BEADS

Melon beads (Fig 32; 514-541). These beads are found in 1st- and 2nd-century contexts (Guido 1978, 100) and seem, on the evidence from our catalogue, to have been introduced into this country at the conquest. There is some slight indication that the smaller the bead the earlier it is. Most are made of turquoise frit, which often decays to white. Only one example. Fig 32,524, is of dark blue glass.
520 Fig 32 SF LWC 3429, J1212. Occupation. Period 2. Length 13.0 mm , diameter 15.0 mm . Turquoise frit.

521 Fig 32 SF LWC 3443 , J1228. Floor. Period2. Length 12.0 mm , diameter 14.0 mm . Turquoise frit.
524 Fig 32 SF LWC 3745, K434. ?Garden topsoil. Period 4b. Length 22.0 mm , diameter 29.0 mm . Dark blue translucent glass with many air bubbles.
Small gadrooned beads (Fig 32; 542). These beads date to the middle third of the 4th century (ibid, 99).
542 Fig 32 SF BUC 327(C), B570/571 G109. Gravefill? Period 2. Length 8.0 mm , diameter 7.5 mm . Dark blue translucent glass.



546 Fig 33 SF BKC 5746, V1161 L149. Dump? Period 4. Length 10.0 mm , diameter 20.0 mm . Dark blue translucent glass with marvered white paste zig-zag trail (ibid, 63-4, Group 5A).
548 Fig 41 SF BUC 13(C), A7 G1. Grave deposit. Period 2. Length 13.0 mm , diameter 17.0 mm . Opaque dark blue glass with marvered mid blue glass zig-zag trail. The trail is bordered on each side by a very thin line of red glass. A thick bun-shaped bead, threaded on a two-strand cable armlet, Fig 41, 1610.

Plain annular beads (Fig 33; 549-558). These beads derive from contexts varying in date from the mid 1st to the late 4th century.
549 Fig 33 SF LWC 3931, ?E unstratified. Length 4.0 mm , diameter 13.0 mm . Mid blue translucent glass.


543


545

$\qquad$ 1 cm

Fig 33 Annular beads (1:1)

551 Fig 33 SF BKC 4259, N257 F2? Period 5b2 or 6. Length 8.0 mm , diameter 24.0 mm . Translucent dark green glass.

553 Fig 33 SF BKC 4959, V59. Unstratified. Length 8.0 mm , diameter 18.0 mm . Natural translucent greenish glass.
555 Fig 48 SF BUC 53(C), A360 G15. Grave deposit. Period 2. Length 5.0 mm , diameter 13.5 mm . Natural translucent greenish glass. Found on an iron armlet, Fig 48,1738.

DISC BEADS (length less than $1 / 3$ diameter)
Oblate disc bead (Fig 34; 559)
559 Fig 34 SF BUC 53(C), A360 G15. Grave deposit. Period 2. Length 4.0 mm , diameter 17.0 mm . Amber, weathered.

SHORT BEADS (length more than $1 /{ }^{1}$ but less than $\%$ 。diameter)
Short oblate beads (Fig 34; 560-624). These generally belong to the 3rd and 4th centuries. The majority of those catalogued derive from graves dated to the last three-quarters of the 4th century.
562 Fig 34 SF BKC 210, A78 L4. Topsoil and town ditch (F19)f ill. Post-Roman. Length 4.5 mm , diameter 5.5 mm . Opaque mid blue glass.
614 Fig 34 SF BUC 202(C), B290 G69. Grave deposit. Period 2. Length 2.5 mm , diameter 5.5 mm . Jet.
615 Fig 34 SF BUC 186(C), B306 G69. Grave deposit. Period 2. Length 4.0 mm , diameter 7.5 mm . Jet. Pierced three times. At one end there are five small indentations which, with the two outer perforations, form a circle.

617 Fig 34 SF BUC 1518, H231 G503. Grave deposit. Period 2. One of a group of six, with 618-22, from an armlet. Average length 13.0 mm , average diameter 16.0 mm . Jet. All but one of the six are worn round the perforation to a barrel-shaped longitudinal section.

Short barrel beads (Fig 34; 625-649)
628 Fig 34 SF BKC 80, A43 L5. Topsoil and town ditch (F16) fill. Post-Roman. Length 3.0 mm , diameter 5.0 mm . Opaque 'black' glass.
634 Fig 34 SF BUC 53(C), A360 G15. Grave deposit. Period 2. One of a pair with 635 . Length 5.5 mm , diameter 11.5 mm . Amber, weathered. Worn to a wedge-shaped longitudinal section.

Short biconical beads (Fig 34; 650-802). All the catalogued examples, with the exception of Fig 34, 650, derive from graves in the later Butt Road cemetery. The type is found in dark blue translucent glass throughout the Roman period (ibid, 97), and the early date of 650 suggests that it was also current in other colours.
650 Fig 34 SF LWC 3774, K507 F287. Gully. Period 3? Length 3.0 mm , diameter 5.0 mm . Opaque mid green glass.

656 Fig 34 SF BUC 39(C), A225 G16. Grave deposit. Period2. One of a group, with 657-65, of twenty large biconical beads. Average length 3.0 mm , average diameter 6.0 mm . Translucent dark blue glass.
666 Fig 34 SF BUC 39(C), A225 G16. Grave deposit. Period2. One of a group, with 667-82, of seventeen biconical beads. Average length 2.5 mm , average diameter 4.0 mm . Translucent dark blue glass.

Short cylinder beads, circular section (Fig 34; 803805). The catalogued examples are all jet and almost certainly belong to the 3 rd and 4 th centuries.
803 Fig 34 SF BKC 3137(C), J61 L1. Site clearance. Length 6.0 mm , diameter 10.5 mm . Jet, with three shallow, evenlyspaced, transverse grooves.

## Short lenticular bead (Fig 34; 806)

806 Fig 34 SF BUC 186(C), B306 G69. Grave deposit. Period 2. Length 4.5 mm , diameter 9.5 mm . Amber, weathered.

Short interlocking beads (Fig 34; 807-900). These beads date to the 4th century. At least one necklace of similar beads is in the Yorkshire Museum.
807-9 Fig 34 SF BUC 186(C), B306 G69. Grave deposit. Period 2. With 815-900 a group of 94. Average length 3.0 mm , average diameter 4.5 mm . Jet. Discs with zig-zag-shaped notched walls and ends. As Hagen 1937, 123, Type D15 and Taf 27, Abb 1, top left.


Fig 35 SF BUC 186(C), B306 G69. Grave deposit. Period 2 Length 11.5 mm , diameter 11.5 mm . Jet. Spacer bead with two perforations. As 951 , but lacking the centralconvexhub.
956 Fig 35 SF BUC 712, C1394 G406. Grave deposit. Period 2. Length 11.0 mm , diameter 11.0 mm . Jet. Spacer bead with two perforations. Plain. The upper face showsan indentation from a lathe centre.


Fig 35 Standard beads (1:1)
LONG BEADS (length more than 1 '/, diameter)

## Long barrel beads

957-959 Not illustrated; in microfiche catalogue
Long biconical beads (Fig 36; 960-973). These beads have a wide date range covering most of the Roman period (ibid, 98).
960 Fig 36 SF BUC 53(C), A360 G15. Grave deposit. Period 2. Length 10.0 mm , diameter (elliptical) 5.0 by 6.5 mm . Translucent dark green glass.
Fig 34 Disc and short beads (1:1)
STANDARD BEADS (length more than $\%$ but less than $1^{1 /}$, diameter)

## Standard spherical beads

901-902 Not illustrated; in microfiche catalogue.
Standard barrel beads (Fig 35; 903-905)
904 Fig 35 SF BUC 39(C), A225 G16. Grave deposit. Period 2. One of a pair with 905 . Length 5.0 mm , diameter 5.5 mm . Colourless translucent glass enclosing gold foil, belonging to the late 3rd and 4th centuries (Boon 1977, 193-207; Guido 1978,33-4).

## Standard cylinder beads (Fig 35; 906-950)

a) circular section

906-910 Not illustrated; in microfiche catalogue.
b) faceted rectangular section (faceted cuboid). These beads date to the late 3 rd to 4 th century (ibid, fig 37 , 20).

912 Fig 35 SF BUC 402(C), B1124 G174. Grave deposit. Period 2. One of a group of twelve with 913-23. Average length 6.0 mm , average width 6.0 mm . Translucent dark blue glass.
c) hexagonal section

950 Fig 35 SF LWC884, B443 F149. Small stone-filled?pit. Early medieval or later. Length 5.0 mm , width 5.0 mm . Irregular in section. Opaque mid green glass.

Standard plano-convex beads (Fig 35; 951-956). These are all jet and all derive from Roman graves dated no earlier than c 320.
951 Fig 35 SF BUC 186(C), B306 G69. Grave deposit. Period 2. With $952-4$, a group of four. Average length 11.5 mm , average diameter 11.5 mm . Jet. Spacer bead with two perforations. There is a central convex hub and an indentation from a lathe centre on the upper face. The lower face shows coarse file marks.
.Fig 36 SF BUC 1221, C505 G291. Grave deposit. Period 2. One of a group of thirteen with 962-73. Average length 10.0 mm , average diameter 3.0 mm . Opaque dark blue glass.

## Long cylinder beads (Fig 36; 974-1446)

a) circular section, plain

974 Fig 36 SF LWC 2618, J567 F187. Posthole. Post-Roman? Length 9.0 mm , diameter 6.0 mm . Jet, pierced twice transversely (cf Hägen 1937, 115, Type C1 and Taf 23, Abb 2, bottom left). Each end has an indentation from a lathe centre. By Beck's classification this would be a standard cylinder bead with rectangular transverse section.
982 Fig 36 SF BUC 39(C), A225 G16. Grave deposit. Period 2. With 983-8 a group of seven. Average length 4.0 mm , average diameter 3.0 mm . Opaque mid green glass.
990 Fig 36 SF BUC 53(C), A360 G15. Grave deposit. Period 2 Length 19.5 mm , diameter 9.0 mm . Opaque (crazed, originally ?translucent) dark blue glass. Possibly broken at one end. The other end is convex.
b) circular section, with transverse grooving

1042 Fig 36 SF BUC 186(C), B306 G69. Grave deposit. Period 2. One of a pair with 1043 . Length 6.0 mm , diameter 4.0 mm . Jet, with fine transverse grooves approximately 2.0 mm apart.
1059 Fig 36 SF BUC 371 (C), B832 G133. Disturbed grave deposit. Period 2. Length 13.5 mm , diameter 4.5 mm . Jet, with fine transverse grooves at each end (ibid, 122, Type D11).
1060-1 Fig 36 SF BUC 1508, H215 G503. Grave deposits. Period 2. Two of a group of 123 with 1062-1182. Lengths range from 2.0 to 17.0 mm , average diameter 2.5 mm . Jet, with quite deep transverse grooves approximately 1.0 mm apart. The depth of the grooving has caused the cylinders to break into short lengths, usually of one or two divisions (ibid, 122, Type D14). It is impossible to assess the original number of beads.
1183-4 Fig 36 SF BUC 1509-10, H211-12 G503. Grave deposits. Period 2. With 1185-1345 a group of 163. Lengths vary from 1.5 to 7.0 mm , average diameter 5.0 mm . Jet, with deep transverse grooves approximately 1.5 mm apart. As with 1060-1 the cylinders have broken into short lengths,
usually of one division. It is impossible to assess the original number of beads.
c) circular section, segmented

1346 Fig 36 SF LWC 2955, J565 F180. Road ditch. Period 4. Fragment, length 12.0 mm , diameter (elliptical) 3.0 by 3.5 mm . Opaque turquoise glass. Ribbed, rather than segmented.
1347 Fig 36 SF BKC 714, D64 L1/F1. Upper town ditch fill. Late Anglo-Saxon. Length 10.0 mm , diameter 4.5 mm . Translucent turquoise glass.
1348 Fig 36 SF BUC 7(C), A8 G1. Grave deposit. Period 2. Length 15.0 mm , diameter 8.0 mm . Amber, in two irregularlyshaped segments.
1349 Fig 36 SF BUC 186(C), B306 G69. Grave deposit. Period 2. With 1350-69 a group of 21 . Lengths vary from 8.0 to 22.0 mm , average diameter 3.0 mm . Jet. Segments vary in depth and size.
1370 Fig 36 SF BUC 455(C), C33. Unstratified. Length 27.5 mm , diameter 6.0 mm (tapers slightly towards one end). Jet. Plain central convex band flanked by segments.
d) circular section, collared

1380 Fig 36 SF BUC 195(C), B303 G69. Grave deposit. Period 2. With 1381-2 a group of three. Average length 15.5 mm , average diameter at centre 4.0 mm . Jet, tapers at each end towards collar.


Fig 36 Long beads (1:1)
e) rectangular section

1385 Fig 36 SF BKC 2871, H372 L12. Destruction debris of Period 5b building. Period 5b (end). Length 10.0 mm , width 4.5 mm . Translucent dark green glass. Tapers slightly towards each end.
1386 Fig 36 SF BKC 4435, N441 L56. Dump. Period 5b2. Length 5.0 mm , width 3.0 by 3.5 mm . Opaque dark green glass.

1415 Fig 36 SF BUC 1221, C505 G291. Grave deposit. Period 1. Length 4.5 mm , width 2.5 by 3.5 mm . Opaque mid blue glass with an opaque white paste marvered chevron with red paste in the centre. One end tapers slightly.
f) faceted rectangular section. These beads date to the late 3rd or 4th century.
1419 Fig 36 SF BUC 708, C1394 G406. Grave deposit. Period 2. One of a pair with 1420 . Length 14.0 mm , width 10.5 mm . Amber, weathered.
g) pentagonal section

1421 Fig 36 SF MID 776, G3274 L538. Topsoil. 4th century to early medieval. Length 9.0 mm , width 7.0 mm . Opaque dark green glass.
h) hexagonal section, or prism-shaped (Guido 1978, fig 37, 9, 11)
1422-3 Fig 36 SF LWC 1358, E78. Topsoil. Uncertain date. 1422) length 4.0 mm , width 2.5 mm . 1423) length 4.5 mm , width 2.5 mm . Chrysoprase, threaded onto gold wire. MrEA Jobbins of the Institute of Geological Sciences, London suggests that the chrysoprase comes from a source in Silesia, at Kosemutz or Frankenstein.
1424 Fig 36 SF BKC 3237, J167. Unstratified. Length 13.5 mm , width 3.0 mm . Opaque dark blue glass, tapers towards one end.
1426 Fig 36 SF BUC 7(C), A8 G1. Grave deposit. Period 2. Length 7.5 mm , width 5.5 by 8.0 mm . Prism-shaped, dark green translucent glass. This bead is possibly of Sarmatian origin (ibid, 97).
1427 Fig 36 SF BUC 429, B1302 L3. Period 1. Length 13.0 mm , width 6.0 mm . Opaque, corroding, dark green glass. Both ends are convex.
1429 Fig 36 SF BUC 1544, H392 G537. Grave deposit. Period 2. With 1430-6 a group of eight. Average length 7.5 mm , average width 5.0 mm . Translucent dark green glass.
i) octagonal section

1444 Fig 36 SF BKC 3036, J48 L6. Dump. Probably Period 5b. Length 9.0 mm , width 5.5 mm . Variscite. Pierced off-centre. Mr EA Jobbins suggests a Central European source for the variscite used to make this bead and 1445 and 1446.
1445 Fig 36 SF BKC 3398(C), J221 F49. Pit. Period 5b. Length 5.5 mm , width 4.0 mm . Variscite. Pierced off-centre.

1446 Fig 36 SF BKC 5129, V188 F50. Pit. Period 5 (or 6). Length 9.0 mm , width 4.0 mm . Variscite. Pierced off-centre.

## Long plano-convex bead (Fig 36; 1447)

1447 Fig 36 SF BUC 711 , C1394 G406. Grave deposit. Period 2. Length 21.5 mm , width 19.5 mm . Jet. Spacer bead, pierced twice.

## OTHER BEADS

Heart-shaped beads (Fig 37; 1448-1481). These are dated by Guido $(1978,98)$ to the 3rd and 4th centuries. Our examples are from graves (G1, G609) dated to not earlier than c 320.

1448-50 Fig 37 SF BUC 7(C), A8 G1. Grave deposits. Period 2. With 1451-78 a group of 31 . Average length 3.5 mm , average width 4.5 mm . Opaque light blue glass.
1479 Fig 37 SF BUC 7(C), A8 G1. Grave deposit. Period 2. Length 6.0 mm , width 9.0 mm . Translucent dark blue glass. This bead is not heart-shaped but flat-sectioned and oval, a shape classified by Guido with heart-shaped beads.


1507
1506


1509


Fig 37 Other beads (1:1)

Kidney-shaped beads (Fig 37; 1482-1495). Dated to the 4th century (ibid, fig 37,18 ).
1482-4 Fig 37 SF BUC 186(C), B306 G69. Grave deposits. Period 2. With 1485-1495 a group of fourteen. Average length 6.0 mm , average width 9.0 mm . Translucent dark blue glass.

Semicircular jet beads with decorated upper edge and wedge-shaped section (Fig 37; 1496-1500). These beads date to the late 3rd to 4 th century.
1496 Fig 37 SF BKC 2643(C), H13 L2. Topsoil. Post-Roman. Length 5.5 mm , maximum width 26.0 mm . The upper edge bears a pattern of two wedge-shaped notches alternating with a narrow cross groove, giving an impression of NNNshaped decoration (Hagen 1937, 117, Type C9 and Taf 24, Abb 5; RCHM 1962, pl 70; Lawson 1976, fig 2, 9). Pierced twice
1498 Fig 37 SF BKC 2683(C), H16 L2. Topsoil. Post-Roman. Length 3.5 mm , maximum width 26.0 mm (one end chipped). The upper edge is decorated with opposing V-shaped notches which form a raised lozenge pattern similar to a string of biconical beads (Hagen 1937,116, Type C6 and Taf 24, Abb 4; RCHM 1962, pl 70; a similar pattern is found on armlets of shale and jet, Fig 38, 1560). Pierced twice.

Exotics (Fig 37; 1501-1510). All but two of these beads are grave deposits dated to the last threequarters of the 4th century. Of the remaining two, one, $\mathbf{1 5 1 0}$, is an exotic heart- or kidney-shaped bead found in a medieval context, and the other, 1509, comes from the fill of a grave dated post c 320 .
1501 Fig 37 SF BUC 8, A6 G1. Grave deposit. Period 2. Length 18.5 mm , diameter 14.0 mm . Opaque black glass. Pedestal vase with suspension loop

- 1502 Fig 37 SF BUC 8, A6 G1. Grave deposit. Period 2. Length 7.0 mm , diameter 9.0 mm . Opaque light blue glass (?originally white) with three applied eyes of black within grey. A much-corroded short oblate bead.

1503 Fig 37 SF BUC 7(C), A8 G1. Grave deposit. Period 2. Length 12.0 mm , diameter 10.0 mm . Translucent mid yellow glass. Pedestal vase with suspension loop.
1504 Fig 37 SF BUC 7(C), A8 G1. Grave deposit. Period 2. Height 19.0 mm , length 28.0 mm . Opaque black glass with applied yellow paste trail, part of which has sunk into the black glass. A hollow barrel/biconical shape, with suspension loop.
1505 Fig 37 SF BUC 53(C), A360 G15. Grave deposit. Period 2. Length 13.5 mm , diameter 11.0 mm . Opaque black glass with very irregular surface, partly due to air bubbles, partly to the apparently slightly segmented barrel design of the profile.
1506 Fig 37 SF BUC 196(C), B297 G69. Grave deposit. Period 2. Length $11,0 \mathrm{~mm}$, width 12.0 mm . Jet, pierced twice on the shorter axis. The base is rectangular. The shorter section is plano-convex, the longer semicircular. There is a knob at the centre of each side
1507 Fig 37 SF BUC 192(C), B304 G69. Grave deposit. Period 2. Length 27.0 mm , diameter 7.5 mm . Jet. Toggle-shaped bead, with spool-and-bead decoration.

1508 Fig 37 SF BUC 186(C), B306 G69. Grave deposit. Period 2. Length 16.5 mm , diameter 9.5 mm . Jet, pierced twice transversely and with elliptical transverse section. The central panel has been decorated with a grooved spiral cable design. There is a plain collar at each end.

1509 Fig 37 SF BUC462(C), C87 G236. Grave fill. Period 2. Length 29.5 mm , diameter 17.0 mm . Jet. There are four bands of decoration, one plain, one of deep grooves forming five narrow collars, one bead-shaped, and another of five narrow collars. One central perforation completely pierces the bead. Two others, at the decorated end of the bead, flanking the central perforation, reach only the bead-shaped element of the decoration (one is 11.0 mm , the other 12.0 mm , deep).

1510 Fig 37 SF MID 257, C1002 F305. Trench. Phase 1 of Site C. Length 10.5 mm , width 13.0 mm . Translucent greeny-blue glass with four marvered yellow paste spots. Flat-sectioned ellipsoid belonging in the late Roman period.

## ARMLETS

Individual types are briefly described and examples catalogued. Clasps have not been used as diagnostic features. Groups of armlets from graves in the Butt Road cemeteries are given in Appendix 2 on microfiche.
It has been suggested that small shale and jet armlets are possibly hair-rings (Lawson 1976,247)." Though the smallest rings of shale, jet, copper alloy, or iron would be tight on all but a very young infant's wrist, and in some cases are perhaps too delicate to survive for long the persistent examination to which a child would subject them, it is difficult to envisage them as other than armlets. Among the groups of armlets found in the Butt Road cemeteries are some damaged copper-alloy pieces. These may have been cut down deliberately from larger, adult-sized armlets to fit children, or they may simply be broken from prolonged wear or by accident. In some cases a makeshift clasp has been fashioned on these broken pieces. Where the new diameter and the context suggest that the armlet was used by a child, I believe that this may indicate a deliberate cutting down of an adult's armlet (possibly specifically for deposit with the corpse), or, at the least, salvage of a damaged item of jewellery for use by a younger member of the same family (eg Fig 43, 1653). Some of the armlets had been on the arm of the corpse when it was buried (eg G537), though this was not the case with any of the armlets deposited in the graves of children. The table below shows the range of measurable internal diameters of armlets from groups deposited in the later Butt Road cemetery and the estimated ages of the associated skeletons. ${ }^{18}$ Since increase in diameter with age is apparent, and since there can be little doubt but that the pieces found in adult graves are armlets, those found in child graves must also be armlets.

| Grave <br> no. | Estimated age <br> at death | Diameter (mm) of <br> the smallest armlet <br> in the group | Diameter (mm) of <br> the largest armlet <br> in the group |
| :---: | :---: | :---: | :---: |
| 503 | young infant | $29.0-32.0$ | $39.0-47.0$ |
| 109 | $4-5$ | $36.0-41.5$ | 38.0 |
| 16 | 6 | 40.5 | 52.0 |
| 1 | about 10 | 29.0 | $42.5-50.0$ |
| 378 | 12 | 41.0 | 57.0 |
| 171 (b) | $12-15$ | 52.0 | 65.0 |
| 69 | adult | $45.0-52.0$ | 69.0 |

Table: minimum and maximum internal diameters of groups of armlets from the later Butt Road cemetery seen against the estimated ages of the associated skeletons. For an oval armlet both diameters are given.

## SHALE AND JET ARMLETS

It seems likely that the oval shape of some shale and jet armlets is deliberate and not caused by distortion in the ground after loss or deposition (ibid, 250, note 1). Oval copper-alloy armlets are found as well as shale and jet examples, and in some cases the swelling of the metal towards the midpoint of a long side, directly opposite the clasp, can only be a deliberate part of the design (Fig 42). . ${ }^{19}$ Oval shale and jet armlets would presumably have been hand-made rather than lathe-turned, and if the finish of jet
figurines and medallions and of shale furniture is considered, it is obvious that there is no good reason why a hand-carved shale or jet armlet should not be of as high a standard as one produced on a lathe. Unless otherwise stated each armlet below is circular. Where only a fragment of an armlet survives, it is rarely possible to tell if the piece is from an oval or a circular ring. The fabric of each armlet has been identified only by eye. There is a strong possibility, therefore, of error (Musty 1982, 277).

Plain (1511-1553). As the wide variety of sections found on shale and jet armlets is well illustrated by Lawson (1976, fig 4), none has been illustrated here. In microfiche catalogue.

## Ring-and-dot decoration (Fig 38; 1554-1555)

1554 Fig 38 SF LWC 1060(C), A64. Topsoil. Post-Roman to postmedieval. Shale. Fragment, internal diameter about 53.0 mm ; D-shaped section, thickness 6.5 mm , height 7.5 mm .

Cable decoration (Fig 38; 1556-1558). These jet and shale armlets appear to be imitating in solid form the twisted, highly reflective, appearance of copperalloy cable armlets. For similar armlets see Hagen 1937, Taf 23, Abb 1; and Lawson 1976, fig 5, 34, 35. 1556 Fig 38 SF LWC 3806, R52. Clay floor? Period 4. Jet. Fragment. Internal diameter about 55.0 mm ; circular section, thickness 7.5 mm . height 8.0 mm . The grooves form a continuous spiral.
1558. Fig 38 SF IRB 43(C), F41. Grave deposit. 3rd-to 4th-century inhumation. Shale. Fragments. Thin D-shaped section, thickness 3.0 mm , height 4.5 mm . Grooved only on the outer face.

Latitudinal grooves and ridges (Fig 38; 1559)
1559 Fig 38 SF BKC 865(C), D275 L13. Town ditch fill. AngloSaxon. Jet. Fragment. Internal diameter about 45.0 mm ; Dshaped section, thickness 5.0 mm , height 9.0 mm . The outer face bears an upper and lower marginal groove, and two grooves flank a central ridge.

## Notched (Fig 38; 1560-1565)

a) opposed notches (Hagen 1937, Type B20)

1560 Fig 38 SF LWC 484, B184 F70. Cellar backfill. Period 5. Jet. Fragment. Internal diameter oval, about 50.0 by 60.0 mm ; rectangular section, thickness 11.0 mm , height 6.5 mm . Long $V$-shaped notching on all four edges gives the impression on all faces of a string of biconical or facetedcuboid beads.
b) alternating notches

1561 Fig 38 SF LWC 1976, H137. Topsoil. Roman?/AngloSaxon?/16th to 17 th century? Shale. Fragment. Internal diameter 60.0 mm ; rectangular section, thickness 8.0 mm , height 7.5 mm . Long $V$-shaped notching on the upper and lower outside edges produces a continuous wave decoration on the outer face.
c) oblique and irregular notches

1564 Not illustrated, in microfiche catalogue.
d) complex notches

1565 Fig 38 SF LWC 1788, J68. Topsoil. Late Roman or postRoman. Shale. Fragment. Internal diameter 60.0 mm ; oval section, thickness 7.0 mm , height 5.5 mm . On the facethere is a central ridge defined by sharp steps. The ridge has a continuous central groove and regular transverse grooves which effectively divide it up into pairs of squares. The upper and lower steps are decorated with long V -shaped notches.

Transverse grooves (Fig 38; 1566-1567)
1566 Fig 38 SF BKC 536(C), A10 L1. Town ditch (F30) fill. Anglo-


Saxon. Shale. Fragment. D-shaped section, thickness 3.0 mm , height 5.0 mm . This fragment is either a repair or a clasp. The grooved shale is in two pieces enclosed by a thin sheet of copper alloy which has been pressed into the grooves.

Octagonal (Fig 38; 1568). Parallels date from the late 2nd to the early 4th century (ibid, Type B23; Lawson 1976, 254, fig 5, 44).
1568 Fig 38 SF BUC 1515, H220 G503. Grave deposit. Period 2. Jet. Internal diameter 43.0 mm ; rectangular section, thickness 4.0 mm , height 5.0 mm . The inside is round, the outside octagonal, with two parallel latitudinal grooves.

## BONE ARMLETS

Plain (Fig 39; 1569-1584)
1584 Fig 39 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. Internal diameter 57.0 mm ; rectangular section, thickness 3.5 mm , height 5.0 mm . One of a group of five similar armlets (1580-4). Four (1580-2, 1584) have butt joints held together by a bronze plate on the outer face fixed by two iron rivets. The fifth, 1583, has a lap joint fixed by one iron rivet. All have sprung apart as the metal at the joints corroded. The internal diameters have been estimated from the circumferences.

## With copper-alloy plating

1585 Not illustrated; in microfiche catalogue.

## COPPER-ALLOY ARMLETS

The overwhelming majority of copper-alloy armlets date to the late 3 rd and 4 th centuries. The large Butt Road cemetery with the east-west graves produced over 90 armlets, very few exactly alike. All fall within this date range. Fragments of two early armlets were found at Balkerne Lane. They are quite distinct from the later examples.

Early (Fig 40; 1586-1587)
1586 Fig 40 SF BKC 1360(C), D417 F50. Fortress ditch. Period 1. Three fragments of a distorted armlet, similar to Hawkes and Hull 1947, pl 100, 29. Height 17.5 mm . The central panel of wreath design is flanked by grooves and mouldings. See also Waugh and Goodburn 1972, fig 32, 31.
1587 Fig 40 SF BKC 2703(C), H133. Contaminated. Modern? Distorted fragment, internal diameter 50.0 mm , height 19.0 mm . The transverse section is convex. The decoration consists of slight transverse and latitudinal scoring, with small notches on the upper and lower edges.

Wire (Fig 41; 1588-1603)
1590 Fig 41 SF BUC 5(C), A8 G1. Grave deposit. Period 2. One of a pair with 1591 . Internal diameter 45.0 mm ; lozenge-shaped section, thickness 2.0 mm , loosely twisted. Twisted expanding clasp.


Fig 39 Bone armlet (1:1)


1598 Fig 41 SF BUC 1549, H377 G537. Grave deposit. Period 2. Internal diameter oval, 40.0 by 49.0 mm ; circular section, thickness 2.5 mm . Twisted expanding clasp.
1601 Fig 41 SF IRB 47(C), F41. Grave deposit in 3rd- to 4thcentury ihhumation. Internal diameter oval, 54.0 by 60.0 mm ; circular section, thickness 2.0 mm . Twisted expanding clasp.
1602 Fig 41 SF IRB 102(C), F92. Grave deposit in 3rd- to 4thcentury inhumation. In fragments, internal diameter 54.5 mm ; lozenge-shaped section, twisted, thickness 2.0 mm . Decorative spiral above a hook-and-eye clasp.

## Cable (Fig 41; 1604-1636)

## a) two strands

1610 Fig 41 SF BUC 13(C), A7 G1. Grave deposit. Period 2. Internal diameter oval, 34.0 by 41.0 mm ; circular section strand with a thin rectangular section strand, plated with ?white metal, wrapped round it. Total thickness 1.5 mm . Twisted expanding clasp. A copper-alloy bell with an iron clapper (1808) and an annular dark blue glass bead with marvered mid blue trail (548) are threaded onto the armlet.
1611 Fig 41 SF BUC 3(C), A8 G1. Grave deposit. Period 2. Internal diameter 33.5 mm ; two oval section strands, total thickness 4.0 mm . This armlet appears to have been cut down from a larger one. The circumference is regular, but one end has been cut or broken off. At the other end is a hook.
1613 Fig 41 SF BUC 323(C), B571 G109. Grave deposit. Period 2. Internal diameter oval, 36.0 by 41.5 mm ; two strands of Dshaped section, tapering from 4.5 to 3.0 mm thick. Penannular, with bead-and-reel decorated caps soldered to the terminals.
b) three strands

1628 Fig 41 SF BUC 1(C), A8 G1. Grave deposit. Period 2. In fragments, internal diameter oval, 42.5 by 50.0 mm ; three circular section strands, total thickness 3.0 mm . Double hook clasp.

## c) four strands

1633 Fig 41 SF LWC 637(C), B239. Medieval. Fragment, four circular section strands, tapering from 6.0 to 4.5 mm thick.

Plain (Fig 42; 1637-1651)
1640 Fig 42 SF BUC 3(C), A8 G1. Grave deposit. Period 2. Large ?earring used as a child's armlet. Internal diameter 29.0 mm ; D-shaped to circular section, tapering from 3.0 to 1.5 mm . Penannular. The tapering section has been crudely produced by soldering a strip of metal to about $2 / 3$ of the circumference of an originally simple ring.
1643 Fig 42 SF BUC 69(C), A356 G24. Grave deposit. Period 2. Internal diameter oval, 32.0 by 38.0 mm ; oval section, tapering from 2.5 to 1.0 mm thick and from 3.5 to 2.0 mm high. Double hook clasp.
1644 Fig 42 SF BUC 348(C), B770 G126. Grave deposit. Period 1. Internal diameter oval, 53.0 by 60.0 mm ; oval section, thickness 3.0 mm , height 3.5 mm . Penannular.
1650 Fig 42 SF BUC 1565, H403 G519. Grave deposit. Period 2. Internal diameter oval, 36.0 by 44.0 mm ; oval section, tapering from 5.5 to 2.0 mm thick, and from 8.0 to 2.5 mm high. Twisted expanding clasp.
1651 Fig 42 SF IRB 42(C), F41. Grave deposit in 3rd- to 4thcentury inhumation. Internal diameter oval, 55.0 by* 65.0 mm ; oval section, tapering from 5.0 to 3.5 mm thick, 6.0 mm high. Damaged hook-and-eye clasp.

## Notched, toothed, crenellated (Fig 43; 16521671)

a) alternating notches

1653 Fig 43 SF BUC 6(C), A8 G1. Grave deposit. Period 2. Internal diameter 41.0 mm ; rectangular section, thickness 2.0 mm , height 3.5 mm . The decoration consists of broad shallow alternating notches, emphasised by thin scored oblique lines. This armlet has been cut down from a larger one.
1654 Fig 43 SF BUC 213(C), B309 G69. Grave deposit. Period 2. One of a pair with 1655. Internal diameter 62.5 mm ; rectangular section, thickness 2.0 mm , height 15 mm . The two ends are joined by a soldered lap joint, now sprung apart. Irregular alternating notches on the upper and lower outside edges have produced a degenerate continuous wave decoration. Similar armlets come from Shakenoak, Oxfordshire (Brodribb et al 1971b, fig 48, 73, 77) and Portchester, Hampshire (Cunliffe 1975, fig 112, 41), all dated from the late 3rd century.


Fig 41 Wire and cable copper-alloy armlets (1:1)


1656 Fig 43 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. Internal diameter oval, 46.0 by 50.0 mm ; rectangular section, thickness 1.0 mm , height 3.0 mm . Twisted expanding clasp. There are faint alternating notches on the upper and lower edges.
b) obliquely toothed (Kenyon 1948, fig 83, 2)

1657 Fig 43 SF BUC 38(C), A223 G16. Grave deposit. Period 2. Internal diameter 40.5 mm ; rectangular section, thickness 2.0 mm , height 1.0 mm . There is no obvious join on the armlet. A penannular suspension ring, which probably originally held an ornament (as Fig 41, 1610), is threaded onto the armlet.
c) crenellated, with toothing between the crenellations (ibid, fig 83, 3)
1659 Fig 43 SF BUC 388/9(C), B1050 G171. Grave deposit. Period 2. Internal diameter 59.0 mm ; rectangular section, thickness 3.0 mm , height 2.0 mm . One of a group of similar armlets (1658-64), six with complete diameters (two in fragments), and part of a seventh. All have lap joints fixed by a single copper-alloy rivet. The depth of the crenellations varies. On 1663 they have almost worn away, whereas on 1660 they show no sign of wear.

## Transverse grooves (Fig 44; 1672-1692)

a) continuous

1676 Fig 44 SF BUC 388/9(C), B1050 G171. Grave deposit. Period 2. One of a pair with 1677. Internal diameter 55.0 mm ; D-shaped section, thickness 1.5 mm , height 3.0 mm . The deep transverse grooves give a ridged effect. The armlet has a lap joint, probably originally soldered, now sprung apart.
1679 Fig 44 SF BUC 388/9(C), B1050 G171. Grave deposit. Period 2. One of a pair with 1678. In fragments, internal

diameter 53.0 mm ; rectangular section, thickness 1.0 mm , height 4.0 mm . The decoration is slight transverse scoring between marginal grooves. Fixed by a lap joint, probably originally soldered, now sprung apart.
b) in groups

1683 Fig 44 SF BKC 2788(C), H298 (F94 + F167). Pits. Period 6. Distorted. Internal diameter 41.0 mm ; D-shaped section, thickness 1.5 mm , height 3.0 mm . Penannular. At each terminal a group of transverse grooves is followed by a plain panel and two transverse grooves. A similar armlet was found at Shakenoak, Oxfordshire (Brodribb et al 1971 b, fig 48, 75).
1684 Fig 44 SF BKC 5467(C), V701. Unstratified. Distorted. Internal diameter 30.0 mm ; D-shaped section, thickness 1.5 mm , height 3.5 mm . Penannular. Only one terminal survives. This shows similar decoration to that of 1688 , but the panel between the groups of transverse grooves bears an incised elongated cross. The other end has been either broken or deliberately cut.
1687 Fig 44 SF CPS 601(C), 576 F115. Occupation. Period 4. Fragment, with groups of grooves alternating with panels containing a single ring-and-dot. D-shaped section, thickness 3.0 mm , height 4.0 mm . A parallel for this fragment was found in a hoard of armlets at Richborough, Kent (Henderson 1949, pl 49, 9) dated post 275-300.
1688 Fig 44 SF BUC 69(C), A356 G24. Grave deposit. Period 2. Internal diameter 28.0 mm ; D-shaped section, thickness 2.0 mm , height 3.0 mm . Groups of slight transverse grooves alternate with short thick plain panels which may have been plated with white metal. The armlet was probably made from a larger one, as one end appears to have been cut. The upper half of the other end forms a tongue.

1689 Fig 44 SF BUC 388/9(C), B1050 G171. Grave deposit. Period 2. In two fragments, internal diameter 52.5 mm ; rectangular section, thickness 1.5 mm , height 3.5 mm .

Groups of slight irregular grooves alternate with plain panels. The join is a lap joint, probably originally soldered, now sprung apart.

## Diagonal grooves, stamped 'S' and 'C' decoration, and wave-crest decoration (Fig 44; 1693-1705)

a) diagonal grooves. This grooving is probably meant to imitate in solid form the appearance of cable armlets
1693 Fig 44 SF BUC 2(C), A7 G1. Grave deposit. Period 2. Distorted slightly. Internal diameter 32.0 by 34.5 mm ; Dshaped section, thickness 3.0 mm , height 3.5 mm . The body of the armlet is decorated with deep diagonal grooves. The one surviving terminal is flattened into a broad snake's head, marked with marginal grooves and notching. There is a wide hole in the centre of the terminal for a hook-and-eye clasp. The other end has been cut off, indicating that the armlet has been adapted from a larger one.
b) 'S' decoration. This may also be associated with the imitation of cable armlets.
1700 Fig 44 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. Internal diameter 41.0 mm ; rectangular section, thickness
c) 'C' decoration

1702 Fig 44 SF BUC 69(C), A356 G24. Grave deposit. Period 2. In two fragments, internal diameter oval, 30.0 by 35.0 mm ; rectangular section 1.0 mm , height 3.5 mm . Hook-and-eye clasp.
d) wave-crest decoration. This decoration is linked to the continuous wave of notched shale and jet (Fig 38) and copper-alloy (Fig 43) armlets.
1703 Fig 44 SF BKC 712(C), D65 L1. Upper town ditch fill. Late Anglo-Saxon. Fragment, rectangular section, thickness 1.0 mm , height 2.0 mm . The wave crests are formed by alternating oblique notches on the upper and lower edge Each wave is marked with an impressed dot.
1704 Fig 44 SF BUC 354(C), B843 G142. Grave fill. Period 2. Distorted fragment, rectangular section, thickness 1.0 mm , height 2.5 mm . The design is similar to that of $\mathbf{1 7 0 3}$, but each wave is marked by an impressed ring-and-dot motif The surviving terminal is an eye for a hook-and-eye clasp.
1705 Fig 44 SF BUC 388/9(C), B1050 G171. Grave deposit. Period 2. In fragments, internal diameter 58.0 mm ; rectangular section, thickness 0.5 mm , height 3.0 mm . The wave crests are formed by an elongated S -shaped stamp


Fig 43 Notched, toothed and crenel/ated copper-alloy armlets (1:1)


Fig 44 Copper-alloy armlets with transverse grooves, diagonal grooves, stamped ' $S$ ' and ' $C$ ' decoration, and wave-crest decoration (1:1)


Fig 45 Copper-alloy armlets with punched or raised dots (1:1)
applied horizontally. The $S$ is made up of tiny rectangular panels. The remains of a hole, almost certainly for a rivet, but possibly for a hook-and-eye clasp, are visible on one fragment.

Punched or raised dots (Fig 45; 1706-1712)
1707 Fig 45 SF MID 55(C), A256 F38. Robber trench. Early medieval. Distorted, internal diameter 50.0 mm , circular section, thickness 3.0 mm . Penannular. Each terminal has been flattened to rectangular section and bears a row of raised dots.
1708 Fig 45 SF BUC 69(C), A356 G24. Grave deposit. Period 2. Internal diameter oval, 38.0 by 44.5 mm ; rectangular section, thickness 0.5 mm , height 3.5 mm . The decoration is of punched dots surrounded by a slight hollow area of faint concentric circles. Hook-and-eye clasp.
1709 Fig 45 SF BUC 1615. H672 F45. Gully. Period 2. Distorted, internal diameter 65.0 mm ; rectangular section, thickness 1.5 mm , height 4.0 mm . Punched dots within marginal grooves. Hook-and-eye clasp.
1710 Fig 45 SF BUC 1691 (C), H792 G638. Grave deposit. Period 2. Internal diameter oval, 40.0 by 48.0 mm ; D-shaped section, tapering from 5.0 to 2.5 mm thick, 6.5 to 3.5 mm high. Penannular. Each terminal is of rectangular section, decorated with an incised snake's head with punched dots for eyes.

1711 Fig45 SF IRB 8(C), F15. grave deposit in 3rd-to4th-century inhumation. Slightly distorted, internal diameter oval, 49.0 by 56.0 mm ; D-shaped section, thickness 2.5 mm , height 4.5 mm . Each terminal is flattened to a rectangular-section snake's head and decorated with a pattern of punched dots.
1712 Fig 45 SF IRB 10(C), F15. Grave deposit in 3rd- to 4thcentury inhumation. In two fragments, internal diameter oval, 52.5 by 56.0 mm ; D-shaped section, thickness 2.0 mm , height 4.0 mm . As 1711 but with a different pattern of punched dots.

## Hatched (Fig 46; 1713-1714)

1714 Fig 46 SF BUC 999, E180 L13. Destruction debris and topsoil. Post-Roman. Fragment, rectangular section, thickness 1.0 mm , height 3.0 mm . Bands of hatching alternate with short, plain, slightly faceted panels.

Bead-imitative (Fig 46; 1715-1723). Other beadimitative armlets can be found under jet and shale armlets (Fig 38).
1715 Fig 46 SF LWC 1876(C), H90 F15. Robber trench. Medieval. Fragment, with groups of deep grooves alternating with faceted plain panels, giving the impression of short oblate and long biconical beads. Circular section, thickness 2.0 mm . A parallel comes from Portchester, Hampshire (Cunliffe 1975; fig 111, 31), where the biconical panel bears


Fig 46 Hatched and bead-imitative copper-alloy armlets (1:1)
two transverse grooves at the widest point.
1717 Fig 46 SF BUC 603(C), C1226 G384. Grave fill. Period 2. Internal diameter oval, 54.0 by 59.0 mm ; circular section tapering from 5.0 to 4.0 mm thick. Penannular. The terminals have been decorated with a design of bead and double reels.
1719 Fig 46 SF BUC 1550, H377 G537. Grave deposit. Period 2 Internal diameter 49.0 mm ; rectangular section, thickness 2.0 mm , height 5.0 mm . Faceted panels alternate with horizontally-scored uprights. The armlet has a soldered lap joint

1721 Fig 46 SF BUC 1567(C), H405 G519. Grave deposit. Period 2. One of a pair with $\mathbf{1 7 2 0}$. Internal diameter 45.0 mm , circular section, thickness 2.5 mm . The decoration is similar to that of 1715. The ends are linked by a sheet of copper alloy moulded to match the decoration, wrapped round the armlet, and soldered into position.

Multiple motifs (Fig 47; 1724-1732). These armlets are best described by their illustrations.

1724 Fig 47 SF BKC 1294(C), E360 L433. Town ditch (F138/317) fill. Post-Roman. Internal diameter oval, 31.0 by 45.0 mm ; rectangular section, thickness 1.5 mm , height 3.0 mm Hook-and-eye clasp.

1725 Fig 47 SF BUC 388/9(C), B1050 G171. Grave deposit Period 2. Internal diameter 56.5 mm ; rectangular section, thickness 1.0 mm , height 4.5 mm . Soldered lap joint.
1726 Fig 47 SF BUC 457(C), B1681. Unstratified. Distorted, in two fragments, internal diameter 60.0 mm ; D-shaped section, thickness 2.0 mm , height 4.0 mm . One terminal is tongueshaped and secured to the other by a large copper-alloy rivet
1728 Fig 47 SF BUC 457(C), B1681. Unstratified. Fragment internal diameter 59.0 mm ; rectangular section, thickness 1.0 mm , height 4.0 mm . The terminals are missing.

1729 Fig 47 SF BUC 457(C), B1681. Unstratified. Fragment, with a copper-alloy rivet in the terminals.

1730 Fig 47 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. Internal diameter oval, 47.0 by 52.0 mm ; D-shaped section, thickness 2.0 mm , height 7.5 mm . Hook-and-eye clasp.

1731 Fig 47 SF BUC 1548(C), H377 G537. grave deposit. Period 2. Distorted, internal diameter 46.0 mm , rectangular section thickness 1.5 mm , height 5.0 mm . Hook-and-eye clasp.

1732 Fig 47 SF IRB 46(C), F41. Grave deposit in 3rd- to 4thcentury inhumation. In fragments, internal diameter 56.0 mm ; rectangular section, thickness 2.0 mm , height 6.0 mm . Hook-and-eye clasp.

## IRON ARMLETS

Plain (Fig 48; 1733-1737). Five iron armlets were recovered from graves in the Butt Road cemeteries. Four came from east-west oriented graves and one
(1737) from a grave aligned north-south. The acidity of the sandy soil on the site has destroyed all but fragments of four of these armlets. All appear to have been simple circular section rings. No clasps or joins have been identified. 1736 (G647) was found linked to a group of copper-alloy armlets (1666-71) by a copper-alloy three-strand cable armlet (1636). 1737 (G679) was on its own ?on the arm of a skeleton.

1737 Fig 48 SF BUC 1713, H1034 G679. grave deposit. Period 1. A corroded iron armlet of ?circular section, 6.5 mm diameter. Internal diameter 58.0 mm .

## With copper-alloy binding (Fig 48; 1738)

1738 Fig 48 SF BUC 53, A360G15. Grave deposit. Period 2. Grave 15 probably contained two armlets, one of solid metal and one a loose string of beads and coins (Appendix 2; on microfiche). The only remains of the solid metal armlet are three bands, penannular in transverse section. One is of very corroded copper alloy and two of copper alloy ?plated with white metal. Each band is approximately 6.0 mm long.

Inside the two ?plated bands pieces of what appears to have been a circular-section iron bangle can be seen. From the site plan, this was approximately 43.0 mm in diameter measured internally. The relevant site photograph shows at least eight bands in situ, of which only three survived the lifting process. Threaded onto this armlet was an annular bead of natural translucent greenish glass (555)
On the basis of this rather tenuous evidence, a circularsection iron armlet, bound at regular intervals with clasps of plated copper alloy and carrying an annular bead, has been postulated. The bands appear from the site photograph to have been at 6.0 mm intervals, giving a regular pattern of 6.0 mm of exposed iron and 6.0 mm of copper alloy. On the basis of the estimated diameter of the iron bangle, this would give eleven bands of copper alloy, ten 6.0 mm lengths of exposed iron, and one unbound length of just under 12.0 mm . As the perforation of the annular bead is not large enough to slide over one of the surviving bands, it must have been placed between two adjacent bands. Though, at 5.0 mm long, it could have fitted onto a short length of exposed iron, it is likely that it was located on the 12.0 mm length. The reconstruction shows only two pieces of the copper-alloy binding, one upside down to illustrate the section. No attempt has been made to show a clasp or join.

## FINGER-RINGS

All but two of the rings are of metal. The plain Dsection copper-alloy ring, Fig 50, 1749, found on the index finger of a skeleton (G41) ${ }^{20}$ in the later Butt Road cemetery, implies that many rings not usually considered to be finger-rings may in fact be so. Designs on finger-rings are frequently similar to those on armlets. Compare the armlet Fig 38, 1561 with the ring Fig 50, 1766; the armlet Fig 44, 1684 with the ring Fig 50, 1773; and the armlet Fig 44,
1676 with the ring Fig 50,1770 . As with the armlets and beads most of the finger-rings derive from late 3 rd- to 4th-century contexts, with a fairly high proportion coming from graves in the Butt Road cemeteries. Early finger-rings are represented by the plain ring with a clasp based on a Celtic motif. Fig 50, 1756, the coiled ring, Fig 50, 1759, and the ring with glass inset. Fig 50, 1779.

## SHALE AND JET FINGER-RINGS

## Plain (Fig 49; 1739)

1739 Fig 49 SF BKC 5005, V68 L22. Dump. Late Period 5. Shale, fragment. Plain. Internal diameter 16.0 mm ; D-shaped section, height 3.0 mm , thickness 2.5 mm .

## Faceted (Fig 49; 1740)

1740 Fig 49 SF BKC 2357, G343 F141. Pit. Period 5c? Jet. Internal diameter oval, 13.0 by 15.0 mm ; D-shaped section, height 5.5 mm , thickness 4.5 mm . A series of leaf-shaped notches has been cut into the ring on the point of the outer curve. Damaged.

## COPPER-ALLOY FINGER-RINGS

Plain (Fig 50; 1741-1755.)
1741 Fig 50 SF LWC 1040, C411. Cultivated soil. Period 2?, 3a?, 3b? Cast. Internal diameter 20.5 mm ; rectangular section, height 5.5 mm , thickness 1.5 mm . Possibly not a finger-ring?

1742 Fig 50 SF LWC 3068(C), J860. Occupation. Period 4. Cast. Internal diameter 16.0 mm ; roughly D-shaped section, height 2.5 mm , thickness 1.5 mm . Possibly not a finger-ring?
1743 Fig 50 SF BKC 36(C), A32 L3. Topsoil and town ditch (F16) fill. Post-Roman. Cast. Internal diameter 18.0 mm ; thin Dshaped section, height 4.5 mm , thickness 1.0 mm . Possibly not a finger-ring?

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Fig 47 Copper－alloy armlets with multiple motifs（1：1j


Fig 48 Iron armlets (1:1)


Fig 49 Shale and jet finger-rings (1:1)
1744 Fig 50 SF BKC 1310(C), E412 L440. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Cast. Internal diameter 16.5 mm ; rectangular to D-shaped section, height 2.0 mm , thickness 1.0 mm .

1749 Fig 50 SF BUC 130, A563 G41. Item of dress; on left hand index finger of one three skeletons in a roughly-dug pit. Period 2. Cast. Internal diameter 16.5 mm ; D-shaped section, height 4.0 mm , thickness 3.0 mm .

1755 Fig 50 SF IRB 96(C), F90. Context uncertain. Either an item of dress on a finger of the skeleton in a 3rd- to 4th-century grave, or in the backfill of the grave. Cast. Internal diameter 16.0 mm ; D-shaped section, height 3.0 mm , thickness 2.5 mm .

Plain, with decorative clasp (Fig 50; 1756-1757)
1756 Fig 50 SF BKC 1644(C), E934 L271. Charcoal. Period Ib. Internal diameter oval, 17.0 by 18.5 mm ; circular section, thickness tapers from 2.0 to 1.5 mm . Each end of the ring is twisted into a spiral which forms a clasp. The design clearly has native British links.
1757 Fig 50 SF MID 297(C), C1109 L114. Topsoil accumulation. Early medieval, pre Site C Phase 1 (or Phase 1?). Distorted Internal diameter 18.0 mm ; circular section, thickness tapers from 1.5 to 1.0 mm . Each end is twisted into three running loops. A similar ring was found in Hollytrees Meadow (Hull 1958, fig 47, 4).

Coiled (Fig 50; 1758-1761). Rings of many coils were present in comparatively high numbers at Sheepen, Colchester (Hawkes and Hull 1947, 330) which probably indicates an early date range for the type.
1758 Fig 50 SF LWC 655(C), B unstratified. Minimum internal diameter 17.0 mm ; D-shaped to oval section, height 3.5 mm , thickness 3.0 mm . A crude coil. One end has been cut off, the other is moulded into three beads of varying sizes. Possibly

cut down from an armlet? Similar to Waugh and Goodburn 1972, fig 32, 28.

1759 Fig 50 SF LWC 3178(C), J941. Make-up. Period 3. Internal diameter 18.0 mm ; circular section, thickness 1.5 mm . Three coils. One terminal is pointed, the other ends in a rearward-facing hook.

## Cable decoration (Fig 50; 1762)

1762 'Fig 50 SF BUC 503, C922 G327. Item of dress; on finger of skeleton. Period 1. Cast. Internal diameter oval, 17.0 by 19.0 mm ; circular section, thickness 4.5 mm . A very corroded ring. The powdery surface shows traces of cable decoration. This may be incised or may be all that remains of a thin wire (possibly of a more precious metal) wrapped round the ring.

## Segmented

1763 Not illustrated; in microfiche catalogue.

## Notched, and crenellated (Fig 50; 1764-1768)

a) opposing notches

1764 Fig 50 SF LWC 739(C), A248 F87. ?Post-medieval. Cast. Internal diameter 18.5 mm ; rectangular section, height 2.0 mm , thickness 1.0 mm . A longitudinal groove is flanked by small V-shaped opposing notches.
1765 Fig 50 SF BUC $788(C)$, C1674 G439. Probably a grave deposit. Period 2. Internal diameter 19.5 mm ; rectangular section, height varies from 2.0 to 5.0 mm , thickness 1.5 mm . The hoop has been joined by beating each terminal flat and soldering one on top of the other. The effect is of a plain bezel. There is no sign of anything being fixed to this bezel. To either side of the join the hoop bears a row of opposed notches for approximately 9.0 mm .
b) alternating notches

1766 Fig 50 SF BUC 389(C), B1050 G171. Grave deposit. Period 2. Internal diameter 13.5 mm ; rectangular section, height 2.0 mm , thickness 1.0 mm . The ring is fixed by a soldered lap joint. The decoration consists of long V-shaped alternating notches, creating a continuous angular wave design (cf the armlet Fig 38, 1561).
c) crenellated

1768 Fig 50 SF BUC 389(C), B1050 G171. Grave deposit. Period 2. Internal diameter 14.5 mm ; rectangular section, height 1.5 mm , thickness varies from 1.5 to 0.5 mm . The ring has worn away on one side, indicating possible friction against another ring on the adjacent finger. The decoration consists of three crenellations. There are very faint traces of grooves either side of the crenellations (cf Fig 52, 1789).


## Transverse grooves (Fig 50; 1769-1773)

a) continuous

1770 Fig 50 SF BKC 2981(C), J26 L1. Site clearance. Cast. Internal diameter 20.0 mm ; D-shaped section, height 2.0 mm , thickness 1.5 mm .
b) in groups

1771 Fig 50 SF LWC 3376(C), J1108 F365. Pit. Period 4. Penannular. Internal diameter 16.0 mm , the section varies The broad decorative part of the hoop bears transverse grooves across the two broadest points.
1773 Fig 50 SF LWC 2299(C), L31. Post-medieval. Penannular, slightly distorted. Internal diameter 17.0 mm ; D-shaped to rectangular section, height 1.5 to 2.0 mm , thickness 1.5 to 1.0 mm . Each flattened terminal bears a decoration of two groups of transverse grooves separated by a cross. Possibly post-Roman.

## Chevrons (Fig 50; 1774)

1774 Fig 50 SF BUC 382(C), B1044 G168. Grave fill. Probably disturbed grave deposit or item of dress from an earlier grave. Period 1 or 2. Penannular. Internal diameter 16.5 mm ; rectangular section, height 2.0 mm , thickness 1.0 mm . The decoration is on the inner face of the hoop and each terminal shows a fairly rough cut or broken face. This ring has almost certainly been cut down from an armlet. The decoration consists of lightly incised lines forming a chevron pattern.

With glass or enamel setting (Fig 50; 1775-1786)
1777 Fig 50 SF LWC 3010(C), L326 F198. Oven. Period 4(2). Fragment. Most of the decorative element of the ring survives, showing two droplets of corroded blue glass in cast settings, with part of the setting for a third.
1778 Fig 50 SF BKC 397(C), A95 L4. Topsoil and town ditch (F19) fill. Post-Roman. Fragment with an elliptical bezel filled with Champlevé enamel of ?yellow round a white spot. The surviving part of the hoop has decorative moulding. Similar to Neal and Butcher 1974, fig 60, 115.
1779 Fig 50 SF BKC 1625(C), E897 L250. Road metalling. Periods 2 and 3a. In five fragments. Internal diameter 21.5 mm ; the hoop is of roughly circular section, 3.0 mm thick. The large bezel is inset with principally translucent dark blue glass, with two pieces of translucent mid yellow glass on one side. The glass is now cracked and damaged, but appears to have originally had an irregular surface.
1780 Fig 50 SF BKC 2249(C), G171 F31. Postpit. Period 5c. Fragment. The bezel contains an intaglio of translucent dark blue glass. The surviving fragment of hoop has decorative mouldings. Of the intaglio Dr Martin Henig writes: The intaglio consists of random grooves, perhaps derived from a human figure. Such imitation gemstones seem to have been manufactured in Britain (Henig 1978,133, with distribution map fig 2, catalogue nos 572-576).'
1781 Fig 50 SF BKC 5112(C), V250 F59. Slot? Period 5? Fragment. The bezel is filled with ?yellow enamel, now green flecked with red, and the surviving part of the hoop has decorative mouldings.
1782 Fig 50 SF BKC 5363, V702 L22. Dump. Late Period 5. Small intaglio of translucent mid green glass. Dr Henig writes: 'Although the intaglio may be a 'Romano-British imitation' as unidentifiable as 1780, it might, alternatively, have been intended to show two corn ears (Henig 1978,272, catalogue nos 722-724; two of these come from Essex but one is a carnelian of early imperial date from the second Bartlow Barrow and another is a later Roman nicolo paste from Terling Place).'
1783 Fig 50 SF CPS 556(C), 576 F115. Occupation. Period 4. In two fragments. Internal diameter 15.0 mm ; rectangular section, height 2.0 mm , thickness 1.0 mm . The broad element of the the hoop probably had a decorative setting soldered to it (cf Fig 52, 1791).
1784 Fig 50 SF CPS 761, 723 L182. Destruction of Period 4. Fragment. All that survives is a fragment of bezel and an inset of corroded 'opaque mid green glass with a large marvered central spot of ?opaque ?yellow glass.

1785 Fig 50 SF BUC 392(C), B1081 G173. Grave fill. Period 2. Cast. Internal diameter oval, 16.0 by 17.5 mm ; D-shaped section, height and thickness vary. The bezel contains a field of ?yellow enamel round a central copper-alloy spot. The hoop to either side of the bezel has a winged moulding and cable decoration.
1786 Fig 50 SF IRB 15(C), F13. Grave fill. Early medieval grave. Cast. Internal diameter oval, 14.0 by 18.0 mm ; D-shaped section, height and thickness vary. The broad part of the hoop is set with a translucent dark blue glass intaglio. The ring has cracked in one place. Of the intaglio Dr Henig writes: 'The intaglio, also a 'Romano-British imitation', shows a standing human figure (see Henig 1978,133, 255, catalogue nos 539-543, and especially no 552 from Great Chesterford, Essex).'

## Inscribed (Fig 51; 1787)

1787 Fig 51 SF BUC 1181(C), E441 L29. Destruction debris. Probably first half of the 5th century. Mark Hassall writes: The ring, originally approximately 18.0 mm in diameter, is made of a thin copper-alloy strip 5.0 mm wide at the bezel and reduced to 2.5 mm at the narrowest part. On the oblong bezel, 10.0 by 5.0 mm , two lines of lettering have been produced, apparently with tiny punches, within and separated by three scored guide lines. The reading is ASV/ASVS.


## WHITE-METAL FINGER-RINGS

## Plain (Fig 52; 1788)

1788 Fig 52 SF BKC 3165(C), J124 F7. Foundation or dump. Period $5 \mathrm{c} / 6$. Cast. The hoop is oval internally and an irregular octagon externally. Internal diameter 18.5 by 17.0 mm ; rectangular section, varying in thickness and height. Polygonal hoops appear to be generally 4th-century in date (Waugh and Goodburn 1972,.fig 32, 25; Wilson 1968, pl 42, 160, 161).
Crenellated (Fig 52; 1789)
1789 Fig 52 SF BUC 403(C), B1127 G174. Grave deposit. Period 2. In two fragments. Internal diameter oval, 15.5 by 17.0 mm ; rectangular to $D$-shaped section, height and thickness vary. The central decorative element of three crenellations is flanked by transverse grooves. The hoop is fixed by a soldered lap joint.

## Transverse grooves (Fig 52; 1790)

1790 Fig 52 SF BUC 1574, H414 G537. Grave deposit. Period 2. Internal diameter 15.0 mm ; circular section, thickness 2.0 mm . The single thick bezel-like moulding has traces of plating, perhaps gilding, and is flanked by transverse grooves. The ring is fixed by a soldered lap joint. Similar to Neal and Butcher 1974, fig 60, 120.

## With glass setting (Fig 52; 1791-1792)

1791 Fig 52 SF BUC 1678, H848 G647. grave deposit. Period 2. In fragments. D-shaped, internal diameter 16.0 by 18.5 mm ; Dshaped section, height 2.5 mm , thickness 1.5 mm . The ends of the curve of the $D$ have been beaten flat and bear a decoration of crude incised lines. The straight element carries a setting of corroded glass, possibly originally translucent and dark blue, in a silver frame. The setting was fixed with iron solder.

## IRON FINGER-RINGS

With setting (Fig 52; 1793-1794)
1793 Fig 52 SF BKC 3402(C), J176 F32. Pit. Period 5c/6. In fragments. Internal diameter 22.5 mm ; D-shaped section, height 2.0 mm , thickness 2.0 mm . The stone or glass of the setting is missing.


Fig 52 White-metal and iron finger-rings (1:1)

## EARRINGS (Fig 53; 1795-1798)

Earrings are rarely found, or rarely identified, or rarely published. Many factors may contribute towards this apparent scarcity. Earrings may have been genuinely uncommon in the Roman period. The probable preferred use of a stable precious metal (to prevent the pierced ear from going septic) would reduce the likelihood of casual loss and the fragility of decayed copper-alloy or white-metal rings may have hindered the identification of any fragments remaining. Only three pairs of earrings and one individual ring have been identified from recent excavations in the town. In one case, 1798, both rings were held by corrosion products in position on a skull in the Roman cemetery in St John's Abbey grounds. The identification of the others as earrings is not certain. See also the ?earring used as a child's armlet. Fig 42, 1640.

1795 Fig 53 SF BKC 886, D275 L13. Town ditch fill. Anglo-Saxon. A tapering piece of copper-alloy wire varying in section from rectangular to circular and twisted into a rough loop. Diameter 12.5 mm .
1796 Fig 53 SF BUC 329, B600 G110. Grave fill. Period 2. Two plain copper-alloy ?earrings, in fragments. One almost
complete. Only this one is illustrated. Internal diameter 16.0 mm ; D-shaped to rectangular section, 1.0 mm thick, tapering from 6.0 mm to 2.0 mm in height. The thin end is rather thick for an earring. Of the incomplete ring the thin end is less than 1.5 mm in height. It may be that part of the more complete ring is missing, though there appears to be a good edge to the metal.
1797 Fig 53 SF BUC 642, C1275 G385. Grave fill. Period 2. Two possible pendants from a pair of earrings. Each consists of an opaque dark blue glass bead suspended from two linksof copper-alloy double wire chain.
1798 Fig 53 SF IRB 95(C), F56. On a skull in the backfill of a 3rd- to 4th-century grave, no doubt derived from a disturbed adjacent grave of similar date. Two copper-alloy earrings, in fragments. One almost complete. This consists of a copperalloy hoop with a twisted join, internal diameter oval, 19.0 by 23.0 mm ; circular section, 1.5 mm thick. Suspended from the hoop is a short length of wire twisted into a suspension loop and carrying a decayed ?frit bead.


Fig 53 Earrings (1:1)

## MISCELLANEOUS JEWELLERY (Fig 54; 1799-1801)

1799 Fig 54 SF BUC 1294(C), C1515 G404. Grave deposit. Period 2. An unusual item of ? jewellery consisting of a rectangle of translucent colourless glass enclosed by a gilt copper-alloy 'envelope'. Two of the edges of the glass rectangle appear to have been chipped to shape, the other two are cleanly cut. There is a considerable degree of curvature to the glass, probably indicating that it was cut to shape from an odd fragment, perhaps from a broken vessel. The envelope is formed by two sheets of copper alloy, each with a marginal groove and a grooved cross that divides the face into four small squares. A circle has been cut out from within each square. The edges of the sheets are folded over to enclose the glass, the slightly longer edges of one sheet overlapping those of the other. It seems certain that there would have been a rivet hole at each corner to attach the sheets firmly together. Three rivet holes survive on one sheet. As the outer face of each sheet has been gilded, the object was presumably intended to be seen from each side. It is uncertain, therefore, what method of attachment was used to link this piece to the two others recorded as being seen in the grave (1800-1) or on what item of jewellery or dress the objects were displayed.

## Pendants

1802 Fig 54 SF BUC693(C), C392 G278. grave deposit. Period 1. Amber head, possibly female, pierced for suspension; height approximately 19.0 mm , in three fragments. The hair is piled

into an elaborate tiered coiffure. The proportions of the head are quite crude, particularly those of the nose, and the two profiles combine into an extremely odd full face. The head bears slight affinities with a jet head from Cologne (Hagen 1937, Taf 29, Abb 2). Together with 1803-5, a bell (Fig 54, 1811), and two pierced coins (Julia Maesa, 218-225, and Claudius I copy, 43-64), the head was found in a corroded mass of iron pan which also yielded several types of copperalloy chain links. These links probably derive from a chain purse (Fig 57,1850). The suspension holes and loops of the related pendants and amulets are too small to allow a chain to be inserted.
1803 Fig 54 SF BUC 693(C), C392 G278. Grave deposit. Period 1. A pierced dog's canine, length 29.5 mm . The discovery of this piece in a grave aligned north-south refutes any theory that pierced teeth are only found in Anglo-Saxon contexts (Clarke 1979, 296-7).

1804 Fig 54 SF BUC 693(C), C392 G278. Grave deposit. Period 1. A copper-alloy horned phallus, with a suspension loop behind the lunular horns. Length 17.0 mm , width 15.5 mm .
1805 Fig 54 SF BUC 693(C), C392 G278. Grave deposit. Period 1. An as of Hadrian (RIC 717), with reverse showing the emperor, a spear at rest in his right hand, on a horse prancing right. The coin is enclosed in a frame of silver with a suspension loop soldered at the top of the vertical axis of the reverse. The frame round the reverse is crenate and bears a decoration of incised lines, around the obverse the frame is plain. It seems clear, then, that it was for the reverse that the coin was treasured.

1806 Fig 54 SF BUC 714(C), C1394 G406. Grave deposit. Period 2. A silver lunula, with a suspension loop soldered on. Width 23.0 mm . Part of an armlet of jet, amber and glass beads, from which a coin of Valens, 367-75, was also suspended.

## Bells

1808 Fig 41 SF BUC 13(C), A7 G1. Grave deposit. Period 2. A copper-alloy bell with an iron clapper, maximum diameter 23.5 mm . Suspended from a two-strand cable armlet, 1610.

1811 Fig 54 SF BUC 693(C), C392 G278. Grave deposit. Period 1. A copper-alloy bell with a copper-alloy clapper, maximum diameter 18.0 mm . There are two pairs of incised lines round the circumference. The bell is one of a group of objects found in a chain ?purse (see 1802).

## Clasp

1812 Fig 54 SF BUC 11(C), A8 G1. Grave deposit. Period 2. Copper-alloy clasp from a bead necklace.

## BUCKLES AND BELT-PLATES <br> (Fig 55; 1813-1820)

Unless otherwise stated objects are of copper alloy. 1813 Fig 55 SF LWC 3738(C), K450 F232. Pit. Medieval or later? Well preserved buckle and belt-plate from a narrow belt. Length 57.5 mm , width of plate 10.5 mm . The buckle loop and tongue are attached to the returned hinged plate by means of a riveted pin. The tongue-ended back part of the belt-plate extends just past the first of two dome-headed riveted studs. There is a washer at the back of the second stud. Possibly post-Roman
1815 Fig 55 SF BKC 3335, K323 L26. Make-up. Period 4c. Thick D-shaped buckle loop, maximum width 20.0 mm .

1816 Fig 55 SF BKC 4420(C), N399. Period 6? Large bone Dshaped buckle loop, maximum width 49.0 mm .

1818 Fig 55 SF BKC 5166(C), V298 F500. Pit. Period 5? Belt-plate, one end has been folded upwards and over to form a hinge. Length 63.5 mm , width 25.0 mm . In three of the corners of the rectangular plate a flat-headed stud survives, two are clenched. There is a hole for a stud in the fourth corner. The plate is decorated with an inlay design in ?opaque dark blue glass of two stylised floral patterns flanking a block of small squares and bordered by triangles. As with 1819 below this piece may be from auxiliary military equipment, but in the absence of an exact parallel it has been assumed to be civilian.
1819 Fig 55 SF BKC 5498(C), V920 L11. Dump. Late Period 5. A double buckle with white-metal plating. Length 39.5 mm , width $21,5 \mathrm{~mm}$. There is iron corrosion on the central bar, probably indicating an iron tongue. One end of the buckle comes to a point. At the other end a shallow arc has been cut from the metal, seemingly after manufacture. Double buckles have been found in 2nd-century auxiliary military contexts on the continent (Oldenstein 1976, 217), though none is similar to this piece.

## HOBNAILS (Fig 56; 1821-1849)

Iron hobnails were found not only as all that remained of footwear deposited in inhumations, but also as ordinary site finds. Their contexts range in date from Claudian to late Roman. Groups of hobnails found in


1813


Fig 55 Buckles and belt-plates (1:1)



1816


[^2]graves in the Butt Road cemeteries were planned in situ. Some are illustrated in Fig 56. The soil conditions on the site were acid, so no leather survived except as a dark stain from which the approximate shapes of the shoes could be planned. The nails themselves were very corroded. In many cases distortion of the nail pattern caused by the disturbance of the body within the coffin on deposition and by soil movement on the collapse of the coffin, coupled with the unfavourable soil conditions, meant that only a jumble of a few nails survived to indicate the presence of footwear.

The type of shoe deposited is unknown. Probably both the calceus, a shoe, often of openwork, and the solea, a thonged sandal (Charlesworth and Thornton 1973, 150; Keppie 1975, 66, 68), were represented. It may be that soles set with hobnails in a simple pattern were from sandals, and those studded heavily were shoes. There is no evidence to suggest that the military boot, the caliga, may also be represented (Clarke 1979, 322; Keppie 1975, 78).

## Notes

1 The prefix $A D$ has been omitted from dates except where confusion may arise.
2 Pre-Roman features have, however, been found during the Culver Street excavation of 1981-2.
3 This brooch, with six others, was found in a box in the Colchester and Essex Museum with a label stating that they had been given by Mr Round. This probably refers to Dr J H Round, the eminent Colchester historian, who died in 1928.
4 In late Iron Age contexts only three are known to me. two from Prae Wood, Herts, Iron Age occupation period, AD 5-35, both flat sectioned, one with incised zig-zag on top, the other with transverse incisions near coil (Wheeler and Wheeler 1936, fig 24, 3 and 4); and one from Camulodunum, Colchester, Sheepen T.H.7, 80-90 ft at 18 ins, flat sectioned with two grooves on upper face, transverse hatchings across these (Hawkes and Hull 1947, fig 59, 4, no 186, CM 35.10.
From undated or unlocated contexts, some of which might be 1st or 2 nd century but some of which might well be late Romano-British\or Anglo-Saxon, there are: Colchester, Essex, one with round sectioned hoop, segmented mouldings on upper half (Jarmin Coll., CM 246.02); half only of a minute brooch with tiny zig-zag impressed into flat upper face (Joslin Coll., CM 1051); St Albans or Verulamium, Herts, two flat sectioned brooches with notched chevrons on edge (Herts County Museum); Woodeaton, Oxon, round sectioned, groove on coils (Ashmolean, Pr 421); Dragonby Moneyfield, Scunthorpe, Lines, flat sectioned, with engraved transverse hatchings on hoop, coil and pin head, which is humped and spoon-ended (Scunthorpe Museum); Honington, Suffolk, flat sectioned, engraved opposed 'V's on hoop (Ashmolean, 1927, 6326); Icklingham, Suffolk, one, rolled strip, flattened, engraved triangles like snake's skin (Ashmolean, 1927, 6386) and another one, flat sectioned, engraved transverse hatchings (Ashmolean, 1927, 6329); Ixworth, Suffolk, flat sectioned with engraved 'S's across ring, (Museum of Archaeology and Ethnography, Cambridge, A.1910.150).
From late Romano-British contexts: Lydney, Glos, one flat sectioned, 'V's nicked on outside edge of hoop, another round sectioned, has coils only engraved like the Woodeaton example. Most of the Lydney penannular brooches are Type Ds and many are decorated with transverse hatchings, 'V's nicked on outside and inside of hoop, or have opposed triangles or figures-of-eight across hoop. All these forms of decoration figure on other types of penannular brooches which, where datable, are late rather than early Romano-British (Wheeler and Wheeler 1932).
From Anglo-Saxon contexts, some graves (all are flat sectioned): Sleaford, Lines, one with grooved coils (BM 834-

## ?PURSE (Fig 57; 1850)

1850 Fig 57 SF BUC 693(C), C392 G278. Grave deposit. Period 1. A large mass of iron pan containing objects Fig 58, 1802-5 and 1811, two pierced coins (Julia Maesa, 218-223, and Claudius I copy, 43-64) and many copper-alloy chain links. Three types of link were present. Thick $(1.5 \mathrm{~mm})$ penannular links (Fig 57, a), thin ( 1.0 mm ) solid links (Fig 57, b), and thin ( 1.0 mm ) penannular links with flattened and pierced terminals fixed by a rivet (Fig 57, c, d). The thick penannular links appear to predominate. No patterns of interlinking could be distinguished. Though the majority of surviving fragments are of interlinked thick penannular rings (Fig 57, e), at least one example can be found of each type joined to each other type. The most likely interpretation of these links is that they formed a purse. The interlinking and the narrow holes and suspension loops of the objects associated with the links rule out the possibility of a simple neck chain.



1850


Fig 57 Links from a ?chain mesh purse (1:1)
1.52); Faversham, Kent, with a shallow groove round hoop(BM 1175.70); two from Nassington, Northants, with sideways 'S's (Antiq J 24 (1944), pl 23, c.A); Fimber, Yorks, with zig-zags (Mortimer 1905, 190-2).
5 At Colchester the average diameter of bone pin shafts is 4.1 mm . The average width or diameter of bone needle heads is 4.7 mm and of bronze needle heads 3.2 mm .

6 Grave 115, silver pin Fig 28, 480; Grave 174, silver pin 481 ; Grave 342, silver pin Fig 31, 512 ; Grave 519, two copper-alloy pins 488 and 489; Grave 537, copper-alloy pin Fig 28, 484, silver pin 483, silver pin with gilt copper-alloy head 482, and four glass pins 462, 464, Fig 25, 461,463 . Grave groups and the positions of these objects relative to the skulls concerned will be published in the forthcoming site report.
7 Grave 687, Type 3 bone pin 340.
8 See also Hagen 1937, 95-7.
9 Stephen Greep has noted evidence for the use of a lathe on pins of Type 6 in the north of England (pers comm).
10 A Type 2 pin from the Culver Street site, 1981.
11 An attempt was made to dye an unstratified metapodial using green food colouring. After immersion for a week in a solution of one part colouring to ten parts water the bone was externally green. It was then split using a hammer. Internally the cancellous tissue was much greener than the bone wall, which had only been penetrated by the colouring for a depth of 1.0 mm .
12 I am very grateful to Stephen Greep for information about the relative percentages of this type. These figures are, however, provisional.
13 For information on the properties attributed by the ancients to jet, its sources, and the etymology of the word see Hagen 1937, 77-8; RCHM 1962, 141.
14 The lumps of a black vitreous substance mentioned by Hull (1958, 158b) may have been melted jet.
15 Other examples are published in Neal 1977, fig 46,23; Neal and Butcher 1974, fig 64, 212; Cunliffe 1971, fig 52, 172; and Bushe-Fox 1928, pl 19, 26.
16 See Brodribb et al 1971 a, fig 30, 32; Cunliffe 1971, fig 52,171; Henderson 1949, pl 53,197,198; and Kenyon 1948, fig 89,2,3.
17 The reference in Lawson 1976 (247 note 2) to the use of hairrings having been observed at Strood, Kent (Coll Ant 1848) is spurious.
18 I am grateful to David Birkett for this information.
19 The human wrist and arm are, after all, more or less oval in section.
20 The bones are very decayed and the skeleton cannot therefore be sexed.

CATEGORY 2: TOILET, SURGICAL OR PHARMACEUTICAL INSTRUMENTS

Tweezers, spoons, probes, spatulas, and other objects usually described as being toilet or surgical instruments are found on urban, military, and villa sites both in this country and abroad (eg Kenyon 1948, fig 86; Ritterling 1913, Taf 16; Neal and Butcher 1974, figs 62 and 63; Merrifield 1965, pls 136 and 137; Branigan 1977, fig 27). Most were probably employed for toilet rather than surgical purposes, though their use in minor surgery or pharmacy should not be discounted, particularly on military sites, where there may have been a resident army surgeon, several medical staff, or even a hospital. ${ }^{2}{ }^{2}$ The most common use(s) for each type of
object and the appropriate reference to Milne 1970, where the applications of these instruments in medical practice are listed in detail, are given below.

COMBS (Figs 58 and 59; 1851-1860)
Very few antler or bone combs were recovered. Eight were found at Butt Road, of which seven were deposits in east-west oriented graves belonging to the later cemetery and can therefore be dated to within the last three-quarters of the 4th and perhaps the early 5 th century. The eighth came from the fill of an east-west grave and probably derived from a north-south aligned late 3rd- to 4th-century


Fig 58 Combs (1:1)



Fig 59 Combs (1:1)
inhumation. The poor state of preservation of the Butt Road combs is the result of the site's acid soil conditions. All the combs are composite and doublesided. They are more likely to be made from red deer antler than from bone.
1851 Fig 58 SF BKC 4295(C), N272. Topsoil? Probably Period 6. Two fragments of a broad connecting plate from a comb. Length (incomplete) 51.0 mm , width 20.0 mm . Two iron rivets are still in place and the plate has broken across a hole for a third. The plate has a stepped profile and is decorated with double diagonal grooves across the topmost step between the rivets. The long edges are notched from the cutting of the teeth.
1852 CAR 1, fig 10, 2. SF CPS 188(C), 405 F100. Occupation. Period 4. Fragment of a comb with zoomorphic ends and broad connecting plates. Length (incomplete) 28.5 mm , total width 55.5 mm , width of plates 18.0 mm . Each plate has a stepped profile and decorative grooving. A report by Dr Patricia Galloway accompanies the illustration. The comb is almost certainly mid to late 4 th-century in date.

1853 Fig 58 SF BUC 325(C), B570/571 G109. Grave deposit. Period 2. Badly decayed fragments of a comb with narrow connecting plates. Length (incomplete) 69.5 mm , width of plates 12.5 mm . Each plate has a rounded profile and is plain. There are slight notches from the cutting of the teeth. Five iron rivets survive. Nothing remains of the ends of the comb.
1854 Fig 58 SF BUC 399(C), B1126 G174. Grave deposit. Period 2.

Badly decayed fragments of a comb with broad connecting plates. Length (incomplete) 69.0 mm . The surviving teeth indicate a total width of 60.0 mm . Width of plates 19.0 mm . Each plate has slight marginal steps, convex moulding and grooves flanking a flat central area. Four iron rivets survive. The decayed surviving end appears to be undecorated.
1855 Fig 58 SF BUC 487(C), C483 G258. Grave deposit. Period 2. A fairly well-preserved comb. Length 11.0 mm , total width 54.5 mm . The connecting plates are relatively narrow, 15.0 mm across, plain, and fixed by only four iron rivets. Each is flat and rectangular, with bevelled edges scarred when the teeth were cut. The end segments of the comb are in comparatively poor condition. Of the eight areas available for decoration, three are definitely plain, two are pitted by decay, one, also decayed, bears a small dot, possibly from ring-and-dot decoration, and the remaining two, obverse and reverse, are pierced by a hole 2.5 mm in diameter The centre of the tooth segment at each end is diagonally fluted.
1856 Fig 58 SF BUC 586(C), C1192 G377. Grave deposit. Period 2. Fragment of a comb. Length (incomplete) 44.0 mm . The surviving teeth indicate a total width of approximately 53.0 mm . One connecting plate is quite well-preserved and the other survives as a decayed fragment. The more complete plate is 17.0 mm across (possibly tapering from a slightly broader centre), and rectangular in profile with two stepped convex marginal mouldings on each long side. The flat upper element of the plate bears diagonally-arranged rows of ring-and-dot decoration. The iron rivets holding the pieces of the comb together have been skilfully incorporated into this pattern. Each long side is scarred from the cutting of
the teeth.
1857 Fig 59 SF BUC 1529, H181 G487. grave deposit. Period 2. Fragmentary comb. Length 118.0 mm , total width 53.5 mm . The connecting plates are relatively narrow, 15.0 mm across, and have a complex profile of hollow chamfers and grooves with transverse mouldings between the seven iron rivets. The long sides are scarred from tooth-cutting. The ends are quite badly decayed. The best preserved may be zoomorphic with a ring-and-dot motif suggesting an 'eye'. Opposite the ends of the connecting plates are additional groups of three ring-and-dot motifs.
1860 Fig 59 SF BUC 1705, H1024 G685. Grave fill. Period 2. Fragments of a decayed comb. Length (incomplete) 66.0 mm , width at the surviving end 46.0 mm . The connecting plates are broad, 19.0 mm across, and patterned with lengthwise grooves and double-ring-and-dot decoration. The surviving end may be zoomorphic and has pairs of double-ring-and-dot motifs.

Patricia Galloway has kindly supplied the following comments on the combs: Parallels for most of these combs may be sought from late 4th-century cemeteries in Britain (Lankhills, Poundbury) and on the Continent (Künzing), but no comb in the present group has an exact and complete parallel from another site. The proportions and the spirit of decoration in this group, however, are clearly in line with the examples from similar sites.

Precise parallels can be sought for individual decorative elements. The stepped connecting plate found on combs 1851,1856 , and 1857 isa relatively common stylistic device which appears in multiple examples from the sites mentioned above, although the incised motifs on 1851 and 1856 have no exact parallel on a comb. The unusual vertical moulding on 1857 is echoed by vertical incised lines on a connecting plate from Künzing, while the horizontal row of double-ring-and-dot motifs on 1860 is a decorative theme found also at Künzing and Trier. The shaping of the 1860 connecting plate and the one on comb 1854 may represent simply a deepening of the very common horizontal grooves found on many combs from late Roman sites. Even the broad flat connecting plate of 1855 is not without parallel, this time from Lankhills and Poundbury.

The combs from Butt Road are badly preserved, so that in no case are the end tooth segments intact enough to establish their shapes with certainty, but it is quite evident in most cases that these end segments were decoratively shaped. Such decorative shaping is a part of the definition of the late Roman provincial double-sided type; it might almost be said that uniqueness in this shaping is part of the type definition, so that where shaping is obvious, as on 1855, 1857 and 1860, we do not expect it to conform to any one pattern. Decoration of the end segments with ring-and-dot ornament is also characteristic. All of the attributes cited, in fact, confirm the membership of most of these combs in this type classification.

There is one exception. Comb 1853 is clearly, even from superficial observation, not a comfortable member of the group. Its narrow convex connecting plate and its carelessly-applied iron rivets suggest possible local manufacture, although at least one
example, far more skilfully made and decorated, was found in the Trier Kaiserthermen. The comb is, however, so badly preserved that it is impossible to judge its origin with much confidence except to say that it was not the same as that of the others and might conceivably fall into a later period.

## STIRRING RODS (Fig 60; 1861-1864)

Glass rods (Isings 1957, form 79) were used to stir perfumes and cosmetics stored in small glass flasks, aryballoi or unguentaria. Thin oil-based cosmetics and perfumes separate and need to be re-emulsified before use, while thicker ones may dry out and require softening with extra oil at intervals. Stirring rods may date only to the 1 st and 2 nd centuries (ibid), but seem to be found throughout the Roman period (Charlesworth 1972, 215). Four rod fragments are catalogued here. All are of translucent glass drawn out in a tight spiral. Two are green, each with a distinct air hole visible as a dark thread in the glass, and two are bluey-green, each with two narrower air holes. The two bluey-green fragments are 1.0 mm thicker than the green examples. These similarities may be coincidence.
1861 Fig 60 SF BKC 2224, G126. Uncertain. Period 3? Length 28.0 mm , diameter 7.0 mm . Corroding translucent blueygreen glass.
1862 Fig 60 SF BKC 4611, T213 F95. Slot? Period 3. Length 19.0 mm , diameter 6.0 mm . Translucent green glass.


1861


Fig 60 Stirring rod fragments (1:1)

## MIXING PALETTES (Fig 61; 1865-1868)

Small slabs of stone were used as palettes on which to mix cosmetics or medicines (Milne 1970, 171). These palettes have bevelled edges, and were probably kept with the more decorative bevelled side up. This is suggested by our illustrated examples where it is the undersurface that has been worn by the action of mixing. Palettes have been found with edges worn by the sharpening of scalpels (ibid).

1865 Fig 61 SF LWC 732, B F70. Probably cellar backfill. Period 5. Onyx marble. Length (incomplete) 81.0 mm , width (incomplete) 59.5 mm .

1867 Fig 61 SF BKC 4883, T17 L5. Destruction debris of Period 3. Period 3 (end). Greenstone. Length (incomplete) 59.5 mm , width 58.0 mm . This palette is very worn on the underside, and also shows signs that some mixing has been done on the upper surface

## NAIL-CLEANERS

Despite the low number of nail-cleaners recovered, it has been possible to suggest a rough typology for these objects. Types 1 to 3 are cast, Type 4 is beaten out. All are of copper alloy.

Type 1 a (Fig 62; 1869-1870). A simple type with a more or less straight flat, thickish shaft. The suspension loop rises directly from the shaft, and is on the same plane. A mid to late 1st-century type,


Fig 61 Mixing palettes (1:2)


1875


1872

Fig 62 Nail-cleaners (1:1)
which may survive into the 2nd century.
1869 Fig 62 SF BKC 4581(C), T201 F90. Stakehole. Period 3. In two fragments. Part of the suspension loop is missing. Length 43.0 mm , width 3.5 mm .

Type 1 b (Fig 62; 1871). Similar to 1a, but the shaft is offset from the suspension loop and tapers to the points. A mid to late 1 st-century type (Hawkes and Hull 1947, pl 100, 34; Goodburn 1974, fig 32, 75).
1871 Fig 62 SF LWC 1102, C491 F235. Pit. Period 1. In two fragments. The points and part of the suspension loop are missing. Length (incomplete) 47.0 mm , width at the top of the shaft 7.0 mm .

Type 2a (Fig 62; 1872-1874). The offset shoulders of Type 1b gave rise to the leaf-shaped blade of Type 2. In 2a the blade tapers fairly gently from shoulders to points. The suspension loop is often, though not invariably (Hawkes and Hull 1947, pl 100, 36; Neal and Butcher 1974, fig 62, 184), at right angles to the plane of the blade, and the junction can be marked with decorative mouldings. Mid to late 1st-century, probably continuing into the 2 nd-century. See also the nail-cleaner from toilet set 1942.

1872 Fig 62 SF LWC 2943(C), K213. Garden topsoil. Period 4b. A well-preserved example. The blade is slightly waisted. The division between the points continues up both sides of the blade as a roughly scored line. The junction of blade and suspension loop has bead, reel and spool mouldings. Length 47.0 mm , maximum width 8.0 mm .

1874 Fig 62 SF COC 214(C), 1016 F379. Pit. (Early) medieval. The points are missing. A plain example. Length (incomplete) 51.0 mm , maximum width 8.0 mm .

Type 2b (Fig 67; 1941). The simple leaf-shaped blade of Type $2 a$ has developed into a stylised shape with a very broad but short top and long, narrow body. This type belongs in the 2 nd and probably 3rd centuries. The stylised leaf shape can be paralleled by seal-boxes of the same period (Fig 106).

Type 3 (Fig 62; 1875). A plainer type than the preceding. The shaft is almost straight and rectangular to square in section at the top. Our one example has crude moulding above the shaft. Probably mid to late 3rd-century.

1875 Fig 62 SF BKC 4955(C), V50 L22. Dump. Late Period 5. The suspension loop is missing. The scar above the bead-andreel moulding seems to indicate that the loop would have been on the same plane as the shaft. Length (incomplete) 47.0 mm , maximum width 3.5 mm .

Type 4 (Fig 67; 1943-1945). As this type is beaten out, not cast, considerable latitude has been allowed in the shape of the blade and the method of forming the suspension loop. Our examples of this type derive from late 3rd- or 4th-century contexts at Butt Road and form part of the toilet sets 1943-1945.

## TWEEZERS (Fig 63; 1876-1895)

Tweezers were used for the removal of unwanted facial and body hair. No clear picture of any development that may have taken place in the design of tweezers can be seen. They vary considerably in size and shape, though in all cases the ends of the blades curve in like pincers. Long-bladed tweezers have less spring than shorter examples and seem to be more prone to distortion. Perhaps to counteract

this, one long-bladed pair, Fig 63, 1876, has a ring around the blades. Presumably this was pushed to the top of the blades during use, then slid down to keep them rigidly closed and therefore less likely to suffer damage, as well as to be less bulky for storage. Alternatively, the ring could have served to clamp the blades together during use. Surgical uses for
tweezers are discussed in Milne 1970, 91-3. Some examples were possibly cast (1884), most were probably beaten out and folded to shape. All the catalogued pieces are of copper alloy. See also the tweezers from toilet sets 1942, and Fig 67, 1943 and 1945.

1876 Fig 63 SF LWC 428(C), B147. Cellar (F70) backfill, contaminated. Period $5+$. The blades are parallel-sided, 4.0 mm wide. A ring grips the blades about half-way down their length. There is a fragment of a suspension ring through the loop.

1877 Fig 63 SF LWC 682(C), B269 F95. Pit. Period 5. Length 53.0 mm . Flared blades, maximum width 6.0 mm . Each has a bevelled inner edge.
1879 Fig 63 SF LWC 1242(C), E12 F12. Pit. Medieval? The tip of one blade is missing. Length 39.0 mm . The blades are virtually parallel-sided, 4.5 mm wide. Possibly not Roman.
1881 Fig 63 SF LWC 1860(C), J82 F30. Pit. Post-Roman. Bent. Length 69.0 mm . Flared blades, maximum width 5.0 mm .

1882 Fig 63 SF LWC 2381(C), J367. Period 4b demolition debris. Period 4b destruction. The blades are almost parallel-sided, 3.5 mm wide. The tweezers hang from a thick, penannular suspension ring.
1883 Fig 63 SF LWC 2454(C), J426. Section straightening. Roman. In two fragments. Most of one blade and the tip of the other are missing. Length (incomplete) 34.5 mm . Flared blades, probable maximum width 5.0 mm . An incised marginal groove runs parallel to each edge and over the loop.
1884 Fig 63 SF LWC 2586(C), J550 F188. Flue of lime pit (F16). Early medieval. Length 47.0 mm . A well-preserved pair, only the tip of one blade is slightly damaged. Possibly cast. The blades are parallel-sided, 5.5 mm wide. Possibly not Roman.

1885 Fig 63 SF BKC 1615(C), E898 L250. Road metalling. Periods 2 and 3 a . Flattened. Length 32.0 mm . Flared blades, maximum width 5.5 mm . The tweezers are suspended from a bent bar from a bar-and-loop toilet-set holder (cf Collingwood and Richmond 1969, pi 21, k).

## TOILET SPOONS

Spoons were probably used for a variety of purposes. Those with a small cupped scoop have been described as ear picks or scoops (Hawkes and Hull 1947, 334; Neal and Butcher 1974, fig 62, 184), though the surgical ear scoop (oricularium specillum) known to the Romans had a small narrow scoop (Milne 1970, 63 ). More convincingly, spoons with both round and long scoops are generally recognized as being used to extract cosmetics from flasks, boxes, and small pots (ibid, 77; Merrifield 1965, 187; Neal and Butcher 1974, fig 63). Spoons with a small round flat scoop could also serve as the equivalent of the modern 'hoof, an instrument used to push back the cuticle (Merrifield 1965, 188). Surgical and pharmaceutical uses for spoons are given in Milne 1970,63,77-9. All these examples except one, 1905, are of copper alloy. The methods of manufacture range from casting (Fig 64,1917 ) to rolling up and trimming a thin strip of sheet copper alloy (Fig 64, 1898). Toilet spoons appear to have been made throughout the Roman period.

With small round flat or cupped scoop (Fig 64; 1896-1916). See also the spoons in toilet sets 1942, 1944 and Fig 67, 1943.

1897 Fig 64 SF LWC 405(C), B127. Later Roman levels. Periods $4 / 5$. Bent. Length 83.5 mm . Cupped scoop, diameter 6.5 mm .


Fig 64 Toilet spoons (1:1)

1898 Fig 64 SF LWC 681, B269 F95. Pit. Period 5. The top of the shaft is missing. Length 30.0 mm . Made by rolling up a strip of sheet copper alloy and folding and trimming one end into a flat scoop. Diameter of scoop 4.0 mm .

1899 Fig 64 SF LWC 872(C), C159 F92. Robbertrench. Medieval. The top of the shaft is missing. Length 40.0 mm . Flat scoop, diameter 6.0 mm .
1900 Fig 64 SF LWC 2088(C), K28. Uncertain. ?Post-Roman. Spoon from a toilet set, with a suspension loop. The tip of the scoop is damaged. Length 41.5 mm . Cupped scoop, diameter 3.5 mm . Similar to one from a set from Gadebridge, Hertfordshire (Neal and Butcher 1974, fig 62, 184).
1901 Fig 64 SF LWC 2889(C), K209. Garden topsoil. Period 4b. Bent. Length 113.5 mm . Flat scoop, diameter 5.0 mm .
1907 Fig 64 SF BKC 3429(C), J234. Machine clearance. Modern. The top of the shaft is missing. Length 65.0 mm . The scoop has a convex underside and flat top, diameter 4.5 mm .

With long cupped scoop (Fig 64; 1917-1925)
1917 Fig 64 SF LWC 1148(C), B609 F70. Cellar. Period 5. In two fragments. The top of the shaft and most of the scoop are missing. Length (incomplete) 72.0 mm . The junction of scoop and shaft is marked with a zoomorphic moulding. The shaft is cast in a barley-sugar twist.
1921 Fig 64 SF BKC 4053(C), N20. Period 6. The tip of the scoop is damaged. Length (incomplete) 96.5 mm . The junction of scoop and shaft has bead-and-reel moulding. The shallow V -section scoop is 7.0 mm wide.
1924 Fig 64 SF BKC 5171(C), V270 L27. Make-up. Period 5. A small spoon from a toilet set with a suspension loop but no shaft. Length 35.5 mm . Maximum width of scoop 7.0 mm .

## SPOON-PROBES (Fig 65; 1926-1932)

These double-ended instruments (cyathiscomeles), though not as common as site finds as single-ended spoons, were almost certainly employed not only as surgeon's curettes or sounds but also for minor pharmaceutical or toilet purposes (Milne 1970, 62). The spoon end would have been used, as toilet spoons in general, to extract cosmetics from containers, the probe end to apply these cosmetics to the face. Alternative uses of the probe (where necessary wrapped in material, probably wool) could include the removal of cosmetics from the face, particularly round the eyes, and the application of medicaments to eye and ear (ibid, 54-8). Spoonprobes were all cast. The white-metal wire inlay of 1927 would have been added cold. All the catalogued examples are of copper alloy.
1926 Fig 65 SF LWC 2030(C), J103. Topsoil with gravel. Late Roman or later. Part of the spoon has decayed and the end of the scoop has broken off. Length 155.5 mm , length of spoon 30.0 mm , length of probe 17.0 mm . The centre of the shaft has a length of barley-sugar twisting (cf Neal and Butcher 1974, fig 63, 199).

1927 Fig 65 SF LWC 3417(C), J1179. Make-up. Period 3. Bent. One end of the instrument is missing. The shape of the section of the shaft at that end indicates that it would have developed into a long spoon. Length (incomplete) 115.0 mm , length of probe 18.0 mm . Most of the length of the shaft has two spiralling grooves of different depths. The shallower groove in some places contains white-metal wire. The deeper groove is empty. It possibly contained niello. At the spoon end of the shaft there is a short length of spool-andreel moulding.
1929 Fig 65 SF BKC 2602(C), H54 F23. Pit. Post-Roman. Bent. Length 142.0 mm , length of spoon 33.5 mm , length of probe 22.0 mm . Immediately above the spoon the heptagonalsection shaft has a short length of decorative moulding.
1931 Fig 65 SF MRC 74(C), 109 F52. Pit. Approximately early 2nd century. Slightly bent. In two fragments. The spoon bowl is

damaged. Length 127.5 mm , length of spoon 27.0 mm , length of probe 26.0 mm . The octagonal-section shaft above the spoon has decorative moulding similar to that of 1929.

1932 Fig 65 SF MRC 70(C), 112 F52. Pit. Approximately early 2nd century. Slightly bent. One end of the instrument is missing. It would almost certainly have developed into a probe. Length (incomplete) 152.5 mm , length of spoon 38.5 mm . At the spoon end of the shaft is a length of bead-, double-reel-, and spool moulding. At the ?probe end is a short length of inset bead-and-reel moulding.

PROBES
Fragments of six probes (1933-1938) were found. In five cases not enough of the shaft remained to determine if the probe were part of a double-ended instrument or not. The sixth was probably doubleended as a considerable length of shaft remained and the piece had been broken at a bead-and-reel moulding. The uses of probes are discussed under spoon-probes (see above). Not illustrated; in microfiche catalogue.

## MISCELLANEOUS TOILET INSTRUMENTS

(Fig 66; 1939-1940)
Both are of copper alloy.
1939 Fig 66 SF BKC 372(C), A91 L4. Topsoil and town ditch (F19) fill. Post-Roman. A sickle-shaped instrument with a suspension loop. The tip is missing. Length 50.0 mm . As neither edge of the blade is sharp, the tip was presumably the functional part. Possibly used as a toothpick, or as a nailcleaner (cf Waugh and Goodburn 1972, fig 35, 76; Wheeler 1930, pl 38, 10).

1940 Fig 66 SF BKC 5063(C), V88. Period 3 or 4? Bent. A pin-like instrument with worn suspension loop above moulding of a hatched cylinder and a biconical bead. The shaft is octagonal in section. Length 116.0 mm . Possibly used as a pick of some kind.

## TOILET SETS (Fig 67; 1941-1945)

All the instruments are of copper alloy.
1941 Fig 67 SF BKC 2106(C), G9. Modern? 1) Nail-cleanerof Type 2b, with stylised leaf-shaped blade; length 56.5 mm . 2) File, the reverse side of the blade is serrated; length 57.0 mm . Both pieces have an enamelled motif above the blade of an


Fig 66 Miscellaneous toilet instruments (1:1)


Fig 67 Toilet sets (1:1)

The nail-cleaner and the third piece have a suspension loop formed by turning the top of the shaft over. The pieces are hung from a piece of wire with a simple twisted knot. Probably late 3rd- to 4th-century.

## SPATULAS (Fig 68; 1946-1950)

Spatulas often form one end of a double-ended instrument, for example the spathomele, or spatulaprobe, and the scalpel, the handle of which can carry a leaf-shaped spatula. The spathomele was generally used for pharmaceutical purposes, such as mixing and applying ointments (Milne 1970, 58), while a spatula in association with a scalpel implies surgical use as a blunt dissector (ibid, 24, 84-5). None of our catalogued examples is complete, but 1948 was certainly not double-ended, and resembles blunt dissectors (ibid, pl 20, 3,4), and 1950 appears to be a single-ended instrument too small for any use other than spreading or mixing. Most examples are cast, but some are beaten out. All are of copper alloy.

1947 Fig 68 SF LWC 3517(C), K239. ?Garden soil. Period 4? or post-Roman? Most of the shaft is missing. Bent (drawn straight). Length 106.0 mm . Cast. Waisted leaf-shaped blade with double edge. The shaft has four ridges running along its length. Similar to Wheeler 1930, pl 37, 1.

1948 Fig 68 SF BKC 2305(C), G246 F61. Clay- and timber-lined pit. Period 5b. Bent. Length 128.5 mm . Cast. Leaf-shaped blade with double edge. The shaft tapers slightly and is octagonal in section. At the top of the shaft is a short
projecting tang, the underside of which has a groove between two transverse mouldings at the tip. The spatula could have had a bone handle (though the tang is rather short for this) or was more likely a folding instrument with a metal handle (cf Milne 1970, pl 20, 3, 4).

1949 Fig 68 SF BKC 5135(C), V158 F62. Pit. Period 5 (or 6)? Fragment. Most of the shaft and the tip of the blade are missing. Length 67.5 mm . A crude spatula, with a beaten blade.

1950 Fig 68 SF CGC5, 37 F6a. Pit. Roman; no earlier than the late 2nd century. The tip of the shaft is missing. Bent. Length 100.5 mm . The lozenge-shaped blade is very small. The instrument seems to have been cut from a sheet of copper alloy and the shaft formed by folding the edges of the cut piece upwards and inwards. This piece may more correctly belong with the spoons.

OCULIST'S STAMPS (Fig69; 1951-1953) Mark Hassall has provided the following report: Recent excavations in Colchester have produced one certain example of an oculist's stamp and possibly two others. ${ }^{\text {a }}$

1951 Fig 69 SF BKC 3321, J194 F13. Large pit. Period 5b. Green slate oculist's stamp, 31.0 by 20.0 mm square, 2.5 mm thick. ${ }^{5}$ One of the longer sides has been inscribed (a) and on the corresponding side a similar text (b) has been lightly scratched as if to mark out the letters for a second stamp. The presence of an $M$ at both ends of (b) suggests that the writer had originally forgotten to write retrograde, and the die may not have been cut for this reason. Both texts are retrograde with the exception in (a) of the letter L: (a)


Fig 68 Spatulas (1:1)

MARTIALCROC Martial(is) croc/odes), "Martialis' saffron salve" ${ }^{\text { }}$; (b) MARIIAIAM
1952 Fig 69 SF BUC 290, B502 L1. Post-Roman topsoil. Oblong stamp ${ }^{7}$ of green slate with handle fashioned in the form of two lobes, measuring overall 23.0 by 16.0 by 22.0 mm Besides the main die (a), there is a second stamp (b) on the top of one of the lobes. The first of the stamps but not the second has been cut retrograde: (a) PCLPR, perhaps P(ublius) Cl(audius) $\operatorname{Pr}$ (imus); (b) P

1953 Fig 69 SF LWC 1529, G44 F28. Pit. Period 4. Oblong block" of green slate, 35.0 by 9.0 by 5.0 mm . The back is rough as if it had been detached from the face of a larger piece of stone, perhaps originally 35.0 mm square, like an oculist's stamp. The inscription, of which three or four letters are missing at the beginning, is somewhat crudely cut. It can be read either forwards or retrograde: ...]ID.conceivably for LEPID, lepis, -idos, copper scale', (= copper oxide)'.

There is an extensive bibliography on Roman oculists and their stamps. Fundamental is the collection of stamps published by E Espérandieu in CIL 13 3.2, 559-610. This includes not only stamps found in Gaul and the Rhineland (the area covered by CIL 13) but also those found in Britain, as well as the few discovered elsewhere, in all about 230. Indexes of the names of the doctors, medicines and ailments listed on the stamps are provided. In 1927 Espérandieu produced a supplement of seventeen new stamps (also indexed) in Revue Archéologique, ser 5, 26 (1927), 158-69. Discoveries, about 30 so far, since 1927 are reported in L'Année Epigraphique, until 1963 published as part of Revue Archéologique and

## Notes

1 Valuable collections of surgical instruments have been recovered from the sites of military hospitals at Baden, Vindonissa and Inchtuthil (Milne 1970).
2 Several of these instruments could also have been used in veterinary surgery.
3 To these three may be added two further examples found previously, the first certainly from Colchester and the other probably so, since, though unprovenanced, it belonged to a Colcestrian. 1) CIL 7, no $1311=$ CIL 13, no 10021.103, the stamp of $Q$. Julius Murranus for impressing melinum ad claritatem, a salve, probably made from oil made from quince seed, for clearness of vision, and stactum opobalsamat(um) ad cal(iginem), a salve mixed with the resinous juice of the (opo)balsam tree (balm of Gilead) for blurred vision. 2) Ephemeris Epigraphica 9 (1913), 670, no $1338=$ CIL 13, no 10021.198, the stamp of L. Ulpius Deciminus for stamping penicille, a variety of medicament perhaps applied with a sponge (penicillum), and dialepidos crocod(es) ad omnia vitia, a salve of (copper) scale (= copper oxide) and saffron for all illnesses. For a lengthy discussion of the precise meaning of


Fig 69 Oculist's stamps (1:1 J
thereafter only available as a separate publication. See the combined index produced every ten years under section 5, cachet d'oculiste. Two important recent discussions are Nielsen 1974 and Nutton 1972.
penicille see Nielsen 1974, 83-8, and for dialepidos and crocodes see notes 6 and 9 below.
4 Without thin-sectioning or X-ray analysis the exact identification and likely provenance of the slate used to make these stamps are unknown. However, Martyn Owen of the Institute of Geological Sciences, London, considers that a British origin for the slate is unlikely.
5 Originally published in Britannia 7 (1976), 383, no 22.
6 For a discussion of the use of saffron as an opthalmological agent see Nielsen 1974, 40, and compare the second stamp mentioned in note 3 above.
7 Originally published in Britannia 8 (1977), 437, no 52. 1 can find no parallel for the curious shape of this stamp
8 Originally published in Britannia 8 (1977), 437, no 53.
9 The word lepis is borrowed from the Greek. See Nielsen 1974, 42-3 for the use of copper oxide as an opthalmological agent, and for an example of dialepidos, the lotion made from it (and in this case saffron), see the second stamp mentioned in note 3 above.

## CATEGORY 3: OBJECTS USED IN THE MANUFACTURE OR WORKING OF TEXTILES

## NEEDLES

## SEWING NEEDLES

The width of the head of most bone and copper-alloy needles seems to imply that they were used only for sewing very coarse cloth. However, several of the catalogued examples were used on hessian with seven warp threads to each 10.0 mm and it was apparent that even a needle with a maximum diameter of 6.0 mm does not leave large holes in the material. Pushing through each new stitch has the effect of closing up the threads around the preceding stitch. Spatulate-headed needles caused less displacement of the threads than round ones. Clearly, though, it would be advisable always to select the thinnest possible needle (eg Fig 70, 1993) when sewing finer materials, and to use a thread of approximately the same diameter as those from which the cloth was woven. Only needles with complete eyes have been catalogued, except where the type can be distinguished and the context is of importance with regard to dating the type.

Type 1 (Fig 70; 1954-1975). Needles with a pointed head. Type 1 is only found in bone, and is the counterpart of bone hairpin Types 1 and 2, being a simple tapering shaft with a pointed head. The length of the head varies. Some are quite long, eg Fig 70, 1963. The eyes are either rectangular, circular or figure-of-eight shaped. Circular and figure-of-eight eyes were drilled through the head. In the latter case two perforations were made, either slightly overlapping, or sufficiently close together to enable them to be linked by a rectangular cut panel. Occasionally three overlapping perforations were drilled. The circular eye of Fig 70, 1959, is slightly wider on one side than the other, indicating that the maximum width of the drill bit did not pass completely through the shaft. Rectangular eyes could be made with either a knife or a fine chisel. They vary considerably in the degree of finish achieved. Most were worked obliquely inwards from both faces and the sides of the eye are consequently bevelled. The bevels are usually more pronounced to the top and bottom of the eye. Type 1 needles parallel bone hairpin Types 1 and 2 not only in style but also in date. One catalogued example, 1969, derives from a 2 ndcentury context. The total number recovered is insufficient to enable a terminal date to be postulated for the type, which also turns up in 3rd- and 4thcentury, and post-Roman, contexts. Some examples are dyed green, another parallel with early bone hairpins (see pp 20-1).

## a) rectangular eye

1954 Fig 70 SF LWC 3171, P2. Surface clearing. Unstratified. The point is missing. Length 50.0 mm . Dyed green. Maximum width 5.5 mm .

1956 Fig 70 SF BKC 4786, T74 F19. Postpit. Period 5b. The point is missing. Length 64.5 mm . Maximum width 5.0 mm .
b) round eye

1959 Fig 70 SF BKC 2906, J7 L1. Site clearance. Complete Length 74.0 mm . Maximum width 4.5 mm . Dyed green.
c) figure-of-eight eye

1963 Fig 70 SF LWC 922, B471 F166. Pit. Period 5. Complete. Length 124.5 mm . Maximum width 4.5 mm .
1974 Fig 70 SF IRA 2, 2 F2. Pit. Probably 2nd century. Complete, slightly bent. Length 112.0 mm . Maximum width 4.0 mm . The two holes for the eye were not lined up correctly.
1975 Fig 70 SF BUC 658, C1312 L1. Period 2. The point and the top of the head are missing. Length 94.0 mm . Maximum width 4.5 mm . The needle had two eyes, the lower one a figure-of-eight, the upper either a single circle or a figure-ofeight.

Type 2 (Fig 70; 1976-1990). Needles with a flat spatulate head. This type is found in both bone and copper alloy. The copper-alloy examples all have a rectangular eye and were probably cast. The bone examples have either a rectangular or a figure-ofeight eye. One is dyed green which indicates a 1 st-or 2nd-century date for the type. All but one of the needles that can be allocated to this type derive from 3 rd- and 4th-century contexts. Only 1979 is definitely Type 2 and from a 2nd-century context. Three others, 1987, 1988, and 1990, all copperalloy and therefore presumably not Type 1 and lacking the groove below the eye of Type 3, derive from late 1 st-century contexts, and a fourth, 1989, comes from 2nd-century rampart material at Lion Walk. A bone spatulate-headed needle from Verulamium (St Albans, Hertfordshire) was found in a context dated 155/160 (Waugh and Goodburn 1972, fig 55, 198). It therefore seems apparent that copper-alloy Type 2 needles were in production in the 1st century, but the evidence is lacking to confirm that bone examples of the type were produced before the 2nd century. In view of the high number of both bone and copperalloy Type 2 needles deriving from late Roman contexts, it seems likely that the type was current throughout the Roman period.
a) rectangular eye

1976 Fig 70 SF LWC 3773(C), K507 F287. Gully. Period 3? Copper-alloy. In three fragments. Length 149.0 mm . Maximum width 9.5 mm . There are two slight incised grooves both above and below the eye (Neal and Butcher 1974, fig 64, 228).
1977 Fig 70 SF BKC 5161(C), V224 L22. Dump. Late Period 5.


$\qquad$
1996
1 cm
1993 cm

Fig 70 Needles (1:1)

Copper-alloy. Complete. Bent. Length approximately 106.5 mm . Maximum width 4.0 mm .

1982 Fig 70 SF BKC 4421 (C), N437 F122. Clay-lined pit. Period 5b2. Bone. Complete. Length 116.0 mm . Maximum width 5.0 mm .
b) figure-of-eight eye

1986 Fig 70 SF BKC 3160(C), J100 F18. Slot. Period 5b. Bone. The point is missing. Length 59.0 mm . Maximum width 4.0 mm .

Type 3 (Fig 70; 1991-1995). Needles with a groove above and below the eye. All Type 3 needles are of copper alloy, and are thinner, resembling modern needles more closely, than both the preceding types. Only five examples are catalogued here, but all derive from 3rd- and 4th-century contexts, and a late Roman date for the type agrees with evidence from other sites (eg ibid, fig 64, 230, 231). Similar needles have been found in post-Roman contexts on sites in Colchester and not all may necessarily be residual, as the type seems to recur in the post-medieval period. There is no apparent use for the groove below the eye. It probably marked the line on which the eye should be made. Above the eye the groove could possibly serve to carry the thread so that the maximum thickness of the head was not increased. At least three of the five examples have had the eye cut through when cold. Only one (Fig 70, 1993) appears to have had the eye cast in the mould.

1991 Fig 70 SF LWC 1153(C), B634 F225. Pit. Period5. Complete Length 75.5 mm . Maximum width 3.0 mm . There are marked striations along the groove, probably tool marks from cutting the groove and eye.
1993 Fig 70 SF BKC 4379(C), N372 F111. Pit. Period 5b1 Complete. Length 99.5 mm . Maximum width 1.5 mm . The eye was probably cast in the mould.

## NETTING NEEDLE (Fig 70, 1996)

The standard form of netting needle has a pair of forked prongs at each end of the shaft. The pairs are set at right angles to each other. J P Wild (1970a, 73) puts forward the hypothesis that in the Roman period netting needles were used for band-weaving rather than netting.
1996 Fig 70 SF BKC 4167, N105. Period 5 or 6. Copper-alloy. One pair of prongs is missing as well as the tip of one point of the other pair. Length 125.5 mm .

## SPINDLEWHORLS (Fig 71; 1997-2005)

No spindles were found, and only a few spindlewhorls have been identified. All but one are made from sherds of coarse pottery. Many pierced pottery roundels were recovered, but only eight are considered to be spindlewhorls. The function of the remainder (2463-2482) is discussed on p 94. Four criteria were applied to the pierced roundels to determine which, if any, might have been used as spindlewhorls. First, that the perforation should be a minimum of 5.0 mm in diameter to enable a spindle to be inserted (ibid, 32). Second, that the diameter and thickness should be even and the sides smooth; and third, that the perforation should be central. These last two factors govern the stability of the rotation of the spindle, and thereby the quality of the thread produced. Fourth, that the whorl should be no larger
than 50.0 mm in diameter (ibid, 33 ; but see Fig 71 , 2003). Pieces $f$ ulf illing the first three criteria but of an impracticable diameter were thus extracted. It is unfortunately possible that the application of these somewhat arbitrary standards has resulted in failure to identify some whorls.
1997 Fig 71 SF LWC 424, B145. Cellar (F70) backfill, contaminated. Period $5+$. The diameter is slightly uneven, 34.0 by 35.0 mm , but the sides are very smooth and the perforation well worn. Slightly chipped. Diameter of perforation 5.0 mm . Upper surface slightly convex, maximum thickness 6.5 mm . Black burnished ware. 2ndcentury or later.

2001 Fig 71 SF BKC 1653, D301 (F20). Tile scatter in town ditch. Anglo-Saxon. Damaged. Diameter 38.0 mm , thickness 10.0 mm . Made from the base of a colour-coat beaker. The internal face of the base has been ground flat so that all traces of slip have been removed. The sides of the whorl have been rubbed in places. The perforation is well worn, diameter 7.0 mm . 3rd-to 4th-century.
2002 Fig 71 SF BKC 2680(C), H14 L2. Topsoil. Post-Roman. Shale. Slightly damaged and laminated. Diameter 38.5 mm , thickness 14.5 mm . Biconical in section, with a narrow groove on each flat face approximately 6.0 mm from the perforation, which is 7.0 mm in diameter. This object would have been produced on a lathe, and the centre marks removed by the drilling of the perforation. Usually dated to the late 3rd century (Lawson 1976, 272).
2003 Fig 71 SF MID 562, B2089 F685. Pit. Post-medieval to modern. Fragment. Diameter approximately 58.0 mm , thickness 9.5 mm . The perforation is well worn, diameter 8.5 mm . Black burnished ware. 2nd-century or later.

2005 Fig 71 SF COC 151, 722 L196. Floor. Period 3. Slightly damaged. Diameter 37.5 mm , thickness 7.0 mm . The sides are very smooth and rounded. One part of the face is very smooth, possibly from constant handling at that spot. The perforation is only slightly worn, diameter 5.0 mm . Grey ware. Roman.


Fig 71 Spindlewhorls (1:2)

WEAVING TABLETS (Fig72; 2006-2007)
Triangular or rectangular bone or bronze tablets pierced at each corner were used in the weaving of braid. A warp thread was passed through each hole and fixed in a frame. The number of tablets used
depended on the width of material required. A gazeteer of tablets and a full description of their use is given in Wild 1970a, 73-4, 140-1.
2006 Fig 72 SF LWC 1010, C332. Make-up. Period 4. Bone. Triangular weaving tablet. Two corners have been broken off. Length 35.0 mm , thickness 1.5 mm . The edges of the surviving perforation are very irregular where the movement of threads has worn away the bone.



Fig 72 Weaving tablet (1:1)

The paucity of items of furniture that have survived from the Roman period in Britain makes the allocation of objects to this category difficult. Also, a conflict inevitably occurs between the identification of fragments of furniture as opposed to fragments of buildings. To avoid confusion, all hinges, keys and locks have been placed in Category 11, fasteners and fittings, except in cases where they clearly belong to items of furniture, such as the fittings from the Butt Road boxes and small ring-keys. However, some pieces described as being from furniture could perhaps more correctly belong to other groups within this category, such as iron handles, which may derive not from chests or cupboards but from buckets or kettles. Decisions as to the contents of this category are therefore unfortunately subjective to a considerable extent.

## SPOONS

Only metal spoons were recovered. The absence of round-bowled bone spoons from the sites excavated 1971-79 must be purely fortuitous since bone spoons have been recovered from sites excavated since 1979. The bowls of metal spoons come in three shapes, round, pear-shaped and mandolin-shaped. All spoons are of copper alloy unless otherwise stated.

Type 1 (Fig 73; 2008-2011). Spoons with a round bowl. This type dates from the second half of the 1st and the 2nd century (Wilson 1968, 101; and see Crummy forthcoming on a workshop in Winchester, Hampshire producing round-bowled bone spoons). Martial describes these spoons as used to eat eggs, with the pointed handle serving to extract shellfish or snails from their shells (Epigrams 16, 121).
2008 Fig 73 SF BKC 4742(C), T472. Period 2 or 3? The bowl is damaged and the tip of the handle is missing. Length 75.5 mm , diameter of bowl 22.5 mm . Copper-alloy with white metal plating. The junction of bowl and handle is marked on the underside by two opposed triangles. The one on the bowl is in relief, that on the handle sunken.

Type 2 (Fig 73; 2012-2015). Spoons with pearshaped bowls. This type appears to have been in production by the first half of the 2 nd century (Waugh and Goodburn 1972, 124).
2012 Fig 73 SF LWC 528(C), B199. Uncertain. Probably Roman. The handle is missing. Length of bowl 41.0 mm , maximum diameter 22.5 mm .
2014 Fig 73 SF BKC 5038(C), V91 L11. Dump. Late Period 5. Silver. Complete. The bowl is dented. Length 134.5 mm , maximum diameter of bowl 23.5 mm . The handle is offset from the bowl.

Type 3 (Fig 73; 2016-2019). Spoons with a mandolin-shaped bowl. This type is often made in two pieces, with bowl and handle connected by a
tenon (Wilson 1968, 101). None of our examples appears to be of this construction. The type was probably produced throughout most of the Roman period.
2016 Fig 73 SF BKC 2160(C), G49 L11. Timber-lined drain. Period 5c. A very corroded example. In fragments. Length 143.0 mm , maximum diameter of bowl 28.0 mm . The handle is offset from the bowl.
2018 Fig 73 SF BKC 5471(C), V867. Modern. The handle is missing. Length 47.0 mm , maximum diameter 29.5 mm . Copper-alloy with white-metal plating.
2019 Fig 73 SF BKC 5496(C), V924 L16. Cultivated soil. Late Period 5, possibly earlier. The handle is missing. Length 36.5 mm , maximum diameter 19.0 mm .

## Folding spoon (Fig 73; 2020)

2020 Fig 73 SF MID 17(C), A80 L4. Topsoil. 4th century or later. The handle of a folding spoon in the shape of a crested dolphin. This handle can be dated to the late 3 rd or 4 th century by comparison with Robertson 1970, fig 9, 4.

## OBJECTS USED IN THE PREPARATION OR SERVING OF FOOD

Shale trays (Fig 74; 2021-2023). Fragments of three rectangular trays have been found. Both rectangular and circular trays are known (Biddle 1967, 248-50; Lawson 1976, 263-5) and are usually dated to the late 1st or early 2nd century (Biddle 1967, 248). The Colchester examples fit happily into this date range. Rectangular trays appear to have been made in two sizes, 12 by 10 in ( 305 by 255 mm ) and $20 \times 16$ in ( 508 by 406 mm ). It has not been possible to estimate the sizes of the trays from which our examples derive. There is some likelihood of these trays being used as trenchers on which the food was cut (ibid, 249).
2021 Fig 74 SF BKC 1384(C), E345 L69. Oyster layer. Period 3b or 4. Edge fragment of a rectangular tray. The undersurface has broken off and the exact original thickness is uncertain. Maximum length 75.0 mm , present thickness 7.0 mm . The edge is vertical with a broad bevel towards the upper surface. There is a border design of three parallel groups of three grooves.
2022 Fig 74 SF BKC 5961, K663 F129. A ?gully, discounted as a feature. Period 5. Fragment of a rectangular tray, probably from near the edge. The piece is very distorted and the undersurface has broken off. Maximum length 60.0 mm . The upper face is decorated with a design of two parallel sets of three grooves, the area between the two is filled with an incised herring-bone pattern. Depending from the innermost groove are contiguous semicircles of four concentric grooves round a central dot. The two dots on this fragment cut the innermost groove and indicate that the semicircles were produced by a compass-like incising tool set on the groove as a base line.
2023 Fig 74 SF BUC 585(C), C113 F50. Ditch. Period 1. Edge fragments of a rectangular tray, severely laminated. Maximum length 67.5 mm , probable original thickness 10.0 mm , tapering slightly towards the edge. Decorated with a border similar to that on the rectangular tray(s) from Silchester, Hampshire (Lawson 1976, fig 11), with two parallel sets of three grooves enclosing a line of overlapping

semicircles of two concentric grooves round a central dot on the inmost groove of the outer set. The dots on this fragment are not as deeply impressed as those on 2022, but were clearly made after the groove.

Shale vessels (Fig 75; 2024-2028). Five fragments of shale vessels have been found, of which only one is sufficiently well-preserved to enable the diameter of the vessel to be estimated.
2024 Fig 75 SF LWC 4221(C), J1635 F571. Slot. Period 4a. Badly split and distorted rim sherd from a ?bowl. The outer face is bevelled up to the top of the rim. The sherd is 59.0 mm high, 6.0 mm thick. There are faint traces of shallow grooves on the outer face. These are probably tool marks rather than decoration.
2027 Fig 75 SF BKC 4102(C), J445 F281. Pit. Periods 3/4/5a? Distorted rim sherd of a large shale platter (or tray), with a simple rounded rim on a low wall ( 6.0 mm internally). The base is splitting, but appears to thicken towards the centre of the platter. Maximum diameter approximately 46.0 mm .

2028 Fig 75 SF BUC 137(C), A580 F152. Ditch. Period 1. Sherd from a shale bowl. Thickness 5.0 mm .

## Copper-alloy vessels (Fig 76; 2029-2051)

2029 Fig 76 SF LWC 1246(C), B411 F147. Pit with burnt edges. Period 5. Fragments of the upper section of a colander with a simple lip. The thin wall is perforated with small punched dots arranged in a continuous swastika design surmounted by two horizontal rows of holes. The vessel has broken up along the lines of holes. See Szabó 1980, fig 47.4 for a more complete colander with simpler punched design. Surviving height 58.5 mm . Diameter 150.5 mm .
2030 Fig 76 SF LWC 3266(C), J985. Demolition levelling debris. Period 2 demolition. Distorted rim sherd from a ?bowl. The rim is folded over to within a millimetre of the wall of the vessel
2031 Fig 76 SF LWC 3415(C), J1174. Gravel courtyard. Period 2. Rim sherd from a shallow bowl. The vessel is decorated round the rim with a frieze in relief of broad tongue-shaped leaves with raised outer edge and central rib backed by narrow leaves. There is a row of raised dots below the leaves. The simple rim is grooved. Diameter 160.0 mm .
2034 Fig 76 SF BKC 3787(C), K605 L142. Dump. Period 4c. Rim sherd from a large bowl. The vessel has a thin wall with a thick beaded rim projecting internally. Diameter 280.0 mm .
2035 Fig 76 SF BKC 331 (C), A81 L11. Town ditch (F19) fill. PostRoman. ?Vessel handle in the shape of a swan's head with elaborate grooving round the eyes and over the crown to simulate plumage. The handle seems to have been cast in one with the vessel, probably a bowl. A fragment of grooved thin vessel wall is attached to the handle. Length 52.0 mm . (Possibly not from a vessel, see 2037.)
2036 Fig 76 SF BKC 3012(C), J35 L4. Dump. Period 5b. Swan's head handle with eyes, nostrils, serrated beak and rudimentary 'ears'. The head rises from a three-petalled 'flower' which runs down to a rectangular section shank. The handle seems to have been fitted to the vessel by inserting the shank into a socket and soldering it in position. Length 53.0 mm .
2037 Fig 76 SF BKC 3084(C), J69 L1. Site clearance. Corroded swan's head handle. Traces of the eyes and serrated beak are visible. Possibly not from a vessel but from a cart fitting (Fig 109, 2545; Webster 1958, fig 3, 37). The fragment of wall attached to the ?handle is much thicker than that of 2035. Length 49.5 mm .

2039 Fig 76 SF BKC 1698(C), E934 L271. Charcoal-rich layer associated with metal-working. Period 1 b . Corroded handle from a shallow bowl. Similar handles were found in Period 6 contexts at Sheepen (Hawkes and Hull 1947, 332) and in an early to mid 2nd-century grave at Bingen (Como 1925, Abb 1, 1-6). See Fig 76, 2044 for the method of attachment. Length 70.5 mm .

2040 Fig 76 SF BKC 2187, G1. Site cleaning. Unstratified. Escutcheon from a large kettle or bucket (Waugh and Goodburn 1972, fig 41, 132; ORL 8, 93, fig 13). The kettle


2021


Fig 74 Shale tray fragments (1:2)


Fig 75 Sherds from shale vessels (7:2)

handle would pass through the hole. The escutcheon was soldered to the vessel by the large triangular fish-tailed plate. Similar escutcheons are found on modern jam kettles, and it is possible that this object is post-Roman.
2043 Fig 76 SF BKC4101 (C), N17. Period 6. Corroded handle from a skillet. Length 114.5 mm . Rectangular in section, with chamfered upper edges on the stem of the handle.
2044 Fig 76 SF BKC 4847(C), T508 F185. Pit. Period 1. Handle from a shallow bowl (as 2039 and 2042). Length 106.5 mm .

2045 Fig 76 SF CPS 912(C), 1023. Surface of pit F106. Period 5 or 6. Jug handle. Length 112.0 mm . The handle would have been soldered to the vessel along the rim and on the side. The rim attachment has decorative mouldings and the junction of the tongue-shaped base plate and the handle grip is marked by two horizontal grooves. Possibly postRoman.
2046 Fig 76 SF COC 191, 901 L226. Dump. Period 2. Handle from a large bowl. Length 150.5 mm . It would have been soldered to the vessel by the curved end-plates. The central section of the handle has heavy mouldings. Similar to other handles from 1st-century military sites (Webster 1958, fig 3, 11).
2047 Fig 76 SF LWC 831(C), B371. Period 5 or later? Leaf-shaped jug lid with traces of white-metal plating. Length 50.0 mm . The hinged attachment is broken. As Ritterling 1913, Taf 14, 45.

2048 Fig 76 SF LWC 1016(C), C356. Cultivated soil. Period 2?, 3a?, or 3 b ? Trefoil-shaped convex jug lid with a single perforation. Length 47.0 mm . The lug of the hinge isbroken. As Hawkes and Hull 1947, pl 99, 12.

2049 Fig 76 SF BKC 3559(C), K412 L71. Ditch (F125) fill. Period 4a. Corroded trefoil-shaped convex jug lid. Length 65.0 mm . There is a stout projection in the centre, probably to help in lifting the lid. The pierced lug for the hinge is complete.
2051 Fig 76 SF BKC 4500 (C), T2 L2. Destruction debris of Period 3. Period 3 (end). A hollow pelta-shaped mount with a central groove. Length 37.0 mm , height 8.5 mm . Possibly a foot from a bowl. Similar to Penn 1958, fig 15,1 which is described as a possible scabbard fitting.


Fig 77 Gridiron (1:3)

Gridiron (Fig 77; 2052)
2052 Fig 77 SF LWC 1101(C), C491 F235. Pit. Period 1. Iron gridiron usually used over an open fire, though it could be put in an oven. See Curie 1911, 274, pl 53, 2; Piggott 1953, fig 10, C71.

## Pewter vessel

2053 Not illustrated; in microfiche catalogue.

## Quernstones (Fig 78; 2054-2081)

 by D G Buckley and $H$ MajorRoman querns from three sites were examined. The original dimensions, where ascertainable, given for each rotary quern are as follows: upper-stones, diameter/maximum thickness at rim; lower-stones, diameter/thickness at rim/ thickness at centre. These measurements are given on the basis that the proportion of thickness to diameter may have a certain chronological significance. This may become more useful as our knowledge of querns increases. The maximum thickness at the rim is given, for this must be closest to the original thickness before wear took place. Often only the maximum thickness of a fragment can be given. The unillustrated fragments are also described here.

2054 Fig 78 SF LWC 978, A100. Post-medieval or later. Lava upper-stone fragment, $456.0 / 66.0 \mathrm{~mm}$. Roman form with radial grooving on the grinding surface, raised lip around the edge on the upper surface which has bi-directional grooving.

2056 SF LWC 3274, J981. Make-up. Period 3. Lava, Iower-stone fragment, $-/ 60.0 \mathrm{~mm} /$-. Radial grooving on the grinding surface, vertical grooving on the edge.
2056 SF LWC 3298, J992 F315. Timber-lined and burnt drain Period 2. Lava, upper-stone fragment. Upper surface grooved.

2057 Fig 78 SF LWC 3299, J1013. Make-up with a little occupation over. Period 3. Lava, upper-stone fragment, 170.0 mm . Roman, as Röder Type 4 (Crawford and Röder 1955, fig 1), the stone tapering towards the middle, raised lip around the edge oh the upper surface, and handle hole through the kerb.
2058 SF LWC 3369, J1038 F315. Timber-lined and burnt drain. Period 2. Lava, lower-stone fragment, -/50.0/up to 58.0 mm . Grinding surface grooved, vertical grooving on edge, well worn.

2059 SF LWC 3534, J1086. Make-up (redeposited from earlier levels?). Period 4. Lava, two joining upper-stone fragments. Very worn, but with traces of grooving on the outside edge.
2060 Fig 78 SF LWC 3401, J1105 F366. Pit. Period 4. Lava, upperstone fragment, $413.0 / 55.0 \mathrm{~mm}$. Roman form with raised lip around the edge of the upper surface which has parallel grooving.
2061 Fig 78 SF LWC 3508, J1343 F465 Pit. Period 4? Lava, lower-stone fragment, $400.0 / 30.0 / 30.0 \mathrm{~mm}$. Very worn, traces of grooving on grinding surface and vertical grooving on the edge.

2062 Fig 78 SF LWC 3973, J1697 F495. Pit. Period 1. Lava, upper stone, $480.0 / 68.0 \mathrm{~mm}$. Roman form with raised lip around the edge of the upper surface which has bi-directional parallel grooving.
2063 SF BKC 5817, A152 L4. Topsoil and town ditch (F19) fill. Post-Roman. Lava, lower-stone fragment, $-/ 20.0 \mathrm{~mm} /-$. Traces of radial grooving.
2064 SF BKC 5818, E183 F65+. Period 6 or post-Roman. Lava, ?upper-stone fragment, about $370.0 / 60.0 \mathrm{~mm}$. Very worn, traces of radial grooving on the grinding surface, vertical grooving around the edge.

2065 SF BKC 1939, E1142 F326. Pipe trench. Period 2. Lava, ?lower-stone fragment, maximum thickness 50.0 mm . Traces of grooving.


2066 SF BKC 1940, El 181 (F158). Collapse. Periods 2-4. Lava, two joining lower-stone fragments, maximum thickness 60.0 mm . Grinding surface has bi-directional grooving, not very worn.
0067 SF BKC 5815, J151 L1. Site clearance. Lava, upper-stone fragment, $-/ 35.0 \mathrm{~mm}$. Faint traces of bi-directional grooving on the upper surface and radial grooving on the grinding surface.
2068 SF BKC 5820, K73 L4. Modern. Lava, upper-stone fragment. Sub-radial grooving on the grinding surface, top surface flat.
2069 SF BKC 5814, N277 F87. Pit. Period 6+. Lava, fragment. One pecked surface.
2070 SF BKC 5819, T496. Period 1 (and 2a). Lava, twojoining and one other upper-stone fragments, $-/ 50.0 \mathrm{~mm}$. Traces of bidirectional grooving on the grinding surface and a very eroded raised lip on the upper edge, tapering towards the middle.
2071 Fig 78 SF BKC 5813, V71. Unstratified. Puddingstone, upper-stone fragment. Diameter 354.0 mm , centre thickness 105.0 mm . Grinding surface slightly concave, band (probably for an iron hoop) above the rim, and possible trace of a handle hole.
2072 SF BKC 6063, V71. Unstratified. Lava, ?upper-stone fragment, $400.0 / 80.0 \mathrm{~mm}$. Traces of grooving on one surface and vertical grooving on the edge.
2073 SF BKC 5816, V701. Unstratified. Lava, three fragments. Two joining pieces are probably reworked, maximum thickness 90.0 mm . The third piece is very eroded with a trace of a kerb, maximum thickness 45.0 mm .

2074 Fig 78 SF BKC 5823, V701. Unstratified. Lava, lower-stone, $-/ 104.0 \mathrm{~mm} /-$. Very thick. No trace of grooving, rough undersurface and an hour-glass-shaped hole.
2075 Fig 78 SF BKC 6055, V772 L93. Charcoal and daub. Period 2. Puddingstone upper-stone fragment. Diameter about 350.0 mm , centre thickness 110.0 mm . Band above the rim (see 2071).
2076 Fig 78 SF BKC 6038, V1029 L94. Sand floor. Period 4 or earlier. Lava, upper-stone fragment, $-/ 110.0 \mathrm{~mm}$. Grinding surface smooth, sub-radial grooving on the top surface, vertical grooving on the edge, and raised lip on the upper edge.
2077 SF BKC 5822, V1262. Unstratified. Periods 2 to 6? Lava, two fragments: a) ?lower-stone, maximum thickness 100.0 mm . Appears to have been squared off for re-use; b) ?upperstone, maximum thickness 100.0 mm .
2078 SF BKC 6037, V1290 L163. Make-up. Period 2 or 3. Lava, upper-stone fragment, $-/ 70.0 \mathrm{~mm}$. Remains of a hopper hole of about 80.0 mm diameter, smooth grinding surface, bi-directional tooling on the top surface.

2079 SF BUC 1 592, H456 L8. Period 2. Lava, possibly a fragment of reused quernstone.
2080 SF BUC 1617, H617 L20. Period 2. Lava, upper-stone fragment, maximum thickness 32.0 mm . Grooved on both faces.
2081 SF BUC 1715, H714 L30. Period 2. Lava, two non-joining quern fragments: a) maximum thickness 23.0 mm , grinding surface smooth; b) maximum thickness 25.0 mm , grinding surface has traces of grooving.

The typology, distribution, and economic and social implications of British querns have attracted little detailed study since the pioneer articles of Curwen (1937; 1941). This arises in part from a lack of adequate information. Although museums contain large numbers of querns the majority are unprovenanced, excavated examples rarely come from well stratified contexts, while poor recording and publication hampers interpretation. The querns from three Colchester sites reported here afford little opportunity for testing the validity of accepted theories about querns but they are a useful addition to the corpus of published information.

With the exception of two puddingstone querns all the stones are lava rotary querns. The majority of lava mills in Britain is generally believed to be from the Mayen quarries of the Eifel Hills of Germany (for the background to these quarries see Hörter et al 1951; Crawford and Röder 1955; Röder 1972) although the possibility of a trade in querns of Volvic lava from the Auvergne region of France has also been discussed (Röder 1953; Peacock 1980). The Mayen quarries have a long history beginning with the production and trading of saddle-querns during the Neolithic period, changing to circular rotary querns during the late La Tène period. During the Roman period there was a considerable trade with Britain and other provinces. This trade apparently ceased with the early AngloSaxon period, but was well established again by the middle to late Anglo-Saxon period (Parkhouse 1977) and continued throughout the Middle Ages.

The majority of fragments of lava querns are too small to provide sufficient data for a meaningful discussion of size and type. Collectively the querns from early and later Roman contexts conform to Roman forms as illustrated by Röder (Crawford and Röder 1955, fig 1, $4,5,6)$. Lower stones are concave below and convex and smoother above; upper stones are concave below and flat above with a raised rim around the edge to hold back the grains of corn. Apart from the underneath of the lower stone, surfaces are usually grooved, although a number have smooth grinding surfaces. These may never have been grooved or have lost the grooves through wear. The striations on the grinding surface were functional, but decorative grooving also occurs on the top of the upper stone and vertically around the edges of both upper and lower stones. Few upper fragments retain any trace of the hopper or handle socket with the exception of 2057 (Fig 78) which has a handle hole through the kerb comparable to Röder's Type 4 (ibid, fig 1). Röder claimed this as a feature of an oscillating rather than totally rotating form, but following experiments this has been disputed (Brown and Chapman forthcoming).

A case has been made (ibid) for a regular trade, perhaps centred on London, of two basic models of lava quern, identifiable by diameter and method of fixing the rynd, which were imported in an unfinished state to be dressed and finished in workshops in this country. It has also been suggested (Mcllwain 1980, 132) that the presence of lava querns on many military sites raises the possibility that they were brought to this country specifically for, or by, the army. The predominance of lava querns from Roman Colchester, particularly over Hertfordshire puddingstone querns which have come from so many Roman sites throughout East Anglia, can be interpreted as a reflection of the extent to which Colchester must have shared in this continental trade. That this trade started early, possibly as a result of Colchester's military connections, is indicated by a number of quern fragments from Period 1 and 2 contexts including 2062 from a military context and 2070 from a pre-Boudican layer. Research being
undertaken (by Buckley and Major) shows that many Essex Roman settlements have produced lava querns. It is quite likely that many of these were marketed through Colchester as an established part of civil trade, but at this time it is not possible to comment on how this may have affected existing trade in native puddingstone querns or how long this lava quern trade persisted. Peacock (1980, 50) considers that it was most common in the 1 st and 2 nd centuries, as only three examples have been securely dated to the later Roman period. The extent to which the Colchester lava querns from 2nd- to 4th-century contexts represent a continuation of this trade into the later Roman period rather than just residual fragments reused or incorporated into later contexts will only be resolved by further study.
The two puddingstone querns fall within the upper diameter range for these stones, but otherwise are of standard bun-shaped form with slightly concave grinding surface to the upper stone and a narrow hopper. Rather than a horizontal handle slot cut into the upper stone both stones have a band above the rim to hold an iron hoop with a projecting horizontal handle. ${ }^{2}$ A provisional gazetteer of Hertfordshire conglomerate or puddingstone querns has been published (Rudge 1968) showing a distribution principally confined to Norfolk, Suffolk and Essex. Although central to this distribution area, Rudge observed that the Colchester district was notably lacking in puddingstone quern finds. This appears to be borne out by their scarcity from recent excavations in the town. It could reflect the dependence of Roman Colchester from the beginning on imported lava
querns. Curwen considered the puddingstone quern to be derived, at least in part, from the pre-Roman Hunsbury type quern although where datable associations are available they have always been Roman (Curwen 1941,20 ). Rudge $(1963,28)$ believed that there was strong evidence that production had ceased within 100 years of the start of the Roman occupation. However, well stratified puddingstone querns are rare which makes 2075 (Fig 78), securely dated to Period 2 predating the destruction of 60/1, particularly useful as an early form. Even though puddingstone querns are of a fairly standard form variations do exist. Whether this is a chronological variation or whether it represents the products of different workshops, rather than of a single firm as postulated by Curwen (1941, 20), may only be established as a typology based upon stratified examples is compiled.

Stone mortars (Fig 79; 2082-2085)
2082 Fig 79 SF LWC 3300, J970. Building debris. Period 2 demolition. Carrara marble. Fragment of the rim with a grooved pouring lug. The vessel was dished. Internal diameter at the rim 169.0 mm .
2083 Fig 79 SF BKC 5323, N637. Period 6 or later. Stone unidentified. A complete profile from a straight-walled ?mortarium. No lugs survive. Rim diameter ? 340.0 mm .
2084 Fig 79 SF BKC 5320, T76 F25. Construction trench of cellar. Period 5c. Purbeck marble. Fragment of the rim with a plain lug. Dished. Internal diameter at the rim 148.0 mm .

2085 Fig 79 SF IRD 1. Unstratified. Stone unidentified. Large fragment with complete profile from a dished mortarium with a grooved pouring lug. Internal diameter at the rim 192.0 mm .


Fig 79 Stone mortars and a fragment from a stone vessel (1:3)

Stone vessel? (Fig 79; 2079)
2086 Fig 79 SF BKC 1126, E118 L51. Ditch (F29)fill. Late Period 6 or Anglo-Saxon. Stone unidentified. Fragment of the base of a ? jar.

Stone pestles (Fig 80; 2087-2088)
2087 Fig 80 SF MID 570, B2100 F691. Pit. Post-medieval. A complete worn Purbeck marble elbow-shaped pestle (Dunning 1968, 112). Length 91.5 mm . Possibly postRoman.

2088 Fig 80 SF MID 612, A2237 L273. Demolition debris. Period 3 destruction. A fragment of the long arm of an elbow-shaped pestle. Length 113.5 mm .


Fig 80 Purbeck marble pestles (1:2)

## LAMPS

All the lamps recovered are ceramic. As many more lamp sherds are likely to be recovered during the postexcavation processing of the pottery only the more or less complete, or particularly interesting, examples are published here. Finds of 1st-century moulds and lamps discovered during excavations in advance of the construction of the Telephone Exchange (West Stockwell Street) in 1964 and 1966 (Dunnett 1971, $33-5,37$ note 3 ) indicate the probable site of a lamp factory in the town. Since these finds have yet to be thoroughly examined and published, it is not proposed to consider here in any detail the 1stcentury lamps from recent excavations. The recovery of three 'rosette' lamps from the Butt Road site (Fig 83) suggests the presence in the Colchester area of a 4th-century (or possibly late 3rd-century) lamp factory (pp 79-80).

Picture lamps (Fig 81; 2089-2099). These are all 1st-century in date. Some are imports from the continent, while some are probably locally made, being of fabrics comparable to early Colchester colour-coat ware.
a) with voluted angular nozzle (Loeschcke Type 1) ${ }^{3}$

2089 Fig 81 SF BKC 5300, T97 F35. Postpit. Period 3. A fragment of a Loeschcke Type 1c lamp, with the ends of the volutes forming divergent tangents (the ends of the volutes of Types 1a and 1b form acute and less acute angles respectively). Coarse pinkish-white fabric with (brick-)red slip. Most of the discus is missing and no design can be distinguished. Probably of local manufacture.
b) with voluted rounded nozzle (Loeschcke Type 4)

2090 Fig 81 SF LWC 3550, J1488. Make-up. Period 1 or 2. Most of the lamp survives. In common with Type 1, Type 4 reached Britain with or soon after the conquest, and continued to the end of the 1st century or even into the Trajanic period. Smooth buff fabric with an orange slip. The discus shows an erotic group (Loeschcke 1919, Taf 8, 422). Possibly made locally.
c) nozzle missing, either Loeschcke Type 1 or Type 4 (probably the latter in most cases). All belong to the second half of the 1st century

2091 Fig 81 SF LWC 4285, B710 F260. Pit. Period 4. Fragment. Coarse red fabric, no slip. Probably of local manufacture. The discus fragment, from the left side of the lamp, shows a gladiator in a pose similar to that of the left-hand figure of a pair of gladiators in combat on a lamp from Camulodunum (Hawkes and Hull 1947, pi 44, 14).

2092 Fig 81 SF LWC 4112, J1002 F318. Pit (?sinkage). Period 2 or 1. Fragment from the right-hand side of the lamp. The discus shows an old woman, probably Odysseus disguised (Loeschcke 1919, 367, Taf 7, 84). Smooth buff fabric with an orange slip, fired in places to brown. Probably locally made.
2093 Fig 81 SF LWC 3350, J1035. Uncertain but before Period 4b. fragment; most of the discus survives. The design has been described by Hull as 'Mars defending ?rampart' (Hawkes and Hull 1947, 201) and by Bailey as a 'soldier stepping behind an ?altar' (Bailey 1974, 294). A male figure in a cuirass and military kilt with a Corinthian helmet is leaping to the right. He holds a spear in his right hand and carries a round shield on his left arm A sword hangs at his left side. There is a curved rectangular ?shield, (Hull's ?rampart) on the ground in front of the figure. Coarse buff fabric with traces of an orange slip, in places fired to dark reddish-brown. Probably locally made.

2094 Fig 81 SF LWC 3573, J1490. Occupation. Period 1. Most of the discus survives. The picture is of Minerva standing to the left, with a spear in her right hand and a round shield on her left arm (as Loeschcke 1919, Taf 4, 331; Hawkes and Hull 1947, pl 44, 6). Smooth buff fabric, with a yellowish-brown slip fired in most places to dark brown. From Lyons?
2095 Fig 81 SF LWC 3716, J1650. Dump or occupation. Period 1. Fragment from the centre of a discus with a mask of Bacchus (as Loeschcke 1919, Taf 5, 29). Smooth buff fabric with an orange slip, fired to dark reddish-brown in places. Probably of local manufacture. The upper part of a mould from the Telephone Exchange site of a Loeschcke Type 1b lamp with this mask is in private hands. A complete example from Colchester is in the British Museum (Walters 1914, no 576). ${ }^{\text {. }}$

2096 Fig 81 SF BKC 4734, T471. Period 2? As 2095. Probably of local manufacture. These two small pieces may have been rough counters or toys produced from broken lamps.
2097 Fig 81 SF BKC 5778, V484 L17. Sandy clay floor? Period 1 to early 4. Fragment from the outside edge of a discus, with a design of a mussel (Loeschcke 1919, Taf 14, esp 551). Fine white fabric with an orange slip fired in places to dark reddish-brown. Probably an import.
2098 Fig 81 SF CPS 892, 1001 L177. Period 1 or 2. A fragment with part of the discus and the volutes. The design is of a wreath (ibid, Taf 11, 190, 191). Fine light grey fabric with dark grey slip. Probably locally made.
d) nozzle and discus missing.

2099 Fig 81 SF LWC 3574, J1486 F438. Pit. Period 1. Fragment with a complete profile from shoulder to base. The wide shoulder has ring-and-dot decoration. Possibly from a


Fig 81 Picture lamps (1:2)

Loeschcke Type 4, Type 2, or Type 5 lamp, or possibly a very early Type 8 . Whitish fabric with traces on the base and wall of a pink slip. Probably of local manufacture.

Factory lamps and others (Fig 82; 2100-2106). There is no direct evidence for the production of lamps in the town in the 2nd and 3rd centuries, but the rough factory lamps, $(\mathbf{2 1 0 0}, \mathbf{2 1 0 3}, 2104)$ may be of British manufacture (Donald Bailey, pers comm), and the simple round lamp (2105) and the 4thcentury grey ware lamp (2106) could be local.
2100 Fig 82 SF BKC 4307, N217. Surface clearing. Period 6. The upper part of the handle is missing. The fabric is very coarse, light reddish-brown and micaceous. A Loeschcke Type 10 factory lamp, with open channel.
2101 Fig 82 SF MID 633, A2353 L353. ?Topsoil. 4th-century or later. Fragment of a well made Loeschcke Type 10 lamp, in a smooth light red fabric. Probably of North Italian manufacture.

2102 Fig 82 SF BKC 2312, G263 F61. Clay and timber-lined pit. Period 5b. Four fragments from a large Loeschcke Type 10 lamp in a smooth light red fabric. Only the stamped base is illustrated. The base has a grooved footring and a moulded stamp, VIBIANI, of the Upper Italian potter, Vibianus, who was probably operating in the Hadrianic-Antonine period (Loeschcke 1919, 293-8).

2103 Fig 82 SF BUC 1210, E39 L13. Destruction debris and topsoil. Post-Roman. Most of a Loeschcke Type 9 factory lamp with closed channel. The handle has been broken off and the top damaged. Coarse micaceous reddish-yellow fabric.

2104 Fig 82 SF BUC 1216, E476 L32. Dump. 4th century. A small
complete handled lamp with slight (?vestigial) channel and side lugs. ?Fabric colour. ?Black slip.
2105 Fig 82 SF BKC 2406, G354 F11? Timber-lined drain. Period 5c. A simple round wheel-thrown lamp with a small pinched-out nozzle and solid pedestal base. There is a slight scar opposite the nozzle which may have come from an applied handle, now missing. The fabric is smooth, reddishyellow to light red in places.
2106 Fig 82 SF CPS 538, 613 F119. Robber trench material. Period 5. An unusual lamp, possibly not Roman, though its form owes much to Roman lamps, and nothing to the medieval cresset. The body of the vessel is wheel-thrown, with a large central vent with a triangular rim. A large nozzle, which shows signs of burning, was applied to the body, a hole forced through the body wall and the join neatly finished. The fabric of the lamp is hard, with much fine grit, including some calcite, and is fired to very dark grey with dark reddish-brown patches. The robber trench in which the lamp was found contained some Norman sherds but the finds consisted principally of late Roman sherds and coins from a dispersed hoard which was deposited no earlier than 350-60. Though the fabric of the vessel could be seen as either Norman or late Roman, it is felt, on balance, that the form of the lamp and the overwhelming preponderance of Roman material in the robber trench indicate a mid 4thcentury date for the vessel.

Open lamps (Fig 82; 2107-2108)
2107 Fig 82 SF LWC 4284, B577 F144. Large pit filled with burnt daub. Period 2. The major part of an open lamp with roughlyapplied loop handle, Loeschcke Type 12, with small nozzle. Buff fabric. Probably wheel-thrown, with the handle applied and nozzle pinched out in a second stage. Possibly locally made.


Fig 82 Factory and open lamps, and others (1:2)

2108 Fig 82 SF LWC 4107, J920. Make-up. Period 3. The major part of an open lamp, Loeschcke Type 12. Moulded. Buff clay, fired to orange and yellow in places. Possibly locally made.
'Rosette' lamps (Fig 83; 2109-2111). Three very similar lamps, two almost certainly from the same mould, were found in the layer of make-up, dated to $c$ 320-40, on which the ?martyrium at Butt Road (Crummy 1980, 264-6) was built. The lamps are of a distinctive design, for which no parallel outside Colchester has been traced so far. The Pollexfen Collection in the Colchester and Essex Museum
contains a parallel (PC 117), possibly from the same mould, for the small lamp, 2111. The type is distinguished by its round body, with a broad shoulder decorated with radiating grooves giving a rosette effect. The base has a pattern of three thick concentric rings round a central dot. On the two larger examples the handle springs from the shoulder and belongs principally to the upper half of the mould, whereas on the smaller lamp the handle projects outwards from shoulder and wall, running right down to the base, and is a major feature of both halves of the mould. There is a herring-bone design both on the


2111

Fig 83 'Rosette' lamps (1:2)
base of the handle and on the shoulder opposite the mid-point of the nozzle on the larger lamps. In the absence of any parallels outside the town for these lamps, it seems likely that they were made in Colchester either in the early years of the 4th century, or, at the earliest, in the late 3rd century.
2109 Fig 83 SF BUC 923, E103 L36. Make-up. c 320-40. Buff fabric with a well-applied light reddish-brown thick slip.
2110 Fig 83 SF BUC 1353, E676 L36. Make-up. c 320-40. As 2109.

2111 Fig 83 SF BUC 1354, E677 L36. Make-up. c 320-40. ?Fabric colour. Pinkish-grey thick slip.


Fig 84 Lamp-hooks (1:1)

## LAMP-HOOKS (Fig 84; 2112-2114)

Both, examples are of copper alloy. Illustrated complete and well-preserved examples can be found in Loeschcke 1919, Tafn 2 and 21 ; Wilson 1968, pi 53, 203; and Hawkes and Hull 1947, pl 100, 33.
2113 Fig 84 SF BKC 4706(C), T446. Period 1. Corroded example, the tip is missing. The first link of the suspension chain survives. There are three bead mouldings below the suspension loop. Length 78.0 mm .
2114 Fig 84 SF BUC 449, B1186 L2. Periods 1-2. Possibly a fragment from a lamp-hook. The metal is well-preserved. The section of the upper part of the shaft is lenticular. The tip has bead-and-reel mouldings.

## FURNITURE FRAGMENTS AND FITTINGS

Handles (Fig 85; 2115-2145). Drop- and other handles of widely-varying sizes were found. The items on which they were fitted ranged from small wooden boxes or drawers to large chests. Handles in situ on pieces of furniture can be seen in WardPerkins and Claridge 1976, catalogue nos 159, 172. All objects are of copper alloy unless otherwise stated.
2115 Fig 85 SF LWC 4305, J429 F59. Timber-lined drain. Period 4. Iron handle of rectangular section. Length 146.5 mm . Possibly from a vessel.
2116 Fig 85 SF LWC 3030(C), J810. Make-up. Period 4a. A ringhandle with fragments of a split-spike loop. The ring has a complex moulded section, a feature taken to be diagnostic of furniture ring-handles. External diameter of ring 40.5 mm . Length of split-spike loop 31.0 mm .
2117 Fig 85 SF LWC 3255(C), J951. Make-up. Period 3. A worn ring-handle of $D$-shaped section with the remains of an iron split-spike loop attached. External diameter 27.5 mm .
2122 Fig 85 SF LWC 3911(C), K574. Period 1 destruction. Period 2. Probably a handle. A strip of roughly rectangular section with flattened pierced terminals. Length 46.0 mm . See Waugh and Goodburn 1972, fig 38, 115.


Fig 85 Drop- and ring-handles from furniture (1:1)

2131 Fig 85 SF BKC 2723(C), H111 F33. Rubbish pit. Period 5c. Iron handle fragment with flat rectangular section loop.

2132 Fig 85 SF BKC 2774(C), H239 F68. Hearth over pit. Period 5c. Large thick handle with bud-like terminals. The section is a slightly flattened circle at the mid-point of the loop and rather more flattened towards the terminals.
2134 Fig 85 SF BKC 3261 (C), J181 L25. Dump. Period 5c/6. Drophandle decoratively moulded terminals, part of one bend is missing. The two split-pins which fixed the handle to the drawer or box still survive. One is rather larger than the other. The loop of the handle is lozenge-shaped in section, becoming circular towards the terminals. Length approximately 54.0 mm .
2137 Fig 85 SF BKC 4877(C), T426. Period 1 (or 2). Iron twisted drop-handle, both terminals are damaged. Length 84.5 mm .
2142 Fig 85 SF BUC 566, C11 28 L1. Period 2. Tiny drop-handle of rectangular section. Length 19.5 mm .
2145 Fig 85 SF COC 204, 975 L280. Dump. Period 3. Drop-handle with square section loop and circular section plain terminals. Length 65.5 mm .

Copper-alloy furniture fragments (Fig 86; 21462149). Pieces to be considered as probably the sources of the following few fragments include small tables, stools, lamp stands (candelabra), portable altars or figurine bases. Valuable groups of illustrated examples can be found in Ward-Perkins and Claridge 1976. Given the size of the fragments catalogued here it is impossible to attempt to draw conclusions as to the specific items of furniture represented.
2146 Fig 86 SF LWC 3200(C), J951. Make-up. Period 3. Very corroded and laminated ?foot. Height 28.0 mm .
2148 Fig 86 SF BUC 97, A408 G33. Grave fill. Period 2. Fragment broken across a perforation in the upper surface. Height 17.5 mm .


Fig 86 Fragments from copper-alloy items of furniture (1:1)

2149 Fig 86 SF BUC 876, E52 L6. Destruction debris and topsoil. Post-Roman. A four-toed foot. The two middle toes do not touch the ground. There is a ?rivet hole at the base of the upright element, with another on the line of the fracture. These could indicate that the foot was fixed to the leg of a wooden piece of furniture. Height 21.0 mm .

Bone inlay (Figs 87 and 88; 2150-2162). Thin strips of bone, often decorated with incised geometric patterns, were used principally as casings for wooden boxes or caskets. Groups of inlay strips from boxes are illustrated in Henderson 1949, pl 58 and Wilson 1968 , pls $61-2$. A complete box of decorated bone is known from Heilbronn (Goessler 1932, 294). Larger items of furniture could also be decorated with bone inlay (Nicholls 1979; Crummy 1981; see pp 152-60).

2150 Fig 87 SF LWC 750, B321 F70. Cellar backfill. Period 5. Inlay strip decorated along each long side with a row of incised single ring-and-dot and down the centre with a row of double ring-and-dot motifs. The decoration would have been cut with a compass-like engraving tool (Goessler 1932, Abb 3). The undersurface has been well smoothed. Length 77.5 mm , width 19.0 mm , thickness 1.5 to 2.0 mm .

2151 Fig 87 SF LWC 1744, D161. Dump or make-up? PostRoman. Inlay strip with badly scarred upper surface. The decoration consists of five triple ring-and-dot motifs, one at each corner and one in the centre, two double ring-and-dots at the centre of each long side, and pairs of single ring-anddots between each of the five triple-ringed elements. A grooved line runs from the inside edge of each double ring-and-dot to the outer edge of each corner triple ring-and-dot and gives some cohesion to an otherwise loose, complex pattern. The undersurface has been smoothed but bears several thin scratches across its width. There is a small perforation at the middle of the central triple-ringed motif, probably to take a small fixing peg. The sides are quite irregular. Length 42.0 mm , width 25.0 mm , thickness 3.0 mm .

2152 Fig 87 SF LWC 3895, G489. Dump or make-up. Period 2. A small thick piece of inlay with two deep parallel grooves. The undersurface is rough cancellous tissue. Length 22.0 mm , width 9.0 mm , thickness 3.5 mm .
2153 Fig 87 SF LWC 1798, H36 F10. Road ditch. Roman. A plain mitred strip of inlay. The end opposite to the mitred corner is broken. Both surfaces are smooth. The upper face still shows traces of saw and/or rasp marks, and parts of the lower are rough with cancellous tissue. Length 75.0 mm , width 11.5 mm , thickness 3.0 mm .

2154 Fig 87 SF LWC 4055, R30. Destruction debris. Period 4 or post-Roman. A small strip with two parallel grooves. The reverse shows coarse saw marks. Length 27.5 mm , width 9.0 mm , thickness 2.0 mm .

2155 Fig 87 SF BKC 2856(C), H288 L13. Dump. Period 5b (end) and possibly into 5 c and 6 . A piece of stepped inlay with one convex step on one long side and two on the other, somewhat similar to the stepped inlay from the Butt Road workshop (Fig 190). There is a peg hole near each end, and one peg survives. There is slight green staining, probably from contact with copper alloy, round one peg hole. The underside shows rasp marks. The piece was made from a long bone or metapodial. The bone is very dense and may be horse bone. Length 62.5 mm , width 19.5 mm , maximum thickness 4.0 mm . The peg is 22.5 mm long and has a maximum diameter of 4.0 mm .
2156 Fig 87 SF BKC 2783(C), H298 (F94+F167). Pits. Period 6. Ansate strip of inlay, with incised ring-and-dot and line decoration. Both ends are damaged. The central panel has three large double ring-and-dot elements, with the area between the two rings filled in with alternating large and small single ring-and-dot ornament. There is a single ring-and-dot at each corner of the central panel and double ring-and-dot motifs between them on each long side, opposite the gaps between the large elements. Grooved lines link the outer edge of this row of four with the inner edges. Filling in the short sides of the central panel is a row of three small


Fig 87 Bone and antler inlay (1:1)
single ring-and-dot motifs also linked by grooves, with a similar but larger row along the outer edge of each ansa. Length 67.0 mm , width 26.0 mm , thickness 2.0 mm . It is uncertain how far the linking of circles to give the impression of continuous wave-crest ornament is merely the result of the restrictions of decoration possible on thin bone inlay and whether or not it is a product of a tradition of spiral design based in Celtic art. Pieces with similar designs are principally late Roman in date. ${ }^{5}$

2157 Fig 87 SF BKC 2816(C), H302 L13. Dump. Period 5b (end) and possibly into 5 c and 6 . A piece of stepped inlay with two peg holes. Similar to 2155 but without the single step on the side. Also probably horse bone. Length 62.5 mm , width 14.0 mm , maximum thickness 2.5 mm .

2158 Fig 87 SF BKC 2857(C), H335 (F165). Settlement. Period 5c. A piece similar to 2155 and 2157 with two peg holes. Also probably horse bone. Length 64.5 mm , width 19.0 mm , maximum thickness 4.5 mm . The similarity between 2155, 2157 and 2158 in both design and context may indicate that they are from the same ?box.
2159 Fig 87 SF BKC 4011(C), N32 L3. Topsoil. Period 6. Possibly an offcut from a strip of inlay, or an unfinished piece. The former is more likely. One end has two parallel grooves which peter out towards the centre. The ?mitred edge at the end with the grooves has been partly sawn through and then broken. The other end is roughly cut. Both surfaces have saw marks. Maximum length 57.5 mm , width 10.0 mm , thickness 2.0 mm .
2160 Fig 87 SF BKC 5435, V736 L11. Dump. Late Period 5. Part of a bone plaque showing the flexed right leg of a figure facing left. The foot rests on a slightly moulded and grooved base. The bottom of the base has broken across a hole drilled to take a peg for attaching the plaque to a background of some kind. This is probably a piece of decorative inlay for furniture (Toynbee 1964, 361). Height 43.0 mm .
2161 Fig 88 SF LWC 3945, R191. Charcoal. Period 2a. A fragment of possible inlay, convex in section, with four ?peg holes. Length 86.0 mm .
2162 Fig 88 SF BKC 5266, V598 F8/F130. Ditch. Period 4. A length of ?possible inlay with two peg holes. Similar to 2161. Length 71.0 mm , width 14.5 mm . A third hole may have been started between the two completed perforations.

Ring-keys (Fig 89; 2163-2170). Ring-keys generally belonged to small boxes or caskets of personal possessions rather than doors or cupboards and have therefore been placed in this category. A ring-key is still in the lock of the first Butt Road box (Fig 90). It may be that the two similar keys with flat wards, 2163 and 2168 , belong to the early Roman period, while the rotary keys of standard form are 3rdor 4th-century in date.

2163 Fig 89 SF BKC 1495(C), E751 L183. Levelling. Period 2. Key with flat ward on a thin ring of D-shaped section. Similar to one from the Jewry Wall (Kenyon 1948, fig 86, 12). Internal diameter of ring 18.0 mm .
2164 Fig 89 SF BKC 2222(C), G129 F21. Slot for ground-plate. Period 5c. Rotary key on a thick slightly D-shaped section ring. The flat front panel is highlighted by two oblique facets separated by a groove. The wards are very slight. Internal diameter of ring 17.0 mm .
2165 Fig 89 SF BKC 2422(C), G375. Topsoil. Period 5c. Damaged rotary key on a thick crude ring of varying section. Minimum internal diameter of ring 13.5 mm .

2168 Fig 89 SF BKC 4702(C), T414 F2? Period 5b (or c)? Key on a thin ring of D -shaped section, in two pieces. Internal diameter of ring 19.0 mm .
2169 Fig 89 SF BUC 99(C), A465 G35. Grave fill. Period 2. Rotary key on thick D-shaped section ring. There is a tall front panel with notched and faceted decoration. Internal diameter of ring 17.5 mm .
2170 Fig 89 SF BUC 100(C), A475 G25. Grave fill. Period 2. Rotary key on a thick ring of varying section. The ring appears to


Fig 88 Bone Pnlay (1:1)


2164


2165


Fig 89 Ring-keys (1:1)
have been broken, but used after the damage as an expanding ring. There is a broad front panel with marginal grooves. Minimum internal diameter of ring 12.0 mm .

## BOX FITTINGS

## FIRST BUTT ROAD BOX

A crushed wooden box or casket with copper-alloy and iron fittings was found deposited in an east-west oriented grave (G69) at Butt Road. Frequent incidents of overnight vandalism and theft meant that the box had to be lifted en bloc on the day of its discovery and removed to the Trust's offices for 'excavation'. ${ }^{6}$ This inevitably resulted in further disturbance of both fittings and contents, so that despite plans, sketches and photographs taken at various stages of the work both on and off site, only a broadly hypothetical reconstruction can be attempted. The individual elements are catalogued before the reconstruction is described. Pieces not illustrated are described in the main text.

## Copper-alloy fittings (Fig 90; 2171-2198)

2171 Fig 90 SF BUC 166(C), B205 G69. Corner brace with one long edge of the long side obliquely notched, or 'feathered'. Length of long side 36.0 mm , length of short side 16.0 mm . Width of long side 19.0 by 21.0 mm , width of short side 19.0 mm . There is a scar from an iron-shafted, ?lead-filied copper-alloy stud towards the end of each side.

2172 Fig 90 SF BUC 169(C), B208 G69. Corner brace with one edge of both sides feathered. Length of long side 41.0 mm , length of short side 20.0 mm . Width of long side 19.0 mm , width of short side 18.0 mm . Marks of studs in similar positions to those on 2171.

2173 Fig 90 SF BUC 175(C), B209 G69. Corner brace with one edge of both sides feathered. Length of long side 35.0 mm , length of short side 19.0 mm . Width of long side 19.0 mm to 21.0 mm , width of short side 19.0 mm . Marks of a stud at each end.

2174 Fig 90 SF BUC 161(C), B285 G69. The long side only of a corner brace, feathered on one edge. Length 36.0 mm , width 21.0 mm . There is the mark of a stud at the end.

2175 Fig 90 SF BUC 212(C), B183 G69 Winged lobate corner fitting, the right hand side is damaged. The object has been folded round a corner of the box and secured on the short side by two iron nails, and on the long side by an ironshafted, ?lead-filled copper-alloy stud. The entire circumference of the fitting was feathered (as 2176), except possibly on the short side, which is now very worn. Length of long side 45.0 mm , length of short side 6.0 mm . Maximum width (incomplete) 28.5 mm .
2176 Fig 90 SF BUC 211(C), B184 G69. Winged lobate corner fitting as 2175, complete except for the tip of one wing. The feathering on the circumference is visible on part of the short side. As with 2175 the short side was secured to the box by two iron nails, the head of one still survives in situ, and the long side by a composite stud. Length of long side 40.0 mm , length of short side 11.0 mm . Maximum width 40.0 mm .

2177 Fig 90 SF BUC 159(C)/181(C), B218/320 G69. A winged lobate fitting similar to 2175 and 2176 but not bent and with no apparent means of attachment to the box, though there is a circular mark on the lobe, possibly where a boss had been soldered to the fitting. Length 51.0 mm , maximum width 38.0 mm .

2178 Fig 90 SF BUC 209(C), B182 G69. Composite boss (or stud) with copper-alloy head filled with a ?lead solder. No trace of an iron shaft can be distinguished without damaging the object. Only slightly convex, diameter 24.0 mm . Part of the head is missing.

2179-82 Fig 90 SF BUC 218(C), B186 G69. Four (only one illustrated) composite convex studs, lifted on site from the lock-plate. All have copper-alloy heads and iron shafts, and are filled with a ?lead solder. All are slightly crushed and distorted, and the shafts are broken. Average diameter 15.0 mm .

2183 Fig 90 SF BUC 190(C), B187 G69. Very slightly convex plain stud. Diameter 27.0 mm , length 16.0 mm .

2184 Fig 90 SF BUC 165(C), B210 G69. Composite convex stud similar to 2179-2182 with broken iron shaft. Damaged. Diameter 23.0 mm .
2185 SF BUC 187(C), B281 G69. Fragments of a composite convex stud with iron shaft. Diameter approximately 19.5 mm .

2186 SF BUC 162(C), B282 G69. Fragments of the ?lead solder filling from a composite stud.
2187 SF BUC 156(C), B286 G69. A badly damaged composite convex stud. Diameter approximately 18.0 mm .
2188 SF BUC 181(C), B320 G69. A badly damaged composite convex stud. Diameter 24.0 mm .

2189-90 SF BUC 181(C), B320G69. Fragments of two composite convex studs. Average diameter approximately 16.0 mm .

2191 Fig 90 SF BUC 181(C), B320 G69. Small composite convex boss (or stud). There is no sign of an iron shaft. Diameter 9.0 mm .

2192 Fig 90 SF BUC 216(C), B186 G69. A strip with slight convex mouldings on each long side and bent to fit round a corner of the box. There are marks from two composite studs on the long side, and of a third on the short side. Length of the long side 49.5 mm , length of the short side 17.5 mm . Width 31.0 mm .

2193 Fig 90 SF BUC 216(C), B186 G69. A corner brace of more or less square section, 3.0 by 3.0 mm , with flattened round Pierced terminals and two copper-alloy nails (16.0 and 18.5 mm long), one of which was found in situ through a terminal. Length of longer side, 35.0 mm , length of shorter side 28.0 mm

2194 Fig 90 SF BUC217(C), B186 G69. A copper-alloy plate, folded to pass round a corner of the box. The plate is irregular in shape, being more or less rectangular, but with one short side splaying outwards for most of its length, then sharply inwards at the fold. There is a mark from a composite stud at each side and a hole from a nail or rivet at each end of the fold. Preserved on the back, or inside, of the plate are an iron staple, an iron nail and iron-impregnated wood. Length of long sides 80.0 mm , width to the fold 315 mm , width over the fold 8.5 mm .
2195 Fig 90 SF BUC 217(C), B186 G69. Gilt copper-alloy lock plate, with a gilt rotary ring-key held in the lock by corrosion products. The edges of the plate have repousse piecrust decoration, and there are scars from four composite studs, one at each corner of the plate. Two are right on their respective corners and two, those at the top of the plate, are set about 15.0 mm down. The plate is not quite rectangular. Length 90.0 mm , width 81.0 to 84.5 mm . Part of the lock mechanism and some fragments of wood are preserved at the back of the plate.

2196 SF BUC 148(C), B219 G69. Copper-alloy nail, similar to those found with the corner brace 2193. Circular section shaft, length 13.5 mm .
2197 Fig 90 SF BUC 184(C), B316 G69. Spatulate object with shaft of circular section flattened at one end. Length 54.5 mm . The position of this piece relative to the other items from the box was not recorded. It may be from the fill of the grave.
2198 Fig 90 SF BUC 179(C), B318 G69. Object found at the bottom of the box. The central part is semicircular in section, and the two ends circular. Length 44.0 mm , maximum diameter 5.0 mm .

Iron fittings (Fig 90; 2199-2213). All the nails have square section shafts.
2199 Fig 90 SF BUC 149(C)/152(C)/182(C), B213/214/215 G69. An almost complete loop hinge. The pierced strap,


Fig 90 Copper-alloy and iron fittings from the first Butt Road box (1:2)
tapering from 23.0 to 15.0 mm wide, survives to approximately 117.0 mm , and had nails centred at 29.0, 75.0 and 107.5 mm from the broad end. The slightly tapering looped strap is on average 19.0 mm wide and 96.5 mm long and has nails still surviving at 12.0 and 64.0 mm from the blunt end. Each strap has wood-grain preserved on one side.
2000 SF BUC 208(C), B237 G69. Fragments of another loop hinge. The pierced strap is 19.0 mm wide but survives to only 47.0 mm , with a nail centred on 31.0 mm . The looped strap, apparently parallel-sided, is 21.0 mm wide and survives to 83.5 mm . There are nails centred at 31.0 and 82.0 mm from the loop. The head of the latter nail has broken off, slipped, and become reattached by corrosion products lower down the strap and to one side. Each strap has wood grain on one side.
2201 Fig 90 SF BUC 189(C), B202 G69. Fitting, probably a brace from the outside of a corner at the back of the box. There a re two nails on the broader edge, approximately 20.5 mm apart, centre to centre, and one on the narrower piece. Wood grain has been preserved on one side of the fitting, except in the corner. Width of broader section 40.0 mm , width of narrower section 21.0 mm . Length into the corner from the broader edge 35.0 mm , length from the narrower edge into the corner 26.0 mm .

2202 Fig 90 SF BUC 189(C), B202 G69. Fitting, probably also a brace from the back of the box. Length of long side (incomplete) 70.5 mm , length of short side (incomplete) 29.0 mm , width 17.5 to 20.5 mm . There is a nail centred at 19.5 mm from the corner on the short side, and one centred at 29.0 mm from the corner on the long side.

2203 SF BUC 189(C), B202 G69. Fragments, including a nail head with part of the shaft, and a very corroded object that maybe either a clenched nail with a split head or part of the lock mechanism.

2204 Fig 90 SF BUC 157(C), B206 G69. The major part of the guide plate from the inside of the lock. The key, when inserted, rests against the circular fitting, and the cut-out on the ward enables the key to rotate. The reverse of this plate, that faced the interior of the box, has iron-replaced wood on it. Also, not illustrated, a fragment probably from the same fitting.

2205 Fig 90 SF BUC 180(C), B287 G69. A tongue-ended strip, 60.0 mm long and 12.0 mm wide, with a nail centred at
19.0 mm from the shaped end. Wood grain is preserved over 27.0 mm of the strip at the same end. Also two other fragments, not illustrated, one from a strip of similar dimensions.
2206 SF BUC 185(C), B322 G69. Two small flat fragments.
2207 SF BUC 210(C), B185 G69. Nail. Length (incomplete) 36.5 mm , diameter of round head 12.0 mm

2208-10 SF BUC 215(C), B201 G69. Three nails and three fragments of nail shafts (not numbered). 2208) Length 51.5 mm , diameter of round head 17.0 mm . 2209) Length (incomplete) 35.0 mm , diameter of round head 16.0 mm . 2210) Length (incomplete) 37.0 mm , diameter of round head 14.0 mm . Also a small curved strip, possibly from the fixings for the lock bolt.

2211 SF BUC 223, B211 G69. One nail and four nail shaft fragments. Length (incomplete) 35.5 mm , diameter of round head 13.0 mm .
2212 SF BUC 154(C), B284 G69. Fragment of a nail. Length (incomplete) 18.0 mm , diameter of round head 10.5 mm .
2213 SF BUC 172(C), B317 G69. Nail. Length (?complete) 58.0 mm , diameter of round head 13.0 mm .

Reconstruction (Fig 91). The problems confronting any attempt at a reconstruction of the box are daunting in their variety. The box had been crushed in situ, so that the upper fittings from the front lay horizontally, the lower were still in place, the loop hinges had been pushed backwards and downwards, and at least one armlet from among the contents lay exposed at the same level as the external fittings. The hurried removal of the box from the site resulted in most of the iron fittings from the inside and back of the box becoming detached and subsequently being recorded as 'loose'. Some of the fittings have freshly broken edges, yet matching pieces have not survived. This is probably a.result of the removal of the box from the site. Lastly, only an odd number survives of some


Fig 91 Theoretical reconstruction of the layout of the copper-alloy fittings on the front of the first Butt Road box
of the fittings. Some of these problems can be overcome. For example, the irregular number of fittings seems to be in one case caused by a repair to the box. That is, the use of a rectangular plate and a stud to imitate a lobate fitting on the top right hand side of the front of the box. Other problems remain insoluble. It has proved impossible to formulate a clear picture of the positions of the pieces belonging to the lock mechanism.
Only the positions of the copper-alloy fittings from the front of the box shown on the site plans and photographs have been reconstructed. The iron braces 2201, 2202 and 2205 have not been shown. All were probably used at the rear of the box, but whether to hold together the back and bottom boards or the back and side boards is uncertain. The loop hinges were undoubtedly fitted so that the strap on the lid lay inside the box, and the strap on the back board lay outside. The nails from the upper strap would have been visible on the lid, probably countersunk, but have not been shown in Fig 91.
There is very little evidence for the joints used in the construction of the box. One site plan shows a tapering patch of end grain wood exposed on the front board after removal of a winged lobate fitting. This cannot be seen on a photograph of the same area, and has not survived on the reverse of the mount. Other graining planned, photographed and visibly surviving from the front board is all longitudinal so an explanation cannot be sought in having a front board of exposed end grain. While the identification of this patch of end grain is suspect, the use of dovetail joints on a box of this kind would not be unexpected. The chest from the Bradwell villa had partly mitred, partly dove-tailed joints (Keepax and Robson 1978, 35-40). Also, the fittings and nails from the Butt Road box are few in number when the joints at the back are considered, and the winged lobate mounts would
seem to be employed for decorative, rather than practical, reasons. Their side pieces are too short to serve as effective clamps. The use of strong joints which could give some rigidity to the box without recourse to nails or braces would therefore be of major importance. The widest part of the planned patch of end grain is approximately 20.0 mm across. If, as seems likely, this indicates the thickness of the wood (ibid, 38), then a suggested thickness of 20.0 mm for the lid would seem to be appropriate. By analogy with the lid, all the boards may have been 20.0 mm thick. The size of the box as shown in Fig 91 is purely conjectural.

## SECOND BUTT ROAD BOX (Fig 92; 22142222)

A second box was found deposited in an east-west oriented grave (G519) at Butt Road. The evidence for this box consists of four copper-alloy corner braces (2214-7) which were found in two sets of two at one edge of a group of grave goods which lay on a patch of dark-stained earth. Also probably connected with the box are fragments of other copper-alloy strips, unfortunately with no apparent means of attachment (2218-2221), and an iron plate (2222). As no hinges appear to have survived, it is possible that the box had a simple unhinged lid.
2214 Fig 92 SF BUC 1559, H396 G519. One of four comer braces. Length of long side 26.0 mm , length of short side 9.0 mm , width 4.5 mm . Average length of nails 8.0 mm .
2222 Fig 92 SF BUC 1 577, H395 G519. An iron plate with one end folded back on itself. Adhering to this fold and to the lower face of the plate are fragments of iron-impregnated wood. The grain of the wood all seems to run in the same direction across the width of the plate. There are at least four small nails or rivets in the main body of the plate, one at each corner. The two along the line of the fold are just outside its edge. Three other nails are distinguishable in the vertical side of the fold. As the fold is a complete return, it would seem that it was fixed to only one piece of wood, and thus the


Fig 92 Fittings from the second Butt Road box (1:1 j
plate appears to have formed a protective reinforcement on the lid of the box. Length 72.5 mm , width 69.5 mm .
OTHER BOX FITTINGS (Fig 93; 2223-2224)
2223 Fig 93 SF BKC 2114(C), G12 L2. Demolition debris of Period 5c building. Period 5c (end). A copper-alloy hasp, probably from a box. The outer face is shaped like a shell. There is no obvious means of attachment. Similar to hinged hasps from Richborough (Wilson 1968, pl 45, 193) and Radnage (Skilbeck 1923)
2224 Fig 93 SF BKC 5110(C), V137 F31. Pit. Period 4. A latheturned bone disc with a central perforation, 7.0 mm in diameter, around which the bone is stained green from contact with copper alloy. The disc is 24.0 mm in diameter, biconical in section, and has, on the upper surface close to the edge, a pair of fine concentric grooves. Three similar discs came from a Colchester amphora-burial, grave 302, (Hull 1963, 145, fig 81, 6 a-c), dated to about 190. The disc was probably part of the terminal at one end of a composite bone and wood hinge, held in place by an ornamental peg similar to two from grave 302 (ibid, fig 81, 5; Fremersdorf 1940, Abb 13).

## Notes

1 Thanks are given to H Chapman for making available a copy of the chapter on 'Querns and Mills' from Roman Technology in advance of publication.
2 For the appearance of these handles see Proceedings of the Society of Antiquaries 14, 2nd ser, 181-93; 183 illustrates an example from Leziate, near Lynn, Norfolk, found with the hoop surviving.
3 Loeschcke's Type 1 is Wheeler's Type 1 (1930, 62), and his Type 4 is Wheeler's Type 2 (ibid, 62-3).
4 I am grateful to Donald Bailey for this information and for all his


Fig 93 Other box fittings (1:1)

## COUCH/BED (2225)

2225 SF LWC3765(C),JF611. Period 2. Remains of a burnt couch or bed (Wilson 1973, 302-3). This piece of furniture will be discussed in detail in the site report.
help with the lamps.
5 The inlay from the box in Wilson I968, pls 61 and 62 is dated to the 2 nd century (Cunliffe 1968,34 ) even though it derives from a 4 th-century pit. There would appear to be no evidence for a 2 ndcentury date.
6 We are most grateful to Victoria Grainger, who undertook this task.
7 A table of casket fittings from south east England and East Anglia can be found in Partridge 1981. Where datable, most of these fittings belong to the 1st century.

## CATEGORY 5: OBJECTS USED FOR RECREATIONAL PURPOSES

## COUNTERS FOR BOARD GAMES

Counters were most commonly made of bone and broken pottery sherds, though stone, tile and glass counters are also known (MacGregor 1976, 3). Descriptions of the board games popular in the Roman period can be found in Bell 1960, 30-5, 84-7 and are mentioned briefly in MacGregor 1976, 3-4. The possible use of bone counters for a game similar to tiddlywinks is refuted by MacGregor.

## BONE COUNTERS

Bone counters were almost invariably face-plate turned on a lathe and retain the indentation of the lathe centre on the obverse. Two main types are represented here, equivalent to Kenyon's Types A and $B$ (1948, 266, fig 91), with some rather more individual pieces. There would appear to be no clear difference in date for the period of manufacture of the two types.' Both are represented in contexts ranging in date throughout most of the Roman period.

Type 1 (Fig 94; 2226-2263). Plain counters (Kenyon's Type A). Many have a countersunk upper surface, and all but one (2227) have an indentation from a lathe centre.
2238 Fig 94 SF BKC 2961, J22 L1. Site clearance. The obverse is countersunk and the reverse flat except for a slight 'worn' area. This latter feature, which usually occurs in two opposed patches, has been demonstrated by MacGregor $(1976,4)$ to be an indication of the use of a long bone in the manufacture of the counter and of the difficulty thereby encountered in achieving a flat surface over the whole area of the disc. The reverse bears a lightly-incised numeral XLV (Hassall 1978, 478, no 39). Diameter 21.0 mm , thickness 4.0 mm .

2242-53 Fig 94 SF BKC 3524(C), J274. Pit complex, largely unexcavated. Periods $3-6$. A set of twelve counters, nine blank, three inscribed. All have flat upper and lower surfaces and bevelled edges. They exhibit varying degrees of wear. The inscriptions have been identified by Mark Hassall (1978, 477-8, nos 34a,-c). 2242) Diameter 17.5 mm , thickness 3.0 mm . The obverse has the inscription V with a superimposed I, and the reverse, very faint. El. 2243) Diameter 21.0 mm , thickness 4.0 mm . The obverse has an incised rough oval, with the letters EIR crossing the perimeter. The first letter resembles an H on its side. The reverse also has an incised oval, with a series of twelve dots marking the long axis. To the left of the line so formed is a letter 0 , to the right a letter M. 2244) Diameter 18.0 mm , thickness 4.0 mm . On the obverse four strokes have been scratched radially from the centre mark to the edge. On the reverse is an inscribed $X$ with an exaggerated serif on the top right-hand terminal. 2245) Diameter 21.0 mm , thickness 6.0 mm . 2246) Diameter 19.0 mm , thickness 5.0 mm . 2247) Diameter 18.0 mm , thickness 4.0 mm . 2248) Diameter 17.5 mm , thickness 4.5 mm . 2249) Diameter 17.5 mm , thickness 3.5 mm . 2250) Diameter 16.5 mm , thickness 4.0 mm .2251 ) Diameter 16.5 mm , thickness 3.0 mm . 2252) Diameter 16.0 mm , thickness 5.0 mm . 2253) Diameter 16.0 mm , thickness 4.0 mm .

2256 Fig 94 SF BKC 4459(C), N544 F131. Pit. Period 5b1. The upper surface is countersunk. The reverse has two paralle 'worn' areas (see 2238). Diameter 22.0 mm , thickness 4.5 mm .

Type 2 (Fig 94; 2264-2279). Counters decorated on the obverse with concentric grooves, usually set obliquely into the surface (Kenyon's Type B).
All have an indentation from a lathe centre.
2268 Fig 94 SF BKC 2728(C), H153. Unstratified. The obverse of this piece is decorated with five evenly-spaced grooves of similar depth set round the lathe centre indentation. Diameter 20.0 mm , thickness 3.5 mm . There is a 'worn' patch on the reverse (see 2238).
2271 Fig 94 SF BKC 3315(C), J186 F13. Large pit. Period 5b. This well made counter has four fine concentric grooves on the upper surface. The edges are bevelled. Diameter 17.5 mm , thickness 4.0 mm .
2274 Fig 94 SF BKC 5710, V938 L11. Dump. Late Period 5. The upper face is decorated with four evenly-spaced concentric grooves. The reverse has a 'worn' area (see 2238). The edges are bevelled. Diameter 19.0 mm , thickness 2.5 mm .

2277 Fig 94 SF BUC 20, A24 F20. Pipe-trench. Modern. A large well made counter with three grooves of similar depth and a Very broad outer groove. The reverse has two 'worn' areas (see 2238). and has the lightly-scratched inscription VAL, (Hassall 1978, 477, no 33). Diameter 25.0 mm , thickness 3.5 mm .

Type 3 (Fig 94; 2280-2281). Convex counters. Only two counters of this type were recovered, each in a late Roman context. Both are lathe turned. A similar counter was found in a 4th-century context at York. The type can be seen as the forerunner of Anglo-Saxon plano-convex counters (MacGregor 1978, 33).
2281 Fig 94 SF BUC 1348, E668 L46. Destruction debris. Probably first half of the 5th century. There is a lathe centre mark on the upper surface. The reverse is flat. Diameter 25.0 mm , thickness 5.5 mm .

Type 4 (Fig 94; 2282). Counter with notched rim. This can be seen as a variant of Type 2.
2282 Fig 94 SF BKC 2395, G354 F11 ?Timber-lined drain. Period 5c. The upper edge is decorated with regular V-shaped notches. A shallow groove has been cut round the circumference of the edge, positioned immediately below the notches to give a waisted appearance to the section. There are traces of two very fine grooves on the upper face immediately inside the notched rim. The central area of the obverse is sunk around a flat-topped moulding cut by the lathe centre mark. The reverse bears faint casual scratchings and the letter M (Hassall 1978, 477, no 32). Diameter 215 mm , thickness 3.0 mm .

## Miscellaneous (Fig 94; 2283)

2283 Fig 94 SF LWC 3349, J1086. Make-up (redeposited from earlier levels?). Period 4. Fragment of a large lathe-turned ?counter. The upper surface is decorated around the edge with a hollow chamfer bordered by a single shallow groove. Inside the chamfer two pairs of concentric grooves define a low convex moulding set round the lathe centre indentation, which is set in a small slightly countersunk area. Diameter 34.0 mm , thickness 5.5 mm .


Fig 94 Bone counters (1:1)

## GLASS COUNTERS (Fig 95; 2284-2294)

All the catalogued examples are simple more or less round, flat-bottomed, convex 'blobs' of glass. The best known set of glass counters is that found on a 4thcentury lead coffin at Lullingstone. The set consists of fifteen white and fifteen brown decorated counters (Liversidge 1973, 350).

2285 Fig 95 SF LWC 748, B323. Gravelled surface. Periods 3-5, probably 5 . Opaque black glass. Maximum diameter 17.5 mm , thickness 7.5 mm . The underside is quite rough.

2286 Fig 95 SF LWC 2588, J530. Occupation on floor. Period 4a and b. Opaque sligtly greenish-yellow white glass. The
slight tinge of colour is probably caused by surface corrosion of the glass. Maximum diameter 12.5 mm , thickness 6.0 mm .

2287 Fig 95 SF LWC 3735, K443 F229. Pit. Period 2. Opaque ?black glass. Maximum diameter 13.5 mm , thickness 6.5 mm . The underside is rough.

2291 Fig 95 SF BKC 3776, K578. Surface cleaning. Probably Periods 4-6. ?Opaque mid blue corroded glass with many air holes. Maximum diameter 15.5 mm , thickness 7.0 mm .

2292 Fig 95 SF BKC 4568, T178 F76. Slot. Period 3. Opaque black glass. Maximum diameter 19.5 mm , thickness 7.5 mm . The underside is rough.
2293 Fig 95 SF BKC 4653, T343. Unstratified. Corroding opaque ?black glass. Maximum diameter 15.0 mm , thickness 7.0 mm . The underside is rough.


Fig 95 Glass counters (1:1)

## POTTERY COUNTERS

Pottery roundels are found in large numbers at Colchester. Most are plain, but twenty are pierced. These pierced roundels will be considered separately. The uses to which pottery roundels were put are not absolutely clear. They have rarely been discussed in finds reports.
The counters are catalogued in four groups. First, counters with a ground edge and at least one abraded surface. Second, counters with no abraded surface but with an edge ground for at least part of its circumference. Third, rough-outs. Fourth, pierced counters. The maximum diameter and thickness only are given. Where possible surfaces are described as inner and outer, relative to the vessel from which they were taken. Comments on the fabric and thus likely date of the counters have been provided by Philip Crummy and Philip Kenrick. In a number of cases the only comment possible was 'Roman'. All but four of the examples recovered are of Roman fabric, though because of later activity on the sites concerned many were found in post-Roman or site clearance levels. A large number of the roundels from Balkerne Lane derive from the topsoil fill of the town ditch in levels either dated to the Anglo-Saxon period (while containing almost entirely Roman finds) or contaminated by post-Roman activity. From postRoman contexts come four pieces made from fabrics which could be either Roman or medieval; in view of the large number of roundels identified as Roman on the basis of context and fabric, these four also are almost certainly Roman. ${ }^{2}$ Most of the plain roundels ( $49.5 \%$ ) are of grey ware that can only be described as Roman. Where a date can be given to grey sherds it is usually 2 nd-century or later, but a few are of 1st- or 2 nd-century fabrics. Appendix 3 contains a catalogue of further pottery counters extracted in summer 1983 from the main bulk of the ceramic material. Whilst
these counters have not been incorporated into the table of fabrics below, it is worth noting that two derive from pre-Boudican contexts. A small excavation in 1971 on Hilly Fields, Sheepen, Colchester, also produced a mid 1st-century pottery roundel.

| black burnished ware | $17.5 \%$ |
| :--- | ---: |
| Hadham ware | $4 \%$ |
| terra sigillata (Hadrianic/Antonine |  |
| $\quad$ or Antonine) | $5.5 \%$ |
| other colour-coated wares | $5 \%$ |
| miscellaneous | $2.5 \%$ |

There is no hint from the type of contexts involved as to the use of plain roundels. They seem to be items of common use in most households, and may therefore have a domestic purpose. One possibility that has been considered, and which would have readily explained the great range of size of these roundels, is that the objects were household weights, used probably in the kitchen. Accordingly the weight of each was taken and plotted in the hope that clusters would be found at the major divisions and multiples of one Roman ounce. No such clustering was apparent. Though groups of three or four of the smaller roundels shared the same weight, there was an overall steady rise in weight from just above one gramme to 126.5 grammes. The groups merely illustrated the fact that there are more small and medium-sized counters than larger ones, and the chances of some being the same weight was therefore greater at the lighter end of the range. Another use in the kitchen that was considered for at least the larger and thicker roundels (eg Fig 96, 2385) was that they may have been lids for narrow-necked jars in which dry goods were stored (MacGregor 1978, 33). This hypothesis can be neither conclusively proven nor disproven, though perhaps a major point against the idea is that where in Colchester pots have been found buried complete with lids (eg LWC B), the lids were not roundels of pottery. Another suggested use for large and thick post-Roman roundels is as 'mats' on which to set pots hot from cooking (Addyman and Priestley 1977, 139).

An attractive idea is that the roundels were used as reckoning counters, similar to medieval jettons (MacGregor 1978, 33). Many of our examples have at least one surface, often both, abraded from being pushed along on that face. This could equally well be done on a tally board as a game board. The numbers sometimes found incised on counters (eg Fig 96, 2307) could indicate either a tally piece or a value in a game, as could the ten notches along part of the edge of one side of a tile counter (Fig 100, 2490).
In the absence therefore of a satisfactory household use for the roundels, their recreational possibilities were considered. The least likely of the suggestions put forward is that they were used as stacking bricks by young children. This notion was to some extent inspired by the varying sizes of roundels within possible sets (cf 2304-6;2361-3). However, the size
of a roundel is largely dictated by the pot from which it is made. Small counters made from thick-walled pots and large counters made from thin-walled pots are rare (though not unknown, see 2299 and 2436). The possibility has also been considered that some of the larger counters were used in a game involving throwing. Some of the pieces have been chipped in antiquity. However, such chipping could equally well occur during normal handling as from the objects being thrown, and few broken roundels have been found.

Perhaps inevitably then we are forced to consider these roundels as pieces for board games. This is supported by the abraded surfaces already noted. In general, the boards used for pottery counters would have had to be larger than those used for sets of bone counters. The average diameter of our catalogued bone counters is 19.5 mm , a size rarely matched by pottery examples, most of which are between 25.0 and 50.0 mm in diameter. As some of the pottery counters are very big, the possibility that they may have been used on a board drawn on the ground should be borne in mind (ibid). It is perhaps also not unlikely that counters of different sizes were used in the same game and on the same board, though obviously the size of the stations on the board would be governed by the size of the larger pieces. Another point for consideration is that larger pieces may have had a greater value in the game than smaller ones.

Those pieces that have only a ground edge are probably little-used examples, and those with a rough edge are almost certainly unfinished. The method of their manufacture seems to have been that a suitable sherd was selected and its edge chipped or clipped to a more or less even shape, then ground smooth either by using a hone or by rubbing the sherd on any hard surface that would abrade the fabric. (Only a few of the counters are close to a true circle in shape, many are ovoid, even elliptical, and two are subrectangular.) The sherds selected are often from the walls of grey ware storage jars (eg Fig 96, 2319, 2385), the walls or bases of thinner grey ware pots,(eg 2290, Fig 96, 2307) or the walls or bases of black burnished ware bowls (eg Fig 98, 2438) and occasionally jars. Sometimes a whole base, rather than a base sherd, was used (eg Fig 98, 2449, 2450).

As only twenty pierced pottery roundels have been recovered, percentages produced by comparison of their fabrics are probably not significant, but it may be worth noting that two come from 1st-century contexts, none is made from Hadham ware, but one is of Flavian terra sigillata. There is some slight indication therefore, probably more apparent than real, that these pierced roundels tend to be earlier in date than plain examples. The holes in pierced counters were made with a drill. Most holes have an hour-glass shape which shows that the drill was used first on one side, then the other. As with plain counters three groups can be distinguished: those with a ground edge and abraded surface(s), those with no abraded surface but an edge ground for at least part of its circumference, and rough-outs. The technique of manufacture was
therefore, as might be expected, the same for both plain and pierced counters.
If pierced counters represent a group of objects genuinely separate from plain counters, then we should look for an alternative use for them. The most obvious is that of spindlewhorls, but the counters catalogued here have failed to meet the criteria put forward to identify spindlewhorls (p 67). Some would ciearly be unsuitable on grounds of either size (Fig 99, 2472), or the position of the hole (Fig 99, 2467). At least one (2471) was pierced after its use as a counter, for it had abraded surfaces when it broke as a hole was being drilled into it. However, if these pieces are accepted as counters, what purpose was served by the perforation? An attractive suggestion, but one with no evidence to support it, is that perforated counters could be strung together in sets.

Counters with a ground edge and at least one abraded surface (Fig 96; 2295-2389)
2295 Fig 96 SF LWC 1041, A64. Topsoil. Post-Roman to postmedieval. Diameter 27.5 mm , thickness 7.5 mm . Wall sherd. Both surfaces have been abraded. Grey ware. Burnished. 2nd-century or later.
2307 Fig 96 SF LWC 776, B321 F70. Cellar backfill. Period 5. Diameter 38.0 mm , thickness 7.5 mm . ?Base sherd. Both surfaces are abraded. Grey ware. Burnished. 2nd-century or later. Mark Hassall has on one side identified a graffito X , and on the other multiple scratchings, all done after firing.


Fig 96 Pottery counters (1:2)

2312 Fig 96 SF LWC 1508, E125 F61. Pit. Late Roman. Diameter 24.0 mm , thickness 6.5 mm . Wall sherd. Both surfaces slightly abraded. Grey ware. Roman.
2313 Fig 96 SF LWC 1508, E125 F61. Pit. Late Roman. Diameter 26.0 mm , thickness 6.5 mm . Wall sherd. Inner surface slightly abraded. Grey ware, with well defined margins. Burnished. Roman.
2314 Fig 96 SF LWC 1508, E125 F61. Pit. Late Roman. Diameter 23.5 mm , thickness 6.0 mm . ?Base sherd. Both surfaces very slightly abraded. Grey ware. Burnished. Roman. Counters 2312-14 possibly come from the same set. All are quite irregular in shape, but are of a compatible size.
2319 Fig 96 SF LWC 1989, J163 F84. Pit? ?Part of robber trench (F18). Early medieval. Diameter 41.5 mm , thickness 13.0 mm . Wall sherd. Grey ware. Roman. The inner surface carries the graffito SVPER scratched after firing (Hassall 1978, 438, no 64), and the outer surface is, appropriately, abraded.
2327 Fig 96 SF BKC 133, A31 L2. Topsoil. Post-Roman. Diameter 21.5 mm , thickness 4.0 mm . Wall sherd. Inner surface abraded. Hadham ware. Mid 3rd- to 4th-century.
2356 Fig 96 SF BKC 2672, H63 F28. Sand pit. Period 6. Diameter 36.0 mm , thickness 8.5 mm . Rim sherd. Outer surface abraded. Terra sigillata, form Dragendorff 37. East Gaul. Antonine.
2385 Fig 96 SF MID 563, C2082 L21. Site clearance, mainly topsoil. Site C Phases 4 and 5. Diameter 62.0 mm , thickness 21.0 mm . Wall sherd. The inner surface is abraded. Grey ware. Roman.

Counters with no abraded surface but with an edge ground for at least part of its circumference (Fig 97; 2390-2435)
2402 Fig 97 SF BKC 628, A4 L1. Topsoil and town ditch (F30) fill. Post-Roman. Diameter 54.0 mm , thickness 13.5 mm . Wall sherd. Grey ware. Roman.
2411 Fig 97 SF BKC 1781, A31 L2. Topsoil. Post-Roman. Base sherd. A subrectangular counter, 35.5 by $30.0 \mathrm{~mm}, 5.0 \mathrm{~mm}$ thick. Grey ware. Burnished. Roman.
2413 Fig 97 SF BKC 214, A75 F16. Town ditch. Anglo-Saxon or Period 6. Diameter 34.0 mm , thickness 6.0 mm . Wall sherd. Hadham ware. Mid 3rd-to 4th-century.


Fig 97 Pottery counters (1:2)

## Counter rough-outs (Fig 98; 2436-2462)

2437 Fig 98 SF LWC 1914, D261. Topsoil. Post-Roman. Diameter 19.5 mm , thickness 4.5 mm . Wall sherd. Hadham ware. Mid 3rd- to 4th-century.
2438 Fig 98 SF LWC 1978, D261. Topsoil. Post-Roman. Base sherd. A subrectangular counter, 40.0 by $35.0 \mathrm{~mm}, 6.5 \mathrm{~mm}$ thick. Black burnished ware. 2nd-century or later.
2449 Fig 98 SF BKC 2499, G417. Surface cleaning. Period 5c. Diameter 47.0 mm , thickness 13.0 mm . Base. Grey ware. Burnished. Roman.
2450 Fig 98 SF BKC 2491, G429. Periods 4 and 5. Diameter 72.5 mm , thickness 10.0 mm . Base. Grey ware. Roman.


Fig 98 Pottery counter rough-outs (1:2)

Pierced pottery counters (Fig 99; 2463-2482)
2463 Fig 99 SF LWC 317, B86 F43. Pit. 12th to 15th century. Diameter 52.0 mm , thickness 15.5 mm . Wall sherd. Chipped. The edge is ground and both surfaces are abraded. Diameter of perforation 5.0 mm . The wall of the hole is straight and smooth. An abandoned attempt at drilling a hole lies close to the finished one. Grey ware. Roman.
2467 Fig 99 SF LWC 2659, K114. Surface cleaning. Post-Roman. Diameter 45.5 mm , thickness 12.0 mm . Wall sherd. Slightly chipped. The edge is ground and both surfaces are abraded. The hole is well off-centre. Diameter of perforation 4.0 mm . The wall of the hole is smooth but not straight. Grey ware. Roman.
2472 Fig 99 SF BKC 473, A92 (L12). Post-Roman. Diameter 26.5 mm , thickness 10.5 mm . Wall sherd. The edge is ground and both surfaces are abraded. Diameter of perforation 5.0 mm . The wall of the hole is smooth but not straight. Terra sigillata, form Dragendorff 17. South Gaul. Flavian.


## TILE COUNTERS (Fig 100; 2483-2495)

The discussion of the possible uses and method of manufacture of pottery counters applies equally to tile counters. Imbrices, tegulae, and boxtiles all seem to have been used.
2483 Fig 100 SF LWC 1013, B75 F23. Road ditch. Period 4.


Fig 100 Tile counters (1:2)

Diameter 51.5 mm , thickness 15.0 mm . The edge is only partly ground, neither surface is abraded.
2485 Fig 100 SF LWC 2884, J696 F180. Road ditch. Period 4. Diameter 58.0 mm , thickness 16.0 mm . A rough-out.
2487 Fig 100 SF LWC 2873, L260. Occupation. Period 4(3). Diameter 47.0 mm , thickness 14.0 mm . The edge is smooth and both surfaces are abraded.

2490 Fig 100 SF BKC 344, A31 L2. Topsoil. Post-Roman. Diameter 60.0 mm , thickness 16.0 mm . The edge is smooth and both surfaces are abraded. One surface shows the comb decoration of a box tile. Along part of the edge of the other surface are ten small notches. This could either be an attempt at decoration, or could indicate a value given to the counter.

## STONE COUNTERS (Fig 101; 2496-2499)

Three stone counters similar in size to large pottery counters were found. They were apparently made in a way similar to that used for pottery roundels by cutting down pieces of broken, or possibly spare, wall veneer. These objects, then, are also probably counters for board games, as is the small worn pebble, 2499.

2496 Fig 101 SF BKC 197, A35 L3. Topsoil and town ditch (F16) fill. Post-Roman. Brecciated pink and white marble. A counter rough-out made from a piece of strip veneer 40.0 mm wide. Thickness 9.5 mm .

2497 Fig 101 SF BKC 2277, G1. Site cleaning. Unstratified. ?Purbeck stone. A counter with an edge ground smooth but still irregularly-shaped. Diameter 48.5 mm , thickness 16.0 mm .

2498 Fig 101 SF BKC 2503, G376 F108. Pit. Period 5c. ?Sandstone. A counter with one smooth surface and one rough. The edge is ground smooth but has been damaged. Diameter 54.5 mm , thickness 7.5 mm .


Fig 101 Stone counters (1:2)

## BONE DICE (Fig 102; 2500-2506)

2500. Fig 102 SF LWC 1092(C), B520. Make-up, dump, or floor. Period 5. The numerals are marked by double ring-and-dot motifs, and opposite faces add up to seven. Approximately 16.0 by 15.0 by 12.0 mm .

2501 Fig 102 SF LWC 3141(C), J876. Gravel make-up. Period 4a. A fragment-of a die made from a long bone. No attempt has been made to avoid the marrow cavity. The numerals are marked with double ring-and-dot motifs. The faces seem to conform to the rule of opposite sides totalling seven. It is difficult to guess where the central character of the face showing 3 would have been placed, as it would normally fall directly over the space of the marrow cavity. Perhaps a character was placed in three of the four corners. The surviving complete face measures 17.0 by 19.0 mm .
2502 Fig 102 SF BKC 221(C), A59. Post-Roman? A small worn die with the characters marked by single ring-and-dot motifs. Opposite faces total seven. 10.5 by 10.5 by 9.5 mm .

2503 Fig 102 SF BKC 5421, V729 L22. Dump. Late Period 5. The numerals are marked by double ring-and-dot motifs. Opposite faces total seven. 11.0 by 11.0 by 11.5 mm .
2504 Fig 102 SF BUC 1314, E623 F94. Pit/postpit. 4th or 5th century. A large die, now in four fragments split along the grain of the bone. The numerals are marked by double ring-and-dot motifs. Opposite sides total seven. 15.0 by 15.5 by 16.5 mm .

2505 Fig 102 SF BUC 1365, E652 L46. Destruction debris. Probably first half of the 5 th century. A large die, with the characters marked by single ring-and-dot motifs. Opposite sides total seven. It may be no coincidence that this piece derives from the same layer as the bone convex counter Fig $94,2281.16 .5$ by 16.5 by 16.5 mm . This die is the only very regular example recovered.

2506 Fig 102 A die, found by a machine operator, Mr Bill Yager, in soil dumped near the Colchester Institute from the town ditch at Balkerne Lane. Mr Yager kindly loaned the die so that it could be drawn. The faceted cuboid shape of the die probably implies that the object dates to the late 3rd or 4th century. This shape would probably also allow the die to roll very freely before coming to rest. The numerals are shown by double ring-and-dot motifs. This piece is also interesting in that it does not conform to the opposite sides total seven' rule. The face usually representing 4 shows 5 and vice versa. It seems that on the face that should represent 4, after

the four corner motifs were inscribed, a central one was added in error and thus to compensate the face that should have carried five motifs was given only four.

## Notes

1 Stephen Greep (pers comm) has divided Type 1 into two flat and countersunk examples. He suggests that flat counters made their appearance in the 1st century and countersunk counters in the 2nd century.
2 Roundels of Anglo-Saxon pottery have been recovered from the Flaxengate site, Lincoln. We should perhaps then be wary of allocating our four ambiguous counters to the Roman period. I am grateful to Jenny Mann of the Lincoln Archaeological Trust for this information and for her help with pottery counters generally.

## CATEGORY 6: OBJECTS EMPLOYED IN WEIGHING AND MEASURING

## SCALES

Descriptions of the use of both the balance and the steelyard can be found in Kisch 1966, 26-52 and Liversidge 1973, 176-7.

## Balance (scale with beam arms of equal length; libra) (Fig 103; 2507)

2507 Fig 103 SF LWC 453(C), B165 F70. Cellar backfill. Period 5. The arm of an equipoise balance with a central pierced lug for suspension and pierced decorative terminals for attaching the scale pans. Each half of the arm is graduated by eleven punched dots into twelve divisions, each division probably representing one ounce, uncia ( 27.29 gm ). The balance could therefore be used with a rider-counterpiece suspended on the various graduated spots along the arm as well as with weights in the scale pan (Kisch 1966, 36, 66). Length of the arm 253.0 mm . A complete balance with pans is illustrated in Ward-Perkins and Claridge 1976, catalogue no 249.

## Steelyard (scale with beam arms of unequal length; statera) (Fig 104; 2508)

2508 Fig 104 SF BKC 3463(C), J275. On floor of building destroyed in AD $60 / 1$. The arm and scale pan of a steelyard, total length 215.0 mm . The chains probably used to suspend the pan from the arm are missing, as is the counterweight. The pan was suspended from the very end of the thick part of the arm, and the counterweight moved along the points of the graduated scale until equilibrium was achieved, ie when the weight suspended times the distance along the arm were equal to either side of the fulcrum. This example, as is usual, has two suspension hooks providing two different fulcra, each with a corresponding scale marked on the arm (see Kisch 1966, 66). The scale on the face corresponding to the hook furthest in from the pan's suspension ring is divided into six by slight transverse grooves, each length thus given then being subdivided by eleven punched dots. Each groove represents a pound, libra ( 327.45 gm ) and each dot an ounce, uncia ( 27.29 gm ) of which there were twelve to the Roman pound. Below this scale, opposite the sixth dot of each pound, is inscribed an S formed by two crescents, representing semis, or six ounces ( 163.73 gm ) (ibid, table 12, chart 9). The other scale is less well preserved, but would appear to be marked out with a combination of transverse grooves and Roman numerals. (Numerals were used to mark the scales on a steelyard from Pompeii (Ward-Perkins and Claridge 1976, catalogue no 248), and a combination of numerals, grooves and dots defined one of the scales on a steelyard from Richborough, Kent (Henderson 1949, pl 38).) Despite the poor condition of the scale, it is possible to deduce the unit of measure involved and the minimum and maximum weight represented at each end.

The fulcrum provided by the outer hook on a steelyard involves the measuring of much greater weights than does that provided by the inner hook. It was usual for this greater scale to take up more or less where the lower scale left off (ibid, 131; Ward-Perkins and Claridge 1976, catalogue no 248). Therefore with a measure from 0 to 6 pounds on the lower scale, the first stop on the greater scale should represent 6 pounds. That this is so can be checked, for if the first stop represents 6 pounds and if each subsequent stop represents a pound, then the distance between the first stop and nought, ie the centre of the fulcrum, should be equivalent to that of six of the units marked on the arm. This is indeed the case. Each unit (ie each pound) in the greater scale measures approximately 5.0 mm . The distance from the centre of the fulcrum to the last transverse groove marked on the arm is about 200.0 mm , therefore up to 40 Roman pounds (just over 28.5 modern pounds) can be weighed using the outer fulcrum, and the stops marked on the arm ran from 6 to 40 pounds at one pound intervals. Traces of Roman numerals can be distinguished at intervals along the scale. However, apart from the row of three Xs (possibly with other numerals) near the end of the arm, the mid point of the central one of which lies at the point for 35 , there seems to be no correspondence between the numerals and the more obvious divisions of the scale, ie at 5 or 10 pound intervals.

On the thin edge of the thick part of the arm uppermost when the 6 to 40 pound scale is in use, traces of other letters or numerals are visible. Nearest to the outermost hook is a letter or numeral $C$ (on its back in the illustration) and a transverse groove. At least three other Cs can be distinguished. As the other faces of that part of the arm are blank, this is unlikely to be a decorative feature, and could be expected to relate in some way to the scale, though how has not been established.

The scale pan (found close to the steelyard arm) has a central perforation 5.5 mm in diameter. The rim of the pan has been folded over and there are two slight grooves round the outside of the pan below, and at intervals equivalent to, the depth of the fold. These grooves show through the metal on the inside of the pan. The roughly-made rim makes it unlikely that the pan was cast. Either spinning or turning (Hodges 1976, 74-5) seems to be indicated. Riveted to the pan at slightly unequal distances are three fittings (similar to harness strap-loops, Fig 149). Each fitting has a penannular ring passed through it which would have connected the chains or threads used to suspend the pan from the arm. A similar ring is fitted through the suspension hole at the end of the steelyard arm. The diameter of the pan is approximately 90.5 mm , its depth about 23.0 mm . Since the pan is perforated and the steelyard could apparently be used for large weights, it is apparent that this scale was not used for the minute quantities involved in pharmaceutical weighing, but for ordinary household or commercial weighing of solid goods.


Fig 103 Balance arm (1:2)



## WEIGHTS (Fig 105; 2510-2515)

2510 Fig 105 SF LWC 3584(C), J1551. Make-up, redeposited Period 2 demolition. Period 3. A cone-shaped lead weight with the remains of an iron shaft, square in section, embedded in the upper face. This shaft is all that remains of a hook or suspension loop. On the wall towards the top edge the object there is a stamp, either blundered or damaged which appears to be an M set on a ground line, surmounted by further markings, now illegible. The object weighs 189.1 gm, close to seven Roman ounces, so the marks above the $M$ may be S- for seven ounces (Kisch 1966, table 12).' The M probably stands for moneta, indicating the authority of the government department responsible for the control of weights and measures. Weights were inseparably linked to the monetary system, as being both the coin and the weight of the coin. Length 41.0 mm , diameter 36.0 mm
2511 Fig 105 SF LWC 3832(C), R69. Make-up. Period 4b. Copperalloy disc-shaped ?weight with an inscribed Lformed by two strokes of a chisel, set round two punched dots (Hassal 1978, 477, no 31). Maximum diameter 17.0 mm , thickness 1.5 mm . Weight 1.9 gm , possibly for two scruples (scripula) (there were 24 scruples to the Roman ounce). The inscription could also stand for two scruples (cf Kisch 1966, table 4).
2512 Fig 105 SF BKC 2859(C), H379 L13. Dump. Period 5b (end), and possibly into 5 c and 6 . Copper-alloy disc-shaped weight. Diameter 14.5 mm , thickness 2.5 mm . Weight 3.4 gm , possibly for three scruples (1/8 oz).


2511


2510


Fig 105 Weights (1:1)

## Note

As lead oxidizes very easily it was an unreliable metal to use for weights (Kisch 1966,81). The present weight of this object may therefore be misleading.

## CATEGORY 7: OBJECTS USED FOR OR ASSOCIATED WITH WRITTEN COMMUNICATION

## SEAL-BOXES

The method of use of seal-boxes is illustrated in Wheeler 1930, fig 33. Briefly, a seal-box served to protect the (often impressed) lump of wax which held together the bindings of a packet or writing tablet. Most seal-boxes have enamelled lids and consequently seem to belong to the 2nd or 3rd century. Similarities of design can occasionally be traced between enamelled plate brooches and sealbox lids (Henderson 1949, 124, no 75). The boxes catalogued here can be divided into four groups according to shape. The enamelled Types 2, 3 and 4 probably date to the 2 nd or 3rd century. There is some likelihood that seal-boxes ceased to be manufactured in the late 3rd century (ibid). All the boxes are of copper alloy except where stated otherwise.

Type 1 (Fig 106; 2516-2517). Acorn-shaped. Unfortunately, the one example definitely belonging to this type was found in a post-Roman context. The base of a seal-box probably of the same type (2516) derives from a context dated 61 to c 75, but this evidence is clearly insufficient to allow the type to be positively dated to the second half of the 1st century. A parallel has not been found.

2517 Fig 106 SF BKC 2578(C), H14 L2. Topsoil. Post-Roman. A seal-box with a hinged lid held in place between two lugs by a copper-alloy rivet. The lid has a central transverse groove and moulding. A line of punched dots runs along the groove and the moulding is marked by shallow knurling. Rows of punched dots decorate both the upper and lower halves of the lid. The design resembles an acorn (pendant in the figure). The inner part of the base has worn away. Length 28.0 mm , maximum width 15.0 mm , height 6.5 mm .

Type 2 (Fig 106; 2518-2521). Round. Two lids of this type survive, one apparently plain (2518), one enamelled.

2521 Fig 106 SF BKC 4526, T40 F19. Postpit. Period 5b. Around enamelled seal-box lid. The Champlevé enamel decoration consists of an outer band of ?blue enamel in which are set eight green eyes and an inner roundel of green enamel. The corrosion at the centre of this roundel probably conceals either an eye in a contrasting enamel or a small copper-alloy boss. The two lugs that formed the hinge between the base and the lid of the box are still fixed to the lid. Diameter 22.0 mm , thickness (not at the centre) 2.0 mm .

Type 3 (Fig 106; 2522). Square. The elaborately decorated example of this type undoubtedly belongs to the 2nd-century floruit of enamelling.
2522 Fig 106 SF BKC 3462(C), J254 F283. Pit. Periods 5c/6. A large seal-box decorated with both Champlevé and mosaic enamel. The colours here described are not always certain since enamels can change colour as they decay and are also discoloured by adjacent corroding metal. The lid is divided by copper-alloy walls into five strips of colour, from left to right green, red, white, red, blue. The two red strips are plain, the central white strip contains five mosaic enamel eyes, three of black set round yellow, one of red set round ?blue, and one damaged eye. This latter eye was probably also red set round


Fig 106 Sea/boxes (1:1)
blue, thus providing a symmetrical pattern. The two outside strips each held four eyes. In the centre of the right-hand strip two survive intact: one of white round black and one of white round red. An outer band of white survives at the lower end of the strip. In the left-hand strip only the lowest eye of white round red survives. It is probable that the eyes in both outer strips alternated white/red with white/black eyes. Unlike the usual seal-box design of a flat lid and walled base, this box has a walled lid and a walled base. The walls of the lid enclose those of the base except at the back, where they interlock and are riveted together by an iron pin. The walls to left and right have slant-sided cut-outs. The floor has faint marginal grooves and four perforations, one at each corner. The box measures 23.0 by 23.0 mm , with a height of 9.0 mm .

Type 4. Leaf-shaped. The nine examples found have been divided into two groups, a) a stylised leaf-shape with an inner leaf design in Champlevé enamel (Fig 106; 2523-2528).
2523 Fig 106 SF LWC 1918(C), J115 F57. Shallow pit. Late Roman or later. White metal. An elongated lead-shaped hinged lid, terminating in a knob. The inner design of a leaf (or heart, ibid, no 77) encloses a roundel. In the outer field on the long axis of the leaf is a solid spot of white metal. There is a second spot inside the inner leaf. The outer field may have been filled with niello, while the inner leaf and the roundel appear to have held yellow or white enamel. (It seems to be more usual for the roundel to contain the same colour as that of the outer field, see 2525.) The reverse of the lid is recessed. Beneath the terminal knob is a small locating pin to fix lid and base together accurately. Length 52.0 mm , maximum width 26.0 mm , thickness 2.5 mm .
2525 Fig 106 SF BKC 2712(C), H133. Contaminated. Modern? The lid of a seal-box similar to 2523, but lacking the spot inside the inner leaf. The outer band and roundel contain yellow enamel, the inner leaf ?green enamel. The reverse is recessed. There is a tiny locating pin beneath the terminal knob. Length 37.0 mm , maximum width 19.5 mm , thickness 2.0 mm .

2527 Fig 106 SF BKC 4593(C), T215. Collapsed destruction of Period 3. Period 3 (end). A very corroded lid. The design is rather more elaborate than that of the preceding stylised examples and it may well be that earlier examples as a whole were more elaborate. Projecting inwards from the rim of the lid around the circumference are semicircular lugs, with a circular lug suspended at the top. This lug is clearly related to the spot of metal in a similar position but unconnected to the rim on 2523 and 2525. From the Vshaped base the walls of the inner leaf project into the field. The metal tapers and is constricted at one point, forming a shape in which the origin of the roundel of 2523 and 2525 can be seen, and also the inner spot of 2523. Both the inner and outer fields appear to have held red enamel. The reverse is recessed. Length (incomplete, the tip is missing) 28.5 mm , maximum width 18.0 mm , thickness 4.0 mm .
b) other leaf-shaped boxes. This group contains three very differently ornamented lids, each of which could well represent a common subtype (Fig 106; 25292531).

2529 Fig 106 SF LWC 316(C), B86 F43. Pit. 12th to 15th century. An almost complete box, though the lid is now separated from the base. The lid has three perforations, each surrounded by a groove. These grooves may have held enamel decoration, or a large ornamental stud may have been fixed in each perforation and the grooves may mark the stud's diameter. The lid is bent. The base has three large perforations. There are opposing notches in the walls, and a thick locating pin beneath the lid. Length 39.5 mm , maximum width 16.5 mm , thickness 5.0 mm .

2530 Fig 106 SF BKC 2990(C), K L1. Overburden. Modern. A lid with a thickened tongue-shaped terminal. The field is filled with blue enamel, now partly missing. Near the hinge the wall projects into the field of the lid in a similar design to that of the inner leaf of $\mathbf{2 5 2 7}$. This lid may represent a debased form of Type 4a. Length 19.5 mm , maximum width 12.5 mm , thickness 2.0 mm .

2531 Fig 106 SF IRB 7(C), 32 (F25). Backfill of medieval grave. A complete seal-box with a round terminal flanked by two small lugs, rather like the voluted nozzle of a picture lamp. The terminal bears an incised ring-and-dot, possibly once filled with enamel. The field of the hinged lid is filled with red enamel. Round the circumference are ten eyes of blue mosaic enamel squares set round Champlevé enamel white dots. Two squares in the middle of the field are missing. The base has three perforations, each marked with a groove There are opposing notches in the walls and a small locating pin beneath the lid fits into a depression in the terminal of the base. Length 38.0 mm , maximum width 21.5 mm , thickness 7.0 mm .

## STYLUS (Fig 107; 2532-2535)

Complete styli may be seen in Merrifield 1965, pl 138. Most had a broad end for erasing and a pointed end for writing. Where on our example we should expect to see a point, there is instead a depression. Presumably separate, and therefore interchangeable, points or even nibs could be inserted on to this end, (perhaps with a projection which located in this depression). This instrument may therefore be both a stylus, for writing on a wax tablet, and a pen, for writing on paper.
2534 Fig 107 SF BUC 138(C), B180 G70. Grave deposit. Period 1. One of a pair, with 2535 , of exactly similar copper-alloy styli. The long erasing blade is waisted and tapers gently from a rectangular section ( 4.0 by 5.5 mm ) to the edge. The shaft is plain and circular in section (diameter 4.0 mm ) at the junction with the erasing blade, becoming octagonal in section above this plain band and swelling from 3.5 to 4.5 mm wide, terminating in a circular section stock which swells from 5.0 to 6.0 mm in diameter. The end of this stock bears a depression 3.0 mm in diameter. The point of the stylus (or a nib) could have been fitted in some way into this stock. Length 102.0 mm .


All the catalogued items connected with transport are from horse or oxen equipment except the ?cart fitting, 2545. Harness from both ridden and driven animals is no doubt represented here, but it is not always possible to distinguish between the two (eg straploops). Also, there is not always a positive means of distinguishing cavalry from civilian harness. Where an item seems likely to be military from its context it has been catalogued under military equipment.

## HARNESS

Hipposandal (Fig 108; 2536). Discussions of the precise function of hipposandals can be found in Manning 1972, 171, Ward 1941, 26-7, and Clark 1976, 236-7.
2536 Fig 108 SF BUC 1215(C), CI 661 L4. Modern. Iron. Length 217.0 mm , width (incomplete) 109.5 mm , height 117.5 mm . Hipposandals have been classified into three types (by Aubert, see Manning 1972, 171). This example belongs to Type 1, with a long hooked rod at the front, side-wings, and a hooked heel. One side-wing is missing.

Bridles (Fig 109; 2537-2538). No metal fragments
from bridles have been found or recognized. The two objects described here are cheekpieces, which lie outside the horse's mouth against the cheek and thus prevent the bit from sliding through the mouth (Green 1977, 41).
2537 Fig 109 SF LWC 4194, J214 F112. Pit. Post-Roman. A pierced ?deer phalange, possibly used as a cheekpiece for a leather bit (ORL 8, 182, pl 20, 91,92 ). Length 56.5 mm , maximum width 18.0 mm , maximum diameter of oval perforation 7.0 mm . Possibly post-Roman.
2538 Fig 109 SF IRA 1, 5 F5. Pit. Mid to late 1st century. A fragment of an antler cheekpiece for use with a leather bit. The object appears to be well polished, possibly the result of wear. In contrast, it has been quite roughly made. Crude cuts are visible round the perforation, at the broad broken end, and at the inset section. Similar cheekpieces are found from the prehistoric period onwards in both Europe and Asia (Roes 1960, 68-72; Britnell 1976; Foltiny 1967). A suggested alternative use for less well-worn examples is that they may be crude needles used in the manufacture of twig or rush matting or thatching (Roes 1960, 71-2). Length 88.0 mm , maximum diameter 19.0 mm .

Strap-loops (2539-2541). Only fragments of straploops identified as ?civilian were found. Not illustrated; in microfiche catalogue. Cavalry straploops are catalogued under military equipment.



Fig 109 Antler and bone cheekpieces from leather bits, copper-alloy terrets. harness mount, and cart fitting (1:1)

Terrets (Fig 109; 2542-2543). A terret is a ring mounted onto a harness-pad through which a driving-rein (or reins) passes and is thereby more easily controlled.
2542 Fig 109 SF BKC 2076(C), G19. Surface cleaning. Period 5c. A well-preserved copper-alloy terret. There is a plain discmoulding at each side of the broad convex attachment plate, and three grooved astragaloid mouldings projecting from the circular section ring. Maximum diameter 62.5 mm .

2543 Fig 109 SF BKC 2772(C), H239 F68. Hearth over pit. Period 5c. A crudely made copper-alloy terret (Henderson 1949, pl $36,124)$. The junction of the lower loop with the main ring on the left hand side is particularly crude. Length 57.5 mm , maximum width 40.0 mm .

Harness mount (Fig 109; 2544)
2544 Fig 109 SF BUC 1704, H1004 L31. Period 1. A copper-alloy harness mount (ibid, pi 36,122 ) with two confronting
hearts, each with a high central boss. The design is reminiscent of button-and-loop fasteners (Wild 1970b, fig 1, Class 3).

## CART FITTING (Fig 109; 2545)

2545 Fig 109 SF COC 203, 965 L282. Road metalling sealed by topsoil. Period 4. Part of a copper-alloy cart fitting, found crushed into a road surface. Originally the piece would have had an eagle's head above the hexagonal socket, and the projecting hook may have terminated in a swan's head. The reins of a stationary vehicle would have been secured to such a fitting (Webster 1958, 74). The distribution and date of similar pieces suggests a military connection (ibid, 75, where full references are given). However, a late 2 nd- or early 3rd-century example, possibly residual, was found at Chichester, West Sussex (Down 1978, 47). The Colchester example appears to be civilian and is not residual, being on the street surface.

## CATEGORY 9: BUILDINGS AND SERVICES

The finds belonging to this category will be dealt with in more detail in the site reports since, as for example with fragments of architectural stone, these are best seen in the light of the structure with which they are associated. Catalogue numbers have been allocated to these pieces and brief descriptions are given in note form on microfiche.

Wall veneer and other architectural stonef ragments (except tesserae): 2546-2821.
Tesserae (other than of tile) not directly associated with a mosaic: 2822-2866.
Water-pipe junction collars and associated finds: 2867-2914.

## CATEGORY 10: TOOLS

## TOOL HANDLES

Most of the catalogued handles probably come from knives. Some may be from razors (2938-9). All but two of the handles are of bone or antler. The bones used in most cases can be identified as long bones. The handles are illustrated with the blade end downwards.

Three methods of attaching a handle to the tang of a knife or tool are distinguishable. First, riveting which was used on two-piece handles (Fig 111, 2933). Second, driving the tang into the marrow-cavity of the bone, which was usually packed with woodshavings', so that the irregularities of cancellous tissue and the wood-shavings prevented the tang from twisting or slipping out (often a collar was also used with this method). Third, fixing the tang in tension against the handle by means of an iron clip. The handle types on which this last method was used are the subject of a paper by Stephen Greep (forthcoming a). This paper illustrates not only complete extant examples, but also a relief (CIL 6, 16166) on which several forms of handle and blade are shown, including pieces with tension clip fittings. This method of attachment is described below under one-piece waisted handles.

## BONE AND ANTLER HANDLES

## One-piece handles

a) plain (Fig 110; 2915-2920). Handles similar to these are found throughout the Roman period.
2915 Fig 110 SF LWC 895(C), A292. Period 3b. A polished and only slightly worked metapodial. One articulated end has been sawn off, the other has been sawn through to provide a thickened grip. There is green staining from association with corroding copper alloy at the narrow end, probably from a collar. Length 82.5 mm , maximum diameter 13.5 mm .

2916 Fig 110 SF LWC 4208, J571. Floor level Period 4. A roughly-
made handle of red deer antler, slightly curved, with the outer surface trimmed. A fragment of an iron tang is visible in the narrow end of the handle. It does not pierce through to the broad end. Length 56.0 mm , maximum diameter 22.5 mm .
b) with a waisted end. These handles appear to be Claudian-Neronian in date, though they may survive into the early. Flavian period. In Britain their distribution covers the area of early military occupation and civilian settlement. While they clearly arrived in Britain with the Roman army, there is no good reason to suppose that they were specifically military. The relief depicting knives with these handles in a cutler's shop (ibid) indicates rather that they had civilian uses. Moreover, the great range in size of the handles suggests that they were fitted onto blades of widely varying size and function. ${ }^{2}$

These handles were attached to the tang of the knife blade by a complex method involving the use of a tension clip. While none of the Colchester examples has a surviving clip, Stephen Greep's work on the handle types enables the method to be described. At each end of the handle a groove was cut across the transverse section (both slots were parallel). The top of the blade slotted into the groove at the lower end, and an iron strip of rectangular section fitted into the upper groove. The tang, which rose from the centre of the blade, extended up the handle to pass through a hole in the iron strip in the upper groove. The end of the tang was hammered flat to hold both blade and strip in position. To hold the blade firmly to the handle, and to stop any lateral movement of the tang, the end of the handle was waisted and the ends of the strip coiled into spirals and positioned in this waist so that the hammered end of the tang was pushed outwards against the end of the handle. The strip thus acted as a tension clip rather than simply as a washer, and was, in addition, decorative. That this method of


Fig 110 One-piece bone and antler handles (1:1)
attachment was probably not particularly effective is perhaps demonstrated by the fact that it ceased to be used in or by the Flavian period.
i) plain (Fig 110; 2921-2924). See also the iron blade with a small fragment of one of these handles still attached (Fig 113, 2947).

2921 Fig 110 SF LWC 1209. B672 F158. Ditch. Period 1. A complete bone handle with no trace of the iron tang. The upper end has a narrow waist and the lower (blade) end is pinched on the plane of the blade. Both upper and lower slots are clearly seen in the illustration, in which the piece is viewed from the side. The handle is made from a solid piece of bone (possibly horse) and the hole for the tang bored through. Regular striations from a drill bit can be seen on the walls of the perforation. Length 76.5 mm , maximum width 13.5 mm . Oval section.

2922 Fig 110 SF BKC 1713(C), E1009 L320. Fill of slot (F299). Period 2. A similar, slightly damaged, bone handle. The tang survives in the handle and a fragment of the iron clip survives in the groove in the upper end. Also made from a solid piece of bone. Length 81.0 mm , maximum width approximately 15.0 mm . Oval section.
ii) decorated (Fig 110; 2925-2926). See also the two-piece handle Fig 111. 2934.

2925 Fig 110 SF BKC 669(C), C unstratified. A damaged bone handle, part of one side has broken away, and the remainder is cracked from the pressure of corroding iron. Most of the pinched lower end has broken off. Both sides of the handle are decorated with three longitudinal grooves. Surviving length 66.5 mm , maximum width 15.0 mm . Oval section.
2926 Fig 110 SF BKC 3816(C), K639. Modern surface cleaning. Most of a rectangular section handle with slightly concave upper and lower faces, each with a raised central rib. The lower pinched end is damaged, but the groove for the blade is still visible. The tang survives in the handle, and part of a corroded clip remains in the upper groove. There are two small iron pins to one side of the midrib on one face. Length 74.0 mm , section 8.5 by 14.5 mm .

c) with incised decoration. These handles are generally of 3 rd- or 4 th-century date.
i) bands of trellis decoration at each end (Fig 110; 2927-2929)

2929 Fig 110 SF BKC 2408(C), G389. Uncertain. Period 4 or 5. A complete bone handle made from a metapodial. Most of the length of the bone was used, thus giving the handle a natural waist. The iron tang survives in the handle. Length 96.5 mm , maximum width 23.0 mm .
ii) ladder decoration (Fig 110; 2930-2931)

2930 Fig 110 SF BKC 5851, D401. Town ditch fill. Late Period 6 or Anglo-Saxon. Fragment of a bone handle made from a metapodial and with a natural waist as 2929. Each broad face is decorated with incised zig-zag ladder decoration, two ladders on the illustrated face, possiblythree on the reverse. There are traces of iron at the complete end, which may or may not be the lower end. Length 82.5 mm , maximum width 26.5 mm .
iii) chevron grooving (Fig 110; 2932)

2932 Fig 110 SF MID 767, A3006 F920. Stoke-pit of Period 3. A complete waisted bone handle with a fragment of an iron blade surviving at one end. The tang appears to run the length of the handle. The section of the handle is heptagonal, and each end is decorated with three parallel grooves which pass alternately up and down on each face to form chevrons. Because of the heptagonal section the grooves have to follow one direction on two contiguous sides to enable a continuous line to be formed. Probably made from a metapodial. Length (without the blade) 94.5 mm , maximum width 18.5 mm .

Two-piece handles (Fig 111; 2933-2937). Only individual examples have been recovered.
2933 Fig 111 SF LWC 896(C), A290. Dump or backfill of Period 1 ditch. Period 1 destruction or Period 2. A tapering bone handle made from two rectangular section plates decorated with a panel of converging grooves. The handle and tang are fixed by six copper-alloy rivets. The plain band at the narrow


Fig 111 Two-piece bone and antler handles (1:1)
?blade end is slightly pinched.
2934 Fig 111 SF BKC 5953, K541 L125. Make-up. Period 2. A two-piece handle with waisted end clearly related to similar one-piece handles (2921-6). As with one-piece examples the upper end is waisted and the lower pinched on the plane of the blade. Each plate has a raised rectangular central panel decorated with deeply incised crosses and transverse grooves and with marginal mouldings. The handle is fixed by three copper-alloy rivets (or possibly iron rivets with copperalloy caps). Length 78.0 mm , maximum width 14.0 mm . (These measurements do not include the attached iron corrosion products.) For other two-piece handles of similar type see Greep forthcoming a. This handle is ClaudianNeronian in date.

2935 Fig 111 SF BKC 5111 (C), V250 F59. Slot? Period 5? A handle of two convex plates fixed by two iron rivets. Part of the blade survives. Each plate is decorated with panels of trellis work and transverse grooves. A date contemporary with that of its context is likely for this piece.
2936 Fig 111 SF CPS 963, 842 L115. Make-up. Period 4. One convex plate of a two-piece curved handle of red deer antler. The piece is roughly sawn and trimmed, and may be unfinished. Two large ?rivet holes pierce the plate. Length 64.5 mm , maximum width 25.0 mm .

COPPER-ALLOY HANDLES (Fig 112; 29382939)

Both the following handles could be for knives or razors (Waugh and Goodburn 1972, 124).
2938 Fig 112 SF BKC 3011, J38 L4. Dump. Period 5b. A heavy handle with parts of the iron tang surviving. There are two cut-outs on each face, one horizontal, one vertical, through which the tang can be seen. These cut-outs may have held some form of decoration (ibid). Maximum length 73.0 mm , maximum width 22.0 mm . A similar form exists in ivory and dates to the 1st century (Greep forthcoming a).
2939 Fig 112 SF BKC 5294, V234 L21. Dump. Period 4. A lighter handle with hollow suspension loop and cut-out. Part of the iron tang survives towards the lower end. Maximum length 69.0 mm , maximum width 18.0 mm .



Fig 113 Knife blades (1:2)

## IRON KNIFE OR CLEAVER BLADES

(Fig 113; 2940-2951)
2942 Fig 113 SF LWC 2990(C), J802 F261. Shallow pit. Period 4 or post-Roman? Fragments of a blade with part of a tang of rectangular section. The edge and back of the narrow blade appear to be straight and parallel. The tip is missing. The fine edge makes this unlikely to be a hand-saw blade (cf Manning 1974, fig 70, 356-60). Length 119.0 mm , width 15.0 mm .

2944 Fig 113 SF LWC 3343(C), J1071 F353. Pit. Period 4a (early). Two fragments of a knife with the blade and handle made in one piece (Manning 1972, fig 65, 41). The blade is too corroded for description. Fragments of two rivets survive in the handle, indicating probably that two bone or wooden plates were originally attached to provide a smooth grip. This is supported by the differing degrees of corrosion affecting blade and handle, and also by the ridge of corrosion along part of one edge of the handle. The handle ends in a loop. No measurement of length can be given as the central part of the handle is missing. Width approximately 20.0 mm
2947 Fig 113 SF LWC 3483, J1232 F419. Pit. Period 1. Two fragments of a knife with a square section tang. The edge of the blade is straight and the back curves to meet it at the tip, which is missing. Adhering to the tang is a small fragment of iron-impregnated bone, the position and shape of which suggests that the handle to this knife was probably of the plain waisted one-piece type described above (Fig 110). Certainy the shape of the blade conforms to that of complete examples fitted with this type of handle (Greep forthcoming a, fig 1, 1, pl 1), and the central tang further supports this idea. Length (incomplete) 180.0 mm , maximum width of blade 29.5 mm .
2949 Fig 113 SF BKC 5067, T93 L31. Occupation with charcoal. Period 1. A small heavy knife or cleaver with an arched back and a handle continuing the curve of the back. The edge of the blade seems to have been straight originally. The edge towards the tip has broken off. There is a similar early cleaver from Hod Hill (Brailsford 1962, pl 8, G91) and another from Kingsholm (see Manning 1974, 171). Length 210.0 mm , maximum width 47.0 mm .

2950 Fig 113 SF BUC 387/391, B1062 GI71; Grave deposit. Period 2. An iron knife in three fragments with a copperalloy handle. The handle has bead-and-reel mouldings and a terminal suspension loop through which is passed a copperalloy penannular ring, originally fixed with a soldered lap joint which has now sprung apart. Through this ring passed a copper-alloy chain of S-shaped links of rectangular to Dshaped section. The chain has a hook-and-eye fastener decorated with rough incised lines. The knife has a straight edged and curved back. The tip is missing. The tang is set in from the edge. Length (incomplete) of knife including handle 120.5 mm . Maximum width of blade 22.5 mm . Surviving length of chain with fastener 674.0 mm . Adhering to one side of the blade and base of the handle are fragments of textile. The weave is plain and part of a selvedge can be distinguished. A report by John Peter Wild on the textile is given under 4301 . The blade may have been sheathed in a leather scabbard before it was wrapped in the cloth. An iron knife (2950a) wrapped in textile was found in an inhumation in the St John's Abbey cemetery (IRB).

## HONES (Fig 114; 2952-2972)

While the majority of the hones are of calcareous sandstones deriving from either the Hythe Beds of Kent, the Spilsby sandstones of Lincolnshire, or possibly the Howardian Hills of West Yorkshire (the two former are the most likely sources), two rather more unusual examples are 2957 from the area of the Forest of Dean and 2961 from the south-west peninsula. ${ }^{3}$
2953 Fig 114SF LWC 687, B287 F111. Shallow pit or settlement. Period 5. A fragment of a rectangular section hone, 290 by 19.0 mm . The undersurface is rough and clearly has not been used. Micaceous calcareous sandstone with ostracod fragments. Length (incomplete) 59.5 mm .


Fig 114 Hones (1:2)


Fig 115 Various iron tools (1:2)

2956 Fig 114 SF LWC 3452, J1232 F419. Pit. Period 1. Rectangular section hone worn down to a point at one end. Calcareous sandstone with ostracods and a few mica flakes. Maximum dimensions 24.0 by 23.0 mm . Length 79.5 mm .

2957 Fig 114 SF BKC 948, D344 L24. Town ditch fill. AngloSaxon. Fragment of a slightly curved hone with an oval section tip worn down to subrectangular at the broken edge. Fine-grained micaceous haematitic sandstone of pennant type from the area of the Forest of Dean. Maximum dimensions 39.0 by 23.0 mm . Length (incomplete) 85.5 mm .
2961 Fig 114 SF BKC 2288, G49 F11. Timber-lined drain. Period 5 c . Fragment of an irregularly-shaped hone of reddened phyllitic micaceous sandstone from the south-west peninsula. Both ends are broken, and the surface of one broad face has split off. Length (incomplete) 114.5 mm , maximum width 35.0 mm , maximum thickness 16.0 mm .
2962 Fig 114 SF BKC 2456, G354 F11 ?Timber-lined drain. Period 5c. Complete hone, worn on all faces. Unidentified micaceous sandstone. Rectangular section, maximum dimensions 23.0 by 15.5 mm . Length 81.5 mm .
2966 Fig 114 SF BKC 5083, K140 F15. Gully/ditch. Period 6. ?Complete hone. The straighter end may have been broken and subsequently abraded. Calcareous sandstone with ostracods and a few mica flakes. Rectangular section, maximum dimensions 35.0 by 21.0 mm . Length 109.5 mm .
2968 Fig 114 SF BKC 5832, V633 F139. Pit. Period 2. ?Complete hone of rectangular section, 22.5 by 20.0 mm . Finer-grained calcareous sandstone with ostracods and a few mica flakes. Both ends are quite rough and may be slightly abraded fractures. Length 78.0 mm .
2969 Fig 114 SF BKC 5708, V938 L11. Dump? Late Period 5. Fragment of a hone of rectangular to oval section. Calcareous sandstone with ostracods and a few mica flakes. Maximum dimensions 24.0 by 16.5 mm . Length

## VARIOUS IRON TOOLS (Fig 115; 29732981)

2974 Fig 115 SF LWC 4313, B642. Dump. Period 1. A small tanged punch with a square stem. The tip is damaged but was probably square-ended. The tang is of round section. Length 78.5 mm .

2975 Fig 115 SF LWC 1027(C), C324. Make-up. Period 4? A trowel, probably used by a mason, with an offset handle cast in one with the blade. Length approximately 290.0 mm .
2977 Fig 115 SF BKC 1774, E922 L270. Silt. Period 1b or 2. A tanged chisel with rectangular section blade. The edge is no longer straight. Length 163.5 mm .
2978 Fig 115 SF BKC 5068, T150. In and below clay floor (L49). Period 2. A pick with chisel edge and one end and two tines at the other. Both the tines are damaged. The eye for the handle is oval. There is no expansion round the eye. Length (incomplete) approximately 230.0 mm , width of chisel edge 55.0 mm .

2979 Fig 115 SF BKC 4852(C), T245 F112. Pit. Period 5c. An iron handle with rectangular section shaft, most of which is twisted. Possibly from a small fire shovel (Manning 1972, fig 60, 6). Length 96.0 mm .
2980 Fig 115 SF BUC 1729. E886 L75. Fill of grave-like feature. 4 th century. A tanged punch with a square stem. The tip is square-ended. Most of the tang, which is square in section, is missing. Length 112.5 mm .
2981 Fig 115 SF BUC 1726, H769 F49. Pit. Medieval or later. A small corroded pair of shears, in three fragments. The spring is looped. Possibly post-Roman. Length 130.0 mm .

## Notes

I am grateful to Stephen Greep for this information.
2 The Culver Street excavation of 1982 produced an example of this type of handle only 52.0 mm long.

3 I am grateful to .Robin Sanderson and Martyn Owen of the Institute of Geological Sciences, London for these identifications.

## CATEGORY 11: FASTENINGS AND FITTINGS

This category includes many objects which cannot be assigned with certainty to Category 4 (household utensils and furniture), Category 9 (buildings and services), or even, in the case of some copper-alloy studs to Category 1 (personal ornament or dress), or Category 13 (military equipment). Pieces which are clearly fittings of some kind but which do not fall into one of the groups dealt with in this category have been catalogued under Category 18 (function or identification unknown or uncertain).

## NAILS AND STUDS

## COPPER-ALLOY NAILS

The distinction between nails and studs is to a large extent subjective. The dimension of the head has been the factor in deciding to which group an object belongs. Many nails have a head designed to project above, and thereby decorate, the surface into which they are fixed. This is a major characteristic of studs. Some studs, on the other hand, have a flat head, a characteristic often associated with nails.

Nails with a globular, bun-shaped or biconical head, almost certainly from furniture upholstery (Fig 116; 2982-3050)
2992 Fig 116 SF LWC 2858(C), J445. Occupation? Period 4 Diameter of head 6.0 mm . Polygonal section shaft. Length 24.5 mm .

2995 Fig 116 SF LWC 2821(C), J603. Make-up for second


Fig 116 Copper-alloy nails with a globular, bun-shaped or biconical head (1:1)
gravelled yard surface. Period 4a. Diameter of head 10.0 mm . Circular section shaft. Length 35.0 mm .

3002 Fig 116 SF LWC 3132(C), K287. Surface trowelling, mainly of Boudican deposits. Period 3. Diameter of head 8.0 mm . Polygonal section shaft. Length 37.0 mm .
3021 Fig 116 SF BKC 3106(C), J39 L1. Site clearance. Diameter of head 9.0 mm . Square section shaft, clenched. Length 27.0 mm .

3029 Fig 116 SF BKC 3280(C), K308 L24. Dump. Periods4c/5/6. Diameter of head 9.5 mm . Thick circular section shaft, incomplete. Length 29.5 mm .

Nails with a flat head (Fig 117; 3051-3080)
3057 Fig 117 SF LWC 3570(C), J1498. Period 2 street, contaminated. Period 3. Diameter of head 6.5 mm . Polygonal section shaft. Length (bent) 24.0 mm .
3059 Fig 117 SF LWC 3742, K446 F231. Robber trench. Period 3. Diameter of head 5.0 mm . Square section shaft. Length (bent) 7.0 mm .
3067 Fig 117 SF BKC 3479(C), J238 F13. Large pit. Period 5b. Subrectangular head, 7.5 by 10.0 mm . Square section shaft, incomplete. Length 65.0 mm .
3070 Fig 117 SF BKC 5143(C), V152 L14. Oyster layer (dump). .Period 5. Diameter of head 4.5 mm . Square section shaft, incomplete. Length 18.5 mm .
3073 Fig 117 SF CPS 743(C), 724 L96. Make-up. Period 4. Diameter of head 11.0 mm . ?Polygonal section shaft, incomplete. Length 30.0 mm .


Fig 117 Copper-alloy nails with a flat head (1:1)

Nails with a convex head (Fig 118; 3081-3091)
3081 Fig 118 SF LWC 3702(C), J1701. Dump or occupation. Period 1. Diameter of head 5.0 mm . Square section shaft, bent. Length 27.0 mm .
3082 Fig 118 SF LWC 3781(C), K453. Make-up. Period 3. Diameter of head 5.5 mm . Polygonal section shaft, incomplete. Length 14.5 mm . An upholstery nail.

3091 Fig 118 SF MID 690, A2679 L263. Demolition debris. Period 3. Diameter of head 8.0 mm . Rectangular section shaft, bent. Length approximately 13.0 mm . An upholstery nail.


Fig 118 Copper-alloy nails with a convex head (1:1)

## Miscellaneous nails (Fig 119; 3092-3094)

3092 Fig 119 SF BKC 1496(C), E747 L217. Make-up. Period 3b. This nail is either headless (and therefore a brad) or its head has broken off. The shaft varies in section from circular at the top to rectangular at the tip. Length 20.0 mm .
3093 Fig 119 SF BKC 1902(C), E1203 F316. Daubwall. Period 1 b. Nail with a pyramidal head, 8.0 by 10.0 mm . The incomplete circular section shaft is either clenched or bent. Length approximately 31.0 mm .


## COPPER-ALLOY STUDS

Studs with a flat head (Fig 120; 3095-3137). The concentric mouldings and slightly down-turned rim on many studs with a flat head were, as well as being decorative, designed to provide extra grip on the surface, presumably leather, into which they were set.
3096 Fig 120 SF LWC 684(C), B293. Topsoil. Post-Roman. A stud with an originally flat head, now curved as if it has been bent over a strip of wood. Diameter of head 26.5 mm . Square section shaft. Length 13.5 mm .
3098 Fig 120 SF LWC 1078(C), C413. Make-up. Period 3b. A stud with an originally flat head. On the undersurface are two slight concentric convex mouldings. Diameter of head 21.0 mm . Square section shaft, incomplete. Length 7.0 mm .

3100 Fig 120 SF LWC 3240(C), J813. Make-up. Period 4a. On the undersurface is a single concentric convex moulding and the rim is turned down. Diameter 15.5 mm . Square section shaft, incomplete. Length 5.0 mm .
3101 Fig 120 SF LWC 3155(C), J927. Make-up. Period 4a. A stud head with a very slight convex moulding atthe rim. Diameter 18.0 mm .

3105 Fig 120SF LWC 3733(C), K441. Period 4b or 3. The head is slightly convex at the centre. Diameter 29.5 mm . Square section shaft. Length 6.5 mm .
3110 Fig 120 SF BKC 2649, H63 F28. Sand pit. Period 6. The head is folded upwards in half. There is a slight moulding, flattopped, on the undersurface near the rim. Diameter 28.5 mm . Rectangular section shaft. Length 10.0 mm .

3111 Fig 120 SF BKC 3339(C), J188 F34. Pit. Period 5b (end). Fragmented stud (one piece only is illustrated). The rim is turned down and there is a concentric convex moulding, hollow on the underside, midway between centre and rim. Diameter 26.5 mm . Circular section shaft, incomplete. Length 8.5 mm .

3117 Fig 120 SF BKC 4166(C), N119 F34. Pit. Period 5b1. A stud with a riveted shaft. Diameter of head 23.5 mm . Circular section shaft. Length 7.5 mm .
3124 Fig 120 SF BKC 4819. T564. Period 1 or 2. Part of the head is missing. Diameter of head 11.0 mm . Square section shaft. Length 5.0 mm .

3132 Fig 120 SF BUC 412, B1134 F149. Grave fill. Period 2. Diameter of head 11.0 mm . Square section shaft. Length 5.0 mm .

3134 Fig 120 SF BUC 634, C1270 F57. Pit. Post-Roman. The rim of this stud is turned down. Diameter 16.5 mm . Square section shaft, incomplete. Length 5.0 mm .

## Studs with a convex head (Fig 120; 3138-3216)

3138 Fig 120 SF LWC 672(C), A179, Make-up for mortar floor. Period 4. A corroded stud head, with a small rim. Diameter 16.0 mm .

3140 Fig 120 SF LWC 713, A235. Surface cleaning. Earlier than Period 4. Stud with a high convex centre and rim. Diameter 22.5 mm . Square section shaft, incomplete. Length $11,0 \mathrm{~mm}$. Similar to 3148 but without the flange.
3141 Fig 120 SF LWC 987, A363. Occupation debris from industrial activity behind rampart. Period 1. A small plain stud. Diameter of head 8.5 mm . Circular section shaft, clenched. Length 11.5 mm .
3148 Fig 120 SF LWC 1044(C), C424. Make-up. ?Period 4. A stud head in three fragments with high convex centre and flanged convex rim. Diameter 25.5 mm .

3149 Fig 120 SF LWC 1111(C), C459. Cultivated soil. Periods 2?, 3a? and 3b? A slightly damaged stud. Diameter of head 28.0 mm . Square section shaft, bent. Length 11.0 mm .

3151 Fig 120 SF LWC 1627(C), H8. Topsoil. Roman?/AngloSaxon?/16th to 17 th century? A stud with a head slightly flattened on the top. Diameter 16.0 mm . Square section shaft. Length 27.0 mm . Possibly post-Roman.
3152 Fig 120 SF LWC 2458, J409. Floor (?contaminated). Period 4. A small stud similar to $\mathbf{3 1 5 1}$. Diameter of head 7.0 mm . Square section shaft, bent. Length 14.0 mm .
3157 Fig 120 SF LWC 31 50(C), J914(F59 contaminated). Timberlined drain. Period $4+$. Diameter of head 26.0 mm . Square section shaft, incomplete. Length 9.0 mm .
3159 Fig 120 SF LWC 3421(C), J1201. Make-up? Period 4a. The head is damaged. Diameter 14.5 mm . Square section shaft, incomplete, bent. Length 8.5 mm .
3160 Fig 120 SF LWC 3474(C), J1269. Make-up or dump. Period 1. A damaged composite stud with copper-alloy head, iron shaft and ?lead filling. Similar to studs from the Butt Road box(2179-82). Diameter of head 30.0 mm . ?Square section shaft, incomplete. Length 8.5 mm .
3161 Fig 120 SF LWC 3506(C), J1343 F465. Pit. Period 4? A thick plano-convex stud head. Diameter 14.5 mm .

3165 Fig 120 SF LWC 3914(C), R95 F24. Street. Period 2b. Diameter of head 11.5 mm . Square section shaft, bent. Length 23.0 mm .
3168 Fig 120 SF BKC 2123(C), G10 L6. Clay' floor. Period 5a or 6. A stud head or boss similar to 3148 but thicker. This may, however, be a result of corrosion. Diameter 22.0 mm .

3173 Fig 120 SF BKC 3718(C), J475. Unstratified. Diameter 22.5 mm . Square section shaft, incomplete. Length 21.0 mm .

3187 Fig 120 SF BKC 5201(C), V271 L46. Make-up? Period 5. Similar to 3151 . Diameter of head 19.5 mm . Square section shaft, incomplete. Length 9.0 mm .

3190 Fig 120 SF BKC 5253, V375 F198. Pit. Modern? A very small stud. Diameter of head 4.0 mm . ?Square section shaft, bent. Length 5.0 mm .


Fig 120 Copper-alloy studs with a flat or a convex head (1:1)

3199 Fig 120 SF CPS 858(C), 905 L121. Cellar material, burnt Period 3. Small slightly convex stud with a hollow convex moulding midway between centre and rim. Diameter 10.0 mm . ?Circular section shaft, incomplete. Length 2.0 mm .

3209 Fig 120 SF BUC 626, C1254 L4. Modern. Stud in three fragments. The head has a sunken centre. Diameter 14.0 mm . Circular section shaft, clenched. Length 16.0 mm .

3215 Fig 120 SF COC 167, 755 L221. Period 3. Similar to 3138 with riveted shaft. Diameter 12.5 mm . ?Section shaft. Length 6.0 mm .

Enamelled studs (Fig 121; 3217-3221)
3217 Fig 121 SF LWC 1142(C), B608 F70. Cellar. Period 5. A small stud with a ring of ?yellow enamel round a central copperalloy dot. Diameter of head 9.0 mm . ?Circular section shaft, ?incomplete. Length 5.0 mm .

3218 Fig 121 SF LWC 394(C), B unstratified. Stud with an outer ring of red enamel, now mostly missing, which contained probably eleven white enamel spots. There is an inner ring of ?turquoise enamel and a central dot. The dot and two rings are separated by copper alloy-walls. Diameter 18.0 mm . The square section shaft is set off-centre. Length, incomplete, 6.0 mm .

3219 Fig 121 SF BKC3312(C), J176 F32. Pit. Periods $5 c / 6$. A leafshaped stud. The head is filled with ?green enamel. Length of head 11.0 mm . Square section shaft. Length 18.5 mm .

3220 Fig 121 SF BUC 260, B384. Unstratified. The stud has two concentric bands of Champlevé enamel, the outer 'yellow, the inner ?green, with a central dot of copper alloy. The rim is slightly notched. Diameter 15.5 mm . ?Circular section shaft, incomplete. Length 4.0 mm .

3221 Fig 121 SF MID 689, A2684 L308. Make-up. Period 3b. Similar to 3220. The outer band is yellow, the inner green. There appears to be no central dot. Diameter 18.0 mm . Thick circular section shaft, incomplete. Length 7.0 mm .


Fig 121 Enamelled copper-alloy studs (1:1)

Other decorated studs (Fig 122; 3222-3227)
3222 Fig 122 SF LWC 3127(C), L372. Make-up or ?cultivated soil. Period 3a (+2). Stud with the head of Pan, similar to a stud from Haltern (Albrecht 1943, Abb 21, i) and one of Silenus from Verulamium (St Albans, Hertfordshire) (Waugh and Goodburn 1972, pl 38, e). The head is well executed, with fine curly beard, slanted animal-like eyes and wavy hair. A pair of horns is set close to the head. Height 17.5 mm . Oval section shaft, incomplete. Length 13.5 mm .

3223 Fig 122 SF BKC 1978(C), E1282 L392. Levelling. Period 2. Stud in the form of a dolphin. The crested tail is marked off from the body by a groove. The design seems to have been quite plain. The piece has been quite badly corroded. Length upright 19.0 mm , nose to tail 28.0 mm . The remaining
fragment of shaft is circular in section
3224 Fig 122 SF LWC 812(C), C101. Period 4 destruction. Late Roman or early post-Roman. A stud with slightly notched rim. Diameter of head 14.0 mm . ?Square section shaft, bent over. There isa slight moulding on the undersurface. Similar to a stud from Verulamium (ibid, fig 38, 102).
3225 Fig 122 SF BKC 5009(C), V116 L16. Cultivated soil. Late Period 5, possibly earlier. A lozenge-shaped stud with riveted shaft. Two of the points are missing. There is a marginal groove. Maximum length probably 20.0 mm . ?Circular section shaft, 6.5 mm long.
3226 Fig 122 SF BUC 146, A618 G48. Coffin fill. Period 1. Two fragmentary rosette-shaped stud heads with convex centre and rim (only part of one is illustrated). Diameter 17.5 mm . Almost certainly from an article of clothing.
3227 Fig 122 SF MRC 54(C). Unstratified. A large stud with convex rim and concentric convex moulding within which the field is filled with a paste-like inlay on which human figures can be discerned. There appears to be a ?naked ?female figure to the right, facing left, possibly reclining on a couch. Another figure, clothed, faces the first with right arm extended. The scene could represent Cupid and Psyche, but it must be stressed that the inlay is not well preserved and interpretation of the figures has been largely subjective. Diameter 31.0 mm . Square section shaft, bent, 13.0 mm long.


Fig 122 Other decorated copper-alloy studs (1:1)

## IRON NAILS AND STUDS

3228-4029 Not illustrated; in microfiche catalogue

## RIVETS (Fig 123; 4030-4034)

Rivets, or riveted studs, were used principally for attaching copper-alloy fittings to leather (eg beltplates on a military belt) or iron (eg hinges on
laminated armour). There are copper-alloy rivets on the military dagger scabbard (Fig 154). Though military equipment illustrates clearly the use of such rivets, they were by no means confined to arms and armour. All the examples catalogued here are of copper alloy.
4031 Fig 123 SF BKC 2769(C), H228 F68. Hearth over pit. Period 5c. A double-headed rivet. Each head has a marginal groove and central small hollow. To enable this rivet to befitted one head, presumably the one now detached, must have been made with a central hole which passed over the shaft of the other head and was fixed by riveting the shaft. However, the shaft fits neatly to the head and there seems to be no double thickness of metal. Diameter of heads 12.0 mm , length 7.5 mm .

4033 Fig 123 SF BKC 4737, T522. Period 1 (or 2). A flat-headed rivet. Diameter of head 8.0 mm , length 3.0 mm .
4034 Fig 123 SF BUC 809(C), C1739 F62. Ditch. Period 1. A conical-headed rivet. Diameter of head 7.5 mm , length 9.0 mm .


Fig 123 Rivets (1:1)

## BOSSES

The term boss has here been applied only to hollow convex objects with no central shaft, though strictly a boss is 'a metal stud used for ornament' (OED sub 'boss'). Many bosses were attached to a metal surface by a Plead solder (cf the lead-filled studs of the first Butt Road box, 2179-82). Five hollow bosses are listed here, of which one may have contained solder which has fallen out. The method of attaching the other four to a wood, leather, or metal surface is uncertain. All are of copper alloy.
Bosses containing ?lead solder (Fig 124; 40354046)

4036 Fig 124 SF LWC 3506, J1343 F465. Pit. Period 4? A damaged boss with steep domed centre. This object may have had a shaft which has become detached and may therefore belong with the studs. Diameter approximately 17.0 mm .

4037 Fig 124 SF LWC 3557(C), J1480. Make-up? Period 1 or 2. A damaged low convex boss with concentric mouldings. This piece may be military. Diameter approximately 25.0 mm .
4044 Fig 124 SF BKC 5772, V1236 L146. Cultivated soil. Late Period 5, possibly earlier. Either one boss with a head in two layers, or two bosses corroded together. Each piece has a slight upturned rim. Diameter 23.0 mm .
4045 Fig 124 SF BUC 741 , C1447 G411. Grave fill. Period 2. A boss, 17.0 mm in diameter. There is a rectangular slot in the solder which may indicate that the piece originally had a shaft.

Plain bosses (Fig 124; 4047-4056)
4049 Fig 124 SF LWC 3794, K511. Garden topsoil. Period 4b. A slightly convex boss, part is missing. Diameter 27.0 mm .
4052 Fig 124 SF BKC 1549(C), E823 L200. Make-up. Period 3b. A large damaged boss with four lugs in the circumference. Assuming that the object was symmetrical a further four lugs can be postulated. Diameter 43.0 mm .


Fig 124 Bosses (1:1)

4053 Fig 124 SF BKC4008, N51 L7. Dump. Period 6. A small boss, diameter 13.0 mm .

## DOUBLE-SPIKED LOOPS (Figs 125 and 126; 4057-4069)

Double-spiked loops have a looped head and either straight-sided blades which are blunt-ended, or blades tapering to a point. Their use is illustrated by the drop-handle 2134 (Fig 85), where each curved end of the handle passes through a double-spiked loop. The blades of the loop would be set in the wood of a drawer or box. All are of copper alloy except where otherwise stated.
4059 Fig 125 SF LWC 3492(C), J1317. Dump or make-up. Period 1. Loop with tapering blades, the ends of which are damaged. The slight distortion of the loop seems to indicate considerable use of this piece: reuse rather than wear in one position. Length 34.0 mm .

4061 Fig 125 SF BKC 1822(C), El 131 L319. Dump. Period 1b. Loop with narrow tapered blades. The ends are missing but were clearly pointed. The loop has a central moulding and raised margins. Length 32.0 mm .
4063 Fig 125 SF BKC 5205, V271 L46. Make-up? Period 5. A thin loop in three pieces. The blades taper. Part of one blade is missing. Length 27.0 mm .


Fig 125 Double-spiked loops (1:1)

4065 Fig 126 SF LWC 2862(C), L245. Occupation. Period 4a. Iron. A large distorted loop. Part of the shaft is missing. Length 98.5 mm .

4066 Fig 126 SF BKC 1816(C), E1115 L382. Charcoal tip-line. Period 1b or 2. A well-preserved loop, which clearly shows the method of fixing. Length (in present position) 43.5 mm .
4069 Fig 126 SF BKC 6002, T473. Period 1. Iron. Part of the tip of the shaft is missing. Length 58.5 mm .


Fig 126 Double-spiked loops (1:2)
JOINER'S DOGS (Fig 127; 4070-4072)
A joiner's dog is a fastener like a large staple used to hold together two adjacent pieces of wood.
4071 Fig 127 SF BKC 6019, J253 L33. Dump. Periods 3/4/5a. Iron. Probably a joiner's dog (though it could be a distorted double-spiked loop). The cross-piece is short ( 34.0 mm ) compared to the arms ( 78.5 mm long). The bottom of each arm is clenched.
4072 Fig 127 SF BUC 1610, B1313 L2. Periods 1-2. Iron. The arms of this example are broken off short. Length of cross-piece 67.0 mm . Maximum surviving length of arms 37.0 mm .


Fig 127 Joiner's dogs (1:2)

## T-STAPLES (Fig 128; 4073-4074)

T-staples are known, among other functions, to have held tiles in position (Manning 1972, 184).
4073 Fig 128 SF BKC 6013, J263 F68. Hearth over pit. Period 5c. A twisted iron T-staple. The bottom of the stem has been broken off. Length 167.0 mm .
RING-HEADED PIN (Fig 128; 4075)
4075 Fig 128 SF BKC 3460(C), J224 F13. Large pit. Period 5b. An iron ring-headed pin (or possibly the shaft of an L-shaped lift key). Length 191.0 mm .


Fig $128 \quad$ T-staple and ring-headed pin (1:2)

## WALL HOOK (Fig 129; 4076)

4076 Fig 129 SF BKC 2722(C), H111 F33, Pit. Period 5c. An iron wall-hook of rectangular section. Length of spike (possibly incomplete), 46.5 mm . Total length 96.5 mm .


Fig 129 Wall hook (1:2)

## BRACKETS OR TIE-STRIPS (Fig 130; 4077-4084)

4079 Fig 130 SF BKC 6032, G438 F199. Slot (for beam?). Period 5c. Iron. A right-angled tie-strip, one end is damaged. The surviving end has been hammered out into a rough circle which is pierced. The damaged end appears to have been broken at the base of a similar terminal. Length of complete
arm (externally) 48.5 mm .
4080 Fig 130 SF BKC 6018, J176 F32. Pit. Periods 5c/6. Iron. A right-angled fitting. No nails or rivets can be distinguished. Both ends are damaged. Length of long arm (externally) 113.0 mm , length of short arm 48.0 mm .


Fig 130 Brackets or tie-strips (1:2)
HINGE FITTINGS (Fig 131; 4085-4097)
Almost complete loop hinges from the first Butt Road box are illustrated in Fig 90.
4088 Fig 131 SF BKC 4234, N218 F75. Timber-lined drain. Backfilled late Period 5b2 or early 6. A copper-alloy strap hinge plate. Length 67.0 mm . Width 27.0 mm .
4096 Fig 131 SF BKC 4716(C), T462 L26. Floor of sandy clay. Period 2. A unit from a bone hinge, with one peg hole. Length 34.0 mm , diameter 20.0 mm . Illustrated descriptions of the manufacture and method of use of bone hinges can be found in Fremersdorf 1940, Schmid 1968, and Waugh and Goodburn 1972.
4097 Fig 131 SF BKC 3631(C), J373 L33. Dump. Periods 3/4/5a. Probably a spacer unit from a bone hinge. Three triangular section grooves have been cut into the surface, one at one end, two at the other. These grooves are filled with a black substance, except for part of the single groove where the filling has either fallen out or been removed. This black substance is perhaps the same as that described in Schmid 1968 (191-2) as beeswax mixed with ivory black, which was used to fill the grooves in some hinge units from Augst. Between the grooves the piece is waisted in profile. Length 12.0 mm , diameter 25.5 mm .

## COLLARS AND FERRULES (Fig 132;

 4098-4107)Collars of copper alloy were used both to strengthen an object at a weak point, possibly a join between two parts, and to some extent as decoration. Some bone knife handles show traces of copper alloy at the end nearest the blade where a collar was fixed (2915). Ferrules were used to protect the ends of objects, in particular wooden ones, such as modern walking sticks. Iron collars from water-mains are catalogued under Category 9.
4101 Fig 132 SF BKC 1404(C), E544 L124. Levelling. Period 2. Three fragments of a very corroded collar with slightly thickened rim at one end. One fragment only is illustrated. Length 11.5 mm , diameter approximately 25.0 mm .

4103 Fig 132 SF BKC 2399(C), G365. Periods 2 to 5. A very corroded collar with an incised groove near one end, and possibly two at the other end. Length 10.5 mm , diameter 21.5 mm .

4104 Fig 132 SF BKC 2978(C), K77 F15. Gully/ditch. Period 6. A fragment of a collar of D-shaped section with thickened


F~ig 131 Hinge fittings (1:1)


Fig 132 Collars and ferrule (1:1)
margins and a central groove. Length 10.0 mm , diameter 33.0 mm .

4107 Fig 132 SF MRC 106(C), 113 F68. Fill of a c 4th-century grave. A slightly crushed ferrule with a square hole in the top. This hole has been made from the inside as the outer edge is burred, and was presumably intended to take a nail or a stud with a square section shaft which would fix the ferrule to the object it was capping. Length 12.5 mm , diameter 17.5 mm .

## BINDING (Fig 133; 4108-4120)

All pieces are of copper alloy.
4108 Fig 133 SF LWC 730(C), BF70. Probably cellar backfill. Period 5. A sheet of copper alloy folded into a tube, now slightly distorted. Length 70.0 mm , diameter 7.5 mm .
4110 Fig 133 SF LWC 3829(C), K533. Make-up or floor. Period 1 or 2. A sheet of copper alloy folded into a tube. Near one end are traces of faint irregular incised grooves. The other end is damaged but also shows a clearer groove where the maximum length survives. Length 57.0 mm , diameter 8.5 mm .

4111 Fig 133 SF LWC 3685(C), Q7. On Boudican surface? AD $60 / 1$ ? Two binding strips of U-shaped section. Both have been slightly flattened out at one end. One is curved and has a rivet hole at the centre of the section in the middle and the remains of an iron rivet near one end. Length 87.5 mm , width 8.5 mm . The other is less markedly curved and has no signs of any rivets. Length 70.0 mm , width 9.5 mm . Possibly shield binding.

4113 Fig 133 SF BKC 3571 (C), J313 L37. Make-up (burnt). Period 2. Four fragments of a piece of straight binding of U-shaped section. There is a slight groove along one edge. Length 89.0 mm , width 15.0 mm .

4116 Fig 133 SF BKC 4749, T513. Period 1 (and 2a?). A strip, slightly plano-convex in section, folded in half. Length 101.0 mm , width 12.0 mm .

4117 Fig 133 SF CPS 463(C), 576 F115. Occupation. Period 4. A gently curving strip with one thickened edge. Folded over the strip are the remains of binding of $U$-shaped section. Four crude rivets survive in the strip, and there is one empty rivet hole close to one of the rivets. Length 58.0 mm , width 13.0 mm .


## MISCELLANEOUS FITTINGS 4121-4127) <br> (Fig 134;

All are of copper alloy.
4121 Fig 134 SF LWC 2901 (C), K150. Daub, make-up? Roman. A mount in the form of three lozenges with knobbed terminals set side by side. One terminal is missing. The face of each lozenge is marked with a marginal groove around which are cut V-shaped notches. On the reverse side are three rivet shafts, one opposite the centre of each lozenge. Length 54.0 mm , width 30.0 mm .

4122 Fig 134 SF BKC 300(C), B46 F24. Fortress ditch. Period 1-1 b. A corroded long strip mount, apparently plain, of rectangular section. There is a nail or rivet at each end. The mount is now distorted. Length 55.5 mm , width 12.0 mm .
4123 Fig 134 SF BKC 1815(C), E1129 L324. Ditch (F230) fill. Period 2. A roughly made lozenge-shaped mount. Two opposite terminals bear large ?lotus bud and leaf terminals, one slightly damaged. The other two terminals are either roughly finished or have had the decorative part cut or broken off. The face of the mount is divided into three stepped lozenge-shaped levels. There is a rivet or stud hole through the centre of the mount. The perforation adjacent to this hole was made by corrosion. The underside of the mount is hollow. Length 48.0 mm , width 33.5 mm .

4124 Fig 134 SF BKC 3570, J299 L35. Dump and levelling deposits. Periods $3 / 4 / 5 \mathrm{a}$. A long plain strip mount, rectangular in section. A dome-headed rivet survives at one end, there are traces of another in a similar position at the other end, and of a third in the centre. Length 120.0 mm , width 14.0 mm .

Fig 134 SF BKC 4284, N280. Latest Roman. Period 6. A damaged mount with large riveted shaft. The face of the mount shows a round ?bud between thin ?leaves. One ?leaf is missing. The base of the object has been broken off. As the mount is beginning to swell out again at the fracture, it is possible that the design may have been repeated to produce a symmetrical figure. Surviving length 22.0 mm , surviving width 23.0 mm , height 10.0 mm .
4126 Fig 134 SF BKC 4794, T276 F120. Pit. Period 3. A damaged lozenge-shaped fitting. Three of the terminals are knobbed and have a transverse moulding close to the knob. The fourth terminal is missing. There is a central knob around which are placed in a square four perforations. Between this central design and the missing terminal are knurled transverse mouldings. There are traces of three rivet shafts on the underside of the mount, one below each plain arm. Surviving length 30.5 mm , width 32.0 mm .
4127 Fig 134 SF BKC 4747, T514. Period 1 (contaminated?). A corroded long 'plain strip mount of D-shaped section. The curve of the D seems to have lain uppermost. A rivet survives at each end on the underside. Both faces show traces of ?wood fragments in the copper-alloy corrosion products. Length 81.0 mm , width 10.0 mm .

## LOCKS AND KEYS

As most of the lock fragments and keys below are of copper alloy it is possible that the majority derived from small locks for boxes or cupboards. Small locks were often composed of both copper-alloy and iron


4124

parts (cf the first Butt Road box. Fig 90). The visible and sometimes the moving parts such as the lockplate, bolt, tumblers and key were of copper alloy, while the internal parts such as the casing were of iron. Larger locks fitted on doors would almost certainly have been made of iron for greater strength. Descriptions of the keys and locks used in the Roman period can be found in Manning 1972, 181.

## Lock-plates (Fig 135; 4128-4129)

4128 Fig 135 SF LWC 2917(C), J767. Make-up. Period 3. Most of a lock-plate in six fragments. There is a seventh piece that cannot befitted on though it clearly belongs to the plate. The cut-out is an equi-armed $L$ for a tumbler-lock slide key. Circumscribed on the face of the plate is a circle which clips the end of the horizontal arm and whose centre lies almost in the middle of the vertical arm of the keyhole. This circle seems to have been a guide for the cutting of the keyhole. The holes in the lock-plate seem not to be rivet holes but caused by corrosion, with the possible exception of the small hole below the horizontal arm of the keyhole. Length 101.0 mm , width 108.5 mm , thickness varies from 1.0 to 2.0 mm .


Fig 135 Lock-plate (1:2)

Lock-bolts (Fig 136; 4130-4141). For the use of lock-bolts see tumbler-lock keys below. See also the probable bolt from an iron barb-spring padlock. Fig 206, 4694.

4133 Fig 136 SF BKC 2241 (C), G173. Surface cleaning. Period 5c. A complete bolt with one square and two triangular cutouts. Length 61.5 mm .

4134 Fig 136 SF BKC 2304(C), G217. Burnt floor. Period 2. A ?complete bolt with one large rectangular perforation. Length 57.5 mm .
4136 Fig 136 SF BKC 2561 (C), J39 F14. Cable trench. Modern. A complete well-preserved lock-bolt with square, rectangular and ovoid cut-outs. Length 80.0 mm .

Lock-pins (Fig 137; 4142-4143)
4142 Fig 137 SF BKC 2266(C), G210. Cleaning top of burnt clay floor. Period 2. Lock-pin with perforated rectangular section shaft and head with concentric mouldings. Length 24.5 mm , diameter of head 15.0 mm .

4143 Fig 137 SF BKC 5451, V779 L100. Metalling? Late Period 5. A large lock-pin (or a handle?) with perforated rectangular section shaft. The head is spindle-shaped with the upper face sunk around a high central cone. Length 57.5 mm , diameter of head 25.0 mm .

Latch-lifter (Fig 138; 4144). A latch-lifter was a suitably-shaped rod which was passed through a hole in a door and used to raise a latch or slide a bolt (ibid). There are possibly some examples of latch-lifters still in use.


Fig 136 Lock-bolts (1:1)

4144 Fig 138 SF BKC 6021, H317 L13. Dump. Period 5b(end), and possibly into 5 c and 6. Iron. Bent? The point is missing. Total surviving length 181.5 mm .

Tumbler lock lift keys (Fig 139; 4145-4149). A lift key, usually T- or L-shaped, was passed on its side through a vertical keyhole, turned horizontally, and its teeth engaged in holes in the lock-pins (or tumblers). These it raised, freeing the bolt, which was then pulled across by a cord (Wheeler 1930, 70). The pins were held to the door or lock-plate by simple loops.
4145 Fig 139 SF LWC 476, B155 F73. Pit. 16th to 17th century. Iron. T-shaped lift key, one bar of the T is missing. The top of the shaft is square in section, narrowing to rectangular towards the base. There is a suspension loop at the head of the shaft. Length 100.0 mm , probable width including the missing part 28.0 mm . Possibly post-Roman.
4148 Fig 139 SF BKC 6001, M22 L1. Gravel metalling. Period 6. Anchor-shaped iron lift key, most of the shaft is missing, as is the point of one of the teeth. Similar to Manning 1972, fig 68,74 . Surviving length 62.0 mm , width 41.0 mm .
4149 Fig 139 SF BUC 1725, H777 G628. Grave deposit. Period 2. Iron corroded L-shaped lift-key with three teeth. In two


Fig 137 Lock-pins (1:1)


Fig 138 Latch-lifter (1:2)

fragments. Part of the shaft is missing. Approximate length 150.0 mm , width 33.0 mm .

Tumbler lock slide keys (Fig 140; 4150-4154). A slide key raised the tumblers engaged in the bolt by pushing them up from underneath. When the teeth of the key lifted the tumblers, they were themselves engaged in the bolt and thus the key rather than a cord could be used to slide the bolt. The iron example here (4152) has the handle rising from the base of the teeth, while all the copper-alloy keys have the handle rising from the top of the teeth, as do the majority from Richborough, Kent (Wilson 1968, pl 46). The reason for this distinction is not clear, but is probably connected with the type of bolt used.

4150 Fig 140 SF LWC 3187(C), J952 F407? Destruction debris in situ. Period 2. Slide key with six teeth in two rows of three, the two end ones are broken off. The grip is rectangular in section, topped by a suspension loop, and tapers towards a shaft with chamfered edges. Length 47.0 mm , width 19.0 mm .

4153 Fig 140 SF BKC 3599(C), J335 L35. Dump and levelling deposits. Periods $3 / 4 / 5$ a. Slide key with five teeth, three parallel to the base of the handle, and two opposite the two outer teeth of the three. The handle is topped by a suspension loop. Length 70.0 mm , width 38.0 mm .
4154 Fig 140 SF MRC 69(C), 112 F52. c early 2 nd-century pit Slide key with six teeth in two rows of three. The three outer ones have been snapped off at the base. Similar to 4150 but with transverse mouldings on the grip. Length 40.5 mm , width 17.5 mm .

Lever lock keys (rotary keys) (Fig 141; 41554156). The lever lock worked on the same principle as the modern rotary mortice lock.

4156 Fig 141 SF BKC 4413, N405 L28. Dump. Period 6. Key with dog-leg bit with two notches at the bottom and one on the side. The end of the stem was tubular, but is now filled with either corrosion products or with the ?iron pin of the guide

plate onto which it fitted to engage in the lock. The handle is a simple large round loop.


Fig 141 Lever lock keys (1:1)

## Keys of uncertain type

4157-4158 Not illustrated; in microfiche catalogue.
Key handles (Fig 142; 4159-4164). Copper-alloy fleur-de-lis handles for either copper-alloy or iron keys have been dated to post 150 (ORL 8, Taf 12,51). 4361 Fig 142 SF BKC 2844(C), H336 (L13 contaminated?). Period 6 or later. Fleur-de-lis key handle with traces of iron at the base. The fleur-de-lis is flanked by two small leaves. Length 52.0 mm , width 28.0 mm .


[^3]
## CATEGORY 12: OBJECTS ASSOCIATED WITH AGRICULTURE,

 HORTICULTURE AND ANIMAL HUSBANDRYThe dearth of finds in this category may be due in some part to the poor preservation of iron at Colchester (p4). Excavations at Balkerne Lane and Butt Road uncovered areas of agricultural or horticultural land use, but finds of associated tools are lacking (but see the ?rake prong, Fig 206, 4667). Remains of several eggs were found near a nest at Lion Walk in 1 st-century civilian levels. The pipeclay egg fragment (Fig 171, 4270), also from Lion Walk, may be associated with the keeping of hens rather than with any religious beliefs.

## BELLS (Fig 143; 4165-4172)

Most of these bells were probably attached to the halters or collars of cows, sheep, goats, or possibly domestic pets, though some may have been used as personal ornaments (see the bells Fig 41, 1808 on copper-alloy armlet 1610, Fig 54, 1811, and in microfiche catalogue 1809-1810). The three illustrated bells are the same height. However, it should not be supposed that these provide evidence of standardization since there are three further examples (see microfiche catalogue) which do not conform. All the bells are of copper alloy.
4165 Fig 143 SF LWC 851(C), B405. Unstratified. A simple conical bell with suspension loop in four fragments. The clapper is missing. Height 23.0 mm , diameter 21.5 mm .
4166 Fig 143 SF LWC 2498(C), M111. Rampart 1a. Two fragments of a bell with raised central boss. There are traces of an iron clapper on the inside. The suspension loop for attachment would have been formed by the clapper which


## CATEGORY 13: MILITARY EQUIPMENT

The military equipment has been divided into four main groups. They are a) equipment from contexts dated c 43 to $60 / 1$, b) 1st-century equipment from contexts dated later than $60 / 1$, c) equipment of the 2nd or 3rd century, and d) late Roman belt-fittings probably from the cingulum militare. Seven pieces from the first group and one from the second have previously been illustrated (Crummy 1977, fig 2). They are fully catalogued here with their illustrations. Most of the last group has already been published with specialist reports and comments in CAR 1, and consequently for those pieces only brief descriptions and references will be given here. Also included in this category are phallic amulets usually associated with the Roman army.
The total number of pieces of 1 st-century military equipment recovered between 1971 and 1979 is far too small to be able to postulate anything about proportions of legionaries to auxiliaries, or of infantry to cavalry, during the military occupation. Such an attempt would in any case probably be of little value, as the body armour issued to auxiliary infantry is far from certain, and that worn by auxiliary cavalry also probably varied (Frere and St Joseph 1974, 39-40). Moreover, any effort to clarify the fortress map in terms of the disposition of troops would have to be based on what at present is a very limited number of objects found specifically in fortress contexts since equipment from contexts dated after c 49 could as likely derive from the retired veterans of the colony or visiting troops as be residual finds from the occupation of the fortress. Only thirteen pieces of equipment usually dated to the 2nd and/or 3rd centuries have been recovered. At least one piece (the fragment of scale armour, Fig 161, 4246) may possibly belong with the 1 st-century equipment.

## EQUIPMENT FROM CONTEXTS DATED 43 TO 60/1

## ARMOUR

Belt and apron fittings of copper alloy (except for 4176, which is bone) (Fig 144; 4173-4181). Many of these fittings, in particular the apron mounts, would have been tinned or silvered, and would have had niello or enamel set in the recessed areas. Traces of this decoration are often no longer detectable, but in many cases where a flower or leaf pattern is mentioned (eg 4174) it may be assumed that the piece was so embellished.
4173 Fig 144 SF LWC 3715(C), A379 F101. Rampart. Period 1. A D -shaped buckle. Both the hinge end of the tongue and the ends of the loop are decorated with transverse mouldings The triangular section tongue is 2.0 mm thick. Maximum


[^4]length 31.5 mm , width along the bar 39.5 mm . (See also Crummy 1977. fig 2. 2.)
4174 Fig 144 SF LWC 3302(C), J1022. ?Contaminated, or Period 2 demolition. A rosette stud probably from an apron. The surface is decorated with an outer band of petal shapes, alternately facing inward and outward, and an inner simple floret of petals facing inwards on a central dot. Decoration on these studs is very varied (Webster 1958, fig 6, 151) and the circumference of the studs themselves may be rosetteshaped or plain. Diameter 20.0 mm . Most of the shaft, which would have been riveted, has broken off.
4175 Fig 144 SF LWC 3450(C), J1228. Floor. Period 2. A fragment of a rosette stud with roughly incised decoration. Diameter 17.5 mm .

4176 Fig 144 SF LWC 3488(C), J1297 F434. Pit. Period 1. A bone buckle. The tongue is hinged to the buckle by means of a copper-alloy riveted bar, 2.0 mm in diameter, which passes through two lugs on the buckle and one on the tongue and' has a bone cap at one end. The cap at the other end is missing. The length of the bar projecting beyond the lug at this end is some 2.0 mm shorter than that of the surviving cap. This may indicate an inadequate (and now missing) repair, especially taking into account the neat line formed by the surviving cap and the frame of the buckle. The tongue fits so tightly into the frame that it must have been made from a separate piece of bone. Its form is of a stout but standard military buckle tongue with projecting bars.
The inner element of the buckle is also of standard military buckle form with the inner cut-out forming a pelta (Hawkes and Hull 1947, pl 102, 18-23), but with rather more ornate flourishes of scroll decoration flanking the tongue. The terminal of one flourish is missing. A bone buckle of later date with similar flourishes comes from Saalburg (Oldenstein 1976, Taf 74, 974). The outer and dominant element of the buckle is a rectangle with knobbed corners and sides curving inwards except at the hinge end. This frame is decorated with grooves and incised lines that slightly exaggerate the outline and lighten what may otherwise have been a rather heavy shape. The maximum dimensions of the buckle are 47.0 by 42.0 by 9.0 mm except at the swell of the tongue where the thickness increases to 12.0 mm . (See also Crummy 1977, fig 2, 5.)

4177 Fig 144 SF LWC 3849(C), K554. Floor or make-up? Period 1? A slightly domed stud with incised debased rosette design of a cross with bifurcated and thickened ends. Each arm of the cross is intersected by an outward facing crescent (ibid, fig 2, 3). Diameter 21.0 mm , length 7.0 mm .

4179 Fig 144 SF BKC 1719(C), E1046 L314. Ditch (F230) fill. Period 2. This piece is probably a belt-plate as it is rather wider than a hinge from laminated armour, though it could be civilian rather than military. There are five rivet holes placed asymmetrically through the doubled-over plate. Length 28.0 mm , width 25.0 mm .
4181 Fig 144 SF BKC 5335(C), V592 L73. Sandy clay floor. Period 2. A fragment of an apron mount with traces of incised decoration which possibly held niello inlay (Webster 1958, fig 6, 174). Surviving length 26.5 mm , width 11.0 mm .

## Copper-alloy fittings from laminated body armour (Fig 145; 4182-4190).

Full descriptions and illustrations of the laminated body armour (lorica segmentata) supplied to legionaries in the mid to late 1st century can be found in Robinson 1975, 174-82.

4182 Fig 145 SF LWC 938(C), A309. Destruction debris. Period 1 destruction. Lobate cuirass hinge (ibid, fig 182) with central iron riveted bar. Both sides of the hinge are damaged and distorted. Maximum surviving length 55.5 mm , maximum surviving width 30.0 mm . (See also Crummy 1977, fig 2. 7.)
4183 Fig 145 SF LWC 1189(C), B648. Floor. Period 2. Fragments of a buckle from a cuirass (or baldric) strap (Robinson 1975, fig 179). The loop is distorted and the flattened terminals are damaged. Length of the bar 28.0 mm .
4186 Fig 145 SF BKC 605(C), A116 (L17). In fortress ditch (F39). Period 1. A hinged cuirass or baldric strap fitting. The two
rivets on the side of the hinge are domed, on the other side one rivet is missing and the other is flat-headed and rough, probably a repair. Length 42.0 mm , width 17.5 mm .


Fig 145 Fittings from laminated body armour from contexts dated 43 to 60/1 (1:1)

## ARMS

## Shield (Figs 146 and 147; 4191-4193)

4191 Fig 146 SF LWC 1133(C), B602. Dump. Period 1. Three fragments of copper-alloy binding from an oval wooden shield. Oval shields were used by cavalry and infantry (Ritterling 1913, 143). One piece only is illustrated. The binding is of U-shaped section and gently curved (ibid), though each piece has in places been distorted and flattened. On each fragment a more or less semicircular pair of lugs survives joined by a dome-headed rivet. Lengths 108.0 mm (illustrated), 117.0 mm , 104.0 mm . (See also Crummy 1977, fig 2, 1.)
4192 Fig 146 SF CPS 941(C), 1075. From section in contractor's trench. Probably 43 to $60 / 1$. A fragment of copper-alloy binding possibly from a hexagonal cavalry shield (Hawkes and Hull 1947, 337 and fig 63, 1; Ritterling 1913, 143). The binding is thick and folded into a narrow U-shaped section. One face, presumably that on the front of the shield, is decorated with diagonal slashes. Length 92.0 mm .
4193 Fig 147 SF BKC 3741 (C)/3856(C), J310/322 F69. Oven. Period 2. An iron shield boss. The boss has a flat rim, most of which is missing, and a low vertical wall surmounted by a simple cone. On one of the rim fragments is a possible trace of a stud for fixing the boss to the shield. Surviving maximum diameter 173.0 mm , height 65.5 mm .

## Sword (Fig 148; 4194)

4194 Fig 148 SF LWC 4099(C), J1705. Dump or occupation.


Fig 146 Shield binding (1:1)

${ }^{0} \quad 1 \mathrm{~cm}$
Fig 147 Shield boss (1:2)


Fig 148 Scabbard mount, javelin head and pickaxe sheath fitting (1:1)

Period 1. A fragment of a copper-alloy mount from a sword (gladius) scabbard (Webster 1958, fig 3, 7). The mount would lie horizontally on the scabbard and be fixed by two rivets, the holes for which can be seen at each end of the central section of the mount. The moulded loops at each side would carry a ring used to attach the sword to the shoulderbelt or baldric (Robinson 1975, pl 1). The central part of the mount is $V$-shaped in section. Length 71.5 mm , width 12.5 mm . The internal measurement of the central section is 50.0 mm , close to the usual sword width of two inches (Webster 1969a, 130).

## Javelin (Fig 148; 4195-4196)

4196 Fig 148 SF BKC 3855(C), J310 F69. Oven. Period 2. Iron. The head and a small part of the shaft of a javelin (pilum) (Goodburn 1974, fig 41, 10). Length 129.5 mm .

## TOOLS

Pickaxe (Fig 148; 4197-4198)
4198 Fig 148 SF BKC 4693(C), T419. Period 1 (or 2). One of a pair (with 4197) of copper-alloy sheath fittings from a legionary pickaxe (dolabrum) (Webster 1969a, fig 21). Length 44.5 mm .

## CAVALRY HARNESS FITTINGS

Copper-alloy strap-loops (Fig 149; 4199-4202). Strap-loops, or harness clips, provided a secure


Fig 149 Cavalry harness strap-loops (1:1)
method of joining divergent leather harness straps (Lehner 1904, Taf 30, 9). Usually three straps were involved (Hawkes and Hull 1947, 339), but a set of four were found at Nijmegen (Noviomagus 1979, afb 9).

4199 Fig 149 SF LWC 3566(C), J1435 F495. Settlement into Period 1 pit. A fragment of a strap-loop, similar to Hawkes and Hull 1947, pl 103, 7. The junction of the loop and the flat top plate is marked by transverse grooves and mouldings. Surviving length 47.5 mm , maximum surviving width 16.5 mm .

4200 Fig 149 SF LWC 3560(C), J1490. Occupation. Period 1. A strap-loop with concentric grooves decorating the two circular elements of the top plate, and the junction of loop and top plate is marked with transverse mouldings. Both rivets are missing. Length 37.0 mm , maximum width 12.5 mm . As Ritterling 1913, Taf 13, 8. (See also Crummy 1977. fig 2, 8.)

4201 Fig 149 SF LWC 4100(C), J1705. Dump or occupation. Period 1. A strap-loop similar to 4200 but with only two concentric grooves on the circular elements, and slighter transverse mouldings at the junction of loop and top plate. Both globular-headed rivets survive (ibid, fig 2, 4). Length 34.0 mm , maximum width 11.0 mm .

4202 Fig 149 SF BKC 1831(C), El 161 L382. Charcoal tip-line. Period 1b or 2. Possibly a fragment (in two pieces) of a straploop (Ritterling 1913, Taf 13, 23). Length 31.5 mm .

## Button-and-loop fastener (Fig 150; 4203)

4203 Fig 150 SF BKC 4733(C), T471. Period 2? A button-and-loop fastener similar to Wild (1970b, 138) Class $2 / 3$ with a petalshaped head of which the centre is a hole. A boss is set inside the hole at the top. The shank rises vertically from the back of this boss and from the rim above it. The loop is missing. Length 25.5 mm .


Fig 150 Button-and-loop fastener (1:1)

## FIRST-CENTURY EQUIPMENT FROM CONTEXTS DATED LATER THAN 60/1

## ARMOUR

## Belt and apron fittings of copper alloy (Fig 151;

## 4204-4220)

4204 Fig 151 SF LWC 3128(C), J813. Make-up. Period 4a. A damaged stud with notched rim, possibly from a military apron. Diameter 21.5 mm .
4205 Fig 151 SF LWC 3057(C), J852. Gravel foundation. Period 4a. A rosette stud with corroded but seemingly plain surface. Diameter 20.0 mm . Square section shaft, clenched, length 6.0 mm .
4207 Fig 151 SF LWC 3315(C), J1035. Uncertain. Earlier than Period 4b. A rosette stud with traces of white-metal plating on the surfaces and decorated with a design of ?petal shapes and circles possibly in niello. Diameter 16.5 mm . Square section shaft, incomplete, length 4.5 mm .

4208 Fig 151 SF LWC 3325(C), J1050. Make-up. Period 3. A rosette stud similar to Fig 144, 4174. Diameter 19.0 mm .
4209 Fig 151 SF LWC 2726(C), K155 F17? Pit. Medieval/postmedieval. A corroded and damaged apron mount (Webster 1958, fig 4, 64). Length (incomplete) 31.0 mm .
4210 Fig 151 SF LWC 3669(C), K389 F208. Pit. Medieval + A
slightly distorted belt-plate with traces of white-metal plating in the decorative concentric grooves and mouldings round a central boss. Through this boss projects a clenched pin or shaft, possibly from an umbonate stud(see the belt on the central figure in Robinson 1975. pl 1). Each end of the plate is folded over round a thin copper-alloy bar. There are four rivet or stud holes, one in each corner of the plate. Length 46.0 mm , width 37.5 mm .
4211 Fig 151 SF LWC 3809(C), K472 F249. Slot. Period 3. A distorted belt-plate similar to $\mathbf{4 2 1 0}$, but lacking a central boss. There is no trace of white-metal plating. Length (unfolded) approximately 39.0 mm , width 33.5 mm .
4212 Fig 151 SF BKC 1578(C), E834 L252. Make-up. Period 3b. A thin and corroded rosette stud, with a simple impressed pattern of petals. Diameter 17.5 mm , square section shaft, clenched, length 4.5 mm .
4213 Fig 151 SF BKC 1605(C), E886 L253. Make-up. Period 3b. A damaged convex stud with traces of a knurled floret design. Diameter 15.0 mm , ?circular section shaft, incomplete, length 3.5 mm .

4214 Fig 151 SF BKC 1825(C), E1147 F267/L200? Periods 2-6. Either a fragment of an apron mount with a hooked terminal, or a baldric clip or strap-loop. There are traces of incised decoration on the face. Length 47.0 mm , width 9.0 mm .

4215 Fig 151 SF BKC 2214(C), G109. Uncertain. Period 3? A fragment of a buckle loop with a barred tongue and short waisted hinged belt-plate. The two projections on the underside of the plate for attachment to the leather of the belt were cast in one with the plate. A similar plate (4217) comes from a Flavian or later context. Length (approximately) 49.5 mm , width at the hinge 20.0 mm .
4218 Fig 151 SF BKC 3042(C), K99. Site clearance. Modern. A damaged rosette stud with an impressed design of large petals encircling a floret of six petals. (The perforations are caused by corrosion.) Diameter 13.0 mm , ?circular section shaft, incomplete, length 4.0 mm
4219 Fig $151 \times 131(1)(C)$. Stray find, probably from the Sheepen area. A long ?apron mount (Hawkes and Hull 1947, pl 103 20), in two fragments. The mount is plated with white metal, probably silver, and has a design in niello at each side of the


Fig 151 Military belt and apron fittings from contexts dated later than 60/1 (1:1)
central circular element. The illustration shows a conjectural reconstruction of the niello design, as it is in reality not as well preserved as shown, and there may be more niello on the inner sections. The central element is pierced to take a stud (as Wilson 1968, pl 37, 126). Length 66.0 mm , maximum width 15.5 mm .

Copper-alloy fittings from laminated body armour (Fig 152; 4221-4226)
4221 Fig 152 SF LWC 807(C), A273. Probably 1st century. A hinged strap fitting, possibly a repair. Each plate has a crude


4221


4222



4226


4225

Fig 152 Fittings from laminated body armour from contexts dated later than 60/1 (1:1)
angular end, and one rivet instead of the usual two. The one that survives is not a true rivet but a clenched copper-alloy nail. Length 55.5 mm , width at the hinge 14.5 mm . (See also Crummy 1977, fig 2, 6.)
4222 Fig 152 SF BKC 2000(C), E1317 L195+. Period 3b. A buckle fitting from a cuirass or baldric strap (Robinson 1975, fig 188). The D-shaped buckle has broken away from its hinge. The end of the long plate is damaged, and only the rivet in the short plate survives. Length 50.0 mm , width at the central hinge 15.5 mm .

4223 Fig 152 SF BKC 4731(C), T470. Period 2 or 3. A girdle-plate tie hook (ibid, fig 183). The hook has broken away from the flat plate. Length (approximately) 51.0 mm , maximum width 16.0 mm .

4225 Fig 152 SF BKC 5460(C), V816 L108. Make-up or dump. Period 4. A buckle and part of the hinge from a cuirass strap fitting (ibid, fig 188). Length 29.0 mm , width 16.5 mm .
4226 Fig 152 SF COC 183, 845 L245. Dump. Late Period 2 or Period 3. A fragment of a folded hinge fitting probably from a cuirass strap fitting. The lower of the two plates is either missing or is hidden in the mass of iron corrosion products which adheres to the surviving rivet. Length 27.5 mm , width 11.0 mm .

## ARMS

Sword (Fig 153; 4227-4228)
4227 Fig 153 SF BKC 5109(C), V209 F46. Bottom of boundary ditch. Period 4. A fragment of a bone sword grip (Webster 1958, fig 6, 145), hexagonal in section and with four flutings. Length 92.0 mm , maximum width 26.0 mm .

Dagger (Fig 154; 4229). A small number of decorated dagger scabbards have been found in Britain (eg from Hod Hill, Dorset (Brailsford 1962, pl 4), Waddon Hill, Dorset (Webster 1958, pl 12), Richborough, Kent (Henderson 1949, pl 33, 74), Lincoln (Mann 1981, fig 10), and Usk, Gwent (unpublished)). This is the second example to be recovered in Colchester. The first came from 'levelling material' which predated the foundation of the colony (Dunnett 1971, 11, fig 12). Many more such scabbards are known from the continent, and it seems likely that they were manufactured in the Rhineland. A group of three from Auerberg is illustrated in Ulbert 1975, Abb 17.

4229 Fig 154 SF BKC 4554(C), T120 T57. Pit. Period 5b? Fragments of the decorated front plate of an iron dagger scabbard. The illustration shows on the left the internal face of the plate with a section through the surviving part of one of the ring attachments for fixing the dagger to the belt (Simkins 1976, 19), in the centre the detail of the silver (and possibly niello or enamel) inlaid decoration, and on the right a reconstruction of the plate with the missing tip and fittings for the ring attachments restored. The details of the decoration were taken from an X-ray. Surviving length 179.0 mm , maximum surviving width 51.0 mm .

A dagger scabbard with somewhat similar decoration comes from Lincoln (Mann 1981, fig 10) from a late Ist-century context behind the northern defences.


Fig 153 Sword handle grip (1:1)


Fig 154 Decorated front plate of an iron dagger scabbard (2:3)

Dr Graham Webster has contributed the following note on the scabbard plate: Some fifty decorated scabbards are known to date. They all have different designs and the quality of their workmanship also varies. It is common for the space provided to be divided into panels with a long thin triangle to the tip and three rectangular panels in the upper part. The Colchester example with its palm tree in the lower panel and a temple front with columns and pediment in one of the upper ones is closely paralleled by one from Vindonissa (Gonzenbach 1966) but in a cruder version. Gonzenbach shows how the temple design was derived from the much finer bronze repousse plates attached to officers' scabbards. Afine example of one of these is the so-called Sword of Tiberius found in the Rhine at Mainz and now in the British Museum (A Guide to Greek and Roman Life 1929, fig 101). This is said to be a special commemorative gift to the officers who served with Germanicus on his German campaign. The same temple front motif is
found on other scabbards from Gloucester (Hassall and Rhodes 1974, pl 6c) and Zwammerdam in Holland (Haalebos 1981, afb 4). The quality of the Colchester scabbard is much superior to these others, as is evident from the published photograph of the one from Gloucester (the others can only be judged from drawings). This could be due to a difference in date since the quality of equipment generally tended to decline from the Claudian period.

## Spear (Fig 155; 4230)

4230 Fig 155 SF LWC 3185(C), J949. Make-up or dump. Period4. The iron leaf-shaped head of a spear (hasta). Part of the socket is missing but would appear originally to have been split (Goodburn 1974, fig 40, 5). Length 129.5 mm , width 27.0 mm .

Ballista bolt-head (Fig 155; 4231)
4231 Fig 155 SF BKC 6020, J285 L35. Dump and levelling deposits. Periods $3 / 4 / 5$ a. A socketed corroded iron ballista bolt-head. The head is square in section, the socket circular and split. Length 81.5 mm .

## TOOLS

## Turf-cutter (Fig 155; 4232)

4232 Fig 155 SF BKC 4895, T183 F79. Post pit? Period 3. An iron turf-cutter head. For a description of the use of this tool see Webster 1969a, 177. Compared with other examples this head is rather small (ibid) but is possibly still a military tool. The handle is socketed. Surviving length 98.0 mm , width $91,5 \mathrm{~mm}$.

## CAVALRY HARNESS PENDANTS (Fig 156; 4233-4234)

For an illustration of a complete set of harness fittings from Doorwerth see ibid, pl 18.
4233 Fig 156 SF BKC 4597, T117. Unstratified. A ?heart-shaped pendant, corroded and in three fragments (Webster 1958, fig 6,144). There is a dome-headed rivet in the centre of the pendant, and a poorly-made bud terminal which twists off the central axis. The suspension loop is also uneven. Length 47.5 mm , probably width 57.0 mm .

## EQUIPMENT USUALLY DATED TO THE SECOND AND/OR THIRD CENTURIES

## ARMOUR

Copper-alloy pendants, mounts and other fittings (Fig 157; 4235-4241)
4235 Fig 157 SF LWC 2936(C), J704. Period 4. A stud with concentric convex mouldings on the head and a flat shaft. Similar to Oldenstein 1976, Taf 48, 530, which is one of a group of fittings described as for straps from either auxiliary uniform or horse harness, and dated to the second half of the 2nd or the first half of the 3rd century (ibid, 172). Diameter 17.0 mm . The shaft is bent, length approximately 18.0 mm .

4236 Fig 157 SF BKC 52(C), A38 L4. Topsoil and town ditch (F19) fill. Post-Roman. A strap-end with suspension loop and rivet for attachment, probably from a military apron. The end of the fitting is missing. Openwork strap-ends show considerable individuality in the exact detail of their design (ibid, Taf 41). The rivet on the reverse is made of two pieces, a projection from the underside of the strap-end cast in one with it and a thick pierced ring riveted to the end of the projection. Surviving length 35.0 mm , width 11.0 mm .
4237 Fig 157 SF BKC 79(C), A41 F9. Pit. Post-Roman. A damaged pelta-shaped mount. One arm and the tip of the central stem are missing. There is a large rivet at the lower edge on the underside, which probably indicates that there was originally a second rivet at the tip of the stem (ibid, Taf 53 629). Length 15.5 mm , probable width 27.0 mm .

4238 Fig 157 SF BKC 3117(C), J81 L23. Dump. Periods 5c/6. An elliptical mount with two rivets on the underside. One end is missing. The fitting is now curved but would originally have been flat. Oldenstein points out that similar pieces come only from Zugmantel and Saalburg (ibid, 189), suggesting a local production centre based in or near the area of these forts, and gives a date range starting after the middle of the 2nd century. Surviving length 30.0 mm , width 13.0 mm .
4239 Fig 157 SF BKC 3916(C), M26. Probably Periods 3/4-6. A fitting for which no exact parallel has been found, but which seems to be related to a set of smaller belt-fittings from Chichester, West Sussex (Down and Rule 1971, fig 5.18 251p) and other fittings from the Continent (Oldenstein 1976, Taf 62, 780-3, 791). The mount is rectangular, with a sunken rectangular centre, a suspension loop on one side (for a object to be suspended from the fitting), and with a bud and leaves terminal at one end. The other end shows signs of another terminal having been broken off. The bud and leaves design could have derived from a debased pelta (ibid, Taf 62, 783, 786). The mount has a convex transverse section, hollow on the underside. There is a rivet at each end of the rectangle. The suspension loop perhaps held a ring, the forerunner of the rings found with rosette attachments


Fig 155 Spear head, ballista bolt-head, arid turf-cutter (1:2)


Fig 156 Cavalry harness pendant (1:1)
on late Roman military belts. The sunken centre of the mount probably held some kind of decoration, most likely enamel. Surviving length 50.0 mm , width at the suspension loop 25.5 mm .
4240 Fig 157 SF BKC 4155, N116 L10. Occupation. Period 5b A 2nd-century open-work belt-plate (ibid, Taf 64, 816-17, for exactly similar decoration). The design is symmetrical and based on peltas and roundels set within rectangles and squares. There is one rivet surviving at one short end. Two similar mounts come from Zugmantel and Saalburg (ibid, 196). A link between these two Rhine forts and Colchester has already been indicated by the ellipsoid mount 4238. Length 36.0 mm , width 22.0 mm .
4241 Fig 157 SF BUC 1711, H1046 G687. Grave fill. Period 1. A long leaf- (or heart-) shaped pendant or strap-end (ibid, Taf 29, especially the fragmentary 192 and 195). Length (bent) 39.0 mm , maximum width 14.5 mm .

## ARMS

Sword (Fig 158; 4242-4243)
4242 Fig 158 SF BKC 3605(C), K470 L60. Make-up or dump.


4239

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Fig 157 Pendants, mounts and other fittings from 2nd- or 3rd century armour 11:1)


Fig 158 Scabbard chape and mount (1:1)

Periods 5/6. A bone rectangular scabbard chape with peltashaped cut-outs and a central rib. The upper edge has been cut into a series of vaults alternating with crenellations. This design is mirrored on the lower edge where chamfers occur opposite the vaults of the upper edge. The chape is in two pieces. The front plate curves round on both sides to grip a tapering back plate which slides in from the bottom. Once fitted both plates hold together well because of the slight widening of the back plate towards the upper edge, which is sufficient to give a tight grip. A small piece of the top of one side of the curved-over front plate is broken off, damage which was probably caused by the pressure exerted to remove the back plate at some time. Length 58.5 mm , maximum width 42.5 mm . Scabbard chapes of this type are generally dated to the mid 3rd century.

4243 Fig 158 SF MID 578, C2110 L21. Site clearance, mainly topsoil. Site C Phases 4 and 5. A distorted copper-alloy scabbard mount used to attach the baldric to the scabbard. The piece probably belongs to the 2 nd or 3rd century, but could be earlier (ibid, 106-7, Tafn 12 and 13 give close but not exact parallels; see also Webster 1958, fig 3, 34). The method of attaching the mount (or sword belt-holder) to the scabbard and how the baldric was held is illustrated in Oldenstein 1976, Abb 12. The mount had two (sometimes three) projections on the reverse by which it was attached to the sheath. These have been broken off on our example but lay atthe points marked a on the section. Length 103.0 mm .

## Dagger? (Fig 159; 4244)

4244 Fig 159 SF BUC 1177, E365 L11. Destruction debris. Probably first half of the 5th century. Copper-alloy hilt-guard (ibid, Taf 9, 1, 2). Part of the top plate is missing. There are some decorative cut-outs on one long side, presumably that which faced forwards when the blade was sheathed. The length of this piece ( 62.5 mm ) falls midway between that of the two examples illustrated by Oldenstein. Taf 9, 1 is 75.0 mm and Taf $9,251.0 \mathrm{~mm}$ long, measuring the top plate. As no 2 is still fixed to a blade described as a knife, it seems likely that the much larger no 1 is from a sword hilt. The width of our piece is only 22.0 mm , compared to the 34.5 mm of Taf 9, 1. On balance then, our example probably belongs to a dagger rather than a sword. These objects are rare, but are considered to be military on the evidence of an example
in a probably military grave at Lyons (ibid, 88).

## Bow (Fig 160; 4245)

4245 Fig 160 SF BKC 4871(C), N525 L82. Destruction debris. Period 5a. A fragment of a bone stiffener from a composite bow. The construction, origins, find-spots and dating of composite bows are discussed in Rausing 1967, especially 65-9, 99-103 and 145-51. The fragment has a flat lower face, left rough after being sawn, and a convex upper face which has been smoothed along the outer edge, but left quite rough with rasp marks over most of its surface. The surviving end is rounded and has the more or less semicircular nock by which the bow was strung (ibid, fig 52). Length 215.0 mm .

## CAVALRY ARMOUR (Fig 161; 4246)

4246 Fig 161 SF BKC 2855(C), H333 L13. Dump. Period 5b (end) and possibly into 5 c and 6 . Three scales (one in two pieces) from scale armour (lorica squamata) linked together by copper-alloy wire. The method of manufacture of scale armour is discussed in Robinson 1975,153-61. Though this fragment could belong in the 1st century, the context from which it derives has been taken to indicate that a later date is more likely. The lower of the two scales joined vertically is plated with white metal (cf Brailsford 1962, 2, A22-4). The two unplated scales have four sets of two holes for linking them to their neighbours, while the plated scale has no holes at its rounded end. This is no doubt an indication that this piece was at the end of an edge, probably an armhole, and consequently perhaps a weak spot. This supposition is upheld by the fact that the lowest hole and the two further side holes of its neighbour are worn through and it itself is twisted and in two fragments. It would seem that the plating of this scale indicates that the outline of arm holes, the neck, and perhaps the bottom of the garment were decorated in this way but the rest of the armour was plain. Each scale measures 24.0 by 0.9 mm and is 0.5 mm thick. Robinson (1975, 154) suggests that delicate scales came from sleeves or shoulder-pieces of cavalry sports wear rather than battle armour. The illustration shows the scales from behind to show the means by which they were held together.


Fig 159 Dagger? hilt-guard (1:1)


Fig 161 Scales from cavalry scale armour (1:1)


Fig 160 Bone bow stiffener (1:2)

## LATE ROMAN BELT-FITTINGS, PROBABLY FROM THE CINGULUM MILITARE (Fig 162; 4247-4254)

The first six pieces (4247-4252) have all been illustrated and discussed in CAR 1.

4247 CAR 1, fig 8, 1. SF CPS 341(C), 544 L67. Robber trench material. Period 5. A copper-alloy propellor-shaped beltmount dated to the middle or the third quarter of the 4th century.
4248-51 CAR 1, fig 15, 1-4. SF BUC 316(C)/317(C)/318(C)/ 320(C), B524/532/533/534 G101. Grave deposits. Period 2. Copper-alloy fittings from two leather belts. Each set of fittings consists of a buckle with hinged belt-plate decorated with repousse work belonging to Simpson's Group 2 (1976, 195-6), and a nail-cleaner-shaped strap-end decorated with chip-carving and hinged to a belt-plate decorated with repousse work in the same manner as the buckle plate. One of the buckle plates and one of the strap-end plates are in fragments.
4252 CAR 1, fig 15, 5. SF BUC 1287(C), E599 L7. Destruction debris. Probably first half of the 5th century. A copper-alloy heart-shaped strap-end. The strap-end has double leaf plates, now separated, and belongs to a group discussed by Simpson (1976, 201-4).
4253 Fig 162 SF LWC 456(C), B165 F70. Cellar backfill. Period 5. A copper-alloy ring of lozenge section, possibly from a discattachment from a late Roman military belt (Hawkes and Dunning 1962, fig 24). External diameter 26.5 mm .
4254 Fig 162 SF BKC 1717(C), E1034 L325. Topsoil. Post-Roman. A similar ring to 4253 but smaller. External diameter 20.0 mm .


Fig 162 Rings from late Roman belts (possibly from the cingulum militare) (1:1)

## PHALLIC AMULETS USUALLY ASSOCIATED WITH THE ROMAN ARMY

 (Figs 163-165; 4255-4259)Phallic amulets of metal, particularly pendants, are often found on military sites (Green 1978, 34-5), though there is no good reason to preclude their use in civilian life (Oldenstein 1976, 158-9). An amulet in the shape of a horned phallus (Fig 54, 1804) was found with other pendants deposited in a grave (G278) aligned north-south in the earlier of the Butt Road cemeteries. A phallic amulet was no doubt intended to confer virility or potency on its owner and its frequent linking with bull's horns or a fist (see below) carries the further attribute of male strength.

[^5]4258 Fig 164 SF LWC 3579(C), J1540. Occupation. Period 3. Bone


Fig 163 Phallic mounts (1:1)


Fig 164 Fist and phallus amulets (1:1)
fist and phallus amulet. Length 68.0 mm
4259 Fig 164 SF BKC 1842(C), E1174 F341. Large pit. Period 1b. The phallus end of a bone fist and phallus amulet. Length 48.5 mm .

Stephen Greep has contributed the following note on the bone fist and phallus amulets, including comments about other examples from Colchester: These two objects belong to a well known group of bone pendants, characterized by having a central perforation, one end carved into a hand, and the other into a phallus. The hand may be outstretched, or clenched in a fist with the thumb protruding from between the index and middle fingers in an obscene gesture. The use of the phallus is an obvious fertility symbol, serving also to ward away the evil eye (Webster 1969b, 126). There are a large number of related pendant types, such as antler roundels with carved phalli (eg Curie 1911, pl 84, 14) and numerous bronze pendants (eg Webster 1969b).

Hand and phallus amulets were worn as individual pieces rather than as the centre of more complex necklets. A related phallic pendant from Vaison (Fig 165 (left); BM 51 8-13 178) was found with a copperalloy loop with out-turned ends in the central perforation. Attached to this was 143.0 mm of copper-alloy chain, probably part of a necklet, though an alternative suggestion is that it was suspended from a belt. These pendants are an early type, dated to the 1st century.' They occur commonly in military contexts both in Britain and the Rhineland. ${ }^{2}$ Whether


Fig 165 Phallic amulets from Vaison and Colchester (1:2) (figure courtesy of S Greep)
they might be claimed as a purely military type rather than as simply masculine in character and of an early date is not certain.

## Notes

1 Pre-Flavian examples of bone fist and phallus amulets are recorded from London (Woods et al 1975, fig 3, 24) and Southwark (Kenyon 1959, fig 31, 6). Flavian or generally 1stcentury pieces are known at Chester (unpublished, Grosvenor Museum Excavations section), Canterbury (Greep forthcoming b), Fishbourne (Cunliffe 1971, fig 67, 11), Wroxeter (two examples, unpublished, excavations directed by Dr G Webster), Vindonissa (unpublished, Vindonissa Museum), Pompeii (unpublished, Naples Museum), and Ristissen (Ulbert 1970, Abb 28, 468).

Colchester has produced the largest number of hand and phallus pendants from Britain and the Rhineland. In addition to the two pieces published here, a Boudican example was found on North Hill (Dunnett 1971, fig 14, 33) and the Acton Collection contains another (CM 1296). These four are supplemented by two further and important pieces. Both are unfinished and represent the only evidence for the manufacture of these pendants known. The first (May 1930, 254) was recovered from a pre-Flavian cremation and had been burnt with it. An attempt had been made to drill the hole, presumably with a hollow-bit drill, but this had been abandoned and the hole still contains a plug of bone. The second piece (Fig 165 (right); CM 283.35) has only the phallus carved. The other end tapers to a squared-off section. No attempt has been made to produce the hand or the central perforation. This example may have been discarded because the uncarved end was left too narrow, although at 107.0 mm the object is still much longer than many of the completed pieces which range from 65.0 to 80.0 mm .

2 In addition to those listed in footnote 1, examples of bone fist and phallus amulets are recorded from Novaesium (Lehner 1904, Taf 35, 6), Vechten (unpublished, Archeologisch Institut, Utrecht, Inv.6087), Heddernheim (unpublished. Museum fur Vor- und Fruhgeschichte, Frankfurt, Inv 1219), and Cambodunum (Kramer 1957, Taf 23, 7). There are also six unprovenanced examples in the British Museum (1974 10-9 130; 19 11-13(3); 1974 10-5 1; 51 8-13 206).

## CATEGORY 14: OBJECTS ASSOCIATED WITH RELIGIOUS BELIEFS AND PRACTICES

This category includes figurines, model objects, a votive plaque, metal letters from inscriptions, and amulets, though the religious associations or significance of some of these items are possibly minimal. Some, for example the jet hare from Butt Road, could simply be toys. For the sake of simplicity they have been dealt with as a group. Other finds in this category are the fragments of textiles and some possible coffin fittings from graves in the Butt Road cemeteries. A list of grave deposits from Butt Road with catalogue numbers for this volume where applicable is given on microfiche (Appendix 2). General discussion of the grave goods will be dealt with in the site report. Grave goods from all the excavated cemetery areas (Butt Road, Maldon Road, Inner Relief Road Site B) have been catalogued as individual finds.

## FIGURINES

The figurines have been divided into two groups, human and animal.

Human figurines (Figs 166-170; 4260-4267)
4260 Fig 166 SF LWC 4341 , B173/321 F70. Cellar backfill. Period 5. Two fragments of a pipeclay bust. Approximate height 120.0 mm . The larger fragment is a hollow torso on a pedestal base. There has been a rough attempt to indicate folds of drapery across the chest. The smaller fragment is of the lower part of a beardless face. There is a trace of red paint between the lips, indicating that at least the features of the bust were originally coloured. The base and the sides have been knife-trimmed at the leather-hard stage to remove marks left by the mould. It is difficult to be sure of the age or sex of the subject, but the thick neck and heavy features could be those of an adult male (cf the bald man from York, North Yorkshire in RCHM 1962, 69b, pl 31). However, most of the pipeclay busts of infants and females illustrated in Rouvier-Jeanlin 1972 have thick necksand full

lips so the identification should remain open.
This bust lacks the button (or bulla) of the Gallo-Roman figurines and so may come from the Rhineland (RCHM 1962, 69b). Professor Toynbee $(1964,423)$ has suggested that busts of this type could be images representing dead family members and were probably either deposited in tombs or set up in domestic shrines.
4261 Fig 167 SF LWC 667, B267 F105. Pit. Period 5. A terracotta head from a figurine, possibly Venus. The back of the head is missing. The features of the face and the hair as seen from the front are well executed. However, the sides of the head where the two halves of the mould met have been roughly trimmed at the leather-hard stage. The eyebrows are indicated by fine incised lines radiating around the eyes. The hairstyle, with the hair gathered into two bows on the crown, is similarto that of pipeclay Venuses (eg Green 1976, pl 14, c) and of the copper-alloy Venus from Verulamium (St Albans, Hertfordshire) (Waugh and Goodburn 1972, pl 42), though without more positive evidence the identification of this piece as Venus must remain tentative. Height 40.5 mm .

4262 Fig 167 SF LWC 4207, J1. Rubble. Modern. A fragment of a pipeclay Venus. This piece and $\mathbf{4 2 6 3}$ come from the series of pipeclay pseudo-Venus figurines which have been discussed by F Jenkins (1959, 60-76). The figures were manufactured in Central Gaul and Cologne in the 1st and 2nd centuries (Green 1976, 20). This fragment runs from the waist to the knees and is of Jenkins's second type, where the goddess appears naked, holding a discarded garment or piece of drapery in her left hand close to her left leg. The back of the figure is missing. Height 50.0 mm . Numerous complete and fragmentary pseudo-Venuses are illustrated in Rouvier-Jeanlin 1972.

4263 Fig 167 SF BUC 1741, H588 G543. Grave fill. Period 2. A fragment of a pipeclay pseudo-Venus figure of the same type as 4262 . This piece runs from the neck to the top of the thighs. The back is missing, as is most of the right arm, which would have been raised so that the right hand was in the act of arranging the hair (Jenkins 1959, 60). Height 65.5 mm .

4264 Fig 168 SF CPS 766(C), 778 F132. Occupation or make-up. Period 4. A copper-alloy figurine identified by Professor Toynbee' as Abundantia or Fortuna. In her left hand she holds a double cornucopia, the top of the outer piece is


4261


4263


Fig 167 Fragments from Venus figurines (1:2)
missing (cf Pitts 1979, pl 18, 89). Her right hand probably supported a rudder. The goddess is clothed in a full-length sleeveless tunic and a cloak which is clasped on the left shoulder and passes below her right arm. She stands on a small flat base. Her hair is arranged in a style similar to that of 4261 . The figure is classical in style and was almost certainly imported from the continent. Height 39.5 mm .


Fig 168 Figurine of Abundantia (1:1)

4265 Fig 169 SF IRB 55(C), 73. Topsoil. c 12th century. A copperalloy right arm with a large dowel atthe top to enable it to be fixed to a torso (and probably be movable when attached). The hand is held outstretched, palm downwards, with the thumb clear of the fingers. There is a similar piece from Verulamium (Waugh and Goodburn 1972, fig 49, 136). Length 46.0 mm .


Fig 169 Arm frojn a figurine (1:1 J

4266 Fig 170. A fragment of a copper-alloy figurine of Mercury. This piece was found with the aid of a metal detector in soil moved by contractors in 1977 from the area of the Balkerne Lane site to the bottom of Balkerne Hill during the course of redevelopment works. The object was subsequently loaned by the finder, Mr E P Humphreys, to the Trust for drawing and recording. I am indebted to Mr Humphreys for his cooperation and the chance to publish this piece. The discovery of this item in spoil from the area of Balkerne Lane could indicate that the figure may be associated with one of the two temples on the site (Crummy 1980, 266-72; see also 4273 and 4274 below).
The figure is broken off at the knees. The god is standing in a relaxed pose, with his cloak falling from his left shoulder covering his left arm which is held slightly away from the body. The left hand is missing, but probably held a caduceus. The right arm hangs down close to the body, and the right hand probably held a purse. The god is looking to his right and wears a winged petasos the wings of which are damaged. The figure is clearly well made and of classical style and is probably an import (Toynbee 1964, 71). Height 66.5 mm .

4267 Crummy 1975, 32. A copper-alloy figurine of a comic actor. The figurine was found during building works following archaeological excavations on the Cups Hotel site (now Greytown House). The object was found close to the west boundary of the site. ${ }^{2}$ It has been described and discussed in detail in Pitts 1979, 32-5, pl 24, 157.

## Animal figurines (Figs 171-177; 4268-4279)

Fig 171 SF LWC 3028(C), J825 F262. Shallow pit. Period 4. A small copper-alloy bird. The underside of the figure is flat and has a short shaft for attachment to a surface of some kind. The figurine is perhaps intended to be a duck, as the beak is quite prominent and the flat bottom and squat body are reminiscent of enamelled duck brooches. However, in view of the discovery nearby of a cockerel (4269) there is a possibility that this is a chicken. No detail of eyes or plumage is visible on the bird, but despite this the figure has a lively aspect. Length 14.0 mm , height 12.0 mm .
4269 Fig 171 SF LWC 3033(C), J826. Make-up. Period 4a. A copper-alloy cockerel with stout legs. Two small semicircular-opposed cut-outs, one at the bottom centre of each wing, suggest that the bird may have been held in an upright position by something inserted into these slots. The figure is quite roughly made and stylised in design, especially when compared with enamelled cockerel brooches (Fig 14, 75, 76). The head with its raised comb and prominent eye is particularly unlovely. The plumage is indicated by strong irregular slashing done when the metal was cold, and the primary feathers are shown beside the short vertical tail as deep grooves. Beside other cockerel


4266


Fig 170 Figurine of Mercury (1:1j
figures, such as the series of enamelled brooches already mentioned or the birds illustrated by Green (1976, pl 3, i, pl 4, h, pl 5, d), the lack of care taken in the manufacture of this bird becomes apparent. Length 33.5 mm , height 31.5 mm . This bird and $\mathbf{4 2 6 8}$ may possibly be toys, or votive objects used in a household shrine. The cockerel is associated with Mercury (ibid, 12; Pitts 1979, 57, pl 12, 39).
4270 Fig 171 SF LWC 3413, J1182 F348. Pit. Period 1. A fragment of a pipeclay egg, as Rouvier-Jeanlin 1972,1257-66. Height (incomplete) 38.0 mm , maximum diameter 39.0 mm . A discussion of the symbolism attached to eggs can be found in Arthur 1977, 367-72. The context of this piece clearly shows that it arrived in Colchester with or on the heels of the Roman army. It was undoubtedly a product of the factories of Central Gaul. Rouvier-Jeanlin $(1972,84)$ suggests that pipeclay eggs, as well as being burial deposits, could be used for broody hens to sit over.
4271 Fig 171 SF LWC 3689(C), K407. Garden topsoil. Period 4b. A copper-alloy eagle's wing with the tip of the primary feathers raised, similar to Green 1976, pl 9, k. The plain inner end of the wing suggests that it was inserted into the body of the bird, not cast in one with it. Length 61.5 mm . The eagle is associated with Jupiter.


Fig 171 Bird figurines and an egg (1:1)

4272 Fig 172 SF BKC 2421(C), G375. Topsoil. Period 5c. A corroded copper-alloy figurine of a sitting hound, with its head raised and turned to the left. The rump and tail are damaged. Despite the effect of corrosion the long muzzle, lean body and big feet of a hunting hound are clearly defined. The figure is graceful and life-like. The raised head of a dog either listening to or watching his master is particularly appealing. (However, as the muzzle is somewhat damaged by corrosion it is not possible to be absolutely certain that the hound's mouth is shut. If it were open the raised head might be an indication that he is supposed to be howling.) Length 18.0 mm . height 33.0 mm .

The dog is associated with, among otherthings, healing and death. Dogs have been found in association with Deae Matres figurines and the Dea Nutrix (ibid, 19-21, 33), and the hound in particular is associated with Diana the huntress. A stone relief of Diana with a hound in a similar position to our piece, with head raised to look at his mistress, comes from Nettleton, Wiltshire (ibid, pl 12, g).


Fig 172 Figurine of a sitting hound (1:1)

4273 Fig 173 SF BKC 2537(C), H10. Period 5 or later. A copperalloy turtle or tortoise. The underside is plain and slightly concave. The shell of the animal is more or less lozengeshaped, with the head, tail and two legs forming the points The shell is decorated with incised lattice design with an impressed dot at the centre of each lozenge. The figure appears to have been freestanding. Length 415 mm , width 37.0 mm . The turtle/tortoise is one of the animals associated with Mercury (ibid, 224, 65; Pitts 1979, 57, pl 12 39).

4274 Fig 173 SF BKC 2546(C), H33 F17. Large pit. Period 5b or C, or 6. A copper-alloy snake's head similar to Green 1976, p 29, d. The features of the head are emphasised by the incised lines. Snakes are connected with Mercury (ibid, 13)


4274


Fig 173 Figurines of a turtle/tortoise, a snake's head, and a ?bird's foot (1:1)
and Minerva (Toynbee 1964, 79). It may be no coincidence that a Mercury (Fig 188) and figurines of two of his associated animals (4273.4274) derive from a site which contained two temples (Crummy 1980, 266-72).
4275 Fig 173 SF BKC 4180, N152. Latest Roman. Period 6. A small copper-alloy three-toed foot and part of a leg. There was probably a fourth toe at the rear of the foot. Probably therefore, from a figurine of a bird. Length 11.0 mm
4276 Fig 174 SF BKC 4306, N219 F75. Timber-lined drain. Backfilled late Period 5b2 or early 6. A pipeclay figurine of a bull. Length 103.0 mm , maximum height approximately 82.0 mm . The front legs and the lower part of the back legs are missing. The horns have been broken off. The animal has a well developed and muscular neck and long pendulous dewlap. The tail is long and plumed. The beast is well designed and life-like, almost noble, in contrast to the threehorned bull from Colchester with its stiff stance and staring eyes (Green 1976, pl 19, a, b). The figurine could possibly be from the same mould as a rather more damaged but seemingly identical bull illustrated by Rouvier-Jeanlin (1972, 1029). The piece is certainly an import from Central Gaul dated to the 1st or early 2 nd century. The bull is a symbol of strength and fertility (Green 1976, 32).
4277 Fig 175 SF BUC 777(C), C1704 G444. Grave fill. Period 2. A crouching jet hare, with the front of the body missing. Length 72.0 mm , height 43.0 mm . The fur of the animal is depicted by delicately incised overlapping semicircles arranged like scales, running upwards from the base towards the spine There are slight wavy lines on and between the ears, and on the scut. The animal is resting on a plain rectangular base. The underside of the figure has been hollowed out quite roughly and the hollow is surrounded by a decorative incised border of triangles filled with hachuring set between two parallel lines. Beyond this border atthe tail end five letters have been lightly scored: ABC M with a second C above the M (Hassall 1980, 410, no 25). The hare



4277


Fig 175 Fragment of a jet hare (1:1)
seems to have been a realistically executed figure (apart from the treatment of the fur, which is, however, effective). The hare was sacred to the Britons and was apparently sacrificed by Boudica to her war-goddess (Green 1976, 34) This piece could have been a grave good in a north-south burial destroyed by later grave-digging activities, or possibly a lost toy. The hollow body suggests that this could be a female hare crouching over her young which would have fitted within the space (cf the hare brooch, Henderson 1949 pl 29, 44). However, the gouging-out of the underside and the faintly-incised decoration and inscription on the bottom could be secondary especially since the workmanship here certainly seems of a lower order than that of the rest of the piece. The hare was noted for being prolific and hence if this piece derives from an earlier grave on the site it could be seen as a symbol of life-after-death (Professor J M C Toynbee, pers comm).

4278 Fig 176 SF BUC 1757, C1739 F62. Ditch. Period 1. A pipeclay fragment possibly from a Central Gaulish figurine of a pigeon similar to Rouvier-Jeanlin 1972, 1211, ${ }^{3}$ Length 55.5 mm , height 37.5 mm . A 2nd-century date seems likely for the object. The pigeon is the bird of Venus (Green 1976 20). A pipeclay pseudo-Venus fragment also came from Butt Road (Fig 167, 4263).


Fig 176 Fragment of a ?pigeon figurine (1:1)

4279 Fig 177 SF MID 682, A2641 L262. Demolition debris of Period 3. Most of a pipeclay figurine of a ram, probably imported from Central Gaul. Length 108.5 mm , maximum height 76.5 mm . The figure is quite worn and rough but the right hand view of the face shows that where details from the mould survive a well executed design was achieved. The central line of the figure where the two halves of the mould joined has been knife-trimmed at the leather-hard stage, as have the rudimentary legs and base. The ram is a beast of Mercury, the patron of merchants and of flocks and herds (Toynbee 1964,71 ). It is particularly appropriate that this figure was recovered from a large house which combined commercial rooms along the street frontage with spacious living quarters to the rear decorated in a style that indicated the wealth of the owner.


Fig 177 Ram figurine (1:2)

MODEL (7VOTIVE) OBJECTS
(Fig 178; 4280-4283)

4280 Fig 178 SF LWC 2652(C), J587. Upper gravel surface of footway. Period 4. A fragment of a copper-alloy vine branch with a single leaf at the tip and two side tendrils, one with a ?bud at the tip. The veins of the leaf are indicated by incised lines. Length 54.0 mm . This branch could have come from a Bacchic figurine or group, or possibly from a handle.
4281 Fig 178 SF BKC 859, D207 (F6). Shallow depression. Period 6 or later. A fragment of a pipeclay aedicula, probably from Central Gaul (as Rouvier-Jeanlin 1972, 242-4). The piece shows the central one of three projections, ornamented at the tip with an applied rosette, which sometimes surmount these niches in which votive figurines could be placed. The examples illustrated by Rouvier-Jeanlin have rosettes of eight petals. This rosette has only five. Length 65.0 mm . The fragment probably belongs to the late 1st or 2nd century.

4282 Fig 178 SF BKC 1206(C), E319 L448. Town ditch (F138) fill Late Period 6 or Anglo-Saxon. Probably a fragment of a je model axe head. The vertical element is pierced for either suspension or attachment to a shaft. A piece has been broken off from one end. Length 29.0 mm . Model axes are quite numerous in Britain (Green 1976,42). This particular example may be associated with the ?shrine on the same site (Crummy 1980, 266-72)

4283 Fig 178 SF BKC 4258(C), N233 F84. Pit. Period 6. A bone scabbard for a model sword. ${ }^{.}$The rear face of the scabbard is plain, the front has two parallel horizontal ribs indicating binding round the upper edge, and two other ribs running from just below these to the bottom. There is a projection at each side of the bottom of the scabbard, and two curved fittings, pierced for attachment to a belt, flank the top. The scabbard would have held a metal miniature sword. The hole for the blade was made by drilling a hole the length of the scabbard, then from the top widening it for most of its length to a rectangle. The bottom of the hole, still circular, was filled with a bone plug. Length 58.5 mm .

## VOTIVE PLAQUE (4284)

4284 Hassall 1977, pl 27, c. An ansate copper-alloy plaque with an inscription in punched lettering to Jupiter, found during building works following archaeological excavations on the St Helena's School site within the temenos of Temple 2 (Crummy 1980, 252).

## METAL LETTERS (Fig 179; 4285-4286)

These objects were used to embellish inscriptions by sitting in the carved recessed grooves of the letters. They could be used on civilian inscriptions as well as religious ones, and on domestic shrines as well as in temples.
4285 Fig 179 SF LWC 569(C), B208 (F88/F91/F84). Shallow pit. Period 5. Most of a corroded copper-alloy letter A. A rivet survives at one end of the horizontal stroke. A letter A was found at Richborough (Henderson 1949, pl 56, 274). Height 57.5 mm , thickness 0.5 mm .

4286 Fig 179 SF MID 41(C), B177 F37. Brick structure, C 18th/19th century. A white-metal coated copper-alloy letter L. All the serifs have been damaged, those on the left were possibly clipped off. There are two stout riveted projections on the underside for attachment. Possibly postRoman. Height 44.5 mm , thickness 2.0 mm .

## AMULETS (Fig 180; 4287-4288)

Other amulets and pieces with probable amuletic significance can be found under Category 1, (Fig 54, 1802-6) and Category 13 (Fig 163, 4255, 4257 and Fig 164, 4258, 4259).
4287 Fig 180 SF BKC 4548, T59 F15. Pit. Period 5 (a or) b. A crescent-shaped pendant of circular section with a


Fig 178 Model (?votive) objects (1:1)


Fig 179 Metal letters (1:1)
suspension loop in the centre of the convex side. Length 61.5 mm .

4288 Fig 180 SF BUC 607(C), C1228. Periods 1-2. A barnacle' pendant of U - to V -shaped section with central worn suspension loop. One terminal is marked by roughly cut grooves and a convex bead, possibly supposed to represent a phallus. The other shows inverted bull's horns with two diagonal slashes marking the centre, perhaps to indicate a head. Without these slashes the horns could be interpreted as a crescent moon. On both sides of the pendant the body to each side of the suspension loop bears three diagonal grooves. Length 69.0 mm .

There is a considerable bibliography relating to socalled 'barnacle' pendants. It has been suggested (Smith 1918, 54-63) that these pendants are in some way derived from the metal elements (barnacles) on a cavesson noseband. This seems to be unlikely. The elements used to embellish the terminals of these amulets are the symbols of fertility or strength. Phalli, crescent moons or bull's horns, and realistically or roughly executed bull's heads are found in several combinations (Hull 1930, 41-3). None of these elements suggests any connection with horses. Moreover, the hollow underside of these amulets probably served some purpose for which no explanation has yet been offered.

A 1st-century date seems likely for both these amulets, though the range for plain crescent pendants as 4287 is less well established. Amulets as 4288 may belong to a British rather than a Roman tradition, though the use of the triangle motif in enamelling is typically Roman. A similar example is in the Colchester and Essex Museum (ibid, pl 12, A2). A late 1st- or 2nd-century box burial (Group 228) at Chichester contained two amulets, one similar to 4287, and one to 4288 (Down and Rule 1971, fig $5.18,228 \mathrm{v}, 228 \mathrm{w}$ ). The latter has six triangles below the suspension loop, though no mention is made of enamelling.

## IRON COFFIN FITTINGS FROM BUTT ROAD (Fig 181; 4289-4296)

The Lankhills cemetery site (Winchester, Hampshire) yielded coffin-fittings from only four graves out of the 473 excavated (Clarke 1979, 336). These graves produced groups of twelve, eight, five and two fittings


Fig 180 Amulets (1:1)
respectively. Seen against this evidence, it is probably not likely that all the iron objects postulated below as coffin-fittings have been correctly interpreted. All eight derive from different graves. Though their position within the grave suggests the possibility of their being coffin-fittings, there is also every chance of their being either stray finds from the grave fill, or some may come from clothing on the body.

4289 Fig 181 SF BUC 66, A283 G18. Period 2. Found lying vertically in the side of the timber stain. A small iron plate, more or less semicircular. There is an iron rivet at one bottom corner, with possible traces of a second rivet at the opposite corner. Length 44.5 mm , height 31.5 mm .
4290 Not illustrated. SF BUC 108, A513 G25. Grave fill. Period 2. Possibly from a disturbed earlier grave (associated with redeposited human bones). An iron ring in two fragments. Probably of rectangular section. Internal diameter 27.5 mm .

4291 Fig 181 SF BUC 268, B402 G94. Period 2. Found lying atthe bottom of a grave. An iron ring, circular in section, in four fragments. Part only is illustrated. Internal diameter $315 \mathrm{~mm}, 4.5 \mathrm{~mm}$ thick.
4292 Fig 181 SF BUC 1481, C675 G301. Period 2. Described as fitting ' $A$ ' in the sequence of recorded coffin nails from this


Fig 181 Iron coffin fittings from Butt Road (1:2)
grave. A tapering iron strip with a semicircular end slightly wider than the strip itself. Length $132.5 \mathrm{~mm}, 4.0 \mathrm{~mm}$ thick. There are no obvious rivets or nails for attachment.
4293 Fig 181 SF BUC 501, C819 G319. Period 2. Found in the upper part of the coffin fill, midway along. An iron anglefitting. The long arm is roughly square in section. The short arm has been beaten out into a rectangular plate with a central rivet hole for attachment. There was probably a similar terminal at the end of the long arm, now broken off. Length of long arm, externally, 61.5 mm . Length of short arm, externally 35.5 mm .
4294 Not illustrated. SF BUC 691, C1352 G391. Period 2. Outside the south-east corner of the coffin. An iron ring of rectangular section. Internal diameter 15.0 mm .
4295 Fig 181 SF BUC 1483, C1442 G400. Period 2. Found lying between the knees of the skeleton. A subrectangular(?) iron plate, part is missing. Maximum dimensions 50.0 by $49.5 \mathrm{~mm}, 5.5 \mathrm{~mm}$ thick.
4296 Not illustrated. SF BUC 803, C1737 G445. Period 2. Found beneath coffin. An iron ring in two fragments. Circular section. Internal diameter 16.0 mm .

## TEXTILE FRAGMENTS FROM THE LATER BUTT ROAD CEMETERY (4297-4305)

by John Peter Wild

None of the pieces merits illustration, but the full report is given in the main text rather than on fiche.
4297 SF BUC 53(C), A360 G15. Period 2. Associated with a grave deposit of a bead armlet incorporating two coins of the House of Valentinian (AD 364-78). Small fragments of a very fine plain-weave cloth (about $10.0 \mathrm{~mm}^{2}$ in all), preserved through impregnation by metal corrosion products. System 1 , weak Z-spun, about 25 threads per 10.0 mm . System 2, weak Z-spun, about 25 threads per 10.0 mm .

4298 SF BUC $153(\mathrm{C}) / 174(\mathrm{C}) / 176(\mathrm{C}) / 213(\mathrm{C}) / 231(\mathrm{C})$, B307/309/311/314/327 G69. Period 2. From the inside of the first Butt Road box (pp 85-8). A terminus post quem is provided by a pierced coin of Tetricus II (AD 270-3) on an armlet (1629) inside the box. The cloth seems to have been preserved through metal corrosion products. Fragments of a fine plain-weave cloth. System 1, weak Z-spun, about 25 threads per 10.0 mm but yarns widely spaced out. System 2, weak Z-spun, 20-5 threads per 10.0 mm , widely spaced. B307 measures 35.0 by 5.0 mm . B309 two or three layers of cloth, about $20.0 \mathrm{~mm}^{2}$ in all, showing a count of about 18by 18 threads per 10.0 mm . B311 nine small fragments, about $10.0 \mathrm{~mm}^{2}$ in all. B314 four small fragments. B327 four very small fragments.
4299 SF BUC $150(\mathrm{C}) / 151$ (C)/1 $70(\mathrm{C}) / 177(\mathrm{C}) / 198(\mathrm{C})$, B294/295/298/299/312 G69. Provenance as 4298. Fragments of a medium-fine plain weave cloth. System 1, weak Z-spun, 12-15 threads per 10.0 mm . System 2, weak Z-spun, about 20 threads per 10.0 mm . System 2 covers most of system 1. B294 about $20.0 \mathrm{~mm}^{2}$. B295 about $5.0 \mathrm{~mm}^{2}$. B298 five very small fragments. B299 two very
small fragments. B312 one very small fragment.
4300 SF BUC 266(C), B397 G77. Period 2. A minute fragment of woven fabric, now a dense shiny black, found on the right arm of a skeleton. The cloth fragment, folded double, measures about 8.0 by 3.0 mm . Its structure is a very fine plain weave, clearly visible on the one side, but obscured on the other by the fraying of the fabric. Under low-power magnification it seems to have the characteristics of silk. System 1 (perhaps weft), unspun, 40-5 threads per 10.0 mm , comparatively widely spaced, maximum length 8.0 mm . System 2 (perhaps warp), unspun, about 100 threads per 10.0 mm . System 2 contains finer yarn than 1 , which it covers.

Miss B Lomas, Senior Experimental Officer in the Department of Textile Technology, UMIST, reports: The samples are very brittle and opaque to the passage of light, which has made microscopical examination very difficult. The fragment of fabric is of a plain weave and the yarns are composed of fibres of regular appearance which are smooth and uniform in diameter. The fibres are opaque to light and very friable. Cross-sectioning has had limited success. However, the number of fibres observed with approximately triangular sections similar to silk fibres is too great to be coincidental. The evidence indicates that this fragment of plain weave fabric is woven from yarns composed most probably of silk fibres. The cross-section suggests cultivated, not wild, silk.
4301 SFBUC387(C)/391(C), B1062 G171. Period 2. Plain-weave cloth, the outer layer of wrapping around a grave deposit of an iron knife (Fig 130, 2950) which may have been sheathed in a leather scabbard. System 1, fairly weak Zspun, about 11 threads per 10.0 mm , maximum length 19.0 mm . System 2, Z-spun, about 12 threads per 10.0 mm , maximum length 20.0 mm . Attached to the central portion of the blade and running obliquely across it are the remains of a selvedge, about 10.0 mm long. It is a reinforced selvedge (probably not a heading cord), woven 1 -over-1 around one bundle of three extra warp-threads, not plied, but worked as one. The extra, outer, warp is Z-spun. At one point on the blade are traces of what may be a weaving fault (two or three threads worked together in one system), but it may merely be the result of damage.

4302 SF BUC 385(C), B1063 G171. Provenance probably as 4301 . A small fragment of plain-weave cloth (about 10.0 by 7.0 mm ), probably the same as 4301 .

4303 SF BUC 502, C868 G295. Period 2. Surviving remains and impressions in plaster of a fairly fine plain-weave textile (about $20.0 \mathrm{~mm}^{2}$ ), found to the right of the lumbar vertebrae of a skeleton. System 1, weak Z-spun, about 18 threads per 10.0 mm , widely spaced. System 2, weak Z-spun, about 18 threads per 10.0 mm . The yarn in 1 is slightly finer than that in 2.

4304 SF BUC 727, C1396 G404. Period 2. Possibly wrapping from grave deposits inside the coffin. A very small fragment (about $3.0 \mathrm{~mm}^{2}$ ) of medium-fine plain weave, with a possible count of 12 threads per 10.0 mm in both systems.

4305 SF BUC 1312, C1527 G404. Provenance as 4304 Mediumfine plain weave (about $10.0 \mathrm{~mm}^{2}$ ), probably part of 4304.

Corrosion products from metalwork appear to have been responsible for the preservation of most of the fabrics described above. Plaster in Grave 295, however, may have assisted the survival of 4303 . On visual examination all the textiles (except one) appear
to be of flax, and have the weak Z-spin characteristic of linen yarn in the western Roman provinces. The exceptionally fine plain weave from Grave 77 (4300) appears under the microscope to be of silk.

There are few significant technical details to mention, since the fragments are so small. The plain-weave cloth adhering to the knife blade in Grave 171 (4301) had a reinforced selvedge in which the weft returned around a group of three extra warp-threads. (It could be a heading cord, but this is less likely.) This technical device, designed to strengthen the edge of the cloth, can be paralleled on a plain-weave woollen check cloth from Vindolanda (Chesterholm, Northumberland) (c AD 110) but there the warp cord contains six warp-threads, not three (Wild 1977, 7, 29). In the eastern provinces selvedges reinforced by a single warp cord are common, both for wool and linen (Yadin 1963, fig 67,200; table 13,199; table 20, 253). On the precise number of the three warp threads, however, the Colchester selvedge has no parallel in the western Roman provinces.

The extremely fine plain weave from Grave 77 is of unusual interest. It has a count of 45 by 100 threads per 10.0 mm , and is probably silk. Finds of silk textiles are rare in the Roman West and are all of 3rd- or 4thcentury date (Wild 1970a, 101,109, 117, 118; Nuber and Radnoti 1969, 37). The closest parallel, on weave alone, is a recent find from York, North Yorkshire, but it lacks the fineness of the Colchester piece (Hedges 1976, 14-15, pl 2). Neither the warp not the weft of the Colchester silk has been spun, and this may be important. It is generally agreed that silk textiles woven within the Roman Empire have spun (usually Z-spun) warp and unspun weft (Wild 1970a, 44, 51). Indeed, one might argue that the combined Z-spun and S-spun yarns in the warp of the York textile point to a workshop in western Europe where woollen fabrics relying on the varied spin directions of their yarns for pattern effects were being woven in the Iron Age, Roman and Migration periods. ${ }^{5}$ Unspun warp and weft, however, is characteristic of silks woven in China (Pfister 1937, 35-6). One would hesitate to claim this as a Chinese import on this feature alone, but the possibility cannot be ruled out.

The evidence from later Roman graves at York (Wild 1970a, 95) and Poundbury, Dorchester (unpublished report by J P Wild), suggest that the textiles from Butt Road were used to wrap corpses and grave-goods and do not represent clothing remains, except in secondary use. This hypothesis needs to be tested against the results of future work.

## Notes

1 Personal communication to Philip Crummy.
2 The Trust acknowledges its indebtedness to Judy McCausland who first drew our attention to this object when it was in private hands, and who arranged for it to be recorded and photographed by the Trust and at length to be purchased by the Colchester and Essex Museum. The piece had changed hands at least once before Mrs McCausland learnt of it.
3 This piece was identified by Donald Bailey, to whom I am grateful.

4 I am indebted to Stephen Greep for the identification of this object.
5 Wild 1977, 27; H-J Hundt, Textil- und Lederreste aus einem alamannischen Grab von Munningen, Kr. Donau-Ries', in Saalburg Jahrbuch 33 (1976), 76 ff . The silks from Morken in the Rhineland may also be of western origin, for they have close affinities structurally with the products of western European wool-weavers (H Hinz, Die Ausgrabungen in Morken, Kr. Bergheim, 1969, 219 ff).

Reports on the crucible sherds and slags will be published with the site reports.

| CATEGORY 16: | OBJECTS | AND | WASTE | MATERIAL | ASSOCIATED |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| WITH | ANTLER, | HORN, | BONE, | AND | TOOTH | WORKING |

In this category have been placed pieces of antler, horn, bone and tooth which are offcuts or unfinished items. Two groups of associated partially-worked objects can be distinguished which indicate boneworking activities on their respective sites. One of these groups, that from Butt Road, has already been published (Crummy 1981), though not fully.

## ANTLER OFFCUTS OR UNFINISHED OBJECTS (Fig 182; 4306-4312)

All the pieces are of red deer antler.
4307 Fig 182 SF LWC 1199(C), B62 F33. Wall foundation. Period 5. A section of thick antler beam. Length 173.0 mm , diameter 42.5 mm . Both ends have been sawn and one may have been polished. The piece has been sectioned longitudinally for most of its length, but one end seems to have been left complete for 39.0 mm , though about a third of the diameter at that end is now broken off. A hole 7.0 mm across has been bored through one side of the object (it may in fact have passed right through the beam) at the ?complete end before that end was sawn across. The hole is now sectioned. Some of beam core has been cut out, most noticeably at the ?complete end. It could have been the attempted removal of this tissue that caused the piece to break. This object, which is clearly unfinished, could represent a stage in the manufacture of either a large twopiece handle or an item from the tack of a driven animal.
4310 Fig 182 SF BKC 4894(C), N286 F92. Pit. Period 6+. A length of antler beam which has been sawn across at both ends. One section of the outer surface has been removed by very shallow knife strokes. There is a slight abandoned saw cut about 3.0 mm in from one end. Probably intended to be made into a tool handle. Possibly associated with bone working on the same site (4333-47 below). Length $61,5 \mathrm{~mm}$.

4312 Fig 182 SF CPS 961, 605 F115. Occupation. Period 4. A length of antler beam or tine similar to 4310 , but with more of the surface trimmed off. Both ends seem to have been cut for part of the section and then broken. Length 93.5 mm .

## HORN-WORKING WASTE

 across at one end (cf Schmid 1972, 46-8).


Fig 182 Antler offcuts or unfinished objects (1:2)

## BONE OFFCUTS OR UNFINISHED OBJECTS (Fig 183;4314-4331)

4314 Fig 183 SF LWC 969, C195. Make-up. Period 4. A strip of dense bone cut into a length of slightly tapering rectangular section 7.0 by 6.0 mm . Both ends are broken. One end shows a groove across the width of the strip. The piece has been polished. Length 61.0 mm .
4317 Fig 183 SF BKC 420(C), A107 F16. Town ditch fill. AngloSaxon or Period 6. An offcut with one straight edge and the other edge cut into a low curve. Length 42.0 mm , thickness 3.0 mm .

4318 Fig 183 SF BKC 1657, E286 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. A parallel-sided strip, rectangular in section, 10.5 by 5.0 mm , probably intended for use as inlay. One end seems to have broken across. It may have been cut. The other end is cut but damaged. At that end there is a faint ?marker line close to the edge. Length 55.5 mm .


Fig 183 Bone offcuts or unfinished objects (1:1)

4324 Fig 183 SF BKC 2605(C), H12 L2. Topsoil. Post-Roman. A length of bone partly turned on a lathe with spool-and-bead mouldings. One end of the piece is broken, the other end is unturned lathe waste, knife-trimmed into a rough hexagonal section. Length 81.0 mm , diameter 9.0 mm . Possibly post-Roman.
4325 Fig 183 SF BKC 2725(C), H12 L2 Topsoil. Post-Roman. Similar to 4324. One end is broken, the other cut and polished Length 73.0 mm , diameter 9.5 mm . Possibly postRoman.

## WORKED TOOTH FRAGMENT (Fig 184; 4332)

4332 Fig 184 SF CPS 987, L88. Make-up, burnt. Period 4. A fragment of a pig's canine (identified by A Gouldwell), with a small perforation at the upper end. There is no wear of the perforation to suggest that the object was worn as an amulet. Length 42.5 mm .


## A BONE-WORKING INDUSTRY ON BALKERNE LANE AREA N (Figs 185 and 186; 4333-4347)

A collection of bone worked fragments and offcuts derives from the latest levels of BKC N. Many of the pieces are from the same layer and are of similar shape, while others are included here because it seems reasonable to assume that they are related to the main group. All are probably from long bones. Fifteen pieces were recovered in all. Four are tapering wedge-shaped objects of rectangular section, with the plane of the broad face of the thinner end at right angles to the broad face of the thicker end. Three are similar to the wedge-shaped pieces, but are not trimmed down to a fine edge at one end. Two are offcuts from similar items. Two are of similar length but have a more rounded section and may be pegs, though their narrow end is quite broad on one plane suggesting that they may be linked to the previous pieces. Two are fragments of long bones either discarded or yet to be cut up. One is the sawn-off end of a long bone with the articulation broken off. The final piece is a section of long bone with a small drilled hole and the ring-and-dot mark of a drill bit on one face.

The purpose of the wedge-shaped fragments is uncertain. That this is a shape deliberately sought after is demonstrated by the fact that all four faces have been sawn except where use could be made of the reasonably flat outer surface of the bone. If these pieces were offcuts or roughs for other objects it is


Fig 185 Worked bone from Balkerne Lane (1:1)
unlikely that they would exhibit sawn surfaces except perhaps at the ends. Fig 185, 4334, for example, is an obvious offcut and its faces are either natural bone surface, broken or knife-trimmed. It has been noted elsewhere (Crummy 1981, 284-5) that as bone is easily worked it can take as long to make a rough-out from a splinter of bone as it does to make a finished article. The wedge-shaped pieces therefore should perhaps be viewed as objects if not finished, at least near completion. Their shape may in fact indicate their function. Perhaps these objects are wedges used to break up cracked long bones and thus prevent the loss of well-shaped splinters, intended perhaps for the manufacture of pins, by the overuse of a hammer. The thinner ends of all these pieces are damaged, which accords well with this idea. It may be possible to extend this hypothesis to include not only those items which have been sawn to a fine point, but the three with thicker ends, and possibly even the two pieces with roughly rounded section. It is possible then to view these fifteen items as a cohesive group, with the possible exception of Fig 186, 4345.

4333 Fig 185 SF BKC 4902(C), N75 L8. Dump. Period 6. A wedgeshaped object with four sawn faces. The thick end is also sawn. The thin end is damaged. One face shows cancellous tissue. Length 65.5 mm .
4334 Fig 185 SF BKC 4902(C), N75 L8. Dump. Period 6. An offcut with faces of both inner and outer natural bone surface, one broken face and two knife-cut faces. The thick end is sawn. Length 59.5 mm .
4335 Fig 185 SF BKC 4030(C), N77 L8. Dump. Period 6. A wedgeshaped object with three sawn faces and one face of trimmed outer bone surface. The thick end is sawn. The thin end is damaged. One face shows cancellous tissue. Length 80.5 mm .

4336 Fig 185 SF BKC 4371 (C), N84 L8. Dump. Period 6. A wedgeshaped object with four sawn faces. The thick end is sawn and the thin end damaged. One face shows cancellous tissue. Length 85.5 mm .

4337 Fig 185 SF BKC 4371(C), N84 L8. Dump. Period 6. A piece similar to the wedge-shaped objects but thicker. Possibly an unfinished example. Two of its faces are sawn. One is of trimmed outer bone surface, and one narrow one is either cut or broken. Both ends have been sawn. Length 85.5 mm .

4338 Fig 185 SF BKC 4901(C), N84 L8. Dump. Period 6. A wedgeshaped object with three sawn faces and one of trimmed natural outer bone surface. The thick end is sawn and the thin end is damaged. One face shows cancellous tissue. Length 70.5 mm .
4339 Fig 185 SF BKC 4901(C), N84 L8. Dump. Period 6. A thick fragment similar to the wedge-shaped objects. Three faces are sawn as are both ends. The other faces are knifetrimmed or natural outer bone surface. Length 93.5 mm .

4340 Fig 185 SF BKC 4901(C), N84 L8. Dump. Period 6. A roughly-cut tapering object of irregular circular to elliptical section. The narrower end is almost rectangular in section and damaged. The thicker end has been broken. Length 61.0 mm .

4341 Fig 186 SF BKC 5976, N84L8. Dump. Period 6. A section of a long bone sawn at both ends and cloven lengthwise. Length 915 mm .
4342 Fig 186 SF BKC 5976, N84 L8. Dump. Period 6. A fragment of a long bone similar to 4341 . Length 88.0 mm .
4343 Fig 186 SF BKC 4359(C), N87 F21. Pit. Period 6+. A roughlycut peg-shaped object. The thicker end has been sawn across, the narrower end is damaged. Length 53.5 mm .

4344 Fig 186 SF BKC 5344, N90 L9. Floor? Period 6. A fragment of either a wedge-shaped object or one of the thicker but similar pieces. The latter identification if the most likely. Three of the faces are sawn and one is of trimmed natural
outer bone surface. One end has been sawn, the other has been recently broken. Length 59.0 mm
4345 Fig 186 SF BKC 5308, N239 F2(?). Period 5ba or 6. A section from a long bone sawn across at each end and cloven lengthwise. Towards one long edge are traces of two knife strokes. In the cut surface of one a slight hole has been drilled, 2.0 mm in diameter and approximately 1.5 mm deep. The turns of a centre bit can be clearly distinguished on the floor of the hole. Closer to the centre of the bone fragment is a ring-and-dot mark, also 2.0 mm in diameter, made by one turn of a centre bit. Length 58.5 mm .
4346 Not illustrated. SF BKC 5989, N245. Period 6. The sawn-off end of a long bone from near the articulation which has been broken off. Length 69.0 mm .

4347 Fig 186 SF BKC 4407(C), N323 F97(?). Period 5b2 or 6. A thin splinter, possibly from a scapula. No worked surface can be distinguished. Length 76.5 mm .

## THE BUTT ROAD BONE-WORKING INDUSTRY

The bone-working industry on the Butt Road site has been discussed at length in Crummy 1981. In brief, the manufacture of bone ornament, probably for furniture, seems to have taken place if not on, at least near, the site in a period in the early 4th century when the north-south aligned cemetery had ceased to be used and either before the later cemetery was opened or contemporary with its early use. Of the objects recovered, chiefly offcuts and blundered or waste pieces, only a selection has previously been published. The complete group is illustrated here.
Lanceolate leaves with petioles (Fig 187; 43484353). These six objects have all been roughed out with broad knife strokes. Two of the leaves, 4352 and 4353 have been included in the group on that basis, though their petioles are missing. The possibility that the petioles may be stocks providing a handhold in the manufacture of plain leaves similar to 4354-60 has been considered but dismissed (ibid, 284).

4348 Fig 187 SF BUC 661, C1317 L2. Late Period 1 or Period 2. Length 118.5 mm , maximum width 25.5 mm . One edge of the leaf has splintered in antiquity. The other edge towards the tip has been damaged recently.
4349 Fig 187 SF BUC 652, C1332 L2. Late Period 1 or Period 2. Length 94.0 mm , maximum width 21.0 mm . The upper surface is badly scarred by over-deep knife cuts.
4350 Fig 187 SF BUC 703, C1382 G399. Grave fill. Period 2. Length 98.0 mm , maximum width 23.0 mm (ibid, fig 1,1 ).
4351 Fig 187 SF BUC 699, C1411. Unstratified. Length 113.0 mm , maximum width 25.0 mm .
4352 Fig 187 SF BUC 698, C1423 G402. Grave fill. Period 2. Length 89.0 mm , maximum width 25.5 mm . The upper surface is scarred by over-deep knife cuts. There is no petiole but one end is missing.
4353 Fig 187 SF BUC 742, C1498 L2. Late Period 1 or Period 2. Length 79.0 mm , maximum width 23.5 mm . One end has been broken off recently.

Lanceolate leaves without petioles (Fig 188; 43544360). These objects could equally well be petals as leaves (ibid, 278). Both faces of all the pieces have been rasped smooth.

4354 Fig 188 SF BUC 657, CI 310 L2. Late Period 1 or Period 2. Length 95.5 mm , maximum width 28.0 mm (ibid, fig 1, 2).
4355 Fig 188 SF BUC 664, C1313 L2. Late Period 1 or Period 2. Length 81.0 mm , maximum width 20.0 mm .
4356 Fig 188 SF BUC 647, C1334 L2. Late Period 1 or Period 2. Length 63.0 mm , maximum width 23.0 mm . One end has


Fig 186 Worked bone from Balkerne Lane (7:11
been broken off recently
4357 Fig 188 SF BUC 649, C1335 L2. Late Period 1 or Period 2 Length 64.0 mm , maximum width 18.5 mm .
4358 Fig 188 SF BUC 678, C1354 L2. Late Period 1 or Period 2 Length 86.5 mm , maximum width 27.0 mm . Only the very central section of this piece rests on a flat surface. Both ends curve upwards markedly.
4359 Fig 188 SF BUC 671, C1355 L2. Late Period 1 or Period 2. Length 87.0 mm , maximum width 23.5 mm .
4360 Fig 188 SF BUC 673, C1361 L2. Late Period 1 or Period 3. Length 71.0 mm , maximum width 22.5 mm .

Other leaves (Fig 189; 4361-4367)
4361 Fig 189 SF BUC 129(C), A592 F160. Pit. Period 2. An oak leaf
with a central rib defined by deeply cut grooves. The rib projects beyond the leaf as a petiole. The upper surface has been slightly abraded, but rasp marks can still be seen within the indentations and on each lobe. The underside has been rasped. The tip is damaged. Length 78.0 mm , maximum width 30.0 mm (ibid, fig 1, 3).
4362 Fig 189 SF BUC 619 , C1248 L4. Modern. A similar leaf, but much larger, with no central rib or petiole, and abandoned at the rasping stage. One side is damaged near the tip. Cancellous tissue shows on the upper surface near the missing part. Length 101.0 mm , maximum width 37.0 mm .
4363 Fig 189 SF BUC 776 , C1567 G424. Grave fill. Period 2. Half an oak-type leaf with midrib designed to lie along a straight edge. The upper surface has been abraded and polished, though a few deep rasp marks can still be seen. The underside has been rasped. The tip has been damaged



Fig 188 Lanceolate leaves without petioles from Butt Road (1:1)
recently. Length 65.0 mm , maximum width 26.0 mm (ibid, fig 1,4)
4364 Fig 189 SF BUC 750, C1500 L2. Late Period 1 or Period 2. A ?sycamore leaf similar to 4365 but abandoned at a much earlier stage. The lobes have only been rasped into shape on one side. One lobe is damaged. Length 49.0 mm , maximum width 43.5 mm (ibid, fig 1, 5).
4365 Fig 189 SF BUC 726, C1434 G423/G414. Grave fill. Period 2. A ?sycamore leaf. The upper surface has been abraded and polished. The midrib is marked by a groove. Two straight-walled peg holes, 4.5 mm in diameter, have been drilled through the leaf. A third hole was started on the right hand side, but the adjacent lobe broke off during drilling. Length 50.0 mm , maximum width 36.0 mm (ibid, fig 1, 6).
4366 Fig 189 SF BUC 666, C1301 L2. Late Period 1 or Period 2. Either part of a foliate scroll or a curled lobate leaf viewed from the side. The object has been rasped. Length 107.0 mm , maximum width 25.0 mm (ibid, fig 1, 7).

4367 Fig 189 SF BUC 675, C1360 L2. Late Period 1 or Period 2. A rough ivy leaf with petiole. The upper surface has been
rasped. The tip is missing. The leaf is made from a transversely cut piece of a ?metapodial and is more or less semicircular in section along the line from petiole to tip Length 42.5 mm , maximum width 36.0 mm (ibid, fig 1, 8).

Strip mounts (Fig 190; 4368-4373). The method of manufacture of these mounts is clearly illustrated by an offcut (4372) and a rough-out (4371).
4368 Fig 190 SF BUC 668 , C 1300 L2. Late Period 1 or Period 2. A mitred piece cut from a stepped strip mount. The top two steps have been abraded and polished. The lowest step is still rough from being rasped. Length 32.5 mm , width 26.0 mm (ibid, fig 2, 11)

4369 Fig 190 SF BUC 667, C1311 L2. Late Period 1 or Period 2. A stepped strip mount. All three steps have been rasped and slightly abraded. The third step is present only on one long side and both short sides. It would probably have been cut away as waste. The piece has been damaged in several places. Length 86.0 mm , width 27.5 mm .

4370 Fig 190 SF BUC 680, C1366 L2. Late Period 1 or Period 2. A


3


Fig 189 Other leaves from Butt Road (1:1)



4369


Fig 190 Strip mounts from Butt Road (1:1)
stepped strip mount. The upper two steps have been abraded and polished. The rough lower step has been partly cut away at the ends and on one long side. It may, of course, never have been present on this long side (see 4369). There are traces of an incised line along and beyond each wall of the top step. This may be a marker line cut at an early stage of the work to indicate where the steps should be. Length 86.0 mm , width 28.0 mm (ibid, fig 2, 10).

4371 Fig 190 SF BUC 650, C1331 L2. Late Period 1 or Period 2. A section of a long bone sawn at each end and cut and partly rasped on the reverse. The upper surface has been trimmed with a knife. The dimensions of this slightly waisted piece, 86.0 mm long, 29.0 mm wide, suggest that it is almost certainly a rough for a stepped strip mount (ibid, fig 2, 12).
4372 Fig 190 SF BUC 1758, C1342 L2. Late Period 1 or Period 2. A sawn-off end section of a long bone. There are traces of knife strokes on the upper surface. Probably an offcut produced in the manufacture of strip mounts. Length 71.0 mm , maximum width 35.5 mm .

4373 Fig 190 SF BUC 804, C1595. Unstratified. A fragment possibly from an unfinished piece of stepped inlay. There is a rough groove along one edge and two other cuts towards the centre. The upper surface has been rasped. One end has been broken off recently. Length 51.5 mm , width 22.5 mm .

## Convex mounts with spool-and-bead decoration (Fig 191; 4374-4379).

These mounts would have been produced on a lathe from the central, almost circular, part of a metapodial which was then sawn in half along its length.
4374 Fig 191 SF BUC 611, C1244 L4. Modern. In two pieces. One end is sawn, the other has been smoothed and polished. Length 24.0 mm .
4375 Fig 191 SF BUC 635, C1281 L2. Late Period 1 or Period 2. Length 42.5 mm .
4376 Fig 191 SF BUC 629, C1292 L4. Modern. Length 41.0 mm . One end has been smoothed and polished. The other is broken (ibid, fig 2, 17).
4377 Fig 191 SF BUC 669, C1308 L2. Late Period 1 or Period 2. Length 18.0 mm . Both ends have been smoothed and polished.

4378 Fig 191 SF BUC 662, C1309 L2. Late Period 1 or Period 2. Length 12.0 mm .

4379 Fig 191 SF BUC 1759, C483 G258. Grave fill. Period 2. A lathe-turned offcut from the end of a ?metapodial. Probably from the end of a spool-and-bead decorated mount. Length 19.0 mm .

## Miscellaneous mounts (Fig 192; 4380-4383)

4380 Fig 192 SF BUC 653/740, C1330/1552 L2. Late Period 1 or Period 2. A sawn rough-out of a bird in flight, with the wings curving on a downwards beat. At both the throat and the nape a hole has been drilled in an effort to prevent the bone cracking along the grain when the piece was sawn. This was unsuccessful at the throat, and, after being sawn, the object has broken on a line running to the hole at the nape. Length 70.5 mm , width 65.5 mm (ibid, fig 2, 13).

4381 Fig 192 SF BUC 674, C1357 L2. Late Period 1 or Period 2. Possibly a rough-out for a lobate leaf, perhaps similar to 4364 and 4365 . The piece has been broken recently. Length 415 mm .
4382 Fig 192 SF BUC 736, C1450 G405. Grave fill. Period 2. A mount, probably originally rectangular ( 43.0 by 36.0 mm ), with stilted semicircular cut-outs on two opposing sides, and concave-sided $V$-shaped cut-outs on the other two opposing sides.
4383 Fig 192 SF BUC 749, C1562 L2. Late Period 1 or Period 2. A mount of two angular ivy leaves linked by a disc. The upper surface has been abraded smooth and polished. Length 76.5 mm , width 26.0 mm (ibid, fig 1, 9).

Lathe-turned pegs (Fig 193; 4384-4386)
4384 Fig 193 SF BUC 513, C946 L1. Period 1 or 2. An unfinished lathe-turned ?peg, roughly cut to shape before being centred


Fig 191 Convex mounts from Butt Road (1:1J
on the lathe. The marks of the lathe stock centres are visible at each end. Length 56.0 mm , maximum width 11.0 mm .

4385 Fig 193 SF BUC 672, C1372 G384. Grave fill. Period 2. A similar piece, over-cut at the narrower end so that the motion of the lathe has not brought all the circumference of the peg up against the tool used to trim the surface. The lathe centre marks are visible on each end. Length 61.5 mm , maximum width 10.5 mm (ibid, fig 2, 16).
4386 Fig 193 SF BUC 654, C1329 L2. Late Period 1 or Period 2. A possible knife-trimmed rough-out for a peg similar to the above. This piece is unlikely to be a fragment of lathe waste as both the previous pieces show centre marks at each end, indicating that their length was decided upon before, not after, they were turned. Length 44.0 mm , maximum width 14.0 mm .

Double-ended ?pegs (Fig 194; 4387-4389). See ibid, 284-5 for a discussion of the method of manufacture and the identification of these objects. The ?pegs exhibit cut and broken faces, as well as inner and outer natural bone surface.
4387 Fig 194 SF BUC 676, C1353 L2. Late Period 1 or Period 2. Length 80.0 mm , width 8.0 mm .
4388 Fig 194 SF BUC 682, C1356 L2. Late Period 1 or Period 2. Length 92.0 mm , width 8.0 mm .


Fig 192 Miscellaneous mounts from Butt Road (1:1)
4389 Fig 194 SF BUC 677, C1359 L2. Late Period 1 or Period 2. Length 74.0 mm , width 9.5 mm (ibid, fig 2, 15).

Hairpin (Fig 195; 430)
430 Fig 195 SF BUC 686(C), C1348 L2. Late Period 1 or Period 2. An unfinished hairpin of Type 6 (pp 24-5; ibid, fig 2, 14).

Miscellaneous fragments (Fig 196; 4390-4395)
4390 Fig 196 SF BUC 690, C1338 L2. Late Period 1 or Period 2. A triangular offcut, 48.5 by 44.0 by 36.0 mm .

4391 Fig 196 SF BUC 688, C1343 L2. Late Period 1 or Period 2. A very thin sawn fragment probably originally rectangular. Length 36.0 mm , width 23.5 mm , thickness 0.5 mm .
4392 Fig 196 SF BUC 683, C1364 L2. Late Period 1 or Period 2. A fragment of the pelvic girdle of a pig, 43.0 by 38.0 mm . Part of one surface seems to have been sawn or cut into.

4393 Fig 196 SF BUC 697, C1389 G405. Grave fill. Period 2. A fragment with a V-shaped cut-out at one end and a Vshaped mark on the surface. Length 34.0 mm , width 16.0 mm ,

4394 Fig 196 SF BUC 754, C1477 L2. Late Period 1 or Period 2. A small piece of bone, stained green. Possibly cut on one side. The green staining is most likely to be caused by the proximity of copper-alloy salts as the practice of staining bone hairpins green seems to be restricted to the 1st and 2nd centuries.

4395 Fig 196 SF BUC 768, C1683 G444. Grave fill. Period 2. A disc roughly cut from an ox scapula. Possibly an early stage in the manufacture of a leaf similar to 4364 and 4365 . The diameter varies from 56.0 to 51.0 mm .


Fig 193 Lathe-turned pegs from Butt Road (1:1)


Fig 194 Double-ended Ppegs from Butt Road (1:1)


4392


Fig 196 Miscellaneous fragments from Butt Road (1:1)

## CATEGORY 17: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH THE MANUFACTURE OF POTTERY VESSELS OR PIPECLAY OBJECTS


#### Abstract

No objects have been found which relate to the manufacture of pipeclay objects. Any items related to the making of pottery vessels will be dealt with in the pottery report.


## CATEGORY 18: OBJECTS THE FUNCTION OR IDENTIFICATION OF WHICH IS UNKNOWN OR UNCERTAIN

Finds in this category include objects which can be assigned to several of the preceding categories, and objects of which the uses are speculative, unknown, or uncertain.

## RINGS (Fig 197; 4396-4423)

4396 Fig 197 SF LWC 936(C), A292. Period 3b. Copper-alloy ring of roughly circular section. Worn in one place. Internal diameter 13.0 mm .

4397 Fig 197 SF LWC 386(C), B117. Cellar (F70) backfill, contaminated. Period 5+. Copper-alloy ring of stilted Dshaped section. Internal diameter 14.0 mm .
4399 Fig 197 SF LWC 1974(C), H150. ^Probable remains of demolished wall of Roman building. Roman. Copper-alloy ring of ovoid section. Internal diameter 25.0 mm .

4400 Fig 197 SF LWC 2469(C), J385. Demolished building. Period 4b destruction. Iron ring of circular section. Internal diameter elliptical, 45.0 by 51.0 mm .
4402 Fig 197 SF LWC 4306, J452. Demolition debris. Period 4b destruction. Iron ring of rectangular section. Internal diameter 24.0 mm .

4403 Fig 197 SF LWC 3020(C), J806. Occupation of first gravelled footway surface. Period 4a. Copper-alloy ring of ovoid section. Internal diameter 16.5 mm .
4420 Fig 197 SF MID 117, C468 F158. Pit. Roman. Fragment of a bone ring of D -shaped section with an internal ridge. Internal diameter 22.0 mm .

4423 Fig 197 SF BUC 1723, H1065 G693. Grave fill? Period 1. A corroded iron ring of ?D-shaped section. Internal diameter 33.0 mm . Possibly a coffin-fitting.

## CHAINS (Fig 198; 4424-4445)

Copper-alloy chains were used for the suspension of scale pans (Ward-Perkins and Claridge 1976, catalogue no 248) or of metal lamps (ibid, catalogue no 135). They could support jewellery or amulets worn round the neck (Fig 113, 2950), or themselves could be jewellery. Descriptions of the types of chain used in jewellery can be found in Higgins 1976. Iron
chains could also be used for a variety of purposes, such as the suspension of iron cauldrons, or as part of harness. Small single rings could be suspension loops rather than links of a chain.
4424.Fig 198 SF LWC 565, A133. Topsoil over tessellated pavement. Probably late Roman, but possibly early medieval. Two copper-alloy penannular links of thin Dshaped section (the D lying horizontally) and a fragment of a third. Internal diameter 6.5 mm .

4427 Fig 198 SF LWC 3986(C), R324. Demolition debris. Period 4 or post-Roman. A length of copper-alloy chain of oval penannular links of circular section. One end link is larger than the others. Internal dimensions of small links 2.0 by 5.0 mm . Internal dimensions of large link 3.5 by 6.0 mm .

4429 Fig 198 SF BKC 292(C), A75 F16. Town ditch fill. Anglo Saxon or Period 6. Two links of a copper-alloy chain. Each link is made of wire coiled twice and with the ends twisted together. Internal diameter 3.5 mm .

4432 Fig 198 SF BKC 3289(C), J186 F13. Large pit. Period 5b. Copper-alloy loop or hook from the end of a chain (WardPerkins and Claridge 1976, catalogue no 248). Length 41.5 mm .

4440 Fig 198 SF CPS 656(C), 641 L88. Burnt make-up. Period 4. A copper-alloy suspension loop probably from the end of a chain. Part of the loop is missing. Length 28.5 mm .

4441 Fig 198 SF BUC 70(C), A319 L2. Period 2. Five lengths of copper-alloy double loop-in-loop chain. One length only is illustrated
4442 Fig 198 SF BUC 63, A323 F75. Pit. Post-Roman. A short length of iron chain of three figure-of-eight links and one rectangular link. Possibly post-Roman.

4443 Fig 198 SF BUC 410, B1148 G177. Grave fill. Period 1. Five copper-alloy oval penannular links of D-shaped section. Internal diameter 6.5 by 9.0 mm .
4444 Fig 198 SF BUC 477, C309 G284. Grave fill. Period 2. A length of copper-alloy double loop-in-loop chain.

## COPPER-ALLOY WIRE (4446-4462)

Some of the catalogued fragments of wire may be from brooch pins or springs, distorted armlets or other larger objects. None has been illustrated. In microfiche catalogue.


Fig 197 Rings (1:1)

## BONE 7PEGS (Fig 199; 4463-4472)

Each of these ?pegs has a flat head, an elliptical section, and a simple tapering shaft. The shaft suggests that they may be of 1 st- or 2 nd-century date by analogy with bone hairpins of Types 1 and 2. However, most of these pieces derive from later Roman or post-Roman contexts. A further four similar pieces were found in post-Roman levels, and these are probably of post-Roman date. This slight difference of date in context and the rather thick shafts of the objects when compared with hairpins lead to the suggestions that they may be pegs, or styli, or possibly awls. As pegs they could serve a variety of

domestic uses, perhaps as meat skewers, or as eating utensils, or as dressmaker's pins to hold two pieces of fabric together during the manufacture of a garment, or as dress pins. If the latter identification were correct then a late Roman date would perhaps indicate an affinity between these objects and Saxon dress pins (MacGregor 1976, 13).
4465 Fig 199 SF LWC 2688, J595 F184. Circular depression. ?Sinkage. Period 4a. Length 111.5 mm , diameter of head 6.0 mm .

4466 Fig 199 SF BKC 992(C), D396. Town ditch fill. Late Period 6 or Anglo-Saxon. Length 127.5 mm , diameter of head 7.0 mm .

4468 Fig 199 SF BKC 3286(C), J189 F42. Pit. Probably Period 5 Tip missing. Length 73.0 mm , diameter of head 7.5 mm .


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Fig 200 Miscellaneous copper-alloy objects (1:1)

4604 Fig 201 SF LWC 986(C), A313 F117. Ditch. Period 1. Budshaped ?terminal with moulded collar. The mouldings do not pass right round the object. Length 18.0 mm , height $1-5.0 \mathrm{~mm}$.
4605 Fig 201 SF LWC 1944(C), J121 F59. Timber-lined drain. Period 4. Thick triangular object with convex moulded terminal. Height 29.5 mm .

4606 Fig 201 SF LWC 3373(C), J919 F308. Burnt wall with ?plastered south face. Period 2. Acorn-shaped object pierced from top to bottom and from side to side. Possibly used at the junction of wooden bars on furniture. Length 24.5 mm , width 21.0 mm .

4607 Fig 201 SF LWC 3162(C), J943. Make-up? Period 3? Piece of crushed tubing with the ends flared and split. Possibly the neck of a copper-alloy jug. Length 28.5 mm .
4608 Fig 201 SF LWC 3256, J976 F313. Pit. Period 1. Strip with a rounded end and a rectangular cut-out, (see the foot-rule latch in Wheeler 1930, 84). Length 52.0 mm , width 13.0 mm .

4610 Fig 201 SF LWC 3416(C), J1058. Building debris. Period 2 demolition. Triangular object with rounded pierced terminal and slight projection on the base. Length 25.0 mm .
4612 Fig 201 SF LWC 3611(C), J1601. Make-up from Period 3. Possibly a stamp, or perhaps a decorative terminal. A tang for fixing the object into a ?handle rises from a collar set on (or below) the rectangular body. Three V-shaped notcheson each side produce a pattern of four ?bud and leaf designs on the ?bottom face. Length 25.0 mm , the base is 13.5 mm square.
4613 Fig 201 SF LWC 3620(C), J1675. Redeposited building debris. Period 2 demolition? A protective fitting from the corner of a wooden object, perhaps from a wooden handle. The two plates are held together by three rivets. The gap between the plates varies from 4.5 to 9.5 mm . Length 53.5 mm , width 23.0 mm .

4614 Fig 201 SF LWC 3623(C), J1681. Silt. Period 1? An object reminiscent of the front of Class 2 button-and-loop fasteners (Wild 1970b, fig 1), but with a rectangular projection at the back for attachment to a ?strap. The main ring is triangular in section. The inner disc is decorated with Champlevé enamel in pale blue and green (or possibly white). Diameter 21.0 mm .
4615 Fig 201 SF LWC 3749(C), K434. ?Garden topsoil. Period 4b? Probably a protective terminal fitting, similar to a chape. The


Fig 201 Miscellaneous copper-alloy objects (1:1)
narrow end is coarsely serrated. Perhaps a tool end, used for combed decoration. Length 23.0 mm , width 15.5 mm .
4616-17Fig 201 SF LWC 3804(C), K520 F291. Pit. Period 2. Two triangular plates with rounded terminals. One is bent. One only illustrated. Each has a burred rivet hole in the main body of the plate and in the terminal. The remains of a rivet survive in the terminal hole of the illustrated example. Similar to a ?harness fitting (?strap-loop) from Hofheim (Ritterling 1913, Taf 13, 15), but lacking any sign of a hinge on the end opposite the terminal. Length 38.0 mm , width 16.0 mm .

4618 Fig 201 SF LWC 3801 (C), K526. Make-up. Period 2. Possibly a jangle from harness. The object is made in two pieces: a convex disc with concentric mouldings fixed by a domeheaded rivet to a flat back plate with a projecting hook for suspension at the top and a bud-like terminal at the bottom. Length 32.5 mm , diameter 17.5 mm .
4619 Fig 202 SF LWC 3820(C), K541. Period 1 destruction. Period 2. A flat plate with bud-like terminal. The plate is decorated with very faintly incised pairs of dashed lines. Length 25.0 mm , width 22.5 mm .

4620 Fig 202 SF LWC 2421(C), M78. Rampart 1e. A socketed terminal fitting with moulded stem. The bottom is damaged but was asymmetrical, comprising a rectangular piece with two projections set on one side of a circular moulding. From suspension loops on a moulding approximately half way up the object hang two (originally three) leaf-shaped pendants, or jangles, with enamelled centres and bud-like terminals. It is these pendants which indicate that the socket must have been at the top of the object, as it is only by hanging that way up that the enamel is visible. They also imply that the object was portable, or mobile in some way. Length with the pendants 510 mm .

4621 Fig 202 SF LWC 2557(C), M125. Dump between Street 3 and wall, and over Street 3. c 125-150. Lunular object with a perforation in the centre of the crescent near the inner edge and a bent rectangular section stem projecting from the opposite edge. This stem is perhaps a straightened-out suspension loop. Length 34.0 mm .
4623 Fig 203 SF BKC 901(C)/1019, D300. Town ditch fill. Late Period 6 or Anglo-Saxon. A crescent-shaped object with knobbed terminals. In two pieces. On the upper side are two


Fig 202 Miscellaneous copper-alloy objects (1:1)
lugs (one damaged) for a hinge, and on the underside part of a rectangular section curved strip. Possibly a fitting from a vessel, but unlikely to be a lid. Length 41.5 mm , width 35.5 mm .

4624 Fig 203 SF BKC 973(C), D363 L27. Dump and occupation debris at bottom of town ditch. Period 6. A thin crescentshaped object, slightly convex in section. The ends are missing. Length 33.5 mm .

4626 Fig 203 SF BKC 1181(C), E312 L73. Make-up. Period 5. A disc pierced in three places near the edge. The perforations are burred. Diameter 20.0 mm .
4627 Fig 203 SF BKC 1 352, E51 5 F166. Pipe trench. Period 4. A crescent-shaped object with roughly incised grooves containing in three places fragments of white-metal inlay. Possibly a scrap from casting. Length 46.0 mm .
4629 Fig 203 SF BKC 1599, E877 L238. Road metalling. Period 1 b . An object of rectangular section consisting of a fragment of a thick curved strip with another equally thick strip projecting from it. Length 28.5 mm .

4630 Fig 203 SF BKC 1633(C), E907 L250. Road metalling Periods 2 and 3a. A slightly curved rectangular plate decorated with incised seemingly random grooves. Through a lozenge-shaped perforation at one end of this plate a triangular plate is fixed. This second piece is also decorated with grooves and is folded over to touch the back of the first plate. 31.5 by 40.0 mm .
4631 Fig 203 SF BKC 1674(C), E938 L275. Road metalling. Period 2. A plain slightly waisted rectangle. Its weight of 10.5 gm does not suggest that it is either a weight or an ingot. 26.0 by 21.0 mm .

4632 Fig 203 SF BKC 2267(C), G210. Cleaning top of burnt daub floor. Period 2. A laminated circular object with a ?moulding
near the edge on each side and a recessed centre. There is a rectangular perforation through the object. Reminiscent of an escutcheon for a lock-hole. Diameter 27.0 mm .

4633 Fig 203 SF BKC 2303(C), G217. Burnt floor. Period 2. A thick bar of rectangular section, plain on three sides. The fourth side is concave and is decorated in relief with leaves and vertical mouldings set between beaded and slightly knurled marginal grooves and edges. Both ends are damaged Possibly a stamp? Length 102.0 mm , width 16.0 mm , thickness 8.0 mm .

4634 Fig 203 SF BKC 31 59, J100 F18. Slot. Period 5b. Adisc with recessed centre filled with white enamel in which are set four yellow enamel circles to form eyes. Diameter 13.0 mm .

4635 Fig 203 SF BKC 3572(C), J312 L35. Dump and levelling deposits. Periods $3 / 4 / 5 \mathrm{a}$. A disc with concentric convex mouldings and central knob. Diameter 40.0 mm .
4637 Fig 203 SF BKC 3777(C), K585 F124. Posthole/postpit. Periods 5/6. A ?white-metal-plated pelta-shaped object with a broken projection on the outer edges. Possibly military; perhaps part of a very large buckle tongue. Width 22.5 mm .

4640 Fig 203 SF BKC 4272(C), N221 F76. Pit. Period 6+ Somewhat similar to Fig 200, 4601 and 4602. Circular object with recessed ?base and circular projection on the upper side. Diameter 25.0 mm .
4641 Fig 203 SF BKC 4341(C), N312 F95. Pit. Period 6. A convex fitting with ?scallop decoration. Diameter 14.5 mm .

4642 Fig 204 SF BKC 4527(C), T85 L27. Destruction debris of Period 2. Period 3. An object slightly similar to Fig 200, 4601 and 4602 but with a shorter shank and lacking any decoration. A triangular piece of sheet copper alloy, perhaps a washer, is fixed in the recessed base by a rivet, which passes through the shank. There is a slight cut-out in the wall of the base. Similar to Waugh and Goodburn 1972, fig 38, 110. Diameter 19.5 mm .

4643 Fig 204 SF BKC 4753, T518. Period 1 (or 2). Corroded T shaped object with wide cross-bar and narrow damaged upright. Length 22.0 mm , width 24.0 mm .
4644 Fig 204 SF BKC 5007(C), V68 L22. Dump. Late Period 5. Possibly a flask or flagon rim, or a terminal with a flared rim. Diameter 33.0 mm , length 23.0 mm .

4645 Fig 204 SF BKC 4988, V80 L5. Cultivated soil. Late Period 5. Flat object with perforated terminal. Length 20.0 mm , width 9.5 mm .

4647 Fig 204 SF BKC 5355, V457 L87/F130. End of Period 4, beginning of 5 . Leaf-shaped object with damaged tip and a slight shank projecting from the broad end. There is a small perforation on the long axis of the object near the top. One side of the piece is decorated with curved patterns of knurling and faint grooves. Too thin for a seal-box lid. Length 29.0 mm , width 18.5 mm .

4648 Fig 204 SF BKC 5425(C), V727. Unstratified. Probably the handle of a toilet instrument, or of a mirror. Most of the shaft is decorated with complex mouldings, mostly of rectangular section. The plain part of the shaft is octagonal in section. There is a suspension loop at one end. The other end is missing. Bent. Length 152.0 mm .
4649 Fig 204 SF BKC 5757, V1116. Period 4, or 5, or 6. Seven fragments of a disc on the upper face of which are set at random many squares of ?niello. On the underside are a pierced lug, perhaps for a hinged attachment, and three rectangular short projections. Diameter approximately 45.0 mm .

4650 Fig 204 SF CPS 591 (C), 617 F119. Robber trench material. Period 5. A terminal similar to Fig 203, 4640. Diameter 28.5 mm .

4651 Fig 204 SF CPS 889(C), Z1. Unstratified. Probably from contractor's trench. Probably Roman. Slightly tapering rectangular plate, convex in section, with a small projection at the top. A male figure in relief stands on the right, facing left, apparently dressed in a piece of material wrapped round the hips and knotted at the waist. His right arm is raised and his head thrown back, his left arm hangs down and away from his body. He seems to be facing an ?altar on the left, though the plate is very pitted by corrosion and this is


Fig 203 Miscellaneous copper-alloy objects (1:1)


Fig 204 Miscellaneous copper-alloy objects (1:1)
uncertain. Length 57.0 mm , width 49.0 mm .
4652 Fig 204 SF COC 180, 835 L214. Make-up in street. Period 4. A fragment of tubing with a thickened moulded rim. Perhaps a spout? Length 17.5 mm , diameter 15.5 mm .
4654 Fig 204 SF BUC 557, C1029 G344. Grave fill. Period 2. Pierced mount, with one recessed face, one convex face, and a deeply grooved wall. Diameter 16.5 mm .
4655 Fig 204 SF BUC 1357(C), E657 L45. Destruction debris. Probably first half of the 5th century. U-shaped strip with the ends riveted together. Length 10.5 mm , width 8.0 mm .
4656 Fig 204 SF BUC 1553, H371 L2. Period 2. Moulded terminal, perhaps from a handle. Length 27.0 mm .
4657 Fig 204 SF MRC 100(C), 112 F52. Pit. c early 2nd century. Fragment of a moulded strip with traces of knurling on the marginal mouldings and transverse bands of knurling flanking a row of six impressed circles at the siightly broader end. Perhaps a fragment of an armlet? Length 71.5 mm , width 13.5 mm .

4658 Fig 204 SF MRC 106, 113 F68. Fill of a c 4th-century inhumation. Fragment of a strip with wreath decoration in repousse work. Perhaps a piece of a military helmet browband. Length 34.5 mm , width 14.5 mm .

## UNIDENTIFIED GOLD OBJECT (Fig 205; 4659)

4659 Fig 205 SF LWC 3359, J926. Make-up (Period 2 demolition). Period 3. A gold disc decorated with repousse figures. The field is divided by beading into a crescent and a semicircle. In the semicircle is a winged phallus, and in the crescent are two opposed winged griffins (or possibly horses) separated by a cantharus. A projection, perhaps for suspension, has been broken off the top of the disc. Diameter 19.5 mm . The crescent, with its two large beads at the points, is reminiscent of 1st-century British collars (Fox 1958,106-7). A plate brooch in the Santon Downham hoard bears a winged griffin (ibid, pl 37b) and the Marlborough vat depicts pairs of opposed horses. These horses are separated in one case by Celtic scrolls (ibid, pl 35b) and in another by the extended muzzles of the animals shaped into pendant coils (ibid, pl 34e). Perhaps in the Lion Walk disc a mixture of both British and Roman traditions in design can be seen? The ?collar being a British element and the winged phallus Roman, the winged animals being British if they are horses, or classical if griffins, while the Roman cantharus is perhaps derived from a development of the Celtic scrolls seen on the Marlborough vat.


Fig 205 Gold object (1:1)

## UNIDENTIFIED WHITE-METAL OBJECT

4660 Not illustrated; in microfiche catalogue.

## MISCELLANEOUS UNIDENTIFIED IRON OBJECTS (Fig 206; 4661-4694)

4662 Fig 206 SF LWC 4332, B117. Cellar (F70) backfill, contaminated. Period $5+$. A spike of square section. Length 250.0 mm .

4664 Fig 206 SF LWC 4330, B321 F70. Cellar backfill. Period 5. An irregular lozenge-shaped flat plate with a rectangular section projection rising from one corner. Perhaps a pivot for the base of a door? Length 184.0 mm . Height of projection 86.0 m.

4666 Fig 206 SF LWC 4318, J548. Gravel spread in footway. Period 4. An object tapering on opposing sides from the centre towards either end. Possibly a small chisel or punch. Length 187.0 mm .
4667 Fig 206 SF LWC 2934(C), J717. Occupation. Period 4a and b. A ?tanged blade-shaped object, but the main part is of rectangular section except at the end nearest the ?tang where it is of triangular section. Dr W H Manning has identified this as a rake prong (Curie 1911, pl 61,7 and pl 67, 12). Length 158.0 mm .

4668 Fig 206 SF LWC 3425(C), J1207. Site clearance dump, mainly redeposited natural sand. Period 1. Aflat plate with a spike rising from one end. The other end of the plate is broken. Probably a fastener of some kind, perhaps part of a dog. Length $41,0 \mathrm{~mm}$. Height of spike 37.0 mm .

4677 Fig 206 SF BKC 6024, H239 F68. Hearth over pit. Period 5c. An L-shaped object, perhaps originally T-shaped, in which case this is a fragment of a T-staple. Length 190.0 mm .
4679 Fig 206 SF BKC 6015, J439 F242. Pit. Periods $3 / 4 / 5$ a? A hook? Length 87.0 mm .
4681 Fig 206 SF BKC 5154 (X-rayed), T430. Period 1 or 2. The Xray shows a ?tang with a heart-shaped terminal. Length 118.0 mm .

4694 Fig 206 SF BUC 1470, E829 F100. Trench. Last two-thirds of the 4 th century. An L-shaped object with thick pointed end to the longer arm and rounded ?pierced terminal on the shorter arm. Dr W H Manning has identified this as a much corroded bolt from a barb-spring padlock, though the pieces projecting from the thick end appear to have become detached from it, rather than to be corroded on to it. Length 134.5 mm .

## MISCELLANEOUS UNIDENTIFIED LEAD OBJECTS (Figs 207 and 208; 4695-4743)

4696 Fig 207 SF LWC 1131, B545 F195. Pit. Period 4. A rough disc, with the edge turned over to form a smooth line. Perhaps the lid from a small lead burial canister. Diameter 685 mm .

4703 Fig 207 SF LWC 3585(C), J1558. Occupation? Period 3. A ?ring-handle with mouldings at the top of the ring. Length 52.0 mm .

4709 Fig 207 SF BKC 2810, H294 F113. Pit. Period 5c. An object made of sheet lead folded into a tube with one end cut into strips. The object is decorated with raised dots and lines. A similar piece with exactly the same decoration comes from Kelvedon, and a third with different decoration from Wickford. These objects may have a religious significance (Eddy 1983, 14). Length 80.0 mm .

4717 Fig 208 SF BKC 3575(C), J262 F58. Pit. Periods 3/4/5a. A plate with flanged sides and a central perforation. Both ends are damaged. Set around the edges are iron nails or rivets. Length 106.0 mm , width 74.5 mm . Possibly associated with piped water supply, such as at the exit of a junction box.

## MISCELLANEOUS UNIDENTIFIED BONE OBJECTS (Figs 209 and 210; 4744.4756)

4744 Fig 209 SF LWC 1038, C270. Make-up. Period 4. A bone ?terminal probably split lengthwise. Length 32.0 mm , diameter 13.5 mm .
4745 Fig 209 SF LWC 3526, J1343 F465. Pit. Period 4? Possibly part of a pin? Length 53.5 mm , diameter 4.5 mm .

4746 Fig 209 SF BKC 5849, D363 L27. Dump and occupation debris at the bottom of the town ditch. Period 6. A piece of bone used as a tally? Length 128.0 mm .
4747 Fig 209 SF BKC 2460(C), G376 F108. Pit. Period 5c. Hollow bone object, similar to 4748 but plainer, with a rectangular cut out on one side. One end is damaged. Length 47.5 mm , diameter 27.5 mm . A similar object was found at Zugmantel (ORL 8, Taf 20, 88). Perhaps a toggle.
4748 Fig 209 SF BKC 5792(C), V1292. Unstratified. A similar object, grooved at each end, and with a pair of incised


Fig 206 Miscellaneous iron objects (1:2)


4696


Fig 207 Miscellaneous lead objects (1:1)


Fig 208 Miscellaneous lead object (1:2)

crossed lines over the body. Length 44.0 mm , diameter 25.0 mm .

4749 Fig 209 SF BKC 3362, J186 F13. Large pit. Period 5b. Long bone object, perhaps connected with weaving, though it is rather long for a pin-beater, or spinning, though it is probably not straight enough for a spindle. Both ends are damaged. Length 184.5 mm .
4750 Fig 210 SF BKC 3792, K570. Sinkage over F121. Period 3 or 4. A fragment of bone decorated with incised marginal grooves and trellis work. Diameter 39.0 mm .
4751 Fig 210 SF BKC 4344(C), N314 F97. Trench/slot. Period 5b2. Possibly a collar with two incised grooves at one end, a single groove at the centre, and traces of one at the other end. Length 34.5 mm , diameter 35.5 mm .

4752 Fig 210 SF BKC 4549(C), T25 F15. Pit. Period 5(a or) b. A peg with spool moulding capped by a low convex bead. Length 42.5 mm , diameter 11.0 mm .

4753 Fig 210 SF BKC 4994, V88. Period 3 or 4 ? Possibly a crude pin. The tip is missing. Length 55.0 mm .
4754 Fig 210 SF BKC 4848(C), unstratified. Reminiscent of scabbard chapes, but no parallel can be found. Length 54.0 mm , width 30.0 mm .

4755 Fig 210 SF COC 193, 894 L237. Dump. Period 2 or 3. Disc with concentric convex mouldings. Chipped. Diameter 37.0 mm .

4756 Fig 210 SF BUC 319, A642 G25. Grave fill. Period 2. Spatulate object, one end is damaged. One side has a tapering groove down the middle. Length 49.5 mm .



UNIDENTIFIED ANTLER OBJECT

## 211; 4757)

4757 Fig 211 SF LWC 3437, L505 F294. Pit. Period 1 or 2. A roe deer antler, trimmed and pierced close to the burr. The tip of one tine is broken off. Perhaps an amulet?

## UNIDENTIFIED FRIT OBJECT (Fig 212; 4758)

4758 Fig 212 SF BKC 5440, V801 L11. Dump. Late Period 5. A fragment of frit with three parallel grooves. Length 9.5 mm , width 9.5 mm .


Fig 212 Frit object (1:1)

## Abbreviations

BM British Museum
CAR Colchester Archaeological Reports
CAR 1 Philip Crummy, Aspects of Anglo-Saxon and Norman Colchester
CIL Corpus Inscriptionum Latinarum
CK Carson and Kent in Carson, Hill, and Kent, Late Roman Bronze Coinage
CM Colchester and Essex Museum
Coll Ant Charles Roach Smith, Collectanea Antiqua
Corp Catalogue number in Hull, M R, forthcoming, Brooches from pre-Roman and Roman Britain
F Feature number
G Grave number
L Layer number
OED Oxford English Dictionary
ORL 8 Der Obergermanisch-Raetische Limesdes Römerreiches, 8, Kastell Zugmantel
RCHM 1962 Royal Commission on Historical Monuments, Eburacum, Roman York
RIC Roman Imperial Coinage
SF Small find number
YMH 1891 A Handbook to the Antiquities in the Grounds and Museum of the Yorkshire Philosophical Society

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## COLCHESTER ARCHAEOLOGICAL REPORT 2:

## The Roman small finds from excavations in Colchester 1971-9

By Nina Crummy

MICROFICHE SUPPLEMENT

REDUCTION 25 X


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fragment of a wire bow with part of the catchplate.

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Group 2: brooches with cylindrical spring-cover (Fig 3; 17)

In printed catalogue.

Group 4a: eye-brooches (Fig 4; 18)

In printed catalogue.

Group 4b: early hinged brooches (Fig 5; 19-36)

All the examples of this group catalogued on fiche are Hod Hill brooches. Brooches of this series have a head rolled over upwards to hold an axial bar on which the pin is hinged. The curve of the bow is gentle and there is no sharp angle between bow and foot. The foot takes up about half the length of the brooch. There is usually a foot knob.

Type 60 The simplest and commonest of the Hod Hill series.
20 SF LWC 2888(C), K209, Garden topsoil. Period 4b. Fragment of the bow and part of the head, Length 26.5 mm , This brooch has a very narrow neck with a cross-moulding at the junction with the bow, which has marginal ribs and a pronounced central rib.

21 SF BKC 1238(C), E346 L69/B, Oyster layer, Period 3b, Length 40.0 mm . Fragments of a very corroded brooch with traces of longitudinal mouldings on the bow.

SF BKC 2518(C), G406. Uncertain. c Period 2 or 3. Length 47.0 mm . A very corroded brooch in two fragments. The pin is missing. There are traces of longitudinal mouldings on the bow.

SF HEC 7(C), L7. Roman, probably late. Length 20.0 mm . Fragment of the bow and part of the head. The bow has marginal mouldings and wavy-line decoration between mouldings down the centre. There are slight cross-mouldings on the head.

Type 61 Brooches of Hod Hill type with lateral lugs at the base of the bow.
26 SF LWC 3380(C), J111, Burnt Period 2 floor including occupation. Period 2. Length 21.0 mm . A fragment of the bow and part of the foot of a small brooch. One knobbed lug survives. The bow is decorated with knurled longitudinal mouldings and a central knurled moulding flanked by two plain ones. There is a transverse moulding at the junction of bow and foot. of the bow and foot of a small brooch. The sides of the bow expand towards the foot. The bow has marginal mouldings and a central knurled moulding. One knobbed lug survives. There is a stepped cross-moulding between bow and foot.

Type 63 Hod Hill brooches with lateral lugs at the top of the bow. 31 SF BKC 4960(C), V59. Unstratified. Length 29.5 mm , A flattened fragment of the bow and head. The bow is decorated with three equidistant mouldings. Each lug has a knurled moulding on the bow-side which continues down to form a marginal moulding on the bow.

Group 5: early sprung brooches (Figs 6 and 7; 37-61)

Type 90 B Colchester. A one-piece brooch with simple curved bow, flat side-wings, and a forward hook to secure the external chord, Sub-type B has an undecorated bow. small brooch. The bottom part of the bow with the catchplate is missing and the pin has broken away from the spring, which has eight turns. The tiny side-wings are grooved. The tip of the forward hook is missing. SF BKC 3434(C), K373 L39. Dump. Period 4a/b. Length 26.0 mm . A small fragment of a plain bow with hints of the side-wings, the forward hook and the catchplate.

Type 92 Colchester B. Atwo-piece brooch. The spring is secured by passing the external chord and the axial bar through a lug with two perforations behind the head. The side-wings are semicylindrical. There is a crest running on a flat ridge down the head to the bow. The ridge continues down the bow, flanked by cavetto mouldings, and may be decorated in various ways.

42 SF LWC 849(C), A284, Topsail. Early medieval? Length 34.0 mm . A corroded brooch, the spring and pin of which are missing, The bow has faint marginal grooves and two grooves running from below the crest to
merge towards the foot. The side-wings have a slight groove at the end. The catchplate has a single triangular perforation and may be slotted for the pin. SF BKC 300, B46 F24(L25). Fortress ditch. Period 1-lb. Length 27.0 mm , Too corroded for detailed description. SF BKC 1458(C), E668 F197. Posthole. Period 4. Length 19.0 mm . Too corroded for detailed description. SF BKC 1436(C), E732 L194, Footway metalling. Period 3b. Length 42.5 mm . A flattened and distorted brooch, the spring and axial bar of which survive, but the pin is missing. The side-wings are plain. The bow is similar to that of Fig 6.43. The catchplate has a single triangular perforation and is slotted for the pin.

SF BKC 1500(C), E743 F1S4/L200, Settlement. Periods 2-3a, 3b, Length $35,0 \mathrm{~mm}$. Similar to Fig 6,52 , but corroded.

SF BKC 3673(C), J397 F237, Pit. Periods 3/4/5a, Length $34,0 \mathrm{~mm}$. Too corroded for detailed description.

SF BKC 4762(C), T478. Uncertain context. Length 40.5 mm . Similar to Fig 6,52,

SF BKC 5766(C), V1274. Possibly L163. Period 2 or 3 . Length 37.0 mm . Too corroded for detailed description,

Type 94 A Sprung Dolphin brooches. Two-piece brooches with comma-shaped bow, often tapering to a point, and with a thick and rounded head. The semicylindrical side-wings tend to be long and may be plain or decorated. The spring is attached by a rearward-facing hook over the external chord.

54 SF LWC 3440(C), J1232 F419. Pit, Period 1. Length 33.0 mm . Only the pin of this corroded brooch is missing, though the twelve-turn spring and the side-wings are in several fragments. The bow is thick and D-shaped in section, with traces of grooving. The end of each side-wing is grooved
and moulded. The catchplate is solid.
SF BKC 1312(C). E394 F125. Pit. Period 3b. Length 39.0 mm . A very corroded brooch, complete except for most of the pin. The identification is suspect.

Type 94 B Hinged Dolphins. The pin is usually held in the centre of a thick, possibly round, crossbar.

59 SF BKC 5733, V1087. Period 4 or 5 ? Length 16.0 mm . Corroded fragments of a ?hinged brooch.

Group 65 Polden Hill brooches (Fig 8; 62-64)

This series is characterized by the method of attaching the spring by an axial bar fixed in the returned ends of the semicylindrical crossbar.

Type 95 B Brooches of this type have the comma-shaped profile of Dolphin brooches (Type 94) but the Polden Hill arrangement of attaching the spring. The head often takes the form of a crest, reminiscent of the forward hook, Sub-type $B$ has a less elaborate crossbar than that of sub-type A. 64 SF BKC 3439(C), J253 L33. Dump. Periods 3/4/5a. Length 60.0 mm . A more or less complete corroded brooch in three fragments, only the pin and part of the external chord are missing. The spring appears to have ten turns. The external chord passes through a hole in the crest. The crossbar has two grooves at each end. The crest runs half way down the bow, which has a D-shaped section and marginal grooves. The catchplate has two large stepped perforations.

Group 7: T-shaped brooches (Fig 9; 65-6)

Both in printed catalogue.

Group 8: trumpet-headed and allied brooches (Fig 10; 67)

In printed catalogue.

Group 9: knee-brooches (Fig 11; 68-70)

All in printed catalogue.

Group 10: various enamelled bow-brooches (Fig 12; 71)

In printed catalogue.

Group 11: sheath-footed and crossbow brooches (Fig 13; 72-4)

All in printed catalogue.

## Plate brooches

Type 214 Brooches in the shape of a sitting cock or hen (Fig 14; 75-6).
Both in printed catalogue.

Type 224 Early plate brooches set with glass (Fig 14; 77).
In printed catalogue.

Type 226 Flat lozenge- or rhomboid-shaped brooches with no lugs or appendages at the angles (Fig 14) 78).

In printed catalogue.

Type 248 Disc brooches decorated only by mouldings.

79 SF BKC 5446(C), V799 F218. Ditch. Late Period 5? Diameter 26.0 mm . A very corroded brooch which only probably belongs to this type. There are traces of mouldings on the outer band. The central boss is too corroded for any details of decoration to be distinguished.

Type 252 Small, flat, enamelled disc brooches (Fig 14; 80-81).

Both in printed catalogue.

Type 255 Flat disc brooches enamelled with a triskele pattern (Fig 14; 82). In printed catalogue.

Type 257 Fairly large disc brooches with central stud, the face enamelled with concentric bands of mosaic enamel (Fig 14; 83).

In printed catalogue.

Type 261 Flat disc brooches with six very small lugs (Fig 14; 84).

In printed catalogue.

Type 265 Disc brooches with scalloped edge (Fig 14; 85).
In printed catalogue.

Type 266 Small wheel-shaped brooches (Fig 14; 86).
In printed catalogue.

Type 275 Brooches in the shape of a sandal.
87 SF LWC 741(C). A240 F75. Pit. 12th century or later. Length 27.0 mm . Possibly a fragment of a sandal-shaped brooch. On the back are the remains of two lugs for a hinged pin and part of the catchplate. The surface is too pitted to establish whether or not there were any decorative enamel hobnails, which would enable this brooch to be firmly placed within this type. The edges of the brooch have been severely corroded, so that it is impossible to determine the original shape.

Unclassified (Fig 14; 83-92)
91 SF BKC 4613(C), T290 F132. Post pit. Period 3. Length 22.0 mm . A fragment of a plate brooch with pin and hinge complete. The catchplate is only slightly damaged. In contrast, the face of the brooch is so badly damaged that it is impossible to place it in any type. There is a square spot of red enamel towards the foot that may represent the eye of an animal.

92 SF BKC 4923(C), V10 L11, Dump, Late Period 5, Diameter 25.5 mm . A plain disc with a hinged pin and catchplate. Probably the bottom plate of a Type 249 brooch (disc brooches with applied embossed plate).

## Penannular brooches

Fowler Type A Pennanular brooches with rounded bulbous terminals (Fig 15; 93-96).

93 SF LWC 3828(C), G481 F241. Daub-lined pit. Period 2 (or 1?). Fragments of the ring of a penannular brooch, one plain knob terminal survives. The

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diameter of the brooch is approximately 25.0 mm . which places it with Type A1.

SF BKC 2216. G45 F9. Pit. Modern? Fragment of a thin ring of a Type Al brooch with a plain knob terminal.

Fowler Type C Pennanular brooches with the terminals coiled and twisted so that the coil is at right-angles to the plane of the ring (Fig 16; 97-103). 98 SF BKC 4970, V81. Unstratified. Internal diameter 10.5 mm . A small brooch, the pin of which is missing. The plain ring is of circular section, as are the rolled up terminals.

## HAIRPINS

## Bone pins

Unless otherwise stated, the tip of each pin is missing.

Type 1 Pins with a plain conical head (Fig 17, 104-155).

104 SF LWC 647, B253 F100. Pit, Period 5. $58,0 \mathrm{~mm}$ long. Green.

105 SF LWC 674, B268 F94. Pit. Uncertain date, Flavian at earliest.
69.5 mm long.

106 SF LWC 786, B338, Floor or dump. Period 5. 53.0 mm long.
107 SF LWC 861, B410 F139. Pit. Periods. 114.5 mm long. Complete.
108 SF LWC 913, B unstratified. 76.0 mm long. Green.
109 SF LWC 3835, G475 F238, (Pit)/robber trench. Period 1 or 2.58 .0 mm long.

110 SF LWC 3862, G486. Dump or make-up. Period 2. 54,5 mm long. Greenish,
111 SF LWC 1959, H151 F38+F50. Topsoil. Late Roman or Anglo-Saxon or medieval. 37.0 mm long.

112 SF LWC 2944, J717. Occupation. Period 4a and b. 59.0 mm long.
114 SF LWC 2802, J unstratified. 38.0 mm long. Green.

115 SF BKC 2679(C), H14 L2. Topsoil. Post-Roman. 72.5 mm long.
116 SF BKC 2761(C), H14 L2. Topsoil. Post-Roman. 59.0 mm long,
117 SF BKC 2760(C), H91 F33. Rubbish pit, Period 5c. 43.0 mm long,
118 SF BKC $2311(\mathrm{C})$, H287 L13, Dump. Period 5b (end), and possibly into 5c and 6. 78.5 mm long.
119 SF BKC 2881, H300. Surface cleaning, Period 6 or later. 65.0 mm long.
120 SF BKC 3077, J40 F3. Wall. Modern. 79.0 mm long. Reused at this length.

121 SF BKC 3109, J62 L1. Site clearance. 60.0 mm long.
123 SF BKC 3222, J157 F31. Pit. Period 5b. 102.0 mm long. Complete,
124 SF BKC 3298(C), J 166 F36. Pit. Period 5b. 88.0 mm long.
125 SF BKC 3326(C), J 166 F36. Pit. Period 5b. 75.0 mm long.
126 SF BKC 3300(C), J176 F32. Pit, Period 5c/6. 93.0 mm long.
127 SF BKC $3341(\mathrm{C})$, J 188 F34, Pit. Period 5b (end?). 90.0 mm long.
123 SF BKC 3376(C), J214 F50. Pit and midden, Periods 5c/6. 44.0 mm long.
129 SF BKC 3370 (C), J222 F49, Pit. Period 5b. 69.5 mm long. Complete. Possibly repointed.

130 SF BKC 3128(C), K206 F23. Robber trench. Period 6. 65.0 mm long.
131 SF BKC 4453(C), N388 L6. Dump. Period 6, 55.5 mm long,
132 SF BKC 4441 , N483 L59, Dump, Period 5b2. 61.0 mm long,
133 SF BKC 4433(C), H530 L75, Occupation, Period 5b1. 46.0 mm long.
134 SF BKC 5027, V87, largely L11. Dump. Late Period 5. 79.0 mm long.
135 SF BKC 5003, V111. Period 3 or 4 ? 95.0 mm long.
136 SF BKC 5132(C), V161 F50. Pit. Period 5 or (6). 30.5 mm long.
137 SF BKC 5127 (C), V131 F46. Bottom of boundary ditch. Period 4. 80.0 mm long.

139 SF BKC 5397, V369, Dump layer? Period 5? 113.0 mm long. Complete.
140 SF BUC 59(C), A293 L1. Post-medieval. 48.5 mm long.
141 SF BUC 75, A392 F136. Ditch. Period 2. $43,0 \mathrm{~mm}$ long.
142 SF BUC 241 , A629 F152, Ditch, Period 1. 107.0 mm long.
143 SF BUC 373 , B954 G154. Grave fill, Period 2. 63.0 mm long.
144 SF BUC 801, C1737 G445. Grave fill. Period 2. 55.0 mm long,
145 SF BUC 1601, H559 G543. Grave fill. Period 2. 33.5 mm long.
146 SF BUC 1720, H1074 L3 1. Period 1. 27.5 mm long.
147 SF MID 349, A1330 F38. Robber trench. Early medieval. 94.0 mm long.
148 SF MID 347, A1335 F32. Long shallow trench. Probably mid 19th century to 1978.72 .5 mm long.

149 SF MID 558. A2010 L241. General site cleaning. 4th century or later. 67.0 mm long.

150 SF MID 549. A2017 L241. General site cleaning. 4th century or later. 115.0 mm long. Complete.

151 SF MID 560. A2018 L241. General site cleaning. 4th century or later. 82.0 mm long.

152 SF MID 603, B2196 ?L239. ?Period 3 destruction. 64.0 mm long.
153 SF MID 532, E1969 F596. Pit. Site E Phases 4-6. 103.5 mm long. Complete.

154 SF MID 813, E2844 L419. ?Roman gravel layer. Period 3 or later. 76.0 mm long.

155 SF MID 777, G3273 L538. Topsoil. 4th century to early medieval. 64.0 mm long.

Type 2 Pins with 1-4 transverse grooves beneath a conical head (Fig 18; 156-218).

157 SF LWC 591, B225 F91/F84. Shallow pit. Period 5. 55.0 mm long. Three grooves.

158 SF LWC 943, B471 F166, Pit. Period 5. 89.0 mm long. Two grooves.

160 SF LWC 1427, D181, Topsoil or dump? Early medieval? 38.5 mm long. Green. Two grooves.

161 SF LWC 1919, H119. Topsoil, 17th century or later, 73.5 mm long, Complete. Green. Two grooves.

163 SF LWC 2587, J530, Occupation or floor. Period 4 a and b. 45.5 mm long. Two grooves.

164 SF LWC 2819, J593. Demolition debris. Period 4b destruction. 34.5 mm long. Two grooves.

165 SF LWC 3161, J615. Make-up for second gravelled yard. Period 4a. 61.5 mm long. Two grooves.

166 SF LWC 2964, J728. Occupation. Period 4a. 105.0 mm long. Two grooves.
167 SF LWC 3092, J 862. Occupation and floors. Period 4. 47.0 mm long. Two grooves.

168 SF LWC 3165, J942 F210, Pit. Period 4b destruction. 87.0 mm long. Two grooves.

169 SF LWC 3348, J 1086. Make-up (redeposited from earlier levels?). Period 4. 51.0 mm long. Two grooves.

170 SF LWC 3418, CT1105 F366. Pit. Period 4. 122.0 mm long. Green. Two grooves.

171 SF LWC 4135, J1108 F365, Pit. Period 4. 36.0 mm long. Two wide grooves.
172 SF LWC 3523, J1383 F458, Pit with slot. Period 4a. 95.0 mm long, Complete, bent, Two grooves.

173 SF LWC 2949, K209. Garden topsoil. Period 4b, 39,0 mm long. Two grooves.

174 SF LWC 3180, L374, Kitchen floor make-up, Period 4(2), 45.0 mm long. Two grooves.

175 SF LWC 2543, M120. Rampart la. 59.0 mm long. Two grooves.
176 SF BKC 5860, H7 L2. Topsoil. Post-Roman. 24.0 mm long. Two grooves.
178 SF BKC 3266(C), J160 F34. Pit, Period 5b (end?). 59.0 mm long. Two grooves.

179 SF BKC 3299(C), J 176 F32. Pit. Periods $5 \mathrm{c} / 6.100 .0 \mathrm{~mm}$ long. Two grooves.

180 SF BKC 3378(C), J186 F13. Large pit. Period 5b. 56.0 mm long. Two grooves.

181 SF BKC 3369(C), J 196 F44. Pit. Period 5c/6. 125,0 mm long. Complete. Two grooves.

184 SF BKC 3157(C), K223 F12. Robber trench. Modern. 43.0 mm long. One groove.

185 SF BKC $4247(C)$, N247 F82. Pit. Period 6? 54,0 mm long, Two grooves.

186 SF BKC $4841(\mathrm{C})$, N310. Period 6? 41.5 mm long. Three grooves.
187 SF BKC 4374(C), N390. Period 6? 82.5 mm long. Repointed. Two grooves.
188 SF BKC 4531(C), N643. Unstratified. 24.0 mm long. Two grooves.
189 SF BKC 4948, V63 L22. Dump. Late Period 5. 79.0 mm long. Two grooves.
190 SF BKC 4962, V64. Unstratified, 54.0 mm long. Green. Two grooves.
191 SF BKC 5187(C), V259 F60. Pit. Period 5? 55.0 mm long. Two grooves.
192 SF BKC 5173(C), V285 L27. Make-up. Period 5. 57.0 mm long. Two grooves.
193 SF BKC 5173(C), V285 L27, Make-up. Periods. 58.0 mm long. Two grooves.
195 SF BKC 5271, V362 L39, Metalling. Periods. 58.0 mm long. Two grooves.
196 SF BKC 5271, V362 L39. Metalling. Periods. 38.0 mm long. Two grooves.
199 SF BKC 5702, V938 L11. Dump. Late Period 5. 71.5 mm long. Two grooves.
200 SF BKC 5712, V1013. Periods 2 to 4 ? 84.0 mm long. Two grooves.
201 SF BKC 5729, V1069. Unstratified. 80.0 mm long. Two grooves.
202 SF BKC 5733, VI102, Period 4. 75.0 mm long. Two grooves.
203 SF BKC 5190(C), V unstratified. 57.0 mm long. Two grooves.
204 SF BUC 27(C), A156 G17. Grave fill. Period 2. 26.0 mm long. Two grooves.

205 SF BUC 88, A469 F143. Pit. Period 1. 26.5 mm long. Two grooves.
206 SF BUC 849, B740 G117. Grave fill. Period 2. 50.0 mm long. Two grooves.
207 SF BUC 417, B1290 G191. Grave fill. Period 2. 38.0 mm long. Two grooves.

203 SF BUC 580, CI 105 G358. Grave fill. Period 2. 57.5 mm long. Two grooves.

209 SF BUC 571 , CI 107 L1. Periods 1-2. 93.0 mm long. Two grooves.
210 SFBUC 572, C1123G361. Grave fill. Period 2. 37.0 mm long. Two grooves.

211 SF BUC 632, CI290 L4. Machine clearance. Modern. 96.0 mm long. Two grooves.

212 SF BUC 743, C1561 G313. Grave fill. Period 2. 42.5 mm long. Green.

One groove.

213 SF BUC 800, C1721 L3. Post-medieval. 53.5 mm long. Two grooves.
214 SF BUC 808, CI739 F62. Ditch. Period 1. 81.0 mm long. Two grooves.

215 SF MID 451, A1799 L223. Topsoil. Period 3 to early medieval. 73.5 mm long. Two grooves.

216 SF MID 707, A2820 L239. Demolition debris. Period 3 destruction. 45.0 mm long. Two grooves.

217 SF MID 741, A3151 L492. Make-up. Period 2a, 61.5 mm long, Three grooves.

218 SF MID 321, B1232 (F389.F404). Robber trench. Early medieval. 37.0 mm long. Two grooves.

Type 3 Pins with a more or less spherical head (Fig 19; 219-355). (Refer to main text for descriptions of head sub-types.)

219 SF LWC 505, A103. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. 67.0 mm long. Head C.

220 SF LWC 548, A125. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. 84.5 mm long. Complete. Head B.

222 SF LWC 400, B117. Cellar (F70) backfill, contaminated. Period 5+. 80.0 mm long. Head A.

223 SF LWC 410. B125. Cellar (F70) backfill, contaminated. Period 5+. 61.0 mm long. Repointed. Head B.

224 SF LWC 437, B157 F6. Pit. 16th to 17th century. 74.5 mm long. Head D, crude, top sawn off. SF LWC 437, B157 F6. Pit. 16th to 17th century. 87.0 mm long. Complete. Head B.

226 SF LWC 455, B165 F70. Cellar backfill. Period 5. 90.5 mm long. Complete. Head A.

227 SF LWC 455, B165 F70. Cellar backfill. Period 5. 71.0 mm long Complete, possibly repointed. Head B. SF LWC 455, B165 F70. Cellar backfill. Period 5. 78.0 mm long. Complete. Head A. Complete. Head B.

234 SF LWC 734, B F70. Cellar backfill. Period 5. 57.0 mm long. Head A.
235 SF LWC 1701, H21. Topsoil. Late 17 th century. $67,0 \mathrm{~mm}$ long. Crude. Possibly repointed. Head B,

236 SF LWC 1795, H39. Site clearance. Unstratified. 52.5 mm long. Head B.
237 SF LWC 1891, H58. Topsoil. 17th century or later. 68.5 mm long. Head A, crude.

238 SF LWC 1988, H146. Topsoil. Roman?/Anglo-Saxon?/16th to 17th century? 19.5 mm long. Head B, crude.

239 SF LWC 2080, H209 F63. Hut. Anglo-Saxon. 107.5 mm long. Complete. Thick, fairly crude. Head B.

240 SF LWC 1793, J1. Rubble. Modern. 32.0 mm long. Crude. Head C.
241 SF LWC 1750, J38 F20. Pit? 15th century or later. 68.5 mm long. Complete, Crude. Head B?

242 SF LWC 2417, J335 F128. Pit. Early medieval. 63.5 mm long. Crude. Head A, very crude.

244 SF LWC 2410, J382. Demolished building. Period 4b destruction. 63.5 mm long. Head B.

245 SF LWC 2501, J416 F158. Pit or depression? Modern? 83.0 mm long, Complete, Head B,

246 SF LWC 2545, J503 F59, Timber-lined drain. Period 4.77 .5 mm long. Head A.

247 SF LWC 2545, J508 F59. Timber-lined drain. Period 4. 77.5 mm long. Head B.

248 SF LWC 3069, K249 F55. Stoke-hole of hypocaust. Period 4b. 59.0 mm long. Head B. SF BKC 453(C), A7 L1. Town ditch (F30) fill? Anglo-Saxon. 60.0 mm long. Head C.

250 SF BKC 474(C), A8 L1. Town ditch (F30) fill? Anglo-Saxon. 28.0 mm long. Crude. Head A.

Head A. Head B.

SF BKC 490(C). A9 L1. Town ditch (F30) fill? Anglo-Saxon. 50.0 mm long. Fairly crude. Head B. SF BKC 44(C), A33 F7. Pipe-trench. Post-Roman. 54.0 mm long. Complete.

SF BKC 201(C), A75 F16. Town ditch fill. Anglo-Saxon or Period 6. 39.0 mm long. Crude. Head A.

SF BKC 416(C), A92 L12. Post-Roman. 66.0 mm long. Complete. Head B. SF BKC 702(C), D44 L1. Upper town ditch fill. Late Anglo-Saxon. 49.0 mm long. Crudely repointed. Head B. SF BKC 842(C), D241 L16. Topsoil silt or fill in town ditch. AngloSaxon. 59.0 mm long. Head B, crude. SF BKC 1381(C), D383. Town ditch fill. Late Period 6 or Anglo-Saxon. 61.5 mm long. Head A/B. SF BKC 1307(C), E412 L440. Town ditch (F133) fill. Late Period 6 or Anglo-Saxon. 88.5 mm long. Complete. Head B.

SF BKC 1308(C), E412 L440, Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 90.5 mm long. Complete. Head B. SF BKC 1885(C), E1221 L450. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 70.5 mm long. Complete. Head A. SF BKC 1886(C), E1221 L450. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 84.0 mm long. Complete. Head D, crude but well polished. SF BKC 2063(C), Gl. Site cleaning. Unstratified. 37.0 mm long. Head D, crude, top sawn off but well polished. SF BKC 2158(C), G49 F11. Timber-lined drain. Period 5c. 99.0 mm long. Complete. Head B. SF BKC 2159(C), G49 F11. Timber-lined drain. Period 5c. 95.0 mm long.

SF BKC 2189(C), G70F11. Timber-lined drain. Period 5c. 96.0 mm long, Complete. Head A, fairly crude.

269 SF BKC 2293(C), G230. Demolition debris of Period 5c building. Period 5c. 99.0 mm long. Complete. Head A, crude.

270 SF BKC 2317(C), G304 F104. Beam slot? Period 5c. 67.5 mm long. Head A, crude.

SF BKC 2379(C), G347 F141. Pit. Period 5c? 52,0 mm long. Crude. Head B.

272 SF BKC 2360(C), G350 F11? Timber-lined drain. Period 5c. 91.0 mm long. Complete. Head B.

273 SF BKC 2362(C), G354 F11? Timber-lined drain. Period 5c. 95.0 mm long. Complete. Head B, crude.

274 SF BKC 2363(C), G354 F11? Timber-lined drain. Period 5c. 58,0 mm long, Head B.

277 SF BKC 2481(C), G430. Surface cleaning. Periods 4 and 5. 69.0 mm long. Complete, possibly repointed. Head B. SF BKC 2524(C), G460. Surface cleaning. Period 5c. 71.5 mm long. Head A/B, fairly crude.

279 SF BKC 2525(C), HI L2. Topsoil. Post-Roman. $63,0 \mathrm{~mm}$ long. Head B.
280 SF BKC 2526(C), Hi L2. Topsoil. Post-Roman. 86.0 mm long. Complete. Head A/B, crude.

Shaft very crude. Head B. Burnt and distorted. Head A. SF BKC 2886(C), H131 F60. Oven. Period 5c. 53,0 mm long. Head B. SF BKC 2726(C), H133 (F33). Contaminated. Modern? 72.0 mm long. Head B. SF BKC 2777(C), H235 F68. Hearth over pit. Period 5c. 111,0 mm long. Complete. Head A, small, fairly crude.

286 SF BKC 2784(C), H298 (F94 + F167). Pits. Period 6. 74.5 mm long. Complete. Head A, crude.

287 SF BKC 2802(C), H298 (F94 + F167). Pits, Period 6, 103.0 mm long, Complete. Head A, fairly crude.

289 SF BKC 2832(C), H333 LI3. Dump. Period 5b (end), and possibly into 5c and 6. 60.5 mm long. Head B.

290 SF BKC 2852(C), H336 L13. Contaminated? Period 6 or later, $74,5 \mathrm{~mm}$ long. Complete. Head A/B.

307 SF BKC 4014(C), N79 L1. Topsoil. Modern. 58.0 mm long. Head B.
308 SF BKC 4088(C), H30 L1. Topsoil. Modern. 63.5 mm long. Head A/B.
310 SF BKC 4103(C), H83 L8. Dump. Period 6. 97.0 mm long. Complete.

Head B.

Head A. 75.0 mm long. Head A, fairly crude.

314 SF BKC 4260(C), N239 F2? Period 5b2 or 6.32 .5 mm long. Head A. 315 SF BKC 4386(C), N321. Surface cleaning. Modern. 76.0 mm long, Complete. Head B, crude. SF BKC 4369(C). N84 L8. Dump. Period 6. 96.5 mm long. Complete.

SF BKC 4190(C), N159. Period 6? 42.0 mm long. Head A. SF BKC 4217(C), N180 L5. Topsoil and destruction debris. Period 6. Complete, possibly repointed. Head B, crude.

SF BKC 4389(C), N368, Period 6. 56.0 mm long. Head D, fairly crude but polished.

SF BKC 4499(C), Tl. Unstratified, 59.0 mm long. Head B.
SF BKC 4780(C), T44 F25, Construction trench of cellar. Period 5c.
68.5 mm long. Complete. Head A. SF BKC 4798(C), T67. Period 4 or 5? 81.0 mm long. Head B. SF BKC 4872, T67. Period 4 or 5 ? 63.5 mm long. Possibly reused at this length. Head B, crude. SF BKC 4619(C), T274 L9 + L67. Cellar (F25) fill. Period 5a. 102.5 mm long. Complete. Head D, crude but well polished.

SF BKC 4620(C), T274 L9 + L67. Cellar (F25) fill. Period 5a. 81.0 mm long. Complete. Head B.

SF BKC 4603(C), T275 L67. Cellar (F25) backfill. Period 5c. 73.5 mm long. Complete. Head B, fairly crude. SF BKC 4603(C), T275 L67. Cellar (F25) backfill. Period 5c. 53.5 mm long. Complete, probably repointed. Head B, fairly crude. SF BKC 4938, V76 L22. Dump. Late Period 5. 65.0 mm long. Head A. SF BKC 5484, V658 Lll. Dump. Late Period 5. 93.0 mm long. Complete.

Head A, crude. Head B. Repointed. Head A/B. 83.5 mm long. Complete. Head B. thin. Head A. Head A.

Head A. long. Complete. Head A. Head A. Repointed. Head B. fairly crude.

SF BKC 5415, V679. Mainly late Period 5 but with some modern material.

SF CPS 11(C), 43 L12. Period 8. 52.5 mm long. Complete. Very small and

SF CPS 70, 163 F53. Pit. Period 5. 89.5 mm long. Complete. Head B. SF CPS 653(C), 420 F100. Occupation. Period 4. 81.0 mm long. Complete.

SF CPS 775(C), 427 F98. Period 6, 61.0 mm long. Head A.

SF CPS 511(C), 604 L180. Destruction of Period 4. 56.0 mm long. SF MID 348, A1282 L206. Topsoil. Period 3 destruction to early medieval. 93.0 mm long. Head A/B. SF MID 389, A1578 F49. Robber trench. Early medieval. 42.5 mm long.

SF MID 444, A1793 L1. Topsoil. Medieval or later. 45.0 mm long. SF MID 675, A2567 L304. Occupation. Period 3b. 76.5 mm long. Head B,

SF MID 821, A3049 F920. Stoke-pit of Period 3. 55.0 mm long. Head B,
fairly crude.
346 SF MID 42, B173 F37. Brick structure. Approximately 18th or 19th century. 63.5 mm long. Head B.

347 SF MID 449, B 1694 L223. Topsoil. Period 3 to early medieval. 50.0 mm long. Head B.

348 SF MID 92, C376 F115. Robber trench. Medieval. 44.0 mm long. Head B.
349 SF MID 166, C639. Grave fill. Late Roman to early medieval (probably late Saxon/early medieval). 65.0 mm long. Head B.

350 SF MID 319, C1214 F299. Construction pit of Site C Phase 1. 71.5 mm long. Complete. Head B.

351 SF MID 413, C1619 L188. Topsoil accumulation. Late Roman to early medieval. 60.0 mm long. Head A.

352 SF MID 561, C2086 F16. Robber trench. Early medieval. 55.0 mm long. Complete, possibly repointed. Head B.

353 SF MID 557, A2011 L241. General site cleaning. 4th century or later. 31.0 mm long. Head A.

354 SF MID 709, G2803 F721. Pit or gully. Period 8. 73.0 mm long. Complete. Head A.

355 SF DTC 18, A33 L7. Post-medieval. 82.0 mm long. Complete. Head A.

Type 4 Pins with a faceted cuboid head (Fig 20; 356-394).

357 SF LWC 381, B101. Cellar (F70) backfill. contaminated. Period 5+. 74.0 mm long.

SF LWC 372. B112 F59. Robber trench. 12th to 15 th century. 83.0 mm long.

359 SF LWC 455, B165 F70. Cellar backfill. Period 5. 84.0 mm long.
360 SF LWC 455, B165 F70, Cellar backfill. Period 5. 76.0 mm long.

361 SF LWC 490, B173 F70. Cellar backfill. Period 5. 74.0 mm long. Complete.

SF LWC 2045, J 162, Topsoil. Late Roman or later. 83.0 mm long. Complete.

363 SF LWC 2379, J367. Period 4b demolition debris. Period 4b destruction. 84.0 mm long. Complete.

SF BKC 54(C), A25 L1. Topsoil and town ditch (F30) fill. Post-Roman. 64.0 mm long. Repointed.

SF BKC 85(C), A31 L2. Topsoil. Post-Roman. 28.5 mm long.

367 SF BKC 772(C), A91 L4. Topsoil and town ditch (F19) fill. Post-Roman. 54.5 mm long. Repointed.

SF BKC 421(C), A107 F16. Town ditch fill. Anglo-Saxon or Period 6. 40.0 mm long. 29.0 mm long.

371 SF BKC 1916(C),

Anglo-Saxon. 89.0 mm long. Complete.
372 SF BKC 2218(C), G62. Modern. 63.5 mm long. Repointed.
373 SF BKC 2190(C), G70 F11, Timber-lined drain. Period 5c. 89.0 mm long.

Complete.
374 SF BKC 2191(C), G70F11. Timber-lined drain. Period 5c. 57.0 mm long.

375 SF BKC 2234(C). G170 F190. Pit? Trench? Period 5c? 85.0 mm long. Complete.

376 SF BKC 2350(C), G330 F141. Pit. Period 5c? 94.5 mm long. Complete. 377 SF BKC 2388(C), G353 F11? Timber-lined drain, Period 5c. 72.0 mm long. Complete.

379 SF BKC 2556(C), H21 F11. Rubble foundation. Modern. 64.0 mm long.
380 SF BKC 2759(C), HI33. Modern? 81.0 mm long. Complete.
382 SF BKC 2831(C), H298 (F94 + F167), Pits, Period 6. 37.5 mm long.
383 SF BKC 3170(C), Jl L1. Site clearance. 42.0 mm long.
384 SF BKC 4027(C), K76 L8. Dump. Period 6. 90.0 mm long. Complete.
387 SF BKC 4139(C), N93. Period 5 or 6.50 .0 mm long,
388 SF BKC 4223(C), N224 F78. Pit. Period 6 or later. 46,0 mm long,
389 SF BKC 4288(C), N269 L11/F75, Period 6. 54.0 mm long.
390 SF BKC 4603(C), T275 L67. Cellar (F25) backfill, Period 5c. 70.5 mm long.

391 SF BKC 4643(C), T380. Unstratified. 81.5 mm long. Complete.

392 SF BKC 4927, V2 (L11). Largely Period 5 but some modern. 89.0 mm long.
394 SF COC 131, 642 F264. Pit. Medieval. 102.0 mm long. Complete.

Type 5 Pins with $1-5$ reels beneath a conical or ovoid head (Fig 21; 395-416).
396 SF BKC 471(C), A7 L1, Town ditch (F30) fill. Anglo-Saxon, 55.0 mm long. Two rings. Conical head. Faceted section. Swollen shaft.

398 SF BKC 1190(C), E286 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. 53.0 mm long. Three rings. Conical head. Faceted section. Swollen shaft.

399 SF BKC 1198, E302 L447, Town ditch (F138) fill. Late Period 6 or AngloSaxon. 47.0 mm long. Repointed. One ring. Ovoid head, Faceted section, Swollen shaft.

401 SF BKC 1289(C), E360 L433. Town ditch (F138/317) fill. Post-Roman.
74.0 mm long. Three rings. Conical head. Faceted section. Swollen shaft.

Conical head. Round section. Straight shaft.
407 SF CPS 223(C), 420 F100. Occupation. Period 4. 80.0 mm long. Three rings. Conical head, Round section, Swollen shaft.

408 SF CPS 274(C), 420 F100. Occupation. Period 4. $30,0 \mathrm{~mm}$ long, One ring. Ovoid head. Round section. Swollen shaft.

410 SF CPS 478(C), 576 F115. Occupation. Period 4. 97.0 mm long. Complete. Three rings. Conical head. Round/faceted section. Swollen shaft.

412 SF CPS 613(C). 579 F112. Robber trench material. Period 5. 66.0 mm long. Two rings. Conical head. Faceted section. Swollen shaft.

413 SF CPS 443(C). 589 F116. Robber trench material. Period 5. 72.0 mm long. One ring. Ovoid head. Round section. Straight shaft.

414 SF CPS 650(C). 640 F118. Robber trench material. Period 5. 69.0 mm long. One ring. Conical, slightly ovoid head. Faceted section. Swollen shaft.

415 SF CPS 702(C), 714 L181. Destruction of Period 4.80 .5 mm long. Two rings, Conical/ovoid head. Round section. Swollen shaft.

416 SF CPS 733(C), 723 L182. Destruction of Period 4. 88.0 mm long. Complete. Two rings. Conical/ovoid head. Round section. Swollen shaft.

Type 6 Pins with a reel- or bead-and-reel-shaped head (Fig 22; 417-431).
417 SF LWC 3037, G274. Topsoil and gravel, Period 2? 50.0 mm long. Bead/bead.

418 SF BKC 46(C), A25 L1. Topsoil and town ditch (F30) fill. Post-Roman. 28.0 mm long. Reel.

Anglo-Saxon. 66.0 mm long. Reel/bead/reel.
424 SF BKC 2758(C), H167 F71. Modern. 66.5 mm long. Complete. Reel.
426 SF BKC 3349(C), J176 F32. Pit. Period 5c/6. 59.5 mm long. Reel.
427 SF CPS 27(C), 74 L24. Topsoil. Period 5. 49.5 mm long. Reel.
428 SF CPS 37(C), 75 L22. Topsoil. Period 6. 47.0 mm long, Reel.
429 SF CPS 576(C), 576 F115. Occupation. Period 4. 65.0 mm long. Complete. Bead/bead.

431 SF MID 66, A335 F33. Robber trench, Early medieval. 52.0 mm long. Reel.

Miscellaneous (Fig 23; 432-445)
436 SF BKC 66, A34 F16. Town ditch fill. Anglo-Saxon or Period 6. 35.0 mm long. Most of the shaft is broken off and the head is missing, There is a chevron design round the top of the shaft.

## Jet pins

Type 1 Pins with a spherical head (Fig 24; 446-443).

448 SF MID 425, C1643 F471. ?Scaffold trench. Early medieval or Site C Phase

1. 46.0 mm long. Most of the shaft has been broken off. Lathe-turned.

Type 2 Pins with a faceted cuboid head (Fig 24; 449-453).
449 SF LWC 484, B184 F70. Cellar backfill. Period 5. 65.0 mm long.
Complete. A very regularly-shaped pin. Possibly lathe-turned.
451 SF BKC 2219(C), G65. Modern. 26.0 mm long. Most of the shaft has been broken off. Not lathe-turned.

453 SF BKC 5497, V920 L11. Dump. Late Period 5. 50.0 mm long. Tip broken off. Probably not lathe-turned.

## Shaft fragments

454 SF LWC 434, B184 F70. Cellar backfill. Period 5. 15.5 mm long. Latheturned.

455 SF BKC 1508(C), A/B/C/D unstratified. 18.0 mm long, Possibly lathe-turned.

456 SF BKC 2731(C), H103 F33, contaminated. Period 6 or later. 35.0 mm long, Not lathe-turned.

457 SF BKC 4292(C), N258 L1, Topsoil. Modern. 30.0 mm long. Not latheturned.

458 SF BKC 4393(C), N364 F33. Pit. Period 6+. 20.0 mm long. Possibly lathe-turned.

459 SF BKC 4621(C), T274 L9 + L67. Cellar (F25) fill. Period 5a. 43.0 mm long. Possibly lathe-turned.

460 SF BKC 4652(C), T384 L67. Cellar (F25) backfill. Period 5c. 40.0 mm long. Not lathe-turned.

## Glass pins

(Fig 25; 461-465)
461 SF BUC 1538, H365 G537. Grave deposit. Period 2. 69.0 mm long. Very tip broken off. As 462, Fig 24.

463 SF BUC 1542, H364 G537. Grave deposit, Period 2. 57.5 mm long. Very tip broken off. As 462, Fig 24.

465 SF LWC 1029, C387. Make-up? Period 4? 29.0 mm long. Fragment of shaft with tip. Translucent dark to violet blue glass. Not twisted.

## Metal pins

Unless otherwise stated. pins are of copper alloy.

Type 1 Pin with a plain conical head (Fig 26? 466),
In printed catalogue.

Type 2 Pins with a head of bead. reel. and spool motifs surmounted by a flattened sphere (Fig 27; 467-474),

468 SF LWC 1139(C), B unstratified. Fragment. very corroded. 45.0 mm long.
Circular-section reel/bead/reel/flattened sphere.

Type 3 Pins with a more or less spherical head (Fig 28; 475-484), 475 SF LWC 3614(C), J1563 F134. Circular depression. probably sinkage. Period 4. Silver. Two fragments. 25.0 mm long. Spherical head.

478 SF BKC 3800(C), K654 F121. Pit. Period 2. Two fragments. very tip missing. 92.0 mm long. Spherical head

SF BUC 262. B382 L1. Modern. Silver. Fragment. 33.0 mm long.

Flattened spherical head.
431 SF BUC 404(C), B1123 G174. Grave deposit. Period 2. Silver. Length 63.0 mm . The head is spherical. with a slightly conical upper half.

432 SF BUC 1531. H360 G537. Grave deposit. Period 2. Silver shaft with ?gilt copper-alloy head. Length 70.0 mm . Flattened spherical head. 483 SF BUC 1541. H366 G537. Grave deposit. Period 2. Silver. Length
72.0 mm . The shaft is very slightly swollen-waisted. The head has a conical upper and slightly rounded lower half.

Type 4 Pins with a faceted cuboid head (Fig 29; 435-490), 485 SF LWC 1380(C), E84 (F49), ?Sinkage. Late Roman or Anglo-Saxon. Fragment. 13.0 mm long.

488 SF BUC 1533. H352 G519. Grave deposit. Period 2. Length 73.0 mm . 489 SF BUC 1534. H352 G519. Grave deposit. Period 2. Length 72.0 mm . Swollen-waisted.

Type 5 Pins with a groove or grooves below a flattened spherical head (Fig 30; 491-496),

491 SF LWC 2451. M100. Rampart lc. Fragment. 54.0 mm long. Corroded. Three grooves.

495 SF BKC 4667. T417. Period 3 or 4 . Three fragments. 77.0 mm long. Four grooves.

496 SF CPS 845(C), 884 L123. Occupation/topsoil. Period 4. Fragment. 55.0 mm long. Two grooves.

Miscellaneous (Fig 31; 497-513)

498 SF LWC 995, B F70? Probably cellar backfill. Period 5. Corroded, tip missing, bent, 86.0 mm long. Globular head divided by four longitudinal grooves into equal segments.

502 SF BKC 1980(C), E1278 L397+. Post-Roman. Two fragments. very corroded. tip missing. 91.0 mm long. Biconical head. possibly with incised radiating lines.

510 SF BKC 5000. V101 F10. Dog burial. Period 5. Fragment. 54.0 mm long. Flattened spherical head with a latitudinal groove below the maximum diameter. Similar to Type 5. and of similar date.

## BEADS

## Gadrooned beads

Melon beads All are made of turquoise frit (Fig 32; 514-541),

514 SF LWC 926. B542. Floor or make-up? Period 3. Fragment. length 18.5 mm .
515 SF LWC 985. C223. Make-up. Period 4. Fragment.
516 SF LWC 1640. El 11 F55. Slot. or crack in road? Roman or post-Roman. Length 12.0 mm . diameter 14.0 mm .

517 SF LWC 4111. J648. Make-up? Period 4. Fragment. length 14.5 mm .
518 SF LWC 3268. J952 F407? Destruction debris in situ. Period 3. Fragment.

519 SF LWC 3188. J952 F407? Destruction debris in situ. Period 3. Fragment.
522 SF LWC 2632. K114. Surface cleaning. Post-Roman. Fragment. length 19.5 mm .

523 SF LWC 2657. K117 F51. Robber trench. Medieval. Length 16.0 mm . diameter 21.0 mm .

525 SF LWC 3790. K511. Garden topsoil. Period 4b. Fragment. length 17.5 mm . 526 SF BKC 1851. E1141. F322. Hearth. Period lb. Length 13.0 mm . diameter 15.0 mm .

527 SF BKC 2227. G107 L59. Topsoil. contaminated? Modern. Fragment. length 10.0 mm .

528 SF BKC 2848. H338 L12. Destruction debris of Period 5b building. Period 5b(end), Fragment. length 12.0 mm .

529 SF BKC 3348(C), J186 F13. Large pit. Period 5b. Fragment. length 11.0 mm .

530 SF BKC 3092. K158. Site cleaning. Modern. Fragment. length 10.0 mm .

531 SF BKC 4427. H438 L42. Occupation. Period 5bl. Length 13.5 mm . diameter 16.0 mm .

532 SF BKC 4516. T1. Unstratified. Fragment. length 14.0 mm .
533 SF BKC 4578. T214. Collapsed destruction debris of Period 3. Period 3(end), Length 13.0 mm . diameter 17.0 mm .

534 SF BKC 4677. T374 L43. Destruction debris of Period 2. Period 3. Length 11.0 mm . diameter 14.0 mm .

535 SF BKC 5402. V679. Mainly late Period 5 but with some modern material. Fragment. length 12.0 mm .

536 SF BKC 5463. V821 L11 + L22. Dump. Late Period 5. Fragment. length 14.0 mm .

537 SF BKC 4799. Unstratified. Fragment. length 13.0 mm.
538 SF BUC 127. B11. Unstratified. Length 10.0 mm . diameter 12.0 mm .
539 SF BUC 597. C1226 G334. Grave fill. Period 2. Fragment. length 12.0 mm . 540 SF COC 150. 696 L202. Dump. Period 4. Fragment. length 13.5 mm .

541 SF COC 182. 822 L232/233/234. Dump. Period 3. Fragment. length 14.0 mm

Small qadrooned bead (Fig 32? 542)
In printed catalogue.

## Annular beads

Annular beads with marvered trail (Fig 33; 543-548)

544 SF BKC 3670(C), J403. Modern. Length 8.5 mm . diameter 16.0 mm . Bunshaped dark blue translucent glass bead with marvered white paste zig-zag trail. Guido 1978. 63-4. group 5A

547 SF BUC 713. C1394 G406. Grave deposit. Period 2. Length 7.0 mm . diameter 15.0 mm . Corroding ? dark blue ?translucent glass with marvered mid blue ?glass trail.

Plain annular beads (Fig 33; 549-558)
550 SF LWC 3717. K430. Make-up. Period 3. Length 7.0 mm . diameter 13.0 mm . Natural translucent greenish glass.

552 SF BKC 4763. T473. Unstratified. Length 6.0 mm . diameter 16.5 mm . Translucent dark blue glass.

554 SF BKC 5361. V695 L126. Dump? Period 4. Fragment. length 6.5 mm . Translucent amber-coloured glass (Guido 1978. 12),

556 SF BUC 716. C1394 G406. Grave deposit. Period 2. Length 8.5 mm . diameter 17.0 mm . ?Dark blue ?translucent corroding glass.

557 SF BUC 718. C1394 G406. Grave deposit. Period 2. Length 7.5 mm . diameter 15.5 mm . ?Dark blue ?translucent corroding glass.

558 SF BUC 720. C1394 G406. Grave deposit. Period 2. Length 5.0 mm . diameter 14.0 mm . Translucent mid yellow glass.

## Disc beads

(length less than $1 / 3$ diameter)

Oblate disc bead (Fig 34; 559)
In printed catalogue.

## Short beads

(length more than $1 / 3$ but less than $9 / 10$ diameter)

Short oblate beads (Fig 34; 560-624)

560 SF LWC 300. C101. Period 4 destruction. Late Roman or early post-Roman. Length 2.5 mm . diameter 4.5 mm . Opaque dark green glass.

561 SF LWC 2556. M121. Rampart la. Length 2.0 mm . diameter 2.5 mm . Opaque mid blue glass.

563-5 SF BUC 7(C), A8 G1. Grave deposits. Period 2. Average length 2.5 mm . average diameter 5.0 mm . Translucent dark blue glas s.

566-7 SF BUC 7(C), AS G1. Grave deposits. Period 2. Average length 2.5 mm . average diameter 4.5 mm . Opaque mid green glass. corroding.

568-78 SF BUC $39(\mathrm{C})$, A225 G16. Grave deposits. Period 2. Average length 3.0 mm . average diameter 4.0 mm . Translucent dark blue glass.

579-92 SF BUC 39(C), A225 G16. Grave deposits. Period 2. Average length 3.0 mm . average diameter 4.0 mm . Opaque mid green glass.

593 SF BUC 73. A350 L1. Post-medieval. Length 3.0 mm . diameter 4.0 mm . Translucent dark green glass.

594 SF BUC $140(\mathrm{C})$, B99 G62. Grave fill. Period 2. Length 2.0 mm . diameter 3.3 mm . Translucent dark red glass with white paste around the perforation.

595-613 SF BUC 136(0/192(0/202(0/204(0. B288/290/304/306 G69. Grave deposits. Period 2. Average length 3.0 mm . average diameter 5.0 mm . Opaque mid blue glass.

616 SF BUC 402(C), B1 124 G174. Grave deposit. Period 2. Length 4.0 mm . diameter 5.0 mm . Copper-alloy.

618-22 SF BUC 1519-21/1524-5. H232-6 G503. Grave deposits. Period 2. With 617. Fig 34. a group of six from an armlet. Average length 13.0 mm . average diameter 16.0 mm . Jet, Five out of the six are worn round the perforation to a barrel-shaped longitudinal section.

623 SFBUC 1546. H389 G537. Grave deposit. Period 2. Length 1.5 mm . diameter 2.5 mm . Translucent dark green glass.

624 SF BUC 1545. H390 G537. Grave deposit. Period 2. Length 4.0 mm . diameter 7.0 mm . Opaque mid blue glas .

Short barrel beads (Fig 34; 625-649)

625 SF LWC 2512. J475. Topsoil. Period 4b or later. Length 4.0 mm . diameter 5.0 mm . Corroding ?opaque dark green glass.

626 SF LWC 2741. J530. Occupation or floor. Period 4a and b. Length 4.5 mm . diameter 5.5 mm . ?Pottery bead with mid brown glaze. (The fabric of the bead can only be identified by damaging it.)

627 SF LWC 2892. J693. Demoliton debris. Period 4b destruction. Length 3.5 mm . diameter 4.0 mm . Translucent dark blue glass.

629-32 SF BUC 7(C), AS G1. Grave deposits. Period 2. Average length 2.5 mm . average diameter 3.5 mm . Translucent dark blue glass.

633 SF BUC 7(C), AS G1. Grave deposit. Period 2. Length 4.0 mm . diameter 5.5 mm . Opaque mid green glass.

635 SF BUC 53(C), A360 G15. Grave deposit. Period 2. One of a pair with 634. Fig 34. Length 5.5 mm . diameter 11.0 mm . Amber. weathered. Worn to wedge-shaped longitudinal section.

636 SF BUC 371(C), B842 G133. Disturbed grave deposit. Period 2. Length 8.5 mm . diameter 11.0 mm . Jet,

637-46 SF BUC 386(0/1755. B1050/1061 G171. Grave deposits. Period 2. Average length 3.5 mm . average diameter 5.5 mm . Opaque mid green glass. 647-9 SF BUC 710/715/717. C1394 G406. Grave deposits. Period 2. Average length 10.0 mm . average diameter 14.5 mm . Amber. weathered. All worn to wedge-shaped longitudinal section.

Short biconical beads (Fig 34; 650-802)
651-5 SF BUC 7(C), AS G1. Grave deposits. Period 2. Average length 2.5 mm . average diameter 4.5 mm . Translucent dark blue glass

657-65 SF BUC 39(C), A225 G16. Grave deposits. Period 2. With 656. Fig 34. a group of ten large biconical beads. Average length 3.0 mm . average
diameter 6.0 mm . Translucent dark blue glass.
667-82 SF BUC 39(C), A225 G16. Grave deposits. Period 2. With 666. Fig 34. a group of seventeen small biconical beads. Average length 2.5 mm . average diameter 4.0 mm . Translucent dark blue glass.

683-7 SF BUC 39(C), A225 G16. Grave deposits. Period 2. Average length 2.5 mm . average diameter 4.0 mm . Translucent dark green glass. 688-93 SF BUC 39(C), A225 G16. Grave deposits. Period 2. Average length 2.0 mm . average diameter 3.5 mm . Translucent mid yellow glass. 694-710 SF BUC 402(C), B1 124 G174. Grave deposits. Period 2. Average length 4.0 mm . average diameter 7.0 mm . Translucent dark blue glas . 711-20 SF BUC 1544-5/1547. H390-2 G537. Grave deposits. Period 2. Average length 4.0 mm . average diameter 7.0 mm . Translucent dark blue glass.

721 SF BUC 1634. H729 G609. Grave deposit. Period 2. Length 3.0 mm . diameter 6.0 mm . Translucent dark blue glass.

722-3 SF BUC 1634/1639. H729/734 G609. Grave deposits. Period 2. Average length 3.0 mm . average diameter 5.0 mm . Translucent purplish glass. 724-802 SF BUC 1634-5/1640. H729-30/735 G609. Grave deposits. Period 2. Average length 2.5 mm . average diameter 4.5 mm . Opaque mid green glass.

Short cylinder beads. circular section (Fig 34; 803-805)
804 SF BKC 3273(C), J160 F34. Pit. Period 5b (end?), Fragment. similar to 803. Fig 34. Jet,

805 SF BUC 1666. H335 L2. Period 2. Length 4.0 mm . diameter 7.0 mm . Jet, with one shallow central transverse groove.

Short lenticular bead (Fig 34? 806)
In printed catalogue.

Short interlocking beads (Fig 34; 807-900)

810-900 SF BUC 186(0/192(0/194(0/197(0/206(0/229(0. B288/296/302/304/ 306/324 G69. Grave deposits. Period 2. With 807-9. Fig 34. a group of 94. Jet, Discs with zig-zag-shaped notched walls and ends. As Hagen 1937. 123 (type D15. Taf 27. Abb 1. top left),

Standard beads<br>(length more than $9 / 10$ but less than $11 / 10$ diameter)

Standard spherical beads (901-902)
901 SF BKC 3687. J346 F150. Pit. Period 3/4/5a. Fragment. length 7.5 mm . diameter 8.0 mm . Opaque dark green glass.

902 SF BKC 4336. N321. Surface cleaning. Modern. Fragment. length 21.0 mm . diameter 20.0 mm . Jet,
$\underline{\text { Standard barrel beads (Fig 35; 903-905) }}$
903 SF BUC 7(C), A8 Gl. Grave deposit. Period 2. Length 7.5 mm . diameter 8.0 mm . Amber. weathered.

905 SF BUC 39(C), A225 G16. Grave deposit. Period 2. One of a pair with 904. Fig 35. Length 5.0 mm . diameter 5.5 mm . Colourless translucent glass enclosing gold foil (Boon 1977. 193-207),

Standard cylinder beads (Fig 35; 906-950)
a) circular section

906-9 SF BUC 7(C), AS G1. Grave deposits. Period 2. Average length 3.5 mm . average diameter 3.5 mm . Opaque mid green glass.

910 SF BUC 186(C), B306 G69. Grave deposit. Period 2. Length 5.5 mm .
diameter 5.5 mm . Translucent dark green glass.
b> faceted rectangular section (faceted cuboid)
911 SF BUC 7(C), A3 G1. Grave deposit. Period 2. Length 3.0 mm . width
3.0 mm . Translucent dark blue glass.

913-23 SF BUC 402(C), Bl 124 G174. Grave deposits. Period 2. With 912.
Fig 35. a group of twelve. Average length 6.0 mm . average width 6.0 mm . Translucent dark blue glass.

924-31 SF BUC 402(C), B1 124 G174. Grave deposits. Period 2. Average length 5.0 mm . average width 5.0 mm . Copper-alloy.

932 SF BUC 1221. C505 G291. Grave deposit. Period 1. Length 2.5 mm . width 2.5 mm . Jet,

933-47 SF BUC 1544-7. H389/392 G537. Grave deposits. Period 2. Average length 5.0 mm . average width 5.0 mm . Translucent dark blue glass.

948 SF BUC 1636. H731 G609. Grave deposit. Period 2. Length 7.0 mm . width 6.5 mm . Translucent dark blue glass.

949 SF BUC 1637. H792 G609. Grave deposit. Period 2. Length 7.5 mm . width 8.0 mm . Jet, worn.
c) hexagonal section (Fig 35; 950)

In printed catalogue.

Standard plano-convex beads (Fig 35; 951-956)

952-4 SF BUC 186(0/193(0. B301/306 G69. Grave deposits. Period 2. With 951. Fig 35. a group of four. Average length 11.5 mm . average diameter 11.5 mm . Jet, Spacer beads with two perforations. All have a central convex hub on the upper face and show coarse file marks on the lower face. Two have indentations from a lathe centre on the upper face.

## Long beads

(length more than $11 / 10$ diameter)

Long barrel beads (957-959)
957 SF BKC 5310. V407 L18. Metalling. Period 4. Fragments only. Amber.

958 SF BUC 39(C), A225 G16. Grave deposit. Period 2. Length 4.5 mm . diameter 4.0 mm . Opaque mid green glass.

959 SF BUC 1638. H733 G609. Grave deposit. Period 2. Length 17.0 mm . diameter 10.0 mm . Amber. weathered. Worn to slight wedge-shaped longitudinal section and sub-rectangular in transverse section.

Long biconical beads (Fig 36; 960-973)
962-73 SFBUC 1221. C505 G291. Grave deposits. Period 1. With 961. Fig 36. a group of thirteen. Average length 10.0 mm . average diameter 3.0 mm . Opaque dark blue glass.

Long cylinder beads (Fig 36; 974-1446)
a) circular section. plain

975-80 SF BUC 7(C), A8 G1. Grave deposits. Period 2. Average length 4.0 mm average diameter 3.0 mm . Opaque mid green glass.

981 SF BUC 7(C), AS G1. Grave deposit. Period 2. Length 8.0 mm . diameter 5.0 mm . Translucent dark green glass.

983-8 SF BUC 39(C), A225 G16. Grave deposits. Period 2. With 982. Fig 36. a group of seven. Average length 4.0 mm . average diameter 3.0 mm . Opaque mid green glass.

989 SF BUC 39(C), A225 G16. Grave deposit. Period 2. Length 4.5 mm . diameter 4.0 mm . Translucent dark blue glass. Convex at one end.

991 SF BUC 202(C), B290 G69. Grave deposit. Period 2. Length 5.5 mm .
diameter 4.0 mm . Translucent dark green glass.
992 SF BUC 186(C), B306 G69. Grave deposit. Period 2. Length 7.0 mm . diameter 6.0 mm . Translucent dark green glass.

993-1038 SF BUC $386(0 / 1755$. B1050/1061 G171. Grave deposits. Period 2. Average length 5.0 mm . average diameter 2.0 mm . ?Faience. Some were threaded onto thin copper-alloy wire.

1039-41 SF BUC 1544-5. H390/392 G537. Grave deposits. Period 2. Average length 6.0 mm . average diameter 3.5 mm . Copper-alloy.
b) circular section. with transverse grooving

1043 SF BUC 186(C), B306 G69. Grave deposit. Period 2. One of a pair with 1042. Fig 36. Length 14.5 mm . diameter 4.0 mm . Jet, with fine transverse grooves approximately 2.0 mm apart.

1044-57 SF BUC $353(0 / 357 / 371(0$. B832/842/889 G133. Disturbed grave deposits. Period 2. Lengths from 9.5 to 22.0 mm . average diameter 4.0 mm . Jet, with fine transverse grooves approximately 2.0 mm apart. 1058 SF BUC 353(C), B832 G133. Disturbed grave deposit. Period 2. Length 9.5 mm . diameter 4.0 mm . Jet, almost plain except for slight traces of rilling along the length. This may be a badly-finished plain cylinder or an unfinished grooved cylinder.

1062-1182 SFBUC 1507-8/1516-17. H214-5/218/222 G503. Grave deposits. Period 2. With $1060-1$, Fig 36, a group of 123. Lengths vary from 1.0 to 17.0 mm , average diameter 2.5 mm . Jet, with deep transverse grooves approximately 1.0 mm apart. The depth of the grooving has caused the cylinders to break into short lengths, usually of one or two divisions (cf Hagen 1937. 122. type D14). It is impossible to assess the original number of beads.

1185-1345 SFBUC 1509-10. H211-12 G503. Grave deposits. Period 2. With 1183-4. Fig 36. a group of 163. Lengths vary from 1.5 to 7.0 mm . average diameter 5.0 mm . Jet, with deep transverse grooves approximately 1.5 mm
apart. As with 1067-1187. the cylinders have broken into short lengths. usually of one division (cf Hagen 1937, 122, type D14). It is impossible to assess the original number of beads.
c) circular section, segmented

1350-69 SF BUC 186(C)/192(0/195(C)/199(C)/201-2(C). B290-2/303-4/306,G69.

Grave deposits. Period 2. With 1349. Fig 36. a group of 21. Lengths vary from 8.0 to 22.0 mm . average diameter 3.0 mm . Jet, Segments vary in depth and size.
d) circular section, collared

1371-9 SFBUC 10. A8G1. Grave deposits. Period 2. Average length 9.0 mm . average diameter 2.5 mm . ?Faience.

1331-2 SF BUC $195(0 / 205(0$. B288/303 G69. Grave deposits. Period 2. With 1330. Fig 36. a group of three. Average length 15.5 mm . average diameter at centre 4.0 mm . Jet, Tapering at each end towards collar.

1383-4 SF BUC 1545/1547. H390-1 G537. Grave deposits. Period 2. Average length 6.0 mm . average diameter 4.0 mm . Copper-alloy. Tapering slightly at each end towards collar.
e) rectangular section

1387-1413 SF BUC 186(0/192(0/195(0/200(0/202-3(0. B290/292/303-4/306
G69. Grave deposits. Period 2. Lengths vary from 2.5 to 16.0 mm . average width 3.5 mm . Opaque mid blue glass. The shorter lengths are probably broken from long cylinders.

1414 SFBUC 1221. C505 G291. Disturbed grave deposit. Period 1. Length 4.0 mm . width 3.0 mm . Opaque dark blue glass. 1416-17 SF BUC 1545. H390 G537. Grave deposits. Period 2. Average length 7.0 mm . average width 5.0 mm . Translucent dark green glas .
f) faceted rectangular section

1418 SF BUC 192(C), B304 G69. Grave deposit. Period 2. Length 5.0 mm . width 3.5 mm . Copper-alloy.

1420 SF BUC 709. C1394 G406. Grave deposit. Period 2. One of a pair with 1419. Fig 36. Length 14.5 mm . width 11.5 mm . Amber. weathered.
g) pentagonal section (Fig 36; 1421)

In printed catalogue.
h) hexagonal section

1425 SF BKC 3235(C), J173. Modern? Length 8.0 mm . width 5.0 mm . Opaque mid green glass. one end convex. worn.

1428 SF BUC 824. D44 F29. Pit. Modern. Length 6.0 mm . width 4.0 mm . Opaque mid green glass.

1430-6 SFBUC 1544-7. H389-92 G537. Grave deposits. Period 2. With 1429.
Fig 36. a group of eight. Average length 7.5 mm . average width 5.0 mm . Translucent dark green glass.

1437-41 SF BUC 1545-7. H389-91 G537. Grave deposits. Period 2. Average length 6.0 mm . average width 5.0 mm . Opaque mid to dark green glass. 1442-3 SF BUC 1654. H729 G609. Grave deposit. Period 2. Average length 4.5 mm . average width 3.0 mm . Opaque mid green glass.
i) octagonal section (Fig 36; 1444-1446)

In printed catalogue.

Long plano-convex bead (Fig 36; 1447)
In printed catalogue.

## Other beads

Heart-shaped beads (Fig 37; 1443-1481)

1451-78 SF BUC 7(C), A8 G1. Grave deposits. Period 2. With 1443-50. Fig 37. a group of 31 . Average length 3.5 mm . average width 4.5 mm . Opaque
light blue glass.
1480 SF BUC 1634. H729 G609. Grave deposit. Period 2. Length 6.5 mm . width 6.0 mm . Translucent mid green glass.

1481 SF BUC 1639. H734 G609. Grave deposit. Period 2. Length 4.0 mm . width 4.5 mm . Translucent purple glass.

Kidney-shaped beads (Fig 37; 1482-1495)
1485-95 SF BUC $186(0 / 200(0$. B292/306 G69. Grave deposits. Period 2. With 1482-4. Fig 37. a group of fourteen. Average length 6.0 mm . average width 9.0 mm . Translucent dark blue glass.

## Semicircular jet beads with decorated upper edge and wedge-shaped section

(Fig 37; 1496-1500)
1497 SF BKC 2709(C), H14 L2. Topsoil. Post-Roman. Fragments. similar to 1496. Fig 37.

1499 SF BKC 5336. M275 F149. Pit. Period 6 or later. Length 5.0 mm . maximum width 21.5 mm . Similar to 1498 . Fig 37.

1500 SF MID 793. CI542 LI88. Topsoil accumulation. Late Roman to early medieval. Length 4.5 mm . maximum width 30.0 mm . Similar to 1498. Fig 37.

Exotic beads (Fig 37? 1501-1510)
All are in the printed catalogue.

## ARMLETS

## Shale and jet armlets

## Plain (1511-1553)

1511 SF LWC 1042, A65. Surface cleaning. Post-Roman to post-medieval or later. Shale. Fragment. internal diameter 50.0 mm . D-shaped section with internal ridge. thickness 5.5 mm . height 6.0 mm

1512 SF LWC 4239(C), B30 F22. Pit. 16th to 19th century. Shale. Fragment internal diameter 48.0 mm . oval section with internal ridge. thickness 5.0 mm . height 6.0 mm .

1513 SF LWC 4240(C), B31 F18. Robber trench. 12th to 13th century. Shale. Fragments. internal diameter 70.0 mm . D-shaped section with slight internal ridge. thickness 6.0 mm . height 7.5 mm .

1514 SF LWC 484. B184 F70. Cellar backfill. Periods. Jet, Fragment. internal diameter oval. 40.0 by 50.0 mm . D-shaped section. thickness 16.5 mm . height 20.5 mm .

1515 SF LWC 1766. J3. Uncertain context. Medieval or later. Jet, Fragment. internal diameter 72.0 mm . rectangular section. thickness 8.0 mm . height 4.0 mm

1516 SF LWC 4210. J106. Topsoil with oysters. Late Roman or later. Shale. Fragment.

1517 SF LWC 4211. J245 F16. Lime pit. Early medieval. Shale. Fragment. internal diameter 60.0 mm . D-shaped section with internal ridge. thickness 5.0 mm . height 7.0 mm .

1518 SF BKC 1869(C), A7 L1. Town ditch (F30) fill. Anglo-Saxon. Shale. Fragment. internal diameter 70.0 mm . oval section. thickness 7.0 mm . height 12.0 mm .

1519 SF BKC 315(C), A43 L5. Topsoil and town ditch (F16) fill. Poet-Roman. Shale. Fragment. internal diameter 50.0 mm . D-shaped section. internal ridge partly ground away. thickness 3.5 mm . height 7.0 mm .

1520 SF BKC 889(C), A43 L5. Topsoil and town ditch (F16) fill. Post-Roman. Shale. Fragment.

1521 SF BKC 219(C), A55. F16. Town ditch fill. Anglo-Saxon or Period 6. Jet, Fragments. internal diameter 50.0 mm . D-shaped section with slight internal ridge. thickness 4.0 mm . height 8.0 mm .

1522 SF BKC 934(C), A75 F16. Town ditch fill. Anglo-Saxon or Period 6. Jet, Fragment. internal diameter 58.0 mm . rectangular section. thickness 4.0 mm . height 8.0 mm .

1523 SF BKC 812(C), A92 (L12), In L1. Post-Roman. Shale. Fragment. internal diameter 62.0 mm . D-shaped section with internal ridge partly ground away. thickness 7.0 mm . height 8.5 mm .

1524 SF BKC 674(C), A142 F49+L1. Post-Roman. Shale. Fragment.

1525 SF BKC 946(C), D347 L26. Dump and occupation debris at bottom of town ditch. Period 6. Shale. Fragment. internal diameter 45.0 mm . D-shaped section with internal ridge. thickness 4.5 mm . height 6.0 mm .

1526 SF BKC 979(C), D367. Town ditch fill. Late Period 6 or Anglo-Saxon. Shale. Fragment. internal diameter 48.0 mm . oval section with internal ridge. thickness 4.0 mm . height 6.0 mm .

1527 SF BKC 991(C), D394. Town ditch fill. Late Period 6 or Anglo-Saxon. Jet, Fragment. internal diameter 60.0 mm . circular section. thickness 10.5 mm . height 11.0 mm .

1528 SF BKC 1209(C), E319 L448. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Shale. Fragment. internal diameter 68.0 mm . D-shaped section with internal ridge. thickness 5.5 mm . height 6.5 mm .

1529 SF BKC 2019(C), E1234 F432. Ditch fill. Periods 5 and 6. Shale. Fragment. internal diameter 63.0 mm . oval section with internal ridge.
thickness 5.5 mm . height 90 mm .
SF BKC 2763(C), H128 F129?. Period 6? Shale. Fragment. internal diameter 65.0 mm . oval section. thickness 6.0 mm . height 9.0 mm .

1531 SF BKC 3922. M9. Surface cleaning. Mainly Periods 5 and 6 but could include modern. Shale. Fragment. internal diameter 50.0 mm . D-shaped section with internal ridge. thickness 6.0 mm . height 5.0 mm .

1532 SF BKC 4105(C), N21 L1. Topsoil. Modern. Shale. Fragment. internal diameter 63.0 mm . circular section. thickness 6.0 mm . height 6.5 mm .

1533 SF BKC 4040(C), N22 L1. Topsoil. Modern. Jet, Fragment. internal diameter 60.0 mm . wedge-shaped section. thickness 10.5 mm . height 7.0 mm .

1534 SF BKC 4183(C), N144 F47/48. Pits. Period 6 or later. Jet, Fragment. internal diameter 60.0 mm . D-shaped section. thickness 9.0 mm . height 11.0 mm .

1535 SF BKC 4221(C), N210 F71. Pit. Period 6 or later. Shale. Fragment. internal diameter 75.0 mm . rectangular section. thickness 6.5 mm . height 7.0 mm . There is a rivet hole at one end. possibly for a repair.

1536 SF BKC 4532. N643. Unstratified. Shale. Fragment. internal diameter 55.0 mm . D-shaped section. thickness 14.5 mm . height 16.5 mm .

1537 SF BKC 4623. T274 L9 + L67. Cellar fill. Period 5a. Shale. Fragment internal diameter 66.0 mm . oval section with slight internal ridge. thickness 8.5 mm . height 10.0 mm . diameter 62.0 mm . D-shaped section with internal ridge. thickness 8.0 mm . height 10.5 mm .

1539 SF CPS 937(C), 576 Fl 15. Occupation. Period 4. Jet, Fragment. internal diameter 48.0 mm . wedge-shaped section. thickness 6.5 mm . height 4.0 mm .
oval. 40.0 by 45.0 mm . wedge-shaped section. thickness 9.0 mm . height 5.5 mm .

1541 SF CPS 532(C), 608 Fl 16. Robber trench material. Periods. Jet, Fragment.

1542 SF COC 172. 732 L213. Topsoil. Period 6 or post-Roman? Shale. Fragment.

1543 SF COC 181. 815 L228. Debris on tessellated pavement. Period 6. Shale. Fragment, internal diameter 68.0 mm , circular section, thickness 6.5 mm , height 6.0 mm .

1544 SF BUC 37(C), A224 G16. Grave deposit. Period 2. Shale. Fragments. internal diameter 52.0 mm . oval section. thickness 3.0 mm . height 5.0 mm .

1545 SF BUC 158(C), B203 G69. Grave deposit. Period 2. Jet, Internal diameter oval. 45.0 mm by 52.0 mm . D-shaped section. thickness 6.0 mm . height 9.0 mm .

1546 SF BUC 219(C), B305 G69. Grave deposit. Period 2. Shale. In two fragments. Internal diameter 69.0 mm . D-shaped section with internal ridge. thickness 6.0 mm . height 9.5 mm .

1547 SF BUC 395(C), Bl 104 G174. Grave deposit. Period 2. Shale. Internal diameter oval. 52.5 by 59.5 mm . D-shaped section. thickness 4.0 mm . height 5.5 mm .

1548-9 SF BUC 605(C), C1215 G378. Grave deposits. Period 2. Shale. 1548) internal diameter 42.0 mm . D-shaped section with internal ridge. thickness 4.0 mm . height 6.0 mm . 1549) internal diameter 43.5 mm . D-shaped section with internal ridge partly ground away. thickness 4.5 mm . height 5.0 mm .

1550 SFBUC 1511(C), H213 G503. Grave deposit. Period 2. Shale. Internal diameter 33.0 mm . D-shaped section. thickness 6.0 mm . height 3.0 mm . 1551 SF BUC 1512(C), H216 G503. Grave deposit. Period 2. Jet, Internal diameter oval. 39.0 by 47.0 mm . D-shaped section. thickness 6.0 mm .
height 5.0 mm .
1552 SF BUC 1513. H217 G503. Grave deposit. Period 2. Jet, Internal diameter oval. 29.0 by 32.0 mm . D-shaped section. thickness 4.0 mm . height 5.0 mm .

1553 SF BUC 1514. H219 G503. Grave deposit. Period 2. Jet, Internal diameter oval. 39.0 by 44.5 mm . D-shaped section. thickness 4.0 mm . height 7.0 mm .

Ring-and-dot decoration (Fig 38; 1554-1555)
1555 SF CPS 777(C), 479 Fl 12. Robber trench material. Periods. Shale. Fragment.

Cable decoration (Fig 38; 1556-1558)
1557 SF LWC 3741. R unstratified. Shale. Fragment. internal diameter 60.0 mm . circular section. thickness 8.0 mm . The grooves form a continuous spiral.
$\underline{\text { Latitudinal grooves and ridges (Fig 33; 1559) }}$
In printed catalogue.

Notched (Fig 33; 1560-1565)
a) opposed notches (Fig 38; 1560)

In printed catalogue.
b) alternating notches

1562 SF MID 287, CI 135 (?L114), Topsoil accumulation. Early medieval to Site C Phase 1 (or ?pre Site C Phase 1), Shale. Fragment, internal diameter 52.0 mm , rectangular section. thickness 8.0 mm , height 6.5 mm . Similar to 1566 , Fig 38, but less well-made, so that the notches at one end are almost opposing.

1563 SF BUC 1593(C), H544 G500. Grave fill. Period 2. Shale. In four pieces. mended. Internal diameter 60.0 mm . D-shaped section. thickness 8.0 mm . height 5.0 mm . Small shallow notches on both upper and lower outer edges. set in slightly.
c) oblique and irregular notches

1564 SF BKC 4290(C), N270. Cleaning. Period 6? Shale. Fragment. internal diameter 60.0 mm . rectangular section. thickness 7.5 mm . height 4.5 mm . Irregular. slight. oblique $V$-shaped notches are cut into the upper and lower outside edges.
d) complex notches (Fig 38. 1565)

In printed catalogue.

Transverse grooves (Fig 38. 1566-1567)

1567 SF BUC 1563/1564/1570. H397/398/406 G519. Grave deposit. Period 2.

Fragment of a plain shale bracelet. thickness 3.0 mm . height 4.0 mm bound by two fragments of grooved copper-alloy sheet

Octagonal (Fig 38; 1568)
In printed catalogue.

## Bone armlets

Plain (Fig 39; 1569-1584)

1569 SF BKC 2155(C), E217 L55. Demolition debris. Post-Roman. Fragment.
1570 SF BKC 3359(C), K556 L134. Make-up/dump. Period 4. Fragment
1571 SF CPS 162(C), 331 L43. Topsail build-up. Period 6. Fragment. with copper-allay rivet

1572 SF CPS 336(C), 533 F116. Robber trench material. Periods. Fragment. with rivet hole and a fragment of a copper-alloy plate on the outer face.

1573 SF CPS 607(C), 614 F118. Robber trench material. Periods. Fragment. with copper-alloy rivet.

1574 SF BUC 4. 5. 9(C), AS G1. Grave deposit. Period 2. Fragments. possibly of two armlets. Oval section. thickness 2.5 mm . height 4.5 mm . One fragment shows two ends butted together and held by an iron plate on the inside face fixed by rivets.

1575 SF BUC 326. 327(C), B570/571 G109. Grave deposit. Period 2. Fragments. oval section, thickness 3.0 mm , height 5.0 mm .

1576 SF BUC 384(C), B1050 G171. Grave deposit. Period 2. Fragments, internal diameter 65.0 mm , rectangular section, thickness 2.5 mm , height 6.0 mm .

1577 SF BUC 388/389(0.B1050 G171. Grave deposit. Period 2. Fragments, possibly belonging to 1576 .

1578 SF BUC 388/389(0.B1050 G171. Grave deposit. Period 2. Fragments, internal diameter 52.0 mm , rectangular section, thickness 1.5 mm , height 5.5 mm . One fragment is of a lap joint that is held by an iron rivet.

1579 SFBUC 1754. B1061 G171. Grave deposit. Period 2. Fragments. possibly belonging to 1576 .

1580-3 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. With 1584, Fig 39, a group of five armlets. Four (1580-2, 1584) have butt joints held together by a copper-alloy plate on the outer face fixed by two iron rivets. The fifth, 1583, has a lap joint fixed by one iron rivet. All have sprung apart as the metal corroded. The internal diameters have been estimated from the circumferences. 1580) internal diameter 42.0 mm . oval section, thickness 3.0 mm , height 5.5 mm , 1581) internal diameter 48.0 mm , oval section, thickness 3.5 mm , height 6.0 mm . 1582) internal diameter 50.0 mm , D-shaped section, thickness 3.0 mm , height 5.5 mm ,
1583) internal diameter 54.0 mm , D-shaped section, thickness 2.0 mm , height 4.5 mm . bane armlet covered with gilt sheet copper alloy. The sheet seems to have been covered with fine repousse hatched decoration.

## Copper-alloy armlets

Early (Fig 40; 1586-1587)

Both in printed catalogue.

Wire (Fig 41; 1588-1603)

1588 SF LWC 3941(C), J unstratified. Section cleaning. Fragment. circular section. thickness 1.5 mm . Twisted expanding clasp.

1589 SF BKC 1050. Unprovenanced. Fragment. rectangular section. thickness 2.0 mm . twisted. Probably a hook-and-eye clasp.

1591 SF BUC 5. 11(C), A8 G1. Grave deposit. Period 2. One of a pair with 1590. Fig 41. Fragments. internal diameter 40.0 mm . lozenge-shaped section. twisted. thickness 1.5 mm . Twisted expanding clasp.

1592 SF BUC 6(C), AS Gi. Grave deposit. Period 2. One of a pair with 1593. Internal diameter 42.5 mm . lozenge-shaped to circular section. thickness 2.0 mm . Twisted expanding clasp.

1593 SF BUC 6(C), A8 G1. Grave deposit. Period 2. One of a pair with 1592. Internal diameter 43.5 mm . circular section. thickness 1.5 mm . Twisted expanding clasp.

1594 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. One of a group of three with 1595 and 1596. Internal diameter 45.0 mm . circular section. thickness 2.0 mm . Twisted expanding clasp.

1595 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. One of a group of three with 1594 and 1596. In fragments. internal diameter 44.5 mm . circular section. thickness 2.0 mm . Twisted expanding clasp.

1596 SF BUC 605(C), C1215 G378. Grave deposit. Period 2. One of a group of three with 1594 and 1595. In fragments. internal diameter 44.0 mm . circular section. thickness 2.0 mm . Twisted expanding clasp.

1597 SFBUC 1238/1297. C1509/1518 G404. Grave deposit. Period 2. Fragments. internal diameter 33.0 mm . circular section. thickness 1.5 mm . Twisted expanding clasp.

1599 SFBUC 1551/1571. H377 G537. Grave deposit. Period 2. Fragments. circular section. thickness 1.5 mm .

1600 SF BUC 1690(C), H793 G633. Grave deposit. Period 2. Internal diameter 48.0 mm . D-shaped section. thickness 1.5 mm . height 2.0 mm . Twisted expanding clasp. A short length of chain of three rectangular-section S-shaped links is suspended from the armlet.

1603 SF MRC 132(C), 76. Post-Roman. Fragments. internal diameter 37.0 mm . lozenge-shaped section. twisted. thickness 1.0 mm . Possibly penannular.

Cable (Fig 41; 1604-1636)
a) two strands

1604 SF LWC 888(C), C152 F40. Robber trench. c 1500. Fragment. two rectangular-section strands. total thickness 3.0 mm .

1605 SF BKC 3958. N21 L1. Topsoil. Modern. Fragments. two circular-section strands. total thickness 2.0 mm .

1606 SF BKC 4267. N233 F84. Pit. Period 6. Fragments. two rectangularsection strands. total thickness 2.5 mm .

1607 SF CPS 435(C), 590 Fl 12. Robber trench material. Periods. Fragment. two circular-section strands. total thickness 2.0 mm .

1608 SF MID 175. C625 L25. Topsoil accumulation of Site C Phase 2. Fragment. two ?circular-section strands. total thickness 3.0 mm .

1609 SF COC 128. 601 L160. Topsoil. ?Early medieval. Fragment. two circularsection strands. total thickness 4.0 mm .

1612 SF BUC 69(C), A356 G24. Grave deposit. Period 2. Distorted. in two fragments. internal diameter 33.0 by 42.0 mm . two circular-section strands. total thickness 2.5 mm . Double hook clasp.

1614 SF BUC 336(C), B700 G115. Probably a grave deposit. Period 2. In two fragments. internal diameter oval. 44.0 by 55.0 mm . two rectangularsection strands. total thickness 3.5 mm . Both terminals are broken. 1615 SF BUC 450. B1577 G211. Probably in grave fill. Period 2. Fragment. two circular-section strands. total thickness 4.5 mm .
b) three strands

1616 SF LWC 2838(C), K200 F66. Hut. 6th to 7th century. Fragment. three circular-section strands. total thickness 2.0 mm .

1617 SF BKC 131(C), A31 L2. Topsoil. Post-Roman. Fragment. three circularsection strands. total thickness 2.0 mm .

1618 SF BKC 737(C), A31 L2. Topsoil. Post-Roman. Fragment. three circularsection strands. tapering from 4.0 to 3.5 mm thick.

1619 SF BKC 692(C), A unstratified. Fragment. three circular-section strands. total thickness 2.5 mm .

1620 SF BKC 695. D46 L1. Upper town ditch fill. Late Anglo-Saxon. Fragment. three circular-section strands. total thickness 4.0 mm .

1621 SF BKC 815(C), D178 L2. Town ditch fill. Anglo-Saxon. Fragment. three rectangular-section strands. total thickness 3.0 mm . At one end is a hook.

1622 SF BKC 929(C), D301 (F20), Tile scatter in town ditch. Anglo-Saxon. Fragment. three oval-section strands. total thickness 4.0 mm .

1623 SF BKC 1001(C), D385. Town ditch fill. Late Period 6 or Anglo-Saxon. Fragment. three rectangular-section strands. total thickness 2.5 mm .

1624 SF BKC 1189(C), E281 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Fragment. three ?rectangular-section strands. total thickness 3.0 mm .

1625 SF BKC 2569(C), H7 L2. Topsoil. Post-Roman. Fragment. three circularsection strands. total thickness 3.0 mm .

1626 SF BKC 2959(C), K60. Modern topsoil? Fragments. three circular-section
strands. total thickness 2.5 mm .

1627 oval. 28.0 by 34.0 mm . three circular-section strands. total thickness 5.0 mm .

1629 SF BUC 153(C), B307 G69. Grave deposit. Period 2. Internal diameter 57.0 mm . three circular-section strands. total thickness 4.0 mm . The armlet is badly affected by iron corrosion. but contains no iron itself. Hook-and-eye clasp. the hook of which is missing. The terminals below the clasp are strengthened by sheet copper-alloy binding. On the armlet was a pierced coin of Tetricus II (270-3),

1630 SF BUC 1290(C), C1511 G404. Grave deposit. Period 2. In two fragments. internal diameter oval. 30.0 by 35.0 mm . three rectangular-section strands. total thickness 2.5 mm . Cut down from a larger armlet? Originally with a hook-and-eye clasp. The clasp at the new length is formed by the original eye and a hook made by turning one strand at the cut end upwards. Possibly a repair rather than a deliberate alteration to the size of the armlet.

1631 SF BUC 1674(C), H843 G647. Grave deposit. Period 2. Internal diameter oval. 46.0 by 61.0 mm . three rectangular-section strands. total thickness tapers from 5.5 to 3.5 mm . One end is damaged. At the other two strands are used to form an eye. The damaged end turns outwards slightly for a
coppes-aliry plain finger-nny its4 kreapled on to this ar chlet.
hook. This armlet linked 1666-71 and 1736.
1632 SF BUC 1695. H894. Unstratified (spoil heap), Internal diameter 33.0 mm . three strands. sections vary from circular to D-shaped to recatngular. tapering from 6.5 to 3.5 mm thick. The small diameter probably indicates that this was deliberately cut down from a larger armlet. No clasp.
c) four strands

1634 SF BUC 183(C), B303 G69. Grave deposit. Period 2. Internal diameter
53.0 mm . four circular-section strands. total thickness 3.0 mm . Like 1629. this armlet is badly affected by iron corrosion. but contains no iron itself. There are slight traces of white metal coating the strands. Hook-and-eye clasp.

1635 SF BUC 338/389(C), B1050 G171. Grave deposit. Period 2. Fragment. four circular-section strands.tapering from 7.5 to 5.0 mm thick.

1636 SF BUC 330. D98 G454. Probably a grave deposit. Period 2. Fragment. four rectangular-section strands. tapering from 5.0 to 4.0 mm .

Plain (Fig 42; 1637-1651)
1637 SF LWC $3721(\mathrm{C})$, Q16. Surface cleaning of pit complex. Post-medieval? Fragments. D-shaped section. thickness 3.0 mm . height 4.5 mm .

1638 SF BKC 374(C), A84 L4. Topsoil and town ditch (F19) fill. Post-Roman. Distorted penannular armlet. Internal diameter 52.0 mm . oval section. thickness 2.5 mm . height 3.0 mm .

1639 SF BKC 4072. Nil L1. Topsoil. Modern. Fragment. with terminal shaped to a plain snake's head. Thickness 2.0 mm . height 4.0 mm .

1641 SF BUC 2(C), A7 G1. Grave deposit. Period 2. Internal diameter oval. 30.5 by 33.0 mm . circular section. tapering from 2.5 to 1.5 mm thick. and from 3.0 to 1.5 mm high. Twisted expanding clasp. Similar to 1654 .

Fig 41.

1642 SF BUC 36/37(C), A223/224 G16. Grave deposit. Period 2. Fragments. internal diameter 52.0 mm . circular section. thickness 2.0 mm .

Penannular.

1645 SF BUC 388/339(C), B1050 G171. Grave deposit. Period 2. Internal diameter 52.0 mm . D-shaped section. tapering from 4.5 to 2.0 mm thick. and from 6.0 to 4.0 mm high. Penannular.

1646 SF BUC 395(C), B1104 G174. Grave deposit. Period 2. Internal diameter 56.0 mm . circular section. thickness swells from 4.0 to 6.0 mm at the
terminals. Penannular.
1647 SF BUC 830, D98 G454. Probably a grave deposit. Period 2. In fragments. internal diameter 39.5 mm . $\mathrm{D}=$ shaped section. thickness 1.5 mm . height 2.5 mm . Hook-and-eye clasp.

1648 SF BUC 831(C), D100 G454. Probably a grave deposit. Period 2. Internal diameter 36.5 mm . D-shaped section. thickness 1.5 mm . height 2.0 mm . Double hook clasp.

1649 SF BUC 831(C), D100 G454. Probably a grave deposit. Period 2. Fragment. internal diameter 39.0 mm . D-shaped section. thickness 2.0 mm . height 3.0 mm .

## Notched. toothed. crenellated (Fig 431 1652-1671)

a) alternating notches

1652 SF LWC 398(C), Bl 17. Contaminated cellar (F70) backfill. Period 5+. Fragment. rectangular section. thickness 2.5 mm . height 1.5 mm . One end has been beaten flat to form a lap joint. Irregular alternating notches on the upper and lower outside edges have produced a degenerate continuous wave decoration.

1655 SF BUC 167(C), B310 G69. Grave deposit. Period 2. One of a pair with 1654. Fig 43. In two fragments. internal diameter oval. 56.5 by 63.5 mm . rectangular section. thickness 3.5 mm . height 1.0 mm . The two ends are joined by a soldered lap joint.
b) obliquely toothed (Fig 43; 1657)

In printed catalogue.
c) crenellated. with toothing between the crenellations

1658 SF BKC 3829. M2 F4. Town ditch fill. Late Period 6 or Anglo-Saxon. Fragment.

1660-5 SF BUC $388 / 389$ (0. B1050 G171. Grave deposits. Period 2. With 1659. Fig 43. a group of six armlets and a fragment of a seventh. All have lap
joints fixed by a single copper-alloy rivet. All are plated with white metal. The depth of the crenellations varies. On 1663 they have almost worn away, whereas on 1660 they show no signs of wear. 1660) internal diameter 53.0 mm . rectangular section, thickness 2.5 mm , height 2.0 mm , 1661) internal diameter 60.0 mm , rectangular section, thickness 4.0 mm , height $2.5 \mathrm{~mm}, 1662$ ) internal diameter 56.0 mm , rectangular section, thickness 3.0 mm , height 2.0 mm , 1663) internal diameter 59.0 mm , rectangular section, thickness 3.0 mm , height $\mathbf{2 . 0} \mathbf{~ m m}, 1664$ ) internal diameter 60.5 mm , rectangular section, thickness 3.0 mm , height $\mathbf{2 . 0} \mathbf{m m}$, 1665) fragment, distorted, rectangular section, thickness 4.0 mm , height 2.0 mm .

1666-71 SF BUC 1669-73/1676. HS43 G647. Grave deposits. Period 2. A group of six similar armlets. As 1659. Fig 43. 1666) internal diameter oval. 56.0 by 60.0 mm . rectangular section, thickness 4.0 mm , height 2.0 mm , 1667) in fragments, internal diameter 57.5 mm , rectangular section, thickness 4.0 mm , height 1.0 mm , 1668) internal diameter 55.5 mm , rectangular section, thickness 4.0 mm , height $2.0 \mathrm{~mm}, 1669$ ) in fragments, internal diameter 56.0 mm , rectangular section, thickness 4.0 mm , height $1.5 \mathrm{~mm}, 1670$ ) in fragments. internal diameter oval, 50.0 by 56.0 mm , rectangular section, thickness 4.5 mm , height $1.5 \mathrm{~mm}, 1671$ ) in fragments, internal diameter oval, 54.5 by 60.0 mm , rectangular section, thickness 4.0 mm , height 1.5 mm , As with $1659-65$, all are plated with white metal, and have lap joints fixed with a single copper-alloy rivet. The degree of wear varies considerably. These armlets, together with 1736, were linked by the three-strand cable armlet 1631.
a) continuous

1672 SF BKC 4144. N123 F76. Pit. Period 6 or later. Fragment.

1673 BF CPS 537. 576 Fl 15. Occupation. Period 4. Fragment.
1674 SF MID 823. 3351 F1020. Timber-lined well. Period 1. Fragments.
1675 SF BUC 324(C), B571 G109. Grave deposit. Period 2. In fragments. internal diameter 38.0 mm . rectangular section. thickness 1.00 mm . height 4.0 mm . Hook-and-eye clasp. The decoration is transverse scoring between marginal grooves.

1677 SF BUC $388 / 389$ (0. B 1050 G 171 . Grave deposit. Period 2. One of a pair with 1676. Fig 44. Internal diameter 56.0 mm . D-shaped section. thickness 2.0 mm . height 3.0 mm . The transverse grooves are deep. giving a ridged effect. The armlet has a lap joint, probably originally soldered, but now sprung apart.

1678 SF BUC 388/389(C), B1050 G171. Grave deposit. Period 2. One of a pair with 1679 , Fig 44, In fragments, internal diameter 54.5 mm , rectangular section, thickness 1.0 mm , height 4.5 mm . The decoration is slight transverse scoring between marginal grooves. Fixed by a lap joint, probably originally soldered. now sprung apart.

1630 SF BUC 457(C), B 1681 . Unstratified (spoil heap). Fragment.

1681 SF MRC 132(C), 76. Post-Roman. Internal diameter oval, 33.0 by 35.5 mm , circular section, thickness 2.5 mm . Both ends have been beaten to rectangular section. One may have been in the shape of a snake's head. The armlet is very worn and corroded. and the grooving may not be continuous.
b) in groups

1682 SF BKC 69(C), A34 F16. Town ditch fill. Anglo-Saxon or Period 6. Fragment, with groups of three grooves alternating with plain panels.

1685 SF CPS 529. 566 F114. Pit. Period 5. Fragment. with groups of nine grooves alternating with plain panels.

1686 SF CPS 467(C), 576 F115. Occupation. Period 4. Fragment, with groups of seven grooves alternating with thick plain panels.

1690 SF BUC 953. E149 L13. Destruction debris and topsoil. Post-Roman. Fragment. showing one plain panel and one group of grooves.

1691 SF BUC 1528. H241 G503. Grave deposit. Period 2. Fragment. with groups of irregular grooves alternating with short panels. on each of which is a wide shallow V -shaped notch. The notches are cut alternately from the upper or lower edge. One end has a looped eye from a hook-and-eye clasp.

1692 SF BUC 1633. H728 G609. Grave deposit. Period 2. In fragments. internal diameter 44.0 mm . rectangular section. thickness 1.5 mm . height 3.5 mm . Riveted lap joint. Groups of transverse grooves alternate with panels of two or three oblique grooves.

## Diagonal grooves. stamped 'S' and 'C' decoration. and wave-crest decoration

(Fig 44; 1693-1705)
a) diagonal grooves (Fig 44; 1693)

In printed catalogue.
b) 'S' decoration: this may be associated with the imitation of cable armlets

1694 SF BKC 1185(C), E302 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Fragment, with a hooked terminal.

1695 SF BKC 2555(C), H6 L2. Topsoil. Post-Roman. Fragment.
1696 SF CPS 546, 576 F115. Occupation. Period 4. Fragment.
1697 SF CPS 445(C), 589 Fl 16. Robber trench material. Periods. Fragment. S decoration between grooved margins.

1698 SF BUC $69(\mathrm{C})$, A 356 G24. Grave deposit. Period 2. In two fragments. internal diameter 34.5 mm , rectangular section, thickness 1.0 mm , height 3.5 mm . Hook-and-eye clasp.

1699 SF BUC 374(C), B938 G121. Grave fill. Period 2. Fragment, with a hooked terminal.

1701 SF BUC 605(C), C1215 G373. Grave deposit. Period 2. Fragment, the S is retrograde. Rectangular section, thickness 1.0 mm , height 3.0 mm .
c) 'C decoration (Fig 44. 1702)

In printed catalogue.
d) wave-crest decoration (Fig 44; 1703-1705)

In printed catalogue.

Punched or raised dots (Fig 45; 1706-1712)
1706 SF LWC 1703(C), H30 F10 + F15. Early medieval. Fragment. with ring-anddot decoration.

Hatched (Fig 46! 1713-1714)
1713 SF BKC 4237. N155 F47/48. Pits. Period 6 or later. Fragments.

Bead-imitative (Fig 46; 1715-1723)
1716 SF BKC 3913. M6. Cleaning. Modern with Periods 5 and 6. Fragments. similar to 1719 . Fig 46.

1713 SF BUC 330. D98 G454. Probably a grave deposit. Period 2. Fragments. similar to 1719 . Fig 46.

1720 SF BUC 1566. H404 G519. Grave deposit. Period 2. One of a pair with 1721. Fig 46. Internal diameter 42.5 mm , circular section, thickness 2.0 mm . The ends are linked by a sheet of copper alloy moulded to match the decoration, wrapped round the armlet, and soldered into position.

1722 SF BUC 1568. H406 G519. Grave deposit. Period 2. One of a pair with 1723. Internal diameter 43.0 mm . rectangular section. thickness 2.0 mm . height 5.0 mm . Similar to 1719. Fig 46. Fixed by a soldered lap joint. now sprung apart.

1723 SFBUC 1569, H406 G519. Grave deposit. Period 2. One of a pair with 1722. Internal diameter 40.5 mm , rectangular section, thickness 2.0 mm . height 5.5 mm . As 1722 .

Multiple motifs (Fig 47; 1724-1732)
1727 SF BUC 457(C), B1681. Unstratified (spoil heap). Fragment, similar to 1730. Fig 47.

## Iron armlets

Plain These armlets appear to have been simple circular-section rings. No clasps or joins have been identified (Fig 48; 1733-1737),

1733 SF BUC 163/177/193(0. B294/300/312 G69. Grave deposit. Period 2.

Fragments, some with textile preserved in the iron corrosion

1734 SF BUC 326/327(0. B570/571 G109. Grave deposit. Period 2. Fragments.

1735 SF BUC 1570. H406 G519. Grave deposit. Period 2. Fragments. corroded to copper-alloy armlets 1722-3. Internal diameter 33.0 mm .

1736 SF BUC 1675. H843 G647. Grave deposit. Period 2. Fragments, corroded to copper-alloy armlets 1666-71. Internal diameter 60.0 mm .

With copper-alloy binding (Fig 43; 1738)
In printed catalogue.

## FINGER-RINGS

## Shale and jet finger-rings

Plain (Fig 49; 1739)
In printed catalogue.

Faceted (Fig 49; 1740)
In printed catalogue.

## Copper-alloy finger-rings

Plain (Fig 50; 1741-1755)

1745 SF BKC 2837. H338 L12. Destruction debris of Period 5b building. Period 5b (end), Fragment.

1746 SF BKC 5136. V207 F50. Pit. Period 5 (or 6), Cast. Internal diameter 15.0 mm . D-shaped section. height 3.0 mm . thickness 2.0 mm . Possibly not a finger-ring.

1747 SF BKC 5369. V533 L72. Make-up? Period 4. Fragments.

1748 SF CPS 885. 966 L159. Make-up. Period 3. Fragments.

1750 SF BUC 367(C), B932 G152. Probably not a grave deposit. Period 1.
Cast. Internal diameter 16.5 mm . roughly oval section. height 3.0 mm . thickness 2.0 mm . Possibly not a finger-ring.

1751 SF BUC 1132. E301 L16. Destruction debris. Probably first half of the 5th century. In two fragments. Penannular, terminals overlap. Internal diameter 15.8 mm , rectangular section, height 2.0 mm , thickness 1.0 mm .

1752 SF BUC 1572. H412 G537. Grave deposit. Period 2. Penannular. terminals just overlap. Internal diameter 13.5 mm . ?circular section. thickness 1.5 mm .

1753 SF BUC 1573. H413 G537. Grave deposit. Period 2. As 1752. Internal diameter 12.0 mm . ?circular section. thickness 1.5 mm .

1754 SF BUC 1679. H848 647. Grave deposit. Period 2. Fragments only. was complete in situ. Found threaded onto cable armlet 1631.

Plain. with decorative clasp (Fig 50; 1756-1757)
Both in printed catalogue.

Coiled (Fig 50; 1758-1761)
1760 SF BKC 206(C), A75 F16. Town ditch fill. Anglo-Saxon or Period 6.
Internal diameter 13.5 mm . roughly rectangular section. height 2.5 mm . thickness 1.5 mm . One and a third coils. very crude.

1761 SF BKC 2179(C), G65. Modern. Distorted. Internal diameter 14.0 mm . rough circular section. thickness 2.5 mm . Both ends are broken. Just over one coil remains.

Cable decoration (Fig 50; 1762)
In printed catalogue.

Segmented (1763)
1763 SF LWC 3377(C), G518 F260. Pit. Period (1 or) 2. Penannular. distorted. Internal diameter 17.0 mm . thickness 1.5 mm . A very worn ring. the segments are only just visible.

Notched. crenellated (Fig 50; 1764-1768)
a) opposing notches (Fig 50; 1764-1765)

Both in printed catalogue.
b) alternating notches (Fig 50; 1766)

In printed catalogue.
c) crenellated

1767 SF BKC 4061. N22 L1. Topsoil. Modern. Fragment. very corroded.
Internal diameter 14.0 mm . rectangular section. height 1.0 mm . thickness
2.0 mm . The complete circumference of the hoop appears to be crenellated.

Transverse grooves (Fig 50; 1769-1773)
a) continuous

1769 SF LWC 2266(C), L14. Post-Roman. ?Cast. Broken and twisted. Internal diameter 17.0 mm . D-shaped section. height 2.0 mm . thickness 1.0 mm . The grooves slant slightly.
b) in groups

1772 SF LWC 2644(C), K85. Topsoil and rubble. Post-Roman. Fragment. At each end the hoop widens and bears transverse grooves.

Chevrons (Fig 50; 1774)
In printed catalogue.

With glass or enamel setting (Fig 50; 1775-1786)

1775 SF LWC 1254(C), E unstratified. Fragments. probably similar to 1791.
Fig 52.
1776 SF LWC 3724. L302. Kitchen floors. occupation. Period 4(3),
Translucent dark blue glass inset for a ring. a flattened oval in shape.

Inscribed (Fig 51; 1787)
In printed catalogue.

## White metal finger-rings

Plain (Fig 52; 1788)

In printed catalogue.

Crenellated (Fig 52; 1789)

In printed catalogue.

Transverse grooves (Fig 52; 1790)

In printed catalogue.

With glass setting (Fig 52; 1791-1792)

1792 SF BUC 1677/1693. H834/848 G647. Grave deposit. Period 2. In fragments. As 1791. Fig 52.

## Iron finger-rings

With setting (Fig 52; 1793-4)

1794 SF BUC 1522. H234 G503. Grave deposit. Period 2. In fragments. Internal diameter 18.0 mm . D-shaped section. height 4.0 mm . thickness 3.0 mm . The hoop thickens at one point, either for a solid bezel or a setting for a stone. This ring, with a plain pierced copper-alloy disc
(1807), a coin of Diadumenian (AD 217-18), and six jet short oblate beads (617-22), formed an armlet.

## EARRINGS

In printed catalogue (Fig 53; 1795-1798).

## MISCELLANEOUS JEWELLERY

(Fig 54; 1799-1801)
1800 SF BUC 1295/1308. C1516/1523 G404. Grave deposit. Period 2. Fragments of opaque yellowish glass. from one or two rectangles similar to Fig 54. 1799. (Two yellow glass rectangles were recorded in the site notes.)

1801 SF BUC 1311(C), C1526G404. Grave deposit. Period 2. One gilt copper-alloy rectangular frame from an object similar to Fig 54. 1799.

Pendants (Fig 54; 1802-1807)
1807 SF BUC 1523(C), H234 G503. Grave deposit. Period 2. A plain copperalloy pierced disc. maximum diameter 27.5 mm . thickness less than 0.5 mm . Threaded onto an armlet of jet beads (617-22), from which was also suspended a coin of Diadumenian (AD 217-13), and an iron finger-ring (1794),

Bells (Fig 54; 1808-1311)
1809 SF BUC 267. B403 G94. Grave deposit. Period 2. A thin corroded copperalloy bell. maximum diameter 20.0 mm . The clapper is missing. With 1810. this bell was suspended from an iron chain.

1810 SF BUC 267. B403 G94. Grave deposit. Period 2. Similar to 1809.

In printed catalogue.

## BUCKLES AND BELT-PLATES

Unless otherwise stated objects are of copper alloy (Fig 55; 1313-1820),
1814 SF BKC 1182(C), E312 L73. Make-up. Periods. Fragment of a thin D-shaped buckle loop.

1817 SF BKC 4721. T496. Period 1 (and 2a), A corroded hinged belt-plate length 58.5 mm . width 27.5 mm . Possibly with inlaid decoration.

1820 SF BUC 670. C1302 L1. Period 2. Possible fragment of a belt-plate strap-end. Roughly rectangular. 31.0 mm long. 12.0 mm wide.

## IRON HOBNAILS

(Fig 56; 1821-1849)

1821 SF LWC 862(C), B414 F70. Base of cellar backfill. Period 5.
1822 SF LWC 4225(C), C103 F102. Pit. Post-Roman. (Hobnails may be postRoman.)

1823 SF LWC 3231. J951. Make-up. Periods.
1824 SF LWC 3342. 31070 F353. Pit. Period 4a (early),
1825 SF LWC 3444. J1233. Gravelled yard. Period 2.
1826 SF LWC 3516. J1408 F459. Pit. Period 4.
1827 SF BKC 5151. E1278 L397+. Post-Roman. The imprint of hobnails preserved in iron-impregnated soil.

1828 SF BKC 4896(C), N314 F97. Trench/slot. Period 5b2. The imprint of hobnails preserved in iron-impregnated soil.

1329 SF BKC 4397(C), T310 Fl 12. Pit. Period 5c. The imprint of hobnails preserved in iron-impregnated soil.

1830 BKC T F43. Destruction debris of Period 2. Period 3. Hobnails planned but not recorded in small find day book.

1831 SF BUC 301(C), B514 G100. Grave deposit. Period 1. In coffin.
1832 Fig 56 SF BUC 340-3/346. B729 G125. Grave deposit. Period 1. In coffin.

1833 SF BUC 400. B1109 G171. Grave deposit. Period 2. In coffin.
1834 Fig 56 G177. Grave deposit. Period 1. Hobnails stolen from site.
1835 Fig 56 SF BUC 422/1430/1486. B1294-5/1312 G188. Grave deposit. Period 2. Outside coffin.

1836 SF BUC 438-9. C401-2 G273. Grave deposit. Period 1. In coffin.
1337 Fig 56 SF BUC 493/1432. C433-9 G277. Grave deposit. Period 1. In coffin.

1838 SF BUC 492. C456 G274. Grave deposit. Period 1. In coffin.
1839 SF BUC 1491-2. C648-9 G298. Grave deposit. Period 2. Outside coffin.
1840 SFBUC 1609. C1410. Unstratified.
1841 SF BUC 1485. D127 G458. Grave deposit. Period!. In coffin.
1842 SFBUC 1727. E839 G613. Grave deposit. Period!. In coffin.
1843 Fig 56 SFBUC 1589-90. H435-6 G533. Grave deposit. Period 1. In coffin. on feet.

1844 Fig 56 SFBUC 1730-1. H510-11 G554. Grave deposit. Period 1. In coffin. on feet.

1845 SF BUC 1732-4. H527-9 G555. Grave deposit. Period!. Outside coffin.

1846 SF BUC 1598-9. H532-3 G500. Grave deposit. Period 2. In coffin. on feet.

1847 SF BUC 1735/1738. H688/691 G601. Grave deposit. Period 1. In coffin. one on foot. the other apparently slipped off.

1848 SF MRC 123. F15. Grave deposit. Inhumation (c 4th century),
1843a MRC F7. Grave deposit. Inhumation (c 4th century), One on foot.

1843b MRC F68. Grave deposit. Inhumation (c4th century),
1849 SF IRB 57. 81 F47. Grave deposit. Disturbed 3rd-to 4th-century inhumation.

Summary of contexts of deposited footwear in the Butt Road cemeteries.

Where little or no skeletal material survived, it was not possible to determine whether or not the shoes were on the feet.

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north-south graves east-west graves
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G100 in coffin, on feet
G125 in coffin, not on feet (Fig 56)
G177 in coffin, possibly on feet? (Fig 56) coffin, not on feet
G273 in coffin, little skeletal material G188 outside coffin (Fig 56)
?PURSE

In printed catalogue (Fig 57; 1850).

## CATEGORY 2: TOILET, SURGICAL, AND PHARMACEUTICAL INSTRUMENTS

## COMBS

(Figs 58 and 59; 1851-1860)
1858 SFBUC 1562(C), H410 G519. Grave deposit. Period 2. Fragments of a badly decayed antler(?) comb. Length 79.5 mm . probable width approximately 54.0 mm . The connecting plates are both much decayed but were probably similar to those of 1854, Fig 58. The top of one of the surviving iron rivets appears to have been covered with copper-alloy. Not enough of the remaining end survives to indicate either shape or decoration.

1859 SF BUC 1680. H848 G647. Grave deposit. Period 2. Four small fragments from an antler(?) comb. Two are adjoining pieces of a stepped connecting plate. possibly with grooved decoration, and two are iron rivets with small pieces of ?antler adhering to them.

## STIRRING-RODS

(Fig 60; 1861-1S64)
1863 SFBUC 1596. H553 G669. Grave fill. Period 2. Length 38.0 mm . diameter 6.0 mm . Translucent green glass.

1864 SF MID 762. A2863 L317. Make-up. Period 3a. Length 18.0 mm . diameter 7.0 mm . Translucent bluey-green glass.

## MIXING PALETTES

(Fig 61; 1865-1868)
1866 SF LWC 1926. HI 15 F24. Slate-lined ?pit. Post-medieval. Length 96.5 mm . width (incomplete) 60.5 mm . Possibly not a mixing palette. The bevelled edges are very shallow and there is no sign of wear on either surface.

1868 SF CPS 54, 120 L46. Topsoil. Period 6. Greenstone. Length (incomplete) 43.0 mm , width (incomplete) 39.0 mm .

## NAIL-CLEANERS

Both are of copper alloy.

Type la Nail-cleaners with a more or less straight. flat. thickish shaft.
The suspension loop rises directly from the shaft and is on the same plane (Fig 62; 1869-1870),

1870 SF COC 162. 695 L201. Dump. Period 4. In two fragments. Part of the suspension loop is missing. Length 39.0 mm . width 3.5 mm .

Type lb Similar to Type la. but with tapering shaft offset from the suspension loop (Fig 62; 1871),

In printed catalogue.

Type 2a Nail-cleaners with a leaf-shaped blade which tapers gently from shoulders to points. The suspension loop is often. though not invariably. at right angles to the plane of the blade. and the junction can be marked with decorative moulding (Fig 62; 1872-1374),

1373 SF BKC 3075(C), K108 F13. Pit. Modern. One point and the suspension loop are missing. Similar to Fig 62, 1874, but with a fine marginal groove round the blade. Length (incomplete) 38.0 mm . maximum width 9.5 mm .

Type 2b With stylised leaf-shaped blade. broad at the top and with a long. narrow body (Fig 67; 1941)

In printed catalogue.

Type 3 Nail-cleaners with a virtually straight shaft, rectangular to square in section at the top (Fig 62; 1875).

In printed catalogue.

Type 4 Nail-cleaners which have been beaten out, not cast. Considerable latitude is allowed in the shape of the blade and the method of forming the suspension loop (Fig 67; 1943-1945).

In printed catalogue.

## TWEEZERS

All are of copper alloy (Fig 63; 1876-1895; 1942-1945).
1878 SF LWC 1330. D88 (F61 or F101), ?Pit. Post-medieval. One blade is missing. Bent. Length 41.0 mm . Slightly flared blades. maximum width
5.0 mm . Possibly post-Roman.

1880 SF LWC 3812(C), G474 F234. ?Timber-lined storage pit. Period 2. Bent. Length 57.0 mm . The blades are parallel-sided. 4.0 mm wide.

1886 SF BKC 1991(C), E1312 L250+. Period lb-3a. Distorted. Length 52.0 mm . The blades are parallel-sided. 4.0 mm wide.

1887 SF BKC 5290(C), V345 L39. Metalling. Period 5. In four fragments. Bent. Length 59.0 mm . The blades flare slightly. maximum width 6.0 mm . 1888 SF CPS 384(C), 576 F115. Occupation. Period 4. The tips of both blades are missing. Length (incomplete) 31.0 mm . Flared blades. 1889 SF BUC 445(C), B 1479. Unstratified. Length 44.5 mm . Flared blades with marginal groove. maximum width 6.0 mm . Possibly gilded. Possibly not Roman.

1890 SF BUC 466(C), C164 G247. Grave fill. Period 2. One blade is broken. Length 56.0 mm . Slightly flared blades. maximum width 5.5 mm . A fragment of an iron suspension ring remains in the loop.

1891 SF BUC 773. C1590 L1. Periods 1-2. Most of one blade and the tip of the other are missing. Length (incomplete) 34.5 mm . ?Parallel-sided blades.

1892 SF BUC 1576.H393L1. Modern. Length 43.5 mm . Flared blades with marginal groove. maximum width 6.0 mm . Possibly not Roman.

1893 SF BUC 1696. H903 G658. Grave fill. Period 2. Length 43.0 mm . Parallel-sided blades. 5.5 mm wide.

1394 SF MID 697. A2627 L366. Demolition debris of Period 2 and make-up for Period 3. In three fragments. Length 52.5 mm . Flared blades. maximum width 5.5 mm .

1895 SF COC 103. 483 F213. Pit. Medieval. In two fragments. Length 47.0 mm . Slightly flared blades. maximum width 6.0 mm . Possibly postRoman.

## TOILET SPOONS

All objects are of copper alloy except where otherwise indicated.

With small round flat or cupped scoop (Fig 64; 1896-1916; 1942-1944)
1896 SF LWC 654(C), A F68. Tessellated pavement. Period 4b. In two fragments, bent. Length approximately 83.0 mm . Flat scoop. diameter 6.0 mm .

1902 SF BKC 2750(C), H7 L2. Topsoil. Post-Roman. The top of the shaft is missing. Length 50.5 mm . Flat scoop, diameter 4.0 mm .

1903 SF BKC 2963. J22 L1. Site clearance. The top of the shaft is missing and the scoop is damaged. Length 34.0 mm . Flat scoop, diameter 5.0 mm .

1904 SF BKC 3255(C), J 175 . Modern? The top of the shaft is missing. Bent. Length 97.0 mm . Flat scoop. diameter 7.0 mm .

1905 SF BKC 3415(C), J176 F32. Pit. Period 5c/6. White-metal copper alloy (?speculum), The top of the shaft is missing. Length 60.0 mm . Flat scoop. diameter 6.5 mm .

1906 SF BKC. 3260(C), J178 F39. Pit. Period 5c/6. Bent. Length 126.0 mm . Flat scoop. diameter 4.5 mm .

1908 SF BKC 3770. K567 L58. Gravel surface. Period 4c (or 5?), The top of the shaft is missing. Length 38.5 mm . The scoop has a convex underside and flat top. diameter 3.5 mm . There are four fine grooves incised round the shaft. a group of three and a single one immediately below the fracture.

1909 SF BKC 4054. N48 F13. Pit. Period 6+. The very tip only of the shaft is missing. Bent. Length 70.0 mm . Flat scoop. diameter 4.5 mm .

1910 SF BKC 5382. V542 F113. Pit. Period 1 to early 4. The top of the
shaft is missing. It seems to be widening out to form a suspension loop. Length 37.5 mm . Flat scoop, diameter 5.0 mm .

1911 SF BKC 5277. V550. Dump. Period 4. In four fragments. Only the very tip of the shaft is missing. Bent. Length 119.0 mm . Flat scoop. diameter 6.0 mm . There are traces of decorative moulding immediately above the scoop.

1912 SF BUC 110(C), A487 G35. Grave fill. Period 2. The tip of the shaft is missing. Bent. Length 77.0 mm . Flat. but bent. scoop. diameter 6.5 mm . 1913 SF BUC 467(C), C263 F14. Pipe-trench. Modern. The top of the shaft is missing. Bent almost to a right angle. Length 61.0 mm . Flat scoop, diameter 6.0 mm .

1914 SF BUC 491(C), C685 L2. Period 1. The top of the shaft is missing. Bent almost to a right angle. Length 64.5 mm . Flat scoop, diameter 7.0 mm .

1915 SF BUC 1535(C), H331 L2. Period 2. Only the tip of the shaft is missing. Bent. Length 62.0 mm . Flat scoop, diameter 5.0 mm .

1916 SF BUC 1714. H1047 L2. Periods 1-2. The top of the shaft is missing. Length 30.0 mm . Flat scoop, diameter 5.5 mm . A spiralled groove of five turns has been cut into the shaft immediately above the scoop.

With long cupped scoop (Fig 64*. 1917-1925)

1918 SF BKC 1200. E281 L447. Town ditch (F138) fill. Late Period 6 or AngloSaxon. Fragment.

1919 SF BKC 3349. M10. Modern with Periods 5 and 6. The shaft has been broken off. Length 50.0 mm . The junction of scoop and shaft is marked by bead-and-reel moulding.

1920 SF BKC 3918. M10. Modern with Periods 5 and 6. Fragment. with similar moulding.

1922 SF BKC 4340. N338. Period 6. Fragment.

1923 SF BKC 5347, N419 F117. Period 5b2? Scoop only. Length 45.5 mm . maximum width 9.0 mm , shallow V -shaped section.

1925 SF BKC 5356, V457 L87 and F130. End of Period 4, beginning of Period 5. Scoop only. Length 41.5 mm , maximum width 5.0 mm , shallow U-shaped section

## SPOON-PROBES

All are of copper alloy (Fig 65; 1926-1932).

1928 SF BKC 2393(C), G353 F11? Timber-lined drain. Period 5c. Bent. Most of the spoon is missing. Length (incomplete) approximately 126.0 mm , length of probe 20.0 mm . There is a single bead-and-reel moulding at the centre of the shaft.

1930 SF BUC 432(C), C317 L4. Modern. Bent. The end of the spoon is missing. Length (incomplete) 110.5 mm , length of probe 20.0 mm . Immediately above the spoon is a short length of decorative moulding.

## PROBES

All are of copper alloy (1933-1938),

1933 SF LWC 3815(C), G474 F234. ?Timber-lined storage pit. Period 2.

Fragment. Length 36.5 mm .

1934 SF LWC 3826(C), K430. Make-up. Period 3. Fragment. Length 30.5 mm .

1935 SF BKC 3553. J307 L35. Dump and levelling deposits. Periods 3/4/5a Fragment. Length 35.0 mm .

1936 SF BKC 4930. V4 L4. ?Dump. Late Period 5. Fragment. Length 24.5 mm .
1937 SF BKC 5371. V679 L11. Mainly late Period 5 but with some modern material. Fragment. Length 33.0 mm .

1933 SF BUC 35(C), A138 G99. Grave fill. Period 2. Fragment. Length 78.0 mm . length of probe 14.0 mm . The object has broken at a bead-and-reel moulding which could have marked the centre of the shaft or, more likely, was immediately above another functional end (cf Fig 65)

## TOILET SETS

All the pieces are of copper alloy (Fig 67; 1941-1945).

1942 SF BKC 5715(C), V1038. Demolition debris. Period 4. Crushed.

1) Nail-cleaner. Type 2a, with leaf-shaped blade. Length 47.5 mm .
2) Tweezers, part of one blade is missing. Length 58.0 mm . Slightly flared blades, maximum width 8.0 mm . 3) Spoon with small round cupped scoop. Length 52.0 mm , diameter of scoop 5.0 mm . The set is suspended from a simple ring and dates to the mid to late 1 st century, or possibly the early 2 nd century.

1944 SF BUC 484(C), C210 G247. Grave fill. Period 2. In fragments. 1)
Nail-cleaner. Type 4. Length approximately 44.0 mm . 2) Spoon with small round flat scoop. Length 45.5 mm , diameter of scoop 5.0 mm . The top of each piece is curled over to form a simple suspension loop. A fragment of an iron suspension ring remains in the loop of the nail-cleaner. Probably late 3rd- to 4th-century in date.

## SPATULAS

(Fig 68; 1946-1950)
1946 SF LWC 867(C), B418. Floor or dump. Period 4 or 5. Fragment. Length 75.0 mm . Copper-alloy.

## NEEDLES

## Sewing needles

Type 1 Bone needles with a pointed head (Fig 70; 1954-1975),
a) with rectangular eye

1955 SF BKC 3264(C), J160 F34. Pit. Period 5b(end), Complete. Length 61.5 mm . Maximum width 3.5 mm .

1957 SF BKC 5019, V77 L5. Cultivated soil. Late Period 5. The point is missing. Length 49.5 mm . Maximum width 5.0 mm .

1958 SF BUC 841, D113 G266. Grave fill. Period 2. The point is missing. Length 52.5 mm . Maximum width 5.5 mm .
b) with round eye

1960 SF BUC 261, B383 L1. Site clearance. Modern. The point is missing. Length 37.5 mm . Maximum width 3.0 mm . Dyed green.
c) with figure-of-eight eye

1961 SF LWC 402, B123 F60. Robber trench. 12th to 13th century. The point is missing. Length 60.0 mm . Maximum width 5.0 mm . Dyed green. The head is damaged.

1962 SF LWC 647, B253 F100. Pit. Period 5. Complete. Length 125.0 mm . Maximum width 6.0 mm .

1964 SF LWC 1160, B634 F225. Pit. Periods. The point is missing. Length 87.0 mm . Maximum width 5.0 mm . The eye is formed by three holes.

1965 SF LWC 636, C4 F7. Pit. Post-medieval. The point is missing. Length 65.0 mm . Maximum width 5.5 mm . The eye is formed by three holes.

1966 SF LWC 3343, J1086. Make-up (redeposited from earlier levels?), The paint is missing. Length 93.5 mm . Maximum width 4.0 mm . The eye is formed by three holes.

1967 SF LWC 4199, J 1408 F459. Pit. Period 4. The point is missing. Length 60.0 mm . Maximum width 5.0 mm .

1963 SF LWC 3548, J1467. Make-up. Period 4. The point is missing. Length 60.0 mm . Maximum width 4.5 mm .

1969 SF LWC 2499, Mill. Rampart la. The point is missing. Length 85.5 mm . Maximum width 5.0 mm .

1970 SF BKC 3082, J40 F3. Wall. Modern. Complete. Length 101.0 mm Maximum width 4.0 mm . The eye is formed by three holes.

1971 SF BKC 3249, J181 L25. Dump. Period 5c/6. The point is missing. Length 55.0 mm . Maximum width 3.0 mm . The holes drilled for the eye are only 1.0 mm in diameter.

1972 SF BKC 4466(C), N533 F122. Clay-lined pit. Period 5b2. The point is missing. Length 95.5 mm . Maximum width 4.5 mm .

1973 SF BKC 5192(C), V243 L46. Make-up. Period 5. The point is missing. Length 93.0 mm . Maximum width 4.5 mm .

Type 2 Needles with a flat spatulate head (Fig 70; 1976-19905.
a) rectangular eye

1973 SF BUC 565, CI 129 F58. Gully. Period 1. Copper-alloy. The very tip is missing. Bent. Length approximately 113.0 mm . Maximum width 3.0 mm .

1979 SF MID 737, A3179 L494. Occupation of Period 2b. Copper-alloy. Fragment of the head.

1980 SF BKC 2632(C), H63 F28. Sand pit. Period 6. Bone. The point is missing. Length 87.0 mm . Maximum width 5.0 mm .

1931 SF BKC 2779(C), H227 F68. Hearth over pit. Period 5c. Bone. The point is missing. Length 96.0 mm . Maximum width 5.0 mm .

1983 SF BKC 4532(C), T229 F159. Pit. Period 5c. Bone. Repointed. Length 93.5 mm . Maximum width 5.0 mm .

1984 SF BUC 40. A169 L1. Post-medieval. Bone. Most of the shaft is missing. Length 42.0 mm . Maximum width 5.5 mm .

1985 SFBUC 1721, H1075. Unstratified. Bone. The point is missing. Length 85.0 mm . Maximum width 7.0 mm . Dyed green.

Probable Type 2 needles. All are of copper alloy.
1937 SF LWC 3139(C), J924. Occupation. Period 3. Broken across the eye. Length 93.0 mm .

1988 SF LWC 3513(C), K339 F161. Slot. Periods? Broken across the eye. Length 102.0 mm .

1989 SF LWC 2585, M125. Dump between road 3 and wall. and over road 2. Broken across the eye. The point is missing. Bent. Length approximately 92.0 mm .

1990 SF BKC 4525. T24 L6. Make-up of Period 3. Period 3. Broken across the eye. The point is missing. Length 63.0 mm .

Type 3 Copper-alloy needles with a groove above and below the eye (Fig 70; 1991-1995),

1992 SF LWC 3055(C), K238 F115. Slot. Post-Roman. In two fragments. The point is missing. Length 66.5 mm . Maximum width 2.0 mm . The shaft either side of the eye is distorted, probably from forcing the metal apart to form the eye.

1994 SF BUC 67. A301 L1. Post-medieval. Complete. Bent. Length approximately 109.0 mm . Maximum width 3.5 mm . There are tool marks along the groove.

1995 SF BUC 882. E22 L7. Destruction debris. Probably first half of the 5th century. Complete. Bent. Length approximately 60.0 mm . Maximum width
2.5 mm . Too corroded to determine how the eye was made.

## Netting needle

In printed catalogue (Fig 70; 1996).

## SPINDLEWHORLS

All in microfiche catalogue are made from pottery sherds (Fig 71; 1997-2005), 1993 SF LWC 1225, B702. Cellar (F70) backfill. contaminated. Period 5+. Diameter 34.5 mm . thickness 8.5 mm . The perforation is worn. diameter 6.0 mm . Grey ware. 2nd-century to $400+$.

1999 SF LWC 4085, H33 F15. Robber trench. Medieval. Diameter 40.0 mm . thickness 8.0 mm . The perforation is worn, diameter 8.5 mm . Grey ware, 2nd-century to $400+$.

2000 SF LWC 4043, R junction of 51 and 52. Post-Roman. Diameter 41.5 mm , thickness 8.0 mm . Made from the base of a colour-coat beaker. The broken line of the wall has been ground down. The perforation is worn, diameter 6.5 mm . 3 rd - to 4 th -century.

2004 SF MID 807, C1710 F490. Pit. Early medieval. Fragment. Diameter approximately 40.0 mm , thickness 6.0 mm . The perforation is worn, diameter 6.5 mm . Grey ware. 1st-century?

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## WEAVING TABLETS

(Fig 72; 2006-2007).
2007 SF CPS 818, 827 L111. Occupation/topsoil. Period 4. Fragment of one corner of a triangular bone tablet.

## CATEGORY 4: HOUSEHOLD UTENSILS AND FURNITURE

## SPOONS

All spoons are of copper alloy unless otherwise stated.

Type 1 Spoons with a round bowl (Fig 73? 2008-2011),

2009 SF BKC 4724, T481. Period 1 or 2. In fragments, a large part of the bowl is missing. Length 122.0 mm , diameter of bowl 26.5 mm .

2010 SF BKC 5015, V88. Period 3 or 4 ? Fragment, most of the handle is missing. Length 34.0 mm , diameter of bowl 23.0 mm .

2011 SF BKC 5392, V686 L81. Make-up? Period 2. Fragments of a round bowl.

Type 2 Spoons with a pear-shaped bowl (Fig 73; 2012-2015).
2013 SF BKC 4625, T310 F112. Pit. Period 5c. Fragments of a pear-shaped bowl.

2015 SF BKC 5255, V373 F53. Pit. Period 5? Fragments, part of the bowl is missing.

Type 3 Spoons with a mandolin-shaped bowl (Fig 735 2016-2019).
2017 SF BKC 2652(C), H16 L2. Topsoil. Post-Roman. Fragment of a bowl, broken across the neck. Length 32.0 mm , maximum diameter 25.5 mm .

Folding spoon (Fig 73; 2020)
In printed catalogue.

# OBJECTS USED FOR THE PREPARATION OR SERVING OF FOOD 

## Shale trays

All are in printed catalogue (Fig 74; 2021-2023).

## Shale vessels

(Fig 75; 2024-2028)

2025 SF BKC 4169(C), J141 F13. Large pit. Period 5b. Fragment. Probably a sherd from a vessel. perhaps a platter. Thickness 5.0 mm .

2026 SF BKC 3413(C), J176 F32. Pit. Periods 5c/6. A fragment of either a rim or a footring. Thickness 5.5 mm .

## Copper-alloy vessels

(Figs 761 2029-2051)

2032 SF BKC 2321(C), G308. Street metalling. c Period 3. Two fragments from the wall of a vessel?

2033 SF BKC 3166. K246 F15. Gully/ditch. Period 6. Rim sherd from a narrownecked vessel?

2038 SF BKC 1499. E743 F184/L200. Settlement. Period 3. Possibly a fragment from a skillet handle.

2041 SF BKC 2162, G47 F11. Timber-lined drain. Period 5c. Fragment of a ? jug handle. Elliptical section, varies from 10.0 to 15.0 mm wide.

Length 80.5 mm .
2042 SF BKC 3037, J46 L6. Dump. Probably Period 5b. Fragments of a handle from a shallow bowl, as 2039, Fig 76.

2050 SF COC 122, 568. Unstratified (medieval or later). Trefoil-shaped convex jug lid. The hinge is broken. Too corroded to tell whether or not there is a projection on the top. Length 52.5 mm .

## Gridiron

In printed catalogue (Fig 77; 2052).

## Pewter vessel

2053 SFBUC 1707. H1038 G693. Grave deposit. Period 1. Dish. In fragments. Diameter approximately 219.0 mm . Small footring, internal diameter 90.0 mm .

## Quernstones

All are in printed catalogue (Fig 78; 2054-20815).

## Stone mortars

All are in printed catalogue (Fig 79; 2082-2085).

Stone vessel?

In printed catalogue (Fig 79; 2086).

Stone pestles

Both are in printed catalogue (Fig 80; 2087-2088).

## LAMPS

## Picture lamps

All are in printed catalogue (Fig 81; 2089-2099).

Factory lamps and others

All are in printed catalogue (Fig 82; 2100-2106).

Open lamps

Both are in printed catalogue (Fig 82; 2107-2108)
'Rosette' lamps

All are in printed catalogue (Fig 83; 2109-2111).

## LAMP-HOOKS

(Fig 84; 2112-2114)
2112 SF LWC 3257(C), J976 F313. Pit. Period 1. Two fragments from a copperalloy lamp-hook with one side projection.

## FURNITURE

Handles

All pieces are of copper alloy unless otherwise stated (Fig 85J 2115-2145).
2118 SF LWC 3270(C), J979. Make-up. Period 4a. Ring-handle of complex moulded section (as 2116, Fig 85). External diameter 28.0 mm .

2119 SF LWC 3294(C), J 1011 . Gravelled yard surface. Period 2. Drop-handle with one end distorted and that terminal broken off. Length 115.0 mm . The loop is of lozenge section changing to circular section towards the terminals.

2120 SF LWC 3527(C), J1424 F180? Road ditch. Period 4? Drop-handle with bud-like terminals. Length 53.0 mm . Lozenge section loop with circular section towards terminals.

2121 SF LWC 4319. J1486 F438. Pit. Period 1. Very corroded drop-handle of uncertain section. Length 111.5 mm .

2123 SF LWC 2975(C), L284. Kitchen floor, occupation. Period 4(3). Fragment of a drop-handle. Surviving length 35.0 mm , probable length complete 40.0 mm . Circular section loop with rectangular section terminal.

2124 SF BKC 1096(C), E139 L48. Ditch (F29) fill. Late Period 6 or AngloSaxon. Ring-handle of complex moulded section. External diameter 27.0 mm .

2125 SF BKC 1325(C), E429 L101. Metalling. Period 4. Fragment of a drophandle with bud-like terminal. Surviving length 30.5 mm , probable length complete 34.0 mm . Lozenge section loop with circular section towards terminal.

2126 SF BKC 1329(C), E463 L69/A. Oyster layer. Period 3b or 4. Handle ?similar to 2122. Fig 85. A strip of circular section with flattened pierced terminals. Length 53.0 mm .

2127 SF BKC 1826(C), El 135 L355+. Periods lb and 2. Ring-handle of lozenge section. the two outer faces are finely grooved. External diameter 25.0 mm .

2128 SF BKC 2208, G99. Period 5. Corroded fragment of a drop-handle. Section uncertain. probably circular. Surviving length 55.0 mm . probable length complete 60.0 mm .

2129 SF BKC 2306(C), G170 F190. Pit? Trench? Period 5c? Acorn terminal. ?from a drop-handle. Length 37.0 mm .

2130 SF BKC 2302. G224. Period 4 or 5? Fragment of a drop-handle with acorn terminal and split-pin.

2133 SF BKC 3226(C), J166 F36. Pit. Period 5b. Acorn terminal, probably from a drop-handle. Length 32.5 mm .

2135 SF BKC 3747, K529 F126. Ditch. or backfill of ditch. Periods 1-2. Two fragments of a twisted ?drop-handle.

2136 SF BKC 4528(C), T31 L22. Sandy clay floor. Period 2. Ring-handle of complex moulded section (as 2116, Fig 85). External diameter of 29.0 mm .

2138 SF BKC 4974(C), V71. Unstratified. Fragment of a drop-handle of lozenge section. Length 52.0 mm .

2139 SF BKC 5295(C), V314 L34. Make-up? Periods. Fragment of a flattened iron drop-handle. Length 150.0 mm .

2140 SF CPS 651(C), 635 L62. Occupation or make-up. Period 4. Acorn terminal from a drop-handle. Length 44.0 mm .

2141 SF BUC 464. B1692 G263. Grave fill. Period 2. A corroded drop-handle. in two fragments. Length 55.0 mm . Circular section.

2143 SF BUC 1386, E604 L46. Destruction debris. Probably first half of the 5th century. Probably an iron ring-handle with a fragment of a splitpin. External diameter 31.0 mm . Rectangular section.

2144 SFBUC 1280, E609 L7. Destruction debris. Probably first half of the 5th century. A similar iron object but with a circular section.

External diameter 28.0 mm .

## Copper-alloy furniture fragments

(Fig 86; 2146-2149)
2147 SF BKC 3483. J272 L33. Dump. Periods 3/4/5a. Fragment possibly from a small table, stool, lamp stand. figurine or altar base. Similar to

Fig 86, 2148.

## Bone inlay

All in printed catalogue (Figs 87 and 88? 2150-2162).

## Ring-keys

(Fig 89; 2163-2170)
2166 SF BKC 2741(C), H189 F94. Pit. Period 5c. The ring of a rotary type ring-key with rectangular section ring and flat front panel double the height of the ring. Internal diameter of ring 16.0 mm .

2167 SF BKC 4122(C), N86 F21. Pit. Period 6 or later. Rotary type key on a ring of D-shaped section. The wards have broken off. There is a flat front panel similar to that of 2166. Internal diameter of ring 17.0 mm .

## Box fittings

First Butt Road box
All in printed catalogue (Figs 90 and $91 ; 2171-2213$ ),

## Second Butt Road ?box

All are of copper alloy (Fig 92; 2214-2222).
2215-17 SF BUC 1559, H396 G519. Grave deposit. Period 2. Three corner braces as Fig 92, 2214. The short side of one is missing.

2218 SF BUC 1555, H399 G519. Grave deposit. Period 2. Four fragments of a thin strip.

2219 SF BUC 1558, H400 G519. Grave deposit. Period 2. Incomplete strip, 32.0 mm long, 5.0 mm wide.

2220 SF BUC 1557, H401 G519. Grave deposit. Period 2. Incomplete strip in two fragments, 37.0 mm long, 5.0 mm wide.

2221 SF BUC 1556, H415 G519. Grave deposit. Period 2. Fragment of a strip.

## Other box fittings

Both are in printed catalogue (Fig 93; 2223-2224).

## COUNTERS

Bone counters

Type 1 Plain counters (Fig 94; 2226-2263). Unless otherwise stated each counter bears on the obverse the indentation of a lathe centre.

2226 SF LWC 882, B443 F149. Small stone-filled ?pit (or part of F74). Early medieval or later. Both obverse and reverse are flat. Both upper and lower edges are bevelled, the lower comparatively sharply. Diameter 18.5 mm . thickness 4.0 mm .

2227 SF LWC 1534. E unstratified. The obverse is countersunk. On the flat reverse has been scored a star of eight points, now partly worn away. Diameter 20.5 mm , thickness 2.5 mm .

2228 SF LWC 3855m, K552. Base of garden topsoil or make-up? Period 3? or 4b. This counter does not have a lathe centre mark. Both sides, which are flat. seem to have been sawn, then smoothed and polished. Where the edges are undamaged, both upper and lower are bevelled. Diameter 14.0 mm , thickness 2.0 mm .

2229 SF LWC 2738, L232. Latest occupation. Period 4(a). The obverse is countersunk. This piece was clearly made from a long bone or metapodial as the reverse is flat except for a groove formed by the marrow cavity. Diameter 19.0 mm , thickness 3.5 mm .

2230 SF BKC 396(C), A95 L4. Topsoil and fill of F19 town ditch. Post-Roman. The upper surface is very slightly dished. The reverse is flat except towards one edge which is worn (see Fig 94. 2238). Diameter 22.0 mm .
thickness 4.0 mm .

2231 SF BKC 2822. G154 F190. Pit? Trench? Period 5c? The obverse is countersunk. The reverse is flat. Diameter 20.0 mm . thickness 4.0 mm .

2232 SF BKC 2264. G182. Pit. Period 4. The obverse and reverse are flat. The wall is slightly rounded. Diameter 18.0 mm . thickness 3.0 mm .

2233 SF BKC 2239(C), G208 F190. Pit? Trench? Period 5c? The upper surface is countersunk. The reverse is flat except for a worn area (see Fig 94. 2233), Diameter 20.0 mm , thickness 3.5 mm .

2234 SF BKC 2466(C), G427. Surface cleaning. Period 5c. A small and well worn counter. The upper surface is countersunk, the base flat. Diameter 14.5 mm , thickness 3.0 mm , worn down to 1.0 mm at one place.

2235 SF BKC 2838(C), HIS L2. Topsoil. Post-Roman. The obverse is countersunk. The reverse is flat. Diameter 18.0 mm , thickness 4.0 mm .

2236 SF BKC 2785(C), H299 L13. Dump. Period 5b (end) and possibly into 5c and 6. Both surfaces are flat. The wall is rounded. Diameter 19.0 mm , thickness 3.0 mm .

2237 SF BKC 2894, J3 L1. Site clearance. Both surfaces are flat. Both upper and lower edges are slightly bevelled. Diameter 18.0 mm , thickness 2.5 mm .

2239 SF BKC 3035, J39 L1. Site clearance. Both surfaces are flat. Both upper and lower edges are bevelled, the lower sharply. The lower surface has a worn area (see Fig 94. 2238). Diameter 20.0 mm , thickness 3.0 mm .

2240 SF BKC 3021. J44 L4. Dump. Period 5b. Both surfaces are flat. The lower has a worn area (see Fig 94. 2238), Diameter 14.5 mm , thickness 2.5 mm .

2241 SF BKC 3023, J45 L6. Dump. Probably Period 5b. The upper surface is flat. The lower face is concave. Though the concave area is not
natural bone surface, this shape could be the result not of wear, but of the maker fallowing the curvature of a marrow cavity wall. Both upper and lower edges are bevelled. Diameter 20.5 mm , thickness 3.0 mm . 2254 SF BKC 3943(C), N16 L1. Topsoil. Modern. The central part of the upper surface is countersunk. The reverse is flat. Diameter 21.5 mm , thickness 3.0 mm .

2255 SF BKC 4087(C), K80 L1. Topsoil. Modern. Both surfaces are flat. The edges are bevelled. Diameter 19.5 mm , thickness 4.0 mm .

2257 SF BKC 4644(C), T144 L5. Destruction debris of Period 3. Period 3 (end). Both faces are flat. Diameter 18.5 mm , thickness 3.5 mm .

2258 SF BKC 4917. V17 L11. Dump. Late Period 5. A decaying counter, seemingly with both surfaces flat. Diameter 18.0 mm , thickness 2.0 mm .

2259 SF BKC 5710, V938 L11. Dump. Late Period 5. The central area of the obverse is slightly sunk. There is a worn area (see Fig 94. 2238) on the reverse. Diameter 22.0 mm , thickness 3.5 mm .

2260 SF CPS 833(C), 858 L120. Make-up. Period 4. Both faces are flat. The edges are bevelled. Diameter 18.5 mm , thickness 4.5 mm .

2261 SF CPS 864(C), 924 F161. Demolition debris. Period 4. Both faces are flat. The edges are bevelled. On the obverse there is a very lightly incised X to one side of the lathe centre mark (Hassall 1978, 478, no 37). Diameter 17.0 mm , thickness 4.5 mm .

2262 SF MID 150, C607 L33. Daub floor of Site C Phase 2. The upper face is countersunk. The edges are bevelled. Diameter 21.0 mm , thickness 4.0 mm .

2263 SF MID 533, A1975 L241. General site cleaning. 4th century or later. The obverse is countersunk. Diameter 23.0 mm , thickness 3.5 mm .

Type 2 Counters decorated on the obverse with obliquely-cut concentric grooves (Fig 94; 2264-2279). All have an indentation from a lathe centre. 2264 SF LWC 534. Al 19. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. Fragment. with four grooves. Diameter 18.5 mm , thickness 4.0 mm . The edges are bevelled.

2265 SF LWC 2495, M114. Rampart la. A thin counter with three grooves. Diameter 19.5 mm , thickness 2.0 mm . The edges are bevelled. Both obverse and reverse have a lathe centre mark, and the reverse bears a very faintly incised $X$ (Hassall 1978, 478, no 38).

2266 SF BKC 2324, G321. Topsoil? or dump? Period 4 or 5. The obverse has four fine concentric grooves and a fifth outer broad groove. Diameter 19.0 mm , thickness 2.0 mm . On the reverse Mark Hassall has identified a faint scored line across the diameter with a second line joining it at right angles.

2267 SF BKC 2704, H7 L2. Topsoil. Post-Roman. The obverse has two fine grooves and one outer broad groove set close together same distance from both lathe centre mark and rim. The reverse has two worn areas (see Fig 94, 2238). Diameter 20.0 mm , thickness 3.0 mm .

2269 SF BKC 2833(C), H324 (F165). Settlement. Period 5c. Counter with four concentric grooves on the obverse. The reverse bears the inscription VI, (Hassall 1978. 478. no 35 ). Diameter 23.5 mm , thickness 3.0 mm .

2270 SF BKC 3342(C), J166 F36. Pit. Period 5b. A piece of bone with cancellous tissue was used to make this counter which is now very worn. There appear to have been three concentric grooves on the obverse. The reverse has two worn areas (see Fig 94, 2238), Diameter 20.0 mm , thickness 3.5 mm .

2272 SF BKC 3374(C), J218. Pit material. Modern or Period 5-6? A thin worn counter with four fine concentric grooves and a fifth outer broad groove on the obverse. The reverse has an inscribed figure X , each member
formed by two converging strokes joined at the top (Hassall 1973, 478, no 36). Diameter 21.0 mm , thickness 2.0 mm .

2273 SF BKC 4429(C), N496 L106. Clay floors and occupation. Period 5b1. The upper surface is decorated with four fine grooves and a fifth outer broad groove. There is a single deep cut across the reverse. Diameter 23.0 mm , thickness 3.0 mm .

2275 SF CPS 200(C), 325 F83. Robber trench material. Period 5. A worn counter, with a very deep oblique outer groove and a small almost horizontal inner groove, producing a 'stepped' effect round the central area of the disc, which is almost completely pierced by a deep lathe centre mark. Oval in shape, maximum diameter $20.5 \mathrm{~mm}, 3.0 \mathrm{~mm}$ thick.

2276 SF CPS 357. 561 L75. Topsoil. Period 6. The obverse has four fine concentric grooves and a very broad outer groove. The outer edge is damaged slightly. The reverse has two parallel worn areas (see Fig 94. 2238). Diameter 24.0 mm , thickness 3.0 mm .

2278 SF MID 365, C1384 L4. Surface cleaning and topsoil, 4th century and later. A small worn counter with four concentric grooves on the obverse. Diameter 16.0 mm , thickness 2.5 mm .

2279 SF COC 139. 683 L196. Floor. Period 3. A worn counter. with traces of four very fine grooves on the surface. apparently not set obliquely. The edges are bevelled. The counter is stained green. which appears to be an indication of an early (1st- or 2 nd-century) date (see printed text. section on bone pins of Types 1 and 2), Diameter 17.0 mm . thickness 3.0 mm .

Type 3 Convex counters (Fig 94; 2230-2281),

2280 SF LWC 218. B45 F23. Road ditch. Period 4. There is a lathe centre mark on the domed obverse. The reverse is flat and shows some cancellous tissue. Diameter 29.0 mm . thickness 7.0 mm .

## Type 4 Counter with notched rim (Fig 94; 2282).

In printed catalogue.

## Miscellaneous

In printed catalogue (Fig 94; 2283).

## Glass counters

All are convex 'blobs' of glass, more or less circular, and flat-bottomed (Fig 95\{ 2284-2294.)

2284 SF LWC 754, B321 F70. Cellar backfill. Period 5. A large damaged counter of corroding translucent mid blue glass. Maximum diameter 25.0 mm , thickness 7.5 mm .

2288 SF BKC 2010, E1051 L128. Dump. Period 2. Opaque mid yellow glass. Maximum diameter 13.0 mm , thickness 6.0 mm .

2239 SF BKC 3357, J463 F286. Pit complex. Periods 3/4/5a. Opaque white glass. Maximum diameter 14.0 mm , thickness 6.0 mm .

2290 SF BKC 3656, K400 F111. Pit. Period 1/2. Opaque black glass. Maximum diameter 18.5 mm , thickness 7.0 mm .

2294 SF MID 377, C1445. Make-up or dump of Site C Phase 2 or 3. Opaque white glass with many air holes. Damaged. Maximum diameter 20.5 mm , thickness 6.5 mm .

## Pottery counters

## Counters with a ground edge and at least one abraded surface (Fig 96;

2295-2389)
2296 SF LWC 5, B6 F5. Cesspit. 12th to 15 th century. Wall sherd. Both surfaces abraded. Diameter 29.5 mm , thickness 5.0 mm . Grey ware, Burnished. 2nd century or later.

2297 SF LWC 153, B45 F23. Road ditch. Period 4. Wall sherd. Both surfaces slightly abraded. Diameter 36.0 mm , thickness 12.5 mm . Grey ware. Roman.

2298 SF LWC 320. B101. Contaminated cellar (F70) backfill. Period 5+. Base sherd. Both surfaces abraded. Chipped. Diameter 45.0 mm , thickness 9.0 mm . Grey ware. Burnished. 2nd century or later.

2299 SF LWC 373. B110 F58. Modern. Wall sherd. Both surfaces abraded. Diameter 30.5 mm , thickness 11.0 mm . Grey ware. Burnished. 2nd century or later.

2300 SF LWC 1124. B141 F23. Road ditch. Period 4. Wall sherd, from junction of wall and base. Inner surface abraded. Diameter 43.0 mm , thickness 11.0 mm . Grey ware. Burnished. 2nd century or later.

2301 SF LWC 444. B162 F70. Cellar backfill. Periods. Wall sherd. Inner surface very abraded. Diameter 39.0 mm , thickness 9.0 mm . Grey ware. Burnished. 2nd century or later.

2302 SF LWC 478. B180 F70. Cellar backfill. Period 5. Wall sherd. Both surfaces slightly abraded. Diameter 30.5 mm , thickness 9.0 mm . Grey ware. Burnished. 2nd century or later.

2303 SF LWC 543. B206 F70. Cellar backfill. Period 5. Wall sherd. Inner surface abraded. Diameter 34.0 mm , thickness 8.5 mm . Grey ware. Roman.

2304 SF LWC 772. B321 F70. Cellar backfill. Period 5. Base. The junction
of wall and base is irregular but ground smooth. Footring very slightly abraded. Diameter 105.0 mm , thickness 24.0 mm . Terra sigillata dish or bowl. Central Gaul. Hadrianic/Antonine.

2305 SF LWC 772. B321 F70. Cellar backfill. Period 5. Base. Junction of wall and base ground smooth. Footring and inner centre of base abraded. Diameter 88.0 mm , thickness 28.0 mm . Terra sigillata dish or bowl. Central Gaul. Hadrianic/Antonine.

2306 SF LWC 772, B321 F70. Cellar backfill. Period 5. Base. Junction of wall and base is irregular but ground smooth. Footring abraded. Diameter 58.5 mm , thickness 22.0 mm . Terra sigillata dish or bowl. Central Gaul. Hadrianic/Antonine. Counters 2304-2306 may be part of a set. The backfill of the cellar B F70 yielded other counters which may also be part of the same set.

2308 SF LWC 1034, B unstratified. Wall sherd. Inner surface abraded. Diameter 29.0 mm , thickness 8.5 mm . Grey ware. Roman.

2309 SF LWC 993, C F60. Pit. 16th century. ?Wall sherd. Both surfaces and the edge are very abraded. Diameter 36.0 mm , thickness 8.5 mm . Grey ware with well defined margins. Probably Roman, but could be 13th or 14 th century.

2310 SF LWC 1885, D279 F149+F162. Robber trench material. Post-Roman. Wall sherd. Inner surface abraded. Diameter 41.0 mm , thickness 9.0 mm . Black burnished ware. 2nd century or later.

2311 SF LWC 1334, E60. Topsoil. Period B or C. Base sherd. Both surfaces abraded. Diameter 57.0 mm , thickness 8.0 mm . Black burnished ware. 2nd century or later.

2315 SF LWC 1835, J1. Rubble. Modern. ?Base sherd. Both surfaces are very abraded. Diameter 31.0 mm , thickness 7.5 mm . Grey ware. Probably Roman but could be 13th century.

2316 SF LWC 4118, Jl. Rubble. Modern. Base sherd. Both surfaces are
abraded, especially the outer one. Diameter 40.0 mm , thickness 15.5 mm . Grey ware. Roman.

2317 SF LWC 1767, J37 F18. Robber trench. Early medieval. Wall sherd. Both surfaces are abraded. especially the outer one. Diameter 40.0 mm , thickness 15.5 mm . Grey ware. Roman.

2318 SF LWC 1951, J 140 F46. Group of Roman roof tiles. Period 4b destruction? Wall sherd. Both surfaces are slightly abraded. Diameter 29.5 mm , thickness 6.0 mm . Black burnished ware. 2nd century or later. 2320 SF LWC 2531, J494 F59. Timber-lined drain. Period 4. Wall sherd. Inner surface slightly abraded close to the edge. Diameter 40.0 mm , thickness 10.0 mm . Terra sigillata bowl. Central Gaul. Antonine

2321 SF LWC 2847. J617 F180. Road ditch. Period 4. Wall sherd. Inner surface abraded. Diameter 71.0 mm , thickness 16.5 mm . Grey ware. Roman.

2322 SF LWC 2801, L50 F34. Pit. Period 6 or 7. Base sherd. Both surfaces slightly abraded. Diameter 57.0 mm , thickness 13.0 mm . Grey ware. Burnished. Roman

2323 SF LWC 2941, L294 F81. Pit. Period 5 or 6. ?Base sherd. Diameter 29.5 mm , thickness 7.5 mm . Black burnished ware. 2nd century or later. 2324 SF LWC 4084, R116. Floor? Period 4. Base. The junction of wall and base has been thoroughly ground down. Both surfaces abraded. Diameter 52.0 mm , thickness 8.0 mm . Grey ware. 2nd century or later.

2325 SFBKC 276, A12 L1. Town ditch (F30) fill, ?contaminated. Anglo-Saxon. Wall sherd. Inner surface very abraded. Chipped. Diameter 38.0 mm , thickness 18.5 mm . Black burnished ware. 2nd century or later.

2326 SF BKC 6079, A16 L1. Town ditch (F30) fill? Anglo-Saxon? Base sherd. Both surfaces are abraded. Diameter 47.0 mm , thickness 6.0 mm . Black burnished ware. 2nd century or later

2328 SF BKC 204, A31 L2. Topsoil. Post-Roman. Wall or lid sherd. Inner surface abraded. Diameter 36.0 mm , thickness 8.0 mm . Grey ware.

Roman. The outer surface shows decoration of parallel grooves bounded by two broad grooves.

2329 SF BKC 375, A31 L2. Topsoil. Post-Roman. Wall sherd. Both surfaces abraded. Diameter 46.0 mm , thickness 9.0 mm . Grey ware. Roman.

2330 SF BKC 829, A31 L2. Topsoil. Post-Roman. Wall sherd. Inner surface abraded. Diameter 35.5 mm , thickness 7.5 mm . Hadham ware. Mid 3rd to 4th century.

2331 SF BKC 6082, A35 L3. Topsoil and town ditch (F16) fill. Post-Roman. ?Wall sherd. Both surfaces are abraded. Diameter 27.0 mm , thickness 8.5 mm . Grey ware. Roman.

2332 SF BKC 135, A50 F14. Pit. Post-Roman. Wall sherd. Both surfaces abraded. Diameter 27.5 mm , thickness 8.0 mm . Grey-buff ware, with well-defined margins. Roman.

2333 SF BKC 254, A55 F16. Town ditch fill. Anglo-Saxon or Period 6. Wall sherd. Both surfaces abraded. Diameter 37.0 mm , thickness 11.5 mm . Orange-red amphora sherd. ?Spanish. Roman.

2334 SF BKC 265, A80 F20=L8. Town ditch (F30) fill. Anglo-Saxon or Period 6. Wall sherd. Inner surface abraded. Diameter 22.0 mm , thickness 6.0 mm . Grey ware. Roman.

2335 SF BKC 1053, A91 L4. Topsoil and town ditch (F19) fill. Post-Roman. Wall sherd. Inner surface abraded and chipped towards the edge. Diameter 43.0 mm , thickness 13.5 mm . Nene Valley colour coat. Mid 2nd century or later.

2336 SF BKC 6085, A111 (L16), Town ditch (F30) fill. Anglo-Saxon or Period 6. Base sherd. Both surfaces are abraded. Diameter 30.0 mm , thickness 7.0 mm . Black burnished ware. 2nd century or later.

2337 SF BKC 947, A155 F60. Pit? Post-Roman. ?Base sherd. Fragment. Both surfaces abraded. Diameter 46.5 mm , thickness 3.0 mm . Grey ware.

Burnished. Roman.

2338 SF BKC 844, A184 L3. Topsoil and town ditch (F16) fill. Post-Roman. Wall sherd. Inner surface slightly abraded. Diameter 30.0 mm , thickness 9.5 mm . Grey ware. Burnished. 2nd century or later.

2339 SF BKC 710, D65 L1. Upper town ditch fill. Late Anglo-Saxon. Wall sherd. Inner surface very abraded. outer less so. Diameter 48.5 mmm , thickness 15.5 mm . Grey ware. Roman.

2340 SF BKC 778, D90 L1. Upper town ditch fill. Late Anglo-Saxon. Base. pierced before firing (?waster). The junction of wall and slight pedestal base has been ground down until a virtually straight-sided edge was achieved. The inner surface is abraded. Diameter 35.0 mm , thickness 10.0 mm . Colchester colour coat. Mid 2nd century or later.

2341 SF BKC 1654, D253. Town ditch fill. Late Period 6 or Anglo-Saxon. ?Wall sherd. Fragment. Inner surface abraded. Diameter 23.0 mm, thickness 7.0 mm . Black burnished ware. 2nd century or later.

2342 SF BKC 949, D322 L24. Town ditch fill. Anglo-Saxon. Base sherd. Inner surface abraded. Diameter 44.5 mm , thickness 11.0 mm . Grey ware. Roman.

2343 SF BKC 953, D331 L24. Town ditch fill. Anglo-Saxon. Wall sherd. Fragment. Both surfaces abraded. Diameter 39.0 mm , thickness 6.0 mm . Grey ware with well-defined margins. Roman

2344 SF BKC 981, D379. Town ditch fill. Late Period 6 or Anglo-Saxon. Base sherd. Both surfaces slightly abraded. Diameter 38.0 mm,

2345 SF BKC 1875, D unstratified. Base sherd. Both surfaces are abraded. The ?inner surface is flaking. Diameter 64.0 mm . thickness 7.5 mm . Black burnished ware. 2nd century or later.

2346 SF BKC 1870, E291 F105. Gravel pit. Post-Roman. Wall sherd. Both surfaces are abraded. the outer one very much so. Diameter 38.5 mm . thickness 8.0 mm . Black burnished ware. 2nd century or later.

2347 SF BKC 2157, E1346 L428. Ditch (F133) fill. Late Period 6 or AngloSaxon. Wall sherd. Both surfaces are very abraded. Diameter 41.0 mm , thickness 10.0 mm . Grey ware. Burnished. Roman.

2348 SF BKC 2230, Gl. Site cleaning. Unstratified. Wall sherd. Inner surface abraded. Diameter 47.0 mm , thickness 14.0 mm . Grey ware. Roman.

2349 SF BKC 2279, G1. Site cleaning. Unstratified. Wall sherd. Inner surface slightly abraded. Diameter 37.0 mm , thickness 6.5 mm . Grey ware. Roman.

2350 SF BKC 2201, G111 F11. Timber-lined drain. Period 5c. Wall sherd. Inner surface slightly abraded. Diameter 25.5 mm , thickness 8.0 mm . Terra sigillata. plain bowl. Central Gaul. Hadrianic/Antonine.

2351 SF BKC 2488. G375. Topsoil. Period 5c. ?Wall sherd. Inner surface very abraded, outer less so. Diameter 44.0 mm , thickness 14.0 mm . There are two faint crossed lines occupying the whole inner face (cf 2381). Black burnished ware. 2nd century or later.

2352 SF BKC 2493, G375. Topsoil. Period 5c. Base. The junction of wall and base has been ground smooth. Both surfaces are slightly abraded. Diameter 68.0 mm , thickness 10.5 mm . Grey ware. Roman. Possibly 2nd century or later.

2353 SF BKC 2501. G388 F11. Timber-lined drain. Period 5c. Base sherd. Both surfaces are slightly abraded. Diameter 36.0 mm , thickness 10.0 mm . Grey ware. Burnished. Roman.

2354 SF BKC 2678. HI L2. Topsoil. Post-Roman. Base. Both surfaces are abraded. The wall has been chipped away and smoothed. but still stands very slightly clear of the base. Diameter 43.5 mm . thickness 9.0 mm . ? Lower Rhineland colour coat. Flavian and 2nd century.

2355 SF BKC 3592. H14 L2. Topsoil. Post-Roman. Wall sherd. Fragment. Both surfaces are abraded. Diameter 33.0 mm . thickness 6.0 mm . Grey ware. Roman.

2357 SF BKC 3144. H288 L13. Dump. Period 5b (end), and possibly into 5c and 6. ?Wall sherd. The ?inner surface is very abraded. Diameter 32.5 mm , thickness 7.0 mm . Black burnished ware. 2nd century or later.

2358 SF BKC 3145. H298 (F94 + F167). Pits. Period 6. Wall sherd. The inner surface is very abraded. The edge is chipped. Diameter 50.0 mm . thickness 13.0 mm . Grey ware. Roman.

2359 SF BKC 3331. H332. Period 6 or earlier. Wall sherd. Both surfaces are abraded. Diameter 54.5 mm . thickness 14.5 mm . Grey ware with well defined margins and worn white slip on outer surface. 3rd to 4th century.

2360 SF BKC 5366. M15. ?Modern. with Periods 5 and 6. Wall sherd. Both surfaces are abraded. the inner more than the outer. Diameter 42.5 mm . thickness 11.0 mm . Grey ware. Roman.

2361 SF BKC 5394. M27. Unstratified. Wall sherd. Both surfaces are abraded. Diameter 64.0 mm . thickness 12.0 mm . Oxfordshire mortarium. AD 240 or later.

2362 SF BKC 5394. M27. Unstratified. Wall sherd. The inner surface is abraded. Diameter 39.5 mm . thickness 10.0 mm . Grey ware. Roman.

2363 SF BKC 5394. M27. Unstratified. Wall sherd. The inner surface is very abraded. Diameter 31.5 mm . thickness 10.0 mm . Grey ware. Roman. Counters 2361-2363 possibly come from a set.

2364 SF BKC 5211. N2 L1. Topsoil. Modern. Base. The junction of wall and
base has been ground smooth. The outer surface is very abraded.
Diameter 35.0 mm , thickness 10.0 mm . Colchester colour coat. Mid 2nd century or later

2365 SF BKC 5214. N12 F3. Ditch. Period 5b2 or 6. Wall sherd. Both surfaces are slightly abraded. Diameter 54.5 mm . thickness 18.0 mm . Grey ware. Roman.

2366 SF BKC 5212. N16 L1. Topsoil. Modern. Wall sherd. Fragment. Both surfaces are abraded. Diameter 42.0 mm . thickness 10.0 mm . Grey ware. Roman.

2367 SF BKC 5215. K21 L1. Topsoil. Modern. Wall sherd. The inner surface is slightly abraded. Diameter 67.0 mm . thickness 15.5 mm . Grey ware. Roman.

2368 SF BKC 5210. N39 F12. Pit. Period 6 or later. Wall sherd. The inner surface is abraded. Diameter 29.0 mm . thickness 7.0 mm . Grey ware. Burnished. Roman.

2369 SF BKC 5213. N42. Period 6 or later. Wall sherd. The inner surface is abraded* Diameter 52.5 mm . thickness 18.0 mm . Grey ware. Roman.

2370 SF BKC 5223. H84 L8. Dump. Period 6. Wall sherd. The inner surface is slightly abraded. Diameter 43.5 mm . thickness 12.0 mm . Grey ware. Roman.

2371 SF BKC 5216. N166 F55. Pit. Modern. Wall sherd. The outer surface is abraded. Diameter 18.0 mm . thickness 4.0 mm . Hadham ware. Mid 3rd to 4th century.

2372 SF BKC 5296. N188F64 + F71. Pits. Period 6+. Base sherd. The inner surface is abraded. Diameter 34.0 mm . thickness 8.5 mm . Black burnished ware. 2nd century or later.

2373 SF BKC 5267. N349 LI3. Occupation. Period 6. Wall sherd. The inner surface is slightly abraded. Chipped. Diameter 40.5 mm . thickness 7.5 mm . Terra sigillata bowl. Central Gaul. Probably Antonine.

2374 SF BKC 5332. T283 L67. Cellar (F25) backfill. Period 5c. Wall sherd. The inner surface is very abraded and bears a graffito $X$. scratched after firing. Chipped. Diameter 51.5 mm . thickness 9.5 mm . Grey ware. with well defined margins. Roman.

2375 SF BKC 6035. V680. Modern. Base. Fragment. The junction of wall and base has been ground completely flat. Both the inner surface and the footring are abraded. Diameter approximately 60.0 mm . thickness 6.5 mm . Terra sigillata. form Dragendorff 33?? Central Gaul. Hadrianic/Antonine.

2376 SF CPS 8. 53 L19. Period 7. ?Base sherd. Both surfaces are abraded. Diameter 41.5 mm . thickness 8.0 mm . Grey ware. Roman.

2377 SF CPS 155. 321 L57. Topsoil. Period 6. Wall sherd. Both surfaces are abraded. Diameter 33.0 mm . thickness 10.0 mm . Grey ware. Burnished. 2nd century or later.

2378 SF CPS 509. 602 F106. Robber trench material. Period 5. Wall sherd. Both surfaces are abraded. Diameter 45.0 mm . thickness 12.5 mm . Grey ware. Roman.

2379 SF CPS 510. 604 LI80. Destruction of Period 4. Base sherd. The outer

* surface is abraded. Diameter 51.0 mm . thickness 9.0 mm . Black burnished ware. 2 nd century or later.

2380 SF CPS 707. 723 L182. Destruction of Period 4. Wall sherd. Both surfaces are abraded. Diameter 51.5 mm . thickness 10.0 mm . Grey ware. Roman.

2381 SF MID 38. B157 L4. Topsoil. 4th century or later. ?Base sherd. Both surfaces are abraded. Chipped. One surface bears two faint crossed lines. Mark Hassall points out that as the lines are cut across the whole face they are unlikely to represent the Roman numeral X. Diameter 35.5 mm . thickness 9.5 mm . Black burnished ware. 2nd century or later.

2382 SF MID 208. A743 ?L1. Topsoil. Medieval or later. Wall sherd. Both surfaces are abraded. Diameter 33.5 mm . thickness 9.5 mm . Black burnished ware. 2nd century or later.

2383 SF MID 401. CI538 L36. Daub floor. Site C Phase 2. Wall sherd. Both surfaces are abraded. Chipped. Diameter 37.5 mm . thickness 12.0 mm . Black burnished ware. 2nd century or later.

2384 SF MID 801. D1618. Medieval to modern accumulation of topsoil/river silt. Machine-dug trial trench on site of multi-storey car park north of main Middleborough site. Base. The junction of wall and base has been ground smooth. Diameter 56.5 mm . thickness 10.0 mm . Grey ware. Possibly 1st to 2 nd century?

2386 SF COC 42. 101 F61. Pit. Post-medieval. Wall sherd. Both surfaces are slightly abraded. Diameter 47.0 mm . thickness 20.0 mm . Grey ware. Roman.

2387 SF BUC 817. C577 L2. Period 1. Wall sherd. Both surfaces are abraded. Diameter 44.5 mm . thickness 13.5 mm . Grey ware. Roman.

2383 SF BUC 1499. E329 L16. Destruction debris. Probably first half of the 5th century. Base. The junction of wall and base has been chipped down below the level of the inner surface of the base and has been only slightly smoothed. Both surfaces are abraded. Diameter 38.5 mm . thickness 11.0 mm . Colchester colour coat. Mid 2nd century or later.

2389 SF BUC 1192. E436 L16. Destruction debris. Probably first half of the 5th century. Base. The junction of wall and base has been ground smooth. Both surfaces are abraded. Diameter 41.5 mm . thickness 9.0 mm . Grey ware. Roman.

See also Appendix 3 for further counters of this type. 18.5 mm . Grey ware. Roman.

2393 SF LWC 1455. D150. Dump or make-up? Post-Roman. Wall sherd. Diameter 34.0 mm . thickness 12.5 mm . Grey ware. Roman.

2394 SF LWC 2970. G265. Gravel and tile layer in yard. Period 2. Wall sherd. Diameter 31.0 mm . thickness 6.5 mm . Grey ware. Burnished. Roman.

2395 SF LWC 4083. G343. Topsoil. Period 2. Wall sherd. Diameter 29.0 mm . thickness 3.5 mm . Grey ware. Roman or 13 th to 15 th century.

2396 SF LWC 4081. G475 F238. (Pit)/robber trench. Period 1 or 2. Wall sherd. Diameter 32.5 mm . thickness 7.5 mm . Black burnished ware. 2nd century or later.

2397 SF LWC 3361. G487 F241. Daub-lined pit. Period 2 (or 1?), ?Wall sherd. Diameter 41.0 mm . thickness 8.0 mm . Black burnished ware. 2nd century or later.

2398 SF LWC 4082. H133. Stony topsoil. Probably medieval. perhaps 16th to 17th century. Wall sherd. Diameter 41.0 mm . thickness 18.0 mm . Grey ware. Roman.

2399 SF LWC 2998. J696 F180. Road ditch. Period 4. Wall sherd. Diameter 56.5 mm . thickness 9.0 mm . Grey ware. Roman. The outer surface bears
two crossed lines. cut after firing. which cover the face (cf 2381),

2409 SF BKC 319. A31 L2. Topsoil. Post-Roman. Wall sherd. Diameter 32.5 mm . thickness 5.0 mm . Grey ware. Probably 1 st to early 2 nd century.

2410 SF BKC 340. A31 L2. Topsoil. Post-Roman. Wall sherd. Diameter 32.0 mm . thickness 6.0 mm . Grey ware. Probably 1 st to early 2 nd century.

2412 SF BKC 6083. A45. Post-Roman? Wall sherd. Diameter 42.0 mm . thickness 8.0 mm . Black burnished ware. 2nd century or later.

2414 SF BKC 424. A92 (L12), Post-Roman. Wall sherd. Diameter 37.5 mm . thickness 6.5 mm . Grey ware with well defined margins. Roman.

2415 SF BKC 767. A unstratified. Wall sherd. Diameter 41.0 mm . thickness 6.0 mm . Grey ware. Burnished. Roman. SF BKC 1743. D64 L1/F1. Upper town ditch fill. Late Anglo-Saxon. Base sherd. Diameter 21.5 mm . thickness 8.0 mm . Grey ware. Burnished. Roman.

SF BKC 716. D71 L1. Upper town ditch fill. Late Anglo-Saxon. Base sherd. Diameter 25.0 mm . thickness 10.0 mm . Grey ware. Burnished 2nd century or later.

SF BKC 1665. D303 F13. Town ditch fill. Period 6. Wall sherd. Fragment. Diameter 37.5 mm . thickness 7.0 mm . Grey ware. Roman. SF BKC 2229. G1. Site cleaning. Unstratified. Wall sherd. Diameter 36.0 mm . thickness 9.0 mm . Grey ware. Roman.

2420 SF BKC 2231. Gl. Site cleaning. Unstratified. Wall sherd. Diameter 27.5 mm . thickness 10.0 mm . Grey ware. Roman. 8.0 mm . Grey ware. Roman.

2422 SF BKC 2497. G153 F41. Pit. Period 5c. Wall sherd. Diameter 26.0 mm . thickness 5.5 mm . Grey ware. Roman.

2423 SF BKC 2502. G316. Dump or make-up. Period 5. Base sherd. Diameter 45.5 mm . thickness 9.0 mm . Black burnished ware. 2nd century or later. SF BKC 2489. G388 Fli. Timber-lined drain. Period 5c. Wall sherd. Diameter 46.0 mm . thickness 4.5 mm . Grey ware. Roman.

2425 SF BKC 3593. H14 L2. Topsoil. Post-Roman. Wall sherd. Diameter 42.0 mm . thickness 12.0 mm . Grey ware. Roman.

2426 SF BKC 3330. K52 L1. Overburden. Modern. Wall sherd. Chipped. Diameter 79.5 mm . thickness 12.5 mm . Grey ware. Roman. SF BKC 3220. K132. Site clearance. Wall sherd. Diameter 42.0 mm . thickness 13.5 mm . Grey ware. Roman.

2428 SF BKC 5345. N533 F122. Clay-lined pit. Period 5b2. Wall sherd.

Diameter 28.0 mm . thickness 5.5 mm . Grey ware. Roman.
2429 SF BKC 4604. T275 L67. Cellar (F25) backfill. Period 5c. Wall sherd. Diameter 17.0 mm . thickness 4.0 mm . Hadham ware. Mid 3rd to 4th century.

2430 SF BKC 4636. T275 L67. Cellar (F25) backfill. Period 5c. Wall sherd. Diameter 63.0 mm . thickness 10.0 mm . Grey ware. Roman.

2431 SF BKC 6086. T310 F112. Pit. Period 5c. Wall sherd. Diameter 20.0 mm . thickness 8.5 mm . Terra sigillata. form Dragendorff 37. Central Gaul. Hadrianic/Antonine.

2432 SF BKC 5365. V679. Mainly late Period 5. but with some modern material. Wall sherd. Diameter 41.0 mm . thickness 7.0 mm . Grey ware. Burnished. Roman.

2433 SF MID 94. C415 L21. Topsail and site clearance. 13th/19th century. Wall sherd. Diameter 35.0 mm . thickness 7.5 mm . Pinkish buff ware Roman.

2434 SF MID 559. A2013 L241. General site cleaning. 4th century or later. Wall sherd. Diameter 19.0 mm . thickness 6.5 mm . Black burnished ware. 2nd-century or later.

2435 SF BUC 991. E184 L13. Destruction debris and topsail. Post-Roman. Base sherd. Diameter 26.5 mm . thickness 7.0 mm . Grey ware. Roman.

See also Appendix 3 for further counters of this type.

Counter rough-outs (Fig 98? 2436-2462),

2436 SF LWC 772. B321 F70. Cellar backfill. Period 5. Wall sherd. Diameter 95.5 mm . thickness 8.5 mm . Grey ware. Burnished. 2nd century or later. 2439 SF LWC 3824. G469 F234. ?Timber-lined storage pit. Period 2. Base sherd. Diameter 50.0 mm . thickness 9.5 mm . Black burnished ware. 2nd century or later.

2440 SF LWC 4080. Hi79 F49. Pit. Post-medieval. Wall sherd. Diameter 30.5 mm . thickness 11.0 mm . Grey ware. Probably Roman. or possibly 13 th to 14 th century but thick.

SF LWC 4090. R unstratified. Base sherd. Diameter 46.0 mm . thickness 8.0 mm . Black burnished ware. 2nd century or later. On the ?inner surface Mark Hassall has identified a graffito of a single stroke. probably the numeral I.

2442 SF BKC 6076. A5 L1. Town ditch (F30) fill? Anglo-Saxon. Base sherd. Subrectangular. 39.5 by 37.5 mm . thickness 8.5 mm . Black burnished ware. 2nd century or later.

2443 SF BKC 6078. A16 L1. Town ditch (F30) fill? Anglo-Saxon? Base sherd. Diameter 33.0 mm . thickness 6.0 mm . Black burnished ware. 2nd century or later.

2444 SF BKC 6080. A25 L1. Topsoil and town ditch (F30) fill. Post-Roman. Wall sherd. Diameter 46.0 mm . thickness 6.0 mm . Hadham ware. Mid 3rd to 4 th century.

2445 SF BKC 6084. A65 F16. Town ditch fill. Anglo-Saxon or Period 6. Wall sherd. Diameter 62.5 mm . thickness 5.0 mm . Grey ware. 2nd century or later.

2446 SF BKC 1655. A181 L7. Topsoil and town ditch (F19) fill. Post-Roman. Wall sherd. Diameter 46.0 mm . thickness 8.5 mm . Grey ware. 2nd century or later.

2447 SF BKC 1659. D23 L1. Upper town ditch fill. Late Anglo-Saxon. Wall sherd. Diameter 24.5 mm . thickness 6.0 mm . Grey ware. Burnished. Roman.

2448 SF BKC 1610. E367 L434. Town ditch (F138/317) fill. Period 6 or postRoman. Base. Diameter 72.0 mm . thickness 17.5 mm . Grey ware. 2nd century or later.

2451 SF BKC 2976. H7 L2. Topsoil. Post-Roman. Base. Diameter 77.0 mm .
thickness 9.5 mm . Grey ware. Roman.
39.5 mm . thickness 6.0 mm . Colchester colour coat. Mid 2nd century or later. On the underside Mark Hassall has noted a graffito of a sixpointed asterisk. As the counter is a rough. the graffito is presumably to be associated with the pot when whole rather than with the counter.

2462 SF BUC 147. B222 G60. Grave fill. Period 2. Base. Fragment. Diameter 55.5 mm . thickness 7.0 mm . Grey ware. Roman. On the underside Mark Hassall has identified a graffito of a cross and circle superimposed. with at least five additional rays on the cross. As the
counter is a rough. the graffito is presumably to be associated with the pot when whole as 2461 .

See also Appendix 3 for further counters of this type.

Pierced pottery counters (Fig 99J 2463-2482)
2464 SF LWC 1084. B 199. Uncertain. Probably Roman. Wall sherd. Fragment. The edge is ground and the inner surface is slightly abraded. Diameter 85.0 mm . thickness 11.0 mm . Diameter of perforation 10.5 mm . The wall of the hole is smooth but not straight-sided. Grey ware. Roman. but of irregular diameter and the perforation is off-centre. Diameter approximately 82.0 mm . thickness 12.0 mm . Diameter of perforation 12.0 mm . The wall of the hole is smooth but not straight-sided. Grey ware. Probably Roman.

SF LWC 3966. R4. Topsoil and machine clearance. Post-Roman. Wall sherd. The edge is ground but irregular and both surfaces are abraded. Diameter 28.0 mm . thickness 5.0 mm . Diameter of perforation 5.0 mm . The wall of the hole is smooth but not straight. Grey ware. Roman.

2470 SF LWC 4195. U51 F10. Pit. Medieval. Wall sherd. A rough-out. Diameter 58.5 mm . thickness 7.5 mm . The diameter of the perforation varies greatly. from 9.5 to 14.0 mm . The wall of the hole is smooth but not straight. The manufacture of the hole is likely to have preceded the roughing-out of the counter. Grey ware. 1 st century or
later.

SF BKC 411. A92 (L12), Post-Roman. ?Base sherd. Fragment. The edge is ground and both surfaces are abraded. The counter has been only partly pierced. It seems to have broken during the attempt to drill the hole. though the position of the fracture could be misleading on this point. If it did break during drilling. then we have here an attempt to pierce a counter which had already seen considerable use. Diameter 71.0 mm . thickness 18.0 mm . Maximum diameter of tapering partial perforation 6.0 mm . The hole is off-centre. Grey ware. Roman.

SF BKC 1864. E836 L324. Ditch (F230) fill. Period 2. Wall sherd. The edge is ground. It appears to have been damaged and the chipped section subsequently ground smooth. Diameter 54.5 mm . thickness 10.5 mm . Diameter of perforation 6.5 mm . The wall of the hole is smooth but not straight. Grey ware. 1st century. SF BKC 2490. G375. Topsoil. Period 5c. Base. The junction of wall and base has been only slightly ground. Diameter 77.5 mm . thickness 14.0 mm . Diameter of perforation 5.0 mm . The wall of the hole is smooth but not straight. Grey ware. Probably 2nd century or later. SF BKC 2500. G383 F11. Timber-lined drain. Period 5c. Wall sherd. The edge is ground but irregular. Diameter 42.5 mm . thickness 6.0 mm . Diameter of perforation 4.5 mm . Both surfaces are abraded around the perforation. which appears to have a smooth but not straight-sided wall. Grey ware. Roman.

SF BKC 2977. H7 L2. Topsoil. Post-Roman. Base of ajar. Fragment. The junction of wall and base has not been smoothed. Diameter approximately 84.0 mm . thickness 12.5 mm . Diameter of perforation 7.0 mm . The wall of the hole is smooth but not straight-sided. Black burnished ware. 2nd century or later.

2477
SF BKC 2693. H14 L2. Topsoil. Post-Roman. Wall sherd. The edge has not been ground. Diameter 34.5 mm . thickness 8.0 mm . Diameter of perforation 3.5 mm . The wall of the hole is smooth but not straight. Grey ware. Roman.

SF BKC 2911. H121 F57. Pit. Period 5a. Wall sherd. Fragment. The edge has been partly ground. Diameter 44.5 mm . thickness 9.0 mm . There are two perforations close together near the centre. each about 3.0 mm in diameter. The walls of these holes are smooth but not straight. Grey ware. 1st century.

SF BKC 4026. N44 F12. Pit. Period 6 or later. Wall sherd. Chipped. The edge has been partly ground. Diameter 29.5 mm . thickness 6.0 mm . Diameter of perforation 5.5 mm . Both surfaces are abraded round the perforation. the wall of which is not straight-sided. Oxfordshire colour coat bowl. Mid 3rd to 4th century.

SF BKC 5337. V487 L58. Daub floor. Period 2. Wall sherd. The edge has not been ground. Diameter 37.0 mm . thickness 4.0 mm . Diameter of perforation 5.5 mm . The wall of the hole is straight. Grey ware. Roman.

2431 SF MID 543. A1737 F23. Robber trench. Early medieval. Wall sherd. Chipped. The edge has been ground and the outer surface abraded. Diameter 38.0 mm . thickness 9.5 mm . Diameter of perforation 6.5 mm . The wall of the hole is straight. Terra sigillata. form Dragendorff 31. Central or Eastern Gaul. Antonine.

2432 SF BUC 57. A301 L1. Post-medieval. Wall sherd. Fragment. The edge is ground and both surfaces are alightly abraded. Diameter 38.5 mm . thickness 7.0 mm . Diameter of perforation 3.5 mm . The wall of the hole is straight. Grey ware. Roman.

## Tile counters

(Fig 100; 2483-2495)
2484 SF LWC 2579. J559 F1S0. Road ditch. Period 4. The edge is smooth and both surfaces are abraded. Diameter 51.0 mm . thickness 14.5 mm .

2486 SF LWC 2997. J696 F130. Road ditch. Period 4. A rough-out. perhaps with some attempt at smoothing the edge. Diameter 66.0 mm . thickness 17.5 mm .

2488 SF LWC 4094. R50 F35. Timber-lined drain. Period 4. The edge is only partly ground and neither surface is abraded. Diameter 69.5 mm . thickness 15.5 mm . increasing abruptly on one side to 20.0 mm .

2489 SF LWC 4092. R322 F110. Pit. Post-Roman. The edge is ground but still irregular. Both surfaces are slightly abraded. Diameter 77.5 mm . thickness 18.0 mm .

2491 SF BKC 6081. A31 L2. Topsoil. Post-Roman. The edge is only partly ground. and neither surface is abraded. Diameter 69.5 mm . thickness 14.0 mm .

2492 SF BKC 6075. E32 L13. Topsoil. Post-Roman. The edge is ground but still irregular. The upper surface may be abraded. Diameter 80.0 mm . thickness 24.5 mm .

2493 SF BKC 6074. E359 L437. Ditch (F138) fill. Late Period 6 or AngloSaxon. The edge is ground. Chipped. Both surfaces are abraded. Diameter 72.0 mm . thickness 23.0 mm .

2494 SF BKC 2492. G101 F11. Timber-lined drain. Period 5c. The edge is smooth and both surfaces are slightly abraded. Diameter 49.5 mm . thickness 17.0 mm .

2495 SF BKC 2498. G199 F190. Pit? Trench? Period 5c? The edge is smooth and both surfaces are slightly abraded. The upper surface has a
grooved cross. the remains of lattice decoration (keying) on a box tile. Diameter 53.0 mm . thickness 16.5 mm .

## Stone counters

(Fig 101; 2496-2499)

2499 SF BUC 1597. H551 G500. Grave fill. Period 2. A black pebble. initially water-worn. but also probably worn by much handling. The stone is similar in size and shape to an opaque black glass counter. but is flattish. not convex. Oval. maximum diameter 19.0 mm . thickness 4.5 mm .

## DICE

All are in printed catalogue (Fig 102; 2500-2506),

## SCALES

Balance

In printed catalogue (Fig 103; 2507).

Steelyard

In printed catalogue (Fig 104; 2508).

## Balance fittings

2509 SF BKC 3649(C), J358. Modern. A copper-alloy hook. similar to those found on balances. The hook has a knobbed terminal and decorative mouldings on the outer face below the suspension ring. On the flat inner face are two small punched dots. Length 54.5 mm .

## WEIGHTS

All in fiche catalogue are of copper alloy (Fig 105; 2510-2515)

2513 SF BKC 3643(C), J352 F128. Posthole. Periods 3/4/5a. Disc-shaped ?weight. Diameter 15.5 mm . thickness 2.5 mm . Weight $2.4 \mathrm{gm}(37.052 \mathrm{gr}) »$ possibly for $1 / 123$ of a Celtic pound. (The Celtic pound could be divided not only into ounces. but also into progressive multiples of $1 / 2$ (Waugh and Goodburn 1972. 160),

2514 SF BKC 4350(C), N297 F86. Period 6. Disc-shaped ?weight. Diameter 17.5 mm . thickness 3.5 mm . Weight 6.0 gm ( 92.631 gr )» possibly for six scruples (1/4 oz),

2515 SFBUC 1111(C), E305L7. Destruction debris. Probably first half of the 5th century. Disc-shaped ?weight. Diameter 10.0 mm . thickness 1.5 mm . weight $0.7 \mathrm{gm}(10.307 \mathrm{gr})$, This object derives from a context which produced 26 mid to late 4 th-century coins. including several copies. In size it is commensurate with these coins. and could perhaps be a makeweight connected in some way with coinage. rather than a weight for use with scales. At 0.7 gm it weighs well below one scruple and seems too well-preserved for one scruple to have been its intended weight.

## CATEGORY 7! OBJECTS USED FOR OR ASSOCIATED WITH WRITTEN COMMUNICATION

## SEAL-BOXES

All examples are of copper alloy unless otherwise stated.

Type 1 Acorn-shaped (Fig 106; 2516-2517),

2516 SF BKC 1647(C), E928 F258. Pipe trench. Period 3a. The outer part of the base of a ?gilt seal-box. Possibly from a box similar to Fig 106. 2517. Length 26.5 mm . maximum width 16.0 mm .

Type 2 Round (Fig 106; 2518-2521),

2518 SF LWC 1770(C), H39. Site clearance. Unstratified. Most of the base and lid of a round seal-box. There are three circular perforations in the floor and a straight-sided notch in the surviving fragment of wall. The lid is too damaged by corrosion to distinguish any decoration. Diameter 18.0 mm . height approximately 8.0 mm .

2519 SF LWC 3728. K434. ?Garden topsoil. Period 4b? Fragment of the base of a round seal-box.

2520 SF BKC 467(C), AS L1. Town ditch (F30) fill. Anglo-Saxon. The base of a round seal-box with four circular perforations in the floor and two opposing straight-sided notches in the wall. There are traces of iron corrosion. probably from a rivet. on the two lugs that formed the hinge for the lid. Diameter 19.0 mm . height 5.5 mm . There is a slight footring at the junction of floor and wall.

Type 3 Square (Fig 106J 2522),
In printed catalogue.

Type 4 Leaf-shaped.
a) a stylised leaf-shape with an inner leaf design (Fig 106. 2523-2528),

2524 SF BKC 2403(C), G371 F11? Timber-lined drain. Period 5c. Avery corroded complete seal-box. Similar to Fig 106. 2523. but with an additional solid metal spot in the centre of the roundel. The outer field and possibly the roundel held green enamel. the inner leaf red enamel. There appear to be at least three perforations in the base and there is one set of opposing (?straight-sided) notches in the walls. Length 43.0 mm . maximum width 22.5 mm . height approximately 10.0 mm .

2526 SF BKC 2917(C), J6 L1. Site clearance. A lid similar to Fig 106. 2525. The outer field and roundel contained ?yellow enamel. the inner leaf ?blue enamel. The reverse is recessed. Length 40.0 mm . maximum width 19.5 mm . thickness 2.0 mm .

2528 SF BKC 3348(C), M10. Modern with Periods 5 and 6. A lid similar to Fig 106. 2525. The outer field and roundel held ?yellow enamel. the inner leaf ?green enamel. The reverse is recessed. Length (incomplete) 33.5 mm . maximum width 19.5 mm . thickness 2.0 mm .
b) other leaf-shaped boxes (Fig 106\$ 2529-2531),

All in printed catalogue.

## STYLI

All objects are copper-alloy (Fig 107; 2532-2535),
2532 SF BKC 914(C), D197 L4/6. Make-up. Modern. Possibly a fragment of the shaft and broad end of a stylus. Length 40.5 mm . width of shaft 3.0 mm .

2533 SF CPS 756. 741 L96. Make-up. Period 4. The tip and part of the shaft of a stylus. Length 28.0 mm . width of square section shaft 3.5 mm .

2535 SF BUC 138(C), B180 G70. Grave deposit. Period 1 cemetery. One of an exactly similar pair. with Fig 107. 2534.

## CATEGORY 8: OBJECTS ASSOCIATED WITH TRANSPORT

## HARNESS

Hippasandal

In printed catalogue (Fig 108? 2534),

## Bridles

Both in printed catalogue (Fig 109? 2537-2538),

## Strap-loops

(2539-2541)

2539 SF BKC 1104(C), E104 L36. Ditch (F29) fill. Late Period 6 or AngloSaxon. A ring of D-shaped section with loops from two strap-loops still attached. The front and back plates of both loops are missing. Internal diameter of ring 7.0 mm .

2540 SF BKC 3901(C), M24. Periods 1-6 (probably 1-3/4), Most of a strap-loop only the back plate is missing. The large loop is very worn in one place The front plate is a long plain rectangle with two projections. cast in one with the strap-loop. for fixing the front and back plates together.

Length 60.0 mm (distorted),
2541 SF BKC 4935, S4. Site clearance. Modern. A probable strap-loop. The front plate is damaged by corrosion. but appears to be leaf-shaped. The end of the rectangular back plate is missing. There is a projection at the tip of the front plate cast in one with the object for fixing the two plates together

## Terrets

Both are in printed catalogue (Fig 109; 2542-2543),

Harness mount

In printed catalogue (Fig 109; 2544),

## CART FITTING

In printed catalogue (Fig 109; 2545),

## STONE ARCHITECTURAL FRAGMENTS

The quantity and variety of stone architectural fragments recovered have meant that identification of each piece by a geologist would be prohibitively expensive and time-consuming. Martyn Owen of the Institute of Geological Sciences. London has kindly identified several pieces and from this basis I have described the rest. A few remain with no identification offered.

Most of the architectural fragments derive from post-Roman contexts. This is the result of the medieval robbing of the Roman levels for building stone. there being none locally. Therefore unless a fragment is obviously post-Roman or is found incorporated in a post-Roman structure. it is included here.

2546 SF LWC 359. A14 F6. Pit. Second half of the 17 th century. Africano marble. Veneer, 6.5 mm thick. No edges.

2547 SF LWC 71. A16. Probably modern. Purbeck marble. Inscription'DEO'. Hollow chamfer along top edge.

2548 SF LWC 3666. A19. Probably modern. Imperial (red) porphyry. Veneer. 6.0 mm thick. No edges.

2549 SF LWC 1607. A36 F20. 15th century. Brecciated white and pink marble. Veneer. 8.5 mm thick. No edges.

2550 SF LWC 360. A48. Modern. Greek green porphyry. Veneer strip 6.0 mm thick. 19.0 mm wide.

2551 SF LWC 375. A49 F29. 16th century or later. Brecciated white and pink marble. ?Veneer. Lower surface unworked. maximum thickness 23.0 mm . No
edges.

2552 SF LWC 1061. A64. Topsoil. Post-Roman to post-medieval. Veneer strip. 13.0 mm thick, 38.5 mm wide. SF LWC 1233. A79. Post-Roman to modern? Small chip of white marble. Veneer. 10.5 mm thick. No edges.

2554 SF LWC 1219. A81. Late Roman to early medieval. White marble. Veneer strip. 11.0 mm thick. 35.5 mm wide.

2555 SF LWC 1239. A96. Late Roman to early medieval. Small chip of white marble. Veneer. 8.5 mm thick. No edges

2556 SF LWC 1216. A102. Post-medieval or later. Very small chip of brecciated black/green and white marble. Possibly Verde Antico. Veneer 5.0 mm thick. No edges.

2557 SF LWC 1222. A103. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. Cipollino marble. Veneer. 11.0 mm thick. No edges?

2558 SF LWC 1223. Al 19. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. Strip. Hollow chamfers along all four edges. 19.0 by 11.5 mm .

2559 SF LWC 852. A266 F44. Robber trench. 13th century. Pavonazetto marble Veneer. 9.0 mm thick. No edges.

2560 SF LWC 4344. B7 F11. Robber for gravel. Early medieval. Imperial (red) porphyry. Veneer ?strip. 10.0 mm thick. 37.5 mm wide.

2561 SF LWC 35. B23 F14. Boundary ditch. 17th century. Purbeck stone. Strip. Hollow chamfers along all four edges. 19.5 by 12.5 mm .

2562 SF LWC 232. B45 F23. Road ditch. Period 4. Purbeck marble. Veneer. 54.5 mm thick. At least one edge.

2563 SF LWC 222. B74 F42. 12th to 15 th century. Purbeck marble. Veneer. 43.0 mm thick. Two edges?

2564 SF LWC 4053. B90. Surface cleaning. Possibly modern. Purbeck marble.

Veneer. 25.0 mm thick. No edges.
SF LWC 1754. B192 F74. Pit. 12th to 15 th century. White marble. Veneer. 12.5 mm thick. Two parallel edges. 73.5 mm apart. Possibly a third edge.

2566 SF LWC 2042. B305. Floor and occupation material. Periods 3-5. Africano marble. Veneer. 23.0 mm thick. No edges.

2567 SF LWC 843. B373. Pit complex. Period 4 or 5. Favonazzeto marble. Veneer strip. 7.0 mm thick. One edge chamfered. 19.0 mm wide.

2568 SF LWC 860. B411 F147. Pit with burnt edges. Period 5. Purbeck marble. Moulded ?cornice

2569 SF LWC 1235. B606. Cellar (F70) backfill. contaminated. Period 5+. Purbeck (?)marble. Veneer. 31.0 mm thick. No edges.

2570 SF LWC 1203. B645 F70. Cellar. Period 5. Strip. Hollow chamfer along one edge. two others slightly grooved. 10.0 by 23.0 mm .

2571 SF LWC 4013. B667 F240/30. Pit. 13th to 20 th century. Purbeck stone. Veneer. 45.5 mm thick. Lower surface rough. Edges?

2572 SF LWC 1135. B F70. Probably cellar backfill. Period 5. Purbeck marble. Moulded ?cornice with external return.

2573 SF LWC 823. CSS F49. Cesspit. 16th to 17th century. White marble. Veneer strip. 17.0 mm thick. 37.0 mm wide.

2574 SF LWC 1046. C415. Occupation. Period 3a. Rectangular section strip. possibly associated with mosaic manufacture.

2575 SF LWC 1899. D224 F129. Slat. Post-Raman. Cipollino marble. Veneer. 13.0 mm thick. Lozenge-shaped. but edges very rough. Shape could be fortuitous. 82.5 by 40.5 mm point to point.

2576 SF LWC 1863. D280 F163+164. Pit material. Post-Roman. Cipollino marble. Veneer. 6.0 mm thick. No edges.

2577 SF LWC 1392. E17. Tile spread. 17th century. Brecciated white and pink marble. Veneer. 15.0 mm thick. No edges.

2578 SF LWC 1335. E63. Topsoil over road. Period B or C Brecciated white and pink marble. Veneer. 13.0 mm thick. No edges.

2579 SF LWC 1373. E81 (F48), Sinkage? Late Roman or Anglo-Saxon. White marble. Veneer. 7.5 mm thick. Two contiguous edges.

2580 SF LWC 1372. E82 F47. Slot. or crack in road? Roman or post-Roman. Africano marble. Veneer. 7.0 mm thick. No edges.

2581 SF LWC 1464. E84 (F49), Sinkage? Late Roman or Anglo-Saxon. White marble with black veins. Veneer. 8.5 mm thick. No edges.

2582 SF LWC 1375. E87 F45. Pit. 15th to 16 th century. Verde Antico marble. Veneer. 13.0 mm thick. Three edges. One is complete ( 55.5 mm ) and is slightly chamfered.

2583 SF LWC 2790. E144 F73. Pit? Post-medieval. Purbeck marble. Veneer. 31.0 mm thick. One edge.

2584 SF LWC 1554. G58 F32. Shallow pit. Period 1 or 2. Dark pink marble. Veneer strip with rounded end. 6.5 mm thick. 12.0 mm wide.

2585 SF LWC 1552. G61 F25. Pit. Period 4 (beginning), Cipollino marble. Veneer. 12.0 mm thick. One edge.

2586 SF LWC 1614. Gl 13. Demolition debris or dump? Period 4? Brecciated white. red and purple marble. Veneer. 10.5 mm thick. No edges.

2537 SF LWC 3893. G436 F215. Shallow depression. Period 2. Purbeck marble. Veneer strip with mitred end. 15.0 mm thick. 39.5 mm wide.

2583 SF LWC 3852. G471 F237. Soakaway pit. Period 1 (or 2), White marble. with some pink. possibly as 2549 . Veneer strip. 13.0 mm thick. 16.0 mm wide.

2589 SF LWC 3851. G4S1 F241. Daub-lined pit. Period 2 (or 1?), White marble. with black/purple veins. Veneer. 8.5 mm thick. No edges.

2590 SF LWC 4051. G516 F258. Pit. Period 2. Veneer. 19.5 mm thick. Edges? Lower surface rough.

2591 SF LWC 3936. G541 F272. Slot. Period 2. A brecciated white and pink
marble with some black. Possibly burnt. Veneer. 19.0 mm maximum thickness. Lower surface not worked. No edges.

2592 SF LWC 2211. H85 F15. Robber trench. Medieval. Brecciated white. red and purple marble. Veneer ?strip. 12.5 mm thick. 36.0 mm wide.

2593 SF LWC 2185. HI 10. Topsoil. 17th century or later. Veneer. 27.0 mm thick. Two parallel chamfered edges. one grooved. 67.0 mm wide. Mason's mark scratched into undersurface.

2594 SF LWC 2026. HI86 F32. Pit. Roman?/Anglo-Saxon ?/medieval?. White and orange marble. Veneer strip of ?square section. 11.5 by 12.0 mm . One face could be a break.

2595 SF LWC 2027. H190 F32. Pit. Roman?/Anglo-Saxon?medieval? Fine red sandstone. Veneer strip, 8.0 mm thick, 14.0 mm wide. Lower surface rough.

2596 SF LWC 2139, H218 F63. Hut. Anglo-Saxon. Brecciated white and pink marble. Veneer. 7.5 mm thick. One definite edge.

2597 SF LWC 2305, H256 F10. Road ditch. Roman. Cipollino marble. Veneer, 20.5 mm thick. Two contiguous edges at right angles.

2598 SF LWC 2097, J1. Rubble. Modern. Cipollino marble. Veneer tile. 71.0 by $74.0 \mathrm{~mm}, 10.0 \mathrm{~mm}$ thick.

2599 SF LWC 3987, J9 F4. Post-Roman to modern. Imperial (red) porphyry. Veneer, 15.0 mm maximum thickness. Lower surface very rough.

2600 SF LWC 3988, J1 8 F19. Robber trench. Early medieval. Greek green porphyry. Veneer, 5.5 mm thick. Two contiguous edges at an obtuse angle.

2601 SF LWC 1809, J21 F12. Pit. Post-Roman. Dark pink marble. Moulded veneer strip. 23.5 mm thick. 45.0 mm wide. Two parallel chamfered edges.

2602 SF LWC 2735. J271 F83. Group of Roman roof tiles. Period 4b destruction? Carrara marble. Veneer. 18.0 mm thick. One rounded edge.

2603 SF LWC 2601. J327 F16. Lime pit. Early medieval. Verde Antico marble. Veneer. 10.0 mm thick. No edges.

2604 SF LWC 2504. J367. Period 4b demolition debris. Period 4b destruction. Fine red sandstone. Rectangular section strip. 9.5 by 12.0 mm . One surface rough

2605 SF LWC 2850. J369. Period 4b demolition debris. Period 4b destruction Purbeck marble. Veneer. 31.0 mm thick. No edges? Lower surface rough

2606 SF LWC 2749. 1373. Period 4b demolition debris. Period 4b destruction. Pinky-cream marble. Veneer crescent with flattened base on outer curve. 13.0 mm thick. Maximum length 69.0 mm . maximum width 43.0 mm .

2607 SF LWC 3990. 7384. Destruction debris. Period 4b destruction? Purbeck marble. Moulded ?cornice.

2608 SF LWC 2431. J435 F161. Posthole. Post-Roman. Cream marble with black veins. Veneer. 5.5 mm thick. No edges.

2609 SF LWC 4014. J453. Make-up or floor. Period 4. Purbeck marble. Veneer. 20.0 mm thick. One edge.

2610 SF LWC 2748. J482. Demolition debris? Period 4b destruction? Purbeck marble. Veneer. 27.0 mm thick. One edge?

2611 SF LWC 2736. J518 (F184), Demolition debris. Period 4b destruction. Weathered dull buff-white marble. Veneer. 39.0 mm thick. Two apposite but not parallel edges. one with a right-angled cut-out. Lower surface rough with shallow ?dowel hole.

2612 SF LWC 2702. J551. Tile and gravel patch. Demolished building? Period 5. or late Roman. or later. Purbeck marble. Veneer. 21.0 mm thick. One edge. Right-angled groove with sloping sides for inlay. 4.0 mm deep. varying from 15.5 to 19.0 mm across.

2613 SF LWC 2703. J551. Tile and gravel patch. Demolished building? Period 5. or late Roman. or later. Purbeck marble. Veneer. 28.5 mm thick. No edges

2614 SF LWC 2911. J588. Tile and gravel surface of footway. Period 4. Purbeck marble. Possibly part of a column or sculpture.

2615 SF LWC 2364. J627. First gravelled surface of yard. Period 4a. Purbeck marble. Veneer. 31.0 mm thick. Three edges. 168.0 mm along complete edge. maximum surviving length of the other dimension 134.0 mm . Lower surface rough. Dowel hole.

2616 SF LWC 3070. J838 F119. Foundation. Period 4. Purbeck marble. Veneer. 37.0 mm thick. Two contiguous edges at right angles. Lower surface rough.

2617-18 SF LWC 3184. J951. Make-up. Period 3. Two pieces of Purbeck marble veneer. 2617) 24.0 mm thick. One edge. 2618) 28.5 mm thick. One edge. 2619-20 SF LWC 3327. J931. Make-up. Period 3. Two pieces of Purbeck marble veneer. 2619) 29.0 mm thick. One edge. 2620) 28.0 mm thick. No edges.

2621 SF LWC 3275. J981. Make-up. Periods. Purbeck marble. Veneer. Upper surface partly sunk. 22.0 to 26.5 mm thick.

2622 SF LWC 3276. J987. Make-up. Period 3. Africano marble. Veneer. 26.0 mm thick. Two contiguous edges at right angles.

2623-26 SF LWC 3291. J992 F315. Timber-lined and burnt drain. Period 2. Four pieces of Purbeck marble veneer. 2623) 24.0 mm thick. No edges. 2624) 18.0 mm thick. Two contiguous edges at right angles. 2625) 19.0 mm thick. Two contiguous edges at right angles. Broken across a dowel hole. 2626) 27.0 mm thick. One edge.

2627 SF LWC 3535. J1086. Make-up (redeposited from earlier levels?), Period 4. Purbeck marble. ?Worked.

2628 SF LWC 3058. K227. Medieval or later. Purbeck marble. Veneer. 17.0 mm thick. No edges. Lower surface rough.

2629 SF LWC 3109. K239. ?Garden soil. Period 4? Or post-Roman? ?Verde Antico marble. Veneer. 11.5 mm thick. Two opposite. not quite parallel. edges.

2630 SF LWC 3956. K255 F126. Pit. Medieval or later? White ?marble. Veneer. 25.5 mm thick. No edges.

2631-2 SF LWC 3108. K255 F126. Pit. Medieval or later? White ?marble. Two pieces of veneer 2631) 24.0 mm thick. No edges. 2632) 24.0 to 26.0 mm thick. No edges.

2633 SF LWC 3667. K367. Garden topsoil. Period 4b. Africano marble. Veneer. 21.5 mm thick. No edges.

2634 SF LWC 3751. K415. ?Base of topsoil or make-up of Period 3. Period 3 or 4 b. Africano marble. Veneer. 25.0 mm thick. ?One edge.

2635 SF LWC 2673. L120 F81. Pit. Period 5 or 6. Creamy-pink marble. Veneer. 10.0 mm thick. One edge.

2636 SF LWC 4245. L181. Topsoil. Post-medieval. Cipollino marble. Veneer strip. rectangular section. 11.0 by 8.5 mm . One face broken.

2637-8 SF LWC 2895. L280 F142. Shallow scoop. Period 5? 2637) Purbeck marble. Veneer strip. 14.0 mm thick. 40.5 mm wide. One end mitred. 2638) White marble. Veneer. moulded. Thickness to top of moulding 15.0 mm . No edges.

2639 SF LWC 2933. L294 F81. Pit. Period 5 or 6. Veneer strip. rectangular section. 14.0 by 11.0 mm . One face broken.

2640 SF LWC 4015. L379 F241. ?Oven. Period 4(2), Purbeck marble. Veneer. 44.5 mm thick. ?Four edges. 77.0 by 73.5 mm .

2641 SF LWC 3295. L406. Make-up/dump. Period 4(1), Purbeck marble. Veneer. Split.therefore thickness unknown. No edges.

2642 SF LWC 3352. L440F261. Robber trench. Periods. Purbeck marble. Veneer. 33.0 mm thick. Four edges. 118.0 by 120.0 mm .

2643 SF LWC 3367. L440 F261. Robber trench. Period 5. Purbeck marble. Possibly part of a column or sculpture.

2644 SF LWC 3395. L456. Cultivated soil. Period $2+3 \mathrm{a}$. Pink marble. Veneer. section tapers from 10.0 to 7.0 mm thick. Edges?

2645 SF LWC 3989. M62. Rampart 2? Purbeck marble. Slab. Possibly from town wall. Opus siqninum on all but two faces. which appear to be later
breaks.
2646 SF LWC 3221. M109. Rampart id. Purbeck marble. Veneer. 21.5 mm thick. At least one edge.

2647 SF LWC 3965. R4. Topsoil and machine clearance. Post-Roman. A decorative granite. Veneer. 11.0 mm thick. No edges.

2648-50 SF LWC 4050. R4. Topsoil and machine clearance. Post-Roman. Dull cream marble. Three pieces of veneer. 2648) 7.5 mm thick. No edges. 2649) 7.0 mm thick. No edges? 2650) 7.0 mm thick. One ?chamfered edge.

2651 SF LWC 3782. R21 F18. Trench. Post-Roman. Shelly Purbeck stone. Wedge-shaped fragment. Lower surface rough. Maximum thickness 53.0 mm . Edges?

2652 SF LWC 3924. R23. Metalling. Period 4b. Purbeck stone. Veneer. 25.0 mm thick. At least two contiguous edges. at a slightly obtuse angle.

2653-6 SF LWC 3896. R83 F47. Robber trench? Post-Roman. Four small pieces of veneer. 2653) Creamy marble. 8.0 mm thick. Two contiguous edges at an acute angle. 2654) Brecciated white and dark purple marble. 6.5 mm thick. No edges. 2655) ?Africano marble. 11.0 mm thick. No edges. 2656) Greek green porphyry. 11.0 mm thick. Two parallel edges? 28.0 mm wide.

2657 SF LWC 3917. R127 F53. Robber trench. Period 4b. Purbeck marble. Rectangular section strip. 34.5 by 36.0 mm .

2658 SF LWC 3937. R164 F70. Pit. Period 4. Cipollino marble. Veneer. 23.0 mm thick. One edge.

SF BKC 311. A72 F16. Town ditch fill. Anglo-Saxon or Period 6. Dull white marble with some red/orange veins. Veneer. 17.5 mm thick. One edge.

SF BKC 314. A72 F16. Town ditch fill. Anglo-Saxon or Period 6.
Purbeck marble. Veneer. 18.5 mm thick. Mo edges.
2661 SF BKC 827. A86 L4. Topsoil and town ditch (F19) fill. Post-Roman. Black and white brecciated marble. Veneer. 18.0 mm thick. No edges.

2662 SF BKC 436. A90 F16. Town ditch fill. Anglo-Saxon or Period 6. Cipollino marble. Veneer. 12.5 mm thick. One edge?

2663 SF BKC 1749. A116 (L17), In F39 fortress ditch. Period 1. Purbeck marble. Veneer. 21.5 mm thick. No edges?

2664 SF BKC 810. D171 L2. Town ditch fill. Anglo-Saxon. Purbeck marble. Veneer. 36.0 mm thick. No edges?

2665 SF BKC 826. D184 L2. Town ditch fill. Anglo-Saxon. Greek green porphyry. Veneer. 4.5 mm thick. One edge.

2666 SF BKC 1871. D205. Town ditch fill. Late Period 6 or Anglo-Saxon. Purbeck marble. Veneer. 15.5 mm thick. One rough edge with ?dowel hole. Lower surface rough.

2667 SF BKC 1753. D243 F13/L13. Town ditch fill. Anglo-Saxon. Purbeck marble. Veneer. 34.5 mm thick. No edges. Lower surface rough.

2668 SF BKC 1750. D290 L16. Town ditch fill. Anglo-Saxon. Purbeck marble. Veneer. 23.5 mm thick. One edge. Lower surface very rough.

2669 SF BKC 5850. D367. Town ditch fill. Late Period 6 or Anglo-Saxon. Dark pink marble. Veneer strip. 12.5 mm thick. 17.5 mm wide. Both ends survive. one is mitred. Maximum length to tip of mitred corner. 85.0 mm .

2670 SF BKC 1751. D372. Town ditch fill. Late Period 6 or Anglo-Saxon. White. pink and orange brecciated marble. Veneer. 14.5 mm thick. Two contiguous edges at right angles.

2671 SF BKC 5096. D388. Town ditch fill. Late Period 6 or Anglo-Saxon. Veneer. 24.0 mm thick. One edge. Lower surface rough.

2672 SF BKC 1752. D unstratified. Purbeck marble. Veneer. 38.0 mm thick. One edge. roughly chamfered.

2673 SF BKC 1801. E140 F24. Gravel pit. Post-Roman. Purbeck marble. Veneer. 13.5 mm thick. One edge.

2674 SF BKC 6065. E205 F27. Backfill of robbed pier base. Period 6. Purbeck marble. ?Veneer. probably reused (mortared on polished surface), 33.0 mm thick. Lower surface very rough. No edges.

2675 SF BKC 1450. E230 L31. Make-up. Periods. ?Carrara marble. Veneer. 29.0 mm thick. One edge.

2676 SF BKC 1663. E242 F92/A. Backfill of robbed pier base. Period 6. Purbeck marble. Veneer. 15.5 mm thick. No edges? Lower surface rough. 2677 SF BKC 1234. E230 L445. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Dark pink marble. Veneer strip. 14.0 mm thick. 21.0 mm wide. One mitred end survives. Maximum length to tip of mitred corner 91.0 mm .

2678 SF BKC 1333. E302 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Cipollino marble. Veneer. 13.0 mm thick. No edges. Lower surface rough.

2679 SF BKC 1652. E475 L130. Make-up. Period 5. Purbeck marble. Veneer. 19.0 mm thick. No edges.

2680 SF BKC 5097. E769 F227. Pit. Period 6. Purbeck marble. Moulded ?cornice.

2681 SF BKC 2012. E1236 F432. contaminated. Period 5 to modern. Creamywhite marble. Veneer. 24.0 mm thick. One edge. perhaps another.

2682 SF BKC 2210. G101 F11. Timber-lined drain. Period 5c. Greek green porphyry. Veneer. 4.0 mm thick. Two contiguous edges.

2683 SF BKC 5093. G349. Uncertain. Period 5? Veneer. 28.0 mm thick. One
edge.
SF BKC 5047. G392. Backfill in pipe trench(es), Period 3 or 2. Purbeck marble. Veneer. triangular section. maximum dimensions 73.0 by 43.5 by 60.0 mm .

2685 SF BKC 2461. G401 F11. Timber-lined drain. Period 5c. Purbeck marble. Veneer (brick-shaped), 70.0 mm maximum thickness. 139.5 mm wide. One end survives. One side face is moulded. Lower surface is covered with marks of a walling hammer (Hodges 1976. fig 23. 1),

2636 SF BKC 5841. H14 L2. Topsoil. Modern. Purbeck marble. Veneer. 13.5 mm thick. No edges.

2687 SF BKC 5836. H104 F34? Post-medieval? Veneer. 15.0 mm thick. Two contiguous edges at right angles

2688 SF BKC 5339. H104 F34? Post-medieval? Pink marble. Veneer. 20.5 mm thick. One edge.

2689 SF BKC 5046. H263 F63. Hearth over pit. Period 5c. Imperial (red) porphyry. Veneer. 21.0 mm thick. No edges.

2690 SF BKC 4905. J 83 Li6. Dump. Period 3/4/5a. Purbeck marble. ?Two worked faces.

2691 SF BKC 4907. J 167. Unstratified. Strip. rectangular section. 16.0 by 28.0 mm . Tapering groove along one edge.

2692 SF BKC 4904. J176 F32. Pit. Period 5c/6. Veneer. 18.0 mm thick. Two contiguous edges at right angles. Lower surface rough.

2693 SF BKC 5101. J183 F41. Pit. Period 5b (or 5c/6), Veneer. 14.5 mm thick. Edges?

2694 SF BKC 5837. J183 F41. Pit. Period 5b (or 5c/6), Veneer. 15.0 mm thick. No edges.

Veneer. 22.0 mm maximum thickness. One edge. Lower surface very rough.
2697 SF BKC 5084. J238 F13. Large pit. Period 5b. Pavonazetto marble.
Veneer. 14.0 mm thick. Edges?

2698 SF BKC 5080. J273. Period 4 or 5c/6. Purbeck marble. Veneer (in two fragments), 47.5 mm maximum thickness. Three edges. one complete. 232.0 mm long. Maximum surviving length of the other dimension 163.5 mm . 2699 SF BKC 5085. K69 L1. Overburden. Modern. Veneer strip. square section. 27.0 by 26.5 mm .

2700 SF BKC 5073. K103 F12. Robber trench. Modern. Purbeck marble. Veneer. 33.0 mm thick. No edges.

2701 SF BKC 5158. K108 F13. Pit. Modern. Africano marble. Veneer. 10.0 mm thick. One edge.

2702 SF BKC 5088. K203 F36. Pipe trench. Modern. ?Veneer. no faces. but two contiguous edges at right angles.

2703 SF BKC 6064. K240 F44. Pit. Modern. Purbeck marble. Veneer. 22.5 mm thick. One chamfered edge. Upper surface weathered. lower rough.

2704 SF BKC 5077. K246 F15. Gully/ditch. Period 6. Purbeck marble. Veneer. 30.0 mm thick. One rough edge. possibly another.

2705 SF BKC 5081. K257 F50. Pit. Modern. Creamy-pink marble. Veneer. 15.0 mm thick. One edge. Lower surface rough.

2706 SF BKC 5079. K323 L26. Make-up. Period 4c. Purbeck marble. Veneer. 44.5 mm thick. One chamfered edge. Lower surface rough.

2707 SF BKC 6047. K415 L69. Dump. Period 5/6. Veneer. 17.5 mm thick. One edge?

2708 SF BKC 5086. K436 L73 (F113), Modern. Pavonazetto marble. Veneer. 12.0 mm thick. Two edges.

F BKC 3568. K442 L60. Make-up or dump. Period 5/6. Purbeck marble. Veneer. 8.5 mm thick. One chamfered edge.

2710 SF BKC 5082. K521 L1 19. Dump/make-up. Period 4a/b. Brecciated white
and dark purple marble. Veneer. 11.5 mm thick. No edges.
2711 SF BKC 6039. M28. Periods 3/4-6. Purbeck marble. Veneer. section split. No edges.

2712 SF BKC 6050. M28. Periods 3/4-6. Purbeck marble. Veneer. 14.5 mm thick. No edges?

2713 SF BKC 4106. N19. Period 6. Dull white marble. Veneer. 40.0 mm thick. Two contiguous edges at right angles. Lower surface rough. Inscribed (Hassall 1977. 427-8. no 8),

2714 SF BKC 5220. N19. Period 6. Purbeck marble. Veneer. 32.0 mm thick. No edges.

2715 SF BKC 5340. N22 L1. Topsoil. Modern. White-grey marble. Veneer. $i 3.0 \mathrm{~mm}$ thick. One edge?

2716 SF BKC 5219. N65. Period 5 or 6? Pinky-cream marble with black veins. Veneer. 18.5 mm thick. No edges. (Fits 2720.)

2717 SF BKC 5316. N85 L3. Topsoil. Period 6. Brecciated white and dark purple marble. Veneer. 13.0 mm thick. One edge.

2718 SF BKC 5220(ii), N103. Period 5 or 6. Purbeck marble. Veneer. 30.0 mm thick. No edges.

2719 SF BKC 5313. N233 F84. Pit. Period 6. Veneer strip. rectangular section. 17.0 by 27.5 mm . Hollow chamfers on two edges. slight plain chamfers on the other two.

2720 SF BKC 5317. N314 F97. Trench/slot. Period 5b2. Pinky-cream marble with black veins. Veneer. 20.0 mm thick. At least one edge. (Fits 2716.)

2721 SF BKC 5339. N321. Surface cleaning. Modern. Purbeck marble. Veneer. 32.5 mm thick. Three edges. one complete 123.5 mm long. Maximum surviving length of the other dimension 66.0 mm . Lower surface uneven but smooth. possibly keyed.

2722 SF BKC 5341. N633 L59. Dump. Period 5b2. Purbeck marble. Veneer (in
two fragments), thickness varies from 32.5 to 36.0 mm . Two contiguous edges.

2723 SF BKC 5360. N644 F113. Slot. Period 5b2. Purbeck marble. Veneer. 53.0 mm thick. One edge. Upper surface weathered. lower rough.

2724 SF BKC 6040. P12 F3. Robber trench. Period 6. Brecciated white and dark purple marble. Veneer. 12.5 mm thick. One edge.

2725 SF BKC 531S. Till L33. Destruction debris of Period 2. Period 3. ?Cornice fragment.

2726 SF BKC 5298. T207. Destruction debris. Period 2. Pavonazetto marble. Veneer. 7.5 mm thick. One chamfered edge.

2727 SF BKC 5301. T223 F99. Uncertain. Purbeck marble. Veneer. 31.0 mm thick. No edges. Inscribed.

2728 SF BKC 5302. T223 F99. Uncertain. Purbeck marble. Veneer. 20.0 mm thick. One edge. Lower surface rough.

2729 SF BKC 5299. T617. Period 1 or 2. Africano marble. Veneer. 19.0 mm thick. No edges.

2730 SF BKC 6049. V71. Unstratified. Greek green porphyry. Veneer. 7.0 mm thick. One edge.

2731 SF BKC 6052. V240 L46. Make-up? Period 5. Purbeck marble. Veneer. 26.0 mm thick. No edges.

2732 SF BKC 6046. V385 F28/89. Pit. Period 5. 6. or modern. Purbeck marble. Veneer. 27.0 mm thick. No edges. Lower surface very rough.

2733 SF BKC 6048. V563 L59. Dump. Period 4. White marble. Veneer. 14.5 mm thick. Two edges?

2734 SF BKC 6028. V727. Unstratified. Chalk. Veneer (brick-shaped fragment), 90.0 mm thick. Upper face inscribed. ?Mason's marks on lower face.

2735 SF BKC 6054. V727. Unstratified. Purbeck marble. Moulded veneer.
2736 SF BKC 6053. V731 F185. Pit. Modern (post-medieval?), ?Pilaster
fragment.
2737 SF BKC 6051. V809 F252. Ditch. Period 2. Pinky-cream marble. Veneer. 23.0 mm thick. No edges.

2738 SF BKC 6057. V813 L22. Dump. Late Period 5. Purbeck marble. Small fragment of one surface. ?Veneer. 99.5 mm thick. No edges.

2739 SF BKC 6058. V932 L11. Dump. Late Period 5. White marble with some pink and orange. and grey veins. Veneer. 14.0 mm thick. Two opposite but not parallel edges.

2740 SF BKC 6062. V1070 F423. Postpit. Period 4. Purbeck marble. Moulded ?cornice.

2741 SF BKC 6056. VI114 F434+F437. Period 4. Purbeck marble. Veneer. 41.0 mm thick. Edges? Lower surface rough.

2742 SF BKC 6059. V1140 F441. Post pit with pesthole. Period 4. Veneer. 20.5 mm maximum thickness. Moulded upper surface. lower surface rough.

2743 SF BKC 6060. V1262. Unstratified. Periods 2 to 6? Purbeck marble. Veneer. 26.5 mm thick. One edge.

2744 SF BKC 6061. V1279 F497. Pit. Period 2. Greenstone. Veneer. section split. One edge.

2745 SF CPS 59. 120 L46. Topsoil. Period 6. Purbeck marble. Veneer. 47.0 mm maximum thickness. Lower surface rough. Edges?

2746 SF CPS 74. 129 L46. Topsoil. Period 6. Purbeck marble. ?Column fragment.

2747 SF CPS 948. 412 L70. Robber trench material. Period 5. Purbeck marble. Veneer. with single moulding. Thickness to top of moulding 16.5 mm . Lower surface rough. ?split. No edges.

2748 SF CPS 268. 480 F106. Pit. Period 5. Veneer strip. 12.5 thick. 25.5 mm wide.

2749 SF CPS 817. 580 F114. Pit. Periods. ?Column fragment.
2750 SF CPS 774. 618 F119. Robber trench material. Periods. Veneer strip.
10.5 mm thick. 30.0 mm wide.

2751 SF CPS 778. 641 L88. Burnt make-up. Period 4. Brecciated white. pink and black marble. May be burnt Africano marble. Veneer. 23.0 mm thick. No edges?

2752 SF CPS 842. 723 L182. Destruction of Period 4. Creamy marble. Veneer. 14.5 mm thick. One edge.

2753 SF CPS 724. 783 L1 10. Make-up. Period 4. Greensand. Strip. traces of hollow chamfers on two of the edges. and of plain chamfers on the other two. 18.5 by 25.5 mm .

2754 SF CPS 936. 1032 F170. Rubble wall foundation outside area of excavation. Periods 5(?) to 7. Purbeck marble. Veneer. maximum thickness 45.0 mm . Lower surface very rough. No edges.

2755 SF CPS 798. L78. Topsoil. Period 6. Purbeck marble. Veneer. Maximum thickness 41.5 mm . Two contiguous edges? Lower surface rough

2756 SF CPS 902. L1 18. Deep make-up. Period 4. Purbeck marble. Veneer. 26.5 mm thick. No edges. Lower surface rough.

2757 SFBUC 1395. A301 L1. Post-medieval. Decorative granite. Veneer. 11.5 mm thick. No edges.

2758 SFBUC 1396. A326 L1. Post-medieval. Decorative granite. Veneer. maximum thickness 14.0 mm . ?split. No edges.

2759 SFBUC 1394. B51. Unstratified. Strip. rectangular section. 15.5 by 24.0 mm .

2760 SF BUC 1397. B1301 L3. Period 1. Only part of one worked surface survives.

2761 SF BUC 1391. C1036 L1. Periods 1-2. Purbeck marble. Veneer. 33.5 mm thick. One edge with another ?edge contiguous and at right angles to it. Lower surface rough.

2762 SFBUC 1399. CI 156 F58. Gully. Period 1. Veneer. 29.5 mm thick. Edges?

2763 SF BUC 705. C1412. G410/411/412. Grave fill. Period 2. Pinky-cream marble. Veneer. 20.0 mm thick. One edge.

2764 SFBUC 1393. C1449. G410/411/412. Grave fill. Period 2. Purbeck marble. Veneer. 25.0 mm thick. One edge?

2765 SFBUC 1217/1751. E430/431 F46. Postpit. 4th to 5th century. Purbeck burr. Veneer (in two fragments), tapers from 63.5 to 55.0 mm thick. One edge grooved. for keying?

2766 SF BUC 1752. E507 F4. Archaeological trench. 1965. Chalk. ?Building block. Moulded edge.

2767 SF BUC 1753. E603 L7. Destruction debris. Probably first half of the 5th century. Shelly limestone. from Purbeck? Veneer. 51.5 mm thick. Lower surface rough. Two contiguous edges. with rounded corner.

2768 SF BUC 1749. E632 L46. Destruction debris. Probably first half of the 5th century. Purbeck burr. Veneer. 47.5 mm thick. One edge?

2769 SF BUC 1750. E632 L46. Destruction debris. Probably first half of the

5th century. Purbeck burr. Veneer. 35.0 mm thick. Edges? Lower surface rough.

2770 SF BUC 1622. ES50 F183. Robber trench. Modern. Purbeck marble. Veneer. 29.5 mm thick. Two parallel grooves in upper surface. One edge?

2771 SF BUC 1724. H712 L30. Period 2. Limestone. Building block.
2772 SFBUC 1716. H713 L30. Period 2. Veneer. 31.0 mm maximum thickness. Lower surface quite rough. Section tapers slightly. One definite edge. possibly two others.

2773 SFBUC 1740. H unstratified. Purbeck marble. Veneer. 31.0 mm thick. Two contiguous edges.

2774 SF MID 18. A49 F22. Pit. Post-medieval to modern. Purbeck stone. Veneer. 15.0 mm thick. One edge.

2775 SF MID 430. A145 F36. Pit. Post-medieval to modern. Purbeck marble. Veneer (in two fragments), from 12.0 to 24.0 mm thick. Three rough edges. one complete 175.0 mm long. Maximum surviving length of the other dimension. 85.5 mm . Lower surface rough

2776 SF MID 26. B152 L4. Topsoil. 4th century or later. Purbeck marble. Veneer. 13.0 mm thick. Three edges. none complete.

2777 SF MID 39. A160 L5. Topsoil. 4th century or later. Greek green porphyry. Veneer. 6.5 mm thick. No edges.

2778 SF MID 59. A270 F64. Pit. Post-medieval to modern. White marble. Veneer strip. one face rough. 14.5 by 14.5 mm .

2779-80 SF MID 146. C476 F159. Gully. Period 3 destruction or later Roman. Purbeck marble. 2779) Veneer (in two fragments), 14.0 mm thick. No edges. 2730) Flange? Rectangular. with one rounded edge (?top), and traces along the length of the base of one large face of a projection at right angles to the plane of the face. Possibly from a gutter. 25.5 mm thick. 61.5 mm high.

2781 SF MID 120. C430 F160. Shallow pit. 2nd century to early medieval.

Purbeck marble. Veneer strip. 12.5 mm thick. 36.0 mm wide. Mitred.

2782 SF MID 143. C483 L26. Site clearance. mainly topsoil. Modern. Purbeck marble. Veneer. 17.0 mm thick. One edge. Lower surface rough.

SF MID 205. C542 L25. Topsoil accumulation of Site C Phase 2. Purbeck marble. Veneer. 33.0 mm thick. One edge.

2784 SF MID 215. A739 F25. Robber trench. Early medieval. Purbeck marble. Veneer. 17.5 mm thick. No edges.

2785 SF MID 246. A878 L598. Site clearance in A north. (Mainly topsoil. with modern material.) Purbeck marble. Veneer. 41.0 mm thick. Lower surface rough. All edges intact. quarter circle in shape.

2786 SF MID 268. C1018 F323. Pit. Site C Phase 1. Purbeck marble. Veneer. 16.0 mm thick. No edges.

2787 SF MID 29'?. CI 141 LI43. Metalling of Site C Phase 2 backyard. White marble. Veneer. 9.0 mm thick. Edges?

2788 SF MID 573. A1244 F43. Pit. Post-medieval to modern. White marble. Veneer. 8.5 mm thick. Three edges. one complete 41.5 mm long. Maximum surviving length of the other dimension. 25.0 mm .

2789 SF MID 352. A1268 F399. Robber trench. Early medieval. Purbeck marble. Veneer. 10.5 mm thick. No edges.

2790 SF MID 355. A1322 F44. Robber trench. Early medieval. Purbeck marble. Veneer. 15.0 mm thick. Two contiguous edges at right angles.

2791 SF MID 354. A1332 F38. Robber trench. Early medieval. Cipollino marble. Veneer. 14.0 mm thick. One edge?

2792 SF MID 414. C1504 L213. Patch of charcoal. Site C Phase 1. Purbeck marble. Veneer. 36.5 mm thick. At least two edges.

2793 SF MID 422. B1651 L215. Demolition debris. Period 3 destruction. Pavonazetto marble. Veneer strip. 13.5 mm thick. 35.0 mm wide.

2794 SF MID 511. A1668 F495. Kiln. 12th century. White marble. Veneer strip. 8.0 by 10.0 mm .

2795 SF MID 830. E1691 L223. Topsoil. Period 3 to early medieval. Purbeck marble. Veneer. 33.0 mm thick. At least one edge.

2796 SF MID 831. B1691 L223. Topsoil. Period 3 to early medieval. Purbeck marble. Veneer. 14.5 mm thick. Edges?

2797 SF MID 526. B1725 F508. Post-medieval floor and pit. Purbeck marble. Veneer. 32.0 mm thick. One edge? Lower surface rough.

2798 SF MID 468. A1753 F44. Robber trench. Early medieval. Carrara marble. Veneer strip. 12.5 by 17.0 mm .

2799 SF MID 460. C1766 F490. Pit. Early medieval. Purbeck marble. Veneer. 10.5 mm thick. One edge.

2800 SF MID 450. A1812 L223. Demolition debris. Period 3 demolition. Purbeck marble. Veneer. 19.5 mm thick. Mo edges.

2801 SF MID 609. A1844 F554. Gully. Medieval? White marble. Veneer. 22.5 mm thick. One edge.

2802 SF MID 525. C1835 F349. Kiln. 12th century. Purbeck marble. Veneer. 15.5 mm thick. No edges.

2803 SF MID 566. C2083 L21. Site clearance. mainly topsoil. Site C Phases 4 and 5. Purbeck marble. Veneer. 17.0 mm thick. No edges?

2804 SF MID 594. G2160 (F416?), Early medieval robber trench. Purbeck marble. Veneer. 39.0 mm thick. Two edges. both rough.

2805 SF MID 668. G2167 L239. Demolition debris. Period 3 destruction. Base for pilaster? Traces of paint.

2806 SF MID 648. A2476. Unstratified. but medieval or later context. Veneer. 22.0 mm thick. Two opposite and parallel edges.

2307 SF MID 678. E2563 L339. Metalling of backyard. Site E Phase 2. Purbeck marble. Veneer. section split. No edges.

2808 SF MID 712. A2725 L263. Demolition debris. Period 3. Strip. possibly associated with mosaic manufacture.

2809 SF MID 829. A3011 L445. Demolition debris of Period 3 hypocaust.

Purbeck marble. Veneer. 44.5 mm thick. One edge?
2810 SF MID 727. E3066 L428. Metalling. Medieval but pre Site E Phase 1. Purbeck marble. Veneer. 11.5 mm thick. Ho edges.

2811 SF MID 828. A3372 F1023. Pit. Period 1. Purbeck marble. Veneer. 32.5 mm thick. One edge.

2812 SF COC 153. 428 L1 16. Topsoil. Medieval. Purbeck marble. Veneer. 25.5 mm thick. One edge.

2813 SF COC 222. 541 F234. Pit. Medieval. Purbeck marble. Veneer. 61.0 mm thick. Lower surface rough. No edges?

2814 SF COC 200. 544 L1 13. Topsoil. Medieval. White marble with black veins. Veneer (in two fragments), 14.5 mm thick. No edges.

2815 SF COC 201. 551 F206. Robber trench. Early medieval. White marble. Veneer. 8.5 mm thick. Lozenge-shaped. one point missing. Surviving dimensions 38.5 by 53.0 mm .

2816 SF COC 121. 555 L69. Topsoil. Medieval. Weathered ?pinky-cream marble. Veneer. 9.5 mm thick. One edge.

2817 SF COC 157. 565 F213. Pit. Medieval. Purbeck marble. Veneer. 18.0 mm thick. No edges.

2318 SF COC 153. 590 L 151. Topsoil and rubble. Medieval. Pavonazetto marble. Veneer. 20.5 mm thick. No edges. Lower surface rough.

2319 SF COC 136. 628 F256. Robber trench. Early medieval. Pavonazetto marble. Veneer. 10.5 mm thick. No edges.

2820 SF COC 155. 673 F264. Pit. Medieval. Dull white marble. Veneer. 28.0 mm thick. No edges.

2321 SF COC 221. 989 F340. Pit. Medieval. Purbeck marble. Veneer. 96.5 mm thick. Two contiguous edges at right angles.

## TESSERAE

Tesserae (other than of tile) not directly associated with a mosaic (see also 2574 and 2808)

2822 SF LWC 4052. R5. Mortar floor. Period 4. Nine.

2823 SF BKC 5846. A175 L3. Topsoil and town ditch (F16) fill. Post-Roman. One.

2824 SF BKC 5842. D88 L1? Upper town ditch fill. Late Anglo-Saxon. One.

2825 SF CPS 966. 149 L31. Period 7. One.

2826 SF CPS 973. 199 F74. Period 7. Three.

2827 SF CPS 976. 230 L48. Topsoil. Period 6. One.

2328 SF CPS 965. 343 F87. Pit. Periods. Five.

2829 SF CPS 237. 406 F94=L68. Robber trench material. Period 5. Four.

2830 SF CPS 970. 419 L74. Robber trench material. Period 5. Three.

2331 SF CPS 983. 505 L68. Robber trench material. Period 5. Seventeen.

2832 SF CPS 974. 543 L72. Robber trench material. Period 5. Seven.

2333 SF CPS 968/969. 547 Fl 12. Robber trench material. Periods. Nineteen.

2834 SF CPS 979. 571 F112. Robber trench material. Periods. One.

2835 SF CPS 980. 579 F112. Robber trench material. Periods. Two.

2836 SF CPS 975. 586 F112. Robber trench material. Periods. Eleven

2837 SF CPS 981. 587 F112. Robber trench material. Periods. Six.

2838 SF CPS 984. 589 F116. Robber trench material. Periods. One.

2839 SF CPS 971. 593 F116. Robber trench material. Periods. Twenty-three.

2840 SF CPS 977. 606 F112. Robber trench material. Periods. Two.

2341 SF CPS 982. 608 F116. Robber trench material. Periods. Forty-five.
2342 SF CPS 972. 613 F119. Robber trench material. Period 5. Five.

2843 SF CPS 978. 630 F118. Robber trench material. Periods. Eleven.

2844 SF CPS 967. 821 Ft 18. Robber trench material. Periods. One.

The tesserae from the Cups Hotel all derive from a single pavement. All have been. and some still are. set in a base of opus siqninum with a very red mortar. almost wholly composed of tile chips. used either as a grout or as a skim on the opus siqninum.

2845 SF BUC 284. A474 G36. Grave fill. Period 2. One. 2846 SFBUC 1401. B875 G141. Grave fill. Period 2. One. 2847 SFBUC 1402. B1045 G121. Grave fill. Period 2. One. 2848 SF BUC 852. C1408 F57. Post-Roman. One.

2849 SF MID 634. CI 107 L1 14. Topsoil accumulation. Early medieval to Site C Phase 1 (or ?pre Site C Phase 1), One.

2850 SF MID 641. CI 140 L143. Metalling of Site C Phase 2 backyard. One.
2851 SF MID 680. CI 185 L188. Topsoil accumulation. Late Roman to early medieval. One.

2852 SF MID 681. CI 198 F382. Roman pit. Period 3 or later. One.
2853 SF MID 474. C1788 F354. Kiln. 12th-century. Nine.
2854 SF MID 473. C1851 F354. Kiln. 12th-century. Eleven.
2855 SF MID 825. A1971 F597. Post-medieval pit. Forty-six.
2856 SF MID 636. B2120. Three.
2857 SF MID 599. C2165 L225. Dump. Site C phase 1. One.
2858 SF MID 629. C2365 F349. Kiln. 12th century. One.
2859 SF MID 645. E2486 F793. Wood-lined pit. Site E phases 4-6. One.
2860 SF MID 644. E2503 F823. Pit. Site E phase 1. One.
2861 SF MID 717. E2808 L266. Topsoil. Site E phase 1. Two.

2862 SF MID 716. E2814 L413. Metalling. Medieval but pre site E phase 1. One.
2863 SF MID 726. E2917 L409. Topsoil of site E phase 1 or earlier (but postRoman), Two.

2864 SF MID 763. E3004 L413. Metalling. Medieval but pre site E phase 1. One.

2865 SF COC 173. 262 L49. Topsoil. Medieval. One.
2866 SF COC 127. 603 F255. Lens of topsoil. Early medieval. One.

## WATER-PIPE JUNCTION COLLARS

The collars are all iron. Associated nails and other fragments are also included here.

2867 SF LWC 3898(C), R59 F36. Robber trench. Post-Roman. Collar.
2868 SF BKC 1684(C), E607 F178 Pipe A. Period 5. Collar.
2869 SF BKC 1463(0/1683(0. E608 F178 Pipe A. Period 5. Collar.

2870 SF BKC 1860(C), El 188 F178 Pipe A. Periods. Collar.
2871 SF BKC 1461 (O. E605 F178 Pipe B. Period 5. Collar.
2872 SF BKC 1635(C), E606 F178 Pipe B. Period 5. Collar.
2873 SF BKC 1454(C), E613 F178 Pipe B. Period 5. Collar.
2874 SF BKC 1377(C), El 187 F178 Pipe B. Periods. Collar.
2875 SF BKC 1681(C), E602 F178 Pipe C. Period 5. Collar.
2876 SF BKC 1682(C), E603 F178 Pipe C. Period 5. Collar.
2377 SF BKC 1637(C), E604 F178 Pipe C. Period 5. Collar.
2378 SF BKC 1876(C), E1204 F173 Pipe C. Period 5. Collar.
2879 SF BKC 1356(0/1375(0/1386/1686(0.E526/599 F178 Pipe D. Period 5. Collar.

2880 SF BKC 1630(C), E598 F178 Pipe D. Period 5. Collar.
2881 SF BKC 1688(C), E600 F178 Pipe D. Period 5. Collar.

2882 SF BKC 1679(C), E601 F178 Pipe D. Period 5. Collar.
2883 SF BKC 1363(C), El 186 F178 Pipe D. Periods. Collar.

2884 SF BKC 1378(C), El 199 F173 Pipe D. Periods. Collar.

2385 SF BKC 1965(C), E1256 F365. Period 2. Collar.
2386 SF BKC 1337. E539 F166. Period 5. Fragments. iron and wood.
2387 SF BKC 1338/1412. E542 F166. Period 5. Fragments. iron and wood.
2388 SF BKC 1411. E547 F166. Period 5. Fragments. iron and wood.
2889 SF BKC 1432. E553 F165. Period 5. Nail.

2890 SF BKC 1423. E556 F165. Period 5. Nail.

2891 SF BKC 1427. E557 F165. Period 5. Nail.
2892 SF BKC 1444. E553 F166. Period 5. Nail.

2893 SF BKC 1409. E561 F166. Period 5. Nail.

2894 SF BKC 1408. E562 F166. Period 5. Nail.
2895 SF BKC 1436. E567 F166. Period 5. Nail.

2896 SF BKC 1416. E568 F166. Period 5. Nail

2897 SF BKC 1417. E572 F166. Periods. Nail.

2898 SF BKC 1431. E574 F166. Periods. Nail.

2899 SF BKC 1435. E575 F166. Period 5. Nail.

2900 SF BKC 1418. E576 F166. Periods. Nail.

2901 SF BKC 1425. E577 F166. Period 5. Nail.

2902 SF BKC 1426. E581 F166. Period 5. Nail

2903 SF BKC 1437(C), E590 Fi65. Period 5. Nail.
2904 SF BKC 1424. E594 F165. Period 5. Nail.

2905 SF BKC 1459. E652 F166. Period 5. Fragments of wood.
2906 SF BKC 1453. E655 F166. Period 5. Fragments of wood.

2907 SF BKC 2447(C), G393 F177. Period 3/4-5. Collar.
2908 SF BKC 2551(C), G450 F195. Period 3/4-5. Collar.
2909 SF BKC 2550(C), G451 F205. Period 3/4-5. Collar.

2910 SF BKC 2553(C), G466 F152. Period 3/4-5. Collar.

2911 SF BKC 2554(C), G467 F195. Period 3/4-5. Collar.
2912 SF BKC 2552(C), G468 F205. Period 3/4-5. Collar.
2913 SF COC 234. 1006 F36S. Water-main. Period 2. Collar.

2914 SF COC 212. 1007 F36S. Water-main. Period 2. Collar.

## HANDLES

## Bone and antler handles

## One-piece handles

a) plain (Fig 110; 2915-2920)

2917 SF BKC 409(C), A92 (L12), Post-Raman. Small tapering polished bone handle with traces of a square-sectioned iron tang in the narrow end. Length 43.0 mm . Maximum diameter 17.5 mm . Possibly post-Roman.

2918 SF BKC 410(C), A92 (L12), Post-Roman. Tapering polished bone handle. The cancellous tissue has been removed. Length 58.5 mm . maximum diameter 19.0 mm . Possibly post-Roman.

2919 SF BKC 1819. E1093 L336. Charcoal tip-line. Period lb. Fragment of a red deer antler handle similar to 2916 . but with a more pronounced curve. Length 59.5 mm . maximum diameter 23.0 mm .

2920 SF BKC 5877. J32 L1. Site clearance. Fragment of a tapering bone handle. with an iron tang apparently piercing it completely. Length 52.5 mm . maximum diameter 16.0 mm . Possibly post-Roman.
b) waisted
i) plain (Figs 110 and 1135 2921-2924. 2947)

2923 SF BKC 1773(C), E1077 L336. Charcoal tip-line. Period lb. Fragment of a large handle similar to 2921. Made from a metapodial. No trace of iron survives. Length 88.0 mm . maximum width 19.0 mm . Round section.

2924 SF BKC 1915(C), El 194 L366. Dump. Period lb. Fragment of a bone handle similar to 2921 . The top end has been broken off and the lower
is damaged. The iron tang survives. Probably made from a solid piece of bone. Surviving length 71.0 mm . maximum width 16.5 mm . Oval section.
ii) decorated (Figs 110 and i11; 2925-2926. 2934)

All in printed catalogue.
c) with incised decoration
i) bands of trellis decoration at each end (Fig 110; 2927-2929)

2927 SF BKC 5356. G73 F11. Timber-lined drain. Period 5c. Complete bone handle made from a metapodial with a band of incised trellis decoration at each end. There are traces of iron at the blade end. Most of the length of the bone was used so that the handle has a natural waist. Length 84.5 mm . maximum width 21.0 mm . Similar to Fig 110. 2929.

2928 SF BKC 2209(C), G101 F11. Timber-lined drain. Period 5c. Fragment of a bone handle made from a metapodial. Part of the tang survives in the handle. Only a small part of the trellis band at the upper end survives. At the lower end there are two adjacent bands. the lower is cut more deeply and is wider than the upper one. The junction of each band is blundered. Surviving length 92.0 mm . maximum width 24.0 mm .
ii) ladder decoration (Fig 110; 2930-2931)

2931 SF BUC 1742. H137 L1. Surface clearance. Modern. Fragment of a bone handle as Fig 110. 2930. also made from a metapodial. The handle has split longitudinally. The complete face has a zig-zag of three ladders. Length 90.0 mm . maximum width 29.0 mm .
iii) chevron grooving (Fig 110; 2932)

In printed catalogue.

Two-piece handles (Fig ill; 2933-2937)
2937 SF BUC 639. C1249 L4. Modern. A fragment of one convex bone plate from a two-piece handle. Somewhat similar to 2935 but with one band of trellis work at the surviving end and only transverse grooves decorating
the remaining part. There are two rivet holes. The piece has broken across one hole. Surviving length 41.0 mm . maximum width 18.0 mm . The piece was found close to the group of bone artefacts from a craft workshop (Crummy 1981? see also 4348-4395), but it is probably not associated with them.

## Copper-alloy handles

All in printed catalogue (Figs 112 and 113? 2938-2939. 2950),

## IRON KNIFE OR CLEAVER BLADES

(Fig 113; 2940-29515
2940 SF LWC 1057(C), C F205. Posthole. Period 1. A blade with a short part of a square section tang. The tip of the blade is missing and the object is too corroded for a section to be described. Length 151.0 mm . probable width 20.0 mm .

2941 SF LWC 2957(C), J749. Make-up. Period 4a. A fragment of a ?straightedged blade with a curved back. The tip is missing. Length 108.0 mm . maximum width approximately 31.0 mm .

2943 SF LWC 3130(C), J827. Occupation. Period 3. Three fragments of a blade with straight edge and gently curving back. The tip and tang are missing. Length 119.5 mm . maximum width 28.0 mm .

2945 SF LWC 3434(C), J1106 F367. Pit. Period 4. Two fragments of a blade with straight edge and gently curving back. The tip and tang are missing. Length 78.0 mm . maximum width 25.0 mm .

2946 SF LWC 3428(C), J1212. Occupation. Period 2. Two fragments of a blade with straight edge and gently curving back. The tip and tang are missing. Length 78.0 mm . maximum width 26.5 mm .

2948 SF LWC 3583(C), J 1551 . Make-up. redeposited Period 2 demolition. Period 3. Two fragments of a ? blade.

2950a SF IRE 13(C), F15. Grave deposit (on chest), 3rd- to 4th-century inhumation. A small iron knife in two fragments. The handle thickens at the terminal and may end in a suspension loop (as Fig 113. 2944), Ho bone or wooden plates survive from the handle. but it is possible that originally there was a grip of some kind. The back of the blade is straight. the edge is short and straight. The length of the blade seems out of proportion to its breadth. and part may therefore be missing. The knife was wrapped in textile. fragments of which adhere to both blade and handle. Length 110.0 mm (including handle), Maximum width of blade 32.0 mm . An iron knife wrapped in textile was found in a 4th-century inhumation at Butt Road (Fig 113. 2950),

2951 SF COC 192. 891 F332. Pit. Period 3. A fragment of a leaf-shaped ?blade. Length 80.5 mm . maximum width 19.5 mm .

## HONES

(Fig 114? 2952-2972)
2952 SF LWC 207. A33 F18. Pit. 13th century. Fragment of a hone of rectangular section. Maximum dimensions 26.5 by 18.0 mm . Length (incomplete) 54.5 mm . Calcareous sandstone with ostracods and a few mica flakes.

2954 SF LWC 4086. H201. Surface cleaning. Roman?/Anglo-Saxon?/postmedieval? Fragment of a hone of oval section. Maximum dimensions 24.0 by 18.0 mm . Length (incomplete) 72.5 mm . Glauconitic micaceous calcareous sandstone with carbonised plant fragments. similar to Ryegate stone from the Upper Greensand. Possibly post-Roman.

2955 SF LWC 2358. J200 F99. Flue?? for lime pit F16. Medieval. Fragment of a hone of rectangular section. Maximum dimensions 27.0 by 15.0 mm . Length (incomplete) 43.0 mm . Calcareous sandstone with ostracods and a few mica flakes. Possibly post-Roman.

2957a SF LWC 2987. L317 F184. Stakehole. Period 4(2), Fragment of a hone of oval section. Maximum dimensions 25.5 by 14.5 mm . Length (incomplete) 60.0 mm . Calcareous sandstone with ostracods and a few mica flakes.

2958 SF LWC 3314. L409. Make-up/dump. Period 3b. Fragment of a rectangular section hone. apparently used at its new length as one surface is concave. with the lowest point at the present centre of the length. and the broken edge is slightly abraded. Maximum dimensions 31.5 by 25.5 mm . Maximum length 60.0 mm . Calcareous sandstone with ostracods and a few mica flakes.

2959 SF BKC 2153. E1318 L1. Modern. Fragment of a hone of rectangular section. Maximum dimensions 28.5 by 16.0 mm . Length (incomplete) 56.0 mm . The broken end is abraded. Calcareous sandstone with
astracods and a few mica flakes.

2960 SF BKC 2042. Gl. Site cleaning. Unstratified. Fragment of a rectangular section hone with slight grooving on both narrow faces as well as wear on one broad face. Maximum dimensions 21.0 by 12.0 mm . Length (incomplete) 71.0 mm . Calcareous sandstone with ostracods and a few mica flakes.

2963 SF BKC 3626. J358. Modern. Complete rectangular section hone. Maximum dimensions 29.0 by 23.0 mm . Length 78.5 mm . Siltstone.

2964 SF BKC 5056. J403. Modern. Fragment of an oval section hone. Maximum dimensions 33.0 by 24.0 mm . Length (incomplete) 46.0 mm . Calcareous sandstone with ostracods and a few mica flakes.

2965 SF BKC 3742. J491. Surface cleaning. Periods 2-6. Fragment of a hone of rectangular section. Maximum dimensions 33.0 by 24.0 mm . Length (incomplete) 38.5 mm . Calcareous sandstone with ostracods and a few mica flakes.

2967 SF BKC 6044. V250 F59. Slot? Period 5? Complete hone of rectangular section. All faces are worn. Maximum dimensions 35.5 by 23.5 mm . Length 82.0 mm . Finer-grained sandstone with ostracods and a few mica flakes.

2970 SF BKC 6042. VI124. Period 4. Fragment of a rectangular section hone. 36.0 by 22.0 mm . Length (incomplete) 56.5 mm . Calcareous sandstone with ostracods and a few mica flakes.

2971 SF BKC 6043. V unstratified. Small fragment of a ?hone of rectangular section. 24.5 by 15.5 mm . Length (incomplete) 27.0 mm . Calcareous sandstone with ostracods and a few mica flakes.

2972 SF BUC 1392. A298 L1. Post-medieval. Fragment of an extremely worn hone. probably originally of rectangular section. Maximum dimensions 23.5 by 13.0 mm . Length (incomplete) 49.5 mm . Cherty sandstone. Possibly post-Roman. and possibly not a hone.

## VARIOUS IRON TOOLS

(Fig 115;2973-2981)
2973 SF LWC 542(C), B206 F70. Cellar backfill. Period 5. A socketed tool. in three pieces. with only a small part of the blade remaining. The blade seems to be curved and to be of a thickish rectangular section. Length 69.0 mm .

2976 SF LWC 2581(C), J509 F59. Timber-lined drain. Period 4. A fragment of a blade with part of the looped spring of a pair of shears. distorted and damaged. Length 131.0 mm .

## NAILS AND STUDS

## Copper-alloy nails

With a globular. bun shaped or biconical head (Fig 116; 2982-3050)

2982 SF LWC 487(C), B173 F70. Cellar backfill. Period 5. Diameter of head 9.0 mm . ?Circular section shaft. incomplete. Length 21.5 mm .

2983 SF LWC 492. B173 F70. Cellar backfill. Period 5. Diameter of head 8.5 mm . Polygonal section shaft. Length 30.5 mm .

2984 SF LWC 492. B173 F70. Cellar backfill. Period 5. Diameter of head 8.5 mm . Polygonal section shaft. clenched. Length 27.5 mm .

2985 SF LWC 572. B206 F70. Cellar backfill. Period 5. Diameter of head 8.0 mm . Circular section shaft. Length 36.0 mm .

2986 SF LWC 651. B232 F92??. Pit. Periods. Diameter of head 14.0 mm . Circular section shaft. Length 50.0 mm .

2987 SF LWC 970. C194. Make-up? Period 3? A corroded example. Diameter of head 6.0 mm . ?Circular section shaft. incomplete. Length 16.5 mm

2988 SF LWC 1078(C), C413. Make-up. Period 3b. Diameter of head 5.5 mm . ?Square section shaft. tip missing. Length 18.0 mm .

2989 SFLWC 1414(C), El 10. Road-gravel - contaminated? Roman road. Diameter of head 5.5 mm . ? Square section shaft. clenched. Length 18.5 mm .

2990 SFLWC 1507(C), E125 F61. Pit. Late Roman. Diameter of head 7.0 mm .
Circular section shaft. incomplete. Length 22.5 mm .

2991 SF LWC 1531(C), E125 F61. Pit. Late Roman. Diameter of head 6.5 mm . Polygonal section shaft. incomplete. Length 16.5 mm .

2993 SF LWC 2533. J476. Machine clearance. Unstratified. Diameter of head 11.0 mm . Circular section shaft. incomplete. Length 25.5 mm .

2994 SF LWC 2621(C), J541. Uppermost level of footway. Period 4. Diameter of head 5.0 mm . Square section shaft. incomplete. Length 13.5 mm . 2996 SF LWC 3154(C), J921 F306. Daub wall. Period 2. Diameter of head 4.5 mm . Circular section shaft. incomplete (only the very tip missing), Length 18.5 mm .

2997 SF LWC 3210(C), J951. Make-up. Periods. In three fragments. Diameter of head 7.5 mm . Circular section shaft. incomplete. Length 20.0 mm .

2993 SF LWC 3212(C), J952 F407?. Destruction debris in situ. Period 3. Diameter of head 8.0 mm . Circular section shaft. Length (bent) 35.5 mm . 2999 SF LWC 3228. J952 F407?. Destruction debris in situ. Period 3. In two fragments. Diameter of head 6.0 mm . Circular section shaft. Length 19.0 mm .

3000 SF LWC 3523(C), J 1431 F466. Pit. Period 4a. A very corroded nail. Diameter of head 7.5 mm . "'Circular section shaft. incomplete. Length 23.5 mm .

3001 SF LWC 3067(C), K241 Fl 17. Slot. Medieval or later? Diameter of head 11.0 mm . Circular section shaft. incomplete. Length 34.5 mm .

3003 SF LWC 3713(C), K3S6 F206. Oven. Period 3. Diameter of head 5.5 mm . Circular section shaft. incomplete. Length 11.0 mm .

3004 SF LWC 3796(C), K511. Garden topsoil. Period 4b. Diameter of head 5.0 mm . Square section shaft. Length 22.5 mm .

3005 SF LWC 2940(C), L296. Kitchen floors. occupation. Period 4(2), Diameter of head 5.0 mm . Square section shaft. Length 23.5 mm .

3006 SF LWC 2538. Ml 15. Rampart la. Diameter of head 7.5 mm . Polygonal section shaft. Length 33.5 mm .

3007 SF LWC 3912(C), R1 16. Floor? Period 4. Diameter of head 8.0 mm .

Polygonal section shaft* ?incomplete. Length 19.0 mm
3008 SF LWC 3961(C),R215 F82. Burnt deposit. Period 3a or 4. Diameter of head 8.5 mm . Rectangular section shaft. incomplete. Length 31.5 mm . 3009 SF BKC 866(C), D275 LI3. Town ditch fill. Anglo-Saxon. Diameter of head 6.5 mm . Square section shaft. Length 24.0 mm

3010 SF BKC 1367. E541 F165. Pipe trench. Period 4. Diameter of head 5.0 mm . ?Square section shaft. incomplete. Length 12.5 mm .

3011 SF BKC 1613(C),E881 L260. Make-up. Period 3b. Diameter of head 9.5 mm . Circular section shaft.?incomplete. Length (bent) 50.0 mm . 3012 SF BKC 2002. E1316 L324/356/318. Period lb-2. Diameter of head 5.0 mm . Circular section shaft. Length 17.0 mm .

3013 SF BKC 2126. G40 L7. Occupation. Period 5a or b. In two fragments Diameter of head 6.0 mm . Rectangular section shaft. Length 23.5 mm 3014 SF BKC 2574(C), H7 L2. Topsail. Post-Roman. Diameter of head 6.0 mm . Polygonal section shaft. Length 28.5 mm

3015 SF BKC 2580. H7 L2. Topsoil. Post-Roman. Diameter of head 7.0 mm . ?Polygonal section shaft. clenched. Length 26.5 mm .

3016 SF BKC 2325. H15 L2. Topsoil. Post-Roman. Diameter of head 8.0 mm . Polygonal section shaft. Length 32.0 mm .

3017 SF BKC 2325. H15 L2. Topsoil. Post-Roman. Diameter of head 9.0 mm . Circular section shaft. Length 23.5 mm .

3018 SF BKC 2798(C), H305 LI3. Dump. Period 5b (end) and possibly into 5c or 6. Diameter of head 8.0 mm . Circular section shaft. incomplete. Length 25.5 mm .

3019 SF BKC 2979. J27 L1. Site clearance. Diameter of head 6.5 mm . Polygonal section shaft. Length 26.0 mm .

3020 SF BKC 3146. J32 L1. Site clearance. Diameter of head 8.0 mm . Square section shaft. incomplete. Length 22.0 mm .

3022 SF BKC 3167. J89 F16. Trench. Modern. Diameter of head 5.5 mm .

Polygonal section shaft. Length 22.0 mm .
3023 SF BKC 3208. J149 L1. Site clearance. Diameter of head 8.0 mm .

Circular section shaft. incomplete. Length 27.0 mm .

3024 SF BKC 3296. J198 F45. Timber-lined pit. Period 5b. Diameter of head 6.0 mm . Fragment only of circular section shaft

3025 SF BKC 3373(C), J214 F50. Pit and midden. Periods 5c/6. Diameter of head 3.0 mm . Square section shaft. clenched. Length 27.0 mm .

3026 SF BKC 3658. J340 F147. Posthole. Periods 3/4/5a. Diameter of head 5.5 mm . Square section shaft. Length 24.5 mm .

3027 SF BKC 3647. J359. Machine trial trenching. Diameter of head 5.0 mm Polygonal section shaft. ?incomplete. Length 17.5 mm long.

3028 SF BKC 3732. J483. Surface cleaning. Periods 2-6. Diameter of head 5.0 mm . ?Circular section shaft. Length 21.5 mm .

3030 SF BKC 3850. M10. Modern with Periods 5 and 6. Diameter of head 5.5 mm . Square section shaft. incomplete. Length 23.0 mm .

3031 SF BKC 4192. N159. Period 6. Diameter of head 7.0 mm . Square section shaft. Length 20.0 mm .

3032 SF BKC 4222. N210 F71. Pit. Period 6 or later. Diameter of head 8.0 mm . ?Square section shaft. incomplete. Length 21.5 mm .

3033 SF BKC 4447. N495 L102. Floor/dump. Period 5b 1. Diameter of head 6.5 mm . ?Circular section shaft. Length (bent) 28.0 mm .

3034 SF EKC 4471. N525 L82. Destruction debris. Period 5a. A very corroded example. Diameter of head 8.5 mm . Polygonal section shaft. Length 29.0 mm

3035 SF BKC 4465. N533 F122. Clay-lined pit. Period 5b2. Diameter of head 8.5 mm . Circular section shaft. Length 17.5 mm

3036 SF BKC 4479. N627 F154. Pit. Period 5a. Diameter of head 7.5 mm . ?Circular section shaft. incomplete. Length 15.5 mm .

3037 SF BKC 4572. T152 F65. Pit. Period 3. Diameter of head 6.5 mm .
?Circular section shaft. incomplete. Length 9.0 mm .
3038 SF BKC 4609. T247 L21/35. Period 3. A very corroded example. Diameter of head 7.0 mm . ?Square section shaft. incomplete. Length 14.5 mm .

3039 SF BKC 4928. VI1 L5. Cultivated soil. Late Period 5. Diameter of head 6.0 mm . Polygonal section shaft. clenched. Length 20.0 mm .

3040 SF BKC 4956. V50 L22. Dump. Late Period 5. Diameter of head 6.0 mm . Polygonal section shaft. Length 23.5 mm .

3041 SF BKC 4965. V76 L22. Dump. Late Period 5. Diameter of head 3.5 mm Circular section shaft. incomplete. Length 15.5 mm .

3042 SF BKC 5123(C), V149 F50. Pit. Period 5 (or 6), Diameter of head 9.0 mm . Polygonal section shaft. incomplete. Length 29.5 mm .

3043 SF BKC 5499. V920 L11. Dump. Late Period 5. A very corroded example. Diameter of head 7.0 mm . ?Square section shaft. incomplete. Length 13.0 mm .

3044 SF BUC 368. B958 L1. Post-Roman. Diameter of head 6.0 mm . Polygonal section shaft. Length 26.0 mm .

3045 SF BUC 517. C962 G323. Grave fill. Period 2. Diameter of head 7.0 mm . Polygonal section shaft. Length 29.0 mm .

3046 SF BUC 549. C1031 L1. Periods 1-2. Diameter of head 10.0 mm . Square section shaft. incomplete. Length 34.0 mm .

3047 SF BUC 781. C1693 L2. Period 1. Diameter of head 7.0 mm . ?Square section shaft. Length 27.5 mm .

3043 SF BUC 1632. E871 L70. Destruction debris. Probably first half of the 5th century. Diameter of head 5.5 mm . Polygonal section shaft. Length 22.0 mm .

3049 SF BUC 1537. H466 G526. Grave fill. Period 2. Diameter of head 5.5 mm . Square section shaft. Length 19.0 mm .

3050 SF MID 760. A2361 L235. Make-up. Period 3 destruction or later. Diameter of head 8.0 mm . Polygonal section shaft. Length 31.0 mm .

With a flat head (Fig 117; 3051-3080)
3051 SF LWC 986(C), A313 Fl 17. Ditch. Period 1. Diameter of head (damaged) approximately 5.5 mm . Polygonal section shaft. incomplete. Length 23.5 mm .

3052 SF LWC 986(C), A313 Fl 17. Ditch. Period 1. Diameter of head 10.5 mm . ?Square section shaft. incomplete. Length 9.0 mm .

3053 SF LWC 2951. J743. Occupation. Period 4a. Diameter of head (crushed) 4.5 mm . Square section shaft. Length 22.5 mm .

3054 SF LWC 2956(C), J750. Demolition. Period 4a. Diameter of head 5.0 mm . Square section shaft. Length (bent) 6.5 mm .

3055 SF LWC 2956(C), J750. Demolition. Period 4a. Diameter of head 3.0 mm . Square section shaft. Length 5.0 mm .

3056 SF LWC 3493(C), J 1305. Make-up or dump. Period 1. Diameter of head 9.0 mm . Circular section shaft. Length 6.0 mm .

3053 SF LWC 2656. K128 F41. Pit. Medieval/post-medieval/modern? Diameter of head 10.0 mm . Circular section shaft. Length (bent) 21.0 mm .

3060 SF BKC 133(C), A65 F16. Town ditch fill. Anglo-Saxon or Period 6. Diameter of head 6.0 mm . Circular section shaft. Length 13.0 mm .

3061 SF BKC 329. A90 F16. Town ditch fill. Anglo-Saxon or Period 6. A corroded example. Diameter of head 8.0 mm . ?Square section shaft. incomplete. Length 11.5 mm .

3062 SF BKC 1199. E281 L447. Town ditch (F133) fill. Late Period 6 or Anglo-Saxon. Diameter of head 6.0 mm . Circular section shaft. Length (bent) 15.5 mm .

3063 SF BKC 1553(C), E823 L200. Make-up. Period 3b. Diameter of head 7.0 mm . Shaft missing.

3064 SF BKC 1537. E865 L93. Make-up. Period 3a or 3b. Diameter of head 6.5 mm . Square section shaft. incomplete. Length 7.0 mm .

3065 SF BKC 3293. J201 L28. Dump. Periods $5 \mathrm{~b} / 5 \mathrm{c} / 6$. Diameter of head 4.0 mm . Polygonal section shaft. Length 7.0 mm .

3066 SF BKC 3293. J201 L28. Dump. Periods 5b/5c/6. Diameter of head 8.0 mm . Circular section shaft. Length 11.5 mm .

3068 SF BKC 4696. T332. Make-up. Period 3 or 4. Head damaged. diameter possibly 9.0 mm . Rectangular section shaft. incomplete. Length 14.0 mm .

3069 SF BKC 4790. T409. Period 1 or 2. Diameter of head 6.5 mm . Circular section shaft. incomplete. Length 5.0 mm .

3071 SF BKC 5285. V356 L41. Dump. Late Period 5. Diameter of head 8.0 mm . Square section shaft. Length 24.5 mm .

3072 SF CPS 572(C), 613 Fl 19. Robber trench material. Periods. Diameter of head 7.5 mm . Square section shaft. Length 22.0 mm .

3074 SF BUC 366. B824 F119. Timber-lined shaft. Period!. Diameter of head 4.5 mm . Square section shaft. clenched. Length 14.0 mm .

3075 SF BUC 381. B1038 G168. Grave fill. Period 2. Diameter of head 3.5 mm . Square section shaft clenched. Length 28.5 mm .

3076 SF BUC 416. B1151 L2. Periods i-2. Diameter of head 9.5 mm . Square section shaft. Length 7.0 mm .

3077 SF BUC 581. C1116 G373. Grave fill. Period 2. Diameter of head 5.5 mm . Square section shaft. incomplete. Length 22.0 mm .

3078 SF BUC 755. CI 168 G367. Grave fill. Period 2. Diameter of head 8.5 mm . Square section shaft. clenched. Length 21.0 mm .

3079 SF BUC 620. C1256 G379. Grave fill. Period 2. Diameter of head 4.0 mm . Square section shaft. Length 24.0 mm .

3030 SF MID 736. A3195 L325. Daub floor of Period 2b. Diameter of head 12.0 mm . Circular section shaft. incomplete. Length 11.0 mm .

With a convex head (Fig 118; 3081-3091)
3083 SF BKC 418(C), A107 F16. Town ditch fill. Anglo-Saxon or Period 6.

Diameter of head 4.0 mm . Square section shaft. Length 10.0 mm .
3084 SF BKC 1762. E1077 L336. Charcoal tip-line. Period lb. A very corroded example. Diameter of head (damaged) 7.0 mm . ?Polygonal shaft. incomplete. Length 22.0 mm .

3085 SF BKC 2734. H178 F76. Pit. Period 5c. Diameter of head 8.0 mm . Rectangular section shaft. incomplete. Length 8.5 mm .

3086 SF BKC 2739(C), H209 L12. Destruction debris of Period 5b building. Period 5b (end), Diameter of head 8.0 mm . Square section shaft. Length 17.5 mm .

3087 SF BKC 3432. J236 L32. Make-up. Period 5b. Phase 1. Diameter of head 6.0 mm . Circular section shaft. Length 16.0 mm .

3088 SF BKC 3510(C), J283 L33. Dump. Periods 3/4/5a. A very corroded example. Diameter of head 9.0 mm . ?Circular section shaft. incomplete. Length 22.5 mm .

3089 SF BKC 4931. V3 L2. Dump. Late Period 5. Diameter of head 8.5 mm . Polygonal section shaft. Length 49.0 mm .

3090 SF MID 621. A2272 F712. Pit. Period 3? Diameter of head 7.5 mm . Square section shaft. Length 25.0 mm .

Miscellaneous (Fig 119; 3092-3094)
3094 SF COC 7. 13 F12. Wall foundation. Period 5. An iron nail with convex copper-alloy head. Diameter of head 10.5 mm . ?Circular section shaft. incomplete. Length 40.0 mm .

## Copper-alloy studs

With a flat head (Fig 120? 3095-3137)

3095 SF LWC 954(C), A319. Occupation debris from industrial activity behind rampart. Period 1. Four fragments of a flat stud head. Diameter approximately 18.0 mm .

3097 SF LWC 1009. C332. Make-up. Period 4. A fragment of a stud head. The centre of the head is slightly sunk below the rim. which is turned down. Diameter i9.0 mm.

3099 SF LWC 2843(C), J648. Make-up? Period 4. A flat-headed stud in two fragments. Diameter of head 13.5 mm . Square section shaft. Length 5.5 mm .

3102 SF LWC 3209(C), J951. Make-up. Period 3. Similar to Fig 120.3100. Diameter of head 16.0 mm . Square section shaft. Length 4.5 mm . 3103 SF LWC 3230(C), J951. Make-up. Period 3. Similar to Fig 120.3100. Diameter of head 15.0 mm . Square section shaft. incomplete. Length 15.0 mm .

3104 SF LWC 3360(C), K440 F261. Robber trench. Periods. Fragment of a stud head. with a slight concentric convex moulding near the rim on the underside. Diameter 28.0 mm .

3106 SF LWC 2425(C), M86. Rampart le. Fragment of a stud similar to Fig 120. 3100 but with two concentric convex mouldings on the underside. Diameter 19.0 mm . Square section shaft. bent. Length 5.0 mm .

3107 SF BKC 1239(C), E343 L92. Make-up. Period 3b. 4 or 5. Part of the head is missing. Diameter 15.5 mm . Square section shaft. ?complete. Length 4.5 mm .

3108 SF BKC 1488(C), E736 Li83. Levelling. Period 2. The head is damaged.

Probably originally flat. the centre of the head above the shaft now stands well clear of the rest of the head. Diameter 10.0 mm . Square section shaft. Length 6.5 mm .

3109 SF BKC 1339. El 164 L364. Metalling. Period 2. All the rim is damaged and the diameter cannot therefore be measured. Square section shaft. Length 4.5 mm .

3112 SF BKC 3664. J404 L48. Make-up for alley. Period 2. Fragment of a stud with riveted shaft. Diameter of head 17.0 mm . ?Circular section shaft. Length 5.5 mm .

3113 SF BKC 3773. J531. Period 2? Fragment of a stud. Diameter of head 15.0 mm . Square section shaft. incomplete. Length 3.5 mm .

3114 SF BKC 3513. K459 L70. Town ditch 07125), Period 4a. Small stud with a riveted shaft. Diameter of head 5.5 mm . Circular section shaft. Length 4.5 mm .

3115 SF BKC 3339. M10. Modern with Periods 5 and 6. Part of the head is missing. Diameter 19.0 mm . Square section shaft. Length 15.5 mm . 3116 SF BKC 4076. N61. Period 6? Part of the head is missing. Diameter 14.5 mm . ?Circular section shaft. incomplete. Length 4.0 mm .

3118 SF BKC 4437. K495 L102. Floor/dump. Period 5b 1. A stud head folded in half with a small part only of the shaft surviving. Diameter 37.5 mm . ? Circular section shaft. incomplete. Length 5.5 mm .

3119 SF BKC 4494. T1. Unstratified. Similar to Fig 120.3101. Diameter of head 13.5 mm . Square section shaft. Length 5.0 mm .

3120 SF BKC 4557. T140 L19. Destruction debris of Period 2. Period 3. Probably a stud head. Most of the centre is missing due to bronze disease. Diameter 32.5 mm .

3121 SF BKC 4605. T267 F122. Pit? Periods. Similar to Fig 120. 3101. Diameter of head 18.0 mm . Square section shaft. bent. Length 7.5 mm . 3122 SF BKC 4676. T403 L50. Charcoal. Period 1. A stud head with two
concentric convex mouldings. one round the centre and another near the rim. which is also slightly convex. Diameter 27.0 mm

3123 SF BKC 4658. T412 F25. Construction trench of cellar. Period 5c Diameter of head 16.0 mm . Square section shaft. incomplete. Length 6.5 mm .

3125 SF BKC 5264. V45 L5. Cultivated sail. Late Period 5. Diameter of head 11.0 mm . Square section shaft. bent. Length 4.5 mm .

3126 SF BKC 5028(C), V87. largely L11. Dump. Late Period 5. The head is bent. similar to Fig 120. 3096. Diameter 22.0 mm . Square section shaft. Length 24.0 mm .

3127 SF BKC 5203. V271 L46. Make-up? Period 5. Probably a stud head. Diameter 30.5 mm .

3128 SF BKC 5182. V286 L34. Make-up? Periods. Similar to Fig 120.3101. Diameter of head 13.5 mm . Square section shaft. Length 9.0 mm .

3129 SF BKC 5407. V679. Mainly late Period 5 but with some modern material. Diameter of head 20.0 mm . Square section shaft. bent. Length 9.5 mm . 3130 SF BKC 5721. V1042 L64. Dump. Period 4. Part of the head is missing. Diameter of head 23.0 mm . Square section shaft. incomplete. Length 6.0 mm .

3131 SF BUC 71. A359 G27. Grave fill. Period 2. A small stud. The rim is turned down. Diameter of head 6.5 mm . Square section shaft. bent. Length 6.5 mm .

3133 SF BUC 590. C1191 G378. Grave fill. Period 2. Similar to Fig 120. 3101. Diameter of head 21.0 mm . The shaft is missing.

3135 SF BUC 738. C1478 G417. Grave fill. Period 2. Fragment of a large stud head with turned-down rim. Diameter approximately 37.0 mm .

3136 SF BUC 775. C1574 G425. Grave fill. Period 2. Similar to Fig 120. 3101. Diameter of head 19.0 mm . Square section shaft. bent. Length 8.0 mm .

3137 SFBUC 1684. H885 G651. Grave fill. Period 1. Similar to Fig 120.3101.

The head is partly folded over. Diameter 14.5 mm . Square section shaft. clenched. Length 8.5 mm .

With a convex head (Fig 120; 3138-3216)

3139 SF LWC 678. A179. Make-up for mortar floor. Period 4. Stud with a high convex centre and convex rim. Diameter 24.0 mm . Square section shaft incomplete. Length 12.5 mm . Similar to Fig 120. 3148

3142 SF LWC 753. B321 F70. Cellar backfill. Period 5. A crushed stud. the head was probably originally convex. Diameter of head 26.5 mm . Square section shaft. bent. Length approximately 26.0 mm .

3143 SF LWC 755(C), B321 F70. Cellar backfill. Period 5. A stud head. slightly crushed. Diameter 17.0 mm .

3144 SF LWC 892. B417. Occupation material. Period 4 (or 5), A small stud. Diameter of head 4.0 mm . Rectangular section shaft. clenched. Length 9.0 mm .

3145 SF LWC 730. B F70. Probably cellar backfill. Period 5. A copper-alloy stud head with an iron shaft. possibly filled with lead solder? Similar to Fig 120. 3160. Diameter of head 15.0 mm . Shaft incomplete. Length 11.0 mm .

3146 SF LWC 1039. C293. Make-up. Period 4. Stud in three fragments. with a small head. Diameter 6.5 mm . Square section shaft. Length 15.5 mm .

3147 SF LWC 1110(C), C419. Floor and make-up. Periods 1 and 2. Fragmented stud with marked convex centre. but otherwise similar to Fig 120. 3101. Diameter of head 13.5 mm . Square section shaft. Length 6.5 mm .

3150 SF LWC 1379(C), E84 (F49), Sinkage? Late Roman or Anglo-Saxon. Similar to Fig 120. 3138. Diameter 12.5 mm . The shaft is missing.

3153 SF LWC 2806(C), J615. Make-up for second gravelled surface of yard. Period 4a. Diameter of head 10.0 mm . Square section shaft. Length 11.0 mm .

3154 SF LWC 2894(C), J770. First gravelled surface of yard. Period 4a. Diameter of head 9.5 mm . Square section shaft. bent. Length 8.0 mm .

3155 SF LWC 3088(C), J805. Floor. Periods 4a and b. The head has become detached from the shaft. Diameter of head 5.0 mm . Square section shaft. incomplete. Length 10.5 mm .

3156 SF LWC 3158(C), J907. Make-up. Period 4. The head of this stud is damaged. Diameter 30.0 mm . Square section shaft. incomplete. Length 14.5 mm

3158 SF LWC 3292(C), J1008. Make-up for two periods. mixed. Periods 3 and 4a. A small stud similar to Fig 120. 3148. The head is damaged. Diameter 14.0 mm . Square section shaft. incomplete. Length 7.0 mm

3162 SF LWC 3077. K249 F55. Stokehole of hypocaust. Period 4b. A stud with a crushed head. Diameter 24.0 mm . Square section shaft. bent. Length 24.0 mm .

3163 SF LWC 3424. L505 F294. Fit. Period 1 or 2. A stud in three fragments. Diameter 30.0 mm . Square section shaft. bent. Length 19.0 mm

3164 SF LWC 2619(C), M131. Road 3. A stud head similar to Fig 120. 3148. Diameter 22.0 mm .

3166 SF BKC 1003(C), D342 L24. Town ditch fill. Anglo-Saxon. Similar to Fig 120. 3151 . Diameter 18.0 mm . Square section shaft. Length 28.0 mm . 3167 SF BKC 1806(C), El 132 L319. Dump. Period lb. Similar to Fig 120.3133. Diameter of head 16.5 mm . Square section shaft. incomplete. Length 7.0 mm .

3169 SF BKC 2364(C), G355. Periods 1 to 5 . Diameter of head 26.0 mm . Square section shaft. incomplete. Length 12.0 mm .

3170 SF BKC 3079(C), J62 L1. Site clearance. Diameter of head 24.5 mm . Square section shaft. incomplete. Length 9.0 mm .

3171 SF BKC 3441(C), J186 F13. Large pit. Period 5b. A small stud. Diameter of head 5.5 mm . Square section shaft. incomplete. bent. Length 11.5 mm .

3172 SF BKC 3392» J200 F46. Dump. Periods 5c/6. A fragment of a stud similar to Fig 120. 3148.

3174 SF BKC 3279(C), K308 L24. Dump. Periods 4c/5/6. A very corroded stud. Diameter of head 11.5 mm . Square section shaft. Length 21.0 mm .

3175 SF BKC 4044(C), N22 L1. Topsoil. Modern. Diameter 27.0 mm . Rectangular section shaft. incomplete. Length 13.0 mm . A square hole has been made in the head from below.

3176 SF BKC 4801. S3 F6. Pipe trench. Modern. Similar to Fig 120. 3141. Diameter of head 12.5 mm . Square section shaft. incomplete. Length 11.0 mm .

3177 SF BKC 4562(C), T105 L14. Destruction debris. Period 3(end), Diameter of head 3.5 mm . Circular section shaft. incomplete. Length 7.5 mm .

3173 SF BKC 4560. Tl 13 LIS. Destruction debris of Period 2. Period 3? Fragment of a stud head similar to Fig 120. 3140.

3179 SF BKC 4561. T125 F57. Pit. Period 5b? Two fragments of a stud head. Diameter 19.5 mm .

3180 SF BKC 4740(C), T457. Make-up. Periods 1 and 2. Fragment of a stud. Diameter 19.0 mm . Square section shaft. bent. Length 12.0 mm .

3181 SF BKC 4729. T468. Clay floors? Period (2b or) 3. Fragment of a stud head or boss. Diameter 13.0 mm .

3182 SF BKC $4710(\mathrm{C})$, T501. Period 1 or 2 ? Fragment of a stud similar to Fig 120. 3138. Diameter 18.0 mm . Square section shaft. bent. Length 9.0 mm .

3133 SF BKC 4323. T614. Period 1 or 2 ? A very corroded stud with thick riveted shaft. Diameter 20.5 mm . Circular section shaft. Length 14.5 mm .

3184 SF BKC 4997. V21 L1. Topsoil. Period 5. 6. or modern. A damaged stud head. Diameter 13.0 mm .

3185 SF BKC 4964. V76 L22. Dump. Late Period 5. Part of the head of this
stud is missing. Diameter 22.0 mm . Square section shaft. incomplete. bent. Length 11.5 mm .

SF BKC 4998. V102 F10. Dog burial. Period 5. A small stud. Diameter of head 8.0 mm . ?Square section shaft. incomplete. bent. Length 6.5 mm .

3188 SF BKC 5202. V271 L46. Make-up? Period 5. A crushed stud. Diameter of head 13.0 mm . Square section shaft. incomplete. Length 5.0 mm .

3189 SF BKC 5195. V334 F82. Post pit. Period 4. Part of the head of this stud is missing. Diameter of head 14.5 mm . Square section shaft. incomplete. bent. Length 7.5 mm .

3191 SF BKC 5407. V679. Mainly late Period 5 but with some modern material. A small crushed stud similar to Fig 120.3190. Diameter of head 6.0 mm . Square section shaft. Length 10.0 mm .

3192 SF BKC 5412. V730 F209. Pit. Modern? Similar to Fig 120. 3151. Diameter of head 18.5 mm . Square section shaft. incomplete. Length 11.5 mm .

3193 SF BKC 5707. V938 L11. Dump. Late Period 5. Similar to Fig 120.3157. Diameter of head 25.5 mm . Square section shaft. bent. Length approximately 20.0 mm .

3194 SF BKC $5737(\mathrm{C})$, VI116. Period 4 or 5 or 6 . Fragment of a stud. Diameter of head 9.5 mm . Square section shaft. Length 10.5 mm .

3195 SF BKC 5751. VI149 F471. Pit. timber-lined. Period 5. Fragment of a stud. Diameter of head 23.0 mm . Square section shaft. incomplete. Length 9.0 mm .

3196 SF BKC 5769. VI167 L154. Cultivated soil. Period 5. Similar to Fig 120. 3141. Diameter of head 9.5 mm . Rectangular section shaft. incomplete.

Length 6.5 mm .
3197 SF CPS 633(C), 631 L86. Mortar floor. Period 4. A crushed stud similar to Fig 120.3159. Diameter of head 17.5 mm . Square section shaft. bent. Length 10.0 mm .

3198 SF CPS 712(C), 734 L101. Make-up. Period 4. Part of the head of this stud is missing. Diameter of head 13.0 mm . Square section shaft. bent. Length 10.5 mm .

3200 SF BUC 123. B52 G56. Grave fill. Period 2. A large stud head. Diameter 30.0 mm .

3201 SF BUC 369. B900 G145. Grave fill. Period 2. A stud head. Diameter 24.0 mm .

3202 SF BUC 443(C), B 1512 G207. Probably grave fill. Period 2. Four fragments of a stud.

3203 SF BUC 452. B1637 G221. Grave fill. Period 2. Diameter of head 10.0 mm . Square section shaft. twisted and bent. Length 45.0 mm .

3204 SF BUC 527. C1010 L1. Periods 1-2. Similar to Fig 120. 3149. Diameter of head 28.0 mm . Square section shaft. incomplete. Length 8.0 mm .

3205 SF BUC 567. CI 135 G365. Grave fill. Period 2. Similar to Fig 120.3141. Diameter of head 11.0 mm . Square section shaft. incomplete. clenched. Length 10.5 mm .

3206 SF BUC 579(C), C1155. Unstratified. A lenticular ?stud head. Diameter 15.0 mm . Possibly not Roman.

3207 SF BUC 606. CI 193 G377. Grave fill. Period 2. Diameter of head 7.0 mm . Square section shaft. incomplete. Length 5.0 mm .

3208 SFBUC 599. C1211 G380. Grave fill. Period 2. Part of the head is missing. Diameter 12.0 mm . Square section shaft. Length 6.5 mm .

3210 SF BUC 636. C1285 L1. Periods 1-2. Part of the head is missing. Diameter 13.5 mm . Square section shaft. bent. Length 9.0 mm .

3211 SF BUC 681. C1367 L1. Periods 1-2. Diameter of head 10.5 mm . ?Square section shaft. incomplete. Length 8.0 mm .

3212 SF BUC 634. C1378 G402. Grave fill. Period 2. Diameter of head 15.5 mm . Square section shaft. incomplete. Length 11.0 mm .

3213 SF COC 104. 494 F118. Trench robbing Period 4 wall. Periods. Similar
to Fig 120. 3138. Diameter 11.5 mm . ?Square section shaft, clenched.
Length 8.0 mm .

3214 SFCOC 141.670 L43. Demolition/make-up. Period 4 or early 5. Part of the head is missing. Diameter 20.0 mm . ?Square section shaft.
incomplete. Length 8.5 mm .

3216 SF COC 205. 959 L275. Floor. Period 5. A small stud. Diameter of head 6.5 mm . Square section shaft, incomplete. Length 11.0 mm .

Enamelled studs (Fig 121; 3217-3221)

All in printed catalogue.

Other decorated studs (Fig 122; 3222-3227)
All in printed catalogue.

## Iron nails- and studs

Only those pieces deriving from a definite Roman context or from a post-Roman context containing a high percentage of Roman material have been included here* Unless indicated otherwise the head of each object is roughly circular and flat or slightly convex. and the section of the shaft is square. Thus. most of the nails conform to Manning's Type 1 (1972. 186), Iron nails and studs are not included in the small finds catalogue. Measurements are to the nearest millimetre.

Context

3228
3229
3230
3231
323
3233 LWC A160 Late Roman/early Saxon
3234 LWC A170
3235 LWC A216 F68 Period 4b
3236 LWC A245 Post-Roman or Period 4
3237 LWC A249 Period 1 destruction?
3238 LWC A253 Pre-Period 4
3239

3240 LWC A282 F95 Period 3
3241 LWC A290 Period 1 destruction?
3242 LWC A314 F100 Period 2
3243 LWC A329 Period 1 destruction. or $2 / 3$
3244 LWC B81 Period 1?
3245 LWC B92 Period 5+
324
324
3248 LWC B101
3249 LWC B117 "
3250 LWC B117
3251 LWC B117
3252 LWC B117 "
3253 LWC B117 "
3254 LWC B117
3255 LWC B125 "
3256 LWC B125 "
3257 LWC B 125
3258 LWC B125
3259 LWC B 125 •
3260 LWC B 125
3261 LWC E125
3262 LWC B 125
3263 LWC B127 Period 4/5?
3264 LWC B133 F71 Period 5
3265 LWC B137 Period 5+
3266 LWC B137 "
3267 LWC B137 n
3268 LWC B145
3269 LWC B152 c 70-100
3270 LWC B165 F70 Period 5
3271 LWC B173 F70

Descr Max diam of head (mm) Length (mm)


| 3329 | LWC B643 | Period 1 |  | Nail | 26.0 | 80.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3330 | LWC B645 | F70 Period | 5 | Nail | 20.0 | 73.0 |
| 3331 | LWC B645 | F70 " |  | Nail | 17.0 | 64.0 |
| 3332 | LWCB645 | F70 |  | Nail | 19.0 | 47.0 |
| 3333 | LWC B645 | F70 |  | Nail | 15.0 | 54.0 |
| 3334 | LWC B645 | F70 |  | Nail | 20.0 | 60.0 |
| 3335 | LWC B658 | F235 |  | Nail | 18.0 | 50.0 |
| 3336 | LWC B685 | Period 1 |  | Nail | 30.0 | 220.0 |
| 3337 | LWC B697 | ?Period 4 |  | Nail | 17.0 | 53.0 |
| 3338 | LWC B700 | F70 Period | 5 | Nail | 17.0 | 58.0 |


| 3339 | LWC C101 | Late Roman/early post-Roman | Nail | 22.0 | 77.0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3340 | LWC C209 | Period 4 | Nail | 19.0 | 50.0 |
| 3341 | LWC C209 | " | Nail | 20.0 | 43.0 |
| 3342 | LWC C218 | Period 2?. 3a?. or 3b? | Nail | 15.0 | 51.0 |
| 3343 | LWC C213 | " " " | Nail | 15.0 | 57.0 |
| 3344 | LWC C253 | Period 4 | Nail | 25.0 | 44.0 |
| 3345 | LWC C317 | it | Nail | 15.0 | 48.0 |
| 3346 | LWC C332 |  | Nail | 12.0 | 42.0 |
| 3347 | LWC C332 |  | Nail | 17.0 | 53.0 |
| 3348 | LWC C334 | ?Period 4 | Nail | 19.0 | 150.0 |
| 3349 | LWC C336 | Period 4 | Nail | 20.0 | 60.0 |
| 3350 | LWC C398 | Period 2. 3a> and 3b | Nail | 28.0 | 85.0 |
| 3351 | LWC C400 | Period 2?» 3a?» or 3b? | Nail | 13.0 | 60.0 |
| 3352 | LWC C4i6 | Period 3a | Nail/Stud | 15.0 | 32.0 |
| 3353 | LWC C491 | ?Period 1 | Nail | 13.0 | 52.0 |
| 3354 | LWC C491 | " | Nail | 14.0 | 63.0 |
| 3355 | LWC C491 | n | Nail | 24.0 | 54.0 |
| 3356 | LWC C491 | 1 | Nail | 30.0 | 67.0 |
| 3357 | LWC E54 | F33 4th century or later | Nail | 14.0 | 40.0 |
| 3358 | LWC E127 | F61 Late Roman | Nail | 19.0 | 104.0 |
| 3359 | LWC J95 | Late Roman or later? | Nail | 16.0 | 88.0 |
| 3360 | LWC J301 | Late Roman? | Nail | 17.0 | 56.0 |
| 3361 | LWC J302 | Late Roman? | Nail | 16.0 | 60.0 |
| 3362 | LWC J319 | Period 4b or 5 | Nail | 15.0 | 54.0 |
| 3363 | LWC J338 | F58/F152 c 2nd century | Nail | 16.0 | 49.0 |
| 3364 | LWC J367 | Period 4b destruction | Nail | 25.0 | 100.0 |
| 3365 | LWC J367 | -1 it | Nail | 20.0 | 60.0 |
| 3366 | LWC J367 | ${ }^{\text {H }}$ | Nail | 20.0 | 74.0 |
| 3367 | LWC J374 | F59? Period 4 | Nail | 14.0 | 50.0 |
| 3368 | LWC J377 | Period 4b destruction | Nail | 15.0 | 83.0 |
| 3369 | LWC J377 | " ${ }^{\text {a }}$ | Nail | 15.0 | 49.0 |
| 3370 | LWC J377 | H u | Nail | 14.0 | 36.0 |
| 3371 | LWC J395 | " н | Nail | 19.0 | 87.0 |
| 3372 | LWC J400 | н " | Nail | 20.0 | 94.0 |
| 3373 | LWC J400 | " | Nail | 16.0 | 48.0 |
| 3374 | LWC J400 |  | Nail | 14.0 | 51.0 |
| 3375 | LWC J400 | it a | Nail | 17.0 | 58.0 |
| 3376 | LWC J400 |  | Nail |  | 51.0 |
| 3377 | LWC J400 | " 1 | Nail | 19.0 | 73.0 |
| 3378 | LWC J40? | Period 4 | Nail | 12.0 | 50.0 |
| 3379 | LWC J429 | F59 Period 4 | Nail | 17.0 | 48.0 |
| 3380 | LWC J429 | F59 | Nail | 16.0 | 46.0 |
| 3381 | LWC J429 | F59 | Nail | 15.0 | 52.0 |
| 3382 | LWC J429 | F59 | Nail | 14.0 | 80.0 |
| 3383 | LWC J429 | F59 | Nail | 20.0 | 97.0 |
| 3384 | LWC J429 | F59 | Nail | 18.0 | 80.0 |
| 3385 | LWC J429 | F59 | Nail | 17.0 | 84.0 |
| 3386 | LWC J431 | Period 4a or b | Nail | 24.0 | 83.0 |
| 3387 | LWC J431 | н " | Nail | 14.0 | 53.0 |
| 3388 | LWC J433 | Roman | Nail | 17.0 | 59.0 |
| 3389 | LWC J433 | " | Nail | 17.0 | 60.0 |
| 3390 | LWC J450 | Period 4 | Nail | 29.0 | 50.0 |
| 3391 | LWC J474 | ${ }^{11}$ | Nail | 16.0 | 60.0 |
| 3392 | LWC J492 | H F2/FI7 Early medieval | Nail | 13.0 | 69.0 |
| 3393 | LWC J506 | Period 4b destruction | Nail | 12.0 | 35.0 |
| 3394 | LWC J506 |  | Nail | 15.0 | 40.0 |
| 3395 | LWC J506 | ${ }^{\text {H }}$ | Nail | 15.0 | 76.0 |
| 3396 | LWC J508 | F59 Period 4 | Nail | 17.0 | 47.0 |


| 3397 | LWC J508 | F59 | " | Nail | 10.0 | 65.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3398 | LWC J571 | Period | 4 | Nail | 14.0 | 61.0 |
| 3399 | LWC J572 | Roman |  | Nail | 16.0 | 92.0 |
| 3400 | LWC J594 | Period | 4b destruction? | Nail | 16.0 | 49.0 |
| 3401 | LWC J596 | Period | 4 | Nail | 16.0 | 70.0 |
| 3402 | LWC J615 | Period | 4a | Nail | 15.0 | 77.0 |
| 3403 | LWC J617 | F180 | Period 4 | Nail | 17.0 | 74.0 |
| 3404 | LWC J625 | Period | - 4 | Nail | 27.0 | 37.0 |
| 3405 | LWC J625 | "! |  | Nail | 16.0 | 51.0 |
| 3406 | LWC J635 | Period | 4? | Nail | 16.0 | 49.0 |
| 3407 | LWC J637 |  |  | Nail | 14.0 | 41.0 |
| 3403 | LWC J640 | Late R | Roman | Nail | 16.0 | 43.0 |
| 3409 | LWC J648 | Period | 4 | Nail | 20.0 | 61.0 |
| 3410 | LWC J648 | ${ }^{11}$ |  | Nail | 17.0 | 53.0 |
| 3411 | LWC J648 | ${ }^{1}$ |  | Nail | 14.0 | 55.0 |
| 3412 | LWC J648 | $1!$ |  | Nail | 15.0 | 45.0 |
| 3413 | LWC J654 | F180 | Period 4 | Nail | 21.0 | 53.0 |
| 3414 | LWC J654 | F180 |  | Nail | 14.0 | 58.0 |
| 3415 | LWC J663 | Period | d 4 | Nail | 17.0 | 85.0 |
| 3416 | LWC J663 | 11 |  | Nail | 15.0 | 62.0 |
| 3417 | LWC J699 | 11 |  | Nail | 14.0 | 21.0 |
| 3413 | LWC J711 | F59 | Period 4 | Nail | 20.0 | 63.0 |
| 3419 | LWC J711 | F59 | " | Nail | 34.0 | 75.0 |
| 3420 | LWC J711 | F59 |  | Nail | 17.0 | 47.0 |
| 3421 | LWC J738 | F180 |  | Nail | 17.0 | 59.0 |
| 3422 | LWC J770 | Period | da | Nail | 13.0 | 44.0 |
| 3423 | LWC J805 | Period | d 4 a and b | Nail | 13.0 | 53.0 |
| 3424 | LWC J806 | Period | da | Nail | 34.0 | 75.0 |
| 3425 | LWC J326 | н |  | Nail | 13.0 | 61.0 |
| 3426 | LWC J826 |  |  | Nail | 23.0 | 85.0 |
| 3427 | LWC J827 | Period | d 3 | Nail | 15.0 | 64.0 |
| 3423 | LWC J907 | Period | d 4 | Nail | 13.0 | 54.0 |
| 3429 | LWC J907 | ${ }_{\text {it }}$ |  | Nail | 20.0 | 50.0 |
| 3430 | LWC J926 | Period | d 3 | Nail | 15.0 | 51.0 |
| 3431 | LWC J989 | , |  | Nail | 11.0 | 55.0 |
| 3432 | LWC J992 | F315 | Period 2 | Stud | 40.0 | 32.0 |
| 3433 | LWC J1000 | F315 |  | Nail | 15.0 | 65.0 |
| 3434 | LWC J1000 | F315 |  | Nail | 17.0 | 59.0 |
| 3435 | LWC J1017 | F344 | Period 4a? or 3? | Nail | 25.0 | 82.0 |
| 3436 | LWC J1025 | 5 Period | d 3 | Nail | 19.0 | 62.0 |
| 3437 | LWC J1250 | Period | d 1 | Nail | 15.0 | 49.0 |
| 3433 | LWC J1302 |  |  | Nail | 16.0 | 59.0 |
| 3439 | LWC J1310 | Period | d 2 | Nail | 14.0 | 65.0 |
| 3440 | LWC J1316 | 6 Period | d 1 | Nail | 23.0 | 101.0 |
| 3441 | LWC J1317 |  |  | Nail | 23.0 | 104.0 |
| 3442 | LWC J1317 |  |  | Nail | 10.0 | 52.0 |
| 3443 | LWC J1329 | Period | d 2 | Nail | 19.0 | 65.0 |
| 3444 | LWC J1340 | Period | d 1 | Nail | 16.0 | 54.0 |
| 3445 | LWC J 134c | SF465 | Period 4? | Nail | 19.0 | 70.0 |
| 3446 | LWC J1486 | F433 | Period 1 | Nail | 13.0 | 53.0 |
| 3447 | LWC J1486 | 6 F438 |  | Stud | 36.0 | 28.0 |
| 3448 | LWC J1536 | 6 F506 | Period 3 | Nail | 13.0 | 47.0 |
| 3449 | LWC J1536 | 6 F506 |  | Nail | 10.0 | 46.0 |
| 3450 | LWC J1675 | 5 Period | d 2 demolition? | Nail | 49.0 | 177.0 |
| 3451 | LWC K203 | Period | d 4 b | Nail | 27.0 | 53.0 |
| 3452 | LWC K203 | H |  | Nail | 16.0 | 64.0 |
| 3453 | LWC K210 |  |  | Nail | 13.0 | 57.0 |
| 3454 | LWC K218 | Period | d 4 | Nail | 15.0 | 60.0 |


| 3455 | LWC K278 | Period 3? | Nail | 17.0 | 57.0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3456 | LWC K283 | Period 4b? | Nail | 15.0 | 53.0 |
| 3457 | LWC K453 | Period 3 | Nail | 38.0 | 112.0 |
| 3458 | LWC K454 | F235 Period 3? | Nail | 21.0 | 88.0 |
| 3459 | LWC K501 | F281 Period 3 | Nail | 15.0 | 55.0 |
| 3460 | LWC K501 | F281 | Nail | 14.0 | 78.0 |
| 3461 | LWC K541 | Period 2 | Nail | 11.0 | 49.0 |
| 3462 | LWC K565 | F321 Period 2 | Nail | 30.0 | 140.0 |
| 3463 | LWC L251 | Period 4a | Nail | 18.0 | 81.0 |
| 3464 | LWC L251 |  | Nail | 14.0 | 72.0 |
| 3465 | LWC L288 | Period 4(3) | Nail | 23.0 | 52.0 |
| 3466 | LWC L288 |  | Nail | 15.0 | 65.0 |
| 3467 | LWC L309 | F182 Period 4(2) | Nail | 19.0 | 42.0 |
| 3468 | LWC L419 | Period 3b | Nail | 18.0 | 38.0 |
| 3469 | LWC L419 | " | Nail | 20.0 | 68.0 |
| 3470 | LWC L419 | " | Nail | 26.0 | 53.0 |
| 3471 | LWC L419 | $\cdots$ | Nail | 18.0 | 68.0 |
| 3472 | LWC L468 | Periods 2 and 3a | Nail | 17.0 | 54.0 |
| 3473 | LWC L471 | F280 Period 1 | Nail | 16.0 | 62.0 |
| 3474 | LWC M76 | Rampart le | Nail | 13.0 | 61.0 |
| 3475 | LWC Ml 14 | Rampart la | Nail | 28.0 | 105.0 |
| 3476 | LWC M121 | Rampart la | Nail | 18.0 | 76.0 |
| 3477 | LWC M129 | c 125-150 | Nail | 15.0 | 53.0 |
| 3478 | LWC R3 | Period 4b | Nail | 10.0 | 52.0 |
| 3479 | LWC R30 | Period 4 or post-Roman | Nail | 14.0 | 44.0 |
| 3480 | LWC R30 | " " | Nail | 15.0 | 59.0 |
| 3481 | LWC R30 | " " | Nail | 17.0 | 63.0 |
| 3482 | LWC R52 | Period 4 | Nail | 18.0 | 56.0 |
| 3483 | LWC R52 |  | Nail | 20.0 | 96.0 |
| 3484 | LWC R56 | F35 Period 4 or post-Roman | Nail | 20.0 | 79.0 |
| 3435 | LWC R56 | F35 " " | Nail | 14.0 | 48.0 |
| 3486 | LWC R63 | F35 Period 4 | Nail | 17.0 | 43.0 |
| 3487 | LWC R66 | Period 4 | Nail | 20.0 | 110.0 |
| 3488 | LWC R116 |  | Nail | 25.0 | 85.0 |
| 3489 | LWC R158 | Period 2a | Nail | 13.0 | 44.0 |
| 3490 | LWC R158 | " | Nail | 11.0 | 47.0 |
| 3491 | LWC R164 | F70 Period 4 | Nail | 14.0 | 48.0 |
| 3492 | LWC R220 | Period 2a | Nail | 15.0 | 40.0 |
| 3493 | LWC R324 | Period 4 or post-Roman | Nail | 15.0 | 71.0 |
| 3494 | LWC R337 | F129 Period 4 | Nail | 10.0 | 58.0 |



3552 BKC E1272 F392 Period lb Nail

| 3553 | BKC E1236 | Period 5 to modem |
| :---: | :---: | :---: |
| 3554 | BKC E1332 | L358 Period lb |
| 3555 | BKC G32 | F6 Modern |
| 3556 | BKC G56 | L9 Period 5a or b |
| 3557 | BKC G6S | F12 Period 5b or c |
| 3558 | BKC G114 | F11? Period 5c |
| 3559 | BKC G124 | Period 5b or c |
| 3560 | BKC G124 |  |
| 3561 | BKC G125 | F24 Period 5b or c |
| 3562 | BKC G129 | F21 Period 5c |
| 3563 | BKC G131 | L55 Periods 5a and |
| 3564 | BKC G135 | Period 5c |
| 3565 | BKC G135 |  |
| 3566 | BKC G149 | F30 Period 5c |
| 3567 | BKC G151 | F32 |
| 3563 | BKC G165 | F35 " |
| 3569 | BKC G165 | F35 |
| 3570 | BKC G170 | F190 Period 5c? |
| 3571 | BKC G170 | F190 |
| 3572 | BKC G170 | F190 |
| 3573 | BKC G184 | F39 Period 5c |
| 3574 | BKC G189 | Period 5c |
| 3575 | BKC G199 | F190 Period 5c? |
| 3576 | BKC G199 | F190 |
| 3577 | BKC G199 | F190 |
| 3578 | BKC G200 | Period 5c? |
| 3579 | BKC G200 |  |
| 3580 | BKC G200 |  |
| 3581 | BKC G201 | Period 5? |
| 3582 | BKC G201 |  |
| 3583 | BKC G229 | F35 Period 5c |
| 3584 | BKC G337 | Period 5 or modern? |
| 3535 | BKC G339 |  |
| 3586 | BKC G339 |  |
| 3587 | BKC G344 | F141 Period 5c? |
| 3588 | BKC G344 | F141 |
| 3589 | BKC G349 | Period 5? |
| 3590 | BKC G349 |  |
| 3591 | BKC G359 | L46 Period 1 |
| 3592 | BKC G376 | F108 Period 5c |
| 3593 | BKC G376 | F108 |
| 3594 | BKC G414 | Period 3 or 4? |
| 3595 | BKC G415 |  |
| 3596 | BKC G457 | Period 5c |
| 3597 | BKC G457 |  |
| 3598 | BKC H63 | F28 Period 6 |
| 3599 | BKC H63 | F28 |
| 3600 | BKC H63 | F28 |
| 3601 | BKC H63 | F28 |
| 3602 | BKC H63 | F28 |
| 3603 | BKC H63 | F28 |
| 3604 | BKC H63 | F28 |
| 3605 | BKC H63 | F28 |
| 3606 | BKC H66 | F28 |
| 3607 | BKC H78 | F28 |
| 3608 | BKC H96 | F41 Period 5b |
| 3609 | BKC H111 | F33 Period 5c |
| 3610 | BKC H111 | F33 |


| Nail | 11.0 | 44.0 |
| :---: | :---: | :---: |
| Nail | damaged | 59.0 |
| Nail | 14.0 | 61.0 |
| Nail | 22.0 | 61.0 |
| Nail | 19.0 | 36.0 |
| Nail | 17.0 | 66.0 |
| Nail | 17.0 | 77.0 |
| Nail | 20.0 | 46.0 |
| Nail | 16.0 | 42.0 |
| Nail | 15.0 | 67.0 |
| Nail | 19.0 | 79.0 |
| Nail | 14.0 | 45.0 |
| Nail | 17.0 | 60.0 |
| Nail | 22.0 | 90.0 |
| Nail | 16.0 | 61.0 |
| Nail | 25.0 | 120.0 |
| Nail | 25.0 | 85.0 |
| Nail | 24.0 | 62.0 |
| Nail | 16.0 | 68.0 |
| Nail | 16.0 | 62.0 |
| Nail | 24.0 | 90.0 |
| Nail | 22.0 | 45.0 |
| Nail | 15.0 | 60.0 |
| Nail | 17.0 | 90.0 |
| Nail | 18.0 | 61.0 |
| Nail | 15.0 | 52.0 |
| Nail | 29.0 | 93.0 |
| Nail | 11.0 | 41.0 |
| Nail | 13.0 | 41.0 |
| Nail | 15.0 | 54.0 |
| Nail | 13.0 | 67.0 |
| Nail | 18.0 | 78.0 |
| Nail | 18.0 | 68.0 |
| Nail | 22.0 | 52.0 |
| Nail | 25.0 | 79.0 |
| Nail | 12.0 | 58.0 |
| Nail | 23.0 | 93.0 |
| Nail | 18.0 | 62.0 |
| Nail | 28.0 | 75.0 |
| Nail | 20.0 | 74.0 |
| Nail | 17.0 | 69.0 |
| Nail | 20.0 | 48.0 |
| Nail | 25.0 | 54.0 |
| Nail | 19.0 | 67.0 |
| Nail | 15.0 | 45.0 |
| Nail | 18.0 | 60.0 |
| Nail | 21.0 | 70.0 |
| Nail | 19.0 | 115.0 |
| Nail | 20.0 | 51.0 |
| Nail | 13.0 | 52.0 |
| Nail | 14.0 | 46.0 |
| Nail | 10.0 | 52.0 |
| Nail | 15.0 | 62.0 |
| Nail | 19.0 | 83.0 |
| Nail | 16.0 | 58.0 |
| Nail | 17.0 | 58.0 |
| Nail | 15.0 | 68.0 |
| Nail | 13.0 | 54.0 |


| 3611 | BKC Hill | F33 |  | Hail | 18.0 | 65.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3612 | BKC Hi25 | F57 Period | 5a | Hail | 24.0 | 117.0 |
| 3613 | BKC HI25 | F57 |  | Hail | 13.0 | 80.0 |
| 3614 | BKC Hi25 | F57 |  | Hail | 13.0 | 27.0 |
| 3615 | BKC HI27 | F33 Period | 5c | Hail | 17.0 | 43.0 |
| 3616 | BKC HI27 | F33 |  | Hail | 17.0 | 96.0 |
| 3617 | BKC H131 | Modern? |  | Hail | 15.0 | 48.0 |
| 3618 | BKC H131 |  |  | Hail | 16.0 | 75.0 |
| 3619 | BKC H131 |  |  | Hail | 15.0 | 45.0 |
| 3620 | BKC HI64 | F68 Period | 5c | Hail | 17.0 | 69.0 |
| 3621 | BKC HI64 | F68 |  | Hail | 15.0 | 53.0 |
| 3622 | BKC HI83 | F81 |  | Nail | 19.0 | 80.0 |
| 3623 | BKC HI84 | F94 |  | Hail | 25.0 | 53.0 |
| 3624 | BKC HI85 | F94 |  | Nail | 20.0 | 77.0 |
| 3625 | BKC HI85 | F94 |  | Nail | 20.0 | 70.0 |
| 3626 | BKC HI85 | F94 |  | Nail | 14.0 | 70.0 |
| 3627 | BKC HI85 | F94 |  | Nail | 18.0 | 78.0 |
| 3628 | BKC HI85 | F94 |  | Nail | 18.0 | 115.0 |
| 3629 | BKC HI89 | F94 |  | Nail | 15.0 | 53.0 |
| 3630 | BKC HI95 | F95 |  | Nail | 11.0 | 36.0 |
| 3631 | BKC H202 | L12 Period | 5 b (end) | Nail | 12.0 | 56.0 |
| 3632 | BKC H202 | L12 |  | Nail | 15.0 | 31.0 |
| 3633 | BKC H202 | L12 |  | Nail | 13.0 | 48.0 |
| 3634 | BKC H202 | L12 |  | Nail | 16.0 | 76.0 |
| 3635 | BKC H202 | L12 |  | Nail | 13.0 | 62.0 |
| 3636 | BKC H202 | L12 |  | Nail | 16.0 | 129.0 |
| 3637 | BKC H202 | L12 |  | Hail | 21.0 | 108.0 |
| 3638 | BKC H202 | L12 |  | Hail | 21.0 | 132.0 |
| 3639 | BKC H206 | F68 Period | 5c | Nail | 11.0 | 58.0 |
| 3640 | BKC H209 | L12 Period | 5b(end) | Hail | 22.0 | 113.0 |
| 3641 | BKC H213 | L12 |  | Nail | 12.0 | 46.0 |
| 3642 | BKC H229 | F106 Period | 5 c | Hail | 20.0 | 75.0 |
| 3643 | BKC H232 | L12 Period | 5 b (end) | Nail | 19.0 | 34.0 |
| 3644 | BKC H232 | L12 |  | Nail | 14.0 | 40.0 |
| 3645 | BKC H232 | L12 |  | Nail | 21.0 | 113.0 |
| 3646 | BKC H234 | L12 |  | Nail | 18.0 | 52.0 |
| 3647 | BKC H234 | L12 |  | Nail | 14.0 | 79.0 |
| 3648 | BKC H239 | F68 Period | 5c | Nail | 17.0 | 70.0 |
| 3649 | BKC H246 | L14 Period | 5b» c. or 6 | Nail | 22.0 | 62.0 |
| 3650 | BKC H246 | L14 | н | Nail | 13.0 | 115.0 |
| 3651 | BKC H246 | L14 | " | Nail | 14.0 | 64.0 |
| 3652 | BKC H246 | L14 | н | Nail | 15.0 | 72.0 |
| 3653 | BKC H246 | L14 | $\cdot 1$ | Nail | 12.0 | 46.0 |
| 3654 | BKC H246 | L14 |  | Nail | 22.0 | 37.0 |
| 3655 | BKC H254 | F113 Period | 5c | Nail | 18.0 | 61.0 |
| 3656 | BKC H296 | F161 |  | Nail | 15.0 | 62.0 |
| 3657 | BKC H298 | Period 6 |  | Nail | 18.0 | 64.0 |
| 3658 | BKC H298 |  |  | Nail | 25.0 | 131.0 |
| 3659 | BKC H298 |  |  | Nail | 18.0 | 80.0 |
| 3660 | BKC H298 |  |  | Nail | 17.0 | 70.0 |
| 3661 | BKC H298 |  |  | Nail | 15.0 | 62.0 |
| 3662 | BKC H307 | L12 Period | 5b (end) | Nail | 15.0 | 58.0 |
| $3 t^{\prime} h 3$ | BKC H312 | L12 |  | Nail | 18.0 | 90.0 |
| 3664 | BKC H314 | Li2 |  | Nail | 19.0 | 47.0 |
| 3665 | BKC H317 | L1 3 Period | 5 b (end), ? 5 c , | ?6 Hail | 17.0 | 57.0 |
| 3666 | BKC H328 | L12 Period | 5 b (end) | Nail | 20.0 | 58.0 |
| 3667 | BKC H330 | F173 Period | 5c | Nail | 14.0 | 67.0 |
| 3668 | BKC H332 | Period 6 or | earlier | Nail | 18.0 | 57.0 |


| 3669 | BKC H335 | Period 5c | Nail | 18.0 | 50.0 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3670 | BKC H337 | L12 Period | 5b(end) | Nail | 15.0 | 54.0 |
| 3671 | BKC H337 | L12 |  | Nail | 15.0 | 62.0 |
| 3672 | BKC H337 | L12 |  | Nail | 16.0 | 70.0 |
| 3673 | BKC H337 | L12 | Nail | 20.0 | 77.0 |  |
| 3674 | BKC H337 | Li2 |  | Nail | 18.0 | 67.0 |
| 3675 | BKC H337 | L1 b |  | Nail | 16.0 | 67.0 |
| 3676 | BKC H337 | L12 |  | Nail | 14.0 | 70.0 |
| 3677 | BKC H339 | F161 Period $5 c$ | Nail | 11.0 | 59.0 |  |
| 3678 | BKC H339 | F1M | Nail | 13.0 | 43.0 |  |
| 3679 | BKC H339 | F161 |  | Nail | 10.0 | 40.0 |
| 3680 | BKC H363 | L12 Period | 5b(end) | Nail | 11.0 | 48.0 |
| 3681 | BKC H363 | L12 |  | Nail | 17.0 | 60.0 |
| 3682 | BKC H363 | L12 |  | Nail | 16.0 | 71.0 |
| 3683 | BKC H363 | L12 |  | Nail | damaged | 66.0 |
| 3684 | BKC H363 | L12 |  | Nail | 13.0 | 50.0 |
| 3685 | BKC H363 | L12 |  | Nail | 15.0 | 54.0 |
| 3686 | BKC H363 | L12 |  | Nail | 23.0 | 90.0 |


| 3687 | BKC J43 | L6 | Probably | y Period 5b | Nail | 36.0 | 74.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3688 | BKC J81 | L23 | Period | $5 \mathrm{c} / 6$ | Nail | 16.0 | 69.0 |
| 3689 | EEC J81 | L23 |  |  | Nail | 18.0 | 47.0 |
| 3690 | BKC J36 | F13 | Period | 5b | Nail | 18.0 | 89.0 |
| 3691 | EEC J87 | F14 |  |  | Nail | 17.0 | 57.0 |
| 3692 | BKC J100 | F18 |  |  | Nail | 11.0 | 27.0 |
| 3693 | BKC J100 | F1S |  |  | Nail | 13.0 | 44.0 |
| 3694 | BKC J109 | F21 | Period | 5b? | Nail | 15.0 | 63.0 |
| 3695 | BKC JUS | F25 | Period | 3-6? | Nail | 12.0 | 50.0 |
| 3696 | BKC J121 | F13 | Period | 5b | Nail | 17.0 | 35.0 |
| 3697 | BKC J121 | F13 |  |  | Nail | 15.0 | 71.0 |
| 3698 | BKC J124 | F7 | Period | 5c/6 | Nail | 24.0 | 49.0 |
| 3699 | EEC J134 | LIS | Period | 5b Phase 3 | Nail | 19.0 | 54.0 |
| 3700 | BKC J137 | F5 | Period | 5/6 | Nail | 19.0 | 84.0 |
| 3701 |  | L21 | Period | 5 b Phase 2 | Nail | 17.0 | 48.0 |
| 3702 | BKC J157 | F31 | Period | 5b | Nail | 12.0 | 58.0 |
| 3703 | BKC J157 | F31 |  |  | Nail | 15.0 | 67.0 |
| 3704 | BKC J157 | F31 |  |  | Nail | 12.0 | 88.0 |
| 3705 | EEC J157 | F31 |  |  | Nail | 16.0 | 42.0 |
| 3706 | BKC J157 | F31 |  |  | Nail | 13.0 | 44.0 |
| 3707 | EEC J166 | F36 |  |  | Nail | 16.0 | 81.0 |
| 3708 | BKC J166 | F36 |  |  | Nail | 15.0 | 49.0 |
| 3709 | BKC J166 | F36 |  |  | Nail | 15.0 | 40.0 |
| 3710 | BKC J166 | F36 |  |  | Nail | 19.0 | 51.0 |
| 3711 | EEC J166 | F36 |  |  | Nail | 24.0 | 80.0 |
| 3712 | BKC J168 | F13 |  |  | Nail | 19.0 | 62.0 |
| 3713 | EEC J168 | F13 |  |  | Nail | 18.0 | 41.0 |
| 3714 | BKC J168 | F13 |  |  | Nail | 18.0 | 38.0 |
| 3715 | BKC J171 | Period | d or | $6 ?$ | Nail | 12.0 | 32.0 |
| 3716 | EEC J171 |  |  |  | Nail | 20.0 | 49.0 |
| 3717 | EEC J171 |  |  |  | Nail | 16.0 | 79.0 |
| 3718 | BKC J176 | F32 | Period | 5c/6 | Nail | 15.0 | 42.0 |
| 371 ? | BKC J176 | F32 |  |  | Nail | 15.0 | 62.0 |
| 3720 | BKC J176 | F32 |  |  | Nail | 17.0 | 63.0 |
| 3721 | EEC J176 | F32 |  |  | Nail | 14.0 | 57.0 |
| 3722 | BKC J176 | F32 |  |  | Nail | 16.0 | 68.0 |
| 3723 | BKC J176 | F32 |  |  | Nail | 13.0 | 60.0 |
| 3724 | BKC J176 | F32 |  |  | Nail | 14.0 | 85.0 |
| 3725 | BKC J176 | F32 |  |  | Nail | 17.0 | 75.0 |
| 3726 | BKC J176 | F32 |  |  | Nail | 11.0 | 41.0 |
| 3727 | BKC J176 | F32 |  |  | Nail | 12.0 | 59.0 |
| 3728 | BKC J176 | F32 |  |  | Nail | 13.0 | 36.0 |
| 3729 | BKC J176 | F32 |  |  | Nail | 14.0 | 55.0 |
| 3730 | BKC J176 | F32 |  |  | Nail | 15.0 | 53.0 |
| 3731 | BKC J176 | F32 |  |  | Nail | 13.0 | 41.0 |
| 3732 | BKC J176 | F32 |  |  | Nail | 16.0 | 37.0 |
| 3733 | BKC J176 | F32 |  |  | Nail | 18.0 | 85.0 |
| 3734 | BKC J176 | F32 |  |  | Nail | 20.0 | 67.0 |
| 3735 | BKC J181 | L25 |  |  | Nail | 20.0 | 76.0 |
| 3736 | BKC J181 | L25 |  |  | Nail | 14.0 | 64.0 |
| 3737 | BKC J136 | F13 | Period | 5b | Nail | damaged | 74.0 |
| 3738 | BKC J186 | F13 |  |  | Nail | 24.0 | 105.0 |
| 3739 | BKC J136 | F13 ${ }^{\prime \prime}$ |  |  | Nail | 22.0 | 89.0 |
| 3740 | BKC J186 | F13 |  |  | Nail | 14.0 | 48.0 |
| 3741 | BKC J136 | F13 |  |  | Nail | 20.0 | 52.0 |
| 3742 | BKC J186 | F13 |  |  | Nail | 16.0 | 68.0 |
| 3743 | BKC J136 | F13 |  |  | Nail | 12.0 | 57.0 |
| 3744 | BKC J186 | F13 |  |  | Nail | 18.0 | 59.0 |


| 3745 | BKC J138 | F34 | Period | 5 b (end?) | Nail | 18.0 | 62.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3746 | BKC J 192 | L28 | Period | 5b/5c/6 | Nail | 19.0 | 62.0 |
| 3747 | BKC J197 | L25 | Period | 5c/6 | Nail | 10.0 | 51.0 |
| 3748 | BKC J198 | F45 | Period | 5b | Nail | 23.0 | 57.0 |
| 374 ? | BKC J198 | F45 |  |  | Nail | 23.0 | 60.0 |
| 3750 | BKC J200 | F46 | Period | 5c/6 | Nail | 12.0 | 32.0 |
| 3751 | EKC J201 | L28 | Period | 5b/5c/6 | Nail | 15.0 | 47.0 |
| 3752 | BKC J201 | L28 |  |  | Nail | 17.0 | 36.0 |
| 3753 | BKC J218 | Moder | rn or Per | Period 5/6? | Nail | 12.0 | 36.0 |
| 3754 | BKC J218 |  |  |  | Nail | 12.0 | 55.0 |
| 3755 | BKC J219 | F36 | Period | 5 b | Nail | 25.0 | 93.0 |
| 3756 | BKC J219 | F36 |  |  | Nail | 24.0 | 98.0 |
| 3757 | BKC J220 | L27 | Period | 3/4/5a | Nail | 20.0 | 74.0 |
| 3758 | BKC J224 | F13 | Period | 5b | Nail | 14.0 | 56.0 |
| 375 ? | EKC J232 | L17 | Period | 5b Phase 3 | Nail | 15.0 | 74.0 |
| 3760 | BKC J238 | F13 | Period | 5b | Nail | 15.0 | 39.0 |
| 3761 | BKC J238 | F13 |  |  | Nail | 15.0 | 31.0 |
| 3762 | BKC J238 | F13 |  |  | Nail | 13.0 | 23.0 |
| 3763 | BKC J238 | F13 |  |  | Nail | 12.0 | 45.0 |
| 3764 | BKC J238 | F13 |  |  | Nail | 22.0 | 77.0 |
| 3765 | BKC J242 | L33 | Period | 3/4/5* | Nail | 13.0 | 38.0 |
| 3766 | BKC J242 | L33 | Period | 3/4/5* | Nail | 11.0 | 46.0 |
| 3767 | BKC J242 | L33 |  |  | Nail | 16.0 | 29.0 |
| 3768 | BKC J243 | L33 |  |  | Nail | 12.0 | 38.0 |
| 376 ? | BKC J250 | L34 | Period | 5c/6 | Nail | 20.0 | 76.0 |
| 3770 | BKC J253 | L33 | Period | 3/4/5* | Nail | 24.0 | 64.0 |
| 3771 | BKC J253 | L33 |  |  | Nail | 18.0 | 91.0 |
| 3772 | EKC J263 | L35 |  |  | Nail | 11.0 | 45.0 |
| 3773 | BKC J268 | L35 |  |  | Nail | 26.0 | 45.0 |
| 3774 | BKC J236 | L35 |  |  | Nail | 15.0 | 53.0 |
| 3775 | BKC J297 | L35 |  |  | Nail | 22.0 | 142.0 |
| 3776 | BKC J297 | L35 |  |  | Nail | 13.0 | 64.0 |
| 3777 | BKC J332 | L33 |  |  | Nail | 16.0 | 60.0 |
| 3778 | BKC J332 | L33 |  |  | Nail | 15.0 | 40.0 |
| 377 ? | BKC J332 | L33 |  |  | Nail | 20.0 | 51.0 |
| 3780 | BKC J334 | F85 |  |  | Nail | 11.0 | 45.0 |
| 3781 | BKC J394 | L46 | Period | 2 | Nail | 13.0 | 48.0 |
| 3782 | BKC J394 | L46 |  |  | Nail | 15.0 | 33.0 |
| 3783 | BKC J394 | L46 |  |  | Nail | 17.0 | 47.0 |
| 3784 | BKC J398 | L44 |  |  | Nail | 15.0 | 62.0 |
| 3785 | BKC J430 | F239 |  |  | Nail | 17.0 | 40.0 |
| 3786 | BKC J439 | F242 | Period | 3/4/5* | Nail | 12.0 | 60.0 |
| 3787 | BKC J447 | F43 | Period | 5b | Nail | 23.0 | 80.0 |
| 3788 | BKC J439 | F13 |  |  | Nail | 27.0 | 97.0 |
| 378 ? | BKC K164 | F6 | Period | 6 | Nail | 16.0 | 38.0 |
| 3790 | BKC K200 | F28 |  |  | Nail | 25.0 | 49.0 |
| 37? 1 | BKC K223 | F12 | Modern |  | Nail | 34.0 | 54.0 |
| 37 ? 2 | BKC K223 | F12 |  |  | Nail | 30.0 | 75.0 |
| 3793 | BKC K256 | Period | d 5 and | nd 6 | Nail | 8.0 | 14.0 |
| 3794 | BKC K273 | F6 | Period | 6 | Nail | 18.0 | 71.0 |
| 3795 | BKC K282 | F6 |  |  | Nail | 22.0 | 90.0 |
| 3796 | BKC K232 | F6 |  |  | Nail | 19.0 | 70.0 |
| 3797 | BKC K308 | L24 | Period | 4c/5/6 | Stud | 35.0 | 24.0 |
| 3798 | BKC K374 | L40 | Period | 4a | Nail | 20.0 | 48.0 |
| 3799 | BKC K374 | L40 |  |  | Nail | damaged | 49.0 |
| 3300 | BKC K508 | L111 | Period | 4b/c | Nail | 18.0 | 31.0 |
| 3801 | BKC K518 | L117 | Period | 4c | Nail | 20.0 | 42.0 |
| 3802 | BKC K519 | L113 | Period | $4 \mathrm{a} / \mathrm{b}$ ? | Nail | 17.0 | 62.0 |


| 3803 | BKC K557 | LI22 Period | 1/2 |
| :---: | :---: | :---: | :---: |
| 3804 | BKC K557 | L122 ${ }^{\prime \prime}$ |  |
| 3805 | BKC K557 | L122 " |  |
| 3806 | BKC K570 | Period 3 or | 4 |
| 3807 | BKC K584 | F124 Period | 5/6 |
| 3808 | BKC K611 | L58 Period | 4 c (or 5?) |
| 3809 | BKC K631 | F121 Period | 2 |
| 3810 | BKC K646 | LI47 Period | 4c/5/6 |
| 3811 | BKC K647 | L1 18 |  |
| 3812 | BKC K663 | Fi29 Period | 5 |
| 3813 | BKC K666 | LI59 Period | 4c |
| 3814 | BKC K672 | L82 |  |
| 3815 | BKC M9 | Period 5/6 | (or modern) |
| 3816 | BKC M9 |  |  |
| 3817 | BKC M9 |  |  |
| 3818 | BKC M26 | Periods 3-6 |  |
| 3819 | BKC M28 |  |  |


| Stud | 15.0 | 17.0 |
| :--- | :--- | :--- |
| Stud | 10.0 | 14.0 |
| Stud | 12.0 | 20.0 |
| Nail | 13.0 | 62.0 |
| Nail | 19.0 | 69.0 |
| Nail | 12.0 | 34.0 |
| Nail | 30.0 | 55.0 |
| Nail | 14.0 | 54.0 |
| Nail | 24.0 | 87.0 |
| Nail | 22.0 | 70.0 |
| Nail | 17.0 | 95.0 |
| Nail | 17.0 | 46.0 |
| Nail | 14.0 | 78.0 |
| Nail | 20.0 | 64.0 |
| Nail | 13.0 | 80.0 |
| Nail | 14.0 | 82.0 |
| Nail | 18.0 | 80.0 |


| 3820 | BKC N51 | L7 Period 6 | Nail/Stud | 28.0 | 38.0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3821 | BKC K66 | F42 Period 6+ | Nail | 15.0 | 50.0 |
| 3822 | BKC N70 | L7 Period 6 | Nail | 14.0 | 54.0 |
| 3823 | BKC N78 | L8 | Nail | 19.0 | 88.0 |
| 3824 | BKC N84 | L8 | Nail | 18.0 | 102.0 |
| 3825 | BKC H93 | Period 5 or 6 | Nail | 22.0 | 82.0 |
| 3826 | BKC N116 | L10 Period 5b | Nail | 12.0 | 44.0 |
| 3827 | BKC N127 | Period 6 (or later) | Nail | 40.0 | 110.0 |
| 3828 | BKC N139 | F26 Period 6 | Nail | 20.0 | 72.0 |
| 3829 | BKC N159 | Period 6? | Nail | 22.0 | 100.0 |
| 3330 | BKC N168 | Period 6 | Nail | 16.0 | 72.0 |
| 3331 | BKC M198 | F30 Period 6 | Nail | 15.0 | 53.0 |
| 3832 | BKC N214 | Period 6? | Nail | 21.0 | 56.0 |
| 3833 | BKC N250 |  | Nail | 15.0 | 48.0 |
| 3834 | BKC N250 |  | Nail | 14.0 | 49.0 |
| 3335 | BKC N265 | F85 Period 6+ | Nail | i5.0 | 34.0 |
| 3836 | BKC N266 | F86 Period 6 | Nail | 17.0 | 54.0 |
| 3837 | BKC N273 | F42 Period 6+ | Nail | 17.0 | 56.0 |
| 3338 | BKC N274 | Period 6? | Nail | 19.0 | 66.0 |
| 3839 | BKC M277 | F87 Period 6+ | Nail | 24.0 | 80.0 |
| 3840 | BKC N282 | F12 | Nail | 14.0 | 35.0 |
| 3841 | BKC N286 | F92 | Nail | 15.0 | 36.0 |
| 3842 | BKC N297 | F86 Period 6 | Nail | 20.0 | 52.0 |
| 3343 | BKC H298 | F36 | Nail | 23.0 | 78.0 |
| 3844 | BKC N298 | F86 | Nail | damaged | 105.0 |
| 3845 | BKC N299 | F86 | Nail | 25.0 | 160.0 |
| 3846 | BKC N305 | F95 | Nail | 19.0 | 41.0 |
| 3347 | BKC N306 | L1 03 Period 5b1 | Nail | 14.0 | 55.0 |
| 3348 | BKC N317 | F96 Period 6? | Nail | 25.0 | 75.0 |
| 3849 | BKC N317 | F96 | Nail | 15.0 | 52.0 |
| 3850 | BKC N317 | F96 | Nail | 16.0 | 46.0 |
| 3351 | BKC N333 | Period 6? | Nail | 10.0 | 34.0 |
| 3852 | BKC M334 | F79 Period 6 | Nail | 18.0 | 60.0 |
| 3853 | BKC N344 | Probably Period 5b | Nail | 17.0 | 51.0 |
| 3854 | BKC N353 | Period 6+? | Nail | 17.0 | 73.0 |
| 3855 | BKC N354 | Period 6 | Nail | damaged | 92.0 |
| 3856 | BKC N374 | L19 Period 6 | Nail | 21.0 | 77.0 |
| 3857 | BKC N384 | L21 Period 6? | Nail | 22.0 | 67.0 |
| 3858 | BKC N385 | F113 Period 5b2 | Nail | 18.0 | 95.0 |
| 3859 | BKC N385 | F113 | Nail | 15.0 | 59.0 |
| 3860 | BKC N387 | L23 Period 6 | Nail | 14.0 | 70.0 |
| 3861 | BKC N394 | L37 | Nail | 18.0 | 70.0 |
| 3862 | BKC N428 | LIS Period 5b2 | Nail | 15.0 | 33.0 |
| 3863 | BKC M428 | LIS | Nail | 11.0 | 52.0 |
| 3864 | BKC N428 | LIS | Nail | 11.0 | 53.0 |
| 3365 | BKC N428 | LIS | Nail | 21.0 | 63.0 |
| 3866 | BKC N449 | L47 | Nail | 11.0 | 51.0 |
| 3867 | BKC N449 | L47 | Nail | 13.0 | 74.0 |
| 3868 | BKC N461 | F124 Period 5b1 | Nail | 15.0 | 58.0 |
| 3869 | BKC N495 | L102 | Nail | 27.0 | 47.0 |
| 3870 | BKC M495 | L102 | Nail | 26.0 | 59.0 |
| 3871 | BKC N495 | L1 02 | Nail | 17.0 | 104.0 |
| 3372 | BKC N495 | L102 | Nail | 16.0 | 58.0 |
| 3873 | BKC M499 | L1 04 | Nail | 17.0 | 52.0 |
| 3374 | BKC N501 | L71 Period 5b2? | Nail | 14.0 | 67.0 |
| 3875 | BKC N549 | Ll1 1 Period 5b1 | Nail | 15.0 | 43.0 |
| 3876 | BKC N567 | L93 | Nail | 16.0 | 53.0 |
| 3877 | BKC N581 | Period 5b2 or 6 | Nail | 16.0 | 69.0 |


| 3878 | BKC N582 | L96 Period 5b 1 | Hail | 14.0 | 57.0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3879 | BKC N618 | F142 Period 5a | Hail | 11.0 | 46.0 |
| 3880 | BKC K618 | F142 | Hail | 15.0 | 60.0 |
| 3881 | BKC H637 | Period 6 at latest | Hail | 17.0 | 44.0 |
| 3382 | BKC T30 | F25 Period 5c | Hail | 22.0 | 78.0 |
| 3883 | BKC T33 | L15 Period 3? | Hail | 15.0 | 61.0 |
| 3884 | BKC T36 | Period 3? | Hail | 21.0 | 79.0 |
| 3885 | BKC T45 | L27 Period 3 | Hail | 15.0 | 59.0 |
| 3886 | BKC T70 | LIS Period 3? | Hail | 11.0 | 35.0 |
| 3887 | BKC T131 | L34 | Hail | 15.0 | 58.0 |
| 3888 | BKC T131 | L34 | Hail | 13.0 | 75.0 |
| 3889 | BKC T135 | Period 5 | Hail | 15.0 | 43.0 |
| 3890 | BKC T178 | F76 Period 3 | Hail | 13.0 | 71.0 |
| 3891 | BKC T212 | L57 Period 4 or 5a | Hail | 14.0 | 53.0 |
| 3392 | BKC T216 | Period 3(end) | Hail | 13.0 | 57.0 |
| 3393 | BKC T216 |  | Hail | 15.0 | 52.0 |
| 3394 | BKC T229 | F159 Period 5c | Hail | 17.0 | 83.0 |
| 3395 | BKC T275 | L87 | Hail | 19.0 | 49.0 |
| 3896 | BKC T278 | L38 Period 5a and b | Hail | 14.0 | 60.0 |
| 3897 | BKC T273 | L38 | Hail | 20.0 | 45.0 |
| 3893 | BKC T278 | L38 | Hail | i4.0 | 41.0 |
| 3899 | BKC T283 | L67 Period 5c | Hail | 20.0 | 89.0 |
| 3900 | BKC T233 | L67 | Hail | 24.0 | 128.0 |
| 3901 | BKC T233 | L67 | Hail | 16.0 | 61.0 |
| 3902 | BKC T297 | Period 3 | Hail | 13.0 | 51.0 |
| 3903 | BKC T310 | Fl 12 Period 5c | Hail | 16.0 | 43.0 |
| 3904 | BKC T326 | L67 | Hail | 21.0 | 85.0 |
| 3905 | BKC T331 | L56 Period 3(end) | Hail | 25.0 | 102.0 |
| 3906 | BKC T342 | F165 Period 3 | Hail | 15.0 | 35.0 |
| 3907 | BKC T347 | L33 | Hail | 22.0 | 111.0 |
| 3908 | BKC T377 | Period 2 or 3? | Hail | 16.0 | 55.0 |
| 3909 | BKC T378 | Period 3? | Hail | 19.0 | 53.0 |
| 3910 | BKC T382 | Period 3 or 4 | Mail | 15.0 | 54.0 |
| 3911 | BKC T417 |  | Hail | 19.0 | 66.0 |
| 3912 | BKC T458 | Period i | Hail | 16.0 | 112.0 |
| 3913 | BKC T473 |  | Hail | 15.0 | 43.0 |
| 3914 | BKC T473 |  | Hail | 14.0 | 53.0 |
| 3915 | BKC T501 | Period 1 or 2? | Hail | 16.0 | 63.0 |
| 3916 | BKC T519 | Period 1 (or 2) + 5a? contam. | Hail | 12.0 | 47.0 |
| 3917 | BKC T51? |  | Hail | 14.0 | 61.0 |
| 3918 | BKC T519 |  | Hail | 16.0 | 96.0 |
| 3919 | BKC V15 | L5 Late Period 5 | Hail | 21.0 | 80.0 |
| 3920 | BKC V15 | L5 | Hail | 15.0 | 48.0 |
| 3921 | BKC V22 | L11 | Hail | 16.0 | 48.0 |
| 3922 | BKC V22 | L11 | Hail | 16.0 | 42.0 |
| 3923 | BKC V22 | L11 | Hail | 17.0 | 42.0 |
| 3924 | BKC V27 | L5 | Hail | 16.0 | 55.0 |
| 3925 | BKC V61 | L9 | Hail | 13.0 | 38.0 |
| 3926 | BKC V67 | L5 | Hail | 23.0 | 69.0 |
| 3927 | BKC V68 | L22 | Hail | 18.0 | 43.0 |
| 3928 | BKC V73 | L22 | Hail | 23.0 | 62.0 |
| 3929 | BKC V87 | L11? | Hail | 28.0 | 102.0 |
| 3930 | BKC V87 | L11? | Nail | 17.0 | 51.0 |
| 3931 | BKC V91 | L11 | Nail | 13.0 | 74.0 |
| 3932 | BKC VI11 | Period 3 or 4? | Nail | 25.0 | 52.0 |
| 3933 | BKC VI11 |  | Nail | 13.0 | 105.0 |
| 3934 | BKC VI16 | L16 Late Period 5 or earlier | Nail | 11.0 | 45.0 |
| 3935 | BKC VI24 | F25 Period 4 | Nail | 19.0 | 74.0 |


| 3936 | BKC VI37 | F31 |  |  | Nail | 22.0 | 83.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3937 | BKC VI37 | F31 |  |  | Nail | 20.0 | 103.0 |
| 3938 | BKC VI46 | F40 |  |  | Nail | 14.0 | 49.0 |
| 3939 | BKC V151 | L15 P | Period 5 |  | Nail | 20.0 | 63.0 |
| 3940 | EKC V161 | F50 P | Period 5 (or 6) |  | Nail | 25.0 | 56.0 |
| 3941 | BKC VI67 | F39 P | Period 4 |  | Nail | 20.0 | 55.0 |
| 3942 | BKC VI68 | F30 P | Period 2 (possibly | 3?) | Nail | 16.0 | 35.0 |
| 3943 | BKC VI68 | F30 |  |  | Nail | 14.0 | 47.0 |
| 3944 | BKC VI76 | F44 | Period 3(late) or | 4 | Nail | 40.0 | 40.0 |
| 3945 | BKC VI84 | F30 | Period 2 (possibly | 3?) | Nail | 16.0 | 54.0 |
| 3946 | BKC VI90 | F499 | Period 5 |  | Nail | 13.0 | 41.0 |
| 3947 | BKC V214 | F50 | Period 5 (or 6) |  | Nail | 20.0 | 42.0 |
| 3948 | BKC V214 | F50 |  |  | Nail | 14.0 | 64.0 |
| 3949 | BKC V214 | F50 |  |  | Nail | 17.0 | 53.0 |
| 3950 | BKC V225 | F499 | Period 5 |  | Nail | 14.0 | 43.0 |
| 3951 | BKC V238 | F54 | Period 4 |  | Nail | 15.0 | 40.0 |
| 3952 | BKC V238 | F54 |  |  | Nail | 11.0 | 56.0 |
| 3953 | BKC V390 | Period | d 5 |  | Nail | 13.0 | 70.0 |
| 3954 | BKC V400 | L54 | Period 1 to early | 4 | Nail | 13.0 | 52.0 |
| 3955 | BKC V482 | L78 | Period 2 |  | Nail | 11.0 | 45.0 |
| $8{ }^{=}$ | BKC V492 | F30 | Period 2 (possibly | 3?) | Nail | 15.0 | 52.0 |
| 3957 | BKC V630 | F248 | Period 2 |  | Nail | 20.0 | 87.0 |
| 3958 | BKC V743 | Lii | Late Period 5 |  | Nail | 15.0 | 52.0 |
| 3959 | BKC V754 | L94 | Period 4 or earlier |  | Nail | 19.0 | 91.0 |
| 3960 | BKC V757 | L59 | Period 4 |  | Nail | 17.0 | 50.0 |
| 3961 | BKC V772 | L93 | Period 2 |  | Nail | 16.0 | 48.0 |
| 3962 | BKC V787 | L22 | Late Period 5 |  | Nail | 16.0 | 45.0 |
| 3963 | BKC V821 | Late | Period 5 |  | Nail | 25.0 | 84.0 |
| 3964 | BKC V840 | L11 | Late Period 5 |  | Nail | 20.0 | 77.0 |
| 3965 | BKC V881 | L93 | Period 2 |  | Nail | 15.0 | 42.0 |
| 3966 | BKC V918 | F276 | Period 1 or 2 |  | Nail | 10.0 | 45.0 |
| 3967 | BKC V964 | F327 | Period |  | Nail | 15.0 | 50.0 |
| 3968 | BKC VI142 | F442 P | Period 4 |  | Nail | 17.0 | 60.0 |
| 3969 | BKC VI26?1 | 1 F493 P | Period |  | Nail | $13 . \mathrm{u}$ | 54.0 |
| 3970 | BKC VI279 | F497 |  |  | Nail | 16.0 | 46.0 |
| 3971 | CPS 420 | F100 | Period 4 |  | Nail | 20.0 | 44.0 |
| 3972 | CPS 420 | F100 |  |  | Nail | 26.0 | 62.0 |
| 3973 | CPS 420 | F100 |  |  | Nail | 21.0 | 68.0 |
| 3974 | CPS 420 | F100 |  |  | Nail | 22.0 | 80.0 |
| 3975 | CPS 420 | F100 |  |  | Nail | 30.0 | 34.0 |
| 3976 | CPS 454 | L67 | Period 5 |  | Nail | 24.0 | 63.0 |
| 3977 | CPS 470 | F100 | Period 4 |  | Nail | 19.0 | 51.0 |
| 3978 | CPS 483 | F100 |  |  | Nail | 21.0 | 50.0 |
| 3979 | CPS 483 | FiOO |  |  | Nail | 24.0 | 61.0 |
| 3980 | CPS 505 | L1\&y | Period 5 |  | Nail | 24.0 | 94.0 |
| 3981 | CPS 505 | L68 |  |  | Nail | 24.0 | 84.0 |
| 3982 | CPS 533 | F116 |  |  | Nail | 25.0 | 70.0 |
| 3983 | CPS 554 | FitS | Period 4 |  | Nail | 18.0 | 73.0 |
| 3984 | CPS 554 | F115 |  |  | Nail | 17.0 | 53.0 |
| 3985 | CPS 554 | F115 |  |  | Nail | 32.0 | 63.0 |
| 3986 | CPS 554 | Fi 15 |  |  | Nail | 21.0 | 54.0 |
| 3987 | CPS 559 | L1 82 |  |  | Nail | 25.0 | 59.0 |
| 3988 | CPS 560 | F116 | Period 5 |  | Nail | 19.0 | 79.0 |
| 3989 | CPS 560 | F116 |  |  | Stud | 27.0 | 22.0 |
| 3990 | CPS 560 | F116 |  |  | Stud | 27.0 | 36.0 |
| 399 i | CPS 569 | F112 |  |  | Nail | 28.0 | 85.0 |
| 3992 | CPS 569 | F112 |  |  | Nail | 20.0 | 57.0 |
| 3993 | CPS 576 | F115 | Period 4 |  | Nail | 14.0 | 53.0 |


| 3994 | CPS 576 | F115 | Hail | 18.0 | 78.0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3995 | CPS 576 | F115 | Nail | 24.0 | 57.0 |
| 3996 | CPS 576 | F115 | Hail | 20.0 | 90.0 |
| 3997 | CPS 576 | F115 | Nail | 25.0 | 47.0 |
| 3998 | CPS 579 | Fl 12 Period 5 | Hail | 17.0 | 40.0 |
| 3999 | CPS 579 | F112 | Nail | 25.0 | 59.0 |
| 4000 | CPS 579 | F112 | Stud | 22.0 | 35.0 |
| 4001 | CPS 588 | F115 Period 4 or 5 | Nail | 26.0 | 31.0 |
| 4002 | CPS 597 | F112 Period 5 | Hail | 19.0 | 55.0 |
| 4003 | CPS 610 | F119 | Nail | 20.0 | 66.0 |
| 4004 | CPS 617 | F119 | Hail | 30.0 | 60.0 |
| 4005 | CPS 617 | F1 19 | Nail | 34.0 | 81.0 |
| 4006 | CPS 640 | F118 | Hail | 20.0 | 47.0 |
| 4007 | CPS 641 | L88 Period 4 | Nail | 16.0 | 54.0 |
| 4008 | CPS 698 | L61 | Hail | 16.0 | 69.0 |
| 4009 | CPS 698 | L61 | Nail | 17.0 | 86.0 |
| 4010 | CPS 714 | F115 | Hail | 30.0 | 64.0 |
| 4011 | CPS 714 | F115 | Nail | 32.0 | 75.0 |
| 4012 | CPS 716 | L61 | Hail | 19.0 | 52.0 |
| 4013 | CPS 745 | L1 04 | Nail | 24.0 | 95.0 |
| 4014 | CPS 812 | F134 | Hail | 22.0 | 47.0 |
| 4015 | CPS 342 | L115 | Nail | 13.0 | 41.0 |
| 4016 | CPS 842 | L1 15 | Hail | 16.0 | 46.0 |
| 4017 | CPS 842 | L115 | Nail | 15.0 | 67.0 |
| 4018 | MID A252 | F38 Early medieval | Nail | 15.0 | 37.0 |
| 4019 | MID B1230 | F404 | Nail | 19.0 | 57.0 |
| 4020 | MID G2007 | F578 | Nail | 14.0 | 67.0 |
| 4021 | MID G2007 | F578 | Nail | 13.0 | 33.0 |
| 4022 | MID A3113 | F942 Period 2 | Nail | 23.0 | 102.0 |
| 4023 | MRC 81 | 3 rd or 4thi century | Nail | 14.0 | 46.0 |
| 4024 | MRC 101 | F62 + F52 2nd-4th century | Nail | 26.0 | 59.0 |
| 4025 | COC 492 | L1 03 Period 4 | Nail | 15.0 | 66.0 |
| 4026 | COC 660 | L181 Period 3 | Nail | 15.0 | 37.0 |
| 4027 | COC 964 | L286 Period 2 | Nail | 21.0 | 92.0 |
| 4028 | COC 964 | L286 | Hail | 26.0 | 64.0 |
| 4029 | COC 964 | L286 | Nail | 24.0 | 64.0 |

## RIVETS

All are of copper alloy (Fig 123; 4030-4034),
4030 SF LWC 3394. L458. Cultivated soil. Period 2 and 3a. Either a rivet
or the riveted shaft from a stud. Maximum diameter 3.5 mm . Length 6.0 mm .

4032 SF BKC 4654. T326 L67. Cellar (F25) backfill. Period 5c. Similar to
Fig 123. 4031. but without the marginal groove. Diameter of heads

L1.5 mm, length 11.0 mm .

## BOSSES

All are of copper alloy.

Containing Plead solder (Fig 124; 4035-4046)

4035 SF LWC 859(C), B397 F146 + F145. Period 2. Fragment of a boss approximately 17.0 mm in diameter.

4038 SF BKC 2385. G347 F14i. Pit. Period 5c? Fragment of a boss approximately 15.0 mm in diameter. This piece may have an iron shaft and may therefore belong with the studs.

403? SF BKC 2385. G347 F141. Pit. Period 5c? Similar to 4038. Diameter approximately 17.0 mm .

4040 SF BKC 3990. N70 L7. Dump. Period 6. Boss with a slight upturned rim. Diameter 20.5 mm .

4041 SF BKC 3990. N70 L7. Dump. Period 6. A plain boss. possibly with an iron shaft as 4038 and 4039. Diameter 20.0 mm . The similarity in size between this stud and 4040 and their proximity in the ground suggest that. though slightly different in design. they were fixed to the same object.

4042 SF BKC 4629(C), T177. Period 3. 4. or 5. Fragment of a plain boss Diameter approximately 18.0 mm .

4043 SF BKC 5493. V920 L11. Dump. Late Period 5. Fragment of a boss approximately 21.0 mm in diameter.

4046 SF BUC 1185. E439 L16. Destruction debris. Probably first half of the 5th century. A small boss. diameter 10.0 mm .

Plain (Fig 124; 4047-4056)
4047 SF LWC 1116. B F70. Probably cellar backfill. Periods. A very corroded low boss. Diameter 21.5 mm .

4048 SF LWC 3859(C), J 1501 F501. Pit. Period 4. A fragment of a low boss. Diameter 24.5 mm .

4050 SF LWC 3850 (C), K552. Base of garden topsoil or make-up? Period 3?. or 4b. Six fragments of a boss. with remains of white-metal plating on the surface.

4051 SF BKC 1237(C), E326 L447. Town ditch fill. Period 6. A slightlydamaged boss. Diameter 25.5 mm .

4054 SF BKC 4789. T82 L27. Destruction debris of Period 2. Period 3. A small boss. diameter 13.5 mm .

4055 SF BKC 4769. T521 L55. Floor of sandy clay + occupation. Period 3. Fragment of a boss with slight rim. This piece may have contained lead solder. Diameter approximately 17.0 mm .

4056 SF BUC $34(\mathrm{C})$, A155 F96. Pit. Period 1 or 2. A large boss with wide upturned rim. There are traces of white metal plating on both upper and lower surfaces. Diameter 37.5 mm .

## DOUBLE-SPIKED LOOPS

Loops are copper alloy unless otherwise stated (Figs 125 and 126; 4057-4069), 4057 SF LWC 2723(C), J593. Demolition debris. Period 4b destruction. Double-spiked loop with straight-sided blades. The ends are missing. The blades are well-worn at the break. Length 25.5 mm .

4058 SF LWC 3011(C), J817. Demolition. Period 4a. Double-spiked loop with very slightly tapered blades. The ends are missing. Length 24.0 mm . 4060 SF BKC 1291(C), E367 L434. Town ditch 07138/317) fill. Period 6 or post-Roman. Double-spiked loop with tapered blades. The ends have been broken off. Length 36.0 mm .

4062 SF BKC $5155(\mathrm{C})$, G37. Uncertain context. Double-spiked loop with straight-sided blades. The ends are missing. Length 22.5 mm .

4064 SF BUC 480. C327 G267. Grave fill. Period 2. Double-spiked loop with straight-sided blades. The ends are missing. Length 43.0 mm

4067-8 SF BKC 6011, N167. Period 6. Iron. Two double-spiked loops. 4067) in two pieces. Length 74.5 mm . 4068) Part of the shaft is missing. Length 51.5 mm .

## JOINER'S DOGS

(Fig 127; 4070-4072)
4070 SF LWC 4331. B117. Cellar (F70) backfill. contaminated. Period 5+.
Iron. Probably part of a joiner's dog, twisted. Length of cross-piece 65.0 mm . Maximum surviving length of arms 34.0 mm .

## T-STAPLES

(Fig 128;4073-4074)
4074 SF BKC 6003. T394. Period 1 or 2. A fragment of the top of an iron T-staple.

## RING-HEADED PIN

In printed catalogue (Fig 128? 4075).

WALL HOOK

In printed catalogue (Fig 129; 4076).

## BRACKETS OR TIE-STRIPS

(Fig 130; 4077-4084)
4077 SF BKC 1009, D376. Town ditch fill. Late Period 6 or Anglo-Saxon. Iron. Flat strip. 169.0 mm long. 16.5 mm wide, 9.0 mm thick. Both ends are damaged. Each end appears to widen out around a large perforation. 4078 SF BKC 4850(C), E221 F536. Pier base robber backfill. Period 6. A fragment of a flat strip. 60.5 mm long, 38.0 mm wide, 2.5 mm thick. There is a rivet hole in the centre of the fragment.

4081 SF BKC 6017. J218. Pit material. Modern or Periods 5-6? Iron. A right-angled fitting similar to Fig 130. 4079 but both ends are damaged. Length of largest surviving arm (externally) 68.0 mm .

4082 SF BKC 6005. H478 F123. Foundation? Period 5b2. Iron. A more or less flat strip. rectangular in section. 9.0 by 30.0 mm . Length 156.0 mm .

4083 SF BKC 4551(C), T25 F15. Pit. Period 5 (a or) b. Iron. A fragment of a flat sheet of iron ( 2.0 mm thick) with two contiguous straight edges at right angles and a curving edge running up towards the longer ( 98.0 mm ) of the two straight edges. There are two studs or rivets set 8.0 mm in from the longest edge.

4084 SF BKC 5150. T456. Rests on natural. Period 1. Iron. A distorted thin strip, rectangular in section, varying in width. Approximately 200.0 mm long.

## HINGE FITTINGS

(Fig 131; 4085-4097)
4085 SF LWC 4300. B424 F147. Pit. Period 5. A fragment of one arm of an iron loop hinge. Length 97.0 mm .

4086 SF LWC 1233. B681 F251. Timber drain. Period 2. Fragmented iron strap hinge.

4087 SF LWC 4322. K451. Post-Boudican site clearance. Period 3. Fragment of one arm of an iron loop hinge. Length 92.0 mm .

4089 SF CPS 988. 554 F115. Occupation. Period 4. Fragment of one arm of an iron loop hinge. Length 71.0 mm .

4090 SF BUC 365. B930 G158. Grave fill. Period 2. One arm of an iron loop hinge. pierced at one end. Length 124.0 mm .

4091 SF BUC 1611. B1119 G131. Grave fill. Period 2. One arm of an iron loop hinge? Length 101.0 mm .

4092 SF BUC 745. C1446 G411. Grave fill. Period 2. Fragment of one arm of an iron loop hinge. Length 71.0 mm .

4093 SF LWC 3769. K502 F282. Pit. Medieval-*? Fragment of a bone hinge unit. with one peg hole. burnt slightly. Length 23.0 mm . approximate diameter 18.0 mm .

4094 SF BKC 2782(C), H287 L13. Dump. Period 5b (end), and possibly into 5c and 6. Bone hinge unit, with one peg hole. Length 32.0 mm . diameter 19.0 mm .

4095 SF BKC 3368(C), J200 F46. Dump. Period 5c/6. Bone hinge unit, with one peg hole. Length 25.0 mm , diameter 21.5 mm .

All are of copper alloy (Fig 132; 4098-4107),
4098 SF LWC 3405(C), J1108 F365. Pit. Period 4. Four fragments of a ?collar with a thickened rim at one end. Length 6.5 mm , diameter approximately 13.5 mm .

4099 SF LWC 3683(C), K400. Base of garden topsoil. Period 4b. A collar with irregularly spaced mouldings. Length 9.5 mm . diameter 24.5 mm .

4100 SF BKC 993(C), D392. Town ditch fill. Periods 5/6. A collar with slightly inturned edges. Length 19.0 mm . diameter 28.5 mm .

4102 SF BKC 1632(C), E907 L250. Road metalling. Periods 2 and 3a. A very small plain collar. Length 4.5 mm . diameter 3.5 mm .

4105 SF BKC 4743. T472. Period 2 or 3 ? A corroded collar with traces of at least three grooves. Length 12.0 mm . diameter 14.5 mm .

4106 SF BUC 791. C1316 L1. Period 2. A corroded plain collar. Length 15.5 mm . diameter 21.0 mm .

## BINDING

All the pieces are of copper alloy (Fig 133; 4108-4120).
4109 SFLWC 1149(C), C491 F235. Pit. Period 1. Two thin strips slightly turned down along one edge. One is more or less straight-sided and has a rivet hole near the edge that is not turned down. Length 77.0 mm , width 16.0 mm . The other curves gently and has two rivet holes and a rivet still in place near the inside edge. Length 97.0 mm , width 27.0 mm .

4112 SF BKC 126(C), A72 F16. Town ditch. Anglo-Saxon or Period 6. Fragment of a binding strip turned over along one edge. Length 27.5 mm , width 14.5 mm

4114 SF BKC 4458. N549 L111. Occupation and dump? Period 5b1. Possibly a binding strip, distorted. Length 63.0 mm , width 9.0 mm .

4115 SF BKC 4728. T461 L49. Floor of sandy clay + occupation. Period 2. A length of tubing similar to Fig 133. 4108. Length 64.0 mm . width 9.00 mm .

4118 SF BUC 802. C1735 F60. Ditch. Period 1. A strip of ?binding with a rivet hole at one end. Length 35.0 mm . width 14.0 mm .

4119 SF MID 686. A2672 L361. Demolition debris. Period 3 destruction. A thick curving strip, slightly hollowed on the underside. Length 50.0 mm , width 10.0 mm .

4120 SF MRC 83, 121 F52. Early 2nd-century pit. A strip of U-shaped section, bent. Length approximately 136.0 mm , width 5.0 mm .

## MISCELLANEOUS FITTINGS

All in printed catalogue (Fig 134; 4121-4127).

## LOCKS AND KEYS

Unless indicated otherwise objects are of copper alloy.

Lock-plates
(Fig 135; 4128-4129)
4129 SF CPS 883(C), 1002 L175. Burnt material. Period 1 or 2. Thirty-one fragments of sheet copper alloy possibly from a lock-plate. In three of the fragments are the remains of iron rivets. Very few of the pieces can be fitted together.

## Lock-bolts

(Fig 136; 4130-4141)
4130 SF LWC 159(C), All. Modern. A fragment of a lock-bolt with lozengeshaped and triangular cut-outs. Length (incomplete) 37.5 mm .

4131 SF LWC 973(C), C206. Make-up. Period 4. A complete lock-bolt with circular. pear-shaped and triangular cut-outs. Length 78.0 mm .

4132 SF LWC 3502(C), J1321 F424. Slot. Period 2. A small complete bolt with circular and triangular cut-outs. Length 49.0 mm .

4135 SF BKC 2479(C), G429. Periods 4 and 5. A fragment of a lock-bolt.

4137 SF BKC 2867(C), H364 L12. Destruction debris of Period 5b building. Period 5b (end), A fragment of a lock-bolt.

4138 SF BKC 3396(C), J59. Spoil-heap. Two fragments of a bolt similar to Fig 136. 4134.

4139 SF BKC 3427(C), J234. Machine clearance. Modern. A fragment of a bolt.

4140 SF BKC 3659, J394 L46. Lens of pre-Boudican dump? Period 2. Possibly a fragment of a lock-bolt.

4141 SF BUC 425, 11309 L3. Period 1. A fragment of a bolt.

Lock-pins

Both in printed catalogue (Fig 137J 4142-4143).

## Keys

Latch-lifter (Fig 133; 4144)

In printed catalogue.

Tumbler lock lift keys (Fig 139;4145-4149)

4146 SF LWC 2616(C), J467. Demolished building. contaminated. Period 4b destruction. Iron. Bent. L-shaped lift key with ?two wards, both broken off. The short arm is rectangular in section, 3.0 by 7.0 mm . the base of the shaft ? square, 6.0 by 6.0 mm (but it may be round), and the head of the shaft, the grip, rectangular, 5.0 by 14.0 mm , and pierced for suspension. Length 147.5 mm , width 33.5 mm .

4147 SF BKC 6008. J176 F32. Pit. Period 5c/6. Iron. Corroded L-shaped lift key with heavy grip pierced for suspension. Length 83.0 mm , width 24.0 mm .

Tumbler lock slide keys (Fig 140; 4150-4154)
4151 SF BKC 1579(C), E834 L252. Make-up. Period 3b. Slide key, the handle has broken off. Three parallel wards. Surviving length 31.5 mm , width 18.5 mm .

4152 SF BKC 6023. El180 F332. Large pit. Period 2. Iron. Corroded slide key with a single row of wards, the number of which cannot be determined. Length 78.0 mm , width 33.0 mm .

Lever lock keys (Fig 141; 4155-4156)
4155 SF BKC 2982(C), J36 L4. Dump. Period 5b. Key with pelta-shaped cut-out on the handle to serve for suspension. The cut-out is similar to that on 1st-century buckles. as Fig 144. 4176. The wards are broken off.

Length 40.0 mm . maximum width of handle 22.5 mm .

## Keys of uncertain type (4157-4158)

4157 SF LWC 1147. 8628 F225. Pit. Period 5. Massive iron key. possibly of tumbler lock slide type. Length 194.0 mm .

4158 SF CPS 752. 741 L96. Make-up. Period 4. Key? L-shaped. with rectangular-section shaft, pierced at the top for suspension, curving round into the short arm, the end of which is circular in section. Possibly a simple slide key.

Key handles (Fig 1425 4159-4164)

4159 SF BKC 2056. G1. Site cleaning. Unstratified. Fleur-de-lis key handle with traces of iron. Length 55.0 mm , width 735.0 mm . Similar to Fig 142, 4161 but lacking the small leaves.

4160 SF BKC 2192(C), G70 F11. Timber-lined drain. Period 5c. Fleur-de-lis key handle. Length 53.5 mm , width 29.5 mm . Similar to Fig 142. 4161 but lacking the small leaves.

4162 SF BKC 2864(C), H374 L12. Destruction debris of Period 5b building. Period 5b (end), Possibly a key handle. A ring with a square projection. Maximum external diameter 27.0 mm .

4163 SF BKC 3357(C), J198 F45. Timber-lined pit. Period 5b. As 4162. Maximum external diameter 20.5 mm .

4164 SF MID 569. A2069 L214. Destruction debris. Period 3 destruction. Handle with a corroded iron stem still affixed. Possibly a key. The handle is a ring set on a rectangular base of two mouldings.

## CATEGORY 12: AGRICULTURE. HORTICULTURE AMD ANIMAL HUSBANDRY

## BELLS

All are of copper alloy (Fig 143; 4165-4172),

4167 SF BKC 1848. E1148 F166. Pipe trench. Period 4. Fragment of a bell with part of a suspension loop.

4169 SF BKC 5452(C), V784 L97? Period 2 (or 3?), A conical bell with suspension loop. similar to Fig 143. 4168. The body is damaged. Three lugs survive round the base. Height 27.5 mm . diameter 27.0 mm .

4170 SF MID 705. A2826 L366. Demolition or make-up. Period 2b or 3a. Possibly a slightly crushed bell with conical top and straight-sided rim. Round part of the top there is some irregular slashed decoration. There is a fragment of iron fixed in the top. perhaps the remains of a clapper. Height 18.0 mm . diameter 29.5 mm .

4171 SF BUC 468. C165 G247. Grave fill. Period 2. A small conical bell with suspension loop. Height 15.5 mm . diameter 14.5 mm .

4172 SF BUC 524. C1001 Ll. Topsoil. Periods 1-2. Possibly a corroded bell. Height 15.0 mm . diameter 20.5 mm .

## Armour

## Belt and apron fittings

Objects are copper-alloy unless stated otherwise (Fig 144. 4173-4181), 4178 SF BKC 3805(C), C78 L43. Road metalling. First surface of the via saqularis. Period 1. A barred buckle tongue. the hinged end is missing and the point is damaged. Surviving length 25.5 mm .

4180 SF BKC 1790. E1093 L336. Charcoal tip-line. Period ib. A fragment of a rosette stud. The face is too corroded to allow the exact pattern of the decoration to be distinguished. Diameter approximately 15.0 mm .

Copper-alloy fittings from laminated body armour (Fig 145J 4182-4190)

4184 SF LWC 3489(C), J1296. Site clearance dump. redeposited natural sand. Period 1. A loop from a cuirass buckle. Length at the terminals 20.0 mm . 4185 SF LWC 3564(C), J1486 F433. Pit. Period 1 (?), Fragments probably of a hinged strap fitting (as Fig 145. 4186),

4187 SF BKC 1705. E1005 L314. Ditch (F230) fill. Period 2. Fragment of a girdle-plate tie hook (Robinson 1975. fig 183),

4188 SF BKC 1983(C), E1293 (L396+5. Period lb or 2 to C20th. Fragment of a hinged strap fitting (as Fig 145. 4186),

4189 Not used.

4190 SF BKC 5725(C), V1060 L134. Make-up. Period 2. Fragments of a hinged
buckle fitting (as Fig 152. 4225), The buckle loop is missing and the longer of the two plates has split at the hinge. Length (with the buckle tongue) 53.5 mm . width 17.5 mm .

## Arms

## Shield

All in printed catalogue (Figs 146 and 147; 4191-4193),

Sword

In printed catalogue (Fig 143? 4194),

Javelin (Fig 143? 4195-4196)

4195 SF BKC 1800 (X-rayed), E957 L285. Dump. Period lb. Iron. Possibly three fragments of the square section shaft of a javelin. Length (bent) approximately 307.0 mm .
$\underline{\text { Tools }}$

Pickaxe (Fig 148? 4197-4198)

4197 SF BKC 4692(C), T419. Period 1 (or 25. With Fig 148. 4193. one of a pair of sheath fittings from a legionary pickaxe. In two fragments. Length 46.0 mm .

## Cavalry harness fittings.

## Copper-alloy strap-loops

All in printed catalogue (Fig 149; 4199-4202).

## Button-and-loop fastener

In printed catalogue (Fig 150; 4203).

## 1ST CENTURY EQUIPMENT FROM CONTEXTS DATED LATER THAN 60/1

## Armour

Belt and apron fittings of copper alloy (Fig 151; 4204-4220)
4206 SF LWC 3204(C)* J941. Make-up. Period 3. A fragment of a rosette stud with seemingly plain surface. as Fig 151. 4205. Diameter 20.0 mm . Square section shaft. clenched. length 8.5 mm .

4216 SF BKC 2907. J7 L1. Site clearance. A barred buckle tongue. This could belong to either a 1 st- or 4 th-centry buckle. as the barred tongue recurs on some late buckles of Hawkes and Dunning Type 2a (Hawkes and Dunning 1962. fig 17.e.k. fig 18.a), Length 28.0 mm .

4217 SF BKC 3178. J115 F25. Large pit. Periods 3-6? A short waisted hinged belt-plate with two back projections for attachment as Fig 151. 4215. Also as 4215 this piece may be later in date than Ist-century. Length 19.5 mm . width at the hinge end 16.0 mm .

4220 X131(2)(C), Stray find. probably from the Sheepen area. A large barred buckle tongue with transverse mouldings at the hinge end. Length 36.5 mm .

Copper-alloy fittings from laminated body armour (Fig 152; 4221-4226)
4224 SF BKC 5758(C), V701. Unstratified. Spoil-heap. The plate of a girdleplate tie hook. Both rivets are missing. Length 35.5 mm . maximum width 12.5 mm .

## Arms

Sword (Fig 153; 4227-4228)
4228 SF COC 194. 900 F325. Trench fill. Period 2 or 3. A fragment of a bone sword handle grip with four flutings. Length 74.0 mm .

## Dagger

In printed catalogue (Fig 154; 4229).

## Spear

In printed catalogue (Fig 155? 4230).

Eallista bolt-head
In printed catalogue (Fig 155? 4231).

Tools

## Turf-cutter

In printed catalogue (Fig 155? 4232).

## Cavalry harness fittings

Pendants (Fig 156; 4233-4234)

4234 SF MID 9(C), A40 F14. Pit. Post-medieval to modern. A crushed heartshaped harness pendant, probably similar to Fig 156, 4233, but lacking the central rivet. The top is missing. Surviving length 42.5 mm , width 54.0 mm .

## Armour

## Copper-alloy pendants. mounts and other fittings

All in printed catalogue (Fig 157; 4235-4241).

## Arms

## Sword

Both in printed catalogue (Fig 158; 4242-4243).

## Dagger?

In printed catalogue (Fig 159; 4244).

Bow
In printed catalogue (Fig 160; 4245).

Cavalry armour

In printed catalogue (Fig 16; 4246).

## LATE ROMAN BELT-FITTINGS. PROBABLY FROM THE CINGULUM MILITARE

All in printed catalogue (Fig 162. 4247-4254).

## PHALLIC AMULETS USUALLY ASSOCIATED WITH THE ROMAN ARMY

(Figs 163-165;4255-4259)

4256 SF BKC 1598(C), E874 L250. Road metalling. Periods 2 and 3a. A corroded gilt copper-alloy object, possibly a phallus. There is no obvious method of attachment or suspension. Length 23.5 mm .

## FIGURINES

Human figurines

All in printed catalogue (Figs 166-170; 4260-4267).

Animal figurines
All in printed catalogue (Figs 171-177; 4268-4279).

MODEL (?VOTIVE) OBJECTS

All in printed catalogue (Fig 178; 4280-4283).

## VOTIVE PLAQUE

In printed catalogue (4284).

METAL LETTERS

Bath in printed catalogue (Fig 179; 4285-4286).

AMULETS

Both in printed catalogue (Fig 180; 4287-4288).

## IRON COFFIN-FITTINGS

All in printed catalogue (Fig 181? 4289-4296).

TEXTILE FRAGMENTS FROM THE LATER BUTT ROAD CEMETERY

All in printed catalogue (4297-4305).

Reports on the crucible sherds and slags will be published with the site reports.

## ANTLER OFFCUTS OR UNFINISHED OBJECTS

All the pieces are of red deer antler (Fig 182. 4306-4312).
4306 SFLWC 1228. A131. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. The tip of an antler tine which has been roughly cut across. The marks of at least four strokes can be distinguished. Length 59.0 mm .

4308 SF BKC 5858. G116 F21. Slot for ground-plate. Period 5c. The tip of an antler tine that has been roughly cut across. A slice of the tine has been removed longitudinally for most of its length including the tip. It seems to have been taken off with a single knife stroke. Length 71.0 mm .

4309 SF BKC 4467(C), N273 F42. Pit. Period 6+. An offcut section of antler beam which has been sawn across at both ends. Length 39.0 mm .

4311 SF BKC 4503(C), T2 L2. Destruction debris of Period 3. Period 3(end), A thin offcut section of antler beam. One end shows ?saw marks. The other seems to have been cut with a knife as the face shows small groups of many strokes. with each group at an angle to its neighbours. Length 14.0 mm .

## HORN WORKING WASTE

4313 SF BKC 5929. J179 L23. Dump. Period 5c/6. A horn core from an ox. The core has been sawn across the upper end (cf Schmid 1972, 46-8), The lower end is still attached to a fragment of skull. Length 91.0 mm

## BONE OFFCUTS OR UNFINISHED OBJECTS

(Fig 183? 4314-4331)
4315 SF LWC 1019. C332. Make-up. Period 4. A similar piece to Fig 183 4314, but shorter and thicker. Length 31.0 mm , rectangular section 12.0 by 10.0 mm . One end is broken, the other partially sawn, partially broken.

4316 SF LWC 3313. L409. Make-up/dump. Period 3b. A fragment of a metapodial broken at one end, cut at an angle at the other. Length 85.5 mm .

4319-23 SF BKC 5857. G70 F1i. Timber-lined drain. Period 5c. Five ?offcuts.
4319) The sawn off proximal end of an ox metatarsus. Length 56.0 mm . 4320) A length. probably from a metapodial, sawn at both ends. Neither long face shows any tool marks. The piece therefore probably comes from a metapodial splintered by hammering. Length 118.5 mm . 4321) A smaller splinter. tapering to a point. Length 76.0 mm . 4322) A piece sawn from an ox ?ulna. 4323) Also possibly a fragment from an ox ?ulna. Both ends are sawn and the piece is split along its length. Length 92.0 mm . These pieces may be part of the group of partially-worked objects from BKC N (Fig 185, 4333-40, Fig 186, 4341-7).

4326 SF BKC 3399(C), J196 F44. Pit. Period 5c/6. A length ( 58.0 mm ) sawn from the transverse process of an ox vertebra.

4327 SF BKC 5986, M9. Mainly Periods 5 and 6, but could include modern. A length probably from a metapodial, trimmed towards one end into a rectangular section. 8.0 by 7.5 mm . Length 74.0 mm .

4328 SF BKC 4874(C), T27 L2. Destruction debris of Period 3. Period 3(end). A piece cut from a metapodial similar to Fig 190, 4371 from Butt Road. Both ends are sawn. the outer surface has been partly trimmed. and the internal face shows ?knife cuts. Length 112.0 mm . width 31.0 mm .

4329 SF BKC 4360(C), T559. Destruction debris of Period 2. Period 2. Similar to 4328 , but trimmed down to a more or less rectangular section. 23.0 by 5.0 mm . Both ends and the internal surface have been sawn. the outer surface has been knife-trimmed and partly rasped. Probably intended for a piece of strip inlay. as Fig 190. 4368-73 from Butt Road. Length 101.0 mm .

4330 SF BKC 5474. V890 L22. Dump. Late Period 5. A triangular fragment cut from a ?scapula. Length 69.5 mm .

4331 SF BUC 1614. H270 L2. Period 2. A bone fragment with a partly-drilled hole on one surface.

## WORKED TOOTH FRAGMENT

In printed catalogue (Fig 184; 4332).

A BONE-WORKING INDUSTRY ON BALKERNE LANE AREA H

All in printed catalogue (Figs 185 and 186; 4333-4347).

THE BUTT ROAD BONE-WORKING INDUSTRY

All in printed catalogue (Figs 187-196; 4348-4395).

# CATEGORY 17: OBJECTS ASSOCIATED WITH THE MANUFACTURE OF PIPECLAY OBJECTS OR POTTERY VESSELS 

No objects connected with the manufacture of pipeclay objects have been recovered. Items associated with the manufacture of ceramic vessels will be published in future volumes of Colchester Archaeological Reports.

## RINGS

(Fig 197 J 4396-4423)
4398 SF LWC 529(C), B 199. Uncertain. Probably Roman. Fragment of copperalloy ring of circular section. Approximate internal diameter 30.0 mm .

4401 SF LWC 2500. J445. Occupation? Period 4. Fragment of an iron ring. probably of rectangular section. Internal diameter 33.0 mm .

4404 SF LWC 3375. J1103. Demolished building. Period 2 demolition. Copperalloy ring in three fragments. Stilted D-shaped section. Internal diameter 18.0 mm .

4405 SF LWC 4202. J1705. Dump or occupation. Period 1. Fragment of an iron ring of ?cLrcular section. Internal diameter 14.0 mm .

4406 SF LWC 3081. K249 F55. Stoke-hole of hypocaust. Period 4b. Fragment of a copper-alloy ring of D-shaped section. Internal diameter 22.0 mm .

4407 SF EKC 1908. El 185 L365. Charcoal. Period lb. Two fragments of a corroded iron ring of rectangular section. Possibly a finger-ring. Internal diameter 17.0 mm .

4408 SF BKC 2801. H263 F63. Hearth over pit. Period 5c. Iron ring of ?rectangular section. Internal diameter 24.0 mm .

4409 SF BKC 6014. J 168 F13. Large pit. Period 5b. Iron ring of ?rectangular section. Internal diameter 28.0 mm .

4410 SF BKC 3153. K224 L5. Dump. Period 4c. Fragment of a copper-alloy ring of D-shaped section. Internal diameter 14.0 mm .

4411 SF BKC 4075(C), N82. Latest Roman. Period 6. Copper-alloy ring of D-
shaped section. Internal diameter 14.5 mm .
4412 SF BKC 4273. N221 F76. Pit. Period 6+. Penannular copper-alloy ring of rectangular section. Possibly the head of a split-spike loop. Internal diameter 11.0 mm .

4413 SF BKC 4445. N489 L75. Occupation. Period 5bl. Fragment of a copperalloy ring of rectangular section. Bent.

4414 SF BKC 4457(C), N540 L88? Period 5b 1? Copper-alloy ring of D-shaped section. Internal diameter 13.0 mm .

4415 SF BKC 4884. T522. Period 1 (or 2), Copper-alloy ring of ?elliptical section. Internal diameter 10.0 mm .

4416 SF BKC 4324. T574. Period 1 or 2. Copper-alloy ring. ?penannular. of ?rectangular section. Possibly a collar. Internal diameter 17.0 mm .

4417 SF BKC 5503. V899 L80. Metalling. Period 2. Fragment of a copper-alloy ring of circular section. Internal diameter approximately 31.0 mm .

4418 SF CPS 468. 576 F115. Occupation. Period 4. Fragment of a copperalloy ring of circular section. Possibly a finger-ring. Internal diameter 14.0 mm .

4419 SF CPS 565, 579 F112. Robber trench material. Periods. Copper-alloy ring of rectangular section. Internal diameter 12.0 mm .

4421 SF BUC 1606. C1206 G379. Grave fill. Period 2. A corroded iron ring of ?rectangular section. Internal diameter approximately 37.0 mm . Possibly a coffin-fitting.

4422 SF BUC 753. C1477 Ll. Period 2. A copper-alloy ring of D-shaped section. Internal diameter 16.0 mm .

## CHAINS

(Fig 198; 4424-4445)
4425 SF LWC 3961. R215 F82. Burnt deposit. Period 3a or 4. Copper-alloy circular penannular link of circular section. Internal diameter 8.5 mm . 4426 SF LWC 4024. R215 F82. Burnt deposit. Period 3a or 4. Copper-alloy circular penannular link of circular section. Probably from the same chain as 4425. Internal diameter 8.5 mm .

4428 SF BKC 199(C), A74 F16. Town ditch fill. Anglo-Saxon or Period 6. Fragment of a copper-alloy loop-in-loop link of circular section. 4430 SF BKC 930. D301 (F20), Tile scatter in town ditch. Anglo-Saxon. Copper-alloy circular penannular link of circular section. Internal diameter 8.0 mm .

4431 SF BKC 1527. E808 L131. Make-up. Periods. Copper-alloy oval ?penannular link of circular section. Internal diameter 7.0 by 5.5 mm . 4433 SF BKC 3467(C), J238 F13. Large pit. Period 5b. Fragments of a copper-alloy double loop-in-loop chain of wire links. One fragment is attached to a heart-shaped penannular ring of "'circular section.

4434 SF BKC 3485(C), J242 L33. Dump. Period 3/4/5a. Copper-alloy oval penannular link of circular section. Internal diameter 11.0 by 12.5 mm . 4435 SF BKC 3660. J398 L44. Collapsed wattle-and-daub wall. Period 2. Two copper-alloy heart-shaped links of circular section. one link is in three fragments. Maximum internal diameter 5.5 mm .

4436 SF BKC 4718. T476. Period 1 or 2? A length of copper-alloy double loop-in-loop chain of wire links.

4437 SF BKC 5076. T510. Period 1 (or 2), A length of iron chain of figure-of-eight links of ?rectangular section.

4433 SF BKC 5476(C), V860 L22. Dump. Late Period 5. Two fragments of
copper-alloy wire double loop-in-loop chain attached to a ring of circular section

4439 SF BKC 5700. V941 F313/346. Ditch. Period 5. An oval copper-alloy penannular link of circular section. Internal diameter 8.5 by 9.5 mm .

4445 SF BUC 789, C1674 G439. Probably associated with grave deposit 1765, a finger-ring. Period 2. A copper-alloy circular penannular ?link of rectangular section. Internal diameter 3.0 mm .

## COPPER-ALLOY WIRE

(4446-4462)
4446 SF LWC 633, A160. Topsoil over tessellated pavement but under roof collapse. Late Roman or less likely early Anglo-Saxon. Length of bent rectangular section wire.

4447 SF LWC 813(C), B538 F192. Posthole? Period 3. Fragments of two lengths of circular section wire twisted together. Possibly from an armlet.

4448 SF LWC 1106(C), B545 F195. Pit. Period 4. Straight length of circular section wire bent at one end.

4449 SF LWC 1026(C), C364. Make-up. Period 4. Two fragments of wire of irregular twisted section.

4450 SF LWC 1775. D237. Dump or make-up. Late Roman or early medieval. Rectangular section length of wire. tapering to a point. Possibly a pin.

4451 SF LWC 4098. J1705. Dump or occupation. Period 1. Fragment of a length of twisted wire. more or less straight. Possibly from an armlet.

4452 SF BKC 709. D43 L1. Upper town ditch fill. Late Anglo-Saxon. Short fragment of circular section wire.

4453 SF BKC 862. D275 L13. Town ditch fill. Anglo-Saxon. Bent length of circular section wire.

4454 SF BKC 1518. E790 L131. Make-up. Period 5. Bent length of tapering circular section wire.

4455 SF BKC 3269(C), J160 F34. Pit. Period 5b(end?), Two fragments of coiled wire. Possibly from a brooch spring.

4456 SF BKC 3653. J334 F85. Pit complex. Periods 3/4/5*. Length of rectangular section wire.

4457 SF BKC 4130(C), H85 L3. Topsoil. Period 6. Length of tapering circular section wire.

4458 SF BKC 4210 . N143 F33. Pit. Period 6+. Length of circular section wire.
445? SF BKC 4518. N169. Latest Roman. Period 6. Bent length of circular section wire.

4460 SF BKC 4759. T473. Period 1. Length of rectangular section wire.
4441 SF BKC 5760. VI092 L154. Cultivated soil. Periods. Length of circular section wire.

4462 SF COC 93. 491 L103. Floor. Period 4. Length of circular section wire.

## BONE ?PEGS

(Fig 199; 4463-4472)

4463 SF LWC 861. B410 F139. Pit. Periods. Length 91.0 mm . diameter of head 5.0 mm .

4464 SF LWC 4154. J105 F52. Shallow pit. Post-Roman. Tip missing. Length 66.5 mm . diameter of head 6.5 mm . Possibly post-Roman.

4467 SF BKC 2363(C), G354 F11? Timber-lined drain. Period 5c. Tip missing. Length 55.5 mm . diameter of head 6.0 mm .

4469 SF BKC 4394(C), N367. Surface cleaning. Period 5. Tip missing. Length 46.0 mm . diameter of head 6.5 mm .

4470 SF BKC $4641(\mathrm{C})$, T75 F19. Postpit. Period 5b. Length 131.5 mm . diameter of head 6.0 mm .

4471 SF MID 350. A1331 F38. Robber trench. Early medieval. Very tip only missing. Length 103.5 mm . diameter of head 6.0 mm . Possibly post-Roman.

## SHEET COPPER ALLOY

(4473-4600)

4473 SF LWC 1221(C), A103. Topsoil over tessellated pavement. Probably late Roman but possibly early medieval. At least two edges. contiguous and at right angles. At least one rivet hole. 23.0 by 15.0 mm . Possibly post-Roman.

4474-5 SF LWC 491. B173 F70. Cellar backfill. Periods. 4474) Folded over. ?binding. Possibly part of an edge parallel to the fold. 71.0 by 28.0 mm . 4475) Folded over. Two contiguous edges at right angles. one edge cut into a wavy line. One rivet hole at the top of the very edge. Dimensions unfolded. 68.5 by 43.0 mm .

4476 SF LWC 481. B180 F70. Cellar backfill. Period 5. One edge with moulded margin. One dome-headed rivet. 24.5 by 23.0 mm .

4477 SF LWC 801. C101. Period 4 destruction. Late Roman or early post-Roman. At least one edge. 53.0 by 48.0 mm . Possibly post-Roman

4478 SF LWC 1033. C358. Make-up. Period 4. Rectangular? plate with one corner missing. 37.0 by 26.5 mm

4479 SF LWC 1067. C416. Make-up. Period 3a. Strip with two parallel edges. 29.0 by 14.5 mm

4480 SF LWC 2204. J247 F119. Contaminated? Possibly two contiguous edges at right angles. 23.0 by 22.0 mm .

4481 SF LWC 2968(C), J593. Demolition debris. Period 4b destruction. More or less rectangular plate. 29.0 by 27.0 m

4482-3 SF LWC 2960. J718 F220. Slot. Period 3? 4482) One edge. folded over. Possibly another contiguous and at right angles. One rivet hole in the corner formed by these edges. 38.0 by 17.0 mm . 4483) Possibly three edges. 32.0 by 14.5 mm

4484-5 SF LWC 3272. J996. Building debris. Period 2 demolition. 44845 One edge. 27.5 by 19.5 mm . 44855 Possibly two edges. 33.0 by 15.5 mm .

4486-7 SF LWC 3489(C), J1296. Site clearance dump, redeposited natural sand. Period 1. 4486) One straight edge. one curved edge. 38.5 by 23.5 mm . 4487) Crumpled. Three edges? 25.5 by 16.0 mm .

4488 SF LWC 3519(C), J1421 F462. Pit. Period 4. Two contiguous edges at right angles. One square rivet hole. Possible rectangular cut-out. not on an edge. 44.0 by 16.0 mm .

4489 SF LWC 3571 (C), J 1497 . Period 2 road. contaminated. Periods. Eight fragments.

4490 SF LWC 3009. L322 F194. Oven. Period 4(25. Tapering strip. with two edges. Two rivet holes and one rivet. In four fragments. 70.0 by 16.0 mm .

4491-3 SF LWC 3411. L482 F286. Pit. Period 2 or 1. 4491) Rectangular? plate. one edge missing. One small rivet hole. 32.0 by 22.5 mm . 4492) One edge. Possibly two other edges. 27.0 by 14.0 mm .4493 ) One edge. 27.0 by 18.0 mm .

4494 SF LWC 2456. M103. Rampart Id. Thick. possibly folded. At least one edge. 38.5 by 31.0 mm .

4495 SF LWC 4039. R221. Demolition debris. Period 1. Thick rectangular plate in four fragments. There are at least six projections on the back cast in one with the plate. 55.0 by 30.5 mm . Possibly a belt-plate.

4496 SF BKC 816. D178 L2. Town ditch fill. Anglo-Saxon. No edges? Triangular. 17.0 by 16.0 by 13.5 mm .

4497 SF BKC 943. D224. Town ditch fill. Late Period 6 or Anglo-Saxon. No edges? 22.0 by 13.0 mm .

4498 SF BKC 1033. D227. Town ditch fill. Late Period 6 or Anglo-Saxon. Tapering strip. three edges. One rivet. one rivet hole. 18.0 by 17.0 mm . 4499 SF BKC 848. D248 F14/L13. Town ditch fill. Anglo-Saxon. Strip, two
parallel edges. 19.5 by 10.5 mm .
4500 SF BKC 924. D301 (F20), Tile scatter in town ditch. Anglo-Saxon.
Crumpled? At least one edge. 19.5 by 11.5 mm .

4501 SF BKC 922. D303 F13. Town ditch. Period 6. One edge. 29.5 by 21.0 mm . 4502 SF BKC 1396(C), D362. Town ditch fill. Period 6. At least one edge. Two convex mouldings. one on the edge. one parallel to it. 20.5 by 18.5 mm .

4503 SF BKC 1191. E286 L447. Town ditch (F138) fill. Late Period 6 or AngloSaxon. Rectangular sheet. folded over. Remains of three edges. all slightly turned down. Dimensions unfolded. 50.5 by 40.0 mm .

4504 SF BKC 1202. E306 L69a. Oyster layer. Period 3b or 4. Strip. possibly three edges. 18.0 by 11.0 mm .

4505 SF BKC 1215. E319 L448. Town ditch (F138) fill. Late Period 6 or AngloSaxon. Folded. ?Edges. 39.0 by 22.5 mm .

4506 SF BKC 1370. E529 F165. Pipe trench. Period 4. At least one edge. 31.0 by 29.0 mm .

4507 SF BKC 1530. E793 L227. Ditch (F230) fill. Period 2. Strip. two parallel edges. Two rivet holes. 20.0 by 11.0 mm .

4508 SF BKC 1556. E823 L200. Make-up. Period 3b. Two edges? 28.0 by 14.0 mm .

4509 SF BKC 1590. E834 L252. Make-up. Period 3b. ?Edges. 22.0 by 16.5 mm . 4510 SF BKC 1577. E848 L215. Road-metalling. Period ia. Rectangular plate. one edge missing? At least two rivet holes. 41.0 by 32.0 mm .

4511 SF BKC 1612. E881 L260. Make-up. Period 3b. ?Edges. 30.0 by 19.5 mm . 4512 SF BKC 1704. E1009 L320. Slot (F299) fill. Period 2. One edge. 38.5 by 21.5 mm

4513-14 SF BKC 1729. E1059 L356. Ditch (F230) fill. Period lb. 4513) At least one edge. 43.0 by 31.5 mm . 4514) Crumpled. ?Edges. 29.0 by 28.5 mm .

4515 SF BKC 1799. E1059 L356. Ditch (F230) fill. Period lb. Folded.
?Edges. At least eight rivets. 64.0 by 28.0 mm .
4516 SF BKC 2148. G48. Cleaning. Period 5. Five possibly cut edges. 48.5 by 44.0 mm .

4517 SF BKC 2301. G181. Occupation or make-up. Period 3. 4. or early 5. ?Edges. 24.0 by 14.0 mm .

4518 SF BKC 2268. G210. Cleaning top of burnt daub floor. Period 2. ?Edges. 45.0 by 26.0 mm .

4519 SF BKC 2330. G316. Dump or make-up. Period 5. Crumpled. Possibly three edges. 39.0 by 29.0 mm .

4520 SF BKC 2353. G330 F141. Pit. Period 5c? Possibly two pieces riveted together. One rivet. At least two edges. contiguous and at right angles. 30.0 by 28.5 mm ..

4521 SF BKC 2640. H63 F28. Sand pit. Period 6. Square plate. one corner missing. Possibly two rivets. 25.0 by 25.0 mm .

4522 SF BKC 2749. H158 F33. Rubbish pit. Period 5c. Folded. ?Edges. 40.5 by 38.0 mm .

4523 SF BKC 2797. H297 F33. Rubbish pit. Period 5c. Possibly three edges. Two rivet holes. 56.0 by 29.0 mm .

4524 SF BKC 2985. J35 L4. Dump. Period 5b. Strip. three edges. Crumpled. 24.0 by 13.0 mm .

4525-6 SF BKC 3149. J81 L23. Dump. Period 5c/6. 4525) One edge. 22.5 by 18.0 mm . 4526) Two contiguous edges at right angles. 17.0 by 15.0 mm . 4527 SF BKC 3311. J176 F32. Pit. Period 5c/6. At least two edges. contiguous and at right angles? Folded. Dimensions unfolded. 34.5 by 23.0 mm .

4528 SF BKC 3344. J176 F32. Pit. Period 5c/6. At least two edges. contiguous and at right angles. One rivet hole. 22.0 by 16.0 mm .

4529 SF BKC 3351. J176 F32. Pit. Period 5c/6. Rectangular plate. Bent.

Dimensions straightened out. 35.5 by 15.0 mm .
4530 SF BKC 3395. J214 F50. Pit and midden. Period 5c/6. One edge? Thick. 58.0 by 42.0 mm .

4531 SF BKC 3602. J285 L35. Dump and levelling deposits. Period 3/4/5a. Folded. One edge. One rivet hole. 29.5 by 17.0 mm .

4532 SF BKC 3652. J334 F85. Pit complex. Period 3/4/5.1. ?Edges. Thick. 42.0 by 41.5 mm .

4533 SF BKC 3645. J345 F149. Stakehole. Period 2. Rectangular plate. One edge may be missing. Two corner rivet holes. 32.5 by 24.5 mm .

4534 SF BKC 3639. J373 L33. Dump. Period 3/4/5*. Folded. At least one edge. 32.0 by 24.0 mm .

4535 SF BKC 4226. N202 L11. Topsoil sinkage. Period 6. Two contiguous edges at right angles. 23.0 by 22.0 mm .

4536 SF BKC 4339. N282 F12. Pit. Period 6+. One possible edge. There are at least four parallel raws of punched holes in the sheet. It may be from a vessel similar to Fig 79.2029. 38.5 by 31.0 mm .

4537-8 SF BKC 4440. K441 L56. Dump. Period 5b2. 4537) ?Edges. 25.0 by 16.0 mm . 4538) ?Edges. Crumpled. 18.5 by 16.5 mm .

4539 SF BKC 4443. N509 L87. Floor? Period 5b 1. ?Edges. 53.0 by 29.5 mm .
4540 SF BKC 4573. T185 L28. Destruction debris of period 2. Period 3. Crumpled. ?Edges. 24.5 by 15.0 mm .

4541 SF BKC 4672. T369. Cleaning. Period 2? Elliptical disc with projection at one side. One rivet hole.

4542 SF BKC 4776. T435. Period 2(+ 1), Rectangular plate in five fragments. 58.5 by 40.0 mm . A piece of round section ?wire has been passed through the plate near the centre with its ends folded back against the plate to form a loop on the ?reverse. A penannular ring (in two fragments) is fixed in this loop.

4543 SF BKC 4928. VI1 L5. Cultivated soil. Late Period 5. At least two
edges. contiguous and at right angles. Two rivet holes. Bent. 44.5 by 24.5 mm .

4544 SF BKC 4944(C), V73 L22. Dump. Late Period 5. Three edges. 34.5 by 29.5 mm .

4545 SF BKC 4933. V77 L5. Cultivated soil. Late Period 5. ?Edges. 49.5 by 25.5 mm .

4546 SF BKC 5128. V188 F50. Pit. Period 5 (or 6), No edges. 30.0 by 26.0 mm .

4547 SF BKC 5165. V292 L27. Make-up. Period 5. Semicircular. Diameter 47.0 mm .

4548 SF BKC 5240. V415 F90. Pit. Modern. ?Edges. 37.0 by 24.5 mm .

4549 SF BKC 5430. V730 F209. Pit. Modern? One edge. A fragment of a second sheet is riveted to part of the main piece with at least three rivets. 79.0 by 71.5 mm .

4550 SF BKC 5450. V779 L100. Metalling? Late Period 5. Folded and crumpled strip. Three rivet holes and one rivet. 47.0 by 31.0 mm .

4551 SF CPS 461(C), 576 Fl 15. Occupation. Period 4. Curved strip with marginal grooves. 83.0 by 8.0 mm .

4552 SF CPS 632. 632 F112. Robber trench material. Periods. Two edges? One rivet hole. 18.0 by 11.0 mm .

4553 SF CPS 637. 641 L83. Burnt make-up. Period 4. One edge. 33.0 by 21.5 mm .

4554 SF CPS 641. 641 L88. Burnt make-up. Period 4. ?Edges. 16.5 by 13.5 mm .

4555 SF CPS 644. 641 L88. Burnt make-up. Period 4. Three edges? 19.5 by 14.5 mm .

4556 SF CPS 667(C), 679 L93. Burnt make-up. Period 4. Crumpled. ?Binding. ?Edges. 75.0 by 25.0 mm .

4557 SF CPS 726. 767 L96. Make-up. Period 4. ?Edges. 23.5 by 18.0 mm .

4558 SF CPS 730. 773 L108. Make-up. Period $1 / 2$ or 3 . Two contiguous edges at right angles. 43.0 by 18.0 mm .

4559 SF CPS 853(C), 917 L144. Demolition debris. Period 4. Probably four edges. but one is damaged. A rivet hole in each corner and a random cluster of ten rivet holes and one rivet near the centre. In three fragments. Crumpled. 147.0 by 42.5 mm .

4560 SF CPS 874. 938 L146. Floor. Period 3. One edge. 35.0 by 23.0 mm . 4561-2 SF MID 730. A3116 L467. Demolition. Period 3 destruction. 4561) Two edges. Folded. 27.0 by 21.0 mm . 4562) One edge. 27.0 by 18.0 mm .

4563 SF MID 739. A3174 L500. Demolition of Period 2a. One edge? 20.0 by 15.0 mm .

4564-5 SF BUC 93. A375 G27. Grave fill. Period 2. 4564) Two parallel edges. 15.0 by 11.0 mm . 4565) One edge. 25.0 by 8.5 mm .

4566 SF BUC 82. A391 G30. Grave fill. Period 2. Folded. Three straight edges and one serrated edge. One rivet hole. 13.0 by 11.0 mm .

4567 SF BUC 92. A399 G31. Grave fill. Period 2. Tapering bent strip. Three edges. 37.0 by 15.0 mm .

4568 SF BUC 83. A400 G31. Grave fill. Period 2. Ho edges? In four fragments. 39.0 by 29.0 mm .

4569 SF EUC 87. A466 G35. Grave fill. Period 2. Rectangular plate. 21.5 by 11.5 mm .

4570 SF BUC 118. A546 G42. Grave fill. Period 2. At least one edge. 21.0 by 9.0 mm .

4571 SF BUC 279. B473 G98. Grave fill. Period 2. Strip. Bent. 40.5 by 12.0 mm .

4572 SF BUC 350. B730 G126. Grave fill. Period 1. Two contiguous edges at right angles. 21.0 by 21.0 mm .

4573 SF BUC 507. B824 F119. Timber-lined shaft. Period 1. Strip. 29.0 by 9.0 mm .

4574 SF BUC 375. B938 G121. Grave fill. Period 2. At least one edge. 27.0 by 15.0 mm .

4575 SF BUC 378 . B1032 L3. Period!. Three edges. 11.0 by 11.0 mm .
4576 SF BUC 380. B1046 G169. Grave fill. Period 2. Thin tapering strip. 71.0 by 4.0 mm .

4577 SF BUC 407. B1099 G173. Grave fill. Period 2. Three edges. 21.5 by 14.0 mm .

4578 SF BUC 431. B1302 L3. Period 1. At least one edge. 21.5 by 12.5 mm .
4579 SF BUC 438. B1493 G205. Grave fill. Period 2. Tapering strip. bent. 27.0 by 5.5 mm .

4580 SF EUC 463. CSS G240. Grave fill. Period 2. Bent strip. 20.0 by 12.0 mm .

4581 SF BUC 470. C220 G267. Grave fill. Period 2. Three edges. One rivet? 32.0 by 10.5 mm .

4582 SF BUC 497. C807 G314. Grave fill. Period 2. Crumpled. Four edges? Two rivet holes. 38.5 by 18.5 mm .

4583 SF BUC 835. C973 F25. Modern cellar. At least one edge. 39.0 by 31.0 mm . Possibly post-Roman.

4584 SF EUC 547. C1027 G342. Grave fill. Period 2. At least one edge. Folded. 19.5 by 16.0 mm .

4585 SF BUC 644. C1091 G358. Grave fill. Period 2. ?Edges. 44.0 by 32.0 mm .
4586 SF BUC 583. C1117 G372. Grave fill. Period 2. ?Edges. One rivet hole. 15.5 by 11.5 mm .

4587 SF BUC 596. C1224 F53. Period 1. One edge? 37.0 by 8.0 mm .
4588 SF BUC 617(C), C1243 L4. Modern. In three fragments. Bent. Three edges. 35.0 by 16.0 mm .

4589 SF BUC 627. C1254 L4. Modern. Strip. Three edges. Bent. One rivet hole. 26.0 by 7.5 mm .

4590 SFBUC 728. C1444 G399. Grave fill. Period 2. Two contiguous edges at
right angles. 31.5 by 26.0 mm .
4591 SF BUC 973. E165 L10. Topsoil. Post-Roman. Six fragments.
4592 SF BUC 1332. E673 L45. Destruction debris. 5th century. In two fragments. Two edges. 16.0 by 6.5 mm .

4593 SF BUC 1623. E852 L63. Destruction debris. 5th century. Three edges? 9.5 by 9.0 mm .

4594 SFBUC 1554. H369 G531. Grave fill. Period 2. ?Edges. 34.0 by 31.5 mm .
4595 SF BUC 1667. H826 G647. Grave fill. Period 2. Folded. At least two edges. 34.5 by 26.0 mm .

4596 SF BUC 1668. H826 G647. Grave fill. Period 2. ?Edges. 19.0 by 12.5 mm .
4597 SF BUC 1702. H946 F60. Grave fill. Period 2. Curved. ?Edges. 36.0 by 33.0 mm .

4598 SF BUC 1701. H1005 L31. Period 1. One edge. 27.5 by 13.5 mm .
4599 SF MRC 131. 88 F52. Pit. c early 2nd century. ?Edges. 47.0 by 40.5 mm .

4600 SF MRC 120. 116 F70. Shallow pit. 4th century or later. At least one edge. 75.5 by 49.0 mm .

## MISCELLANEOUS COPPER-ALLOY OBJECTS

(Figs 200-204? 4601-4658)

4603 SF BKC 4890(C), T616 F227. Stakehole. Period 1 or 2. Similar to Fig 200. 4601. but with a penannular ring fitted in a perforation in the recess wall. Diameter 18.5 mm . height 15.5 mm .

4609 SF LWC 3261(C), J984. Building debris. Period 2 demolition. Long thin strip. plano-convex in section tapering to a point at each end. Bent. There are two incised grooves close to. but off. the centre on the convex side. Length 158.5 mm . width 3.0 mm . thickness 1.0 mm .

4611 SF LWC 3511(C), J1343 F465. Pit. Period 4? Circular section rod tapering to a point and curved into a hook. Length 34.0 mm .

4622 SF BKC 226. A55 F16. Town ditch. Anglo-Saxon or Period 6. A fragment of a hook from a larger object? Length 13.5 mm .

4625 SF BKC H83(C), E302 L447. Town ditch (F138) fill. Late Period 6 or Anglo-Saxon. Possibly a strap-end. A strip with pointed end and at least one rivet hole. The other end is damaged. Length 25.5 mm . width 12.0 mm .

4628 SF BKC 1566(C), E832 L243. Make-up. Period 3b. A long more or less rectangular penannular loop with a fragment of a second loop attached. Possibly a clasp from a necklet or links from a chain. Length 16.5 mm .

4636 SF BKC 3688. J429 F236. Slot. Periods $3 / 4 / 5 \mathrm{a}$. Bent strip with a marginal groove at each side. Length 111.0 mm . width 6.5 mm .

4638 SF BKC 4034(C), N52 L7. Dump. Period 6. A plain disc. Diameter 17.0 mm .

4639 SF BKC 4140(C), N94. Trial trench. Period 5 or 6 . A disc with a corroded iron fitting on one side. Possibly from a lock. Diameter 33.0 mm .

4646 SF BKC 5181. V287 L25. Dump. Period 4. Hooked circular section rod Length 53.0 mm .

4653 SF BUC 124. A540 G35. Grave fill. Period 2. Convex piece of sheet copper alloy. Perhaps a fragment of a bead? Length 11.5 mm . diameter approximately 12.5 mm .

## GOLD OBJECT

In printed catalogue (Fig 205; 4659).

## WHITE-METAL OBJECT

4660 BP BKC 3391. J141 F13. Large pit. Period 5b. Five small fragments of white-metal (?silver) sheet.

## MISCELLANEOUS IRON OBJECTS

(Fig 206; 4661-4694)
4661 SF LWC 4310 A157. Mortar over tessellated pavement. Period 4. Flat strip. both ends broken off. Length 99.5 mm . width 38.0 mm .

4663 SF LWC 4326. B321 F70. Cellar backfill. Period 5. Two fragments of a ?socket or ferrule. Length 99.0 mm

4665 SF LWC 4314. B642. Dump. Period 1. Flat strip. in two fragments.
Length i 58.0 mm . width 28.5 mm . Perhaps a hinge?

4669 SF LWC 3515. J140S F459. Pit. Period 4. Four fragments of a flat strip? Length 250.5 mm . SF LWC 3879. K580 F339. Depression. Period 1. but contaminated Rectangular plate. 40.0 by 36.0 mm .

4671 SF LWC 4328. M115. Rampart la. Slightly bent strip. perhaps a bucket mount. Length 176.5 mm . width 35.0 mm .

4672 SF LWC 4037(C), R216 F83. Burnt deposit. Period 3a or 4. Flat plate with slight curvature on both sides. Perhaps part of a sickle or scythe blade. Length 98.0 mm . width 53.0 mm .

4673 SF BKC 6033. D372. Town ditch fill. Late Period 6 or Anglo-Saxon. Strip bent into a hook at one end. Length 80.0 mm . width 27.0 mm .

4674 SF BKC 1391(C), E319 L443. Town ditch (F133) fill. Late Period 6 or Anglo-Saxon. Fragment of a hallow convex ?bass. Diameter 64.0 mm .

4675 SF BKC 1277(C), E367 L434. Town ditch (F138/317) fill. Period 6 or post-Roman. Flat strip. Length 58.5 mm . width 22.0 mm .

4676 SF BKC 6022. G115. Surface cleaning. Periods? Bent strip. perhaps a bucket mount. Length 114.5 mm . width 30.5 mm .

4678 SF BKC 3855(C), J310 F69. Oven. Period 2. Long fragment, flat for part of its length. and partly of shallow U-shaped section. This object may be from either a socketed chisel, or, more likely, a winged bar-share with flat tang (Manning 1972. fig 61.17). Length 183.5 mm .

4680 SF BKC 5072. T254 F117. Pit. Period 5c. Three small strip fragments.

4682 SF BKC 4843. T513. Period 1 (and 2a?), Slightly curved strip. Length 134.5 mm . width 15.0 mm .

4683 SF BKC 6004. T582 F205. Slot. Period 1. Slightly curved strip. Length 121.0 mm . width 25.0 mm .

4684 SF BKC 5149. V611 F99. Gully or bottom of ditch? Periods 1 to early 4. Thick ?spike. Length 172.0 mm

4685 SF CPS 203(C), 391 L66. Make-up. Period 4. Curved strip. possibly a
bucket mount. Length 104.5 mm . width 13.0 mm .
BF CPS 849 (X-rayed), 827 Lll1. Occupation/topsail. Period 4. The X-ray shows a rectangular section strip with a wider rectangular terminal at one end. Length 163.0 mm .

4687 SF BUC 109. A478 F152. Ditch. Period 1. A thick triangular section abject. Length 42.0 mm .

4688 SF BUC 1612. A488 G35. Grave fill. Period 2. Flat strip. Length 64.5 mm . width 30.5 mm .

4689 SFBUC 121. A516 G25. Grave fill. Period 2. Hook. Length 53.0 mm .

4690 SF BUC 244. A561 F152. Ditch. Period 1. Flat strip. Length 54.5 mm . width 28.0 mm .

4691 SF BUC 242 (X-rayed), B67 G56. Grave fill. Period 2. Possibly an iron key fragment. Length 72.5 mm .

4692 SF BUC 409. B1149 G177. Grave fill. Period 1. Flat strip. Length 38.0 mm . width 24.0 mm .

4693 SF BUC 522. C951 Ll. Periods 1-2. Three fragments of a flat plate.

## MISCELLANEOUS LEAD OBJECTS

(Figs 207 and 208? 4695-4743)

4695 SF LWC 822. B360. Floor. dump or make-up. Period 4 or 5? Slightly curving strip. Length 60.0 mm . width 26.5 mm .

4697 SF LWC 2268. J286. Period 4b demolition debris. Period 4b destruction or late Roman. Sheet. folded over. Length 103.5 mm .

4698 SF LWC 3104. J865. Period 4. Crumpled sheet. Length 74.0 mm .
4699 SF LWC 3106. J875. Gravel make-up. Period 4a. Sheet. Length 56.5 mm .

4700 SF LWC 3096. J878 F263. Shallow pit or sinkage. Period 4a or postRoman? Probably medieval. Curved strip. Length 38.0 mm . width 9.0 mm .

4701 SF LWC 3140. J907. Make-up. Period 4. Sheet. Length 34.0 mm .

4702 SF LWC 3145. J 925. Make-up. Period 3. Strip. Length 83.0 mm .

4704 SF LWC 3857. K554. Floor or make-up? Period 1? Tapering strip. Length 58.0 mm

4705 SF BKC 808. D142 L2. Town ditch fill. Anglo-Saxon. Thick strip. Length 34.5 mm .

4706 SF BKC 1275. E359 L437. Town ditch (F133) fill. Late Period 6 or AngloSaxon. Crumpled strip. Length 49.0 mm .

4707 SF BKC 2206. Gill F11. Timber-lined drain. Period 5c. Sheet folded into a tube. Crushed. Possibly a waterpipe. Length 68.0 mm . diameter approximately 16.0 mm .

4708 SF BKC 2307. H294 F113. Pit. Period 5c. Folded and crumpled sheet. Length 80.0 mm .

4710 SF BKC 2910. H317 L13. Dump. Period 5b (end) and possibly into 5c and 6. Folded sheet. Length 66.0 mm .

4711 SF BKC 3024. J45 L6. Dump. Probably Period 5b. Strip. Length 43.0 mm . 4712 SF BKC 3155. J132 L18. Make-up for floor. Period 5b Phase 3. Thick
strip. Length 49.5 mm .
4713 SF BKC 3263. J160 F34. Pit. Period 5b (end?), Two fragments of crumpled sheet.

4714 SF BKC 3456. J236 L32. Make-up. Period 5b Phase 1. Folded and crumpled sheet. Length 101.5 mm .

4715 SF BKC 3627. J243 L33. Dump. Periods 3/4/5.1. Curved strip. Length 36.0 mm .

4716 SF BKC 3608. J244. Pit. Periods 2-6. Crushed strip. Length 137.5 mm . 4718 SF BKC 3499. J281 L35. Dump and levelling deposits. Periods 3/4/5a. Two strips.

4719 SF BKC 3526. J281 L35. Dump and levelling deposits. Periods 3/4/5a. Sheet.

4720 SF BKC 3558. J314 L35. Dump and levelling deposits. Periods 3/4/5/a. Two strips.

4721 SF BKC 3701. J422 F74. Slot. Periods 3/4/5a. Strip.
4722 SF BKC 3704. J443. Cleaning. Periods 2-6. Strip. Length 78.5 mm
4723 SF BKC 3713. J452 F57. Posthole. Periods 3/4/5a. Strip. Length 39.0 mm .

4724 SF BKC 3197. K249 F12. Robber trench. Modern. Strip. Length 30.0 mm

4725 SF BKC 3554. K475 L86. Dump. Period 4c. Strip. Length 53.0 mm .
4726 SF BKC 4916. M22 L1. Gravel metalling. Period 6. Lump.

4727 SF BKC 4300. H165 F89. Pit. Period 6+. Hooked strip with flattened terminal. Length 48.0 mm .

4728 SF BKC 4450. H458 L57. Make-up? Period 5b 1. Three strips.

4729 SF BKC 4587. T216. Collapsed destruction debris of Period 3. Period 3 (end), Curved strip. Length 30.0 mm . width 8.5 mm .

4730 SF BKC 4332. T429. Period 1. Folded sheet. Length 68.0 mm .
4731 SF BKC 4934. VI7 L11. Dump. Late Period 5. Crumpled sheet with eight or nine ?rivet holes. Length 39.5 mm .

4732 SF BKC 5288. V345 L39. Metalling. Period 5. Crumpled sheet. Length
61.5 mm .

4733 SF BKC 5257. V595 L72. Make-up? Period 4. Sheet. Length 34.5 mm .

4734 SF BKC 5739. V1072 L155. Cultivated soil. Period 5. Triangular section strip. Length 102.0 mm .

4735 SF CPS 859. 458 F104. Robber trench material. Period 5. Tapering strip. Length 82.5 mm .

4736 SF CPS 567. 579 F112. Robber trench material. Periods. Circular section curved rod. Length 24.0 mm .

4737 SF CPS 923. 920 L145. Demolition debris. Period 4. Crumpled sheet. Length 59.0 mm .

4738 SF MID 128. C477 F158. Pit. Post-medieval. Sheet. Length 53.0 mm .

4739 SF MID 448. A1790 L228. Destruction debris of Period 3 house. Lump. Length 36.0 mm .

4740 SF MID 574. G1997 F633. Secondary face of wall of Period 3 house

Strip. Length 56.0 mm .

4741 SF MID 646. A2474 L354. Make-up. ?Period 3. Strip. Length 71.5 mm . width 8.0 mm .

4742 SF MID 744. A3149 L491. Make-up? Period 2a. Lump. Length 78.5 mm .

4743 SF MID 745. A3149 L491. Make-up? Period 2a. Strip. Length 59.0 mm .

## MISCELLANEOUS BONE OBJECTS

All in printed catalogue (Figs 209 and 210; 4744-4756).

## ANTLER OBJECT

In printed catalogue (Fig 211; 4757).

FRIT OBJECT

In printed catalogue (Fig 212; 4758).


[^0]:    * 1995 edition footnote. The Roman small finds from the Culver Street and Gilberd School sites (excavated in the 1980s) are published in Colchester Archaeological Report 6 (pp 140-250). These two assemblages are particularly valuable for the number and quality of Ist-century finds. The Roman coins are published in Colchester Archaeological Reports 4 and 6 (pp 290-308).

[^1]:    73 Fig 13 SF MID 706, E2847 L390. Dump or make-up? Roman to Period 3 or later. Length 46.5 mm . This brooch has been

[^2]:    Fig 56 Hobnails plotted in situ in graves in the Butt Road cemeteries (1:4)

[^3]:    Fig 142 Key handle (1:1)

[^4]:    Fig 144 Military belt and apron fittings from contexts dated 43 to 60/1 (1:1)

[^5]:    4255 Fig 163 SF BKC 545(C), A11 L1. Town ditch (F30) fill? AngloSaxon. A fragment of a copper-alloy ?phallic amulet, possibly similar to a crescent-shaped pendant from Wall (Webster 1958, fig 8, 223). Length 20.0 mm .

    4257 Fig 163 SF BKC 2626(C), H12 L2. Topsoil. Post-Roman. A copper-alloy phallic mount similar to one from Zugmantel (Oldenstein 1976, Taf 42, 210). There are two projections on the reverse for attachment probably to leather Length 27.0 mm .

