

The Post Roman Accessioned Antler, Bone and Ivory finds from No 1 Poultry

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**THE POST-ROMAN ACCESSIONED ANTLER, BONE AND IVORY FINDS
FROM NO.1 POULTRY
(ONE94)**

**Jackie Keily
(May 2000)**

BONE AND IVORY FINDS

Antler working

Antler and horn were used mainly for the production of combs and, to a lesser degree, knife handles and other objects, such as spoons and pins (Pritchard 1991, 175). A diagram for the division and use of an antler is illustrated in MacGregor (1985, 68-9, fig 42) based on work done by Ulbricht on the material from Hedeby. The tines are removed and the beam itself is divided up into workable fragments. At Hedeby the majority of the antler was used in the manufacture of combs but a number of other objects were also made. The antler waste from Poultry can be identified on the Hedeby diagram. Missing, however, from the Poultry assemblage are the finer waste, such as the shavings and also the actual artefact-production waste. It may, therefore be suggested that the material recovered comes from the preparation of antlers for working and that this activity was probably taking place in the vicinity of the site.

In an overview of the evidence for bone working in Saxon and Norman London (1991, 175), Pritchard highlights the fact that little material evidence for bone or antler working has been recovered, with an average of one or two off-cuts per site. The exception to this was the site at St Alban's House, Wood Street, which produced a group of cattle metatarsals which are thought to have been used for the production of undecorated finger rings. Recent excavations at the Royal Opera House at Covent Garden, however, have produced similar scattered antler tine and beam waste to Poultry, as well as concentrations of waste in pits. Most importantly a small pit or posthole was found within a building, filled with sawn tines and beams, partly finished objects and antler shavings. It has tentatively been suggested that the building may, therefore, have functioned as an antler workshop (Rielly, forthcoming) and that at least some of the other waste from the site may have derived from it. As mentioned above, no shavings were recovered from Poultry and few part-made objects. It would appear, however, given the scatters of sawn antler that the material was being prepared for working in the vicinity of the site.

The evidence from Poultry

Antler waste in the form of off-cuts was recovered from virtually every post-Roman period. The material waste was identified by Alan Pipe. Descriptions of the types of waste were formulated with the aid of the diagram by MacGregor, after Ulbricht (MacGregor 1985, fig 42). Virtually all of the antler derived from adult red deer (a number of fragments are only identified as

'probably red deer' but for the purposes of this study they are included here with the waste identified as definitely red deer). Only one fragment of roe deer waste was found, <4105> (Group 1094, 5065) from OA142 in Period 35. This was a shed adult roe deer antler base, complete with coronet, and tine junction. Table 1 shows the overall quantities of the different types of red deer antler waste from the various periods of the site. The largest concentration is in Period 35, which produced 62 fragments and ten fragments of other bone waste (this compares with the next largest quantity, 28 fragments of antler waste from Period 36). Of the waste recovered from Period 35, Road102 produced by far the largest amount, 35 pieces of antler waste and three fragments of other waste. The buildings and open areas of Period 35 only produced between one and four fragments each.

Table 1:

	P32	P33	P34	P35	P36	P37	P38	P39	P40
Tines	6	6	4	36	19	1	1	2	1
Crown/'Tops'	3	1		13	2				1
'Slice'		1	2	2	2				
Beam	1		1	1	2				
Beam/tine junction		1		4		1			
Base (shed)	1	1		4	1				
Base (cut)				2	3				

Types of waste

As seen in Table 1, the red deer antler waste has been divided into seven broad categories: tines, 'tops', 'slice', beam, beam/tine junction, base (shed) and base (cut).

Tines

The most commonly found fragments of waste were the sawn off tines, these are the smaller branches which extend from the main branch or beam. Their removal from the beam is a common initial stage in the working of antler. Sometimes a number of efforts have been made to cut the tine, for example <4406> and <4096> have cut marks just above the sawn off base. The lengths of the sawn tines varied considerably at Poultry. In some cases the very tip was removed whereas in others virtually the whole length of the tine had been cut off, presumably depending on which parts of the antler were required for further working. For example, a fragment of a tine, <2855>, is sawn off at the base and also has the very tip cut off and <1846> is a tine sawn at the base and with the tip removed, then cut down the middle.

The surface of many of the tines is smoothed and shiny, for example <874>, possibly due to natural wear. Others display small scratch marks, such as <731>. A number of the waste tines had individual features worthy of note. Accession <4408> has a small, rather shallow hole drilled up into the antler from the sawn end. Similar objects have been identified from other sites dating to this late Saxon/early medieval period (MacGregor et al 1999, 1998-9, fig 955) and it has been suggested that they may be the by-product of the

manufacture of antler rings. Tine <4604> has a rough knife-cut mark and worn area running around it approximately halfway along its length, as if something was attached to it and <1859> has five groups of small cuts, going from one to approximately five, along its length. In other cases slivers have been removed from the tine to alter its shape. Accession <4407> has portions removed from the outer surface by sawing vertically and horizontally and <4409>(b) has two lengths removed from each side, possibly to prepare it for use as a peg or wedge. The top of tine <2878> has been shaped by the removal of the very tip and two slivers being cut, one from each side. Again this tine may have been intended for use as a peg or wedge.

Crown / 'tops'

This is the top section of an antler, consisting of the 'cup' or crown and the 'tops' which are the upper-most tines. Frequently this whole section is cut off across the beam. On some examples finer, preparatory, work appears to have been undertaken and then abandoned. Accession <1844> has two 'top' tines remaining. The tip of one has been sawn off and a vertical slice removed from each side, down from the cut off tip. Two crowns survive which appear to have been at least partly prepared as tools or implements. Accession <4209> has two tines remaining and part of the beam. The bottom of the beam has been knife-trimmed to taper and was possibly intended for use as a tool or a hanging hook. An interesting example is <5446>, where the beam is complete from the 'tops' and crown for approximately 330mm of its length. At the bottom it has been sawn off and then a 70mm long incision has been made up through its centre from the cut base. This cut would appear to have been made by a double-bladed saw or 'stadda' (Alan Pipe, pers comm). The cut may have been made in preparing the beam as an object or possibly in an attempt to split the beam lengthways.

'Slice'

These are thin slices or slivers of antler, mainly cut from the beam: thickness varies from 8mm to 18mm.

Beam

Beam fragments are portions cut from the main stem of the antler, sometimes these fragments are halved (<2920>) or cut into a variety of shapes. This category also includes a fragment from the very base of the beam, <953>, which was sawn below and above the beam/brow tine junction. Most of these fragments are quite cleanly sawn but one, <6753>, has been roughly cut and split.

Beam/tine junction

These are pieces cut from the body of the beam at the junction with a tine. Lengths of the beam would have been removed for further working, leaving these junction pieces to be discarded. Often the tine has been removed but in some cases (for example, <1875>, <4600>(c), <4600>(d) and <4233>(a)) a complete tine is still attached. Accession <2782> is a quartered length of beam including two beam/tine junctions with the tines removed.

Base/Burr – shed and cut

Since antlers are shed naturally, most of the antler utilised for artefacts was collected from the annual moult. Evidence for this was found in the discarded remains of the shed base, complete with coronet, sawn across the beam: <873>, <2271>, <4600>(b), <4603>(b), <1855>. A number of exceptions to this, however, were found: <1857>, <2102>, <2106>, <4440> and <4600>(a), all of which have part of the skull still attached, indicating that the antler was removed from an animal probably butchered for its meat.

Textile manufacture and working

Relatively few bone objects associated with the production or working of textiles came from the site. Three pin beaters were found from late Saxon deposits, made from fragments of 'ox-sized mammal' long bones. All three are complete and belong to type 2, with a flattened oval section, as identified at Coppergate in York, where they were found in contexts dating from the late 9th/early 10th to the 12th centuries (Walton Rogers, 1999, 1967). This type of pin-beater is thought to have been used with a two-beam vertical loom (ibid, 1968). The surfaces of all three are heavily polished, particularly in the case of <2989>, which also has a worn area below the tip where the pin-beater was held between the thumb and fore-finger during use. This pin-beater also has a suspension hole through the butt end. This end is largely made up of cancellous tissue and has a roughly chisel shape. Only one pin-beater has any decoration; <2792> has incised decoration on one surface in the form of a double saltire cross banded above and below by three incised lines followed by a single saltire cross, banded at one end by a single incised line.

Three bone spindle whorls were recovered. One, <2801>, came from Period 35 and is probably late Saxon/early medieval in date, although it may possibly be a residual Roman artefact. It is complete and is made from a trimmed ox femur with a hole drilled through it. Spindle whorl <4688> from early medieval Period 36 is quite rough and poorly made and is possibly unfinished. It is also made from an ox femur, but whilst the central hole is well made, the base has not been smoothed off. Period 39 produced a well-made antler spindle whorl <430>, roughly bun-shaped with a flat, smooth base and a round central hole. Part of the top of an ox femur, <6733>, may have been intended as a spindle whorl, as it has been roughly worked and has a central hole partly drilled into the base. All three of the complete spindle whorls come from contexts which contained pottery dating from the 11th to the 12th century; <4688> and <430> being slightly later within this date range than <2801>. This dating coincides with the evidence from other sites in Britain for femur head whorls (Walton Rogers 1999, 1966).

A further implement which may be associated with textile working is <2512>, a small double-pronged tool (*with thanks to comments made by Geoff Egan*). Similar objects have been found, both in Britain and the continent, often identified as lucets and their function has been discussed elsewhere (MacGregor 1985, 175-6, fig 93d, and idem, et al 1999, 1994-6). Some of these are much cruder than the Poultry example, which is made from a fragment of a cattle metapodial and is carved with a decorative panel. The grooves of this panel contain traces of a red pigment. A more crudely made

example from Coppergate in York is decorated with a rudimentary interlace design (MacGregor et al 1999, 1995, fig 951, no. 7740). It is thought that at least some of these implements may have been used as thread twisters. The pattern of wear on the present example is more consistent with this function than with some of the other hypotheses that have been suggested for their use.

Pastimes

Skates

A total of 16 bone skates (12 complete) were recovered, virtually all from late Saxon/early medieval contexts (only one, <4373>, comes from a later medieval context (Period 40) and may be residual). Twelve of the skates have some shaping to either or both ends, but this is often quite minimal. Six skates were made from horse metatarsals, two from horse metacarpals, two from red deer metacarpals, two from cattle metatarsus, one from an ox metacarpal and two from ox radii. One remains to be identified. The bias towards the use of horse bones for skates is also reflected at Coppergate in York (MacGregor et al 1999, 1987). Cattle or ox bones are also frequently found utilised for skates but it is unusual to find ox radii used (Alan Pipe *pers comm*). The wear on the two ox radii skates, <4139> and <4208>, is very advanced and they must have been no longer suitable for use as skates. They were both recovered from Open Area 144 in Period 36 and are thought to be a pair. It is also unusual to find red deer bones (<4373> and <4610>) utilised for skates. Of the 42 skates recovered from Coppergate in York, all were made from either horse or cattle bones (MacGregor et al 1999, 1987).

Skates are commonly found with perforations in the heel, and to a lesser extent the toe, where thongs or straps could be inserted to attach the skate to the foot (MacGregor 1985, 142). It is interesting that only two examples from Poultry were found with any sort of attachment hole. Skates <4610> and <6757> both had the naturally occurring hole in the heel end slightly enlarged. No skates were recovered with toe holes. At York (MacGregor et al 1999, 1987-9), of the 47 skates recovered dating to a similar period, 16 have heel holes and only two have toe holes. In the survey of Saxo-Norman finds from the City of London (Pritchard 1991, 266), only seven skates were available dating to the 11th to 12th centuries; of these two had attachment holes at either end and one had a hole only at the back. It would, therefore, appear from recent excavations that toe holds are possibly less frequently found than previously thought. Whether this is a feature of earlier skates or whether it is a localised fashion will have to await further work.

All of the skates were used with the anterior surface as the base (Alan Pipe, *pers comm*) and in all cases, bar one, this surface was worn to varying degrees. Skate <3550> is very worn and, being quite small in size, may have been a child's, whereas <6728> has very little wear and may not have been finished or used. Of particular interest is <4609> where the wear on the base shows that the skate would have leant over slightly to one side when used. At a later date a number of cut-marks have been made along one side of the worn base, presumably in an effort to rectify this tilt. Skate <6755> has cut

marks on the base or contact surface although these are now quite worn through use. These marks indicate a preparatory flattening of the base prior to use and this feature has also been noted on skates from other sites (MacGregor et al 1999, 1987). Three of the skates (<4608>, <6580> and <6757>) also have horizontal cut marks on the upper surface, presumably to help the foothold. This feature has also been noted by MacGregor (1985, 142).

Counters

Only two bone counters were found. Both are circular with a central round perforation and decorated with incised ring-and-dot motifs. It is interesting to note that the decorative scheme on both appears to be very close, possibly suggesting that they are from the same workshop or may be part of a set. There is some question as to the function of these objects, as it has also been suggested that they may have been used as spindle whorls (MacGregor 1985, 187). The counters found at Poultry were both associated with Building 173 (P39) and were found in contexts that produced pottery dating to the 12th to 13th centuries. These dates coincide with the dating for this type of counter elsewhere in London and with the assertion that they were a Norman introduction (Pritchard 1991, 205).

Musical instrument (with thanks to Margaret Birley, Acting Keeper of Musical Instruments at the Horniman Museum)

A near complete horn musical instrument <2941> came from Open Area 144 in Period 36. This is a very rare survival in the archaeological record since horn usually degrades and disintegrates during burial. The horn is open at both ends and there are three small round perforations (approximately 8-9mm in diameter), aligned lengthways in a row, on the inner curving surface. No decorative mounts remain and there are no signs of any other fittings such as a mouthpiece. The horn has been identified as probably an end-blown horn with fingerholes (identification by Margaret Birley, Acting Keeper of Musical Instruments at the Horniman Museum) and is of a type thought to be the precursor of the cornett. A similar horn, with three fingerholes, was found in a bog at Konsterud in Sweden, dating to the early Iron Age (Lund 1974; 1984, 24) and what appears to be a similar instrument is illustrated in a French psalter of c 1060 (Montagu 1976, plate 6).

Personal Adornment and Use

The main bone objects of personal use or adornment are pins and composite bone and antler combs.

Pins

Six pig fibula pins came from the excavations at Poultry. These are commonly found on sites of this period and were simply made, requiring very little re-shaping of the bone (MacGregor 1985, 120-1). Three have unperforated heads (Group 1; MacGregor et al 1999, 1950) and the other three are perforated (Group 2), reflecting trends seen elsewhere (MacGregor 1985, 121; MacGregor et al 1999, 1950-51). Two pins were also recovered, made from other animal bone, each with a perforated expanded head. Such pins are

frequently found on late Saxon/early medieval sites. As MacGregor (1985, 120) points out their shape would appear to have been inspired by the natural form of pig fibulae.

Combs

Five fragmentary combs were found, four single-sided and one double-sided. It would appear that in all cases the connecting-plates are antler and the tooth-plates, where they remain, are of bone. The single-sided combs will be discussed first. All have curving backs and the connecting plates are decorated with incised linear and/or ring-and-dot motifs. Comb <4724> has a different decorative scheme on each plate, one having ring-and-dot motifs and the other a central row of very fine triple saltire crosses, banded on each side by four fine transverse grooves. It is possible, due to the two decorative schemes, that the two connecting plates may come from two different combs reused in making this comb. This hypothesis has been put forward for an example from Coppergate (MacGregor et al 1999, 1937, and fig 888, no. 7595), with two differently decorated connecting plates. Both the connecting-plates of comb <783> have similar decoration with two bands of transverse grooves and a central plain area banded above and below by a narrow line of double chevrons. Only part of one connecting plate remains of comb <4515>. Its central zone is decorated with two rows of ring-and-dot motifs bounded by two bands of transverse grooves. A round hole has been cut in the middle of the ring-and-dot motifs and the plate has broken at this point. All of these decorative motifs are similar to those found on the large assemblage of single-sided combs from Coppergate in York (MacGregor et al 1999, 1935-7). Part of a comb connecting plate <3261> is also from a single-sided comb. The plate is largely undecorated but there are two groups of very small transverse grooves. These are very faint and may be accidental.

The double-sided comb, <1041>, has one connecting plate with a herringbone decoration defined by three transverse lines. The other plate appears to be plain. Both plates have a series of saw marks from the overcutting of the teeth.

Other

Other objects found included parts of what may be termed fixtures and fittings. A complete, plain ring with a D-shaped section was found associated with Building 117. The ring is now blackened and has a smoothed, polished surface. Its function is unknown but it may have been part of a fitting of some sort. Two small flat fragments of bone are thought to come from mounts, of a type used on caskets or boxes (MacGregor et al 1999, 1954-9 and fig 915). Both are incomplete and are decorated with ring-and-dot motifs. Similar objects have been found in Saxo-Norman contexts elsewhere in London (Pritchard 1991, 210). Such mounts may have been riveted or glued onto the casket or box (ibid). Recent excavations under the Guildhall Yard produced 30 fragments of similarly decorated mounts, some riveted and others not; it has been suggested that these mounts may have been manufactured in the area (Keily 1997).

The side plate of an antler-handled folding knife <1153> was found in a context associated with Building 115, Period 35. The plate widens in the middle and tapers slightly towards each end. The central area is decorated with a panel of intricate geometric interlace, each end terminating in an inverted semi-circle. Within this semi-circle at one end is a small beast, possibly a dog, encircled by a double twisted cord. The opposite end of the handle has a small round hole, between incised lines. There is some green staining on the handle, presumably from the copper alloy parts of the knife. Folding knives have been found on a number of sites in Britain and probably date to the late Saxon period (MacGregor 1985, 170). An example, which stylistically has some similarities to the present object, came from Canterbury (MacGregor 1985, 168, fig 88n) but is decorated in the Borre style of the 10th century.

A much plainer handle <2526> is made from a sheep/goat tibia mid-shaft (right side), which has been sawn at either end. The surface is slightly smoothed. A similar plain, functional handle was found at CED89 and have also been found on other sites, such as Coppergate in York (MacGregor et al 1999, 1970-2, fig 927, no. 7060).

Motif-pieces (GE & JK)

Ten fragments of bone were found which had been used as trial or motif pieces: animal bones selected for their flat surfaces and used for carving practice for interlace and other patterns. Pritchard (1991, 177-93 & 261-2, nos. 198-206) identified a concentration of such pieces from sites in London on the north side and towards the western end of modern Cheapside: fragments have been recovered from three sites at Milk Street, Guildhall House, and St Alban's House, Wood Street (Pritchard 1991, 178-193). Recent excavations at the Guildhall have produced eight more fragments. Examples have also been recovered from elsewhere in the City but are thought to be redeposited (Pritchard 1991, 178-9). These and parallels elsewhere are dated to the 10th/early 11th centuries. All of the Poultry examples came from Late Saxon features, one from Period 34 and the remainder from Period 35. With over twenty motif pieces now known in the walled area of London it is remarkable that this style of artwork is not much more evident on usable objects.

The ten examples from Poultry display a range of different levels of competence in their discernible surviving motifs/borders, and blades of varying sharpness were used in the cutting. Several of the motifs, like the duplex and triquetra are simple and purely conventional, but there are also knotted animals (<3552>A1-2 & 7) as well as animal and bird terminals (<4101>A5-6 & B9, & possibly B8; <3187>B9). The (?)side-viewed human head on <4020>B3 is (if correctly interpreted) unusual. Many motifs are unfinished, some having got no further than the start of the frame. Whether this is the result of reaching an impasse with a design that had not been fully thought out or had gone wrong in the execution, or through simply downing the tool to do something else, is unclear. There is no definite evidence for

these as 'trial' pieces (as known elsewhere) in the strict sense of developing a single motif by several attempts to refine it on the same bone. Examples found in York, as well as in Ireland (Dublin, Wexford, ref.), have sometimes been interpreted as moulds for use in metal-working. None of the present examples are suitable for such a use and none contain any evidence for having been used as such. The function of these objects, therefore, must remain open to speculation. It is of interest to note, however, the discovery of a fragment of leather waste with a series of triangular frames and possible triquetras from context [17282] at Poultry. The motifs are impressed into the leather, probably with a pointed implement. No parallels are known from London but the leather examples must be part of the same tradition as the bone examples.

Comparative material from nearby sites

A number of sites have been excavated in the vicinity of Poultry and, although none produced as large an assemblage of finds, some did produce comparative material. Late Saxon features at CID90 produced a number of bone and antler artefacts. A fragment of cattle rib with motifs on both sides came from a pit. The motifs parallel other examples from the city and are quite lightly incised. The pit produced pottery and other finds dating to the late 10th to 11th centuries (Wardle 1999, 38-40). Other bone finds from CID90 include a spindle whorl and a small quantity of bone and antler waste. The latter was made up of sawn beam and tine fragments. Long slivers of bone waste bear some similarities to fragment <1861>, although without the holes. BUC87 produced a bone skate (<130> [59]) with a perforation through the toe end and a pin-beater (<140> [91]). The latter is a double-ended, cigar shaped pin-beater (type 1, with two working ends (Walton Rogers 1999, 1967)), a type associated with warp-weighted looms. The surface is highly polished from use. CED89 produced little that was directly applicable to the present assemblage, apart from a plain handle with similarities to <2526> and sawn antler waste in the form of two tines and a crown. PLY87 produced no bone accessions.

POST-ROMAN BONE ACCESSIONED FINDS CATALOGUE

(All bone type identifications are by Alan Pipe)

Late Saxon/Early medieval

Personal use

Comb

<4724> [11626] P36, OA144, Group 1084,10645

Incomplete; surviving l 140mm, surviving w 20mm, w of handle 16mm. A fragmentary single-sided composite comb with a slightly curving back and four remaining tooth-plates. The teeth themselves are all broken off and the end-plates are missing. There are the remains of 8 rivet holes in the connecting-plates, most still with traces of the corroded iron rivets. The rivets are positioned between each tooth-plate and the next. The two antler connecting-plates have different decoration. One side has two rows of small ring-and-dot motifs and the other side has a central zone decorated with repeating saltire crosses bounded by four fine transverse grooves. The crosses are formed of very finely and faintly incised lines, three for each arm. There are approximately 5-5.5 teeth per 10mm. This comb was recovered from a context that also produced pottery dating to c 1050-1150.

<783> [3251], P33, OA110, Group 1017,91105

Incomplete; surviving l 105mm, maximum w 43mm, w of handle 16mm. Two fragments, both part of the same single-sided composite comb with a curving back and four surviving tooth-plates. Both end-plates are missing. There are the remains of five round rivet holes in the handle and three iron rivets are still *in situ*. The rivets have been placed in the following pattern: one in the middle of a tooth-plate, the next between the next two tooth-plates and so on. It is interesting to note that one of the holes was drilled though the handle but appears never to have been used as there are no traces of iron or iron corrosion products around it and the hole itself is very sharply defined and unworn. This hole is also placed out of sequence with the others and it may be that it was added at a later point in an effort to re-enforce the handle. A similar hole appears on part of a comb from FST85 in the city (Pritchard 1991, 263, no. 211). Both of the connecting-plates on the present example are similarly decorated with two bands of transverse grooves and in the middle a plain space banded above and below by a narrow line of double chevrons. There are 4 to 4.5 teeth per 10mm. The comb came from a context that also produced pottery dating to c 1050-1100 and an 11th century date would agree with other similar examples from London and elsewhere in Britain and the continent (Pritchard 1991, 194-198).

<3261> [16882] P35, R102, Group 1170,112015

Incomplete; surviving l 106mm, w 13mm, th 4mm. One side of a probable antler connecting-plate with three rivet holes and the corroded remains of the iron rivets. The plate is largely undecorated but there are two groups of very small transverse grooves. These are very faint and may be accidental.

Probably from a single-sided comb. From a context that produced pottery dating to c 900-1050.

<4515> [16891] P37, OA151, Group 1452,111545

Incomplete; surviving l 170mm, w 19mm. Part of an antler connecting-plate from a single-sided composite comb with a curving back. Four rivets remain. The central zone of the plate is decorated with two rows of ring-and-dot motifs bounded by two bands of transverse grooves. In the middle of the ring-and-dot motifs a circular hole has been cut, approximately 13mm in diameter. The plate has broken at this point.

<1041> [7400] P36, OA131 Group 1310,83135

Incomplete, surviving l 80mm, w 36mm: double-sided; broken off at each end; nine coarse and thirteen fine teeth per 20mm; the connecting strips retain five of at least six iron rivets and have saw marks from overcutting the teeth - one strip has herringbone decoration defined by three transverse lines (with a further three at one of the breaks).

Material identified as antler by Alan Pipe (only the connecting strips are definitive). (GE)

Pins

<782> [2679] P35, B105, Group 1205,91391

Incomplete; surviving l 77mm, maximum surviving w 6mm. A small rough pin, broken across the bottom of the round perforation in the head. Made from an ox-sized long bone fragment.

<2770> [11752] P37, OA145, Group 1428,10737

Complete; l 132mm, maximum w 17mm. An expanded-head pin with a round perforation through the head; made from an 'ox-sized mammal' long bone fragment. The shaft is highly polished.

Pig fibula pins

<6587> [3251] P33, OA110, Group 1017,91105

Complete; l 85mm, maximum w 11mm. A juvenile pig fibula with the mid-shaft worked into a rough point. The wide head is unperforated and, therefore, belongs to Group 1 pig fibula pins (MacGregor et al 1999, 1950). The tooling is quite rough and crude.

<721> [2985] P34, OA112, Group 1029,91308

Incomplete; surviving l 80mm, maximum w 8mm. A pig fibula pin with a round perforation in the head. The very tip is missing. The perforated splayed head indicates that it belongs to Group 2 pig fibula pins (MacGregor et al 1999, 1950).

<1848> [7096] P35, S101, Group 1274,83174

Complete; l 93mm, maximum w 10mm. A pin made from a pig fibula distal end; terminating in a rough, rather flat, blunt point. The wide head is

unperforated indicating that it belongs to Group 1 pig fibula pins (MacGregor et al 1999, 1950). Quite rough and simple.

<3047> [11897] P36, OA144, Group 1425,10751

Complete; l 81mm, maximum w 13mm. A pin made from a pig fibula, distal mid-shaft. The head is unperforated indicating that it belongs to Group 1 pig fibula pins (MacGregor et al 1999, 1950). The shaft is quite highly polished.

<1684> [11105] P37, OA145, Group 1427,10736

Complete; l 112, maximum w 13mm. Splayed head with a round perforation indicating that it belongs to Group 2 pig fibula pins (MacGregor et al 1999, 1950). This pin curves to one side, reflecting the natural shape of the bone.

<427> [1993] P39, B173, Group 1463,1147

Incomplete; surviving l 100mm, maximum surviving w 10mm. A near complete pin made from a pig fibula mid-shaft (proximal), broken across the round perforation in the wider end. Probably a Group 2 pig fibula pins (MacGregor et al 1999, 1950).

Textile working

Pin-beaters

All three of the pin-beaters correspond to type 2, with a flattened oval section, from Coppergate in York, where they were found in contexts dating from the late 9th/early 10th to the 12th centuries (Walton Rogers, 1999, 1967). This type of pin-beater is thought to have been used with a two-beam vertical loom (ibid, 1968).

<2989> [17001] P34, OA115, Group 1044,112411

Complete; l 102mm, maximum w 15mm. Made from an 'ox-sized mammal' longbone fragment; flattened oval section, a rounded tip and a slightly rounded butt. The butt end, which is largely made up of cancellous tissue is roughly chisel shaped and there is a round perforation (d 5mm) close to this end. The surface of the pin-beater is highly polished from use and there is wear below the tip indicative of where the pin-beater was held between the thumb and fore-finger.

<2943> [16878] P35, B117, Group 1336,112559

Complete; l 137mm, maximum w 14mm. Made from an 'ox-sized mammal' long bone fragment; oval in section, the butt end is quite rough and unfinished, the other end terminates in a long point. Most of the surface has a high polish.

<2792> [16739] P35, OA122, Group 1351,112154

Complete; l 89mm, maximum w 17.5mm. 'Ox-sized mammal' long bone fragment. Flattened oval in section, pointed tip and grooved butt. Incised linear decoration on one surface in the form of a double saltire cross banded above and below by three incised lines followed by a single saltire cross, banded at one end by a single incised line. The surface is highly polished.

Spindle whorls

<2801> [16739] P35, OA122, Group 1351,112154

Complete; d 35mm, t 15mm, d of hole 9mm. A spindle whorl made from an ox femur (caput, sub-adult), trimmed, with a hole drilled through it.

<4688> [11873] P36, OA144, Group 1425,10752

Complete; maximum d 38mm, maximum h 30mm, d of hole 11-16mm. A rough, poorly made spindle whorl, possibly unfinished; made from an ox, femur caput, adult. The central hole is well made and tapers from 11mm to 16mm in diameter. The outer surface is uneven due to the natural shape of the bone and the base has not been smoothed off.

<430> [1834] P39, OA150, Group 1458,1272

Complete; d 45mm, maximum t 14mm, d of hole 9mm. A well made antler spindle whorl with a flat, smooth base and a central round hole.

Tool (GE)

<2512> [16405] P36, B127

Double-pronged implement made from section of a cattle; l 46mm, l of prongs 10mm. The rounded part is carved with a panel having an eight-pointed asterisk motif between obliquely hatched borders (the one nearest the prongs being double and with opposed hatching); the grooves retain traces of red pigment. Similar items have been recovered from other sites, becoming known in archaeological literature as lucets (cf. MacGregor 1985, 175-6, fig 93d, & idem et al 1999, 1994-6). They are thought perhaps to be for twisting threads. The present item shows more wear consistent with this purpose than many of the somewhat diverse parallels cited, though all share the basic characteristic of two points.

Pastimes

Counters

<340> [1762] P39, B173, Group 1484,1166

Complete; d 44mm, th 6-9mm, d of hole 11mm. A flat bone disc with a round central perforation; made from an ox mandible 'angle'. The decoration on the top surface comprises a series of engraved circles radiating out from the central hole and a row of small ring-and-dot motifs, banded by lines, running around the outer edge (similar to <341>).

<341> [1877] P39, B173, Group 1475,1111

Incomplete; d 45mm, th 8mm, d of hole 10mm. A flat bone disc; made from an ox mandible 'angle'; worn and slightly burnt around part of the edge. The decoration on the upper surface is similar to <340>, comprising a series of engraved circles radiating out from the central hole and a row of small ring-and-dot motifs, banded by lines, running around the outer edge. There has been some discussion over whether these objects are counters or spindle whorls or even counters reused as spindle whorls. With this example the hole

respects the design and would, therefore, appear to have been part of it. It is also possible that there could have been a category of pierced counters, which could be strung onto a thong for safe keeping.

Skates

<2992> [0] unstratified

Complete; l 227mm. Horse, metacarpal, left, adult, anterior surface ground. The base/anterior surface is worn smooth and shiny and each end has been slightly shaped underneath to give an up-swept effect to each end. Neither of the ends, however, has been worked to a point and there are no perforations to aid in the attachment of the skate to the foot.

<4609> [6128] P32, OA140, Group 1088,5049

Complete; l 240mm. Horse, metatarsal, right, adult. The base or anterior surface is worn and smooth; interestingly this wear is slightly off-centre, and at a later date an attempt appears to have been made to rectify this off-centre wear with a series of small chips made along one edge of the wear. It appears, however, that the skate was probably not used much after this as these cut marks are not very worn. The only shaping to either end is on the underneath and is fairly minimal.

<6757> [3540] P34, OA113, Group 1032,91111

Complete; l 179mm. Cattle metatarsus. The lower surface is smoothed from use and the upper surface has been roughly worked, presumably to help the foot to grip. There is some working also at either end and there is a hole in the back for the peg which helped to hold the straps around the ankle and foot in place.

<6580> [6100] P35, OA142, Group 1092,5054

Incomplete; surviving l 125mm. Left horse metatarsal; both ends are missing. The bottom is worn and smooth and the top surface has been roughly smoothed with a series of cut marks.

<4608> [6063] P35, OA142, Group 1095,5075

Incomplete; surviving l 230mm. Horse, metatarsal, right, adult. The base or anterior surface is smooth and worn and the surviving end is slightly shaped underneath. The other end is burnt and blackened and presumably shattered when burnt. The upper surface has many small, horizontal cut marks - possibly to give a better grip. There are no perforations surviving.

<4610> [6080] P35, OA142, Group 1092,5055

Complete; l 236mm. Red deer, metacarpal, left, adult, anterior surface ground. A very narrow skate with a smoothed and shiny base or anterior surface, and some shaping of both ends, giving them a slightly up-swept appearance. The naturally occurring hole in the heel of the skate appears to have been slightly enlarged, presumably to take a peg for the attachment of straps to the foot.

<4601> [17529] P35, R102, Group 1169,112001

Complete; l 216mm. Horse, metacarpal, right, adult, anterior surface ground. The base or anterior surface is smoothed and worn and both ends have been slightly shaped, however neither is pointed and there are no perforations.

<3550> [16916] P35, R102, Group 1170,112010

Complete; l 165mm. A small, bone skate, possibly a child's. There are no holes for attachment but the underside is very worn.

<6586> [16882] P35, R102, Group 1170,112015

Complete; l 237mm. Horse, metatarsal, right, adult. Base or anterior surface worn and smooth, one end slightly worked. There are no holes in either end to aid the attachment of the skate to the foot.

<6755> [11434] P36, OA143, Group 1181,10649

Complete; l 190mm. Cattle metatarsus. The base has been roughly worked, probably to help give more grip, although this is now rather smoothed through wear. The toe end has been shaped.

<6728> [11715] P36, OA144, Group 1407,10719

Complete; l 168. Ox metacarpal, right juvenile. Some minimal shaping to the sides of the toe end. There are tooling marks along the sides of the shaft. The skate has either had very little use of this may be a blank or part made skate.

<4139> [11896] P36, OA144, Group 1425,10751

Complete; l 260mm. Ox radius, right, adult, anterior surface ground. A large skate with the base or anterior surface so worn that it would no longer have functioned successfully as a skate. There has been some minimal shaping of the ends and there are no perforations. Despite the size difference it is thought that this may be a pair with <4208>.

<4208> [11897] P36, OA144, Group 1425,10751

Complete; l 230mm. Ox radius, right, sub-adult, anterior surface ground. The base or anterior surface is very worn; in places the bone has worn through and it would no longer have functioned successfully as a skate. Neither end is shaped and there are no perforations. This is possibly a pair with <4139>.

<2274> [11261] P37, OA145, Group 1436,10781

Complete; l 268mm. Horse, metatarsal, right, adult. Very little wear; some minimal shaping to each end of the base. The toe end has been shaped to a rough point by cutting away each side. This is probably an unfinished skate, which was not completed or used.

<1862> [7416] P36, OA131, Group 1310,83133

Incomplete; surviving l 123mm, maximum w 38mm, maximum th 25mm. Horse metatarsal, proximal mid-shaft, right side, with a smoothed anterior surface and chopped along the posterior. Approximately one third of a skate, the remainder is broken off and missing. The fragment includes the unperforated heel. The base is quite worn, being very smooth and polished. Both the heel end and the upper surface of the skate have been worked and shaped.

<4373> [16069] P40, B136, Group 1826,112210

Near complete; l 250mm. A red deer metacarpal, right side, with the anterior surface ground flat. Neither end is worked.

Musical instrument

<2941> [11974] P36, OA144, Group 1425,10707

Incomplete; l c 220mm, narrow end 20mm x 15mm, wider end 55mm x 45mm. Part of a horn musical instrument. The horn is open at both ends. There appear to be no decorative mounts or the remains of any fittings, such as a mouthpiece. There are three small round perforations (approximately 8-9mm in diameter), aligned lengthways in a row, on the inner curving surface. The last of these lies approximately 33mm from the edge of the wider end.

This has been identified by Margaret Birley, Acting Keeper of Musical Instruments at the Horniman Museum, and the following comments are by her. It is thought to be an end-blown horn with fingerholes, of a type which is thought to be the precursor of the cornett. A similar horn, with three fingerholes, was found in a bog at Konsterud in Sweden, dating to the early Iron Age (Lund 1974; 1984, 24). What appears to be a similar instrument is illustrated in a French psalter of c 1060 (Montagu 1976, plate 6).

Other

Ring

<3270> [16760] P35, B117, Group 1337,112556

Complete; external d 28mm, internal d 19.5mm. Plain circular ring, with D-shaped section, rather irregular, and black in colour. Made from an 'ox-sized' long bone fragment. Found in a context which produced pottery dating to both the Roman period and to c 900-1050.

Handles

<1153> [7437] P35, B115, Group 1256,80915

Incomplete; 78mm, maximum w 18mm, th 4.5mm. The side plate of an antler-handled folding knife. The plate widens in the middle and tapers slightly towards each end. One end is decorated with two grooves, with a small circular perforation between them. The centre of the plate is decorated with a panel of intricate geometric interlace, each end terminating in an inverted semi-circle. The other end of the handle is decorated with a small beast, possibly a dog, encircled by a double twisted cord. There is some green staining on the handle, presumably from the copper alloy parts of the knife. Folding knives have been found on a number of sites in Britain and probably dates to the late Saxon period (MacGregor 1985, 170). An example, which stylistically has some similarities to the present object, came from Canterbury (MacGregor 1985, 168, fig 88n) but is decorated in the Borre style of the 10th century.

<2526> [11421] P37, OA145, Group 1436,10768

Incomplete; l 70mm, w 14-18mm, th 12-14mm. A sheep/goat tibia mid-shaft (right side), sawn at either end, and with a slightly smoothed surface. The bone is hollow and was probably used as a handle.

Mounts

<5708> [7016] P36, OA132, Group 1266,83194

Incomplete; surviving l 17mm, surviving w 7mm. A very small flat fragment of bone decorated with triple ring-and-dot design and probably part of a mount. Approximately 30 such mounts were found during the Guildhall yard excavation (GYE92), dating to the Saxo-Norman period, and are thought to have been possibly used as casket mounts.

<284> [880] P40, B178, Group 1652,212

Incomplete; surviving l 18mm, surviving w 17mm, th 1.5mm. A small fragment of a flat bone panel decorated with slightly overlapping incised triple-ring-and-dot motifs. Probably a mount, possibly for a box or casket.

Motif pieces

Bone identifications are by Alan Pipe.

Carvings on mandibles on the medial (inner) side are described before those on the lateral (outer) side.

<3682> [17027] P34, OA115, Group 1043,112179

Incomplete; surviving l 95mm, w 41mm. A fragment of an 'ox-sized' rib mid-shaft with one knotwork motif. The motif is unfinished and quite lightly incised. The execution of the design is quite crude and laboured. There are also a number of vertical and horizontal lines and scratches, one of which may be a further attempt at knotwork.

<3187> [16882] P35, R102, Group 1170,112015

Front fragment of fully adult cattle right mandible with three and eight motifs (?only two finished) on the respective sides:

Surface A:

1 & 2) unfinished: three sides of elongated-rectangular frames with incipient knot work (part heavily, part lightly incised).

3) (damaged by knock) triangular frame with knot motif (part heavily, part lightly incised).

Surface B:

4) (one corner broken off) triangular frame with unfinished knot motif (part heavily, part lightly incised).

5) unfinished motif against single delimiting line (part heavily, part lightly incised).

6) subrectangular frame with unfinished knot motif (hint of subdivision in one corner) (part heavily, part lightly incised) - (contiguous with next)

7) three sides of elongated, tapering-quadrangular frame with incoherent, unfinished knotting (part heavily, part lightly incised) - (contiguous with preceding)

- 8) triangular frame with incoherent, unfinished knotting (part heavily, part lightly incised) - (contiguous with next)
 - 9) triangular frame with coherent, (?)bird-headed knot (heavily incised) - (contiguous with preceding and following)
 - 10) elongated, tapering-quadrangular frame with unfinished knotting (heavily incised) – (contiguous with preceding)
 - 11) three sides of elongated-rectangular frame (part heavily, part lightly incised).
- (GE)

<6585> [16882] P35, R102, Group 1170,112015

Incomplete; maximum surviving l 185mm, maximum surviving w 80mm. Left ox mandible from a young adult (third molar in early wear). Both surfaces have motifs, although most are on the lateral side.

Lateral:

- 1) a knotwork chain with a possible tail or leg extending from one end; heavily incised.
- 2) a triangular frame; three sides, open at one end; part heavily, part lightly incised.
- 3) a small portion of incomplete and unidentifiable knotwork; very faintly inscribed.
- 4) part of an incomplete knotwork chain; heavily incised.
- 5) a duplex with very closely interlaced bands; heavily incised.

Also various scratches and linear marks.

Medial:

- 6) an incomplete and faint piece of knotwork, possibly part of a duplex or a triquetra.

<4025> [16993] P35, R102, Group 1170,112014

Incomplete; surviving l 168mm, w 36mm. An 'ox-sized mammal' rib mid-shaft fragment. Both surfaces carved with various patterns (see below) as well as a variety of lines and scratches:

Surface A:

- 1) two sides of an incomplete triangular frame (lightly incised).
- 2) a complete triquetra in a triangular frame (part heavily, part lightly incised).
- 3) near complete triangular frame (part heavily, part lightly incised).
- 4) complete triquetra in a triangular frame (part heavily, part lightly incised).
- 5) two sides of an incomplete triangular frame (lightly incised).
- 6) complete triangular frame (lightly incised).
- 7) a triangular frame with beginning of knot work (lightly incised).

Surface B:

- 8) a complete triquetra in a triangular frame (part heavily, part lightly incised).
- 9) complete triquetra in a triangular frame (part heavily, part lightly incised).
- 10) a rectangular frame with part of a line in it (lightly incised).
- 11) a roughly triangular frame with unfinished knot motif (part heavily, part lightly incised).
- 12) two sides of a triangular frame (lightly incised).
- 13) a square frame with the start of a motif in it (lightly incised).
- 14) a near complete triquetra in a triangular frame (lightly incised).

15) a sub-triangular frame with the start of a motif in it (part heavily, part lightly incised).

<3552> [17529] P35, R102, Group 1169,112001

Incomplete; surviving l 195mm. Fragment of adult ox scapula, left; some charring on medial side: nine motifs (including two unfinished) on medial side. At least two blades of different sharpnesses seem to have been used. There is one motif (with a fragment missing from its centre) on the lateral side:

Medial:

- 1) rectangular frame with (?) long snouted beast with three areas of knotwork, including hind leg (part heavily, part lightly incised).
- 2) (slightly damaged) rectangular frame with similar motif to preceding, but neater and more-complex knotwork (both forelegs and one hind leg discernable as such). (part heavily, part lightly incised).
- 3) sub-square frame with beginning of knotwork (part heavily, part lightly incised).
- 4) rectangular frame with two lines (?beginning of knotwork - ?possibly to be as no. 6, though some shallower cuts suggest otherwise) (lightly incised).
- 5) subrectangular frame with incoherent, angular knotting (heavily incised).
- 6) subrectangular frame with neat duplex-and-circle motif (part heavily, part lightly incised).
- 7) incomplete rectangular frame (central portion missing as bone broken) with one surviving corner filled with a beast's head. The frame of the opposite side of the rectangle, which is visible on the other side of the break, is incomplete and appears to be empty of decoration (part heavily, part lightly incised).
- 8) sub-rectangular frame with a beast and knotwork; the bone is quite worn here (the adjacent edge appears slightly burnt) and the design is therefore incomplete and indecipherable (part heavily, part lightly incised; very worn).
- 9) incomplete, worn triangular knotwork motif in a triangular frame (worn but appears lightly incised).

Various scratches.

Lateral:

- 10) an incomplete rectangular panel of knotwork in a frame (the centre is missing where the bone is broken); the remaining portion (the beginning of one short side and one of the opposite corners) indicates that this may have been similar to the beast-and-knotwork panels on the other side (part heavily, part lightly incised).

Various scratches.

(GE+JK)

<4021> [17529] P35, R102, Group 1169,112001

Incomplete; maximum surviving l 87mm, maximum surviving w 42mm. Part of an ox mandible (lower jaw) 'angle'. Both surfaces carved with patterns; the designs are described with the bone upright:

Surface A:

- 1), 2) and 3) three triquetrae each interlacing with a circle in a triangular frame; the three triangles join, two inverted and the third upright between them (all heavily incised).
- 4) (broken off) another triquetra interlaced with a circle in a sub-triangular frame is incomplete due to the broken edge of the bone but is also inverted

and it appears that it would have joined the row. The point of the triangle is open and poorly finished off (heavily incised).

5) There is also a sub-triangular frame to one side with a rounded point (lightly incised).

Surface B:

6) (broken off) two right-angled sides of a rectangular frame partly filled with two narrow knot motifs each of which appear to end in an animal's head (heavily incised).

7) (contiguous with the preceding) a knot motif with an animal's head at one end and no frame (heavily incised).

8) (contiguous with preceding 6 and 7) a knot motif with an animal head at one end and no frame (heavily incised).

9) (broken off) two sides of a triangular frame, with an open point, containing a knot work motif, possibly a triquetra interlacing with a circle (mainly heavily incised with some lightly incised lines).

10) (contiguous with the preceding and broken off) a knotwork motif of uncertain shape and form (appears to be heavily incised but very worn).

11) a small triquetra in a triangular frame with an open point (the triquetra is heavily incised, the frame lightly so).

12) a short knotwork chain with a possible animal head at one end and a possible tail or leg extending from one corner of the other end. Two angled forelegs open out from the head end but are then broken off (part heavily, part lightly incised).

13) (contiguous with the preceding) (broken off) a portion of a knot work motif; too little remains to identify its shape or form or how it relates to the preceding motif (part heavily, part lightly incised).

14) (broken off) part of what appears to be a knot work chain with no frame. Too little remains to be able to identify its shape or form (part heavily, part lightly incised).

There is also a small round hole in this side, where the bone fragment was used as a rest probably while another object was being worked on.

<4022> [17529] P35, R102, Group 1169,112001

Cattle left mandible fragment (one recent break) of a young-adult animal, with one frame on surface A and ten motifs (one uncompleted) and at least two further frames on surface B:

Surface A:

1) rectangular frame (possible hint of start of motif) (lightly incised).

Surface B:

2) sub-triangular frame with incoherent knotting (lightly incised).

3) triangular frame with triquetra (heavily incised).

4) (damaged) (?)duplex; (heavily incised) (overlaps following).

5) (damaged) elongated-rectangle frame with two blank subdivisions and partly illegible knot work (lightly incised) - (overlap with preceding and contiguous with following)

6) rectangular frame with blank subdivision and (damaged) (?)single knot (lightly incised) - (contiguous with preceding)

7) three sides of elongated rectangular frame (part heavily, part lightly incised).

- 8) sub-triangular frame (two round corners) with incoherent motif (lightly incised).
 - 9) sub-rectangular frame with (?) diagonal-cross-through-lozenge motif (part heavily, part lightly incised).
 - 10) (damaged) rectangular frame with faint, illegible motif (lightly incised).
 - 11) conjoined pair of duplexes (heavily incised but very worn).
- (GE)

[17529] <4101> P35, R102, Group 1169,112001

Ox mandible (lower jaw), right, from sub-adult animal probably in 3rd year; (some recent breaks), with six and six motifs on the respective sides, the former with three further frames, and both sides have a series of drilled holes where the bone was used as a rest for other material being worked. Drill diameter 1.5mm.

Surface A:

- 1-4) elongated rectangular frames, one with only two sides and (?)one broken off (all quite heavily incised).
- 5) chain knot with (?)animal head (no eye) and knotted forelimb (no frame) (part heavily, part lightly incised).
- 6) unfinished motif (?)similar to preceding (?head at finished end) (quite heavily incised).

Surface B:

- 7) (broken off) (?) rectangular frame with ring chain (heavily incised).
 - 1) (broken off) long, narrow, slightly curved frame with knot (possibly terminating in bird's head at surviving end) (part heavily, part lightly incised).
 - 2) Elongated knotwork motif with possible animal head (no eye) at on end (part heavily, part lightly incised).
 - 10) (?broken off, possibly originally triangular) knot motif with animal head at one surviving corner (heavily incised).
 - 11) (broken off, surviving as open-ended triangle) the paired frame lines converge but do not meet: incoherent pattern, possibly a palimpsest (part heavily, part lightly incised).
 - 12) (damaged) faint trace of opposed, U-bent straplike forms (?no frame) (lightly incised).
- (GE)

[17572] <4020> P35 R102 Group 1169,112005

Pig right mandible fragment from mature adult, with two motifs on each side:

Side:

- 1) (possibly broken of at snout) incoherent ring-chain beast with head viewed from above (no frame)

- 1) (broken off) fragment of knotwork

Side:

- 3) knotwork on rectangular stem - can be seen as a human head facing right with knotted hair (no frame).

- 4) (broken off) fragment of knotwork - (??)triquetra.

(GE)

Stop/wedge

<6583> [16107] P36, OA135, Group 1382,112402

Complete; l 47-68mm. Left ox metatarsal, only the proximal end survives and a small section of the shaft. The other end has a semi-circular shaped indent worn into the bone. The curved surface is worn very smooth and shiny.

Similar objects have been recovered from other sites in London, such as at the Guildhall (GYE92), although not usually worn all the way through as this example has. Such objects were almost certainly used as stops or wedges, possibly with lathes.

<6741> [16992] P36, OA135, Group 1385,112477

Maximum l 190mm. Cattle metatarsus with a semi-circular 'scoop' worn from the bone; the surface of this worn area is smooth and shiny. There is a similar, although much slighter indent on the other side.

Unidentified

<1865> [7298] P32, OA108, Group 1014,82806

Incomplete; maximum l 72mm, d approximately 31-35mm. An 'ox-sized' long bone fragment, the internal and external surfaces have been partly smoothed (tool marks are still visible). One end is slightly tapered and internally this end has marks that would indicate it was worked on a lathe. Only half of the object survives, suggesting that it may have broken whilst being worked and was then discarded. Possibly intended as a handle.

<1847> [7229] P36, OA131, Group 1313,83137

Incomplete; surviving l 120mm, maximum w 20mm. An adult male pig mandibular canine tooth (left side) with two regular holes drilled through it approximately halfway along its length. Both holes taper from one side to the other. A third hole has not been drilled all the way through. Diameters of holes: 4.5mm narrowing to 2.5mm and 2.5mm narrowing to 2mm.

<1861> [7336] P36, OA131, Group 1313,83136

Incomplete; surviving l 155, maximum w 14mm, th 4.5mm. A long, thin strip from an 'ox-sized' long bone; one end is broken off and missing, the other is worked to a rough, blunt, curving point. There are four small, round holes (d of holes 3.5mm) in a row running up to the broken end. Possibly a fragment of bone working waste but given the presence of the holes it may have been intended for use.

Antler/Bone working

Antler waste

<874> [3218] P32, OA105, Group 1006,91102

Maximum l 190mm. Sawn adult red deer antler brow tine, sawn off at base. Surface is quite shiny and smooth. Very tip broken off.

<892> [3218] P32, OA105, Group 1006,91102

L 101mm. Sawn adult red deer antler tine.

<953> [3218] P32, OA105, Group 1006,91102

Maximum l 45mm. Adult red deer antler base, sawn below and above beam/brow tine junction.

<871> [3095] P32, OA105, Group 1008,90911

(a) L 64mm.

(b) L 65mm.

Sawn adult red deer antler tines.

<954> [3293] P32, OA105, Group 1008,90911

(a) L 87mm; sawn adult red deer antler tine.

(b) Maximum l 155mm; sawn adult red deer antler 'crown' and 'tops', sawn off below the join. Both tines are broken off.

<873> [3205] P32, OA105, Group 1009,90907

Maximum l 140mm. Adult red deer shed antler base complete with coronet; one tine cut off and another broken off.

<4607> [6128] P32, OA140, Group 1088,5049

Maximum l 130mm. Sawn adult red deer antler tines ('tops'), sawn across the base. The two tines are complete to the tip and the surfaces of both are quite smooth and worn.

<2103> [11294] P32, OA140, Group 1057,10709

L 94mm. Sawn adult deer antler tine, probably red deer.

<2104> [11294] P32, OA140, Group 1057,10709

L 32mm. A fragment of deer antler beam sawn off at top and bottom, probably red deer.

<2105> [11294] P32, OA140, Group 1057,10709

Maximum l 122mm. Two adult red deer antler tines ('tops'), sawn off below the join.

<1874> [3094] P33, B101, Group 1019,91203

Maximum l 71mm. Sawn adult red deer antler beam / 'tops' junction, sawn off below the join.

<1875> [3094] P33, B101, Group 1019,91203

L 104mm. Sawn adult red deer antler beam/tine junction, one complete tine remains.

<1877> [3536] P33, OA110, Group 1016,91107

L 54mm. Sawn adult red deer antler tine.

<893> [3401] P33, OA110, Group 1016,91109

2 fragments.

(a) L 115mm; sawn adult red deer antler tine.

(b) Maximum l 55mm; shed adult red deer antler base complete with coronet, beam sawn off and one tine broken off.

<875> [3251] P33, OA110, Group 1017,91105

5 fragments.

(a) L 92mm; sawn adult red deer antler tine.

(b) L 105mm; sawn adult red deer antler tine.

(c) L 100mm; sawn adult red deer antler tine.

(d) L 115mm; sawn adult red deer antler tine.

(e) D 50mm x 42mm, maximum th 8mm; a thin slice of adult red deer antler beam.

<731> [3096] P34, OA111, Group 1024,90916

L 37mm. Sawn adult deer antler tine, probably red deer. Surface is very worn and shiny and has lots of small scratches all over it.

<872> [3203] P34, OA111, Group 1024,90916

Maximum l 35mm, maximum w 18mm. A small triangular fragment of adult red deer antler beam; waste from bone working. All edges are sawn.

<6752> [3059] P34, OA113, Group 1032,91111

(a) Maximum d 48mm, th 1.5–9mm. A thin slice of antler.

(b) Maximum l 53mm. A fragment from a sawn piece of antler waste.

<6758> [3059] P34, OA113, Group 1032,91111

L71mm. Tip of a red deer antler tine, sawn off.

<1873> [3298] P34, OA113, Group 1032,91501

D 27mm, h 11mm. A rough ring, made from a slice of adult deer antler beam that has been sawn and drilled. Possible off-cut from bone working.

<4406> [17001] P34, OA115, Group 1044,112411

L 80mm. Sawn adult red deer antler tine. There is also a small secondary cut mark just above the sawn off base.

<726> [3013] P35, B109, Group 1220,91303

L 48mm. Sawn adult red deer antler tine.

<870> [2912] P35, B111, Group 1226,91749

L 85mm. Sawn adult red deer antler tine.

<729> [2770] P35, B112, Group 1237,91758

Maximum l 56mm. Sawn adult red deer antler tines ('tops'), sawn across just below the join.

<2311> [3405] P35, B112, Group 1245,91606

L 85mm. Sawn adult red deer antler tine.

<1876> [3417] P35, B112, Group 1251,91510

L 94mm. Sawn adult red deer antler tine, sawn off and broken off.

<1856> [7474] P35, B115, Group 1253,80911
L 75mm. Sawn adult red deer antler tine.

<1864> [7452] P35, B115, Group 1255,80912
L 105mm. Sawn adult red deer antler tine.

<3177> [17251] P35, B117, Group 1336,112418
D 40mm, th 10mm. Sawn adult red deer antler beam disc, sawn above and below.

<2951> [16983] P35, B117, Group 1335, 112410
L 55mm. Sawn adult red deer antler tines ('tops'). Two small tines, sawn across the base.

<1863> [7420] P35, OA119, Group 1268,83101
L 62mm. Sawn adult red deer antler tine.

<1836> [7373] P35, OA119, Group 1268,83102
L 105mm. Sawn adult red deer antler tine.

<6340> [8363] P35, OA119, Group 1269,83147
Maximum l 39mm. Sawn adult red deer antler beam, sawn at both ends.

<5446> [16739] P35, OA122, Group 1351,112154
Maximum l c 330mm. Adult red deer antler beam, 'cup' and tines ('tops'). The base of the beam has also been sawn through and then a 70mm long incision has been made through the centre of the antler from the cut base. This long cut would appear to have been made by a double-bladed saw or 'stadda' (Alan Pipe, pers comm). The cut may have been made in preparing the beam as an object or possibly in an attempt to split the beam lengthways.

<4232> [17332] P35, OA122, Group 1355,112485
L 45mm. Sawn adult red deer antler tine.

<6756> [2685] P35, OA124, Group 1295,91338
L 185mm. Sawn red deer antler tine.

<2855> [8496] P35, OA142, Group 1081,10860
L 133mm. Sawn adult red deer antler tine, tip is also sawn off.

<2856> [8496] P35, OA142, Group 1081,10860
L 80mm. Sawn adult red deer antler tine.

<6748> [11583] P35, OA142, Group 1083,10614
Maximum th 13mm. Part of an antler 'slice'.

<6753> [6080] P35, OA142, Group 1092,5055
Maximum l 245mm. Roughly cut and split red deer antler fragment.

<5985> [6106] P35, OA142, Group 1092,5057

Maximum l 180mm. Sawn adult red deer antler tines ('tops'). The base is sawn down and across forming an angle. The two tines are complete to the tip but the surfaces are rather worn and smooth.

<4606> [6075] P35, OA142, Group 1092,5058

Maximum l 128mm. Sawn adult red deer antler tines ('tops'), sawn off at base and one tip sawn off. The smaller tine has a near complete tip and its surface is quite smooth and polished looking, possibly due to natural wear.

<4105> [6021] P35, OA142, Group 1094,5065

L 130mm. Shed adult roe deer antler base, complete with coronet, and tine junction. The beam has long striations on the surface indicating where it has been smoothed. A smaller tine has been removed and the cut smoothed over.

<4106> [6067] P35, OA142, Group 1095,5070

L 110mm. Sawn adult red deer antler tine. The surface is quite smooth and covered in small scratches.

<4096> [6031] P35, OA142, Group 1095,5078

L 145mm. Sawn red deer antler tine. Also some knife cut marks just above sawn end.

<4097> [6031] P35, OA142, Group 1095,5078

L 102mm. Sawn adult red deer antler tine; lots of small scratch marks on the outer surface.

<4098> [6010] P35, OA142, Group 1095,5081

L 68mm. Sawn adult red deer antler tine.

<4231> [17146] P35, R102, Group 1167,111508

L 78mm. Sawn adult red deer antler tine.

<4600> [17529] P35, R102, Group 1169,112001

(a) Maximum l 120mm; adult red deer antler base and coronet smashed from skull. Tine and beam sawn off and removed.

(b) L 280mm; shed adult red deer antler base, complete with coronet, and brow tine; beam sawn off.

(c) Maximum l 152mm; adult red deer beam and tine junction; sawn off across beam, one tine complete. Upper portion sawn and part broken off.

(d) Maximum l 135mm; adult red deer antler beam and tine junction; sawn across beam; one tine complete. Upper portion of beam part sawn and part broken off.

(e) L 65mm; adult red deer antler tine.

(f) L 145mm; adult red deer antler tine.

(g) L 190mm; an adult red deer antler tine sawn across and down (at right angles) at its base.

(h) Maximum l 128mm; adult red deer antler tines ('tops'); two complete tines, and one sawn off. The beam has also been sawn through.

(i) Maximum l 145mm; adult red deer antler tines ('tops'), sawn off across beam.

<4603> [17529] P35, R102, Group 1169,112001

(a) Maximum l 150mm; adult red deer antler 'cup' and tines ('tops'); sawn across beam; two complete tines and one sawn off.

(b) D 60mm x 53mm, l 35mm; adult red deer shed antler base, complete with coronet; beam and tine sawn off.

<3544> [17529] P35, R102, Group 1169,112001

L 75mm. Sawn adult red deer antler tine.

<3551> [17529] P35, R102, Group 1169,112001

(a) L 98mm.

(b) L 90mm.

(c) L 70mm.

(d) L 44mm.

Four sawn adult red deer antler tines. The longest fragment has very clear saw marks on its cut surface.

<4233> [17529] P35, R102, Group 1169,112001

(a) L 145mm. Sawn adult red deer antler beam/tine junction with one complete tine.

(b) L 115mm. Sawn adult red deer antler tine.

(c) L 76mm. Sawn adult red deer antler tine, with the very tip broken off.

<4440> [17529] P35, R102, Group 1169,112001

L 70mm, w 90mm, th 55mm. A large adult red deer antler base, complete with coronet; sawn through the pedicle (skull), not shed.

<5973> [17529] P35, R102, Group 1169,112001

Maximum l 115mm; adult red deer antler tines ('tops'); sawn and broken across beam; two complete tines remain.

<3545> [17278] P35, R102, Group 1169,112002

L 80mm. Sawn adult red deer antler tine.

<6727> [17278] P35, R102, Group 1169,112002

L 73mm; red deer antler tine, sawn off.

<6731> [17278] P35, R102, Group 1169,112002

L 94mm; red deer antler tine, sawn off.

<3553> [16916] P35, R102, Group 1170,112010

Maximum l 85mm. Sawn adult red deer antler tines ('tops'), with one small complete tine and two others broken off.

<4408> [17316] P35, R102, Group 1170,112010

L 97mm. Sawn and drilled adult red deer antler tine. The base of the tine has been sawn through and a small hole drilled up into it.

<4604> [16993] P35, R102, Group 1170,112014
L 82mm. Sawn adult red deer antler tine. There is a rough knife-cut mark running around the antler approximately halfway along its length with a slightly worn area above it. It would appear that something was attached to the antler and wore it down slightly in this area.

<3547> [16993] P35, R102, Group 1170,112014
(a) L 95mm. Sawn adult red deer antler tine ('tops').
(b) L 100mm. Sawn adult red deer antler tine ('tops'). The very tip has been broken off and a narrow strip has been trimmed from its outer surface.

<4407> [16993] P35, R102, Group 1170,112014
L 117mm. Sawn adult red deer antler tine, sawn across the bottom. Portions have been removed by sawing vertically and horizontally.

<4409> [17928] P35, R102, Group 1170,112014
(a) L 115mm; adult red deer antler tine; sawn off at base.
(b) L 68mm; adult red deer antler tine; sawn off. Two lengths have been sawn off each side, possibly for use as a wedge or a peg.
(c) Maximum l 98mm; adult red deer antler tines ('tops'); sawn across beam; two complete tines.
(d) Maximum l 105mm; adult red deer antler beam and tines ('tops') junction; sawn across beam; two tines remain, third broken off.

<3546> [16882] P35, R102, Group 1170,112015
L 90mm. Sawn adult red deer antler tine.

<1855> [7119] P35, S101, Group 1274,83173
L 70mm. Shed adult red deer antler base, complete with coronet, with beam and tine sawn off.

<2879> [16218] P36, B116, Group 1330,112466
L 110mm. Sawn red deer antler tine.

<2920> [16218] P36, B116, Group 1330,112466
L 50mm. Sawn adult red deer antler beam, sawn at the top and bottom and a tine sawn off on one side. The fragment has also been cut down the middle.

<1857> [7020] P36, OA131, Group 1309,83114
Maximum l 55mm. Part of an adult red deer skull and unshed antler, sawn through the pedicle below the coronet and through the antler above it.

<1849> [7058] P36, OA131, Group 1309,83118
L 20mm. A sawn slice from an adult red deer antler beam, both ends sawn off.

<1844> [7210] P36, OA131, Group 1313,83137

Maximum l 90mm. Sawn adult red deer antler tines ('tops'). Two tines remain, sawn across base. The tip of one tine has been sawn off and a vertical slice sawn off each side, down from the cut off top.

<1843> [7293] P36, OA131, Group 1313,83137
L 60mm. Sawn adult red deer antler tine.

<6759> [7293] P36, OA131, Group 1313,83137
L 65mm. Sawn red deer antler tine.

<1860> [7329] P36, OA131, Group 1313,83141
L 83mm. Sawn adult red deer antler tine.

<1837> [7386] P36, OA131, Group 1314,83159
L 95mm. Sawn adult red deer antler tine.

<1858> [7057] P36, OA132, Group 1266,83192
L 90mm. Sawn adult red deer antler tine.

<1889> [7070] P36, OA132, Group 1266,83192
(a) L 100mm. Sawn adult red deer antler tine, worn and smooth at front and back.
(b) L 60mm. Sawn adult red deer antler tine, surface worn smooth.

<1859> [7071] P36, OA132, Group 1266,83192
L 69mm. Sawn adult red deer antler tine. Part of the surface is worn smooth and has five groups of small diagonal cuts on this worn area. The cuts go from one to approximately five, in ascending order from the bottom to the top of the tine.

<1845> [7182] P36, OA132, Group 1317,83124
L 75mm. Sawn adult red deer antler tine. Smoothed surfaces.

<1846> [7302] P36, OA132, Group 1317,83132
L 48mm. Sawn adult red deer antler tine, sawn at both ends and then cut down the middle.

<2270> [11429] P36, OA143, Group 1177,10725
L 37mm. Deer antler beam, probably red deer, sawn at both the top and bottom.

<2271> [11429] P36, OA143, Group 1177,10725
L 60mm. Shed adult red deer antler base, complete with coronet. The base of the beam has two sawn surfaces (at right angles to each other) where the tine and the remainder of the beam have been removed.

<2273> [11372] P36, OA143, Group 1177,10834
L 160mm. Sawn deer antler tine, probably red deer.

<3548> [11879] P36, OA144, Group 1400,10663

L 100mm. Sawn deer antler tine, probably red deer.

<4245> [11898] P36, OA144, Group 1406,10672
L 72mm. Sawn deer antler tine, probably red deer.

<3410> [11778] P36, OA144, Group 1407,10605
L 88mm. Sawn deer antler tine, probably red deer.

<2106> [11236] P36, OA144, Group 1412,10775
L 115mm. Part of a very large adult red deer skull with coronet and base of antler still attached. Removed from a dead animal. The main body of the antler has been sawn off close to its base.

<2102> [11243] P36, OA144, Group 1416,10770
L 170mm. Part of a large adult red deer skull with coronet and sawn antler. From a dead or killed animal.

<4193> [11854] P36,OA144, Group 1421,10653
L 96mm. Sawn deer antler tine, probably red deer. Top broken off, surfaces quite smooth and shiny in places.

<3048> [11897] P36, OA144, Group 1425,10751
L 110mm. Sawn deer antler tine, probably red deer. The surface is quite worn and scratched.

<4209> [11897] P36, OA144, Group 1425,10751
L 230mm. Adult red deer antler tines ('tops') with two tines remaining. The base has cut marks and has been knife trimmed to make it taper. Possibly for use as a tool (the tapered end attached to a handle of some sort).

<2536> [11370] P36, OA144, Group 1404,10692
L 110mm. Sawn deer antler tine, probably red deer.

<2878> [11639] P36, OA144, Group 1405,10669
L 75mm. Sawn deer antler tine, probably red deer. The top has been shaped by the removal of two slivers, one cut off each side. The very tip is broken off. This fragment may not be waste and may have been used as a wedge or peg.

<6747> [11543] P36, OA144, Group 1434,10765
Maximum th 18mm, maximum d 36mm. A small 'slice' of antler.

<1981> [11205] P37, OA145, Group 1426,10732
L 110mm. Sawn adult red deer antler tine.

<2782> [11716] P37, OA145, Group 1428,10739
L 115mm. A quarter fragment of a red deer antler beam cut lengthways, including two beam/tine junctions. Both of the tines have been sawn off. Either end of the beam fragment has been sawn and broken off.

<6732> [2069] P38, OA148, Group 1437,1002

L 125mm. A red deer antler tine, broken off, with tooling marks along its length.

<1932> [11412] P39, B166, Group 1409,10647

(a) L 51mm.

(b) L 60mm.

Both are sawn deer antler tines, probably red deer. Both tops and bottoms sawn off.

<5952> [16069] P40, B136, Group 1826,112210

Maximum l 50mm, maximum w 110mm. Adult red deer antler cup or crown, sawn below 'tops' and above beam.

<5987> [16047] P40, R102, Group 1173,112032

L 120mm. Sawn adult red deer antler tine.

Other bone waste

<2979> [8909] P33, B161, Group 1075,10906

L 39mm, maximum w 6.5mm, th 3mm. A small worked shaft of bone with a roughly faceted surface; an unfinished fragment. Ox-sized long bone fragment.

<700> [2921] P34, OA112, Group 1030,91313

Incomplete; surviving l 69mm, maximum w 8mm. An unfinished pin or peg made from an 'ox-sized' long bone fragment; the top has been sawn smoothly across and the shaft is faceted, tapering to a point which is now missing.

<6751> [11582] P35, OA142, Group 1083,10638

L 150mm. Worked red deer metatarsus. One surface smoothed; both ends missing. Possibly used as a skate.

<6745> [11506] P35, OA142, Group 1083,10640

L 48.5mm, maximum w 14mm. A small, flat, trimmed fragment of bone; possibly intended for a mount, for use on a box or casket.

<4602> [17529] P35, R102, Group 1169,112001

L 235mm. An adult, male, goat left horn core with a round perforation (d 10mm) drilled through it towards the tip.

<2110> [16780] P35, R102, Group 1170,112015

(a) L 40mm, w16mm.

(b) L 80mm, w16mm.

(c) L 90mm, w 15mm.

(d) L 118mm, w 15mm.

(e) L 93mm, w 14.5mm.

Five fragments of 'ox-sized' ribs, with trimmed long edges. It is interesting to note that all of the four fragments have similar widths. Two have a rough V cut out of one end; most of the ends are broken. They may have been intended as box or casket mounts.

<6729> [16780] P35, R102, Group 1170,112015
L 100mm; sawn ox horn core; sawn both top and bottom.

<6730> [16813] P35, R102, Group 1170,112015
Maximum l 70mm; part of a sawn ox horn core.

<6742> [7963] P36, OA129, Group 1301,83207
L 140mm. Worked sheep/goat tibia. The tip end is knife trimmed.

<5710> [7253] P36, OA131, Group 1313,83137
Incomplete; surviving l 13mm, surviving w 9mm, th 2mm. A small flat rectangle of bone; possibly a waste off-cut.

<6584> [16159] P36, OA135, Group 1387,112408
Incomplete; surviving l 120mm. Part of a right side sheep/goat tibia mid-shaft with knife cut shave marks on the shaft, giving it a slightly faceted appearance. Both ends are broken off.

<2272> [11372] P36, OA143, Group 1177,10834
L 70mm. Small sheep horn core, chopped from skull.

<6750> [11672] P36, OA144, Group 1400,10663
Maximum l 54mm. Worked cattle-sized splinter.

<6746> [11510] P36, OA144, Group 1406,10671
Maximum l 128mm. Worked cattle ulna.

<6744> [11526] P36, OA144, Group 1419,10687
Maximum l 65mm. Worked pig femur.

<4222> [11959] P36, OA144, Group 1425,10707
L 173mm. An adult ox metacarpal, left side, possibly a partly made skate, with short, transverse cut marks on what would have been the base of the skate.

<425> [2059] P38, B172, Group 1439,1015
Complete; l 49mm, w 10mm, th 3mm. A small rectangular panel; presumably waste. 'Ox-sized' long bone fragment.

<551> [2069] P38, OA148, Group 1437,1002
Complete; l 45mm, w 13-15mm, th 1.5-3mm. A small rectangular panel with uneven tooling marks on the surface and sides. 'Ox-sized' long bone fragment.

<6733> [2007] P39, B173, Group 1462,1049
D 39mm. Part of the top of an ox femur, cut off and roughly worked. The base has a central hole partly drilled into it. Possibly a part-made spindle whorl.

Medieval

Bead

<93> [789] P40, B178, Group 1652,260

Complete; l 5.5mm, maximum d 5.5mm. A small biconical bone bead. Possibly a rosary bead.

Handle?

<646> [2297] P41, R102, Group 1176,112044

Incomplete; maximum l 39mm, w 20mm to 25mm. 'Ox-sized' metapodial, anterior mid-shaft. Possibly part of a handle, quite short but may have been broken and reworked. The bone is stained green and has two bands of incised decoration in the form of a band of chevrons between two lines. The object is quite worn reinforcing the idea that it might be part of a handle. Another possibility is that it is part of a composite handle. MacGregor (1985, 166, fig 87m) illustrates a knife with a composite handle, consisting of two bone fittings with plates of copper alloy and lead above and below, dating to the 12th or 13th century. The present example was found with pottery, which has been dated c 1050 – 1150. If this was part of a composite handle it may help to explain the green staining which is caused by the proximity of corroding copper alloy.

Socketed point

<2980> [16055] P40, R102, Group 1173,112031

Incomplete; l 87mm. An ox metatarsal, right, proximal, with a hole bored in the proximal articulation. The shaft end has been trimmed to a rough point. Similar implements have been found on other sites in London and England, dating to the late Saxon to early medieval periods (MacGregor 1985, 174-5, figs 93a & b; Pritchard 1991, 208 & 210, fig 3.92). The actual function of these implements is unknown.

Bone waste

<1982> [16041] P40, R102, Group 1173,112032

L 98mm; adult goat horn core, chopped at the posterior base and sawn through the mid-shaft.

<623> [2216] P40, R103, Group 1147,2077

L 86mm. Sawn adult ox horn core, sawn tip and mid-shaft, also sawn lengthways.

Post-medieval

Button

<6152> [+], unstratified

Complete; d 15mm, th 1mm. A plain bone disc with a central perforation (d 2mm). Made from an ox-sized long bone fragment.

Brush

<6153> [+], unstratified

Incomplete; l 85mm, w 18mm, th 5mm. A rectangular bone brush base with a flattened diamond-shaped terminal at one end, with a small, round perforation through its centre. The bristles are missing, although there are some traces of the copper alloy wire that would have held them in place. Ox-sized long bone fragment.

Toothbrush

<6151> [+], unstratified

Incomplete; surviving l 85mm, maximum w 10mm, th 6mm. Part of a bone toothbrush; there is some green staining around the narrow neck area. This may have been caused by the copper alloy wire used to hold the bristles in place. Virtually all of the bristles are missing. 'Ox-sized' long bone fragment.

Handle

<6150> [+], unstratified

Incomplete; surviving l 100mm, maximum w 17mm, th 5.5mm. Part of a bone handle, broken where it narrows to the neck; inscribed on one surface '?UGH(or A?)TIE CHEAPSIDE'. Probably a toothbrush handle.

Unidentified

<300> [363] P42, OA201, Group 2001,85

Incomplete; l 79mm, d 6.5mm. A bone shaft with a screw tread at either end. One end has a short, narrower shaft extending from it, which is heavily iron-stained and has a small hole in its centre. The main shaft is inscribed 'R.WEDGWOOD'. Made from an ox-sized long bone fragment.

Unstratified:

<727> [+], unstratified

L 115mm. Sawn adult red deer antler tine.

<2109> [+], unstratified

L 98mm. Sawn adult red deer beam / 'tops' junction; one tine remains.

IVORY

Post-medieval

Combs

<129> [440] P42, OA201, Group 2001,103

Incomplete; l 58mm, surviving w 10mm, th 2mm. One end of a small two-sided comb; all of the teeth are missing.

<131> [297] P42, OA201, Group 2001,135

Incomplete; surviving l 38mm, surviving w 30mm, th 2.5mm. A fragment of a comb with the remains of ten teeth on one side. These are spaced approximately five per 10mm. Nothing remains of the other side of the comb to indicate whether it was a single or double sided comb.

<91> [675] P42, OA201, Group 2001, 168

Incomplete; surviving l 36mm, surviving w 34mm, th 3.5mm. Part of a double-sided comb; six of the widely spaced teeth remain, occurring approximately three per 10mm. The fine teeth are all missing but the remains indicate approximately 10 teeth per 10mm.

Lid

<132> [442] P42, OA201, Group 2001,104

Incomplete; d approximately 28mm. Part of a small domed fitting with groups of small holes drilled through it. The rim is ridged with a screw tread indicating that this is a lid, probably the top of an ink sander (G. Egan, pers comm).

Unidentified

<123> [97] P42, OA201, Group 2001,16

Incomplete; maximum surviving l 60mm, w 20mm, th 8mm. An incomplete, rectangular sectioned object with a hollowed out centre and a small peg wedged into the hollow at the surviving end. The other end is missing. The object appears to be tapering along its length. The exposed end of the small peg has been worked to a rough point.

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