Ancient Monuments Laboratory
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Summary

The identification of organic materials preserved by metal corrosion products on tools and scrap metal from an Anglo-Saxon metalworkers hoard. The objects examined include four wooden boxes, tool handles and miscellaneous other materials. The report is presented in two parts, a discussion accompanied by a catalogue of all examined material. 11 pages including diagrams of the caskets.

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Organic material associated with the Smith's Hoard from Tattershall Thorpe, Lincolnshire

Jacqui Watson

Introduction

The assemblage was excavated in 1981 and comprised two large blocks of corroded metalwork, which were found to be a mixture of tools and scrap metal with various organic containers. The two blocks had been placed at each end of the grave and the group probably dates from mid C7th to early C8th (Hinton, 1992). The blocks were dismantled and the individual items conserved at the Lincoln Conservation Laboratories.

This report aims to identify the organic materials preserved by proximity to the metalwork and is divided into the following groups: knives, tools, containers including four wooden boxes and various other items with associated organic material. A catalogue of all the examined objects follows the discussion. Most of the organic materials have been preserved by iron salts rather than copper corrosion and many of the wood samples are heavily impregnated with very granular deposits which made it difficult to identify the species of all the samples using the SEM (Watson, 1988). The range of organic materials identified were readily available in Anglo-Saxon England and NW Europe, so no imported items could be recognised on this basis.

Knife

109
Iron tang covered with mineral preserved horn and with a handle of this material this object is more likely to be a knife than a tool.

Tools

Nine tools or iron tangs have been identified with wooden handles. The hoard contained three hammerheads of different sizes, all with traces of their wooden handles, but only one could be identified as ash (133a). Ash is a very springy wood, and as such very useful as a shock absorber in a hammer handle. Two files had wooden handles, but only one could be identified as alder (70). A small thin tool that might be an awl has an alder handle (125), and a burin (31) has a boxwood handle. There is a fragment of a wooden handle, approximately 20mm in diameter, made from willow, poplar, or hazel. The range of woods used for tool handles in this hoard is perfectly normal for Anglo-Saxon Britain.

Containers

A.

One box was made from ash and is represented by two hinges (57, 101), two looped staples (59, 100) which were probably used to attach a handle to the lid, and a hasp (108). These fittings indicate that the back was probably between 11-13mm with a radial surface. The hasp is very curved in section, and there is a barely perceptible curvature on one half of the hinges. The looped staples have a thicker depth of wood on them than the sides, both the top and the front have tangential surfaces. All these features seem to point to a curved lidded box, very similar to the examples from Grave 7 Harford Farm, Norfolk (Watson, 1992b); Field Farm, F140, Berks (Watson, 1992a); Grave 95 Finglesham, Kent; and Swallowcliffe Down, Wiltshire (Speake, 1989). All these boxes are comparatively small in size, and all appear to be caskets containing personal items such as antler combs and jewellery. All are dated mid - late C7th. (Details in table 1).

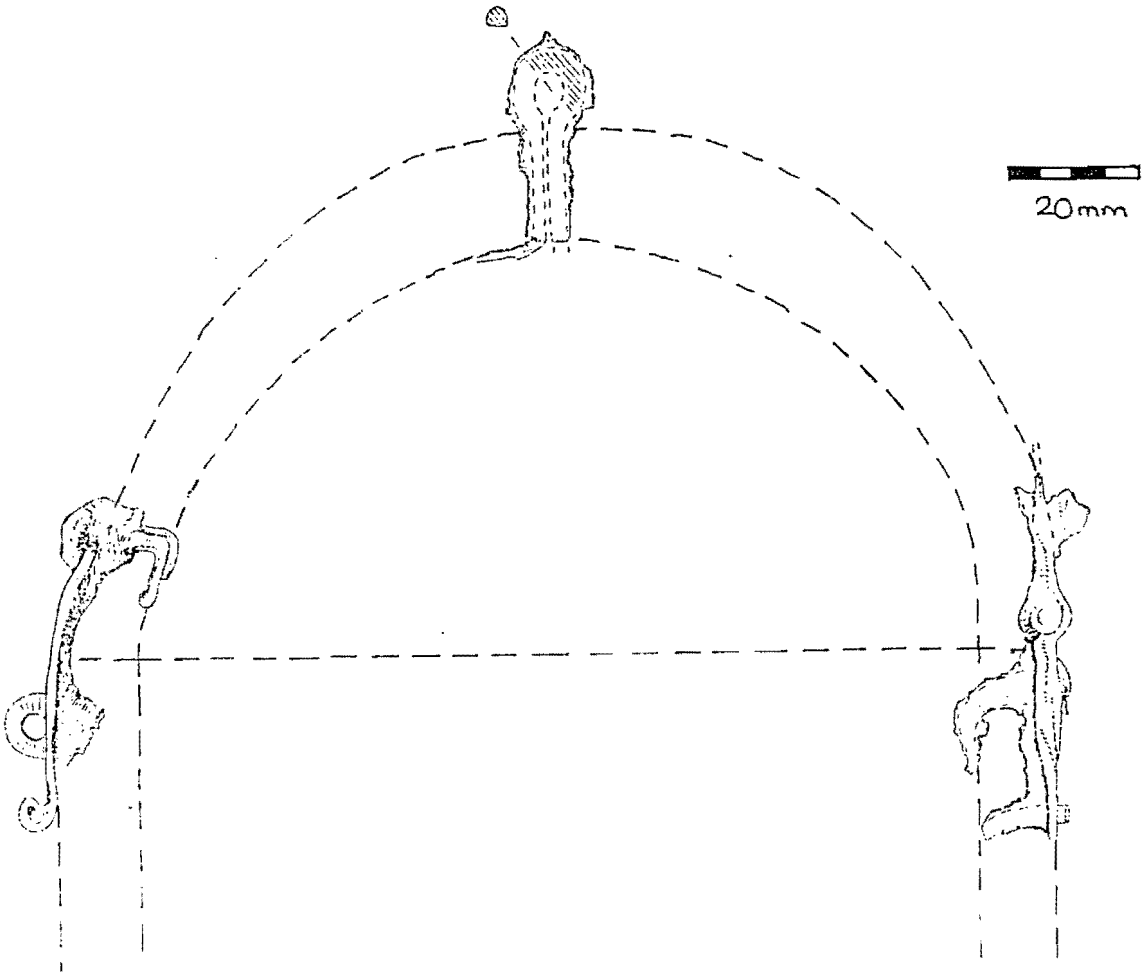

Figure 1. Tentative reconstruction of the box profile using drawings of hasp, looped staple, hinges.

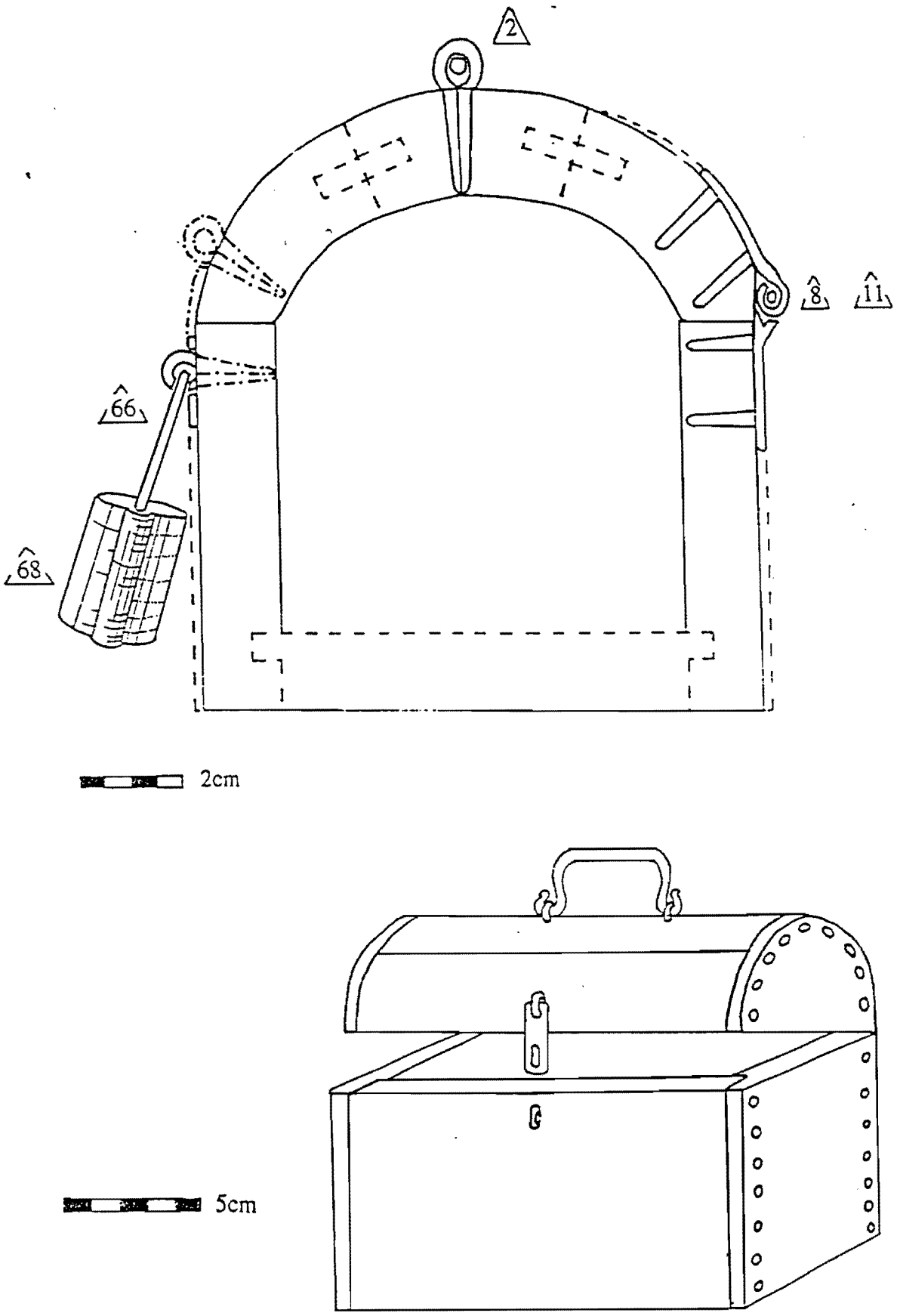

Figure 2. Reconstruction of the casket from grave 7, Harford Farm, Norfolk.

Table 1. Details of boxes with curved lids from Anglo-Saxon Britain

Site	length	width	height	thickness of sides	thickness of lid	wood	fittings
Tattershall Thorpe	-	-	-	11-13mm	22mm	Ash	iron
Harford Farm, Norfolk: Grave 7	150mm	115mm	218mm	14.5mm	15.7mm	Alder	iron
Field farm, Berkshire: F140	-	-	-	11-14mm	11-14mm	Maple	iron
Swallowcliffe Down, Wiltshire	310mm	c.180mm	c.186mm	16mm	-	Maple	copper alloy
Finglesham, Kent: Grave 95	190mm	132mm	130mm	4mm	8mm	Maple	copper alloy

This box appears to originally have been dowelled together, but the presence of nails (18,19) suggests that it may have been repaired at some stage. Fragment 47 has the remains of a dowel. Piece 11 could be a corner bracket mounted on the end grain of one of the boards, which may suggest the use of butt joints that were probably rebated to facilitate the joining with dowels. Pieces 8b and c probably represent the base or side of the box, and the attached metalwork could have been contained within it or placed on the outside. Other items with ash preserved on them which could belong with this box include: 15, 34, 39, 45.

B.
112, 117
Small wooden container with a garnet chip on the inside, made from *Salix* sp (willow) or *Populus* sp. (poplar). Only one piece of this small wooden box remains, preserved by a combination of a decorative copper alloy strip and an iron knife blade on the outside. There are no known parallels for a box of this type in Britain, but examples not in contact with metalwork would be unlikely to survive burial in aerated soils.

128 a fragment of wood with possible horn on it may belong with this group.

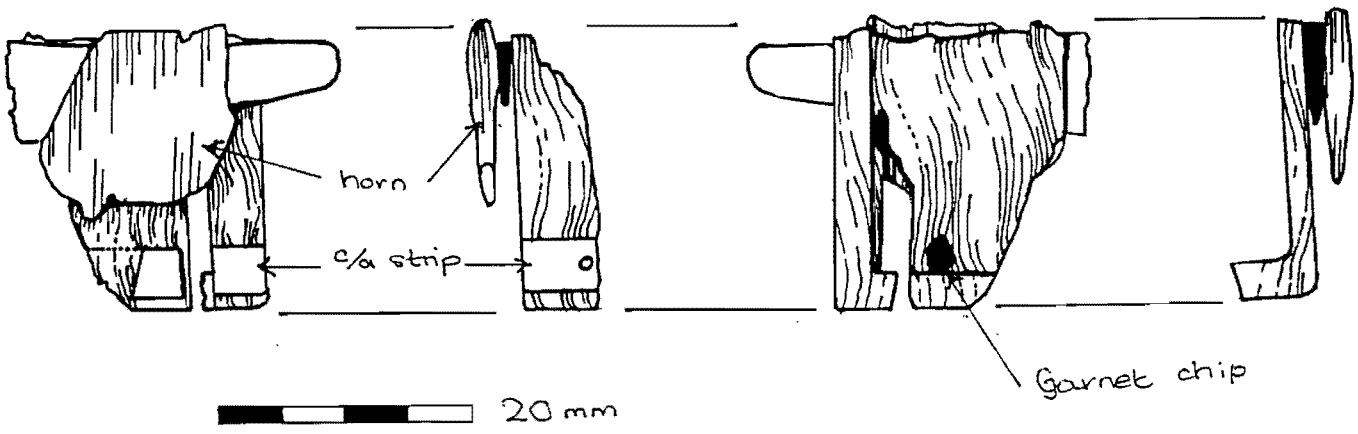

Figure 3. Box fragment 112, 117.

C.
71
The third box was made from *Tilia* sp. (lime) and is only represented by a single corner piece which could be the base and two of the sides.

D.
12b
The fourth box was made from *Quercus* sp. (oak), and is represented by an iron bar seated in a recess in the wood. This could be the bolt for the box and along with the lock spring (105b) are probably the remains of the lock mechanism.

Boxes C and D have hardly any metal fittings, but this is quite common for Anglo-Saxon boxes with sliding rather than hinged lids like the box illustrated from Dover (Evison, 1987). The Corners are usually dowelled together. Any metal attachments are restricted to lock mechanisms and handles, corner brackets are purely decorative. This type of box was produced in a large variety of sizes, as can be seen from the Finglesham examples (table 2.).

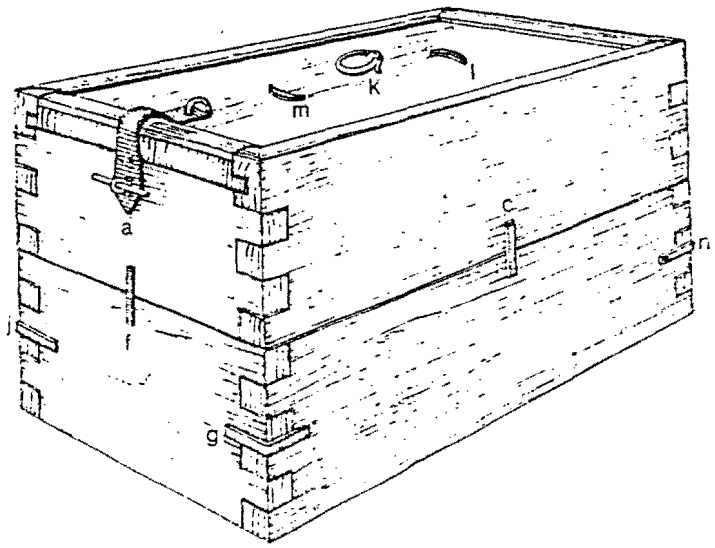

Figure 4. Box with sliding lid from Evison, 1987.

Grave	thickness of side	lid thickness	box length	box width
8	10mm	-	420mm	125mm
62B	14mm	14mm	528mm	222mm
96	17mm	9mm	430mm	250mm
114	-	-	240mm	96mm
124	18mm	9mm	288mm	156mm
138	17mm	-	360mm	280mm
157	-	9mm	360mm	250mm
202	9mm	-	200mm	150mm

Table 2. Dimensions of boxes with sliding lids from Finglesham, Kent (*pers. comm.* G.Grainger).

E.
Some of the scrap metal appears to have been placed in leather pouches, suggested by both the shape of the groups and traces of leather on some of the pieces. Object 28 is made up of mineral preserved textile strips overlain with leather.

F.
There are the possible remains of a drinking horn attached to 112/117, which is represented by fragments of horn overlying the knife blade so are less likely to belong to its handle, but could also be the remains of another knife. Drinking horns without metal mounts are rarely preserved in most soils, but were probably quite common. Three were found in two graves at Snape, Suffolk (Fell, 1996), and two of them were remarkably well preserved considering the soil conditions.

Miscellaneous Objects

7 Copper alloy stud with possible leather on the reverse, which may be a fragment of a scabbard.

42a Copper alloy "shoulder" might have been intended for a seax, like the examples seen on two seaxes from Harford Farm, Norfolk; and Buttermarket, Ipswich.

Miscellaneous fragments of organic material, possibly straw, have been preserved on many items and could indicate that the burial was originally covered in straw, or possibly the boxes were packed with straw. Burials covered with straw, fern fronds, and rushes are quite common in many Anglo-Saxon cemeteries, and such a covering accelerates the decomposition of the corpse and promotes the corrosion of adjacent metalwork (Watson, 1998).

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Catalogue

1. The organic material associated with the copper alloy bar is not identifiable.

7. The copper alloy stud may be associated with leather, but the deposit could easily just be iron oxides precipitated from solution.

8b & c. Two groups of iron panel have a piece of wood preserved on one side - tangential surface ash - probably the base of a box. In among the fragments of metal are masses of random organic material such as plant stems.

11. These fragments are most likely the remains of a corner bracket as they are preserved on top of the end grain of an ash board.

12b. Joins with bar fragment on 105. The iron bar is seated in a cut recess and possibly engages within another piece of wood - could be a bolt for a box. Wood - *Quercus* sp.(oak) with an oblique radial surface.

14. A possible leather strip is preserved round the iron pin, but there is no wood.

15. Iron staple with broken loop, on one side has tangential surface ash preserved.

18. Iron nail with ash preserved on one side.

19. One nail pierces a piece of wood with a cut surface, approximately 8mm thick, *Fraxinus* sp. (ash).

20. Random organic material, possibly straw.

27. Fragment of a diffuse porous wood on one side, but too small to sample.

28. There are textile strips next to the object, with the possibility of leather on top of that.

31. The burin handle has been made from branchwood with the tang following the line of pith in the centre, probably *Buxus* sp. (box).

33. Fragment of a wooden handle, probably as large as 20mm in diameter, probably *Corylus* sp. (hazel), *Salix* sp. (willow) or *Populus* sp. (poplar).
SEM B787

34. One side has a piece of oblique radial surface ash.

35. Leather and textile.

38b. File handle is made from branchwood with the tang more or less aligned with the pith. The residual structure is too granular to identify.
SEM B788

39. Bar with radial surface ash preserved on it.

42. In among a group of items corroded together is a copper alloy shoulder for a knife or seax, but there are no remains of the organic hilt. A piece of tangential surface ash is preserved on one side.

44. Associated mineral preserved organic material, probably leather.

45. Copper alloy fragments with tangential surface ash preserved on one side. Random organic material is also preserved among the layers.

47. One side is covered in a ring porous wood with a possible dowel.

55. Fragment of mineral preserved wood on snips, diffuse porous wood - possible handle of another tool.

57. Radial surface ash, c.11mm thick. May have curved lid.

59. Looped staple mounted on tangential surface ash, c.26mm thick - see 100.

70. File handle is made of a diffuse porous wood, probably *Alnus* sp. (alder).

71. The base and two sides of the box are preserved, made from a diffuse porous wood, *Tilia* sp. (lime).

72c. Random organic material preserved in the iron corrosion products.

94. Hammerhead with remains of haft, could only be identified to the level of a diffuse porous wood.

96. Iron punch with wood preserved on it.

100. Originally mounted on tangential surface ash, c.22mm thick - possibly used to attach handle to box. see 59.

101. The complete nails were mounted on radial surface ash, 13mm thick. The other part of the hinge was mounted on tangential surface ash.

105. Bar joins with 12b. Wood oak.

108. Hasp which was mounted on the lid of the box which at this point had a tangential surface, c.11mm thick. The front of the box also had a tangential surface.

109. Horn preserved on this tang, possibly a knife.

112. Joins with 117. Wooden stave, *Salix* sp. (willow) or *Populus* sp. (poplar), with copper alloy decorative strip at base. Possible horn preserved on the outside.
Iron knife with part of a wooden container preserved on one side of the blade, and a

large fragment of horn preserved on the other (cf. Fig.3). This fragment of horn may be the remains of another knife handle or a fragment of a possible drinking horn.
SEM B791

125. Wooden handle made from *Alnus* sp. (alder).
SEM B789

127. Fibres, but no obvious features remain to suggest what they are made from.
SEM B792

128. Wood fragment with possible horn.

133a. Hammer with ash handle (*Fraxinus* sp.).

133b. Hammer with wooden handle, but not well enough preserved to identify species.
SEM B790