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**Organic Material Associated with Metalwork from the  
Early Anglo-Saxon Cemetery at Blacknall Field, Pewsey,  
Wiltshire**

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# **Organic Material Associated with Metalwork from the Early Anglo-Saxon Cemetery at Blacknall Field, Pewsey, Wiltshire**

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## **Summary**

This report covers the conservation and identification of organic materials preserved on the metalwork from this late fifth to middle sixth century Anglo-Saxon cemetery. As the cemetery was excavated in 1970, and the conservation undertaken by many individuals over the following five years, this report is in fact a compilation of the records made at the time, student research projects and other publications, supplemented by more recent analysis and discussion of these combined results for the full publication of the site. The main objects that are covered include weapons and various personal items such as knives and jewellery, as well as the reconstruction of some simple purses.

## **Keywords**

Iron  
Copper Alloy  
Mineral Preserved Organic  
Conservation  
Early Medieval

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E.Crowfoot, G.Edwards, and J.Watson

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## **Introduction**

This Anglo-Saxon cemetery appears to cover the late fifth to middle sixth centuries based on the finds deposited within the graves, which were found on the Chalk. This alkaline environment has favoured the preservation of ossiferous materials and the metalwork has not corroded too severely, but other organic materials such as wood, leather, horn and textiles only remain as traces in, or on, the corrosion layers. There are about fifty graves from the cemetery, containing metalwork with associated mineral preserved organic material, and the following report covers the analysis of this material for inclusion in the forthcoming publication by Bruce Eagles.

## **Conservation**

The site was excavated in 1970, and the initial conservation work was undertaken by the Institute of Archaeology, London. Subsequent work was then taken on by Wiltshire County Council, between 1974-5, by Mike Corfield, Esther Cameron (nee Stansfeld), and Anne-Marie Bojko. The methods they used during that time include lithium hydroxide, sodium sesqui-carbonate, or continuous washing in de-ionised water in an attempt to stabilise the iron from corroding further. In addition the objects were then lacquered with Ercalene™ or waxed to seal the surface from atmospheric moisture. At the Institute of Archaeology, electrolysis was also used to strip the corrosion layers from the ironwork. These methods may seem extreme but they were widely used in the early seventies, before being abandoned in favour of passive dry storage. In the case of the Blacknall Field ironwork the conservation treatments used have had a detrimental effect on the organic material preserved in the corrosion layers, limiting much further analysis, but thankfully the conservation records made at that time are very detailed and informative about the organic material recognised by the conservators

In the case of the copper alloy objects, copper corrosion was mainly removed from the decorated surfaces using a scalpel rather than chemical methods, with the exception of gilded surfaces where formic acid was used. The metal core has then been stabilised with benzotriazole and lacquered with an acrylic resin (Incralac™).

## **Mineral preserved organic material**

This report has been compiled from information and working notes supplied by Elizabeth Crowfoot and Glynis Edwards along with the conservation records provided by Wiltshire County Council Conservation Laboratory, Salisbury.

The wood has not been identified to species level as the interventive methods used in conservation in the 1970s would make sampling and identification difficult. However, the swords and shields were analysed in detail as part of student projects during the conservation work (Stansfeld, 1979; Bojko, 1982),

and some of these results have since been published: the swords in Cameron (2000) and the shields in Dickinson and Härke (1993).

## **Weapons**

### **Swords**

There are three swords from this cemetery, from graves 22, 47 and 70, and the first two have been studied and recorded by Bojko (1982) and Cameron (2000), and much of the following discussion is based on their work.

#### Hilts

One sword has a hilt probably made from antler (grave 22), while the other two have been made from horn. Anglo-Saxon sword hilts are usually made from interlocking sections of horn, with a few examples made from ivory; the use of antler is unusual (Watson & Edwards, 1990).

#### Scabbards

All three swords have been identified as having composite organic scabbards mostly comprising three layers – an animal pelt lining with the hairs next to the iron blade; wooden stiffeners; and an outer covering of leather.

The use of pelt linings in Anglo-Saxon scabbards is thought to be to keep the sword blades clean and offer some protection from rusting. As this layer is next to the blade it is usually extensively preserved. Where it has been possible to identify the species of animal pelt used, this has usually been found to be sheep or goatskin.

The wooden stiffeners have been discussed in detail and illustrated in Cameron. The wooden stiffener from grave 22 (cat. 221) is 2.5mm thick at the front, and there are the remains of an iron chape. On the scabbard from grave 47 (cat. 220) the wood near the blade tip has been carved into long grooves, 1.5mm wide and 1.5mm apart, on the front face. The wood has been identified by Bojko: the scabbard from grave 22 was made from *Acer* sp. (maple) and the one from grave 47 made from *Salix* sp. (willow) or *populus* sp. (poplar). According to Cameron the most commonly used woods for Anglo-Saxon scabbard stiffeners were *Salix* sp. (willow) or *populus* sp. (poplar) (64%), followed by *Alnus* sp. (alder) (17%). Both the Blacknall Field scabbards have the front face dominant, in that the front is slightly wider and less cambered than the back – this means that the back tucks in behind the front panel

The sword scabbard from grave 22 has skin protruding from beneath the mouthband, which indicates that it also had a leather cover.

#### Blades

Bojko records that both the swords from graves 22 and 47 have pattern welded blades, in the form of a herringbone pattern.

### **Spears**

There are 13 spearheads and 4 ferrules, of which 15 have traces of the wooden shaft remaining in their sockets. Although none have been identified it is quite likely that most may have been hafted with *Fraxinus* sp. (ash), and the ones with ferrules may have been made from mature timber if these follow a similar pattern to other sites of this period. The other wood species normally represented include *Corylus* sp. (hazel), *Alnus* sp. (alder), *Salix* sp. (willow) or *Populus* sp. (poplar) and are often fashioned from young saplings or coppiced timber (Evison, 1988; Malim & Hines, 1998).

### **Shields**

Twelve shields are listed in Dickinson and Härke (1993) from the Blacknall Field cemetery, along with the details of their grip construction and wood species used for the shield boards. This group of shield fittings was used as part of a study by Stansfeld (1979), which provided the species identifications for the previous publication (see table 1).

The shield fittings are included in the detailed study of Anglo-Saxon shields by Dickinson and Härke, and they have attributed the bosses mainly to the group 1 and group 4 types. Group 1 bosses are dominant in Wessex, and have a date range of early sixth to mid seventh centuries, and group 4 cover the same period. Grips are mainly the short fat type, and the B, C2 and D2 refer to the type of inserted grips illustrated in their book.

Only two grips, one *Alnus* sp. (alder) or *Betula* sp. (birch) and the other poplar, and two shield boards, both *Alnus* sp. (alder), have been identified. *Alnus* sp. (alder), *Betula* sp. (birch) and *Populus* sp. (poplar) are perfectly good choices for a shield board and are commonly noted in the archaeological record.

Leather has been noted on a number of fittings, and it would appear that most of the shield boards were leather covered at least on the front surface. At Barrington, Cambs. (Malim And Hines, 1998), it was noted that all the shields were leather covered, usually on both sides, and many with a thinner skin used on the front surface.

One shield, from grave 34, has a copper alloy edge binding.

Details taken from Dickinson and Härke (1993)					Details from Stansfeld (1979)
Burial	Group	Grip	Board diameter	thickness	Wood species
5	-	la.1	-	-	-
8	1.1	lb: C2	Min 0.42, max 0.88	8mm	-
9	1.2	la: D2	Max 0.66	7mm.	Grip alder or birch, board not identified.
14	4	la 1	Min 0.41, max 0.59	8mm	-
22	1.1	la 1: D2	Min 0.39, max 0.88	6mm	Grip poplar, board not identified.
34	4	la 1	Min 0.38, max 0.83	7mm	-
45	1.1	la 1	Max 0.68	-	-
47	1.1	la 1: D2	-		-
62	1.1/1.2	la 1: B	Min 0.31, max 0.44	-	Board probably alder.
68	1.1	la 1: D2	Max 0.72		Board possibly alder.
70	1.1	la 1	Min 0.35, max 0.63	8mm	-
94	1.1	la 1: C1	Probably 0.42	6mm	-

**Table 1.** *Details of the shields and the source of the information.*

## **Personal items**

### ***Knives***

There are twenty knives from this site, and eighteen of them have the remains of their horn handles, five of which retain the edge of the original handle extending onto the blade by a 4-8mm. This overlap effectively locks the handle in position on the blade, and prevents it slipping when in use.

Five knives have traces of leather preserved on their blades which indicates that they were sheathed when placed in the graves.

### ***Belts***

Eight buckles and one belt fitting represent the number of belts worn by individuals in this cemetery. Over half of these still retained traces of the original leather belts, two have associated textile remains likely to be traces of clothing.

### ***Cosmetic brushes***

There are two cosmetic brushes, with hairs still remaining in the tube. The type of hair used in these brushes has rarely been identified, but one example

from Mucking Cemetery II (609/1) was examined at high magnifications and found to be relatively thick and coarse like horse or badger hair.

## Containers

### **Bucket**

There is a small copper alloy bound bucket from grave 22, and this type usually has staves made from *Taxus* sp. (yew) as can be seen in the table below, in contrast to the large buckets with iron bands which usually have staves made from *Quercus* sp. (oak).

Site	Yew	Pine	Maple
Mucking Cemetery II	2	2	2
Barrington*	1		
Braemore, Hants	5	1	
Broughton Lodge*	2	1	
Carisbrooke Castle*	1		
Finglesham	1		
Portway, Andover*	2		
Swallowcliffe Down*	1		

\*Published examples

Barrington – Malim & Hines, 1998

Broughton Lodge – Kinsley, 1993

Carisbrooke Castle – Young, 2000

Portway, Andover – Cook & Dacre, 1985

Swallowcliffe Down – Speake, 1989

**Table 2.** *The woods used for staves in buckets with copper alloy mounts.*

### **Bowl**

There is one wooden vessel represented by copper alloy clips in grave 47.

### **Purses**

Type	Graves
Ivory rings	2; 57
Iron or copper alloy rings	31; 50; 53; 54; 56; 95
Groups of objects at waist	20; 88;

There are possibly 11 purses, based on recognisable purse fittings or because of discreet groups of objects usually placed at the waist. Many purses from early Anglo-Saxon cemeteries have ivory purse rings, and there are two from this site. These are usually made from a single piece of



elephant ivory cut from the base of a very large tusk. The purse from grave 57 has an ivory ring and contents very like the example from grave 152 at West Heslerton (Haughton & Powlesland, 1999, p. 267). It can even be seen from the photograph in the conservation records, that the ivory was originally covered in leather like the one from West Heslerton. Clearly elephant ivory has to be imported into the British Isles, but it would seem that to use such a valuable material and not have it visible implies that the purse itself is probably imported and not just the ivory. The presence of belt slides with this purse suggest that it was probably suspended from a thick strap, and placed under the woman's thigh in the grave rather than in a position as it might have been worn. It is also associated with two copper alloy strap-ends 6D (37mm long) and 7 (73mm), but it is difficult to see what function they might serve as they are not identical and are unlikely to be a pair of straps, or the two ends of one strap, that were used to attach the purse to a belt. Maybe they belong with two different items in the purse, or one could be some form of fastener.

A functioning purse need be no more complicated than a gathered leather pouch and the evidence for such would be limited to traces of leather on objects placed inside it, and maybe metal strap-ends on the laces as these are often associated with purse groups, for example in grave 20. This simple form could easily apply to the remaining purses (see fig.1).

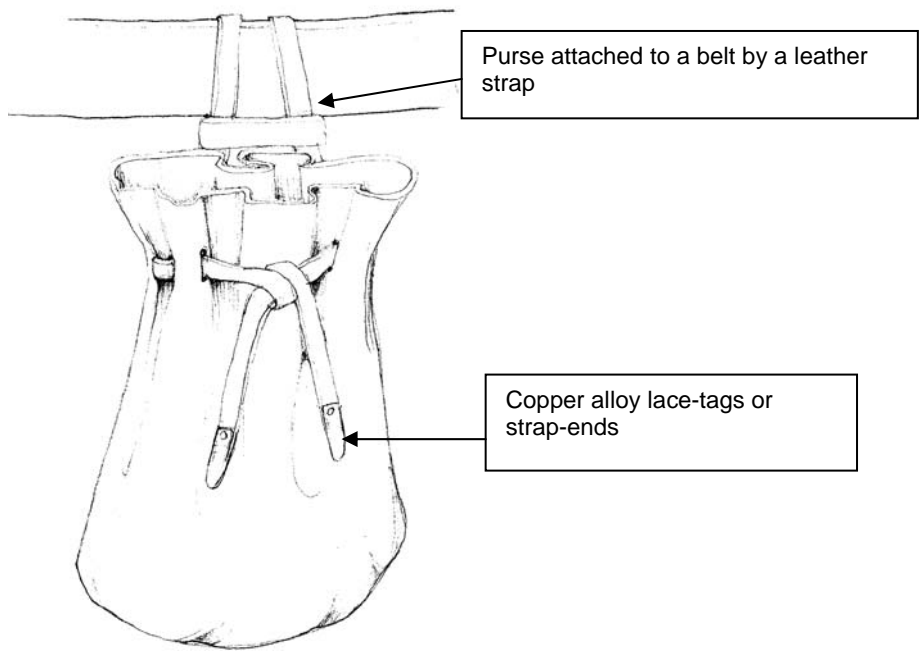
There are six examples that incorporate iron and copper alloy rings in various sizes. These rings could have been in the purse, used as a simple form of closure for the purse, or pairs of rings could have acted as a fastener for the purse or belt (see figs. 2, 3).

Purses were often lined with textile, as can be surmised from the objects within the purse having a layer of textile preserved underneath leather. Iron chatelaine fragments with textile preserved on them may indicate that the purse containing them was lined with textile, BUT there are also examples of latchlifters being wrapped in textile and then placed in a leather purse from other sites, for example West Heslerton, North Yorkshire.

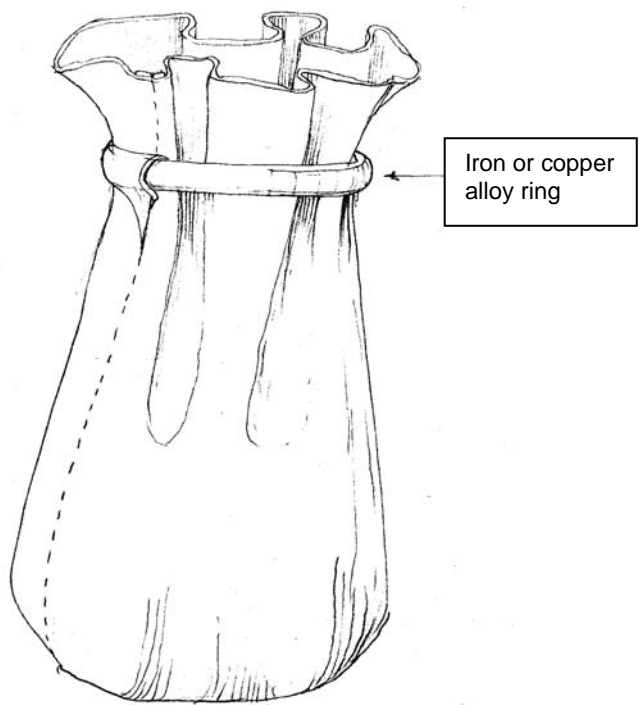
The iron rings from graves 50 and 53, where the textile is preserved on top of leather may indicate one of two possibilities:

- i. the rings were originally placed inside a leather purse, and the textile is part of a garment or covering on top of the purse. OR
- ii. the rings were on the outside of a leather purse that was lined with textile

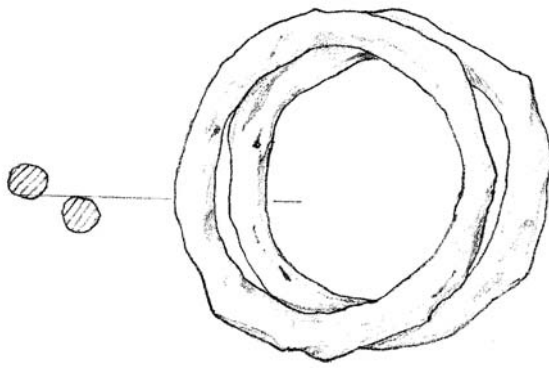
A pierced Roman coin and triangular pendant on a thin copper alloy ring from burial 88 may have been attached to a purse as an amulet or trinket, very like examples from West Heslerton, such as the walnut amulet with jangling triangular pendants from Grave 113 (ibid, p. 187).



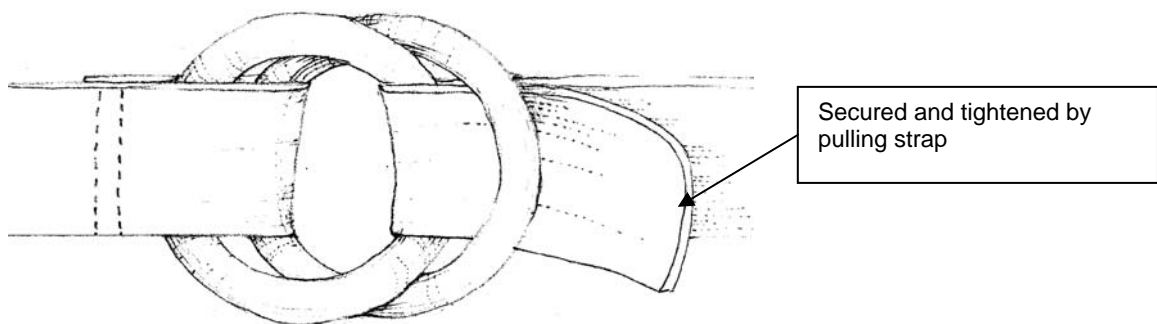
**Figure 1.** Leather purse and how it might have been attached to a leather belt and closed with a leather lace.



**Figure 2.** Leather purse with a large copper alloy or iron ring used as a closure.



BP: Sk 56 Fe 1/1



**Figure 3.** *Overlapping rings used as a closure for a belt or to secure a purse to a belt, and a pair of iron rings corroded together in the same position.*

## **Other organic material**

### ***Pupae cases***

Pupae cases are often indicative of the original presence of leather nearby, and this inference can be further consolidated by their position on an object, for example on the back of buckles where they could be all that remains of a leather belt; or on a knife blade where they might indicate the original presence of a leather sheath.

### ***Plant Material***

Plant material preserved on the surface of some objects in the graves may indicate that some of the burials were covered with straw, bracken, or even floral tributes and herbs before interment, similar to those recorded at other sites including Mucking and West Heslerton (Haughton & Powlesland, 1999). This material would also have had the effect of accelerating the decomposition of the body (Mant, 1987) and the corrosion of the nearby metalwork, which in turn promotes the preservation of adjacent organic materials.

## **Textiles**

Discussion and summary table by E.Crowfoot.

The condition of textile preservation in this cemetery is poor; replacement of fibres by metal oxides on many brooches leaves only lumps of powdery rusted material, where confused textile threads can be seen but the layers cannot be separated, falling to dust when disturbed.

The lowest layer of organic material on a number of brooches appeared at first to be leather, but the position of it next to the body means that in some cases it may actually be replaced human skin. In others, perhaps the decaying textile layers have been compressed before becoming replaced, like fragments from under a bronze cremation bowl at Snape, Suffolk, which looked like decayed leather, but were composed entirely of crushed deteriorated linen from cloth wrapping the bowl (Crowfoot, 1973).

Most of the weaves clearly preserved are tabby (plain) weave, and from their appearance probably linen; like all Anglo-Saxon flax, the thread in these is Z spun and rather uneven, the weaving fairly fine and regular. Bead threads in three graves (15, 25 and 44) again look like flax. Twill remains are less clear, except in the case of the shield grip from Grave 62, probably because these would have come from outer garments. On the back of two brooches (Graves 15 and 56) a layer of soft curled fibres has been preserved, a feature seen in other cemeteries (Crowfoot, 1985; 1987) and here certainly suggesting fibres from a pile or raised nap.

There are three cases where the original decorative details have been preserved, in the form of replaced tablet-weaves. Two are fragments from the edge of borders or braids in regular chevrons made on 4-hole tablets (Grave 44), the other remains from a braid with a diagonal pattern (Grave 48). These patterned tablet-weaves, whether done on 2- or 4-hole tablets, always seem to be made as detached braids, and in some cases they have been found still clearly sewn to the edge of a weave. While the fragment on the right-hand brooch in Grave 48 is confused by loose and broken threads, the position of the braid against a possible selvedge suggests this may have been the case here. From their preservation on the brooches these braids must have formed the neck decoration of women's dresses (Bjorn, 1935).

The leather replaced on the groups of iron rings in two graves, 50 and 53, suggests that these objects were perhaps inside a leather bag hanging from the belt.

## **Summary**

The information presented in this report comes from a number of sources, often where the work was done as part of separate studies on specific artefact types, the shields and swords in particular, and the work has been done at

different times over the last 30 years. Although every effort has been made to fill in the gaps by scanning the material in Devises Museum, this report still falls short in providing a well balanced overview of the organic material originally preserved on the metalwork. That aside it has still been possible to discuss the various observations made about these objects, and compare them with more recent analytical work. In this respect the interpretation of the purse assemblages provides some new ideas on how these objects might have been constructed along with the function of some of the associated metalwork.

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## Catalogue of material examined by E.Crowfoot and G.Edwards

### Grave 5

- |   |                |  |
|---|----------------|--|
| 1 | Iron knife     | Trace of horn handle on one side of the tang, extending onto the blade |
| 5 | Iron spearhead | Trace of wood in socket  |

### Grave 7

- |   |                             |   |
|---|-----------------------------|---|
| 1 | Iron buckle and plate       | Pupae cases on textile on back.<br>All three pieces of the buckle have replacements probably of the same textile; the largest area, 1.5 X 1.0 cm, on the plate, has surface skinning over remains of ?leaf remains or grasses. Textile Z,Z, spinning, tabby weave, count c.14/12 (7/6 on 5mm.). |
|   | Iron tweezers with c/a ring | Traces on both sides of possible leather, replaced and on one end a patch, area 2.5 X 0.18cm cm at widest, fine replaced textile, Z,Z tabby, count estimated at 12/12 per cm. This could be from the same fabric as the buckle.   |

### Grave 8

- |   |                  |                              |
|---|------------------|------------------------------|
| 1 | Iron shield boss | No organic remains           |
| 2 | Iron shield grip | Wood preserved on the inside |
|   | Iron spearhead   | Traces of wood in socket     |
|   | Iron ferrule     | Traces of wood in socket     |

### Grave 9

- |   |                |   |
|---|----------------|---|
| 1 | Iron ferrule   | No organic remains, but wood was noted in conservation notes. |
| 2 | Iron spearhead | Traces of wood in socket.                                     |
| 4 |                | Wood on one side, on other side leather strips,               |

binding?

### Grave 14

	2 shield studs	Trace of wood on shafts
N	Shield stud	Probably leather preserved on the underside of the head, wood on shaft
S	Shield stud	Wood on underside of head with probable leather between it and the iron

### Grave 15

1	Small long brooch	(with good plate). Front soft curled fibres (see p.1). Back deteriorated textile around pin Z,Z. Bunch of Z,S-ply threads, from their appearance probably flax, passing under the pin, probably bead-string.
2	Small long brooch	(With chipped plate) Back, deteriorated replaced textile, possible bead string of 5-6 threads protruding.

### Grave 21

5	U – shaped binding	Wood on inside with possibly two grain directions
7		Wood on both sides of curved end

### Grave 22

6 or 7	Scabbard fragments	Traces Z-spun threads on some pieces, Organic material attached to copper alloy is leather with a possible seam as there are stitch holes visible.
13	Shield boss	Wood on shaft of one rivet with leather between it and the flange
	Shield grip	Wood traces on underside
	Iron spearhead	Considerable amount of wood in socket
	Iron ferrule	Considerable amount of wood in socket.
	Sword	Hilt possibly antler. Scabbard wood with possible sheepskin underneath. Wood inside chape.
16	U-shaped binding	The organic remains are mostly leather, but one



deteriorated patch of textile remains on the narrow bronze strip, 1.2 x 1.0 cm, Z,Z textile, probably twill.

In other places the textile is preserved by the iron corrosion, with at least two layers, Z-spun, but no clear weave.

### **Grave 23**

3	Hinge plate	Textile traces on the remains of the Iron hinge, Z-spun threads, but no clear weave.
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### **Grave 27**

70	Left brooch	Round pinhead, replaced textile, Z,Z, probably plain weave but most of one thread system missing, count 6/6 threads on 5mm; long threads round the hole left by the spring may be from weave, but more probably bead string. On top of weave (nearer body) smooth layer, leather or possibly skin.
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71	Right brooch	Replaced textile remains, Z, Z, under catch.
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### **Grave 28**

	Iron spearhead	Considerable amount of wood in socket.
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### **Grave 34**

2	Iron strip	Wood traces on one side, also area of possible leather.
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3/7	Iron rivets	Wood on underside of some heads.
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	Shield grip	Pupae cases on one side of smaller piece, wood on other.
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	Shield boss	Wood on underside of flange
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### **Grave 37**

1	Iron buckle	Possible traces of leather.
2	Iron knife	Remains of horn handle on tang

### Grave 38

1	Iron knife	Horn handle on tang with straight edge just at start of blade.
	Brooch	Back along pin, mass replaced textile, surface deteriorated, Z,S, fine. Two long Z threads lying side by side suggest tablet twists.

### Grave 44

	Iron knife	Lacquer obscures any organic material.
73	Right button brooch	On back, above and under pin, mass deteriorated textile, Z,Z, thread coarser than 74 (below), probably twill. One long S-ply thread (see 74 (c)).
74	Left button brooch	(a) On pin attachment, area c. 0.7 X 0.6 cm, partially replaced, Z,Z plain weave, probably flax, thread uneven, count 7/6 on 5mm. (b) Protruding from under pinhead, fragment 0.7 X 0.5cm, 4-hole tablet woven braid or weave border, four twists preserved, SZSZ, warp and weft both Z, wefts c. 6 on 5mm. Another fragment protruding under the pin attachment shows edge of tablet weave and five twists (Fig 1). (c) Some long S-ply threads lying along back of brooch and over pin may come from (b), but are more likely bead-string.

### Grave 45

	Iron spearhead	Wood traces in socket
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### Grave 47

1	Iron sword	Horn on tang from hilt.  On blade wood with sheepskin under it and possible traces of leather over it
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2	Scabbard fittings	Wood inside one.
3a	Shield boss	Wood on underside of flange with leather between it and the iron.
	Iron spearhead	Considerable amount of wood in socket.
1	Iron ferrule	Considerable amount of wood in the socket, and an area of random plant material on the outside.
11	Vessel clips	Degraded wood inside one of the clips.
9	Iron strips	On one side of largest piece are traces of textile, possibly Z,Z, twill.

### Grave 48

98	Centre disc brooch	Back, around pin head, layers deteriorated Z,Z weave; above this probably skin or deteriorated textile.
99	Right brooch	a) Over most of front surface, folds of replaced Z,Z, plain weave; best area 1.0 X 0.8 cm, count c. 12/12 (taken as 6 on 5mm) per cm. Another fragment, 0.7 X 0.6 cm, on back, count 6/5 on 5mm, may be same weave, but surface is skinned over.

Charcoal

### Grave 49

1	Iron buckle	Possible leather preserved between plates. Underneath, folds of replaced fine textile, area c. 3.0 X 3.0cm, Z,Z tabby, count c. 14/14 per cm (taken as 7/7 on 5mm).
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### Grave 50

1	Cosmetic brush	Hairs remaining in socket.
13	Iron knife	Horn handle on both sides of tang with straight edge just extending onto blade. Possible leather from sheath on blade.
12	Iron purse rings	Possible leather underlying textile. Pupae cases on three small pieces.

Left brooch                      Mass very deteriorated textile on pin head and along pin, Z,S, some long threads of the Z system preserved from which it is clearly a twill.

Right brooch                     Smooth layer of possible skin, leather or textile, confused by root and leaf fibres and a few Z threads.

### **Grave 52**

1        Iron knife                      Remains of horn handle on tang, edge just onto blade. Probable leather sheath on both sides of blade.

### **Grave 53**

1        Iron knife                      Remains of horn handle on tang, probably leather on blade.

5                                      Possible leather under textile. Small ring, wood on outside.

### **Grave 54**

1        Iron rings                        Possible leather

2        Iron knife                        Remains of horn handle on tang, trace of leather on blade.

### **Grave 55**

Pair applied brooches            On front, rootlets and leaf matter; on backs, on pinhead of one and scrap of pin from other, deteriorated fine Z-spun textile.

Pins, possibly belong with brooches      Vegetable matter, occasionally Z fibres, ie perhaps deteriorated flax.

### **Grave 56**

2        Iron knife                        Remains of horn handle on tang, possible leather

on blade.

Pair saucer brooches

All remains on front of both, leaf and grass matter. Back of 1, same but a few Z threads.

Back of 2, mass of replacement all along the pin, compressed textile fine plain weave in layers, Z,Z, count estimated c. 20/20 threads per cm, taken clear 5/5 on 2.5mm. On back of brooch, replacement of soft curled fibres (see p 1), and one tiny scrap flax.

15 Copper alloy bound bucket

Wood preserved on inside but not accessible for sampling and identification.

### Grave 57

8 Cosmetic brush

Possible fibres inside.

9 Iron buckle

Possible leather between plates.

Copper alloy belt buckle

All over underside, with a clear area 1.6 X 0.9 cm, replaced Z,Z, fine regular plain weave, from its appearance flax, count 16/16 (8 on 5mm) per cm. Over this, i.e. nearer the body, flattened area possibly leather. Deteriorated textile on front of loop and pin seems to be the same textile. Belt inside the buckle plate made from leather.

Iron strips, possibly chatelaine

Replaced areas on all pieces, best c. 1.5 x 0.7, 1.8 X 0.6 cm, Z,Z, four-shed twill, 2/2, count 12/12 (6 on 5mm) per cm.

### Grave 59

2 Belt fitting

Fibrous organic on rivet. Possible leather between plates.

### Grave 60

Applied saucer brooch (S.side)

On pin head and under catchplate, partially replaced textile, fibre identified by J W Hedges as animal, i.e. wool, Z,Z, twill, surface deteriorated. Some probably plied parallel threads curved under the pin, possibly remains of a tablet braid, but may be bead thread.

Applied saucer brooch

Deteriorated Z threads in earth under brooch

(N. Side)

### Grave 62

1	Iron spearhead	Faint traces of wood in socket;
2	Grip	All over top surface, patches replaced, clearest 1.2 X 1.3 cm, Z,Z, four-shed twill, in all areas the diagonals lie the same ie regular 2/2 diagonal; very even spinning and weaving, count 14/12 per cm.
	Iron shield boss	Wood under flange with possible leather between it and the iron.
	Iron fragment embedded in vertebra	Replaced fragment between the iron and the bone, c. 0.8 X 1.2 cm overall, spinning Z one system, s the other, weave twill, surface damaged, as far as can be seen four-shed (2/2), count estimated c. 10/10 per cm.

### Grave 63

	Pair of disc brooches	Replaced areas textile round pin heads on both, Z-spun threads, from broken edges threads visible passing over two, i.e. twill, but too damaged for further identification.
	? Pin fragments, may be part of brooches	?Upper surface (a) layer replaced fabric, best areas 1.6 X 1.6 cm, and on small pieces, 0.7 X 0.6 cm; tabby weave, count c. 18/16 per cm, yarns uneven, from appearance probably flax, possibly a veil or shroud. ?Underside (b) Z,Z twill, coarser than (a) but fragments too small for count. Traces of threads from these two fabrics on other scraps of metal.

### Grave 64

1	Iron spearhead	Considerable amount of wood in socket
2	Buckle and plate	No organic material remaining
2	Iron knife	No organic material remaining

### Grave 68

2	Shield boss	Wood around one rivet underneath the flange, and with possible leather between it and the iron.
3	Iron shield grip	Possible leather under wood on back of grip.
	Iron spearhead	Considerable amount of wood in socket
4	Iron knife?	Possible leather with pupae cases on top.
8	Iron knife	Horn handle on tang, straight edge just onto blade.

### Grave 70

	Iron shield boss	No organic material preserved on boss, rivet fragments with wood.
1 217	Iron shield grip	Leather, probably calf from grain pattern on one side. One area appears to be strips, possibly binding. Area replaced, c. 4.5 X 3.5 cm, Z,Z tabby, fine, even, count 17/16 per cm.
	Iron fragments	Horn on some so probably with sword hilt.
	Iron sword	Hilt, horn. Blade sheepskin against it, but no other scabbard remains. In the corrosion beneath the sword are layers of unidentifiable fibrous organic material.
9a	Iron ring	Wood on inside.

### Grave 72

	Iron knife	Remains of horn handle on tang.
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### Grave 74

	Iron buckle	Pupae cases on back, some complete.
1	Iron fragments	Textile traces, Z?-threads. No clear weave.

### Grave 78

	Disc brooches	Insect? on the back of one. Textile on pins and springs, Z-spun threads, no clear weave.
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Iron knife                      Small traces of horn handle on tang.

### **Grave 81**

1      Iron knife                      Traces of horn handle on tang.

2      Buckle and plate                Possible leather between plates.

### **Grave 85**

Iron nails                      Slight traces of wood.

### **Grave 87**

1      Iron knife                      Traces of horn handle on tang.

### **Grave 88**

1      Iron knife                      Remains of horn handle on tang.

1      Iron ring                      Possible layer of leather under textile.

### **Grave 93**

Sf 269    Small square head brooch            On back of pin and attachment, areas replaced and semi-replaced textile, skinned over, c. 2.5 X 1.8 cm, and on catchplate, Z,Z tabby, count 5/4 on 5mm (c. 10/8). Lump near pin which pierces it, shows longer threads, confused, but probably twining, i.e. perhaps tablet border to the weave.

Sf 270    Pair to 269                      Back of pin, replaced textile, clear skin replacement over it, but Z,Z threads, and some longer threads lying together, i.e. probably tabby and possibly a tablet weave as on 269.

Sf 272    Disc brooch                      Replaced areas of textile, two clear folds with pin going through, showing at front at both ends of pin; clear area on back, largest c. 1.3 X 1.0 cm, and smaller area other end of pin; probably all same Z,Z tabby, count c. 12/12 (taken as 6/6 on 5mm), very even and regular, appearance suggests wool..



### Grave 94

	Iron spearhead	Considerable amount of wood in socket
1	Iron knife	Traces of horn handle on tang.
1	Iron shield boss	Wood on underside of flange with leather between it and the iron.
2	Iron shield grip	Wood on one side around rivet shaft. On other side two fairly thick leather thongs, possibly binding.

### Grave 95

1	Iron knife	Trace of horn on tang.
Sf288	Small long brooch	Back, curving round pin attachment, replaced fragment c. 1.5 X 0.6 cm tablet woven braid, 4-hole twists five in chevrons, S,Z,S,Z,S, thread Z-spun, wefts c. 12-14 per cm.
Sf289	Pair to 288	Back, on pinhead, replaced folds, c. 0.7 X 1.0 cm clear, Z,Z, tabby, count 7/5-6 on 5mm (c. 14/12 per cm), rather open weave. Underneath this, tablet twists in chevrons as on 288.

### Grave 100

	Iron spearhead	Considerable amount of wood in socket
1	Iron knife	Traces of horn handle on tang.

### Grave 101

Sf296	Iron buckle	Structure of textile obscured by clay and preservatives; threads Z,Z.
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### Grave 102

1	Iron fitting	Wood remains
Sf300	Annular brooch	Replaced area c. 4.0 X 0.6 cm, strip of textile in folds lying along pin; as far as can be seen for

preservative, Z,Z, tabby, count probably c. 12/12 per cm.

1 Buckle plate Degraded textile.

### Grave 103

1 Iron knife Traces of horn handle on tang.

### Grave 104

Sf306 Disc brooch Very deteriorated replaced lump of textile on back of pin head; tiny clear patch four-shed (2/2) twill.

Sf307 Pair to 306 Again deteriorated lump with very fragmentary remains, probably from same, Z,Z, twill; some actual fibres, HMA.

Sf314 c/a buckle and plate On top replaced vegetable matter, leaf or grass, and some Z threads; underneath plate, replaced patch c. 1.0 X 1.0 cm, Z,Z, tabby, count 7/6 on 5mm (14/12).

### Grave 105

Iron knife Remains of horn handle on tang, straight edge just on blade.

APPENDIX: Textile Summary Table

## Blacknall Field, Pewsey: Textile Catalogue

Grave	Inventory No.	Object	Position on object	Measurement	Fibre	Spin	Weave	Thread count	Comments
7	3	Iron buckle	On all three pieces	15 x 10mm		Z,Z	tabby	c.14/12	The largest on the plate. Possible leaf or grasses preserved on top.
	5	Iron tweezers	One end	25 x 8mm		Z,Z	fine tabby	12/12	This could be the same fabric as buckle
15	1	small long brooch	around pin			Z,Z			Deteriorated textile on reverse.
	2	small long brooch	around pin		flax	Z,S-ply			Probably bead string Possible bead string of 5-6 threads.
22	6 or 7	scabbard				Z-spun threads			
	16	scabbard chape		12 x 10mm		Z,Z	prob twill		Remains mostly leather
23	3	hinge plate	on hinge			Z-spun threads			
27	70	Left brooch	round pin			Z,Z		12/12	One thread system is missing. Long threads may be part of bead string.
	71	Right brooch	Under catch			Z,Z			
38		Brooch	Along the pin			Z,S fine			Textile deteriorated and two long Z threads lying side by side suggest tablet twists.
44	73	Right button brooch	on reverse, above and around pin			Z,Z	prob twill		Thread coarser than 74. One long S-ply thread, see 74c.
	74 a.	Left button brooch	on pin	7 x 6mm	prob. Flax	Z,Z warp	tabby	14/12 wefts	Uneven thread. 4-hole tablet braid or weave border, four twists preserved. Another fragment protruding under the pin attachment shows edge of tablet weave and five twists.
	74 b	Left button brooch	under pinhead	7 x 5mm		SZSZ, weft both	tablet braid	c.6 on 5mm	

Grave	Inventory No.	Object	Position on object	Measurement	Fibre	Spin	Weave	Thread count	Comments
	74c	Left button brooch	reverse of brooch and over pin			S-ply threads	bead string		Long S-ply threads that may have come from b., but are more likely to be the bead string.
47	9	Iron strips				Z,Z	possibly twill		Textile on one side of largest piece.
48	1	disc brooch	reverse around pin			Z,Z			Layers of deteriorated textile, possibly overlain with skin.
	2	Right brooch	Front	10 x 8mm		Z,Z	tabby	c.12/12	Covers most of the front of the brooch in folds. May be same weave as textile on the front, but surface is skinned over.
			reverse	7 x 6mm				c.12/10	
49	1	silver inlaid iron buckle	Reverse	30 x 30mm		Z,Z	tabby	c.14/14	Folds of replaced fine textile.
50	1	right brooch							A smooth layer of skin, leather or textile which is difficult to interpret because of roots or leaf fibres and a few Z threads.
	2	Left brooch	On pin			Z,S	twill		Mass of deteriorated textile, where some long threads from the Z system indicate a twill weave.
	12	Iron rings and buckle	underside on buckle	10 x 6, 25 x 15mm 25 x 7mm		Z,Z Z,Z			Fibres are curled and could represent a nap.
52		iron neckring	on top	10 x 5, 7 x 10, 10 x 6mm	?flax	Z,Z	tabby	est. 12/? 14- 15/12 (6 over 5mm)	textile fragments Spinning is variable, could be part of a headveil.
53		Iron neckring	on pieces	15 x 5, 18 x 7mm		Z,Z	tabby	15- 16/14- 15 (7+ over 5mm)	As neckring from grave 52, possibly a veil

Grave	Inventory No.	Object	Position on object	Measurement	Fibre	Spin	Weave	Thread count	Comments
		Iron rings and knife	on top under the rings	15 X15, 15 x 7, 30 x 10mm		Z,Z	tabby		Textile on top of the larger area is the same as that preserved on the neckring. Leather possibly from a bag. Leather also preserved on the knife.
55		Pins from pair of applied brooches	reverse		poss. Flax				Vegetable matter, occasionally Z fibres. On the front of both are roots and leaf matter.
56	1	right broch				Z-spun threads			Smooth layer of skin, leather or textile, confused by root and leaf fibres and a few Z-spun threads.
	2	left brooch	back of 2 along the pin			Z,Z	tabby	c.20/20	Mass of compressed textile, soft curled fibres and a small scrap of flax. On the front of the brooches is leaf and grass matter.
57	6	c/a buckle	Reverse	16 x 9mm 15 x 7mm 18	Flax	Z,Z	tabby	16/16	Fine and regular weave overlain with possible leather. The same textile seems to be on front of lop and pin. Traces of leather belt between the buckle plates.
	750208	iron strips	On all pieces	x 6mm		Z,Z	twill	c.12/12	Four-shed twill, 2/2.
59		copper alloy belt fitting	on top			Z,Z	tabby	7/6 over	Textile remains preserved all over.
60		Saucer brooch, S.side Saucer brooch, N.side	underside On pin and under catchplate	c.13 x 10mm		Z,Z	2/2 twill		Coarser textile, and impossible to estimate weave count. Deteriorated surface. Some probably plyed parallel threads curved under pin may be the remains of a tablet braid or bead thread.
62		Iron fragment	between iron and bone	8 x 13mm		Z,S	twill	c.10/10	Deteriorated fragment of textile preserved on a fragment of iron embedded in vertebra. Appears to be a four-shed twill, 2/2.
	750523	shield grip	outer surface	12/13mm		Z,Z	twill	c.14/12	Four-shed twill, a regular 2/2 diagonal, very even spinning and weaving.

Grave	Inventory No.	Object	Position on object	Measurement	Fibre	Spin	Weave	Thread count	Comments
63	750225	pair of disc brooches	around pins on both				twill		Z-spun threads, but too damaged for further identification.
		a.	pin fragments	upper surface	16 x 16mm, 7 x 6mm	prob. Flax	tabby	c.18/16	yarns uneven. Possibly a veil or a shroud. coarser than a., but fragments too small to establish a count. Traces of these two fabrics on other pieces of metalwork.
		b.		underside			Z,Z	twill	
70	2b	shield grip		45 x 35mm		Z,Z	tabby	c.17/16	Fine and even weave
74	1	iron fragments				?Z-spun threads			No clear weave
78	1,2	Disc brooches	pin and spring			Z-spun threads			No clear weave
93	1	Small square head brooch	On back of pin	25 x 18mm		Z,Z	tabby	c.10/8	Piece near pin shows longer threads, which are confused but perhaps a tablet border for the weave.
		2	Small square head brooch	back of pin		Z,Z	prob tabby and tablet		Very like the textile on 269. Textile is preserved as two clear folds with the pin going through, and showing on front. The weave is very even and regular.
		5	quoit brooch	around pin	13 x 10mm	wool	Z,Z	tabby	c.12/12
95	1	small-long brooch	reverse on pin	7 x 10mm		Z,Z	tabby	c.14/12	Folds of textile with a rather open weave. Underneath this, tablet twists in chevrons as on 288.
		2	small-long brooch	reverse, around pin	15 x 6mm		thread Z-spun, S,Z,S,Z,S	tablet braid	wefts c. 12/14
101	1	Iron buckle				Z,Z			Textile obscured by clay and consolidants.
102	1	Penannular brooch	Along the pin	40 x 6mm		Z,Z	tabby	c.12/12	Strip of textile in folds along the pin. Not too clear because of consolidants.
104	1	saucer brooch	on back of pin				four-shed 2/2 twill		Very deteriorated textile with a small clear patch.
		2	saucer brooch			Z,Z	twill		Very deteriorated textile with some fibres HMA.

Grave	Inventory No.	Object	Position on object	Measurement	Fibre	Spin	Weave	Thread count	Comments
	10	c/a buckle	under plate	10 x 10mm		Z,Z	tabby	c.14/12	On top of plate are some Z-spun threads and vegetable matter such as leaf or grass fragments.