

ANCIENT MONUMENTS LABORATORY

REPORT 1709

SERIES/No

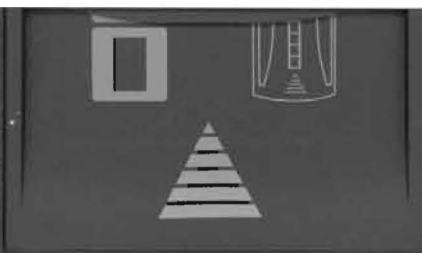
CONSULTANT -- TEXTILES

AUTHOR

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TITLE

WORTHY PARK, Hants
November 1974



Worthy Park, Kingsworthy, Hants.

Anglo-Saxon Cemetery

Appendix: Textiles

Elisabeth Crowfoot.

Most of the textile remains from the Worthy Park cemetery are on iron objects, and the fibres have been completely replaced (oxidised) by metal salts; in no case has fibre determination been possible.

The inhabitants of this settlement seem to have been very efficient textile workers, and spinning and weaving throughout are of consistently good quality.

Only one fragment of tablet-woven border has been preserved and no other selvages, but since in Anglo-Saxon textiles the warp normally has the closer thread count, this has been put first, in the warp position, where thread counts are given in the inventory. The direction of spinning twist in the yarns is indicated by the letters S and Z.

Worthy Park.

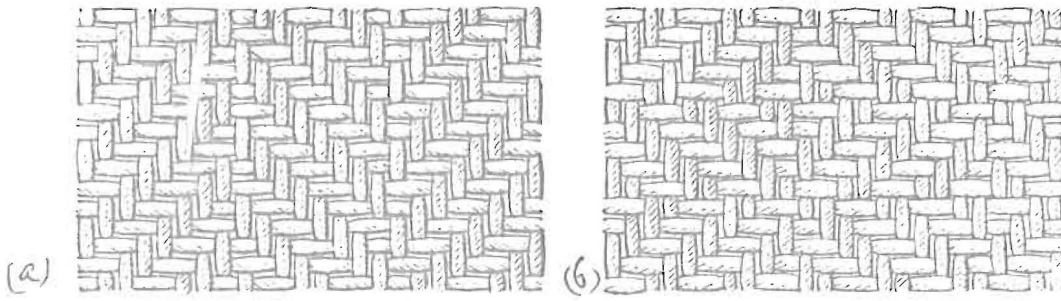


Fig. 1. (a) Chevron Twill. (b). Broken herringbone Twill

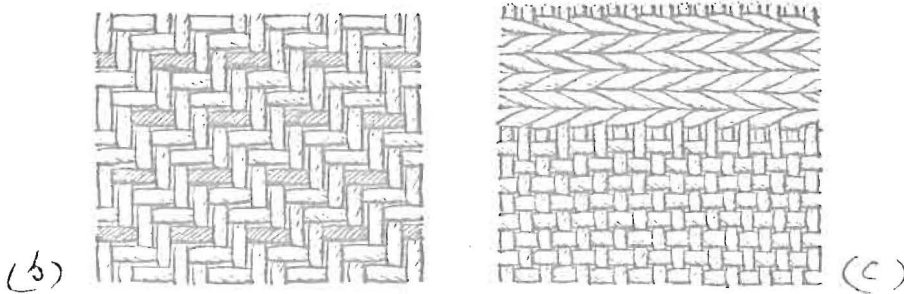
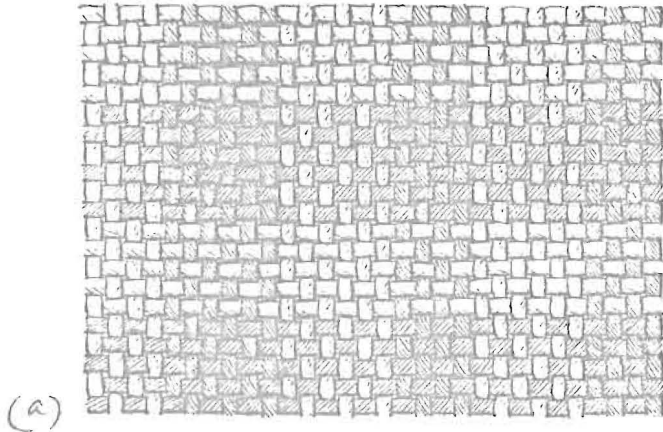


Fig. 3 (a) Checked tabby weave. Gr. 75.

(b) Striped twill, Gr. 10.

(c). Tablet weave border, Gr. 77.

InventoryGrave 9. F.7. Iron key. 76. (r.waist)

Replaced textile in small patches on shaft, best area c.1.0 X 0.8 cm, Z,Z, 2/2 twill, count 6/5 on 0.5 cm.

9. Iron key and RB coin. 73. (r.waist)

Area possibly leather on key up to edge of coin; on other side, traces textile, Z,Z.

Grave 10. F.

Mid-6th cent. A.D.

4. Iron keys. 16. (l.hip)

(a) on ring, strands coarse S ply thread or string, perhaps used to tie keys to belt; one loose fragment 1.4 cm long from plait of three threads of up to 5 strands each (see below, 21).

(b) on under side of keys, over area 11.0 X 4.0 cm, replaced textile, fine regular spinning and weaving, twill, 2/2, count 14/12 per cm, one thread system Z, the other Z,Z,S throughout (fig.2.b).

5. Purse mount. 27. (l.waist)

On one side replaced leather; on other, replaced textile, clearest area 1.9 X 1.1 cm, similar to that on 4 (b), count 14/11-12 per cm.

8. Buckle. 21. (r.waist)

Confused Z,Z textile over both sides ring of buckle; on underside, small replaced area 0.7 X 0.8 cm, Z,Z, plain weave with one paired thread, count 5/5 on 0.5 cm; protruding from under it, long Z threads, almost like fine string, some in pairs; 7 fringes.

21. Iron rings ?necklet. 13. (r.waist)

Replaced fragment 2.8 cm long three-plait of 4-5 strands of coarse S spun Sply threads; circumference 1.3-1.5 cm.

Grave 12. ??

? 7th century

2. Iron buckle (r.hip)

One clear replaced area 1.2 X 1.0 cm, Z,Z, spinning rather variable, plain weave, count 13/6 per cm.

Grave 13. M.2. Iron buckle. 34. (r.waist)

Traces all over underside, deteriorated replaced Z,Z twill.

Grave 20. F.

Mid-6th century

7. Iron plate. 127. (l.waist)

On one surface, area 3.5 X 1.3 cm, replaced, Z,Z, weave rather distorted but probably tabby, count 9/7 per cm (see 32).

9. Ring and coin pendant. 100.

Replaced lump probably leather, but including on one side fragments of Z,Z weave, probably twill.

32. Iron key (l.hip)

Traces of two different textiles: (a) one patch c.0.7 X 0.9 cm, Z,Z, coarse tabby weave, count 3/5 on 0.5 cm. (b) patches finer Z spun textile, too deteriorated for identification.

32. Iron key

Very clear patch, 1.0 X 3.0 cm, Z,Z, regular spinning, plain (tabby) weave, count 9/6 per cm, similar to 7 and 32 (a).

Grave 33. M.4. Buckle. 213. (c.waist)

Underside of buckle plate, area 2.7 X 1.7 cm, replaced, Z,Z, plain weave, count 15/11 per cm; yarn uneven, appearance more like flax.

Grave 34. F.3. Bronze buckle l.sp. 173. (l.waist)

Fine replaced textile in at least three folds, clearest area 2.4 X 1.1 cm, Z,Z, twill, count 7/7 on 0.5 cm, surface obscured by fibres, possibly teasing; but may simply be deterioration.

(Grave 38. con.)

Grave 38. M. 162. (l.waist)

on one side replaced grass stems; other, small areas deteriorated
2/2 twill.

Grave 41. M.

c.500 A.D.

1. Iron buckle. (waist ? - disturbed)

Under side, areas replaced textile, largest c.3.0 X 1.4 cm, surface
deteriorated, 2,2, fine regular twill, count 8/8 on 0.5 cm clear;
on good lines run to right and left in one unfolded area, indicating
diamond or chevron (fig.1), too deteriorated to identify further.
A few detached fragments.

Grave 49. M.

Early 6th century

2. Spearhead (away from body)

On shaft socket, small patch replaced textile, 1.0 X 1.5 cm, 2,2, coarse
regular twill, 2/2, count 10/7 per cm.

Grave 50. M.

6. Iron buckle. 186. (l.waist)

one side, two small areas replaced textile, best 1.4 X 1.4 cm, 2,2,
regular 2/2 twill, count 14/13-14 per cm.

Grave 52. (Child, FM)

1. Iron keys? (l.chest)

large area replaced textile, 5.0 X 2.5 cm at widest, much of surface
deteriorated; in small clear patches, 2,2, twill, well spun and woven,
count 7/6 on 0.5 cm.

Grave 58. (probably F)

6th century

3. Iron object, ?circle ring. (l.chest)

Surface covered with deteriorated replaced textile, 2,2, twill; only
clear area distinctly shows displaced reverse of diamond or chevron;
count estimated c.12/12 per cm.

Grave 61. F.

9. Iron buckle. 212. (l.waist)

Underneath, replaced leather, ?belt, and very deteriorated 2 textile.

Grave 62. F.

2. Iron ring brooch. 204. (r.shoulder)

Replaced textile both sides, clear area 0.8 X 0.5 cm, 2,2, twill, 2/2,
count 6/5 on 0.5 cm.

5. Iron pin or nail. 199. (r.chest)

replaced regular 2,2, twill along whole of preserved piece of pin,
count 6/6 on clear 0.5 cm.

6. Iron pin or nail. 198.

replaced twill over much of surface, possibly same as on 5; mostly 2,2,
but in two places in one system there are 8 threads, suggesting stripe;
impossible to say how many threads stripe was, perhaps 2 or 3.

Grave 72. (possibly F)

6th century

2. Iron belt plates. (l.waist)

traces textile on both plates, surface deteriorated; one patch 1.0 X 1.0
cm, 2,2, twill 2/2, count c.14/14 per cm.

Grave 75. M.

1. Knife. 214. (l.waist)

Over area 2.5 X 1.5 cm on blade, very fine replaced textile, count 25/22
per cm, plain weave, two layers. (a), top layer, 1.4 X 0.8 cm, shows
check with S and Z threads in bands in both systems (fig.2.a).

(b) weave lying under, again mixture of S and Z threads in both systems
probably same fabric though very pulled and threads displaced by pas-
sage of coarser threads which must be embroidery (fig.3, Pl.

Grave 73. F.

Early 6th century

1. Angular brooch. (l.clevis under skin)

On back, small area replaced plain weave, 2,2, count estimated c.15/14 per cm. around pin, on front and partly visible at back, all along pin, area 2.0 X 0.8 cm replaced tablet-weave, 4-hole in chevrons, 2,2, 2,2, 2,2, 0.5 cm clearly preserved; one edge probably missing, the other seems to run into the plain weave, suggesting a border to the weave (fig. 2.c) rather than a separate braid, but surface is deteriorated.

3. Bronze object

Fragment replaced textile, 2.0 X 1.5 cm, 2,2, plain weave, regular, count 13-14/13 per cm.

5. Iron key (r.hip)

Textile in folds, replaced, best area 1.7 X 1.1 cm, 2,2, plain weave, regular spinning and weaving, close, count 14/14 per cm., as on 3.

6. Iron buckle. 248. (r.waist)

Deteriorated replaced textile traces, including tablet twists on the attachment of the buckle pin, similar in style to those on 1.

Grave 84. A.

7. Iron buckle. (c.waist)

Two replaced textiles, (a) on top of plate, fragment 0.7 X 1.6 cm, 2,2, plain weave, count estimated 16/13-14 per cm. (b) patch under plate, c.0.8 X 0.1 cm, 2,2, regular spinning and weaving, four-armed twill, count 7/5 on 0.5 cm, but there are broken and missing threads and it should probably be higher.

Grave 8. Uncertain

1. Iron object, ?knife. (between femurs)

Two patches textile, best c.3.2 X 1.3 cm, 2,2, fine regular 2/2 twill, count 16/16 per cm; broken and missing threads giving irregular look.

3. Iron ?keys

Traces in place, one clear c.0.7 X 1.3 cm, 2,2, fine regular twill similar to that on 2, count 8/7 on 0.5 cm.

Grave 1. Child, probably F.

2. Iron buckle. (waist)

Textile on underside, area 2.5 X 1.8 cm, folded, 2,2, twill, lie of warp etc. indicates diamond or chevron, but surface damaged, count c.16/11 per cm.

6. Iron plate (l.hip)

Patches of two textiles: (a) c.1.5 X 1.5 cm, 2,2, regular thread, fairly coarse plain weave, soft appearance, count 10/11 per cm.

(b) area 3.3 X 1.7 cm, part very clear, 2,2, hard-spin but irregular, very soft similar, appearance suggests flax, plain weave, count 10/16 per cm.

9. Iron plate. (s.hip)

Traces of the same two textiles, both 2, one coarse, regular, other fine with variable spinning.

Grave 25. B.

6th century

1. Iron plate (waist)

Fragments replaced, best 1.5 X 1.0 cm, 2,2, regular 2/2 twill, count 11/11 per cm.

The textiles from Worthy Park include seventeen twills, of which one, and possibly two, were striped; nine tabby (plain) weaves, including one checked fabric which was also decorated with embroidery; one example of a tablet-woven border, and some plaited thread.

Spinning and Fibres

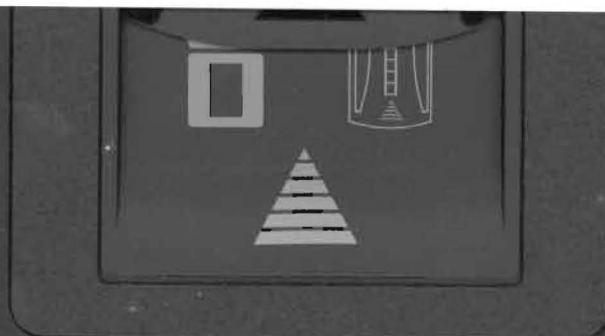
The graves include a very high proportion of textiles with Z spinning in both warp and weft, the only exceptions being one twill with Z spun yarn in one system and S in the other, and three fabrics, two twills and one tabby, in which the combination of Z and S yarns in one or both thread systems indicates striped or checked patterns. Though no unoxidised fibres were preserved it is clear that most of the textiles are likely to have been of wool, though in two of the tabby weaves the hard-fibred appearance and irregularity of the yarn strongly suggest flax.

Weaves

Twills The twill weaves present are all four-shed constructions. The pieces preserved are small, but in three cases (Graves 41.1, 50.3, 51.2) it is clear that the fabric was woven with a lozenge or chevron pattern (fig.1), though the number of threads in the repeat cannot be ascertained. One of these fragments (Grave 58.3) was the only example of the Z spun warp and S spun weft often associated with good quality lozenge twills from other Anglo-Saxon sites.

Striped and checked fabrics The fine diagonal twill from Grave 10 (Pl. , fig.2.b) has Z spun thread in one system and in the other two Z threads followed by one S thread throughout. The sizeable area preserved rather suggests that these simple lines represent the whole design, whether for a border or all over the cloth, and do not come from a larger plaid pattern. This is a beautifully regular piece of weaving, the warp threads so closely packed that the effect is of a 2/1 (three-shed) twill, though it is clear in some pulled areas and a tiny fragment where the back can be seen that it is in fact a simple 2/2 (four-shed) diagonal twill. No selvedge is preserved, and the pattern threads could have been set up in the warp or thrown in the weft, but since the striped system has the lower count the latter, as shown in fig.2.b, is perhaps more probable.

Very similar twills with single-line stripes were found in two graves at Mucking, Essex (Graves 767, 876). In one of these only part of the small fragment is striped, and our even smaller remains on Grave 63.6 may be of this type - perhaps a border on an unpatterned



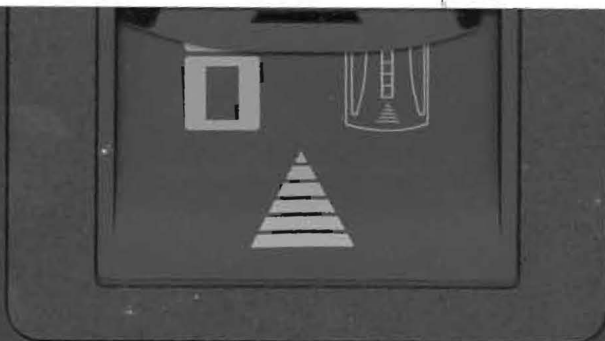
cloak or blanket. Woollen checked and striped twills have a long history in the North, from the Late Bronze Age cloak from Gerum in Sweden (1) through the Thorsberg mantle (2) and Danish Iron Age weaves of the early centuries A.D. (3) to examples from Norway contemporary with the first Anglo-Saxon settlements (4).

The checked tabby weave from Grave 75.1 is again an excellently woven fragment, the finest and most regular piece in the cemetery, with a count of 22/22 threads per cm. The checks are formed by alternate narrow bands of varying numbers of Z and S spun threads in both systems (fig.2.a, Pl.).

Tabby weaves with checks, and stripes possibly from larger fancy checks, have been found in England at Mucking (Graves 4.8, 975) and Finglesham, Kent (Graves 8, 169). Comparative European material again spans a long period, though here we have to go south rather than north. Among early Hallstatt fabrics from the Sälzberg, together with twills there are similar tabby weaves patterned in groups of S and Z threads (5), and these are again found in southern German graves contemporary with the English ones from excavations at Niederstotzingen, Birnau, Donzdorf and Altheimerding (6).

There is no indication of difference in colour between the Z and S threads in our replacements, and the Finglesham stripes and checks are also replaced, but fortunately the tabby weaves at Mucking were preserved unoxidised, and though both were stained a uniform dark brown in one fabric (Grave 975) the woollen threads were sufficiently well preserved for H.M.Appleyard to find a significant difference in the natural pigmentation of the fibres in the S and Z threads, and in some yarns a suggestion of additional dyeing.

Among the Danish twills of the Late Roman Iron Age some have clearly visible check patterns which seem to be produced entirely by the change of spinning direction, and these have in the past been described as shadow patterns, in which the design is in the texture alone without any change of colour. Additional dyeing was however noted in one example from Corselitze (7), and it has recently been suggested that this may have been the case in the other "self-coloured" pieces, the contrasting colour having disappeared (8). The same shadow effect is visible in some Hallstatt checked tabby weaves of seemingly uniform colour, and H.J.Mundt, who has studied these textiles and those from the later German sites, also suggests in his discussion of striped weaves from Donzdorf that although the change of spinning direction gives a visible pattern, there may well also have been



different colours which can no longer be distinguished, and notes that in one replaced example the actual rust colour of one group of threads is different from the other (9).

The evidence from Mucking is additional support for this suggestion and in the case of the Anglo-Saxon twills with one-thread stripes, the effect of the single S yarns is simply an irritation to the eye, and it seems unlikely the weaver would have taken the trouble to insert them unless they had been of a contrasting shade.

Very little colour can now be seen in unreplaced material preserved from Anglo-Saxon burials. The uniform brownness of pieces that have been contaminated after burial gives no idea of their original shades, and attempts at dye identification are hampered both by the fugitive nature of many vegetable dyes and staining from other objects, particularly of wood, present in graves. Only a few scraps, from fine braids and fine fragments and threads in women's workboxes, still show visible traces of red, blue, green and yellow. Different shades of naturally pigmented wool are still clear to the eye in two textiles from Essex sites, a twill with irregular trips of light and dark from Broomfield Barrow (B.3) and a light-coloured tabby weave with a dark check from Mucking (Grave 123). In both these fabrics, as in the earlier Falkirk tartan (10), the spinning is 2 in all yarns, light and dark, and it is obviously impossible to tell how many oxidised 2 spun weaves may have had colour patterns.

Tablet weave The remains of a simple 4-hole tablet weave in Grave 77 are probably from the border of a tabby cloth (fig.2.c). A number of these borders have been preserved in Anglo-Saxon cemeteries (11) and they are also common in Scandinavian finds, an essential piece of weaving construction on the warp-weighted loom (12). For cloaks and blankets pieces of cloth were made to the required size with four woven borders, often tablet weave bands, and cut garments seem also to have been shaped as far as possible to take advantage of the strong and decorative borders (13). This form of tablet weaving seems to have been the first use of the technique, so far discovered, borders on weaves from Hohnichele in Germany, c.6th century B.C.(14). Detached braids, patterned and brocaded, made separately and sewn onto the edge of the cloth, are a later development found in English and Scandinavian burials.

Embroidery

Underneath the checked weave in Grave 75 is another layer which seems to be part of the same textile but is decorated with what must have been very fine embroidery in satin and stem stitches (Pl. ,fig.3). In places the surface is damaged, and the reconstruction of the pattern, with



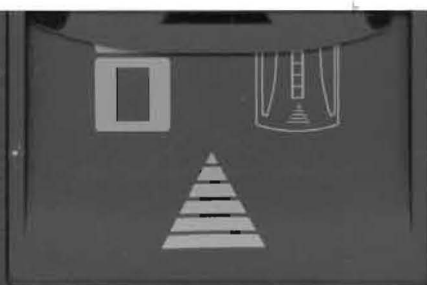
leaf and scroll elements, is very tentative. The fineness of the work, and the patches of deterioration, make it difficult to trace the passage of some of the threads, but the S and Z checks of the ground weave help where these can be identified clearly, by showing up the incorrectly spun threads as part of the design. The length of the longest satin stitches is barely 1 mm; some of the embroidery thread seems to be 3 ply, but its soft appearance and variable spinning direction almost suggest silk, though so far no silk has been found in England in a burial of this date.

The earliest Anglo-saxon embroidery so far known is on tiny fragments of woollen twill found in a woman's workbox in a 7th century burial at Kempston, Bedfordshire. This decoration, in very fine regular 2-ply wool thread, has a pattern of curved interlaced lines of light blue and yellow (perhaps originally white) outlined in red stem-stitch. The style of work and pattern are very similar to the much coarser and later scroll and interlace patterns on a twill from Mammen in Denmark, c.1000 A.D. (15).

Even supposing that shrinkage may have taken place during replacement, the Worthy Park embroidery is of nearly the same fineness as the silk stem- and split-stitch work on the stole and manipule of St. Cuthbert, made probably between 909 and 916 A.D. (16) None of the Anglo-saxon iron needles found so far seems fine enough to do this stitching, though the pattern threads in the St. Cuthbert relics and in our fragment both pass between rather than through the threads of the ground weave, but the preservation of a really fine needle of iron, or possibly silver, would be a very fortunate chance.

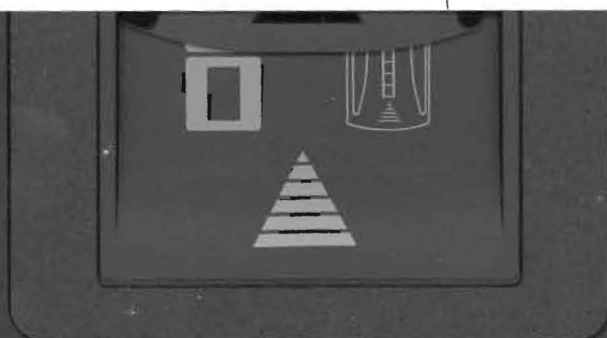
Costume

There is very little at Worthy Park to give any indication of dress details. The women's brooches and pins are single, at the neck or shoulder, but whether they fastened a dress or cloak is uncertain; the presence of a similar tablet-woven border at neck and at waist in Grave 77 makes a cloak perhaps more likely here. The embroidered twill from Mammen may have been a cloak, but the folds of checked cloth on the man's knife from Grave 75 seem too lightweight for such a purpose, and the embroidery is on such a miniature scale that it seems more likely to have decorated some small article such as a pouch or handkerchief.



Notes

1. Sneli v. Walterstorff, Vävt teknik, BronsÅldersmanteln från Gerumsberget, Stockholm, 1924-25.
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3. Margrethe Lund, Liddanske Tekstiler, Copenhagen, 1950, pp. 7, 9, figs. 66, 73, 74, 76.
4. Fjærn Høyen, Antemofunnene, Oslo, 1935, Pl. XI.2, XII.2.
5. H.-J. Mundt, "Vor-geschichtliche Gewebe aus dem Hallstätter Salzberg", Jahrbuch d. Rom.-Germ. Zentralmuseums, Mainz, 6, 1959, p. 71 ff.
6. H.-J. Mundt, "Die Textilfunde" in P. Paulsen, "Alamannische Adelgräber von Niederstutzlingen (Kreis Heidenheim)", Veröffentlichungen des Staatl. Amtes f. Denkmalpflege Stuttgart, 12/11, 1967, Abb. 3.
 ----- "Die Textilfunde" in Robert Koch, "Katalog Esslingen, Teil 1 Die Merowingischen Funde, 1969", Veröffentlichungen d. Staatl. Amtes f. Denkmalpflege Stuttgart, 13/11, 1969, Abb. 1.
 ----- "Die Textilfunde" in Eduard M. Neuffer, "Der Reihengräberfriedhof von Donzdorf", Vorschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg, 2, 1972, Graves 2, 36, 66, 75, 78.
 ----- "Die ersten Textilreste aus den Gräbern von Alterding", Jahrbuch der Römisch-Germanischen Kommission 1973, Graves 110, 3/3, 393.
7. Hald (1950), fig. 69.
8. Marta Hoffmann & Harold B. Burnham, "Prehistory of Textiles in the Old World", Viking, 1973, p. 69.
9. Mundt (1972), p. 104.
10. G. E. Crawford, "Two textiles from the National Museum, Edinburgh", Proc. Soc. Ant. Scot. LXXII, 1947-8, p. 227, c. 300 A.D.
11. A. J. Henshall, Appendix II in "Excavations on Blewburton Hill, 1953", Lerks. Arch. Journ. LVII, 1959, p. 17 ff.
 Elisabeth Crockett in Sonia E. Chadwick, "The Anglo-Saxon Cemetery at Singlesham, Kent", Med. Arch. II, 1958, p. 36, fig. 10.b.
 ----- in Hilda R. E. Davidson & Leslie Webster, "The Anglo-Saxon burial at Coombe (Goodnesbrough) Kent", Med. Arch. XI, 1967, p. 37, fig. 1.
 Unpublished: Broxfield Barrow, B. 2; Mucking, Grave 975; Stretton-on-Fosse, Grave 13, p. 102.
12. Marta Hoffmann, "The Warp-weighted Loom", Calo, 1964, pp. 151 ff.
13. Margrethe Lund, "Drægtudier", Aabogger for Nordisk Oldkundighed og Historie, 1961.
14. H.-J. Mundt, "Die Textilreste aus dem Hohnsichels" in Gustav Niek, Der Hohnsichels, Berlin, 1962, Grave I, Abb. 4, Taf. 28 la, Grave VI, Abb. 5, 7, Taf. 33, 34.
15. Hald (1950), figs. 92-96.
16. Elizabeth Plenderleith, "The stole and Maniples" in The Relics of Saint Guthbert, Oxford, 1956, p. 376 ff. Pls. XXIV-XXVI.



Worthy Park, Kingsworthy, Hants

Anglo-Saxon Cemetery

Appendix: Textiles

Elisabeth Crawford

Most of the textile remains from the Worthy Park cemetery are on iron objects, and the fibres have been completely replaced (usually) by metal salts; in no case has fibre determination been possible.

The inhabitants of this settlement seem to have been very efficient textile workers, and spinning and weaving throughout are of consistently good quality.

The one fragment of tablet-woven fabric has been preserved and no other selvages, but since in Anglo-Saxon textiles the warp is strong and the closer thread count, this has been cut first, in the warp position, where thread counts are given in the inventory. The direction of spinning twist in the yarn is indicated by the letters S and Z.

Notes: The abbreviation "replaced" is used for "fibres replaced by metal oxides". The spinning direction of yarns is indicated by the letters Z and S, the probable warp thread being placed first. Overall measurements of best fragments are given in cms, and weave counts in threads per cm, except where otherwise stated.

Grave	Object	Position	Textile Fibre	Spin	Weave	Count	Measurement	Comments
9 (F)	7.Fe key.76	on shaft	replaced	Z/Z	2/2 twill	6/5 on 5mm	1.0 X 0.8	small patches
	9.Fe key & HB coin	one side	replaced	Z/Z	-	-	-	traces; other side leather
10 (P)	4.Fe keys.16	on ring	(a) replaced	Z, Sply	3-plait	5 per unit	L.1.4	on ring, & loose fragment
		underside ring	(b) replaced	Z/Z, S	2/2 twill	14/12	11.0 X 4.0	stripes 7weft, 2Z, 1S (fig.2.b)
	5.purse mount.27	one side	(b) replaced	Z/Z, S	2/2 twill	14/11-12	1.9 X 1.1	one paired thread in 7weft; Z thread
	8.buckle.21	both sides ring	(c) replaced	Z/Z	tabby	5/5 on 5mm	0.7 X 0.8	pairs protruding, 7fringe
	21.Fe rings, necklet.13		(a) replaced	Z, Sply	3-plait	4-5 per unit	L.2.8, circ.1.3-1.5 cm	
12 (F)	2.Fe buckle		replaced	Z/Z	tabby	13/8	1.2 X 1.0	spinning variable
13 (M)	2.Fe buckle.34	underside	replaced	Z/Z	2/2 twill	-	-	deteriorated patches
30 (F)	7.Fe plate.127	one side	(a) replaced	Z/Z	?tabby	9/7	3.5 X 1.3	(see 32.)
	9.ring and coin.100		(b) replaced	Z/Z	2/2 twill	-	-	fragment on leather
	32.Fe key		(a) replaced	Z/Z	tabby	5/3 on 5 mm	0.7 X 0.9	coarse threads
			(c) replaced	Z/Z	?	-	-	patches finer, deteriorated
	33.Fe key		(a) replaced	Z/Z	tabby	9/6	1.0 X 3.0	clear patch
33 (M)	4.buckle.213	under plate	replaced	Z/Z	tabby	15/11	2.7 X 1.7	yarn uneven, appearance like flax
34 (F)	3.Ae buckle.173	on loop	replaced	Z/Z	2/2 twill	7/7 on 5 mm	2.4 X 1.1	3 folds, surface obscured fibres, 7sealed
	6.chatelaine.162	one side	replaced	Z/Z	twill	-	-	small areas, similar
41 (M)	1.Fe buckle	under side	replaced	Z/Z	2/2 chevron or broken diamond twill	8/8 on 5 mm	c.3.0 X 1.1	and small fragments, most confused (fig.1)
49 (M)	2.spearhead	shaft socket	replaced	Z/Z	2/2 twill	10/7	1.0 X 1.5	regular spin, weave.
50 (M)	6.Fe buckle.186	one side	replaced	Z/Z	2/2 twill	14/13-14	1.4 X 1.4	regular; & one smaller area
52 (M ch.)	1.Fe 7keys		replaced	Z/Z	2/2 twill	7/6 on 5 mm	c.5.0 X 2.5	small clear patches; well spun, woven
58 (7P)	3.Fe 7girdle-ring		replaced	Z/S	2/2 chevron or broken diamond twill	c.12/12	-	all over surface, small patches only clear

<u>Qve</u>	<u>Object</u>	<u>Position textile</u>	<u>Fibre</u>	<u>Spin</u>	<u>Weave</u>	<u>Count</u>	<u>Measurement</u>	<u>Comments</u>
51(F)	9.Fe buckle.212	underneath	replaced	Z/Z	-	-	-	very deteriorated, with leather
53(F)	2.Fe ring brooch.204	both sides	(a)replaced	Z/Z	2/2 twill	6/5 on 5	0.8 X 0.5	small clear area
	5.pin ?nail.199	whole length	(a)replaced	Z/Z	2/2 twill	6/6 on 5	-	
	6.pin ?nail.198	most of surface	(a)replaced	Z/Z,S	2/2 twill	-	-	in two places ?weft, 2 or 3 S threads, ?stripe
72(7F)	2.Fe belt plates	on both	replaced	Z/Z	2/2 twill	c.14/14	1.0 X 1.0	surface damaged
75(M)	1.knife.214	on blade	replaced	Z,S/Z,S	tabby	22/22	1.4 X 0.8	two layers, top shows check clear
							2.5 X 1.5	4Z,6S,6Z,4S,6Z,4S/4S,5Z,6S,4Z (fig.2.a);second layer pulled & distorted coarse embroidery, ?satin & stem stitch, possibly leaf scroll (fig.3, Pl.)
77(F)	1.annular brooch	back	(a)replaced	Z/Z	tabby	c.15/14	-	small area
		across pin,& front	(b)replaced	Z/Z	tablet, 4-hole	6 twists	2.0 X 0.8	?border on tabby but edge missing
	3.Ae object		(a)replaced	Z/Z	tabby	13-14/13	2.0 X 1.5	twists chevrons Z,S,Z,S,Z,S (fig. regular spin and weave
	5.Fe key		(a)replaced	Z/Z	tabby	14/14	1.7 X 1.1	as above
	8.Fe buckle	pin attachment	(b)replaced	-	tablet	-	-	twists, surface damaged, similar (1)
84(M)	7.Fe buckle	top plate	(a)replaced	Z/Z	tabby	est.16/13-14	0.7 X 1.6	
		under plate	(b)replaced	Z/Z	2/2 twill	c.7/5 on 5	0.8 X 0.8	broken and missing threads
88(?)	2.Fe object ?knife		replaced	Z/Z	2/2 twill	16/16	c.3.2 X 1.3	fine, regular, missing threads
	3.Fe keys	on ?shafts	replaced	Z/Z	2/2 twill	8/7 on 5	0.7 X 1.3	
91(child,?F)	2.Fe buckle	underside	(a) replaced	Z/Z	2/2 chevron or diamond twill	c.16/14	2.5 X 1.8	folded, surface damaged
	6,9. Fe plates		(b)detriorated	Z/Z	tabby	10/11	c.1.5 X 1.5	regular thread, soft appearance;
			(c)deteriorated	Z/Z	tabby	18/16	3.3 X 1.7	hard spinning, irregular, suggests flax; patches of (b) and (c) less well preserved on 9.
95(M)	1.spear	on socket	replaced	Z/Z	2/2 twill	11/11	1.5 X 1.0	and smaller fragments