Textiles from the Anglo-Saxon cemetery at Wasperton, Warks

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Introduction

Textiles were recorded in association with the metalwork from 39 graves, all Anglo-Saxon burials of Phase 2. The biological sex could not be established in any of these, but twelve were accompanied by male-gender weaponry, 24 by female-gender accessories and only three were gender-undetermined. Altogether 53 different textiles were recorded, for which full technical details could be identified in 46 and fibres in 21 (Table 1). Cords were also noted in Graves 23, 72, 111 and 167. A detailed catalogue of individual finds, including the identification of fibres using optical microscopy, has been placed in the site archive. The results are summarised grave by grave in Table 2.

Most of the textiles clearly represent the remains of the dead's clothing, although some of the evidence from male graves may also indicate grave linings or covers. The range of textile types is in many ways typical of the more westerly cemeteries of the Early Anglo-Saxon period, but there are also a few items which suggest some survival of Romano-British textile skills. In this they may be compared with other cemeteries in the same short stretch of the upper Avon valley.

2/2 twills

The collection is dominated by 2/2 twills made with Z-spun yarn in warp and weft (abbreviated to ZZ 2/2). There are 30 examples, ranging from medium-coarse, 8 x 8 threads per cm (Grave 73), to medium-fine, 16 x 16 (Grave 13), and they occur in all the sub-phases of Phase 2, in both male and female graves. They are found in linen, of which three are plain (Graves 13, 43, 44, 88, 111) and four diamond-patterned (Graves 24, 44, 88, 111); and in wool, of which most are plain (Graves 8, 24, 91 and probably Graves 57, 73 and 103), and only one possibly diamond patterned (Grave 15). A 28 mm length of the cloth border is present on a plain twill from Grave 77: it is a tubular selvedge in which the weft thread is woven tabby fashion over 19 warp threads and then returned directly back into the twill weave (Fig.1). Another, narrower tubular selvedge worked on 9-11 warp threads, in linen, was recorded in Grave 39, although in that instance none of the main fabric was attached. One of the relatively fine wool twills, from Grave 24, has a matted

appearance and was probably deliberately soft-finished, by fulling and possibly teaselling. Finishing wool cloth is a specialist craft and such textiles are comparatively rare in Anglo-Saxon England (see below).

One of the coarser ZZ diamond twills, from Grave 43, was unusually well preserved and microscopy of the fibres indicated goat hair rather than the more usual sheep's wool. There was a fine undercoat, around 9-12 microns diameter, medium fibres around 25 microns, each with a fine central channel or medulla, and coarse ribbon-like fibres with wide latticed medullas, over 55 microns wide. The cuticular scale-pattern, which is usually regarded as diagnostic, was difficult to determine, but the presence of the three different fibre types, and in particular the medullas in fibres as fine as 25 microns, is typical of goat (Wildman 1954, 119-123; Ryder 1987, 7-9). Dense pigmentation was present in some of the fibres, indicating that the coat was originally black-and-white, although when mixed in the textile, the general impression would have been grey. This fabric was on the back of, and almost certainly clasped by, the great square-headed brooch (Object 3) at the right neck and probably represents the cloak. It may be compared with a twill cloak made from naturally pigmented wool, grey or brown, in grave 13 at Bidford-on-Avon, Warks, which was also clasped by a great square-headed brooch (Walton Rogers unpublished).

There are five examples of 2/2 twills where the yarn is Z-spun in one direction, probably the warp, and S-spun in the other (ZS 2/2): Graves 15, 57, 90, 114 and 145. Three of these could be identified as wool and the ZS yarn combination has elsewhere proved to be almost exclusively used for wool at this date (Walton Rogers 1999, 145; Walton Rogers in press). The fabrics are medium in quality, from 8 x 10 to 12 x ? threads per cm and occur in male and female graves. It is possible that they are all relatively late in Phase 2, since one example comes from Phase 2b2-c, one from Phase 2c and one from Phase 2d-3, the others being less precisely dated.

ZZ and ZS twills had both been in use in the Roman period, but the 5th century saw ZS twills entirely disappear, only to re-appear in the 6th. They begin in the east and their re-emergence coincides with the arrival of plano-convex (Type A) spindle whorls and annular brooches in the eastern counties (Walton Rogers in press). It seems likely that these changes reflect two incoming waves of textile culture, the first bringing ZZ twills, probably from Jutland and Schleswig-Holstein, and the second ZS twills from Frisia and Lower Saxony (ibid.). ZS twills in wool did eventually saturate the whole of Anglo-Saxon England (Hedges 1979; Pritchard 1984, 53-7;

Walton 1989, 334), but during the period in which the Wasperton textiles were being buried, they were still mostly concentrated in the eastern half of the country.

ZZ tabby and tabby repp

Linen textiles woven in ZZ tabby were recorded in four female-gender graves, Graves 15, 43, 88 and 114. One example is of medium quality, 10 x 10 threads per cm, but the others are all fine, 19 x 14, 19 x 18 and 24 x 19 per cm. A tubular selvedge was tentatively identified on the medium quality piece from Grave 88. Although it is difficult to distinguish flax from hemp in mineral-preserved examples, the finest piece, from Grave 114, was almost certainly flax, to judge from its consistently fine fibres, thin central lumen and well-spaced cross-markings. ZZ tabby in linen was one of the standard fabric-types of Anglo-Saxon England and by the 7th century had overtaken twill in cemetery textiles (Walton Rogers in press).

Two further ZZ linens were woven in the form of tabby known as repp, in which one system of threads lies flat while the other weaves round it. Tabby repp often has an unbalanced thread-count and one, from a burial with male weaponry, Grave 75, has 20 x 12 threads per cm; and the other, from a grave with female accessories, Grave 80, has 25 x 12 per cm. In the latter, the textile has a textured effect caused by one thin and two thick threads being alternated in one system. The repp weave gives a slightly stiffer fabric than plain tabby. It appears in Anglo-Saxon graves in the 6th century, when it is almost always, as in both the Wasperton graves, on the backs of buckles (Walton Rogers in press). It is clearly not the material of the belt strap, which is usually leather, and it is possible that it represents some form of cummerbund or sash worn inside the belt.

2/1 twill

A single example of linen 2/1 twill was recorded in Grave 161, Phase 2b-d, a burial furnished with a spear, and a penannular brooch on the right side of the torso. It is a fine piece, with 22-24/Z x 18-20/Z threads per cm, and in two places there is a single throw of the weft in 1/2 (under one over two) instead of 2/1 (under two over one) (Fig.2). In a certain type of continental fluted weave, bands of 1/2 alternate with 2/1 to give a corrugated fabric (Hundt 1978, 157, 162-3), but the single threads in the Wasperton example more probably represent a weaving mistake, caused by the weaver's forgetting to drop back one heddle rod before lifting up the next one, so that two heddles were in action at the same time. 2/1 twill is one of the less common weaves of the Anglo-Saxon period and there are reasons to suppose that it derives from Romano-British practice (see

below). The presence in the grave of a penannular brooch, which essentially derives from the British costume and metalworking traditions, is therefore worthy of note.

Tablet weaves

Small areas of tablet weave were recorded in three graves, of which two have the simple 4-hole construction often used in cloth borders (Graves 24 and 39) and one the remains of a pattern (Grave 114). The position of the two twists in the Grave 24 suggests that they were part of a border, but perhaps on a coarser weave than the 2/2 twill that survives underneath it. In Grave 39 no possible main weave survives, but the coarse Z-plied wefts clearly protruding from the three remaining twists appear to be cut off, as when threaded back through the twists of an end-border (cf Crowfoot 1967, 37-8; 1983, 468-9; Crowfoot and Jones 1984, 18, 20). In Grave 114, the lie of a patch of finer twists, and the holes left by the missing twists, suggest a band in one of the patterned weaves preserved in earlier Scandinavian finds (Hougen 1935, plates XIII and XVII) and later found at Morning Thorpe Norfolk, graves 358 and 360 (Crowfoot 1987, 172-3). This type of band would have been woven separately and then sewn to the edge of the garment.

Weft-faced weave

A coarse weave in which the S-spun threads of one system completely cover the Z-spun of the other was recorded on the lowermost band of the bucket at the foot of Grave 57 (Phase 2d-3), underneath a medium-coarse wool twill, likely to be a blanket. It was not possible to identify the weave structure exactly, but it may be from a tapestry-weave border on a cloak or blanket, or more probably one of the weft-faced weaves which by the 7th century were used for coverlets and hangings. These last include a kilim-style rug placed over the feet of the man at Banstead Down, Surrey (Crowfoot 1976), and true tapestrywork in Mound 1 at Sutton Hoo, Suffolk (SH17, SH18) (Crowfoot 1983, 444-5, 461) and Taplow, Bucks (TB7) (ibid, 477-8). An ivory-ring bag made of leather and lined with tapestry weave was also recorded in a 6th-century burial at West Heslerton, N Yorks, grave 152 (Walton Rogers 1999, 147), but the position of the Wasperton remains suggests, rather, a rug or cover at the base of the grave. Coverlets and blankets have been suspected at a number sites and identified with certainty under the bodies in graves 36, 37 and 43 at Snape, Suffolk (Filmer-Sankey and Pestell 2001, 82-88, 92-5; Crowfoot 2001, 207-8).

Romano-British techniques

The main loom of the Anglo-Saxon settlements was the warp-weighted loom, which naturally lends itself to balanced weaves such as the 2/2 twill and tabby described above. While 2/1 twill

can with ingenuity be woven on the warp-weighted loom, apparatus which has the whole warp in a single plane, such as the two-beam vertical loom, represents an easier option for the 2/1 construction. The two-beam vertical loom was the main weaving apparatus of Roman Gaul and it is possible that it transferred into Roman Britain (Ferdière 1984, 218-222; Roche-Bernard 1993, 80-2, 90-1; Walton Rogers 2001; Wild 2002, 10-11). It is therefore significant that the 38 examples of 2/1 twill recorded in Early Anglo-Saxon graves cluster at the same sites as other techniques which probably have their origins in the Roman period (Walton Rogers in press). The first of these is the tubular selvedge, of which there are two at Wasperton, from Graves 39 and 77. The tubular selvedge is not exclusively a Roman technique, but it is one of the main constructions used by Gallo-Roman and Romano-British weavers (Wild in Wild and Bender Jørgensen 1988, 84-5; Wild 2002, 14-16; 2003, 89). The second is the soft-finishing of wool textiles by fulling and teaselling (Grave 24), which is a specialist craft introduced in the Roman period (Wild 1967, 1970, 83-4). This last tends to be associated with the better-equipped graves, and is found in the same areas as 2/1 twill and the tubular selvedge (Walton Rogers in press).

A recent survey of textiles from Anglo-Saxon cemeteries has shown that these three techniques form four main groups, in North Yorkshire, Norfolk, southern Essex and the upper Avon valley (Walton Rogers in press). They are often found at sites close to old Romano-British centres, such as Scorton near the Roman fort at Catterick in N.Yorks; and Bergh Apton, Spong Hill and Morning Thorpe, hard by the Iceni town, Venta Icenorum, in Norfolk. Wasperton belongs to the Avon valley cluster which includes four soft-finished textiles at Alveston and Stretton-on-Fosse, a tubular selvedge at Bidford-on-Avon and now one soft-finished textile, one 2/1 twill and two tubular selvedges from Wasperton, which, like Scorton, includes burials from the Roman period. It is therefore highly likely that these textiles represent the survival of Romano-British skills and technology. Wasperton Grave 161 has both a 2/1 twill and a penannular brooch, but for the most part the graves with Romano-British textile techniques are not differentiated by artefacts or burial practice from the others. This suggests that there was no separate cultural group wearing the textiles, but rather that in certain areas Romano-British knowledge and skills had been incorporated into a broadly Anglo-Saxon production process.

Cords

In Grave 111 cords have been wrapped around the base of both lateral knobs of a cruciform brooch and meet in a tangle of threads on the hinge. The hinge itself is covered up, but the cords almost certainly represent a repair to a broken pin fixing, comparable with that on a cruciform

brooch from grave 99 at Scorton, N.Yorks (Walton Rogers forthcoming a) and another binding a broken catch-plate to a square-headed brooch from grave 372 at Buckland II, Kent (Walton Rogers forthcoming b). In Grave 72 two cords running across the pin of a small-long brooch are perhaps more likely to come from the string for the beads found next to the brooch. Finally, in Grave 23 two different weights of cord, one multi-stranded and the other a fine two-ply, had been wrapped around the shield grip as a binding to protect the hand from the metal. In Grave 44 there was similar cording, which appeared to wrap round both the iron grip and the wood immediately behind it; and it is possible that some textile square to the grip in Grave 75 represents a form of strap binding, comparable with the 12mm-wide leather/skin strap wrapped neatly round the shield grip from Grave 103: another 20 mm wide from Grave 60 has been recorded by Cameron (this volume). Cords were used to bind the shield grips at Wakerley, Northants, grave 56 (Crowfoot 1989a, 170), yarn at Edix Hill, Cambs grave 29 (Crowfoot 1998, 242), woven tape at Westgarth Gardens, Bury St Edmunds, Suffolk, grave 62 (Crowfoot 1988, 17), and interlaced cut leather strips at Morning Thorpe, Norfolk, graves 1, 126 and 225 (Green, Rogerson and White 1987, 35, 69, 97, 174) and Westgarth Gardens, Bury St Edmunds, Suffolk, grave 41 (West 1988, 30-1, plate IV).

Textiles as clothing and covers

Female-gender graves

It is obvious from the manner in which the textiles engage with brooch pins and adhere to the backs of buckles that they represent the clothing of the dead. The easiest item to identify from the burial evidence is the women's 'peplos' which was a full-length tube-shaped garment clasped on the shoulders and represented archaeologically by a pair of matching brooches, one on either side of the neck (Owen-Crocker 2004, 42-54; Walton Rogers in press). The fabric of the peplos, on the brooches from Graves 43, 77, 116, 145 and probably also 11, proves to be a medium-weight plain twill, in at least two cases made of wool. In Grave 77 the twill has a 5mm-wide tubular selvedge which would almost certainly form the horizontal upper edge of the peplos; and in Graves 24 and 39 a simple tablet-woven border probably had the same function, although none of the main body of the cloth has survived. These plainer fabrics were fastened by small-long brooches in Graves 43, 116 and 145 and by saucer brooches in Graves 11, 24 and 77. Another plain wool twill fastened by a single disc brooch in Grave 8 may indicate a one-brooch peplos, although this grave was probably disturbed in antiquity (Scheschkewitz 2004, 6) and a second brooch may have been lost.

The coarsest plain twill used for a peplos came from Grave 111, where the textile had been pulled out of shape by heavy use. The twill was pierced by the pin of a cruciform brooch (Object 1) on the right shoulder and there were traces of a similar fabric on the small-long brooch on the left (Object 2). Non-matching brooches at the shoulders can sometimes represent a different clothing fashion (Walton Rogers in press) but in this instance they seem to clasp the traditional peplos. The non-matching brooches, the repair to the cruciform brooch with cords (see below) and the worn state of the peplos combine to suggest that this was not a very affluent woman. The function of a linen twill wrapped around an iron ring beside the small-long brooch is not known, but it has remains of stitching and Elisabeth Crowfoot suggests it may have been from a small bag, perhaps an amulet, hung round the neck or suspended from the brooch.

The peplos might sometimes be made from linen. In Grave 88 it is represented by the medium-weight linen diamond twill on the back of one of the two disc brooches on the shoulders: the pin clearly pierces folds of fabric rather than the cloth edge, which suggests that the peplos had some sort of fold-down border or bib. In Grave 13 a single small-long brooch clasped a plain linen twill in the region of the neck and shoulder (the grave had been disturbed and a second brooch may be missing). In Grave 114, the peplos fabric is a very fine linen tabby, on the pins of both saucer brooches at the neck and bordered by a patterned tablet weave: this would probably be the most valuable of the peploi recorded in the Wasperton cemetery. In Grave 167 matching cruciform brooches lie parallel in the region of the chest, but the body had been laid on one side and the linen twill on the backs of both brooches curls round the pin hinges in a manner that is typical of the peplos. It seems likely that the arrangement of the body has caused the brooches to fall against each other.

The peplos was usually worn on top of a dress, which must have been long-sleeved in those graves with metal clasps at the wrist. In Grave 145 the fabric of the dress is represented by a medium-weight wool ZS twill, which is sandwiched between the ZZ twill of the peplos and an area of human skin on the back of the small-long brooch on the right shoulder (Object 1). In Grave 24 it is likely to have been the linen diamond twill which forms the third, innermost layer on the back of the great square-headed brooch, inside the soft-finished wool twill of the cloak and the tablet weave thought to be the peplos border. The sleeved dress was sometimes worn on its own, without the peplos, and the garment of wool twill found with sleeve clasps and buckle on the chest of the crouched body in Grave 102 is probably such a dress, as is the fine linen tabby

clasped by a belt at the waist in Grave 15. The latter is a well-provided grave with a long string of beads, a pin, a girdle complex and a silver finger ring, but no brooches at the shoulders. In cemeteries where the age of the body can be judged, the presence of a pin but no peplos brooches, in early-mid 6th-century graves, correlates with women past their child-bearing years (Walton Rogers in press).

A cloak worn over the peplos is indicated by the soft-finished wool twill on the back of the great square-headed brooch in Grave 24, and the grey goat-hair diamond twill on a similar brooch in Grave 43. Head-veils or scarves reaching over the shoulders are represented by linen tabby in two graves. In Grave 88 the selvedge of the fabric seems to have been caught behind a peplos brooch, where it lies outside the linen diamond twill of the peplos; and in Grave 43 a particularly fine example forms the outermost layer of textiles on two brooches at the neck.

Male-gender graves

Relatively coarse wool twills with thread-counts in the region of 8 x 8 per cm have been recovered from three male-gender graves, each in a position where a blanket or cloak, either lining the grave or placed over the body, seems a likely interpretation. In Grave 57 the twill was at the foot of the grave on the metal fittings of a bucket. It was in association with the weft-faced weave thought to be a coverlet or rug, and a medium-weight wool twill, 10 x 10 threads per cm, which appears in soft folds on the bucket and re-appears on a knife at the waist. It seems likely that the weft-faced weave was under the body, the soft medium fabric covering it and the coarser textile somewhere between. There are further coarse wool twills, both 8/Z x 8/Z per cm, one in Grave 91 at the side of the head under the shield, and the other in Grave 103 beneath the shield placed over the lower legs. A fine linen diamond twill under the shield and beside the man's head in Grave 44 (Phase 2b2-d) may be from sheeting: textiles of this type sometimes appear as women's clothing fabrics, but they also occur in positions which suggest sheets and pillows in 7th-century men's and women's barrow burials, such as Sutton Hoo Mound 1 (SH 12), Crowfoot 1983, 422, 460), Mound 4 (ibid., 446) and Mound 5 (Walton Rogers 2005, 262), and Swallowcliffe Down, Wilts (Crowfoot 1989b).

Men's clothing is represented by textiles on the backs of buckles, which include medium-weight plain twills in Graves 22, 55 and 115 and fine linen 2/1 twill in Grave 161. It is not known whether these textiles represent tunics or trousers, since belted trousers are attested in the Roman Iron Age (Hald 1980, 328-335). A second garment of medium-weight twill was worn over the

belted 2/1 twill in Grave 161, perhaps a cloak or outer tunic, but as with most sites of this perhaps the reconstruction of men's clothing is more difficult than it is for women.	period,
For illustrations see the figures with Elisabeth Crowfoot's original report, but note th figures 1 and 2 are now in reverse order.	at