VINDOLANDA AND ITS TEXTILES: GAVVO AND HIS *TOSSEAE*

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THE theme of this colloquium is textiles and dyes in the ancient city. Vindolanda, however, is not a city, but a Roman auxiliary fort situated just behind Hadrian's Wall, the northern frontier of Roman Britain (Birley 1977; Bidwell 1985) (Fig. 1). Nevertheless, Roman forts shared several characteristics with Graeco-Roman cities (Goldsworthy and Haynes 1999). They had dense populations, a clearly defined social hierarchy and many of the hallmarks of Moses Finley's 'consumer city' (Finley 1985, 123-149, 191-196; Mattingly 1997). Soldiers grew some of their own food, often made their own pottery and were supplied with certain goods and services by their camp-followers in the civil settlements which grew up around the forts (Swan 2008; Dannell and Wild 1987, 66-70; Wild 1993, 85-86). But for their clothing and textiles they were reliant on supplies from the hinterland of the province – and sometimes much further afield (Wild 2002, 31-32).

The first fort at Vindolanda was built about AD 87 by the First Cohort of Tungrians on a plateau; but when it was doubled in size to *c*. 2.8 ha in AD 90/92 to house the next garrison, it was extended westwards over poorly drained terrain. The consequent waterlogging of floors and buildings proved to be a major bonus for archaeologists; for it preserved a range of organic materials which do not survive on most archaeological sites (Birley 1994, 12-14).

The organic deposits were first revealed in 1973 during drainage work to facilitate excavation of the stone buildings of the civil settlement outside the later stone fort. It became clear that not only was the filling of the western ditch outside the first timber fort waterlogged, but so were two successive timber phases of the commandant's house, and later a barrack block erected on the same spot (Birley 2002, col.pl. 4). To avoid wet feet, the residents repeatedly laid down carpets of bracken, straw and moss – and dropped their rubbish. Everything survives.

Archaeological excavation was a challenge, but the finds are without parallel. The most striking are over 1000 pieces of leaf tablets, thin sheets of alder wood used like papyrus for writing in ink. Reading them is helped by infra-red photography. They include both official records and private correspondence, and give us a vivid glimpse of the social and economic activities in and around the fort (Bowman 2003; Bowman 2006; Birley 2002). One tablet, for example – it was originally folded in half – seems to be an inventory of special textiles for banqueting used by Flavius Cerialis, the fort prefect of AD 101-105 (Bowman and Thomas 1994, 166-170, no. 196). It is headed *cubitoria*, 'for banqueting', and the last line reads *tunicas ce[natorias],* 'dinner tunics'.

Along with the tablets and old leather shoes were at least 700 fragments of textile, rags discarded on the floor after long use and repeated recycling. They are all of wool, as one would expect in bog conditions; no processed vegetable fibre survives, although linen bandaging soaked in honey is mentioned on a tablet listing medical materials (Bowman and Thomas 2003, 44-46, no. 591.b.10). How far this accident of survival skews our view of what soldiers wore is a debatable point. In Egypt, where animal and veg-

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PURPUREAE VESTES. *III Symposium Internacional sobre Textiles y Tintes del Mediterráneo en el mundo antiguo* (C. Alfaro, J.-P. Brun, Ph. Borgard, R. Pierobon Benoit, eds.), pp. 69-73.

Fig. 1. Location map of Vindolanda.

etable fibres are both preserved, wool seems to be the preferred fibre in early military contexts.

The initial discovery in 1973 led to three seasons of work on the deep deposits. I published in 1977 a catalogue and brief discussion of the 60 textiles which had been found (Wild 1977; Wild 1979). Ten years later in 1985 digging resumed for a further five years, and the textile corpus multiplied tenfold. A more precise chronology for the first four textile-bearing periods of occupation was established, thanks to dates on the tablets and the dendrochronology of building timbers, and it became theoretically possible to assign the deposition of a textile to a specific ten-year time-span, or less (for latest position on dating: Birley 2002, *passim*).

I started the cataloguing at once, but on a part-time basis. However, in 1992 the Leverhulme Trust gave my colleague Bill Cooke a three-year grant to enable two research assistants, Lucy Campbell and Colin Cork, to evaluate the textile corpus from a new angle – treating it as if it were modern material, and applying the latest digital technology, particularly image analysis, to answering specific questions, such as: for how long were the garments worn? How many different spinners supplied the yarn? Positive answers were obtained, and published (Cooke, Wild, Cork, Fang-Lu 1995; Cork, Cooke, Wild 1996; Cork, Wild, Cooke, Fang-Lu 1997); but this research was a distraction from the everyday data recording, and I am still doing that. The basic measurements have all been made, but I am still recording structural features such as selvedges and sewing.

The general character of the textile corpus is clear, though no definitive statistics are available yet (Wild 1992; Wild 1993). Nearly two-thirds of the fabrics are in 2/2 diamond twill, with a wide spectrum of weights – and presumably function (Fig. 2). Lucy Campbell has drafted the repeat patterns of nearly 300 pieces – though others are concealed under a thick nap. This diagram shows the relative proportions of different diamond centres present. Eventual-

Fig. 2. Close-up photograph of 2/2 diamond twill TT667 (photo by L. Fang-Lu).

VINDOLANDA TEXTILE VOCABULARY

BODY GARMENTS

tunica, 'tunic' (x16+)
stica, 'shirt'
(***tunica***) ***cenatoria***, 'dinner (tunic)'(x2+)
***cubitori*[*?a*]** 'dinner [?dress]'
***sunthesi*[*na*],** 'dinner suit'
synthesis, 'dinner suit'
subpaenula, 'under-a-cape' (x?2)
subucula, 'vest' (x2)
subarmalis, 'arming doublet'
subligar, 'loin cloth' (x2 pairs)
lumbare, 'loin cloth' (x10)
ventralis (***-e***), 'waist band' (x2)

ACCESSORIES

capitulare, 'head band' (x5)
sudarium, 'neckerchief' (x6)
udones, 'leggings' (x2 pairs)

OUTER GARMENTS

paenula, 'cape' (x4+)
abolla, 'cloak (for dining?)' (x2)
laena, 'cloak (for dining?'
(***sagum***) ***infibulatorium***, 'cloak' (x6)
sagum corticium, 'cloak of bark(?)' (x15)
sagacia, '?cloak' (x16)
superaria, 'outer garment' (x2+)
palliolum, 'cloak/blanket' (x24)
alic*(*u*)*la, 'small cloak'

SOFT FURNISHINGS

***bedo*x**, 'coverlet/curtain'
tossea, 'rug' (x4)
lodix, 'blanket' (x2+)
velum, 'curtain/hanging' (x5)

Fig. 3. Textile vocabulary at Vindolanda.

ly, the three main variables – number of warp and weft in a pattern unit, shape of the diamond centres and overall weight of the fabric – will be reviewed comparatively and the results interpreted.

Plain 2/2 twill is scarce (at 5%); its weavers use only Z-spun yarns, in contrast to the standard Z/S spin of diamond twills. 2/1 twill is even rarer.

The remaining 30% of the corpus is divided evenly between plain tabby fabrics of many types and finer basket weaves and half-basket weaves. Traces of decoration are few: a handful of tapestry-woven bands on half-basket weaves, spin-patterning on some diamond twills – and hints from dyestuff analysis that red, purple and blue were among the colours favoured by the garrison (Taylor 1983). There were scarlet, green and purple curtains, too, in one of the principal buildings (Bowman and Thomas 2003, 53-58, no. 596.19-22).

Where does the research go from here? At no other site in the Roman Empire, even in Egypt, can one juxtapose two such rich veins of textile information, documentary and archaeological, from a closely-dated context. The first exercise must be to discover how far they can be related to one another in detail.

I have extracted a list of textiles from the tablets, and divided it into body garments, accessories, outer garments and textile furnishings (Fig. 3). Some entries are familiar – *sagum* and *tunica* for example – while others are virtually unknown, like *tossea*. Gavvo, who features in our title, supplied three *tosseae* around AD 100 to the fort prefect (Bowman and Thomas 1994, 159-161, no. 192.6). He was probably a Briton, a trader, and *tosseae* are only attested in Britain and northern Gaul, in one case as a valuable leaving-present (Wild 2002, 25; Bowman and Thomas 1994, 160). They seem to have been rugs of some sort, and the best counterpart in the textile collection is a heavy rug with blue pile from the first fort. I have interpreted it as a sleeping-mat, but its Ghiordes-knotted pile is so far unique in the north-west provinces (Wild 2007) (Fig. 4).

A child's sock in diamond twill from the Period III prefect's house looks home-made, so one should not perhaps be surprised to find no reference to socks in the tablets (Wild 1993, pl.XII). A rather strange cap is also not mentioned, probably for the same reason; it is really basketry, skilfully plaited from the stripped stems of hair moss, *polytrichum commune*, which grows everywhere round Vindolanda (Wild 1994). The site team believe that it was worn by a lady as a fly-repellent – but it is more likely to have been worn by a soldier against the Vindolanda rain.

Listed in a Period III account are 15 *saga corticia*, literally 'bark cloaks'. They are said to be about 5 feet (1.5m) long, and at 15 denarii each are comparatively expensive (Bowman and Thomas 2003, 53-58, no. 596. 11-12). Can they really be sheets of bark? Or, thinking of the hair-moss cap, could they be woven of tree-bast? Another suggestion is that they were of bark-tanned leather. There are objections to all of those hypotheses. The research on the lead tags from Siscia by Ivan Radman-Livaja (in this volume) promises a new perspective.

Another Period III account records that Lucanus

Fig. 4. Close-up photograph of knots on mat TT639.

paid for his *ventralis*, 'waist band' to be repaired and sewn together (Bowman and Thomas 2003, 68-69, no. 609.b.2). Contemporary sculptural evidence – a torso from Casacco in North Italy – indicates that the *ventralis* was worn below the military belt to help support the weight of the weapons suspended from it (Ubl 1989, Abb.6, 7). Re-enactors have found that the *ventralis* also cushions the back against chafing from armour (Graham Sumner, pers.comm.). A heavy-weight Vindolanda diamond twill would serve the purpose nicely.

Chasing minutiae must not distract us from addressing some of the wider questions posed by the Vindolanda material, such as: where did the textiles at Vindolanda come from?

Gavvo and his fellow traders supplied some of the clothing, we know. One account lists 3 *saga*, 7 *sagaciae*, 6 tunics and 7 *palliola* 'from Gavvo' (Bowman and Thomas 1994, 178-180, no. 207). He will have relied for the bulk of his goods on weavers in Britain, but exotica for the prefect's entourage probably came from across the Channel. How far the military authorities controlled as well as stimulated the trade is an open question.

Given the frequent changes of garrison at Vindolanda, the extent of personal import of clothing by incoming troops should not be underestimated. The Tungrian and Batavian cohorts who manned the fort in pre-Hadrianic times came from the Lower Rhineland where one might expect to find a textile repertoire similar to that of Britain. If the dominant diamond twills at Vindolanda reflect Iron Age traditions both in Britain and the Rhineland, the challenge is to identify nuances within an apparently uniform corpus. Lucy Campbell's work on diamond pattern units is a start, as is Colin Cork's demonstration that the fingerprint of an individual spinner can be recognised by image analysis (Wild, Cooke, Cork, Fang-Lu 1998). As to other weaves: Hero Granger-Taylor has shown that in the eastern provinces 2/1 twill was often adopted for cloaks and capes, half-basket weaves for tunics and light cloaks (Granger-Taylor 2007; Granger-Taylor 2008, 15). Neither weave is likely to have been in the standard repertoire of the northern British weaver so soon after the conquest.

There was an old-fashioned alternative not available to the ordinary soldier. The prefect's wife maintained the honoured tradition of *lanificium* in her own household, it seems, spinning and weaving wool. On one occasion Gavvo sold her 38lbs of it, presumably ready sorted and washed (Bowman and Thomas 1994, 159-161, no. 192.4-5). Her slaves could have converted that into 10 tunics or more.

In sum: the finds from Vindolanda have given us some rich food for thought on broad technological, social and economic issues. The problem is to avoid indigestion.

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