

# Medieval Textiles

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## Woven "Viking" Wall Hanging

By Jacqueline James, York 2001

One of the most interesting custom orders I have ever undertaken was in 1989 when I was approached by Heritage Projects Ltd. and asked to weave a wall hanging for permanent display in one of the reconstructed houses at the Jorvik Viking Centre, Coppergate, York.

Research for the project began with consultation with Penelope Walton Rogers at the textile conservation lab of York Archeological Trust. I was privileged to see some of the results of Penelope's research of textile fragments from Coppergate Viking-age site.

One of the woven fragments I examined was thought to have originated from a curtain or wall hanging. The sample, *wool twill 1263*, was used as a reference to determine the fiber content, weave structure, sett and dye I would use to produce the woven fabric. Although the piece has two adjacent hemmed sides, and is not square, it is easily seen that it has been pulled out of square by hanging from the corner and other points along one edge, an indication of it having been used as a wall hanging or curtain. Another interesting feature of this textile is a single s thread that turns back upon itself to create a gore in the fabric. This is indicative of being woven on a warp-weighted loom where no spacing device is used to keep the warp evenly distributed. Because this gore can only occur in the weft, it also indicated the direction of the warp, which is a Z spun system.

The completed wall hanging measured 45" x 75" and was made with 5s Z-twist wool yarn dyed red with madder root. I dyed the yarn prior to the weaving process. The structure used was balanced 2/2 twill with a 12 epi sett. As I do not have a warp weighted loom, commonly used during the Viking era, the weaving was done on my Glimakra countermarche loom. The finished fabric was washed, but not fullled. A small hem was hand stitched along all four sides.

## Medieval Color & Weave Textiles

by Nancy M. McKenna

Color has always been important to people. As noted in *Textiles and Clothing*, plaids are not uncommon in

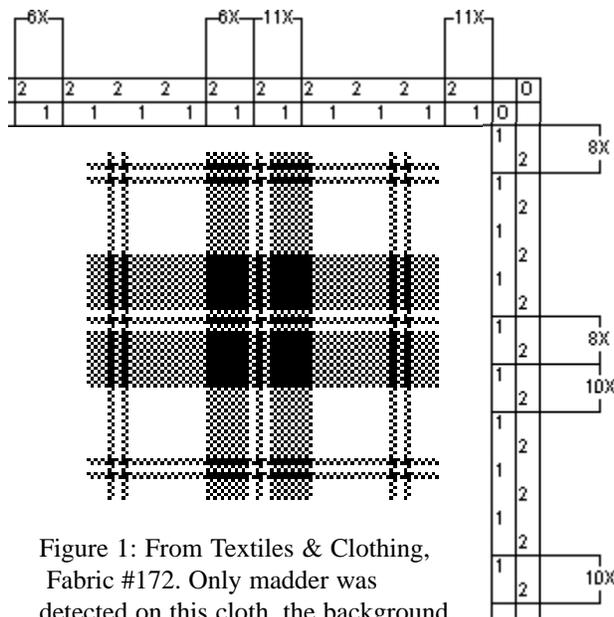


Figure 1: From *Textiles & Clothing*, Fabric #172. Only madder was detected on this cloth, the background being pink and the stripes being near black. Because of waterlogged conditions, it is suggested that the background may have been originally undyed. Late 14 c.

the medieval period. They have been found in many areas of Europe, and even in China. As a general rule, older textiles are generally woven in 2/2 twill, and later textiles in tabby. Diamond twills often use color in one direction and another in the other to show the pattern formed by the weaving. Textiles woven in

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*Cont'd on page 6*

Slavic nations were more likely to have warp or weft dominant stripes in color.

Hems and cuffs from clothing are areas most likely to have a color and weave pattern, even if the rest of the garment is solid in color.

Figure 2: Textiles & Clothing, cloth sample #275. Pink and Black, madder is the only dye detected. Late 14 c.

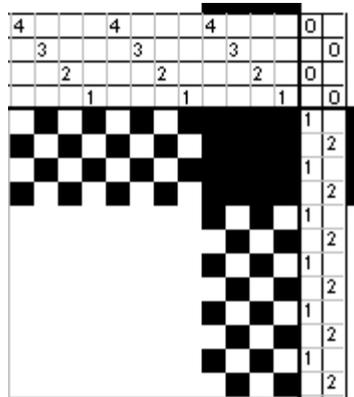


Figure 3: From Textiles & Clothing, cloth sample #38, #329 & #159. Worsted, fine (merino range) to medium wool. This cloth was used to line buttoned garments the outer fabric of each was coarser. Range of thread count is 8 to 28 threads/cm. In the case of textile #329 this wool was used as the outer cloth as well as the lining.

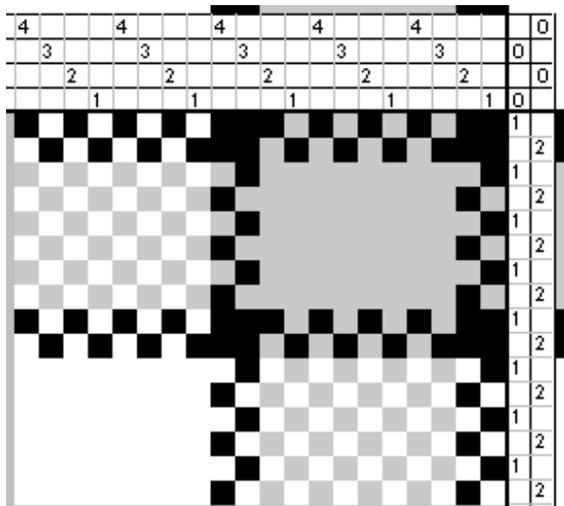
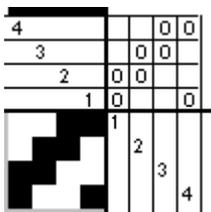


Figure 4: Textiles & Clothing cloth sample #64. Colors are natural, madder dyed red, and a darker color, dye material unknown. This pattern is found as early as the 6th and 7th C but in twills. Originally a firmly woven cloth that did not ravel when cut, this sample was part of a buttoned sleeve.

Figure 5: Textiles & Clothing cloth sample #7. 36 threads per inch in both warp and weft, woven of worsted singles. Colors are those of natural dark and light wool.

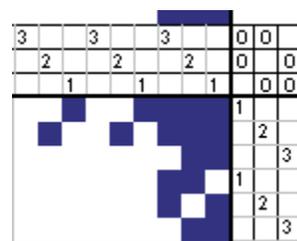
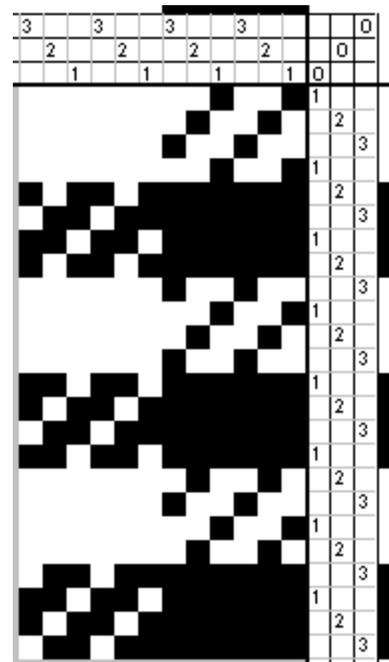


Figure #6: Textiles & Clothing cloth sample #9. Natural and madder dyed wool.

Earlier clothing was constructed of squares of cloth as woven, with seams along selveges, and gores added for ease of movement (for example, the woman's costume from Huldremose, 2nd Century AD in the Danish National Museum). And who can forget Boadicea who is described by the Roman historian Cassius Dio thusly:

"In person she was very tall, with the most sturdy figure and a piercing glance; her voice was harsh; a great mass of yellow hair fell below her waist and a large golden necklace clasped her throat; wound about her was a tunic of every conceivable color [possibly plaid] and over it a thick chlamys..." (Payne, Blanche: History of Costume, 1965)

Later clothing was often constructed on the bias. Thought to be a symptom of conspicuous consumption by the upper classes, this construction method is shown more in images than found in samples, although the small size of samples found in the archeological record may make judgement calls as to which direction the cloth was oriented in a garment difficult.

## ‘THE HANGINGS ABOUT THE HALL’:

An Overview of Textile Wall Hangings in Late Medieval York, 1394-1505

By Dr. Charles Knightly

### Introduction

This brief survey attempts to answer some of the questions I have been asked about wall hangings in late medieval York houses: who owned them; which rooms were they used in; how were they hung; what were they made of, what did they look like, and how much did they cost? It deals essentially with the fifteenth century, and draws mainly on three collections of York manuscript archives: the Dean and Chapter Wills in York Minster Library [A in text references], and the Dean and Chapter Inventories [B] and the Diocesan Will Registers [C] in the Borthwick Institute of Historical Research. Its concern is domestic wall-hangings and -where these formed part of a ‘room-set’ - related textile accessories like ‘bankers’ (seat covers) and cushions: domestic bed-hangings and hangings in churches are excluded. Even within its remit, moreover, the survey does not claim to be comprehensive.

Wall hangings are very frequently recorded in late medieval York wills and inventories. This survey alone covers more than fifty such documents (1394-1505) which describe the colour, material, subject or size of hangings, leaving aside many others where merely their existence is noted. Their ownership spans the whole range of the York ‘will-making classes’, from leading citizens and wealthy clerics with multiple sets of matching ‘hallings’ and ‘chamberings’ in tapestry or fine wool, valued in pounds, down the single cheap ‘painted cloths’, worth a few pence, owned by modest craftsmen or poor widows.

From the household inventories which furnish a room-by-room breakdown of goods, it is clear that wall-hangings were most frequently displayed only in the ‘hall’ or its equivalent, although in a few late cases they are recorded only in the principal bedchamber. The slightly better-off might afford hangings both in the hall and a single bedchamber or ‘parlour’ - the most valuable items being in the hall - while the wealthy possessed complete sets of hangings for several bedchambers.

Among the most minutely described of these multiple sets belonged to William Duffield (d. 1452), a wealthy pluralist cleric who held canonries at Beverley and Southwell as well as York Minister, his principal base.

His ‘York hall’ displayed a complete ‘halling’ set in matching blue ‘say’ cloth (for textile definitions see below). This comprised a ‘dorser’ (hung ‘at the back’ - *ad dorsum* - of the high table) thirteen yards long by four yards deep, with two ‘costers’ (for the side walls) each nine yards long by two and a half yards deep. One bench was draped with a matching blue ‘banker’ (lined with canvas, perhaps to stop it slipping) eight yards long and twenty-seven inches deep, and equipped with ten matching feather-filled cushions: even the hall cupboard had a matching blue say ‘cupboard cloth’. All this blue was set off by a contrasting red say banker, more valuable than the rest and thus perhaps used to drape the high table benching. The complete halling was valued at £2 12/10d, and in addition Duffield owned a set of matching ‘worsted’ hangings in blue (clearly his favourite colour) for his ‘principal bedchamber’, valued at 9/10d, and a third set of red worsted hangings, valued at nearly £1, for his second chamber’.

The three sets of hangings bequeathed by Agnes Selby (d. 1464 A.) - to take another example from the upper end of the scale - were probably rather more costly, though their value is not recorded. The ‘best’ set included hangings, banker and six cushions all of ‘*Arraswerke*’ (imported Flemish tapestry), while the second and third sets ‘in red and green’ (cloth?) were accompanied, intriguingly, by sets of cushions decorated ‘*cum Wervolfes*’ - an unusual and perhaps rather disturbing device, but doubtless useful conversation pieces.

Agnes Selby belonged to a wealthy Lord Mayoral dynasty, intermarried with the minor aristocracy: but far less prosperous York citizens also owned complete room-sets of hangings, even if these were in distinctly inferior materials like ‘painted cloths’. The estate of John Colan (d. 1490 B), a German-born goldsmith living in rented property off Stonegate (near the restored ‘Barley Hall’), was for instance valued at less than £10 after payment of debts. Yet his small hall displayed a set of four hangings ‘of green colour with flowers’ - doubtless ‘painted cloths’, since their total value was only 2/8d - together with three red (cloth?) bankers (value 10d) and a dozen ‘old red cushions’, at 1/6d. His ‘parlour’, meanwhile, had two individual hangings (again doubtless painted cloths) depicting the Trinity and ‘the images of St. George and the Virgin Mary’, valued at only 3d each.

The fact that the ‘appraisers’ conscientiously recorded the exact dimensions of Colan’s hall hangings - an admirable York practice - allows us at least to guess at

how such modest pieces were arranged. Two of them were each four yards and two three yards long, but they were only four and a half feet deep, suggesting that they were hung in strips above the raised backs of a fixed bench running round three or four sides of a small room. Canon Duffield's seven and a half foot deep 'costers' - given a higher room - may have been hung in the same way, though his twelve foot deep 'dorser' perhaps extended from ceiling to floor (fig. 1).

Such hangings - and even costly tapestries, as evidenced by the perforations in surviving examples would generally have been suspended from iron 'tenterhooks' driven into the wall, either by direct 'snagging' or via rings sewn onto the fabric. York indeed possesses the only contemporary illustration I know of this practice, in panels A/2/2 and A/3/2 of the fifteenth century St. William Window in the Minster north-east transept (fig.2). There Roger of Ripon, mounted on a very precarious 'self-propping ladder' is shown fixing up a wall hanging as a stone block accidentally drops on his head. He was however saved from death by the miraculous intervention of St William, as the inscribed block itself - now in the Minster undercroft - still survives to prove.

Tapestries, Embroidered Hangings and Woollen Says  
The hanging shown in the St William window appears to represent striped and damask-patterned silk brocade, an expensive imported textile often depicted by contemporary artists, but for which I have found no evidence in York wills. There the most valuable hanging-fabric mentioned was probably woven 'Arras' (like Agnes Selby's) or 'tapestry werk', and even this is uncommon, probably because of its cost. A contemporary inventory from outside York (that of the very wealthy Sir Thomas Burgh of Gainsborough, Lincolnshire, d. 1496, P. R. O. Probate 2/124) shows that even low-grade tapestry had a second-hand value of around 8d the yard, while a yard of figured 'imagery werk' tapestry containing gold thread was valued at 2/- or more. The complete set of hangings, bankers and cushions 'de opere tapestre' belonging to the York innkeeper Robert Talkan (d. 1415 B) must have been of the cheaper sort, since it totalled only 33/4d. Even so, it was valued at over twice the price of the red and blue cloth set with which it shared his hall.

The red hangings and bankers 'with the arms of Lord Hastings' in Talkan's chamber, conversely, was valued at 66/8d, twice the price of his tapestries. Their

description and price suggest that these may have been embroidered hangings, as may also have been Canon Thomas Morton's (d. 1448 B) green and red *paled say* cloth hallings 'with the arms of Archbishop Bowet', or his red say set 'with the arms of St. Peter'. If so, the embroidered heraldry may have been embroidered using the 'couching' technique, and certainly the alderman's widow Matilda Danby (d. 1459 C) owned a '*couched hallyng*'.

Hangings of plain woollen cloth, however, were far more common than either tapestry or embroidered hangings: apart from painted cloths, indeed, they are the type most often recorded in York documents. Occasionally (as in William Duffield's chamber) the fabric is called 'worsted', but generally it is called 'say', a light but closely-woven woollen serge which (given some changes in specification) remained universally popular for wall and bed-hangings from the fifteenth until the mid seventeenth century.

Say hangings might be of a single colour: Duffield's were mainly blue (an expensive colour to dye) but the cheaper red and green are also often recorded. Very popular, too, were hangings of '*paled say*', woven in 'pales' or vertical stripes of equal width in two contrasting colours, generally red and green. Such hangings could be expensive. Archbishop Bowet's (d. 1423) sumptuous new red and green *paled halling* set was valued at over £8 - perhaps because it included embroidered heraldry - but Thomas Baker's (d. 1436 B) red and green *halling* was probably more typically valued at only 5/-. Both Hugh Grantham (d. 1410 B) and Hawise Aske (d. 1451 B) had *paled* hangings in black and red, while those of John Crackenthorp esquire (d. 1467 C) were more unusually '*paled*' in three colours, red, white and blue. This last, however, may perhaps have been a painted cloth rather than a say hanging.

### Painted cloths

In York, as throughout England, painted cloths were much the most popular cheap wall hangings from the late medieval period until the mid seventeenth century. The earliest York reference I have found is to a painted *dorser* belonging to John de Birne, rector of St. Sampson's, who died in 1394 (C). Their great attraction was that they offered brightly coloured and often figurative wall decoration - much cheaper to paint than either to embroider or to work in tapestry - at a very low cost. The shop stock of the York tailor John Carter (d. 1485 B), for example, included twelve yards of '*panetyd*

*clothes*' at 2/8d, or only 2\_d a yard, while that of the chapman Thomas Gryssop (d. 1446 B) included six whole painted cloths (admittedly 'old') at 5/- the lot. Their cheapness, however, was counterbalanced by their lack of durability: experiments with authentically produced modern replicas have shown that they degrade quite rapidly, especially when the painted surface is cracked or damaged by rolling or folding for storage. For this reason their second-hand value could be very low indeed. The most expensive York example was Richard Dalton's (1505 B) complete painted hallings at 7/-, but their average second-hand value seems to have been only one or two pence a yard, and two whole cloths belonging to Henry Thorlthorp, vicar choral (d. 1427 B) were appraised at only a penny each.

The low value and ephemeral nature of painted cloths has ensured a very low survival rate, and no indisputably medieval English examples are known to exist. Analysis of Elizabethan and later cloths carried out for 'Barley Hall' - has however shown that they were generally made of coarse linen canvas, thoroughly sized with animal-skin size and then painted with inexpensive pigments including red and yellow ochres, red lead, verdigris, lead white, lamp black and 'vegetable' (weld) yellow. Stencils may have been used for repeating patterns.

As elsewhere in England, York painted cloths seemingly imitated more expensive types of hangings. Some were painted in vertical stripes to resemble 'paled says', and others imitated 'bosage' and 'millefleurs' tapestries. Thus Alice Langwath (d. 1466 C) had a painted cloth 'with roses'; John Colan (d. 1490 B) green cloths 'with flowers'; Thomas Baker (d. 1436 B) two cloths 'with batylments'; Thomas Northus, vicar choral (d. 1449 A) one 'with an eagle in the middle'; William Coltman (d. 1481 B) two cloths 'with certain birds', and Richard Dalton (d. 1505 B) one 'with trees'.

More intriguing are the painted cloths which imitated 'tapestry of imagery work' by depicting figurative religious subjects. Though particularly favoured by poorer clerics, many of these were also owned by York lay people, and the descriptions in the documents throw welcome light on the domestic iconography of York houses. We can only guess at their appearance, but it is at least possible that some may have resembled in style the illustrations in the Book of Hours locally produced in c. 1430 for the Bolton family, and now in York Minster Library (Add.MS.2).

Among the earliest described belonged to Robert

Lyndesay (d. 1397 B), parish clerk of All Saints North Street, which depicted 'the image of Christ sitting in the clouds'. John Underwode, clerk of the vestry at York Minster (d. 1408 A), had a cloth 'of the Last Resurrection', Henry Thorlthorp (d. 1427 B) and John Danby (d. 1485 A), vicars choral, both had cloths 'with the Crucifix'; and cloths 'with the Trinity' are recorded for the goldsmith John Colan (d. 1490 B); the widow of Thomas Person (d. 1496 A), and John Clerk, chaplain of St Mary Magdalen chapel (d. 1451 B), whose hanging also depicted St. John the Baptist and St. John the Evangelist. These two saints also appeared on a cloth belonging to John Tidman, chaplain at All Saints, North Street (d. 1458 C), who likewise owned painted hangings with 'a great image of the Virgin' and with 'the history of the Five Joys of the Virgin'. Agnes del Wod (d. 1429 A) favoured images of St. Peter and St. Paul; William de Burton, vicar of St. Mary Bishophill (d. 1414 A) had a cloth with 'the history of St. Thomas of Canterbury'; and John Colan (d. 1490 B) one with 'the Virgin Mary and St. George'; while both John Kexby, Chancellor of York Minster (d. 1452 B) and Janet Candell (d. 1479 C) owned cloths depicting 'the Seven Works of Mercy'. Secular subjects were seemingly much rarer, though the vicar of Acomb, Henry Lythe (d. 1480 A) had a 'halling painted of Robyn Hude'.

## Conclusion

A brief survey of the very rich archival resources surely demonstrates that wall hangings and related textile accessories were an important element of even quite modest house interiors in York. Nor is there much reason to doubt that a similar situation obtained in other communities less blessed with surviving documentation. It follows that such interiors were considerably more comfortable and much more colourful than is even now generally recognized or admitted. Thus the bare stone walls or 'wealth of exposed timbering' which are still the norm for modern representations of the later Middle Ages - and for the great majority of medieval houses displayed to the public - give a seriously false and misleading impression of medieval domestic life.

## Further reading

Though much has been written about tapestries proper, lower-grade medieval hangings like those described here have been little studied, and painted cloths scarcely at all.

Crowfoot *et al.*, *Textiles and Clothing c.1150-1450* (HMSO: Museum of London 1991) is the best technical

*cont'd on page 6*

*Hangings, cont'd from page 5*

work, though it naturally refers mainly to London. K. Staniland, *Medieval Craftsmen: Embroiderers* (British Museum 1991) is invaluable on its subject, and A. and A. Gore, *The History of English Interiors* (Phaidon 1991) has a chapter on the medieval period with reference to hangings.

Tudor and later interiors are rather better covered, and the following have useful references back to medieval furnishing textiles:

V. Chinnery, *Oak Furniture: The British Tradition* (Antique Collectors Club 1979)

G. Beard, *Upholsterers and Interior Furnishing in England, 1530-1840* (Yale 1997)

P. Thornton, *Seventeenth-Century Interior Decoration in England, France and Holland* (Yale 1978).

This article was first published in Medieval Life:  
<http://www.medieval-life.co.uk>

Dr. Kightly is best known for his involvement with the York Archaeology Trust and Barley Hall in York, England

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*Viking Wall Hanging cont'd from page 1*

Madder Dye with Alum mordant (for 1 lb. of wool):

Mordant:

4 oz alum

1 oz cream of tartar

4 gallons of water

Dye: Dissolve ½ pound of madder root powder in 4 gallons of water. Add 1 pound mordanted, whetted wool. Bring temperature to 185 degrees F – maintain heat for 1 hour, stirring occasionally. Allow wool to steep in dye bath overnight. Rinse thoroughly.

Jacqueline James of York, England established her weaving business in 1989. She specializes in making individually designed hand-woven rugs and wall hangings for commission and exhibition. Her work is in public and private collections in the UK and USA. Major commissions include weavings for Westminster Abbey, York Minister and Blackburn Cathedral.

A photograph in color of this wall hanging can be seen in *Chromotography and Analysis*, June 1991 p.7  
More of her work can be viewed at:

<http://www.handwovenrugs.co.uk/>

*Color & Weave, cont'd from page 2*

The emergence of these garments is consistent with the removal of the poor from their small towns in England so that large landowners can annex the land to graze their increasing flocks of sheep raised for wool. This was coupled with the importation of Flemish weavers and government (Edward III) pressure to increase wool and cloth production in the late 14th century AD. Although this caused an increase in crime in some areas, it meant an increase in opportunity for spinners and weavers as well as an increase in overall productivity which corresponded to an increase in disposable income across all classes of society.



Figure 7: detail redrawn from *The Martyrdom and Death of St. Vincent* by the Master of Estamariu, dated the second half of the 14th c. The Plaid is composed of wide red and narrow black warp & weft stripes on a green ground. St Vincent of Valencia, Spain was martyred on the blazing gridiron in 304 AD.

Figure 8: redrawn detail from the *Retable of St. Jean*, dated mid 14 c. The reproduction this is sketched from was in black and white. The ground is medium in color with dark wide and white narrow stripes in the warp and weft.



**Sources of Further Information:**

Bender-Jorgensen, Lise. *Textiles & Clothing until 1000 AD*

Moore, Ellen Wedenmeyer, "Medieval English Fairs: Evidence from Winchester and St. Ives," *Pathways to Medieval Peasants*, ed. J. A. Raftis (Toronto, 1981)

Tompkins, Ken. *Wharram Percy, The Lost Medieval Village*.

<http://loki.stockton.edu/~ken/wharram/wharram.htm>

## The Discovery of Woad Pigment

By: Gayle Bingham

As most of you know, I have been dyeing with woad for many years. It is my very favorite source of blue dye. In the past, I have used the fresh woad leaves for dyeing. And, as textile dyers, we know, it takes a large amount of woad leaves to dye a small amount of fiber or yarn. So you will understand my joy upon discovering a source of woad pigment.

With many discoveries, there is a certain amount of serendipity. This certainly was true for me. It all began with a magazine article found by a friend. This feature article told about Catherine Haeden's shop, in Toulouse, France, named: La Fleuree de Pastel, where woad dyed products are sold. The word for woad, in French, is pastel. Also, the article mentioned, Henri Lambert, the manufacturer of woad pigment and woad products. I sent a letter to Ms. Haeden telling her of my interest in woad and asking, if possible, to be put in touch with Henri Lambert.

Ms. Haeden, realizing I was a devotee of woad dyeing, very kindly faxed my letter to Denise Lambert, co-owner of Bleu de Lectoure. Denise sent a lovely catalog of their products along with their e-mail address: [bleupastel@aol.com](mailto:bleupastel@aol.com) and website. This began a lively correspondence with orders of woad pigment and some of their other products.

You will learn many fascinating facts about woad and their methods of manufacturing from their website. So for now, I will give a short overview of their company and procedures. Their company was started in 1994. It is located in an old 18<sup>th</sup> century tannery. Acres of woad plants are grown. It takes one ton of woad leaves to produce 2 kgs. of pure woad pigment. A method of extraction, using modern technology draws on traditional procedures. The Bleu de Lectoure, along with University of Toulouse developed this process. What I found so comforting to know, is that there is no use of chemicals; it is truly a natural process. This process is described in detail on their website: <http://www.bleu-de-lectoure.com>

In addition to the woad pigment, there are many other products manufactured at Bleu de Lectoure. There are decoration products, such as oil paint and mural wax. The art products, just to name a couple, are: woad ink and woad water color. There are many

textile products: towels, scarves, and more. Decorative products such as bead necklaces and earrings and other beautiful items are available. The video produced by Henri and Denise is excellent. So you see, you will find many temptations on their website.

As a confirmed woad dyer, I am so thankful that the production of woad pigment in our modern world has been revived. And to have such wonderful people as Henri and Denise Lambert in charge of this company, adds to the joy, for me. There is no other blue that gives the warmth and ethereal quality than woad blue.

## A Renaissance Cheese

By: Gayle Bingham

Several months ago, I discovered a delightful Renaissance cheese. This discovery was made at The Central Market in San Antonio, Texas. When my husband I and I approached the cheese department, we noticed a lovely painted sign above one section of the cheese cases. This sign, with a painting of a Renaissance family, described today's Montagnolo cheese.

Today's Montagnolo cheese is a modern reincarnation of a Renaissance delicacy that was made by past cheese makers in the Bavarian mountains. This soft, blue veined cheese was intended for the nobility and was greatly appreciated. But with the demise of feudal Germany, this cheese disappeared—until the present time.

The young lady in charge of the cheese department, very generously, allowed me to take photos of the sign and the large round of cheese. This enabled me to discover the name of the company that produces this soft and wonderfully creamy, blue cheese. The company, Kaserei Champignon, is located in Germany. This presented an interesting problem: learning the correct address for this company. Since I am a subscriber of German Life Magazine, I contacted Tom Lipton, the European Representative. He very kindly sent me the company address.

I wrote to the company telling why I was so interested in the Montagnolo cheese, and ask for any information they could send to me. A few weeks later, I received a phone call from one of their representatives, Birgit Bernhard, who is attached to their East Coast offices. Birgit was on her way back to their

*Cheese, cont'd on p. 14*

## Trade Cloaks: Icelandic Supplementary Weft Pile Textiles

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Among the collections of northern and northwestern Europe are represented no fewer than three types of supplementary weft pile textiles dating to the early Middle Ages. Each textile type seems to have been used for specific purposes. The *rya* type, a coarse weave with a spun pile weft, was apparently used much as it has been throughout the last thousand years, as a domestic furnishing. The shaggy type, a medium-coarse weave with an unspun pile weft, was so favored for use as cloaks that the histories of at least two countries, Iceland and Ireland, include it as a defining example of national clothing. Perhaps in imitation of the shaggy cloak, a third type also existed. Its ground weave varied between coarse and fine, and it was sometimes heavily fulled and even sometimes napped. Its pile was produced by darning unspun or loosely twisted locks of wool or other animal hair into the ground weave with a needle. The darned pile textile was used for hats and possibly also for cloaks or other bad weather gear. This article will focus on the second category, the shaggy cloak textile type with woven-in locks of wool, with special attention to Icelandic materials.

Iconographic and written references to pile textiles exist from the early Middle Ages onward. The earliest medieval depiction of someone wearing a pile woven garment is a portrait of some Vandals, circa 450, wearing shaggy “cloak-coats” (Guðjónsson 39). Later in the Middle Ages, it was typical for images of St. John the Baptist, travelers, and hermits to be depicted wearing pile cloaks (Guðjónsson 52). Some medieval sculptures of St. John in his pile cloak are wonderfully detailed, to the point that the ground weave of the textile (coarse tabby) is clear.

References to pile cloaks (*vararfeldir*) abound in the Icelandic sagas, although they are frequently and inaccurately translated into English as “fur” cloaks, which is really only the correct translation for the “*skinnfeldr*” (Guðjónsson 68). According to the *Heimskringla*, Haraldr Greycloak, a tenth-century king in Norway, was so named for his acquisition of a grey *vararfeldr*. Other early written references to pile textiles of the period mention the *villosa*, believed by some to be shaggy cloaks or coverlets, that were traded by the Frisians in the eighth century (Geijer

1982, 195-196). However, early pile textiles from Frisia have spun pile wefts, which look more like *rya*—and like hair!—than like fleece (see Schlabow). Adam of Bremen, writing about 1070, mentions *faldones*, traded by the Saxons to Prussia (Guðjónsson 70). The Irish are especially renowned in literature and history as well as in art (Sencer 6) for having worn shaggy cloaks throughout the Middle Ages and well into the Renaissance, often in defiance of English edicts (Pritchard 163-164).

Legal references are even more explicit. In the early Middle Ages, Iceland and Norway accepted and regulated as legal tender certain types of domestically produced cloth such as *vaðmál* and shaggy cloaks. During that time Iceland exported several grades of shaggy cloaks to Europe, some of which are detailed in the oldest part of *Grágás*, the earliest written Icelandic legal code, some of whose portions date back to the eleventh century. Early in Icelandic history, when silver was plentiful but cloth was scarce, six ells of *vaðmál* (the standard legal tender grade of 2/2 twill wool cloth) were worth one *eyrir*, or about 24.5 grams of silver (Hoffmann, 195). As the years went on, this number ballooned to 48 ells before stabilizing at about 45 ells around the year 1200 (Dennis et al., 21n, 269n). Standard “trade cloaks,” or *vararfeldir*, had to measure “four thumb-ells long and two broad, thirteen tufts across the piece” (Dennis et al., K § 246, p. 207). That works out to about 205x102 cm; when the cloak was worn, the rows of locks would hang vertically. At two *aurar* apiece, they were originally worth twice as much per ell as *vaðmál*. However, during the same period in which the valuation of *vaðmál* plummeted, the valuation of *vararfeldir* apparently remained constant, possibly due to their being more labor-intensive to produce than *vaðmál*. Better quality pile cloaks, *hafnarfeldir*, presumably with more dense pile, were also regarded as legal tender in the same statutes, but no price or standard was mentioned (Guðjónsson 68-69).

Archaeological remains from the period confirm the evidence of literary and artistic sources. Remnants of this specific type of pile textile dating to the tenth and eleventh centuries turn up in several locations including Heynes, Iceland; Dublin, Ireland; the Isles of Man and Eigg; York, England; Birka and Lund, Sweden; and Wolin and Opole on the Oder River in Poland. One famous piece called the Mantle of St. Brigid has also been preserved at the Cathedral of St. Salvator in Bruges, Belgium. Believed to be Irish in origin, it

was originally donated to the Cathedral of St. Donaas, also in Bruges (Sencer 7), by Gunhild (the sister of Harold Godwinsson) sometime between 1054 and 1087. A so far unique use of pile weave is also represented by the tenth-century Fragment 19B from Hedeby, Denmark. It was dyed with madder and sewn to a man's jacket garment—perhaps the only medieval instance of pink fake fur trim (Hägg 1984, 77)!

A special note is needed here about the St. Brigid piece. Some modern authors, in an attempt to explain how the piece came to look like it does, have drawn parallels to various traditional Irish techniques for producing a napped surface. All these methods rely on raising the nap by teasing up fibers from the fluffy weft yarn—somewhat the same method used to produce broadcloths in the High Middle Ages. Allegedly the St. Brigid piece was then rubbed with pebbles and honey in order to curl up the resultant nap. However, close structural analysis has indicated that “the surface texture could not have been achieved by combing or brushing to raise the nap” (Sencer 10, note 28). Further, this piece appears to have been woven in the same fashion as the other textiles noted above, that is, with a separate pile weft. If it were woven with a separate pile weft, it would fall squarely within the tradition of red Irish pile weaves along with the Dublin Viking Age piece and an early sixteenth century one found at Drogheda, Co. Meath (see Heckett 158-159).

### *Producing a Pile Woven Textile*

In this technique tufts of lightly twisted wool, or locks of guard hair just as they came from the sheep, were inserted into the shed of the weave between wefts. Many factors, some of them possibly geographical in nature, differentiate the various known techniques. The materials ranged in color from completely undyed or naturally pigmented wools to polychrome dyed ones. Icelandic literature mentions several colors of pile cloak including striped (Guðjónsson 69); one possible method for doing this is to use differently colored wefts or locks for a vertically striped effect, or possibly both in combination. One cloak fragment from Birka displays at least three colors (Geijer 1938, 22). The Manx pieces may have been woven from the moorit wool of the local Loghtan sheep (Grace Crowfoot 81), and all three of the putatively Irish ones were dyed with one or more red dyestuffs.

The ground weave might be 2/2 twill, 2/1 twill, or tabby. The number of picks between tufts varies among the known pieces. The tufts across the warp might be crowded together or sparse, regularly or irregularly spaced. The ground weave might be visible or covered by pile; the pile wefts might show on the back of the textile, or not.

Tufts are held down by a number of warp threads that often differs in the same piece. Methods for securing tufts into the warp differ a great deal; some involve simply laying tufts into the weave, while others require securing by wrapping the tuft around the warp. Typically, the length of pile is several centimeters; the Heynes fragments are about 9cm deep, while the Birka fragments are “thumb-long” (Geijer 131).

Because they are the two pieces of known pile weaving most likely to represent an historic Icelandic tradition, I based my pile weave samples on the pieces from Heynes (see Guðjónsson). The ground weave of these pieces is a plain 2/2 twill with a Z-wale, woven using Z-spun warp and S-spun weft; the thread counts are 9x4/cm and 7x5/cm, with the warps finer and more tightly spun than the wefts. Pile tufts are inserted after every four picks, with varying frequency but anchoring to approximately every twentieth warp thread. Sometimes the tufts travel under three, and sometimes under four, warp threads before emerging. At these setts, Guðjónsson estimates that a full two-ell warp would have required about 50 locks per pile row, which would have yielded a high quality shaggy textile, perhaps like *hafnarfeldir* (p. 69). The pile weft length is 15-19 cm, and the tufts are only held down by one warp thread rather than the two that would be raised for a normal 2/2 shed.

*Sample 1:* warp and weft of “Eingirni,” a commercial Z-spun white Icelandic single at 28 wraps per inch (1.0mm diameter). 20 epi, about 10epi. Pile weft of white *tog*.

*Sample 2:* warp of “Loðband Einband,” a commercial Z-spun grey-brown Icelandic single at 30 wraps per inch (0.9mm diameter); weft of brown Shetland singles softly S-spun at 24 wraps per inch (1.1mm diameter). 20 epi, about 10epi. Pile wefts of moorit *tog* and of black *tog*.

As pile weft I used individual locks of Icelandic sheep *tog* (outer coat) as was done in the originals. The

three sample pile wefts I used differed greatly in quality. The white was thick, long, medium fine, and wavy. The moorit was medium length, fine, soft, curly, but not very thick. The black (shown in Figures 1-2) was sparse, short, coarse, straight, and wiry.

After each fourth pick of 2/2 twill, I inserted the pile in a shed created by raising only the first shaft. This gave the same interlacement as that of the originals and was a convenient mnemonic for the weaving process. Also, as in the original, it keeps the pile weft from showing on the back side of the textile. For my two 8x10" samples I chose a pile weft unit of 24 warp threads (16 for the lock and 8 as spacers), which was based on one of the sections of the drawing of the Heynes weave.

For the first row of pile, the lock is inserted from right to left under the first four raised warp threads at the right edge of the weaving area. The tip end of the lock is the working end. After the tuft goes under the leftmost warp thread in the group of four, it is wrapped once around the leftmost warp. The wrap proceeds toward the fell rather than toward the unwoven warp (see Figure 1). Without distorting the wrapped warp thread, gently pull the two ends of the lock until they are roughly even, then snug the lock up against the fell. Proceeding to the left across the warp, skip the next two raised warp threads. (That gives you a total of 24 warp threads for one repeat.) Insert the next lock under the following four warp threads, and so on across the row.

When the entire row is done (see Figure 2), open the complete first twill shed (shafts one and two), beat, and weave the next four picks of 2/2 normally. In subsequent pile rows, the placement of locks should be staggered in order to achieve better coverage. None of the extant pieces are completely regular in their repeats, so let yourself be guided a little bit by where you think the next lock should go. I used a displacement of two raised warp threads per row, and a three-row repeat. Accordingly, the second pile row was worked beginning with the third raised warp thread from the right edge. The third pile row was worked beginning with the fifth raised warp thread. For the fourth, fifth, and sixth pile rows, I repeated the sequence used in the first through third pile rows.

The Heynes examples are not heavily fullled. The intention seems to have been to create a textile that

was light, flexible, and warm, whose pile would help keep the wearer dry. Accordingly, I did not use an elaborate finishing process. Using a bath of hot water and Orvus paste, I worked the wrong side of the ground weave of the textile between my fingertips for a few minutes, endeavoring not to mat the tips of the pile weft too much in the process. A vigorous shaking after the final rinse helped resolve some of the pile weft that had gotten disarrayed in the fulling back into its original locks. Some of the pile weft stayed disarrayed (see Figure 3), creating what Geijer called "a confused fur-like surface" (Geijer 131), which only made the samples look more like the Icelandic finds.

While both samples were set the same, I didn't expect them to finish to the same thread counts due to the different materials. Interestingly, their finished thread counts both worked out to be about 9x5/cm, although the qualities of the two textiles differ somewhat. While this thread count is entirely within the parameters of the medieval examples, it would be helpful to know what the actual thread sizes are on the Heynes fragments. Most of the similar extant weaves whose thread sizes have been reported use warps running around 1.0mm in thickness, with wefts somewhat heavier.

The three different pile wefts behaved somewhat differently upon fulling. The coarse, wiry locks felted swiftly and wound up looking the most like the archaeological examples. The curly, fine locks felted at their bases while their tips stayed separate. The long, medium-fine and wavy locks maintained their lock structures the best, which is perhaps more like the medieval descriptions and depictions. Generally, the better preserved the lock structure before the fulling process, the more the locks stayed separate during fulling. Consequently, the wefts composed of *tog* that had had to be combed (in order to clean it), or of several thin locks used as one, fullled a great deal more than single locks did. Also, the ground weaves differed somewhat in texture. The Eingirni sample did not soften up nearly as much as the Loðband and homespun one. With only these few materials and a single method, I created a wide array of textile effects; accordingly, sampling is clearly a good idea for anyone wishing to achieve a specific effect in this class of weave.

**Sources:**

Crowfoot, Grace. Various sections on textiles, pp. 43-44 and 80-83, in Gerhard Bersu and

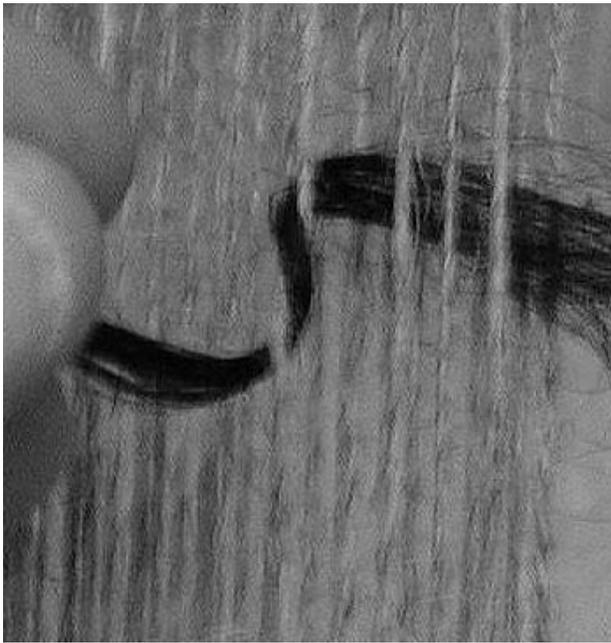


Figure 1. Insertion of a pile weft.

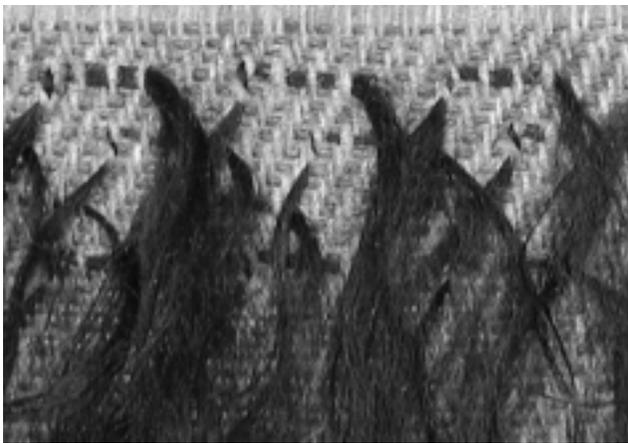


Figure 2. Several completed rows of pile on the loom



Figure 3. Finished samples: white on white, black and moorit on shades of natural brown (from top to bottom). Overly felted black sample reveals sections of ground weave.

Larger pictures at:

<http://www.cs.vassar.edu/~capriest/image/pile1.jpg>

<http://www.cs.vassar.edu/~capriest/image/pile2.jpg>

<http://www.cs.vassar.edu/~capriest/image/pile3.jpg>

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*sources, cont'd*

David M. Wilson, *Three Viking Graves in the Isle of Man*. Medieval Archaeology Monograph Series 1. London: The Society for Medieval Archaeology, 1966. The longer section includes a write-up on a pile cloak.

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Iceland.

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- Guðjónsson, Elsa E. "Forn röggvarvefnaður," *Árbók hins Íslenska Fornleifafélags* (Reykjavík: Ísafoldarprentsja H.F., 1962), pp. 12-71. Considers two pre-1200 Icelandic shaggy cloak fragments, follows with a typology of pile weaves, discusses parallel finds in the same period, and includes plates of several medieval depictions of shaggy cloaks in statuary and illumination. Includes information on appearance and historic dimensions of Icelandic pile cloaks, taken from *Grágás*. Very good English summary. Still the seminal work on the subject.
- Hägg, Inga. *Die Textilfunde aus dem Hafen von Haithabu*. Berichte über die Ausgrabungen in Haithabu, Bericht 20. Neumünster: Karl Wachholtz Verlag, 1984. Careful catalogue includes analysis of Hedeby fragment 19B from 10<sup>th</sup> century Denmark.
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- Henshall, Audrey S. "Early Textiles Found in Scotland, Part I: Locally Made," *Proceedings of the Society of Antiquaries of Scotland*, Vol. LXXXVI (1951), pp. 1-29.
- Hoffmann, Marta. *The Warp-Weighted Loom: Studies in the History and Technology of an Ancient Implement*. Oslo: The Norwegian Research Council for Science and the Humanities, 1974 [Robin and Russ Handweavers reprint; original printing 1966, *Studia Norvegica* 16]. A discussion of *vaðmál*, including Icelandic legal sources.
- Lindström, Märta. "Medieval Textile Finds in Lund," *Textilsymposium Neumünster: Archäologische Textilfunde 6.5-8.5.1981* [NESAT 1], ed. Lise Bender Jørgensen and Karl Tidow, pp. 179-191. Neumünster: Textilsymposium Neumünster, 1982. Description and diagram of a shaggy pile fragment from 11<sup>th</sup> century Sweden. The author (I believe mistakenly) calls it a rug.
- Maik, Jerzy. "Frühmittelalterliche Noppengewebe aus Opole in Schlesien," *Archaeological Textiles in Northern Europe: Report from the 4th NESAT Symposium 1.-5. May 1990 in Copenhagen*, ed. Lise Bender Jørgensen and Elisabeth Munksgaard, pp. 105-116. Tidens Tand 5. Copenhagen: Det Kongelige Danske Kunstakademi, 1992. Details of several pile weaves from 10<sup>th</sup>- to 12<sup>th</sup>-century Opole, Poland, a city on the trade route between the Baltic and the Black Sea.
- . "Frühmittelalterliche Textilwaren in Wolin," *Archaeological Textiles: Report from the 2nd NESAT Symposium 1.-4.V.1984.*, ed. Lise Bender Jørgensen, Bente Magnus, and Elisabeth Munksgaard, pp. 162-186. *Arkaeologiske Skrifter* 2. København: Arkaeologisk Institut, 1988. Viking Age and later textiles from Wolin, a Polish port at the mouth of the Oder River on the Baltic Sea. Two are shaggy pile.
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- Schlabow, K. "Vor- und frühgeschichtliche Textilfunde aus den Nördlichen Niederlanden," *Palaeohistoria*, vol. 16 (1974), pp. 169-221. Technical catalogue of early and medieval textiles from the Netherlands, each with a photo.
- Sencer, Yvette J. "Threads of History," *Fashion Institute of Technology Review*, Volume 2, no. 1 (October 1985) pp. 5-10. Re-examination of the original technical report on the Mantle of St. Brigid; lots of good background and contextual information about the medieval Irish *brat*, or cloak.

**Shaggy Cloak Textile Type: A Catalogue**

- Birka 736 — tabby, pile loosely spun or locks [10C male]. “W 9. Grave 736. Napped fabric? A very small fragment, about 3x1.5 cm. On one side indistinct tabby weave, on the other one as it were locks of loose wool yarn or possibly only unspun wool. } (Geijer 22) “On the penannular brooch [hufeisenfibel, =horseshoe fibula] the remains of a pile weave, W 9.” (Grabregister)
- Birka 750 — tabby, loosely spun or locks in two different (dyed?) colors [mid-10C man and woman]. “D 11. Grave 750. Taf. 37:4. Napped fabric. The fragments are quite largely, however extremely fragile and closely felted. The basic fabric is very difficult to detect, seems to be however tabby weave. The fleece consists of a few approximately thumb-long, spun wool threads or locks in clearly red and blue colour tones, which form a confused fur-like surface. Wool was analyzed (Appendix 1), but without a result for the breed of sheep.” (Geijer 131) “Over the corpses lay probably a blanket or the like. Coherent piece in a pile weave, D 11, shows distinct traces of a woman’s brooch. The thorshammer has left behind a print on a fuzzy clump of hair, probably from a fur blanket....” [Grabregister 166]
- Birka 955 — twill (not sure if 2/2 or 2/1), looks like unspun or locks in at least three colors [male, no date given]. “W8. Grave 955. Taf. 7:1. Napped or pile fabric? Several indistinct fragments, which were situated with a circular clip, from rough wool yarn, in which clearly different colours are to be noticed: light brown, reddish and bluish. On the one side, where the clasp lay, is a coarse, nubby (? =schütteres) yet confused fabric in three- or four-shaft texture. The yarn is left-spun. On the other page a quantity of thread ends pressed in different directions. How they were fastened in the weave cannot possibly be decided because of the small size of the remnant. It reminds of the fabric described as D 11. In individual places is to be seen, how the weft threads of the regular binding turns and remains hanging.” (Geijer 22) “Over the penannular brooch [hufeisenfibel, =horseshoe fibula] a few remnants of a coarse, matted weave, W8, partly coarse hair of some kind of pelt.” [Grabregister 171]
- Bruges (St. Brigid) — third quarter 11th century, donated to cathedral by Harald Godwinsson’s sister Gunnhild; red-violet tabby, fine tight warp, thick loose weft; loosely twisted pile woven in.
- Cronk Moar A1 — tabby; 4/Z/tight x 3/S/loose (Twice warp size); twisted or lightly spun pile woven in; fleece possibly Loughtan?; pile woven atop weft so invisible on back of textile; every second row; pile crosses 5 threads, under-over-under the raised warp threads; spacing unclear; circa 900
- Cronk Moar A4 — tabby; 3/Z/tight x 3/Z/loose (twice warp size); twisted or lightly S-spun pile woven in; fleece possibly Loughtan?; pile woven atop weft so invisible on back of textile; every second row; pile crosses 5 threads, under-over-under the raised warp threads; spacing unclear; circa 900
- Dublin — 2/2; warp 5/Z, dyed with non-madder red dye; weft 3-4/S, pigmented dark brown; pile S woven as Heynes save that it is spun (loosely???)
- Hedeby 19B—madder-dyed (?) pile trimming; 2/2 twill, 6/Z/1.0-1.2 x 3-3.5/S/2.0-2.7, weft more loosely spun; pile woven in, height about 2-3cm; definitely unfilled; Hafn 76ff
- Heynes A — dating 900-1100; 2/2 twill; 9/Z/fine but uneven x 4/S/uneven, slight spin; locks of Icelandic wool, 15-19cm long, woven in; pigmented wool; pile about every 4 wefts, every 20 warps; no regular pattern of placement repeat; pile placed usually R to L under 6 ends, then back R over two ends under first pass to form loop near L end of weft; not pulled tight; no sign on back of textile; ends evenly protrude
- Heynes B — dating 900-1100; 2/2 twill; 7/Z/very slightly spun coarse x 4/S/very slightly spun coarse; otherwise as above save back R loop goes over first pass; carelessly woven

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\*Kildonan, Isle of Eigg — second half 9th century; tabby; loosely z-spun pile inserted on each 3rd and 4th weft (like Cronk Moar, they wouldn't show on back), offset 1 warp to the right in the uppermost of two pile tufts, no offsetting between pairs though [Elsa Guth 41f]; see also Henshall, p. 15.

\*Lund — 2/1 weft-faced twill; 9/S x 3/S; weft thicker than warp; pile locks woven in after every 4th weft; pile loops around 1 thread; eleventh century; see diagram

Opole — 2/2, 4 x 3 (Maik, NESAT 2) [there are 6, 5 of which are 11th century]

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### Samples:

These are the samples that people have chosen for the sample exchange for the December issue:

**Gayle Bingham:** "q" from Bender-Jorgensen (warp float pattern)

**Diana Frost:** Textiles & Clothing sample #49

**Lynn Meyer:** Broken Lozenge twill from Coppergate

**Holly Schaltz:** York 1268, Diamond Twill using Icelandic Fleece

### Next Issue:

Dyes: Woad, Weld & Madder

*Please consider sending in an article! There are several members who have not contributed lately.*

### *Cheese, cont'd from page 7*

home office in Bavaria. When she returns, she will send me more information about all their cheeses. But in the interim, she gave me their website:

[www.champignon.com](http://www.champignon.com). This website is all in German; but with some loose translations, I discovered some of the cheeses Kaserei Champignon manufactures. The cheeses are: cambozola, champignon-camembert, mirabo, rougette, and my favorite, Montagnolo. The company was founded by, Julius Hirschle and Leopold Immler. In 1908, they created a special Camembert: the mushroom Camembert, which has become very popular. For ninety years, Champignon Cheese Dairy, with their traditional craftsmanship combined with the highest standard of product quality is one of the most successful soft cheese manufactures in the world.

Montagnolo cheese has a unique and wonderful taste. I can readily understand why it was so greatly appreciated by the nobility of Bavaria



### **Please Note:**

**One of our members, Noeline Barkla of New Zealand, died of breast cancer on February 8, 2001. The news arrived here too late to add it to the last newsletter.**