

Medieval Textiles

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In this issue:

Oriental Carpets	p.1
Some Medieval Linen Weaves	p.1
A Weaver's Compendium	p.5
Upcoming Events	p.10
Sample Calendar list	p.10

Oriental Carpets

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Mention Oriental Carpets, and usually knotted carpets come to mind. However, the flatwoven or Kilim carpets are the older variety. Anatolian knotted carpets are seen from only the 5th or 6th century AD although they may have been known earlier. Anatolia is singled out primarily, as the Turkish people in that region were the first rank of contributors to the true development of style in carpets. The Seljuks, ejected from their ancestral homes in Turkestan, achieved sovereignty over the entire Near East in the 11th Century and brought carpets into vogue. Marco Polo who visited the realm of the Seljuks at the end of the 13th century makes mention of the fact that there is where the finest and most beautiful carpets were produced.

Yarns:

The hillsides of the Anatolian plateau are the natural habitat of the forbear of the modern sheep, *Ovis orientalis* and for thousands of years the use of the sheep and goats has not changed much if at all. The wool is sheared: the spring shearing being considered the better for carpets. The wool is then combed and made into roving. This roving is carried by women using a drop spindle to create the lustrous yarn. While spinning, the roving is usually wrapped around the spinner's wrist, tucked into their sleeve, or attached to a knobbed or forked stick used as a distaff. Whereas the spinning wheel was adapted throughout much of the world, handspinning with a drop spindle continues even today in this region as great volumes of wool are

cont'd on page 2

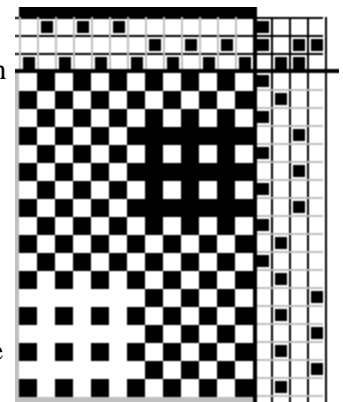
Some Medieval Linen Weaves

© Carolyn Priest-Dorman, 2001

While the most common linen product in the Middle Ages was tabby-woven, weavers also produced many types of figured linens. The *rippenköper* and *Wabengewebe* described in previous articles represent some early medieval examples. This article expands the scope of medieval cultures and techniques producing simple figured linen weaves. The interlacements presented here are both like and yet unlike modern linen weaves, and they can be woven on four to eight shafts. (A future article will address some more complex multishaft linen weaves.) All drafts were produced by the present author from drawdowns by the authors noted in the text.

Based on the available textile evidence, a variety of looms created medieval figured linens. Some were likely produced on upright looms using several shafts. Others could have been produced on horizontal looms with a number of shafts that lifted by hand rather than with treadles, the so-called *métier aux baguettes*. Yet others came from treadle looms. A fifteenth century Italian miniature depicts a woman weaving at a six-shaft counterbalance loom, just right for weaving "Perugia towels" and similar six-shaft linen weaves (Cardon, Fig. 127, p. 316).

Huck- or barleycorn-type weaves existed fairly early. Number 7409 from the Vatican's Pfister collection is a Coptic linen with alternating groups of three long floats in warp and weft on a tabby background. Although it only requires three shafts to weave, it has a lot of textural impact. A later relative of this weave, the "Sluier van Maria" (Mary's Veil), dates to the eleventh or twelfth



vatican textile #7409

Cont'd on page 4

Oriental carpets cont'd from page 1

still prepared for weaving while attending to pastoral duties: spinning cannot be limited to a fixed period of time or a set place. Although multi-ply yarns can be used, weft yarn is often single ply. The warp is customarily two ply yarns.

Six Indigenous dyestuffs: oak galls, weld (*Reseda luteola*) & other yellow producing plants, alum, iron sulphate, madder root and indigo were used to create a palette of between six and thirteen distinct colors. Madder (*Isatis tinctoria*) contains up to nineteen different dyestuffs and depending upon mordant material and time in mordant, quantity of madder in the dyebath, acidity or alkalinity of the water and the temperature of the dyebath contribute to create a large variety of shades: pink, rose, apricot, scarlet, brown-reds, purple, and brown-purple. Although dyeing with madder to obtain a large range of shades requires considerable time, lore, and skill, it is believed that madder dyeing was carried out domestically. In contrast, it is believed that professional dyers did indigo dyeing. Although woad (*Isatis tinctoria*) is locally available, indigo (*Indigofera tinctoria*) was imported from India and Eastern Iran in the form of blue cakes. The use of indigo dyes in the Near East has been traced as far back as 2500 BC in Egypt. Surviving records show that indigo was historically important commodity on the ancient trade routes of the Near East.

It is believed that Anatolian weavers may have fermented their yarns before dyeing. It is known that this is one of the first steps in indigo dyeing. In the yarn fermenting process, skeins of yarn are soaked for a period ranging from three to ten months, usually in a solution of wheat bran, sour dough, and mordant salts. Supporting this belief is the results of examining fibers from antique textiles under electron microscopes. However, because of the length of time required for the process as well as the unevenness of tribal dyed yarns, it is suggested that this fermentation process was limited to professional dyers working with urban or court weaving workshops.

Looms:

In Anatolia the loom called the *istar* evolved into its optimum form in pre-historic times and has required very little refinement since. The warp-weighted loom was the established loom technology by the 4th

millennium BC & possibly the fifth. However, the horizontal ground loom and its vertical variation displaced the warp weighted loom in Anatolia through being adapted from regions to the South and East. These looms along with their shed and heddle bar mechanism seem to have existed in the Middle East and Egypt from at least the 4th millennium BC. Exactly when the horizontal ground loom displaced the warp-weighted loom is unknown.

Carpets:

Although use of Kilim and knotted style carpets early on are well documented in archeology and art are well documented in the middle and far East, use in Europe is less obvious. On the other hand, Persian painters seldom painted rug designs accurately, and often it appears that they invented rugs rather than paint what was before them. Carpet historians, even when looking to Eastern use and design of carpets, often look to European paintings to see a truer representation of progression in carpet design innovation. Because of this, at least in a couple cases “types” of carpets are named after European painters (i.e. Bellini, Holbein, etc).

Giotto, in a fresco in the Arena Chapel in Padua painted in 1304, we find a ‘Konia Group’ carpet used as an altar cloth. It is similar to one found in the Museum of Islamic Art, Istanbul. Through church documents, this image is believed to be one of the rugs, which were placed at the disposal of the local authorities by Venice for the consecration of the chapel. Comparable textiles are pictured as wall hangings in several of Giotto’s earlier paintings in the Lower Church in Assisi. However, there are no known documents linking these painted images with actual textiles. Konia textiles are often distinguished by a border of extremely stylized and eccentric, sometimes heavy, Cufic script, or of star rosettes in a linear setting. The central field is often staggered rows of octagons containing floral ornament or a uniformly continuous interlace or trellis pattern set out as to form stars or lozenges.

Domenico de Bartolo’s paintings incorporated another type of oriental knotted carpet. His image features repeated octagonal panels with narrow borders. Within each is an image of an animal or animals. Such images show a close relationship between the Persian illuminations of the 14th and 15th century and

Oriental carpets, cont'd

Hispano-Moresque weavings. One such rug was found in Rome and is now in the Islamic Department of the State Museum in Berlin. Bartolo features such a carpet in his painting at Sienna: *The Wedding of the Foundlings*. Other carpets in this style are found in paintings by: Lippo Memmi; *Madonna* (Gemäldegalerie, Berlin, No. 1072 c. 1350). The panels show in heraldic manner pairs of long legged eagles with a formalized tree; the framing and borders carry swastikas and ornaments. Niccolo di Buonaccorso: *Betrothal of Mary* (national Gallery in London, No. 1109, painted c. 1380) shows eagles in yellow or red on a ground of red or yellow. Ambrogio Lorenzetti: *Madonna* (Helbing Auction, 1933) shows a carpet featuring stalking beasts of prey. Simone Martini: *St Louis* (S. Lorenzo at Naples, c. 1317) features a rug in which pairs of eagles are repeated. This is but a small selection of painters of this time period in Italy whose works include this type of carpet.

Lorenzo Lotto is well known for his numerous paintings involving knotted carpets. The carpet pictured in *Portrait of a Married Couple*, (The State Hermitage Museum, Saint Petersburg c.1523-1524) is reminiscent of a carpet owned by the Islamic Dept of the State Museum, Berlin. The painting *Mystic Marriage of Saint Catherine, with the Donor Niccolò Bonghi*, (1523, Accademia Carrara di Belle Arti, Bergamo) shows the loom for weaving such carpets. Although Italians in particular imported such carpets from the 13th century onward, by the time Lotto was painting such carpets were considered too valuable for floor use and were most often used to adorn tables, benches, and chests. In the Late Medieval period, use on the floor is pictured only in the cases of especially revered saints

Venetian paintings of the 15th century show in that locale the populace is still wearing semi-Oriental garb and extensive use of carpets. Carpets serve as floor coverings in private homes as well as palaces, lie spread upon tables, hang as decoration on walls, windows and balconies; even gondolas are decked out with these rugs. Churches, too, were richly blessed with these textile items: upon altars and steps leading up to them; before the seats of the ecclesiastics and over balustrades. In this time period, just as glassware and other opulent arts ceased to be purely imported goods, fine oriental style textiles were produced in

Venice.

It was not until the 16th Century that these carpets became popular in the Netherlands and other Western European countries.

Sources:

Bieber, Manfred. The Kavacik Project: A Contribution to the Conservation and Advancement of the Carpet Tradition in the Istanbul Region. *Oriental Carpet and Textile Studies III* 2:175

Bierman, Irene A. Medieval Flatweaves in the Urban Middle East. The Arthur D. Jenkins Collection Vol. 1: Flatwoven textiles, ed Cathryn Cootner (Wash. DC: The Textile Museum, 1981)

Bode, Wilhelm von and Kühnel. Antique Rugs from the Near East. Trans. Charles Grant Ellis. Cornell University Press, Ithica, NY ©1984

Campana, M. Il tappeto orientale. Milan (1945)

Davies, Peter. The Tribal Eye: Antique Kilims of Anatolia. Rizzoli International Publications, Inc., New York, © 1993

Denny, Walter B. Anatolian Rugs: An Essay on Method. *Oriental Rug Review III* 4 (Dec. 1973)

Otten, P. Tentoonstelling Oostersche Tapijten. Catalogus. Delft. 1949

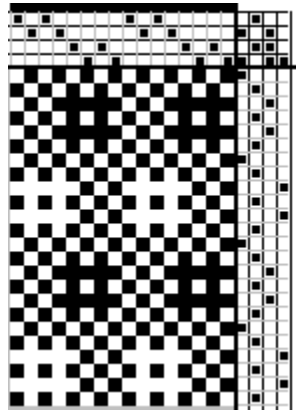
Internet:

www.turkotek.com

This is a non-commercial site for rug collectors



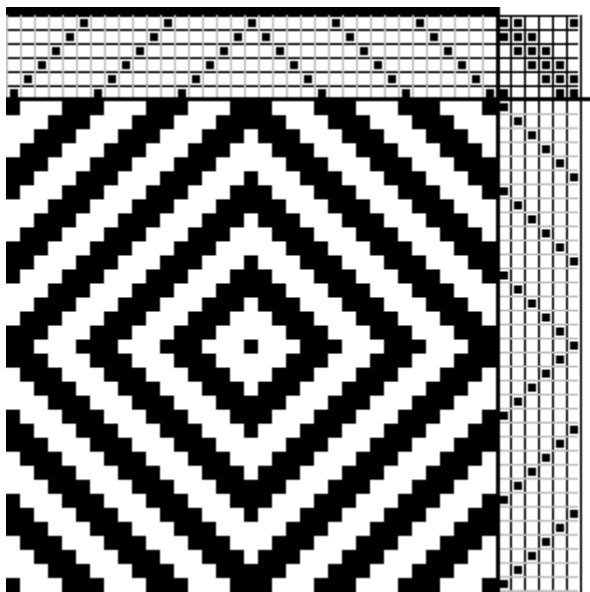
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Sluier van Maria

century. This linen relic, now residing at Tongeren in Belgium, is a four-shaft weave; it alternates rows of paired weft floats with rows of paired warp floats (De Jonghe 1988, pp. 65-66). The drafts for both of these are based on De Jonghe's drawdowns (De Jonghe 1989, p. 241).

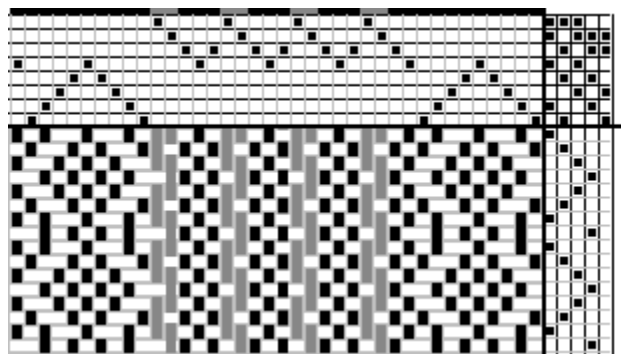
Goose-eye twills, featuring concentric lozenges with point repeat, became widely popular for linens in the Middle Ages, especially those executed on more than four shafts. A prime example is the so-called Perugia towels, a class of Italian tablewares with brocaded borders in a contrasting color. Many of these were



Vatican Museo Sacro T-27

woven with grounds in six-shaft lozenge twill; the aesthetics of this product entered the European folk tradition and survive to this day in some weavings of south central Europe (Endrei, p. 67). A number of these elegant pieces, or at least their brocaded sections, survive in museum collections, often in shapes and sizes that match depictions of tablecloths and serving towels in medieval depictions.

A number of fragmentary, yet unornamented, similar textiles are preserved in treasuries all over Europe. One such six-shaft weave, T-27, comes from the Museo Sacro collection at the Vatican. Dated simply as "medieval," it is in a 3/3 point repeat lozenge twill (see draft, based on Volbach's drawdown). Some of the extant pieces in this style display significant threading, treadling, and/or tie-up errors. Among them are an ecclesiastical hood liner from the Benedictine convent at Engelberg, Switzerland (Schmedding, p. 129f); a relic wrapping from the cathedral at Tongeren, Belgium (De Jonghe 1989, p. 240); and the relic from Gruuthuuse, Bruges (De Jonghe 1989, p. 234).



Shroud of St. Bernard of Clairvaux

Lastly, what would a consideration of medieval linen weaves be without reference to a famous shroud? The shroud of St. Bernard of Clairvaux (dating to the mid-twelfth century) exhibits several interesting features, not least of which is its complete lack of linen fiber. An eight-shaft weave, it alternates narrow warp-faced twill cords with areas of tabby lozenges outlined in weft floats (see draft below, based on Moore's drawdown). The warp is fine hemp with thick cotton for the ribs, and the weft is fine cotton (Moore, p. 19). The original warp yarn is about the size of a 20/2 cotton, finished at about 37 ends per inch. The weft yarn is about the size of a 12/2 cotton, finished at roughly 40 picks per inch. The yarn used for the ribbing is a little heavier than typical carpet warp. Of course, all the original yarns were singles, not plied yarns. Mixed-fiber ribbed textiles of this general type were common enough in later medieval Italy that several regulations pertained to their production under the names *accordolati* or *acordorati* (Mazzaoui, pp. 166f). It is exciting to find such an early textile with similar characteristics.

Sources:

Cardon, Dominique. *La Draperie au Moyen Âge: Essor d'une Grande Industrie Européenne*. CNRS Éditions, 1999.

De Jonghe, Daniël. 1988. "Technologische Beschouwingen," pp. 65-88 in *Textiel van de vroege middeleeuwen tot het Concilie van Trente*. Tongeren Basiliek O.-L.-Vrouw Geboorte, vol. I. Leuven: Uitgeverij Peeters.

———. 1989. "Niet op trapweefstoelen geweven linnen weefsels met ruitpatronen?," pp. 222-241 in *Middeleeuws Textiel, in het Bijzonder in het Euregiogebied Maas-Rijn* [Medieval Textiles, Particularly in the Meuse-Rhine Area], Proceedings of the [First] Congress, Alden Biesen, 13.02-16.02.1989. Sint-Truiden, Belgium: Provinciaal Museum voor Religieuze Kunst.

Endrei, Walter. "Les Étoffes dites de Pérouse, leurs antécédents et leur descendance." *Bulletin du CIETA*, no 65 (1987), pp. 61-68.

Mazzaoui, Maureen Fennell. *The Italian Cotton Industry in the Later Middle Ages 1100-1600*. Cambridge: Cambridge University Press, 1981.

Moore, Naomi. "Textiles from the Tomb of Saint-Bernard de Clairvaux (1090-1153)," pp. 17-27 in *Middeleeuws Textiel, in het Bijzonder in het Euregiogebied Maas-Rijn* [Medieval Textiles, Particularly in the Meuse-Rhine Area], Proceedings of the Second Congress, Alden Biesen, 21.5 - 24.5 - 1991. Sint-Truiden, Belgium: Provinciaal Museum voor Religieuze Kunst, 1991

Stauffer, Annemarie. *Die Mittelalterlichen Textilien von St. Servatius in Maastricht*. Schriften der Abegg-Stiftung Riggisberg, Band VIII. Riggisberg: Abegg-Stiftung Riggisberg, 1991.

Thornton, Peter. *The Italian Renaissance Interior*. New York: Harry N. Abrams, Inc., 1991.

Volbach, W.F. *I Tessuti del Museo sacro vaticano*. Catalogo del Museo sacro della Biblioteca apostolica vaticana, Vol. 3. Città del Vaticano : Biblioteca apostolica vaticana, 1942.

Note: The author is preparing a web page bibliography of reference materials on the Perugia towel.

A Weavers Compendium Part I

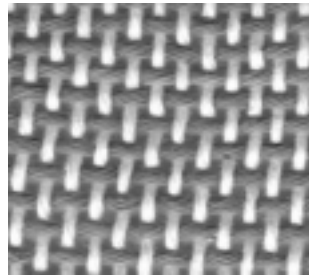
© 2001 Nancy M. McKenna

Approximately 83 Weave structures will be drafted, woven and documented in the course of this project. The results of this project are brought to you through the generosity of the members who are donating their time at the loom, the Textile Department of the Art Institute of Chicago and Nancy McKenna who is coordinating this effort as well as weaving.

The physical samples resulting from this project will be joining the didactic collection at the Art Institute of Chicago.

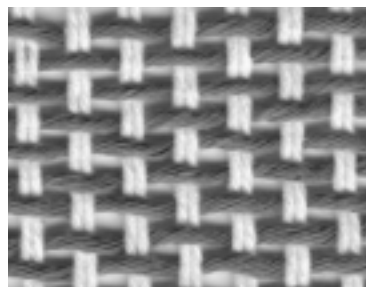
These samples are being brought to you in the order in which they are woven. All descriptive titles are per CIETA terminology. Samples are being woven using a wide sett so as to show the interlacement.

Balanced Plain Weave



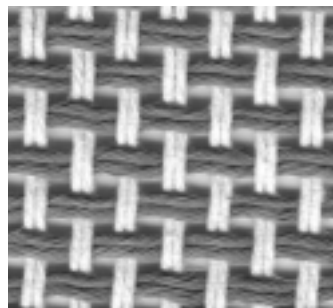
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		5						0	
			4					0	
				3				0	
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									2

Paired Warp Plain Weave



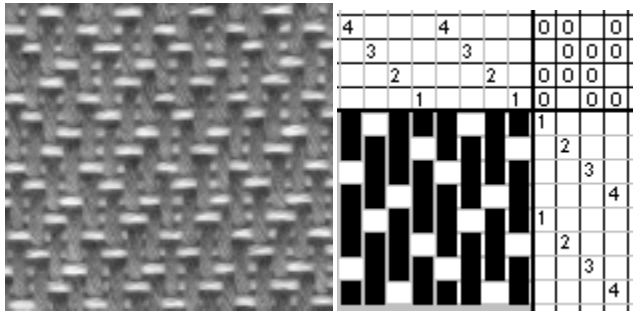
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Basket Weave: paired warp and weft



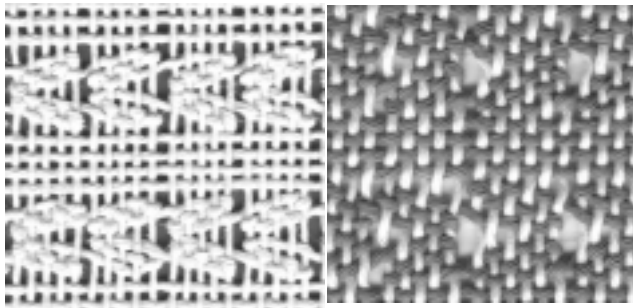
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3/1 Broken Twill

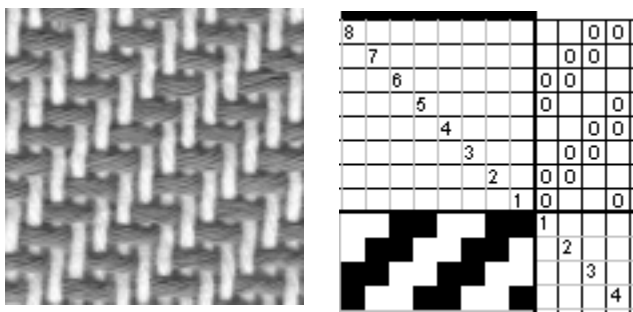


Plain Weave Openwork

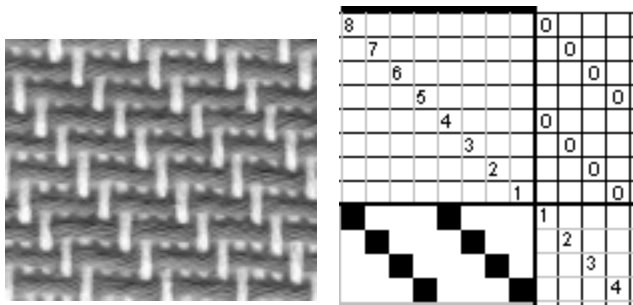
Sometimes called 'spanish lace' the image on the left is as it is usually viewed. The image on the right shows the plain weave construction.



Twills: Balanced 2/2

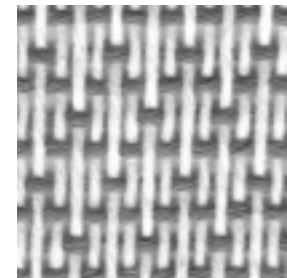
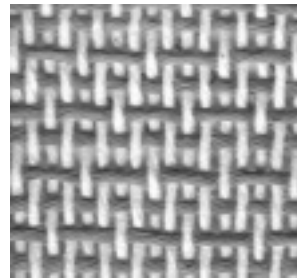
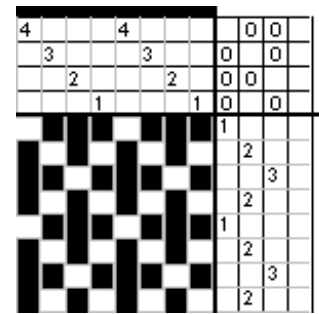


Twills: Uneven 3/1

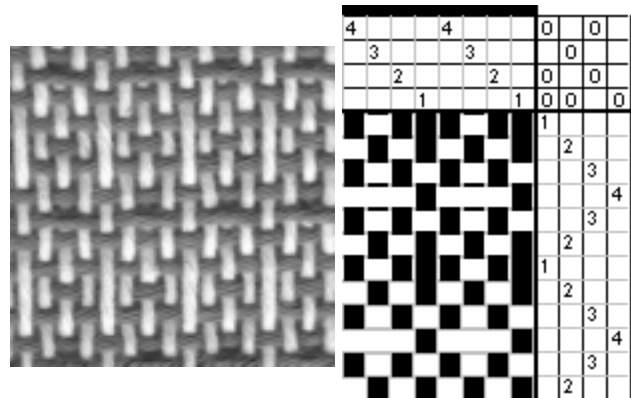


3/1:1/1 Alternating Float Weave: Alternate Alignment

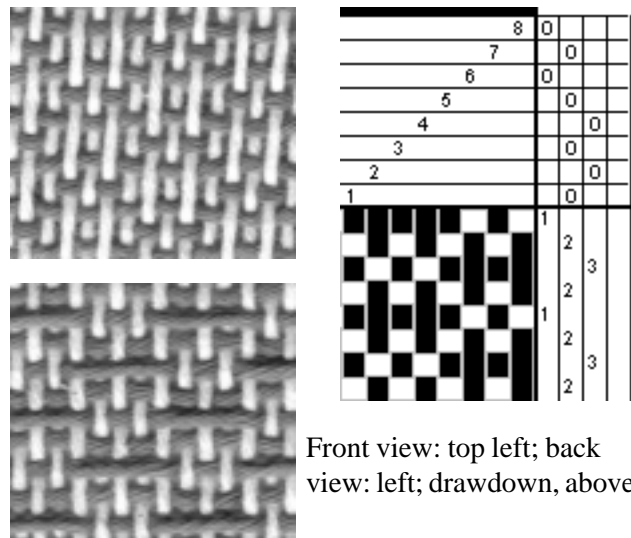
Draft at Right, "front" side of fabric below and "back" of fabric below and to the right.



3/1:1/1 Alternating Float Weave: Rectangular Alignment



3/1:1/1 Alternating Float Weave: Alternate Pairs



Front view: top left; back view: left; drawdown, above

Sample Information:
**Broken Diamond Twill from
 Coppergate, York**
 woven by Lynn Meyer

This sample is a broken diamond twill, based on those from Anglo-Scandinavian York, as described by Penelope Walton in "Textiles, Cordage and Raw Fibre from 16-22 Coppergate", York Archaeological Trust and the Council for British Archaeology, 1989.

Like #1307 in the book, the diamond repeat is 20 warps x 18 wefts. After the cloth relaxed overnight, the thread-count was 12.6 warp ends x 9.1 weft picks per cm — or 32 epi x 23 ppi. That is well within the range of the six broken diamond twills listed in the book, which were:

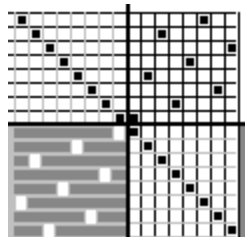
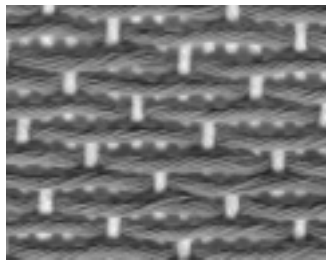
- ID twill repeat thread count
- 1307 20z x 18s; 11 x 7
- 1268 28z x 32s or 24s; 12-14 x 10-14
- 1381 22z x 18s; 14 x 11 (madder)
- 1308 12z x 10s; 14-16 x 11-13 (madder)
- 1380 ?40z x 18s; 15 x 11
- 1382 20z x 18s; 22 x 12

The twill repeats are all approximate, since most were very irregular.

The sample is dyed with madder root, as two of the six finds were. An alum mordant was used on the sample; no details were given about mordants on the York finds.

Weavers Compendium, cont'd

Regular 7/1 (8 end) Satin:



These samples woven by Nancy M. McKenna and Matthew P. McKenna. Structures featured in future issues are in process by other members of MTSG.

**Icelandic Supplementary Weft Pile
 Textiles: An Update**

© Carolyn Priest-Dorman, 2001

Since I wrote the article that appeared in the MTSG Newsletter, Issue 28 (June 2001), I have read an article that corrects some apparently common misunderstandings of the information presented in the Elsa Guðjónsson article about Icelandic pile textiles. According to Guðjónsson, the historic method for laying in the pile tufts is not exactly as I (and many others) interpreted it based on her drawing in the 1962 article. Rather, the pile weft is inserted into a normal twill shed, i.e., without making a special shed for it. Further, instead of being wrapped around a single raised warp at the left side, each lock is wrapped around the naturally occurring pair of raised warps. A clearer drawing published with the article (see below for reference) makes a great more sense than the original, at least to this weaver. I will try to have a photo of a sample woven in the correct technique ready for the next newsletter.

Source

Guðjónsson, Elsa E. "A Note on Mediaeval Icelandic Shaggy Pile Weaving," *Bulletin de Liaison du CIETA*, nos. 51-52 (1980), pp. 41-45.

Corrects the interlacement method depicted in the author's 1962 article on the subject. Mentions some publications where the method has been reproduced without credit, misunderstood, or misrepresented (including Emery).



from Wm. Caxton's 1484 edition of *The Canterbury Tales*



Upcoming events:

Art Institute of Chicago

The Magic of Lace

June 27, 2001- June 2002

Galleries 57-59

<http://www.artic.edu/aic/exhibitions/lace.html>

Colour Congress 2002

An International & Interdisciplinary Symposium on
Natural Dyeing

May 19-21, 2002

Iowa State University, Ames, Iowa

<http://www.fshn.iastate.edu/tc/news/colourcongress/>

Costume Society of America

Symposium: June 5-8 2002

Chicago, Illinois

<http://www.costumesocietyamerica.com>

Indianapolis Art Museum

Gifts to the Tzars: 1500-1700; Treasures from the
Kremlin

including state robes & a silk velvet saddle
until Jan. 13, 2002

<http://www.ima-art.org/>

Spertus Museum of Chicago

A Gateway to Medieval Mediterranean Life:

Cairo's Ben Ezra Synagogue

October 21, 2001–August 18, 2002

[http://www.spertus.edu/museum/exhibits/
rebirth_ezra.html](http://www.spertus.edu/museum/exhibits/rebirth_ezra.html)

The Textile Museum

Hidden Threads of Peru: Q'ero Textiles

March 22 - August 4, 2002

<http://www.textilemuseum.org/exhib.htm>

Samples:

As you know, the December issue is a sample calendar for the following year. 2001 Calendar is finished. Because of the scarcity of samples, only those who wove received a calendar. The rest are receiving sample sheets. Time to think of the 2002 edition. Remember, unlike most other study groups, everyone shares in the bounty of each other's weaving in this Study Group. Please share your weaving with the rest of the members in this annual event.

The last couple calendars have been populated with simpler weaves. How about, those with more than 4 shafts stretching themselves and weaving something a little more complex? The size of finished cloth is small. Add a foot or two to the warp of another project for this purpose.

Please weave enough for 26 samples. Samples & draft are due November 15th, 2002. *This is a piece of cloth as small as 12 inches x 21 inches (30cm x 52.5 cm) You do NOT have to cut the fabric into squares - I'll be doing that as part of the calendar making process. This could be fabric "left over" from another project. It need not be handspun, nor of painstakingly accurate grist yarn, either. Everyone is invited to contribute since everyone shares in the samples.*



Four Shaft Barleycorn: sluier van Maria

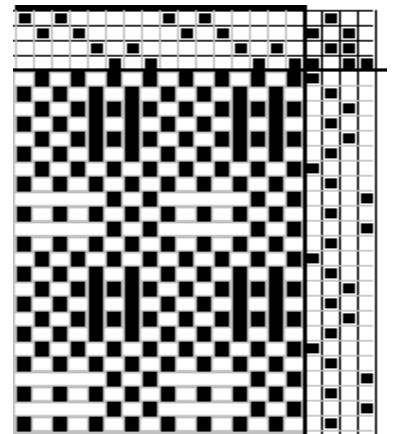
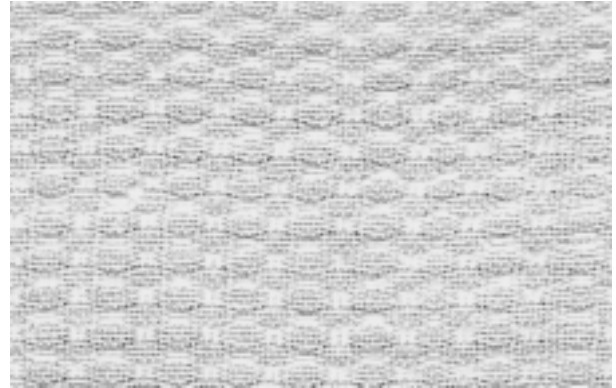
Sample data:

Warp & Weft: 20/1 cream linen

Sett: 36 epi/ppi

Woven By: Carolyn Priest-Dorman

A four-shaft huck or barleycorn variant alternating rows of paired weft floats with rows of paired warp floats, which I drafted from a drawdown by Daniel De Jonghe. The original is a linen relic, the “sluier van Maria [Mary’s veil],” dating to the eleventh or twelfth century and reposing at the Cathedral of Tongeren in Belgium. Original is bleached, woven at 26 ends and 24 picks per cm.



Color and Weave: Plaid from *Textiles & Clothing* c 1150-1450: No. 64

Sample data:

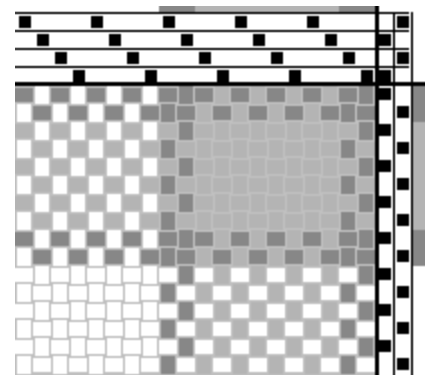
Warp: handspun: natural & madder dyed; commercially available yarn (Curl Brothers)

Weft: Same as warp

Sett: 24 epi/ppi

Woven By: Nancy M. McKenna

The colors used for the original cloth were natural white, madder dyed red, and a darker dye, color unknown. This pattern is found as early as the 6th and 7th centuries but woven in twill at these earlier dates. Originally a firmly woven cloth that did not reveal when cut, this sample was part of a buttoned sleeve.



Warp Float Pattern: North European Textiles until 1000 AD

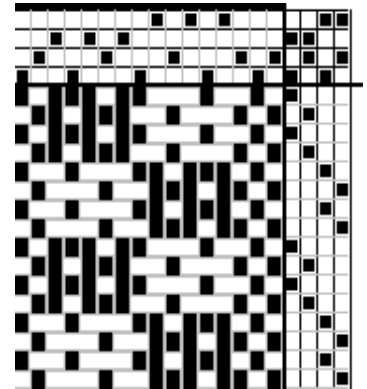
Sample data:

Warp & Weft: 20/1 linen

Sett: 40 epi/ppi

Woven By: Gayle Bingham

This is a warp patterned tabby weave. A picture of the weave is found on page 147 in Lise Bender Jorgensen's book *North European Textiles: until 1000 AD*. The size of the fragment found was: ca. 3 x 1.5 cm and appears to be woven in wool. This weave was first discovered by Hand Jurgen Hundt in the Almannic/Frankish graves of Southern Germany.



Broken Diamond Twill: Coppergate, York

Sample data:

Warp & Weft: commercially spun,
Madder dyed wool

Sett: 32 epi; 23 ppi

Woven By: Lynn Meyer

It's a broken diamond twill, based on those from Anglo-Scandinavian York as described in "Textiles, Cordage and Raw Fibre from 16-22 Coppergate" (Penelope Walton).

Like #1307, the diamond repeat is 20 warps x 18 wefts. After the cloth relaxed overnight, it's 12.6 x 9.1 thread-count (in cm) — 32 epi x 23 ppi — which is in the general range of the six broken diamond twills found there. It's dyed with madder root, as two of the six were.

