

Medieval Textiles

Coordinator: Nancy M McKenna 507 Singer Ave. Lemont, Illinois 60439 e-mail: nmckenna@mediaone.net

Complex Weavers' Medieval Textile Study Group

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

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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:

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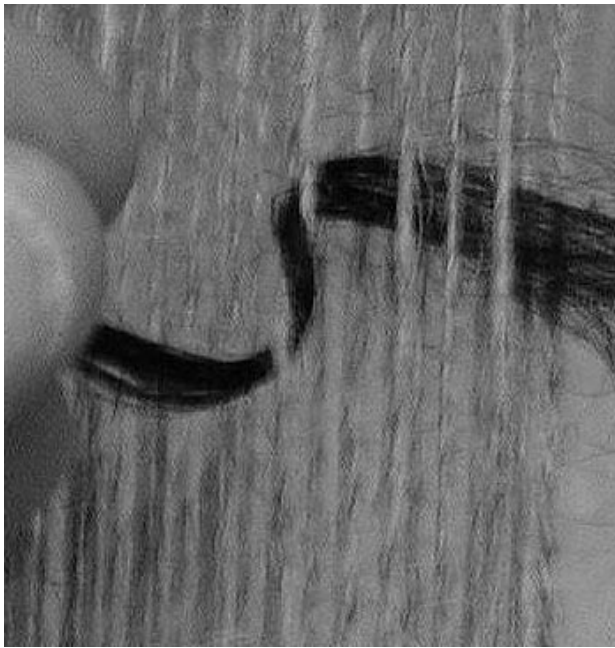


Figure 1. Insertion of a pile weft.

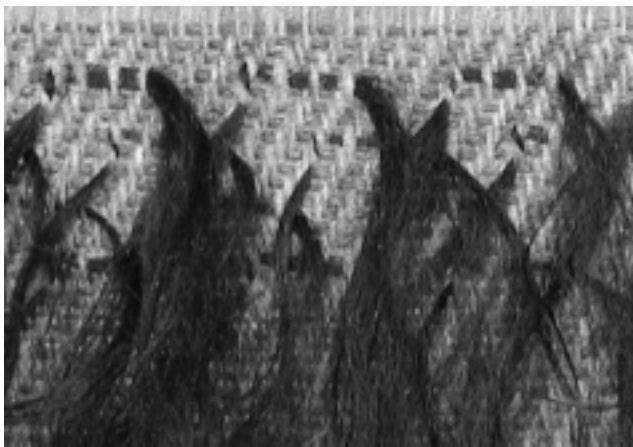


Figure 2. Several completed rows of pile on the loom



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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Iceland.

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- 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 10th century Denmark.
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- . "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.
- Pritchard, Frances. "Aspects of the Wool Textiles from Viking Age Dublin," *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. 93-104. Tidens Tand 5. Copenhagen: Det Kongelige Danske Kunstakademi, 1992. Some text and a photo of a pile-woven fragment.
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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; Hafen 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/slightly spun coarse x 4/S/very slightly spun coarse; otherwise as above save back R loop goes over first pass; carelessly woven

*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]
