TEXTILES FROM A VIKING GRAVE AT KILDONAN, ON THE ISLE OF EIGG. By Mrs GRACE M. CROWFOOT.

The textile fragments found in this grave 1 include two in wool, one of a 2×2 twill, the other of a textile with pile, both in fair condition, as well as smaller pieces heavily rusted, some of which may have been of wool, others of linen.

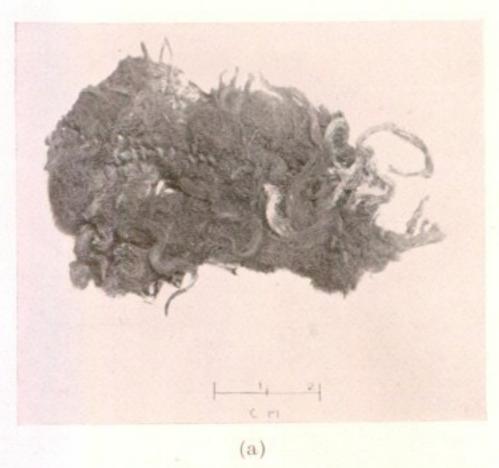
IL 164 (a).—Fragment, irregular in shape, 10×5 cm. at the largest part; no selvedge present (Pl. VII, 2).

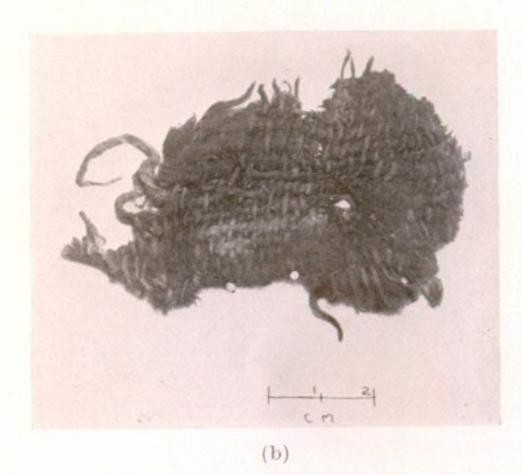
Material.—Wool, in colour a warm brown.

Thread.—All the thread is Z-spun. The fine hard-spun thread is taken to be the warp, the soft thick one the weft.

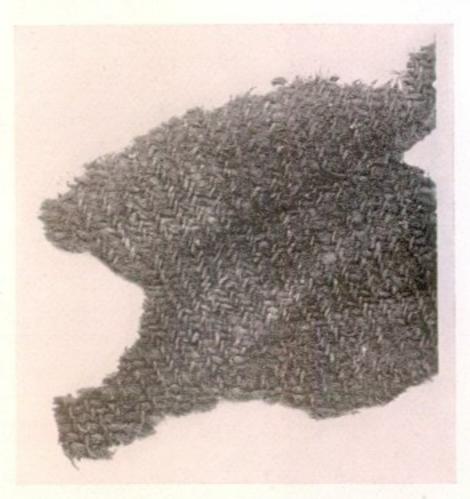
Weave.— 2×2 twill. The count is about $12-14 \times 8$ per cm., but varies, as the weft is much thicker in some parts than in others.

¹ Proc. Soc. Ant. Scot., vol. xii. (1876-78), pp. 589-91, fig. 10.





1. Woollen Textile with pile: front (a) showing pile; back (b) showing plain weave.



2. Fragment of Woollen Twill. (1)

IL 164 (b).—Fragment of a textile with pile. Size 6×4 cm. at the broadest part; no selvedge present (Pl. VII, 1, and fig. 1).

Material.—Wool, colour a warm brown. Though fine, it contains a few coarse fibres.¹

Thread.—The fine well-spun thread, direction Z, is taken to be the warp; the thick, soft, slightly spun thread, direction S, is taken to be the weft; the pile tufts look hardly spun at all, but have a very slight S twist.

Weave.—On the back a plain weave is to be seen, count about $7-9 \times 4$ per cm.; on the face long shaggy tufts hang down in the best-preserved portions; one tuft measures 4 cm. In the centre of the piece are two plain

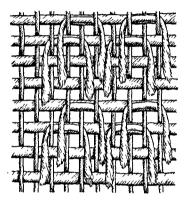


Fig. 1. Diagram showing a possible reconstruction of the pile weave. It repeats on two rows of weft with two empty rows in between.

rows, empty; this may be intentional, or the pile may have fallen out, as the weave is loose here. It is difficult to be certain how the pile tufts were put in. There were no knots, and the tufts issue, not from between the weft rows as is usual in knotted rugs, but from the weft rows themselves. I think the pile must have been laid in in front of the weft, passing under one or more warps, probably two, but at what intervals cannot be seen as it is now so matted in with the weft; only in one place can the weft and the pile be seen together in one shed. When first woven, the presence of the pile might possibly have been betrayed at the back by some bulging of the wefts, but now there is nothing to give any indication of it—there is visible only a plain weave.

The material thus made must have been thick, soft, warm and yet light in weight, admirable for a cloak; further support to this view is given by the condition of some of the pile tufts—they are green from contact with

¹ Report from the Wool Industries Research Association. In this, Dr B. H. Wilsdon contrasts the sample from Eigg, containing "a few coarse hairs," with those from the earlier Balmaclellan twill and Falkirk tartan, which "consist of fine wool only."

metal, in all probability the fine brooch in silverized bronze which once fastened it.

IL 164 (c).—A mass of fibres pressed together showing no trace of a weave. According to a report on samples sent to the Shirley Institute, these "appear to be wool fibres with a hard dark deposit on most of them. The majority of the fibres have no medulla. This is not characteristic of cow's hair, and the fibres are much finer than cow's hair in diameter." It is possible that these are remains of a thick pile such as might have come away from the neck-piece of a cloak, but it does not resemble the pile tufts of IL 164 (b).¹

IL 164 (d). — Four fragments, heavily rusted by contact with iron. Size: (1) 4×1.5 cm.; (2) 3×1.5 cm.; (3) 2.5×2 cm.; (4) 2×1.2 cm. In all four fragments there appears to be a plain weave on one side and a twill weave on the other; in (1) and (2) there are two layers of each, in (3) one layer of plain weave and two of the twill.

Plain Weaves. Material.—The report from the Shirley Institute states that owing to the rusted condition of the fibres "no structure is visible, but the dimensions are consistent with linen."

(1), (2) and (3) are probably from the same piece of linen; the count is about 13×14 per 5 mm. (=26 ×28 per cm.); they are all Z-spun. (4) seems to differ from (1), (2) and (3), the thread, also Z, being finer and better spun. The count also differs, 16×8 per 5 mm. (=32 ×16 per cm.). On one side is a "self band" of two rows with thread paired; this may be either two rows of weft, or two warps set up "sisters."

The Twill Weave.—In all the pieces the twill seems similar, 2×2 . Warp and weft are Z-spun, the warp being probably the fine hard-spun thread, the weft that thick and slightly spun. The count is $14-16 \times 8$ per cm. This twill, seen rusted here, seems very similar to IL 164 (a) and may also be wool.

The material quoted here is fragmentary, but it does give an idea of what some of the "villosa" mantles, so often referred to in the literature of the period, were really like—warm, soft cloaks with knotless pile, a stage intermediate between the darned pile of the Danish Bronze Age cloaks and caps, and the later securely knotted shaggy fabrics, such as the Finnish Ryor.

Comparisons.—These textiles may be compared with some from Viking burials in the Isle of Man excavated by Dr Bersu, who has kindly given me permission to mention them here before publication. They include fragments of linen and of a woollen textile with pile from Cronk Moar, Jurby, and fragments of linen from Camp Keeil Vael, Balladoole (c. A.D. 900).

Linen.—The linen from both sites on the Isle of Man was rusted, but

¹ The discoverers of the Eigg textiles describe them as "small fragments of woollen and linen cloth ornamented with, or at least in close contact with, fur," an idea probably suggested by this loose mass of fibres.

² These fragments are illustrated in *Proc. Soc. Ant. Scot.*, vol. xii. (1876–78), p. 591, fig. 10.

happily not so heavily as that of Eigg; it was found possible to determine that the material was vegetable, no doubt linen, though the fibres were somewhat anomalous (Report from the Shirley Institute). All were Z-spun. In quality the linen of Jurby was coarser than that of Eigg, but that of Balladoole was as fine, in one case finer, having counts of $16 \times 22-24$ per cm. and $28 \times 30-32$ per cm.

Linen was also present in fifty graves mostly of women, in the Viking site of Birka, in Sweden (9th–10th century A.D.), but only in small fragments, much damaged and preserved, as with us, by contact with metal. Where ascertainable, the thread was found to be Z-spun; counts taken vary from 8×22 per cm. to 20×20 per cm.¹

Wool.—At Cronk Moar, Jurby, several fragments of a pile textile were found in a position that suggested that they had formed part of a cloak. These fragments resemble that of Eigg; they also show a plain weave at the back and a pile on the front, long and curly; there are no knots, and the pile was laid in front of the thick weft, in one case passing under two warps as is suggested for the Eigg weave. Warp and weft were, as with Eigg, respectively Z- and S-spun.

What may be the remains of another pile textile, preserved in the Manx Museum, comes from Knoc y Doonee; there are heavily rusted fragments of a coarse 2×2 twill and a finer plain weave, together with tufts of wool resembling the tufts of the Jurby and Eigg pile.

The evidence from Birka is much more conclusive, for there, out of ten fragments of woollen cloth believed to have come from cloaks, five show the remains of pile. Four of these were in plain weave on one side with tufts on the other; unfortunately their fragile condition made it impossible to see how the pile was set in. Where seen, the warp was Z-spun and the weft S-spun. One of these fragments illustrated, D 11, is very like ours, having a long shaggy pile suggestive of the fur of an animal 2—"eine wirre pelzähnliche Oberfläche."

Dating.—The grave has been ascribed to the second half of the ninth century A.D. Among the grave goods are a silvered-bronze penannular brooch with plain balls at the end of the ring and forming the hinge of the pin, and also a buckle with its strap-end decorated with a plant motif—a debased borrowing from Carolingian art. These objects are described and illustrated in Viking Antiquities of Great Britain and Ireland, vol. ii (1940), pp. 66–7, edited by H. Shetelig.

Conclusions.

With the support of the evidence from these other finds, we may venture now a guess as to how the Viking of Kildonan was robed for his burial. He

 $^{^{\}scriptscriptstyle 1}$ A. Geijer, Birka, vol. iii. pp. 14–7, and pl. 3.

² A. Geijer, op. cit., pp. 20-2, pl. 7, 1, 2; pp. 131, 132, pl. 37, 4 (D 11).

must have had two garments at least: a cloak with shaggy pile fastened by the great horseshoe brooch, a tunic in woollen twill girded by a leather belt with bronze buckle, and probably also an undergarment of fine linen. The sword in the scabbard and the axe which lay to his hand are those of a warrior, but the sickle suggests that he came not merely as a plunderer but looking for a harvest from the island soil.