

Clothing found at Huntsgarth, Harray, Orkney

by A. S. Henshall

CIRCUMSTANCES OF THE FIND

The discovery was made in May 1968 by Mr George Spence whilst digging peats. The peat bank was $3\frac{1}{2}$ ft. deep, and the clothing was at the base of the bank. The cloth occupied a small space and the bonnet lay on top. Further investigation produced no other finds. There was no sign that the peat above the find had been disturbed, although it can hardly be doubted that the cloths represent the burial of a child in a hole dug in the peat bog.

The site of the discovery is $7\frac{1}{2}$ miles WNW. of Kirkwall, and $3\frac{1}{4}$ miles E. of the N. end of the Loch of Harray, N.G.R. HY 34901815. The site is in a shallow moorland valley which provides a through route from the Loch of Harray area to Isbister. This old E.-W. route has now been replaced by a minor road, but the find-spot is even closer to an old track which approaches the road from the SW. (fig. 1).

The finds were handed to Mr W. Groundwater, Hon. Curator of Stromness Museum, by

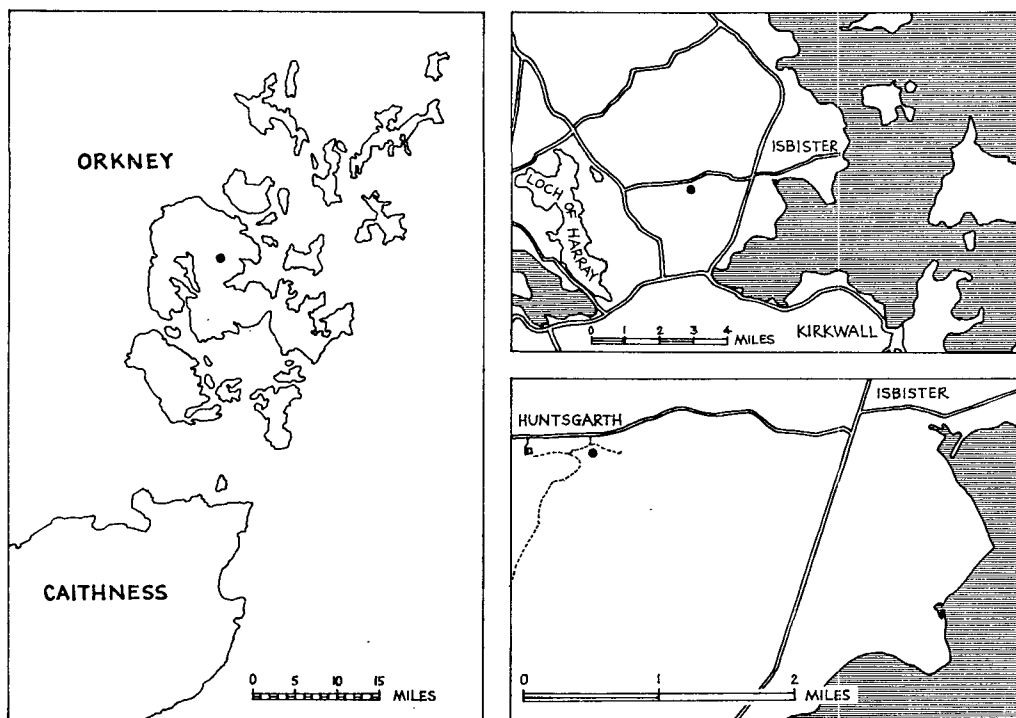


FIG. 1. Location map of bog-find at Huntsgarth.

whom they were forwarded to the National Museum for examination. The site was subsequently visited by the Keeper of the museum.¹

The clothing arrived at the National Museum of Antiquities as six items, a man's knitted bonnet, four pieces of cloth, and a tangled mass of threads. It was evident that the four pieces of cloth had been sewn together by a vanished yarn, presumably linen. The cloths were submitted to the Edinburgh City Police and the Museum research laboratory for examination, and then were washed in Lissapol, rinsed, dried and soaked in lanolin dissolved in a solvent in the Museum conservation laboratory.

INTERPRETATION OF THE FIND

There had been no sign of the remains of a body where the clothing was found, but it was assumed from an early stage in the examination of the cloths that they had constituted a dress on the burial of a child. In an attempt to prove this a phosphate analysis was carried out on the peat still adhering to the cloth, using the usual molybdate/vanadate technique. The result obtained, 200 p.p.m. phosphorus in the peat, is comparable with the levels in a number of Orkney peats analysed by the Macaulay Institute for Soil Research, and accordingly no evidence for bodily remains was detected. Presumably the body had completely dissolved and drained away whilst buried.² But human hair was found in various places on the cloth, 'fair in colour and non-medullated',³ which supports the assumption that there had been a body, and the fineness implied by the lack of medullation that it was a very young person.

Although the presence of a body could not be proved chemically, the subsequent reconstruction of the dress, by re-forming every fold and crease and by observing every impression, further emphasises the probability that the cloths had formed a dress which had been buried on a child's body. The child had been laid on its back with the arms across the chest (Pl. 17, figs. 2 and 3). Further, careful observation of the precise way in which some of the folds lay, especially the unnatural lengthwise folds on the sleeves which made them close fitting when they were in fact rather wide, and the numerous parallel folds over the shoulder, strongly suggests that the dress was constricted within some outer garment. The sharpness of the folds on the sleeves, the shoulder, and under the arms, contrasted with the less clearly defined folds on the body of the dress. There were no remains of this hypothetical garment and, as it is unlikely to have been linen, a leather coat may reasonably be assumed. If there had been a leather coat there could have been other leather garments as well, but it is unlikely that the woollen dress was worn as a shirt with leather breeches as there is no sign of constriction at the waist.

The age of the child wearing the dress is difficult to estimate, but as it lay in the ground the dress measured about 14 in. from shoulder to hem, about 24½ in. from one wrist across the back to the other wrist, and 4 in. round the cuff. As the child seems to have been poor it is likely to have been undersized by modern standards, and an age of three or four years seems likely.

The man's bonnet had been placed over the body before the grave was filled in.

THE KNITTED BONNET

The bonnet measures 12 in. across the crown when flat, and 7 by 6 in. across the head

¹ I gratefully acknowledge my debt to Mr Groundwater for forwarding the find, and for providing the information as to the circumstances of the discovery, and to Mr R. B. K. Stevenson for a description of the site and for help and comments whilst examining the material.

² The analysis was carried out by Dr H. McKerrell of the Museum research laboratory.

³ Report by Detective Inspector R. M. Stalker, Identification Branch, Edinburgh City Police, to whom I am grateful for his careful examination of the clothes.

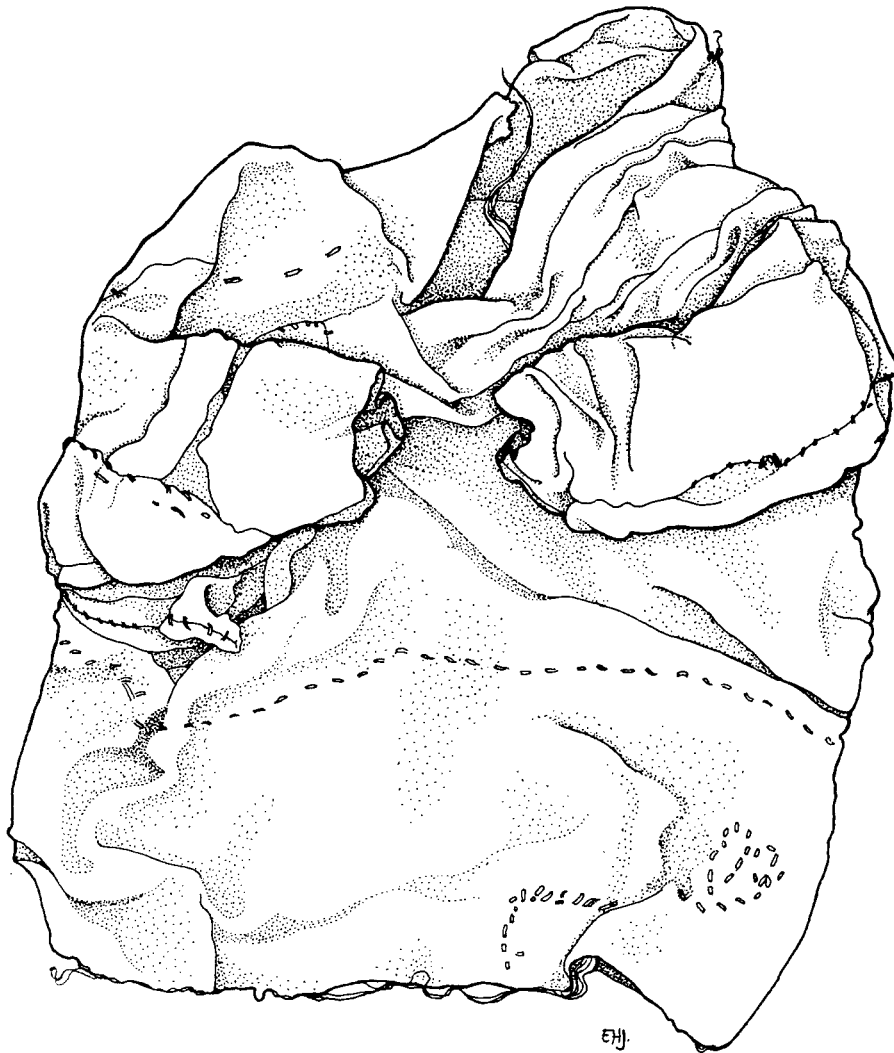


FIG. 2. Front of dress as reconstructed. $\frac{1}{2}$

opening (Pl. 18). Originally the bonnet was dark green in colour, now only seen on the under side as the outside of the crown is stained dark brown. It was knitted much larger and deliberately shrunk to felt it, and the surface was raised and cropped both inside and outside to make a thicker firmer weather-proof fabric. This almost felt-like surface remains inside, and between the brim and the crown where it has been protected. As an additional thickness a disc of knitting, 5.3 in. in diameter, cut from a similar bonnet, has been roughly sewn inside the crown. In the angle between the brim and the crown there is a length of 2-ply horse-hair twine, knotted at one side, presumably to reduce the size of the bonnet to fit a smaller head. The bonnet had started to split round the edge of the crown, and in several places the holes had been drawn together by sewing with a similar dark brown 2-ply wool yarn used to attach the extra piece in the crown.

The knitting of the bonnet was started at the under side of the brim by casting on 194 stitches. It was worked in stocking stitch on four pins. The double-sided brim, only 0.7 in. wide,

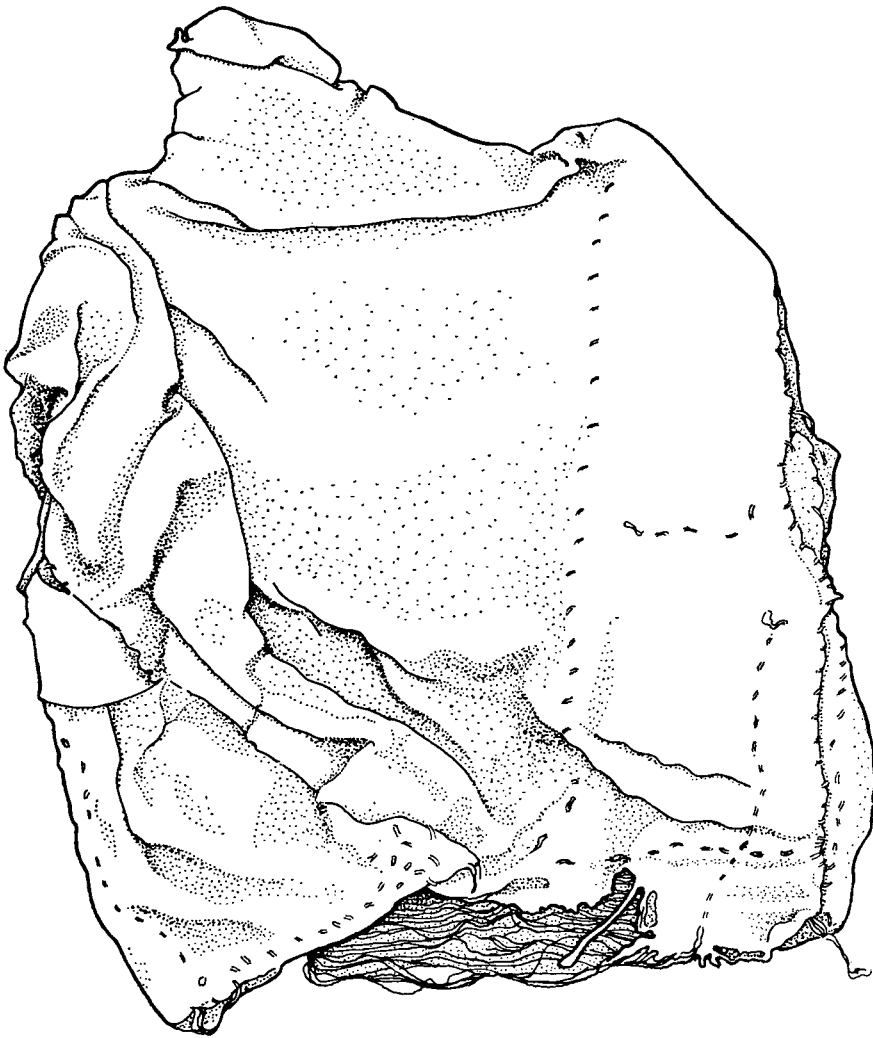


FIG. 3. Back of dress as reconstructed. $\frac{1}{3}$

was formed by increasing to 230 stitches, and then decreasing to the original number, the last row knitted through the cast-on row to hold the two faces together. From this point the knitting increased to a maximum of 240 stitches and then decreased to end with 5 stitches drawn together in the centre.

THE CLOTHS

Three different cloths were used in the dress: a wool check, a wool single-colour, and a wool and linen mixture. All the yarns are Z-spun.

The three rectangular pieces of check cloth comprised the main body piece and the sleeves. Weaving and pattern errors show that these were cut from a single piece of cloth both selvages of which survive; it was 25 in. wide, and 23·2 in. of the length survive (fig. 4). The colour of the

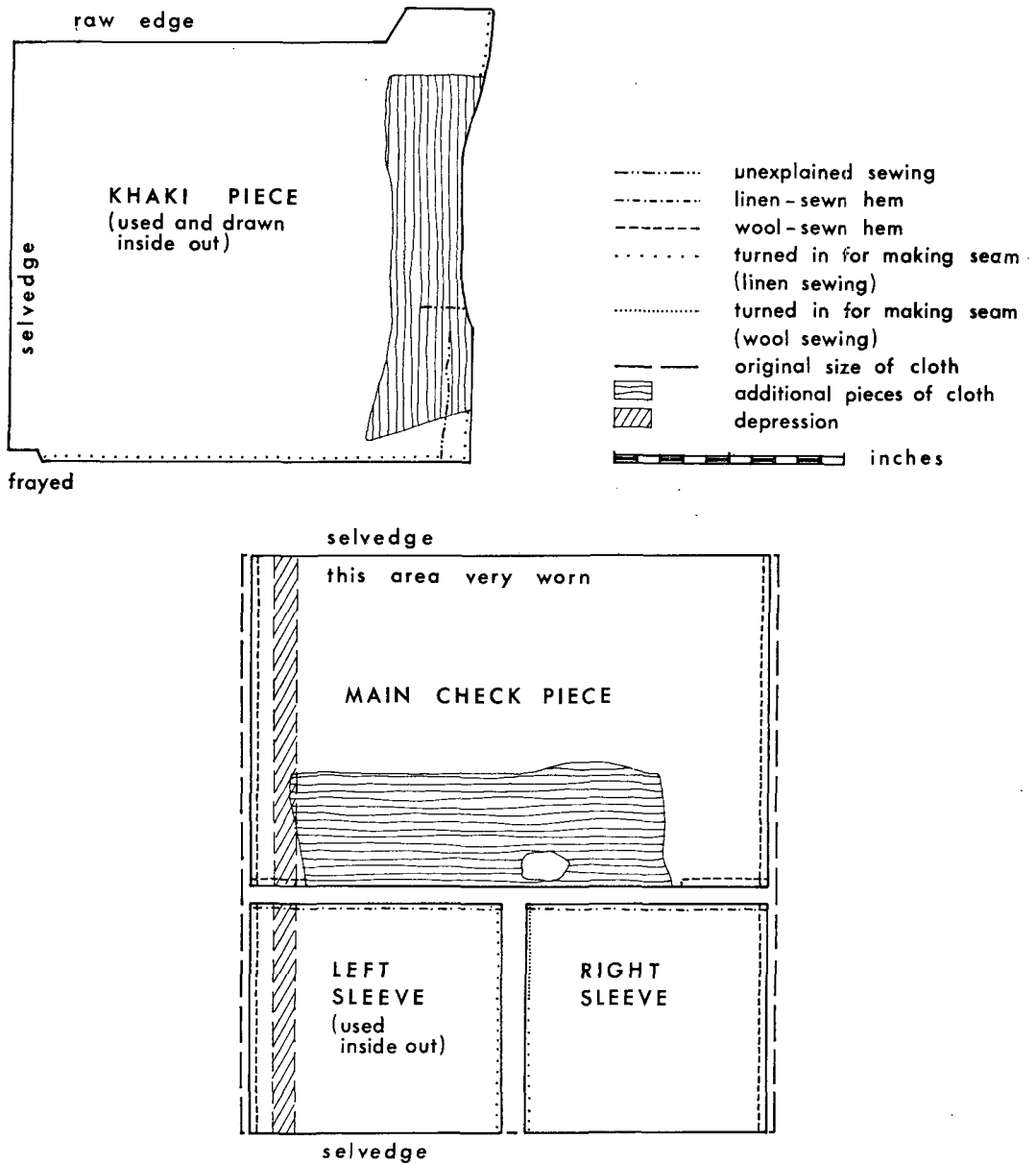


FIG. 4. Plans of two pieces of cloth used for the dress.

cloth is now three shades of dull brown. The main colour is mid-brown (actually slightly varied and including some lighter threads), checked by a light yellow-brown line between two dark-brown lines. In the warp the mid-brown blocks are 1.2-1.5 in. wide consisting of 30-43 threads, the three lines together being 0.5 in. wide, each line consisting of 6 threads. In the weft the mid-brown blocks are 1.1-1.3 in. wide consisting of 20-29 threads, the lines together being 0.7 in. wide and consisting of 4 threads each. Along one selvedge there is a variation in the pattern with 0.5 in. of light-brown along the edge, followed by 2 in. of dark-brown and 0.4 in. of light-brown

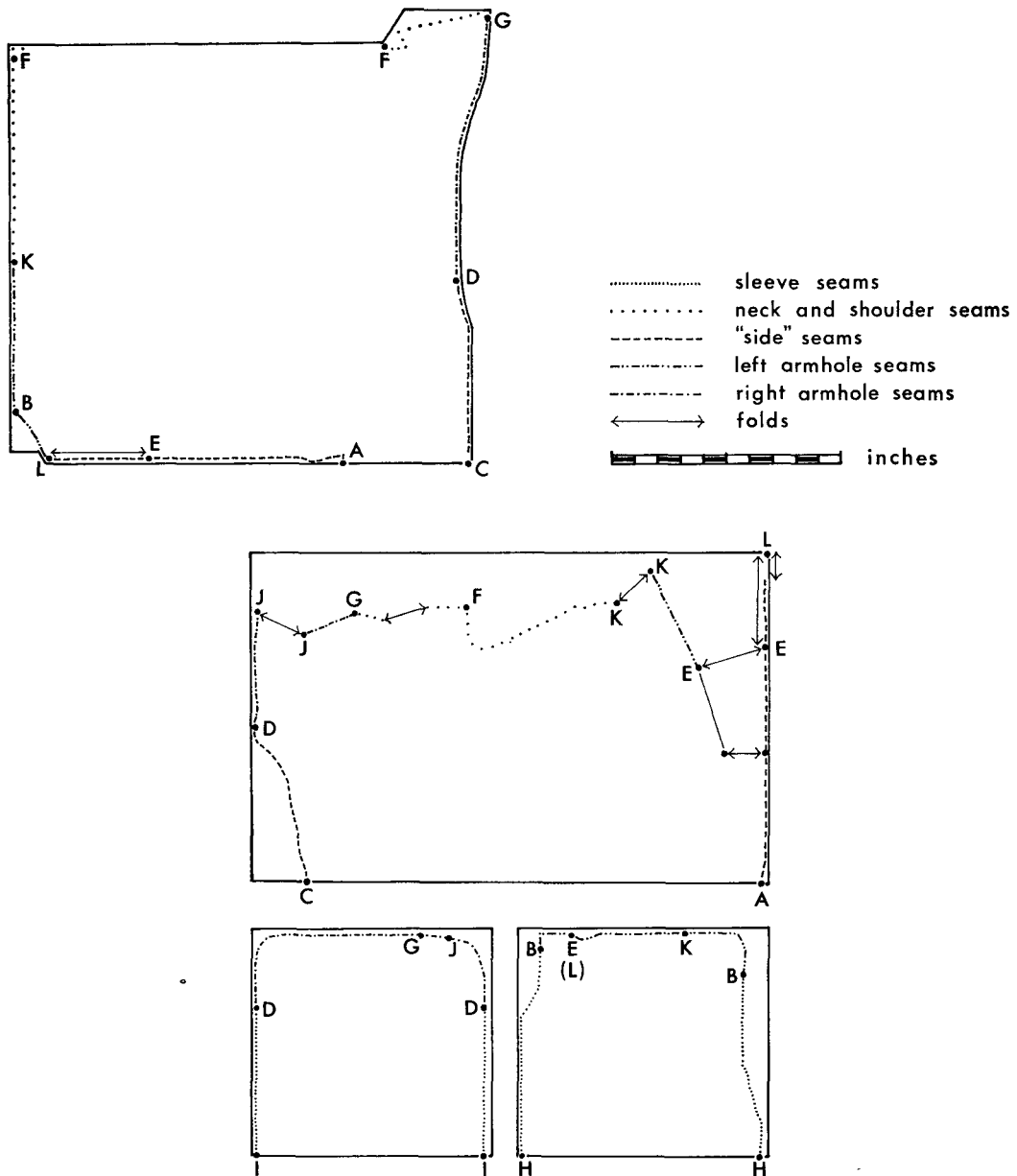


FIG. 5. Plans of the cloth showing reconstruction of dress (points marked by the same letter were brought together when the dress was made up).

before the regular pattern begins with a mid-brown block. At the other selvedge the pattern continues to the edge ending with a mid-brown block.

The weave is a 2/1 twill. In this weave the warp threads predominate on the right side of the cloth, passing over two and under one weft thread, and consequently a colour pattern in the weft shows only faintly. In order to achieve equal weight for the weft colour lines the weave has been

reversed for the weft stripes so that the warp passes over one and under two weft threads. This refinement requires six heddles and treddles on the loom instead of three (Pl. 18).

The care taken with the colour and weaving pattern indicates the quality of the cloth. The spinning and weaving are regular. There are about 30 warp threads per inch by about 16 weft threads. The selvages have a double thread in the outside place. It was a fairly firm cloth but now much worn. The few minor weaving errors referred to above are in the weft, amounting only to an extra or a missing thread, or the omission of 2 light-brown threads in the pattern.

The single-colour cloth is represented by an almost square piece, now khaki brown in colour, about 20.5 in. wide by 20 in. long, retaining one selvedge (fig. 4). It is a 2/1 twill, a firm regular cloth with about 33 warp threads per inch and about 22 weft threads. There are no double threads in the selvedge. There are only minor weaving errors. The cloth is worn in places.

The cloth with mixed yarns now survives as a mass of parallel wool threads representing the weft, all retaining the impressions where the vanished warp threads have lain. The missing warp was presumably linen. Three pieces of this cloth survive, the first two the same size, one sewn by wool to the inner face of the main body piece, and the other to the outer surface of the khaki cloth, the third piece being represented by a separate tangle of threads. The only detail which can be recorded is the width of the cloth, 15.5 in., as both side edges survive. In one piece there was a small oval hole the edge of which had been sewn down onto the main cloth. These additional pieces of cloth were not patches as they do not cover worn areas on the main cloths.

THE CONSTRUCTION OF THE DRESS

The dress was very clumsily contrived out of the four rectangular pieces of cloth, all the edges of which (with one exception) were either already hemmed or selvages. Only one edge had been shaped, but this was not used to help form the garment. The additional cloths sewn to the main pieces are unrelated to the form of the dress, one lying along the hem at the front, the other at right angles along the shaped edge mentioned above. It is necessary to conclude that the cloths had served some other purpose before being made into the dress, and the dress itself had had little use as the wear on the cloths does not relate to the areas of wear which would be expected on a dress.

It may be seen from the diagrams (figs. 4 and 5) that the sewing of the pieces into a dress generally follows the edges of the individual pieces. The two sleeve pieces were formed into tubes, one with the right side of the cloth outside, one inside out. The seams overlapped the edges a varying amount, the selvages forming the wrist edges. The right sleeve retains its original wool sewing, the seam D-I being formed by hemming one already hemmed edge over the opposite edge. All the other seams of the dress lack their sewing yarn which was presumably linen, but often an impression remained, and creases across a seam could be matched, so that before treatment the seams were reconstructed with confidence. All have been sewn in the same way, by overlapping and hemming the edges.

The body of the dress was formed by joining the large check piece to the khaki piece (used inside out) by seams C-D and A-L. As the two edges of the khaki cloth forming these seams are at right angles, one seam lay slightly askew, the other slanted diagonally across the back from the armhole to the centre of the lower edge. The tip of the check cloth at A, the lower left side, is still held by a few stitches of wool yarn. This arrangement contracted the dress towards the lower edge, and the khaki piece provided only 5.5 in. of the actual edge at the back. The worn selvedge of the check cloth had to be turned in, and the folded edge G-F-K runs from armhole to armhole below the throat. The parallel hemmed edge formed most of the lower edge of the dress.

The right armhole was formed at the front by the extension of the side seam D-J-G on the check cloth, and at the back by the extension of the side seam D-G on the khaki cloth. Two deep folds were formed near the top of the left 'side' seam, bringing together points E and L, and E and E, before the sleeve was attached. The left armhole was formed at the front by the folded edge E-K, and at the back by the continuation of the side seam, L-B-K, along the selvedge of the khaki cloth. The rest of this edge, K-F, was pulled round to be sewn to the upper edge of the main check piece forming a rough yoke. The fourth edge of the khaki cloth, which is cut and frayed, formed the neck edge with one end F-G attached to the right end of the upper edge of the check cloth.

This very unsatisfactory arrangement of the khaki cloth meant that its greatest diagonal width came across the back of the shoulders, and in fact a mass of folds have formed at the left side of the back and across the left shoulder. The setting of the square ends of the sleeves into the irregular gaps left between the main check piece and the khaki piece caused considerable difficulty. The right sleeve has been twisted round so that the lengthwise seam ran round the outside of the elbow, and a bundle of cloth formed under the arm. The left sleeve, sewn to deep folds, caused a bundle of cloth to form at the back of the sleeve and inside the armhole. The folds necessary to adjust the cloth to the child's body are deeper and more complex than can be shown on the drawing (fig. 2) for in places they lie several layers deep.

It seems probable that the dress was contrived and sewn straight onto the child.

THE INDIVIDUAL PIECES OF CLOTH

All the surviving sewing is by a 2-ply wool yarn, either mid-brown or light-brown. As mentioned above, the three pieces of check cloth can be shown to have been cut from one piece (fig. 4). It seems that this piece, which would have measured 25.2 x 22.6 in, originally had a use as a single piece, for the two raw edges were turned under twice and neatly hemmed. In addition along one edge there is a curious straight well-marked depression 0.75 in. wide running parallel to the hem 0.75 in. from the edge. As the hems and depression appear on both the main piece and the sleeves, and as the hemming of the other edges is different in character, it may be concluded that these two hems were turned whilst the cloth was in one piece. Whatever the use of this almost square piece of cloth one side was so greatly worn that the selvedge only survives in places.

Later the cloth was cut into three pieces. The top edges of the sleeves were turned in and hemmed, one onto the right side, the other onto the reverse. The newly cut long edges were turned in once only, and hemmed over the already hemmed outer edges to form the sleeve seams. The long edge of the main piece coincides with the edge of the additional cloth for most of its length, and both cloths were turned in once and whipped together with wool yarn. The edge extending beyond the whipping is neatly turned in twice.

A second piece of the additional cloth was placed along one edge of the khaki cloth against its right face which was turned to the inside of the dress. The edge was whipped in the same way as on the check piece, the edge beyond the whipping being turned in once for making a seam. This edge is slightly shaped. The opposite edge is a selvedge, one of the cross edges is turned in once, and the fourth edge is raw. An additional line of sewing runs for 6 in. parallel to the first edge described, and a few stitches run transversely catching down the threads of the additional cloth. The purpose of the added cloths is obscure as they are neither patches nor pockets.

There are other features that are puzzling: the intention behind the shaping of one edge of the khaki cloth; the care in hemming the upper edges of the sleeves when they were destined for such makeshift armholes; the lack of any attempt to shape the individual pieces and the sheer

incompetence of the construction of the dress including the extraordinary way the khaki piece was placed diagonally to form the back. Possibly the original intention was to make the dress from the tartan cloth alone and the main piece had been found to be too small for the body, but this does not explain the contrast between the neatness of detail and extremely unsatisfactory finished article.

COMPARISONS AND DATING

There are several knitted bonnets in the National Museum of Antiquities. These all have narrow double-sided brims or head-bands, and flat crowns. Their construction, surface finishing, yarn thickness and knitting gauge are all very similar, the distinguishing feature being the relative size of the crown. This can be recorded conveniently as the width from the inner edge of the brim to the outside of the crown, with the bonnet laid flat. The form of these bonnets derived from the flat cloth caps in general use in western Europe in the sixteenth century. In Scotland knitting was used from the seventeenth century as an alternative technique, and later as the sole technique, and development was to bonnets with relatively larger crowns, ending in the lowlands with the exaggerated Kilmarnock bonnet of the late eighteenth and early nineteenth centuries, though a less extreme version seems to have continued in the highlands.

The bonnet from Dava Moor, Moray, dating from the seventeenth century and probably from the first half,¹ has a brim/crown width of about 1½ in., but because the brim itself is wider than in other examples the crown hardly overlaps the outer edge of the brim. The late seventeenth century cloth bonnet from Barrock, Caithness, is only slightly wider in the crown, having a head-band rather than a brim.² Three bonnets compare more closely with that from Huntsgarth with its brim/crown width of 3 in. The Tarvie, Ross-shire, bonnet has a width of 2 to 2½ in., those from Arnish Moor, Lewis, and Gask, Perthshire, have a width of 3 in.³ Of these the first two are green and the last is blue. The last two are almost identical in size with the Huntsgarth bonnet; the former is dated by the style of the accompanying jacket to the early eighteenth century, the latter was worn by Prince Charles Edward in 1746.

In the eighteenth and nineteenth centuries bonnets had social significance, being worn by workers whilst the gentry wore hats.⁴

The three Huntsgarth cloths do not, in our present state of knowledge, give a more precise date to the find. The dated Scottish bog-burials, and those from Dungiven, Co. Derry, and Emlagh, Co. Kerry, all belong between the early seventeenth and late eighteenth centuries.⁵ It can be seen that 2/1 twill was a fairly popular weave during this time, only the Gunnister and Cambusnethan finds being without an example. Check cloths are not so common, the only datable Scottish examples (besides one of Iron Age date) being scraps from Dava Moor, but this lack is probably due to the surviving clothes being male garments of international style which required single-colour cloth: that check cloths were widely used in the highland area is quite certain, and

¹ *Proc. Soc. Antiq. Scot.* LXXXVI (1951-2), 21, pl. iv, 1. The ragged garment from this find has now been recognised as a pair of trews from which the sewing has vanished, comparable with those in the more closely dated find from Dungiven, Co. Derry, *Ulster J. Archaeol.* xxiv/xxv (1961-2), 119-42, especially 128.

² *Proc. Soc. Antiq. Scot.* LXXXVI (1951-2), 25, pl. iv, 3.

³ Tarvie, *op. cit.*, 24, pl. iv, 2; Arnish Moor, *Proc. Soc. Antiq. Scot.* xcvi (1964-6), 328, not yet fully published; one of the Gask Jacobite relics, unpublished, mentioned by kind permission of L. Blair

Oliphant, now preserved at Ardblair Castle, Blairgowrie, Perthshire.

⁴ Maxwell, S., and Hutchison, R., *Scottish Costume* (1958), 76, 109-10, 132.

⁵ *Proc. Soc. Antiq. Scot.* LXXXVI (1951-2), 21-27, 30-40; *Ulster J. Archaeol.* xxiv/xxv (1961-2) 119-42; *J. Cork Hist. Archaeol. Soc.* LXXI (1966), 81-91. The latest of the series is probably Cambusnethan, Lanarkshire, dated too early in the report, *Trans. Glasgow Archaeol. Soc.* ix (1937), 44-55. The Dungiven find appears not to have been a burial.

presumably elsewhere also, and check cloth was used in Ireland, as in the two finds already mentioned and for the clothes in the National Museum of Ireland published by McClintock.¹ But the use of a 2/1 twill for a check pattern is distinctly rare, the only other examples from bog-finds of any date known to the writer being two fragments out of the thirteen check cloths used as patches on the Dava Moor clothes. This rarity is probably due to the disparity in the appearance of the warp and weft on the surface giving a shadowy effect to the weft colour pattern. As explained, this difficulty was overcome on the Huntsgarth cloth by a refinement in the weaving. The quality of the Huntsgarth cloth is notable, but may be compared with the 2/2 twill check used for the Dungiven trews.

The curious cloth from Huntsgarth made with a vegetable-fibre warp and wool weft may be compared with a cloth used as a patch on the Barrock plaid.

SUMMARY

The pieces of cloth found at Huntsgarth were worn by a child about four years old buried in a peat bog. The cloths had had previous use and had been roughly contrived into a dress. Curiously, a man's much worn bonnet had been laid over the body. The form of the bonnet suggests a date in the eighteenth century, and a comparison of the cloths with other finds does not disagree with this conclusion.

APPENDIX

Wool Fibre Diameter Measurements (in microns²)

by *M. L. Ryder*, M.Sc., Ph.D., F.I.BIOL. A.R.C.
Animal Breeding Research Organisation, Edinburgh

	<i>Range</i>	<i>Mean</i>	<i>Mode</i>	<i>Distribution</i>	<i>% pigmented fibres</i>
(a) Dark thread, warp of check cloth	18-52 (56)	33	30	symmetrical	97
(b) Light thread, weft of check cloth	10-46 (70, 80)	24	18	skew-fine	18
(c) Weft, khaki cloth	14-50 (54)	24	20	skew-fine	13
(d) Weft, linen and wool cloth	10-40	21	18	skew-fine	2

Note: under *range* the diameters of individual fibres occurring outside the main range are listed separately on the line below.

Yarns (b), (c) and (d) have measurements one would expect from the Orkney sheep (cf. figures given by Ryder, 1968),³ the coarser fibres being more densely pigmented than the fine ones. Yarn (a), although dark brown, is less primitive in having a more symmetrical diameter distribution and is more difficult to identify with a particular breed, although such a distribution would not be impossible in the Orkney sheep.

¹ McClintock, H. F., *Old Irish and Highland Dress*, Dundalk (1943).

² 1 micron = 0.001 mm.

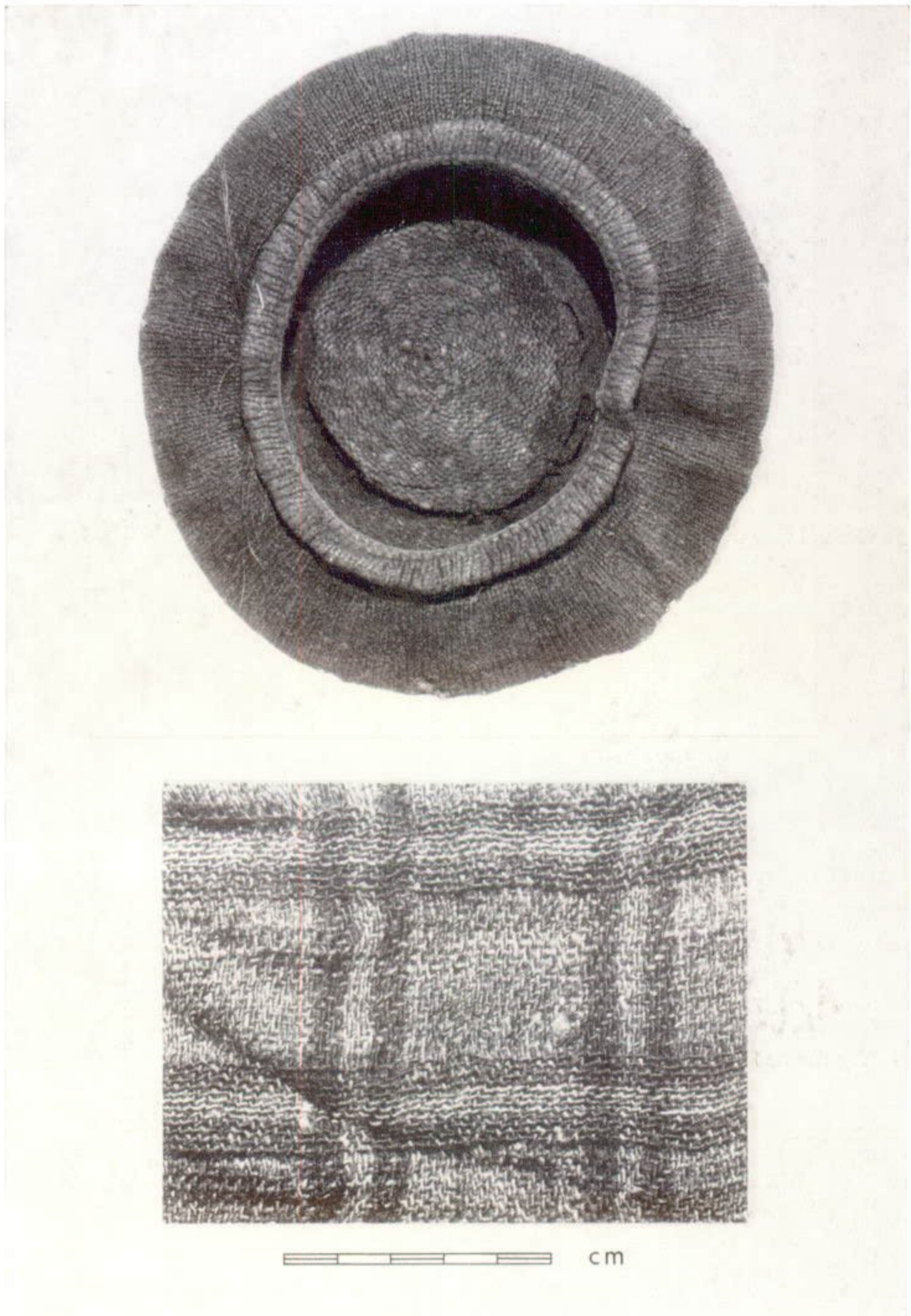
³ Ryder, M. L., 1968, 'The evolution of Scottish breeds of sheep', *Scottish Studies* 12, 127-67.



b The front of the dress as reconstructed



a The back of the dress as reconstructed



Above: The knitted bonnet. *Below:* Detail of check cloth