

### III.

#### THE SO-CALLED HEEL-SHAPED CAIRNS OF SHETLAND, WITH REMARKS ON THE CHAMBERED TOMBS OF ORKNEY AND SHETLAND. BY T. H. BRYCE, M.D., LL.D., F.R.S.

The contrast between the islands of the Orkney group and those of the Shetland group in topography and geology attracts the attention of the most casual traveller. The contrast in the characters of the chambered cairns is quite as striking to the student of the prehistoric monuments.

In the Orkney Islands the chambered tombs, broadly speaking, fall into two classes, corridor tombs (so-called stalled cairns) and chambered tombs proper. All are passage tombs in the sense that the chamber, whether in the form of a gallery with lateral recesses or of a main chamber with cells opening from it, is entered by a passage. In only one instance out of two which in outward form resemble the long-horned cairns of Caithness has it been demonstrated by excavation that the passage opened from a frontal bay or forecourt defined by horns. In no case has any tomb been shown to have a frontal arc of orthostats, whether standing apart in series or united by panels of masonry and only a portal of entrance. Although the scanty grave-goods do not provide any evidence of a local chronological sequence in either class of monument, there is a general

<sup>1</sup> *Ord. Survey Sutherland*, 2nd ed., 1907, Sheets lxxxvii and xcvi.

<sup>2</sup> *Inventory of Monuments in Sutherland*, p. 17, No. 42.

suggestion of evolution, of the first class into the immense corridor tomb on the Holm of Papa Westray, and of the second class into the wonderful *tholos* tomb of Maeshowe.

There are many examples of ruined monuments of the corridor or stalled type, but there are none which suggest devolution or gradual degeneration.<sup>1</sup> In this respect conditions in the Orkney Islands contrast with those in certain other areas in Scotland.<sup>2</sup>

In the Shetland Islands great funerary monuments such as occur in the Orkneys are nowhere to be seen. Only a relatively small number of chambered cairns exist, and all exhibit, by comparison with the Orkney tombs, features which suggest degeneration, combined, however, with others which might be regarded as archaic.

A tomb on the summit of Ronas Hill, in the parish of Northmaven, is definitely a degenerate chambered tomb; indeed it represents what may be regarded as the terminal phase of decadence. It consists of a small rectangular chamber under a cairn, which might be termed a large cist were it not that a short lintelled passage indicates its claim to be considered a vault for successive interments.

A more interesting type of monument was discovered by the staff of the Ancient Monuments Commission during their survey of Shetland. Mr Charles Calder and the late Mr J. M. Corrie recognised a type of chambered cairn not known before, nor observed outside of Shetland, to which the name of heel-shaped cairn was given because its outline resembles the imprint of the heel of a boot. Only two examples retain most of what may be termed typical features. The remainder are represented by ruinous structures, or merely by groups of stones which would have been unintelligible but for the existence of the more complete monuments. Unfortunately all the chambers have been rifled of their contents. The virtual absence of relics lessens the interest of this local type of chambered tomb, but its peculiar structural features are themselves worthy of description, because of the striking contrast they present to those of the Orkney cairns, and because of some general questions which they raise. The present account is all that is possible until such time as the spade in the hands of competent observers reaches the very remote localities where they are situated.

Of the less ruined monuments of the class the cairn at Punds Water, near Mangaster, in the parish of Northmaven, is the largest and perhaps the most normal; the other, situated in the small uninhabited island of Vementry on the greatly eroded northern shore of the Walls-Sandsting

<sup>1</sup> The small chamber B in the cairn on the Calf of Eday (*Proc. Soc. Ant. Scot.*, vol. lxxi. p. 115), excavated by Mr Charles Calder, although it is reduced in size has all the features of the typical tomb.

<sup>2</sup> *E.g.* the Clyde area, where a definite typological descending series can be recognised substantiated by associated relics. V. *The Book of Arran*, vol. i. *Archæology*, 1910, pp. 136-141.

peninsula, is more perfect, but at the same time more unusual in its characters.

*The Punds Water Cairn* (fig. 1) consists of large white granitic boulders, measuring on the average about 2 feet by 1 foot, and it rises some 5 feet above the surface of the hillock on which it stands, high up on the shoulder of a hill. In the heart of the mass of stones is a roofless and rifled chamber, with a passage also open to the sky. The cairn is considerably "spread," but all round its periphery the foundations of an outer wall-face can be traced in the fallen material. On the eastern side of the cairn the walling forms a long, very slightly concave, frontal façade pierced at its central point by a portal leading into the passage. Several courses of the frontal wall survive in its northern half, but the southern portion is less well preserved and the southern corner is ruinous.

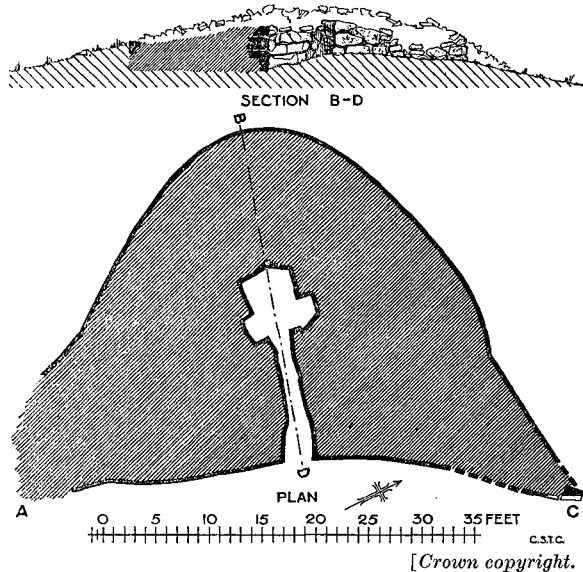


Fig. 1. Heel-shaped Cairn, Punds Water.

The façade measures over 50 feet in length, and as this exceeds the breadth of the cairn behind, it follows that the frontal wall at its extremities returns into the peristalith setting at an acute angle at each end. The horns in which the façade thus terminates were originally, as we may conclude from other examples, marked by upright stones. Of these only one survives, at the northern horn, and standing as it does 4 feet 9 inches high it forms a prominent feature of the monument which is not otherwise orthostatic.

The ground plan of the cairn is thus somewhat triangular, with a base 50 feet long and a rounded apex which is 32 feet distant from the centre of the façade, a distance little more than half the span between the horns. Here the frontal walling is pierced, as already stated, by the external opening of the passage leading into the chamber. The passage is 12 feet long and 2 feet 6 inches wide, contracting about the middle of its length to 1 foot 5 inches. Its walls are faced with coursed masonry, and slabs are not used; the same is true of the chamber into which the passage opens. This has the shape of a trefoil in plan, having three recesses, two lateral and a terminal, which is the largest. The whole chamber measures only 6 feet in length, and in breadth 7 feet, measured from the back of one

transeptal recess to the back of the other. The walls are carefully built in courses and still stand 4 feet 9 inches high. They are vertical without inward inclination or corbelling, and all the angles are sharp, not rounded.

*The Vementry Cairn* (fig. 2 and Pl. VI) stands at the north-west corner of the island on the top of a hill, which rises 298 feet above the sea at its base. It occupies practically the whole breadth of a ridge near the summit of the hill, and is placed with its morphological axis across the ridge. The ground falls away steeply both at the back of the cairn and in front of the façade, so that any area which might be termed a forecourt is very shallow and restricted. The tomb rises from a stone-built foundation which has the same shape as the ground plan of the Punds Water Cairn, except that it is less triangular due to the façade here being shorter relatively to the transverse diameter of the cairn.

The frontal façade (Pl. VI, 2) consists of loosely constructed walling faced in great part by large low slabs closely fitted where they join, and there is here no permanent portal opening. In its present condition the end stones of the façade have not the pillar-like character of those seen at Punds Water and the Hill of Dale (*v. infra*), but as there has been disturbance at both horns the stones which originally finished the façade may have been removed. It is even possible that the two outcrops of rock indicated in the plan (fig. 2) may have been accepted by the builders as completing the design. The concave front of the façade measures 38 feet along the masonry and about 36 feet along the chord of the slight arc.

The monument is not a cairn in the strict sense of the term, as the Punds Water structure is. The chamber and passage leading into it occupy the heart of a solid mass of masonry circular in outline, which rises 5 feet above the foundation, contracting as it ascends, as if it might, originally, have had a domical form. The top, however, is disturbed and the chamber is exposed. This has the trefoil form characteristic of this type of tomb in Shetland, and measures some 9 feet by 10 feet 6 inches at most. The inner wall-face, which survives to a height of nearly 5 feet, is formed of large stones, and the interior is occupied by heavy flags which probably formed the roof. The passage which runs through the thick wall of the tomb is 12 feet long and 2 feet wide, with a height of 2 feet from the present level of the floor. It had originally been roofed with lintels, and the three innermost of these are still in place. The outer end of the passage has been ruined, and the exact position of the entrance cannot be defined. Of this again later on.

The base of the circular building described above is set back some 2 feet from the edge of the foundation, behind it and at the sides, and the two are concentric. In front, however, the outer wall-face of the circular structure curves inwards to the line of the passage, to complete the circumference, while the border of the foundation platform, inclining

outwards on each side, is continued to meet the ends of the frontal façade at sharp angles, to form the conspicuous horns of the monument.

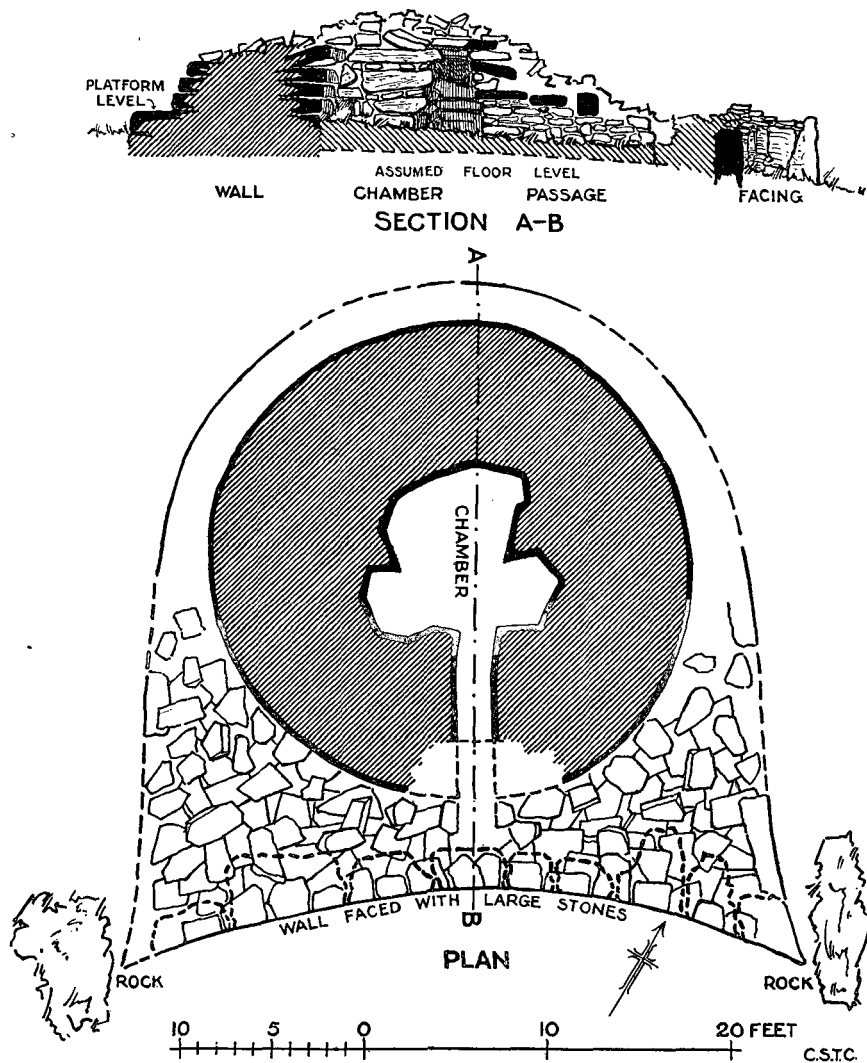


Fig. 2. Heel-shaped Cairn, Vementry. [Crown copyright.]

It follows from this disposition of parts that on the flanks of the circular solid mass of masonry, behind the horns and between it and the frontal façade, there is a space now occupied by loose stones. On the south-east they have no orderly arrangement, but it is to be noted that the stones here forming the surface of the foundation platform are almost all slabs. On the south-west side the appearances suggest that the material

between the façade and the circular wall-face had been laid in courses (Pl. VI, 2). The conclusion to be drawn would seem to be that the "cairn" was completed in front—although there is no evidence of bonding on the wall-face—by a building of stones less solidly put together, and that this has collapsed in course of time, leaving the frontal wall of the circular building exposed in front and on its flanks.

It has been stated above that the outer end of the lintelled passage is ruinous. Between this and the façade there is a quantity of loose material, and the arrangement of the stones in this mass indicates that the passage was originally continued to the central point of the façade. There is now no opening to the exterior in the frontal walling, but it does not follow that there was not one originally. It is quite possible that the tomb was closed after the last interment in it.

*Cairn on Hill of Dale.*—Overlooking Dale Voe from the west is a high ridge named the Hill of Dale. On the shoulder of this, some 700 feet above sea-level, there is a cairn upon which some excavation was carried out in order to discover if it belonged to the heel-shaped category. When its margin was defined it was revealed that the cairn was surrounded by a low wall (Pl. VI, 3) except round its convex side (fig. 3), and that there had been a frontal façade with pillar stones at its extremities (Pl. VI, 3). The façade measured 33 feet 6 inches, and the upright stones stood 3 feet 6 inches and 2 feet 3 inches respectively above ground level. The distance from the façade to the convex border of the cairn was 23 feet 6 inches. This margin was defective, and the disturbance of the material extended into the heart of the cairn. As there was no admixture of earth among the stones of the cairn, the spade could not be used, but an attempt was made to discover if a chamber existed by removing the stones by hand down to ground level. This was first carried out along the morphological axis, but nothing to show the presence of a chamber or passage was revealed. The centre of the cairn had been much disturbed, and either the heart of the cairn had been torn out and the chamber destroyed by some former excavators or the cairn had never been chambered. Time did not permit of the removal and replacement of all the stones of the cairn *en masse*, nor was the labour available; so the examination had to be postponed and left inconclusive. That a closed cist or cists remained unexposed in the mass of stones is possible, and

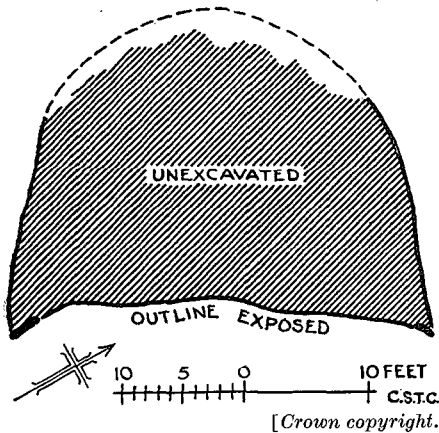
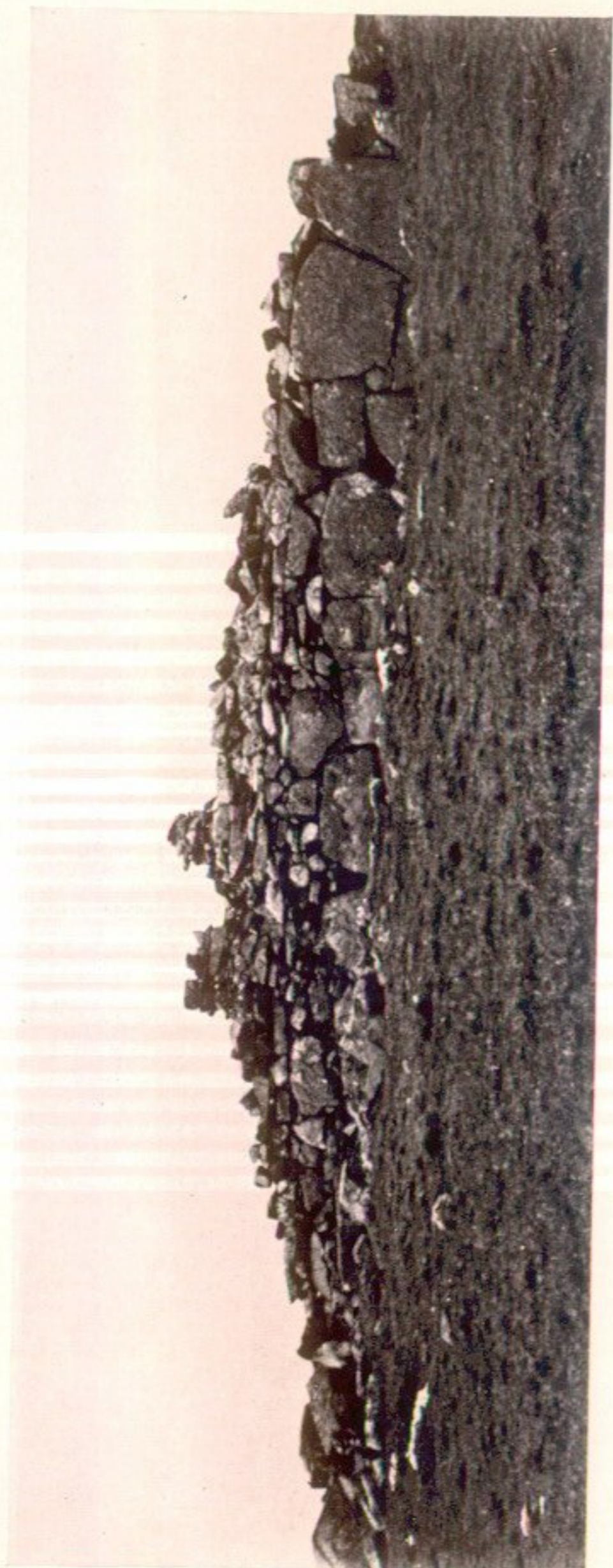


Fig. 3. Heel-shaped Cairn, Hill of Dale.





1. Vementry: façade, from S.S.E.



2. Vementry: façade, from E.



3. Hill of Dale: S. corner and part of S.W. side.

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this solution of the problem will be referred to later on. An object of steatite showing tooling was picked up from among the stones.

Fifteen structures, situated chiefly in Northmaven and in Walls and Sandsting, have been included in the Inventory of the Ancient Monuments Commission as examples of cairns of this special local type. All are much ruined and some are represented by mere fragments. Plans of a few of these are reproduced in figs. 4 and 5. It will be observed that the trefoil form

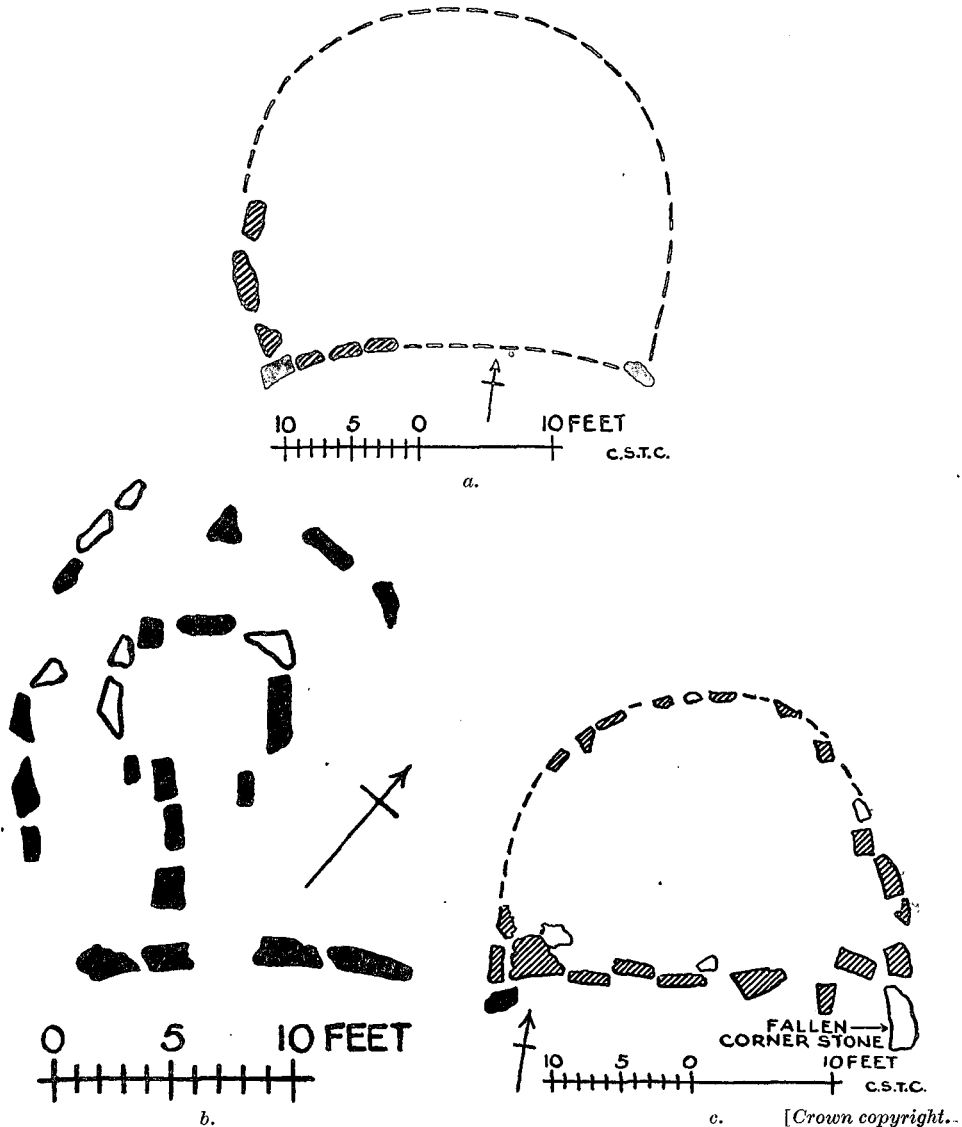


Fig. 4. Heel-shaped Cairns: a, Ward of Silwicks; b, Mangaster; c, Gillaburn.



of the chamber is not universal. At Vivilie Loch (fig. 5, *a*), while the angular character of the chamber is retained, the transeptal recesses are enlarged at the expense of the apical, and one of them is distorted. The chamber in a second cairn at Mangaster (fig. 4, *b*) has taken a rounded form, and the transeptal antechamber has been merged with the chamber proper.

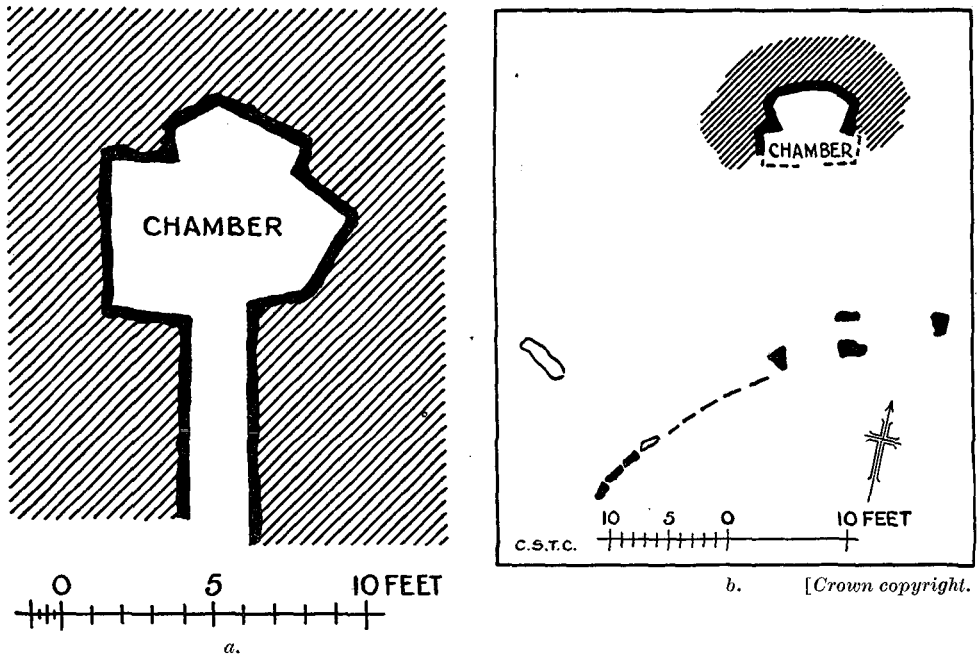


Fig. 5. Heel-shaped Cairns: *a*, Vivilie Loch; *b*, Turdale Water.

At some sites the remains are so ruinous and confused that identification of the monument is very difficult, and sometimes quite impossible without excavation, and this is also difficult, for generally it involves the lifting by hand of stones of large size. Such a structure is "The Benie Hoose" near Isbister, Whalsay, but a recent excavation in the disturbed upper layer of the site yielded the first piece of Neolithic pottery to come from Shetland. It was "a portion of an undecorated carinated dish of Unstan type"; other finds were so-called rude stone implements of Shetland type, a small flint scraper, fragments of steatite, and "a large clay vessel showing an incrustation of soot."

We must now leave the mainland of Shetland with its satellite isles and go to Unst, the most northerly island of the group, to consider some other complications respecting cairns of the type being described.

Looking over Balta Sound from the north is a long ridge which rises at its eastern end into two low hills named the Peerie and the Muckle

Heog respectively. The latter approaches a height of 500 feet above the sea; the Peerie Heog is some 100 feet lower. The rock is here serpentine, and the two Heogs are covered with irregular outcrops and scattered masses of the rock, all of the strong yellow colour which the serpentine here assumes in weathering, on account of the chromium in its composition. The jointing of the rock is such that it splits off in large angular blocks, many having an irregular cuboidal form. At three situations accumulations of these uncompromising boulders form conspicuous cairns. One of them, and the smallest, on the Peerie Heog, is quite indeterminate. The largest mass stands on the summit of the Muckle Heog and consists of a confused mass of rough angular and squarish yellow boulders spread over a large area. Examination shows traces of a wall on the south side marking the probable base of the cairn, but nothing positive can be made out by simple observation.

The cairn entered the archæological record in 1863 when Mr George Roberts read, before the Anthropological Society of London, a paper giving an account of discoveries made at this site.<sup>1</sup> His information was received from Mr Edmondstone of Bunes, and was to the effect that during an "excavation made for the planting of a fishing signal" a "Kistvaen of unusual size was displayed" which on being opened was found to contain "a large number of human bones & skulls." The chief point in his paper, however, was the record, again at second hand, of the finding of a second cist which yielded a skull, some bones of ox, and six "urns or rather vessels formed for domestic uses out of a soft chloritic schist." The urns were figured and described in the paper, while the skull was pictured and fully described by Mr C. Carter Blake. A year later the site was visited personally by Mr Ralph Tate, and his report to the Anthropological Society is published in its *Memoirs*.<sup>2</sup> He "set labourers to work in removing the enormous accumulation of stones . . . that encumbered the top of the hill." The account given of the results of the examination of the cairn is very difficult to follow; two semi-circular walls were stated to have been revealed on the east side 15 feet apart, but what part these had in the general layout does not appear. Scattered human bones and fragments of steatite urns were said to have been found inside the inner wall, where "the skeletons and urns which were the subjects of Mr Roberts's paper were obtained." He found no cist and no cist covers among the stones, and his description of the discoveries is so different from that of Mr Roberts that it is unnecessary to follow his confused account further. The present state of the cairn is even more hopeless than Mr Tate found it in 1863. Apart from the short stretch of walling seen, no structural arrangement is obvious,

<sup>1</sup> *Mem. Anthropol. Soc. London*, vol. i. (1863-64), pp. 296-298.

<sup>2</sup> *Ibid.*, vol. ii. (1865-66), pp. 340-342.

but a line of stones in the debris running across the cairn suggested the possibility, in light of what will be mentioned about the third cairn, of a frontal façade. The evidence, however, for this cairn being included in the heel-shaped category is slender and a final judgment could be arrived at only by a complete clearing of the site.

The third cairn (fig. 6) lies in a gully at the foot of the steep west face of Muckle Heog. It is better preserved than either of the others, but it is composed of the same rough irregular and refractory material, and a more complete study of the cairn is very desirable. The debris covers

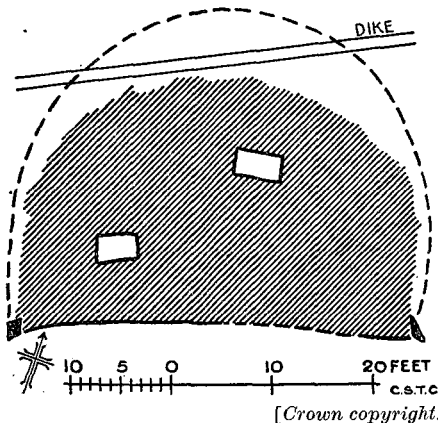


Fig. 6. Heel-shaped Cairn, Muckle Heog.

an area measuring 45 feet from north to south and 52 feet from east to west, and at places it is spread as much as 7 feet beyond its original outline. A series of stones can be traced continuously in the debris following a slightly curved line, with a span of 41 feet 6 inches between two upright stones, and this has been taken to represent the remains of a frontal façade such as occurs in the heel-shaped type of cairn. There is no sign of a portal or passage or chamber, but two cists, now empty, are exposed *in situ* and a third was apparently visible in 1863.<sup>1</sup> The cists

are formed of large flags set on edge in the usual way, and are somewhat larger and more massive than the ordinary "short cist" of the Bronze Age; the measurements of No. 1 are 4 feet 6 inches long, 2 feet 9 inches to 3 feet broad, and 2 feet 3 inches deep; of No. 2, 4 feet long, 2 feet 3 inches broad, and 2 feet 3 inches deep. This cairn affords the only evidence as yet forthcoming, unless the cairn on the Hill of Dale (*v. supra*) should prove to have been cisted and not chambered, that the type survived into the period when burial in closed short cists had become the prevailing practice.

To sum up. The so-called heel-shaped cairn is characterised by (a) a long and slightly concave façade formed of walling, or walling faced with slabs, longer than the diameter of the cairn it faces, and also longer than its depth, and finished as a rule at its extremities by upright stones even when there is no other orthostatic feature in the cairn; and (b) a relatively small chamber approached by a passage and typically trefoil in shape—*i.e.* with two lateral recesses and a terminal one, which is the largest, and without any insertion of slabs to divide the passage, or the parts of the chamber, from one another. (c) There is some evidence that the chamber may be replaced by a closed cist or cists.

<sup>1</sup> *Mem. Anthropol. Soc. London*, vol. ii. p. 296.

As has already been stated, the cairns of the heel-shaped variety have not been met with outside the Shetland Islands. It is therefore of some interest to inquire as to the place to be assigned to them among the other varieties of chambered cairns.

In the first place, they must be included, in the category of passage tombs—and are therefore to be linked with the northern group of Scottish chambered cairns—both on this account and because the frontal arc has the form of a continuous walling. A so-called short-horned cairn presents a certain resemblance to one of the heel-shaped variety, and the question arises whether the Shetland cairn can be considered as a degenerated form of this Caithness type. If the plan of the Vementry tomb (fig. 3) be compared with that of the Garrywhin cairn figured on p. 247 of Joseph Anderson's *Scotland in Pagan Times: Bronze and Stone Ages*, and reproduced here in fig. 7, it will be obvious that if the posterior horns were removed, and the frontal arc elongated and flattened, the outline of the Caithness cairn would become that of the Shetland tomb. Further,

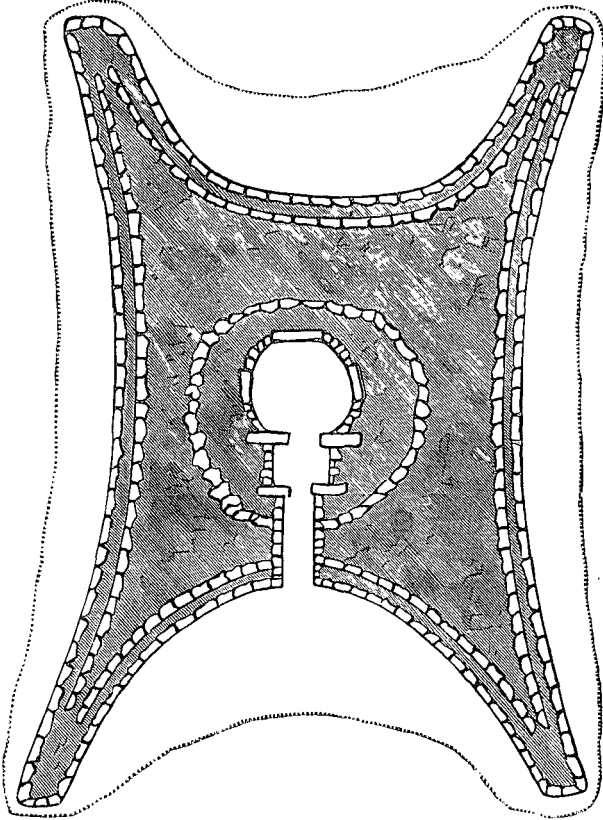


Fig. 7. Plan of Garrywhin Chambered Cairn.

if the wall seen in the heart of the Garrywhin cairn were thickened until its outer face came to the surface, we would have the circular building seen at Vementry. Again, if the divisional slabs were removed from the chamber its plan would be quite like that of the trefoil chamber of the heel-shaped cairn. But these are all fundamental alterations—and there are some other distinguishing structural features that may point to a different conclusion—although evidences of degeneration are not to be denied.

As far as the chamber is concerned, degeneration may be recognised in the simple rounded form of the chamber at the ruined cairn at Mangaster



(fig. 4, *b*). But in its complete form the absence of divisional slabs distinguishes the trefoil chamber from the tripartite gallery of the Caithness cairns and from the small bicameral chamber at Callernish. In ground plan it most closely resembles the cruciform chamber of some Irish passage tombs in Meath and Sligo. Again, its transeptal recesses distinguish it from the simple rounded chambers such as those of the Inverness cairns at Clava and Avielochan.

The most significant character of the Shetland cairn type, however, is the emphasis on the frontal arc. It is elongated and aggrandised, as it were, at the expense of the body of the cairn, and this feature must be analysed in some detail. The frontal arc is considerably greater than the transverse diameter, as already pointed out, but the span between the horns is also great compared to the length of the morphological axis. At Mangaster it is nearly twice as long as this dimension, so that the form of the cairn is that of an equilateral triangle with its apex rounded off.

It has long been recognised that the horned character of our long cairns is reminiscent of a similar feature of the plan of certain of the so-called Giants' Graves in Sardinia. Briefly described, the structural features of these Sardinian tombs are an elongated building containing a gallery, entered at the centre of a frontal façade by a portal; this may be only a hole cut in a tall central flagstone, or a doorway (fig. 8) bounded by the central pair of the orthostats forming the arc. The façade has widespread arms or horns marking off an area of ground as a forecourt. The span between the horns is considerably wider than the tomb building, and the frontal setting of erect stones is continued on each side into the outer wall of the structure enclosing the tomb chamber.

The frontal façade and the forecourt had in every probability some ritual significance, and the tradition of this seems to have survived in the construction of our northern long cairns.

The segmented chambered cairns of the south-west and west of Scotland and north of Ireland show, when the monument is entire, a façade of isolated stones set upright in a semicircle, the central pair of which form the jambs of a portal into the segmented gallery. The span of the horns is greater than the breadth of the chamber, but does not exceed the breadth of the covering cairn, of which the chamber occupies, normally, one extremity.

In the north of Scotland the segmented chambered cairns are replaced by the horned cairns. These show fundamental differences in chamber construction, but the forecourt and frontal-arc features are presumably repeated in the bay between the horns and the walling which bounds it. The façade is no longer orthostatic, but consists of a single or double wall, which is continued at the horns into an identical walling marking the base of the cairn (the peristalith).

Across the Pentland Firth, in the Orkney Islands, as has already been pointed out, horned cairns are few in number, and the so-called stalled cairns have neither frontal arc nor forecourt. It is interesting then to find that in Shetland the frontal arc assumes a prominent part in the design. At the Pundswater cairn the façade consists, like the frontal arcs in

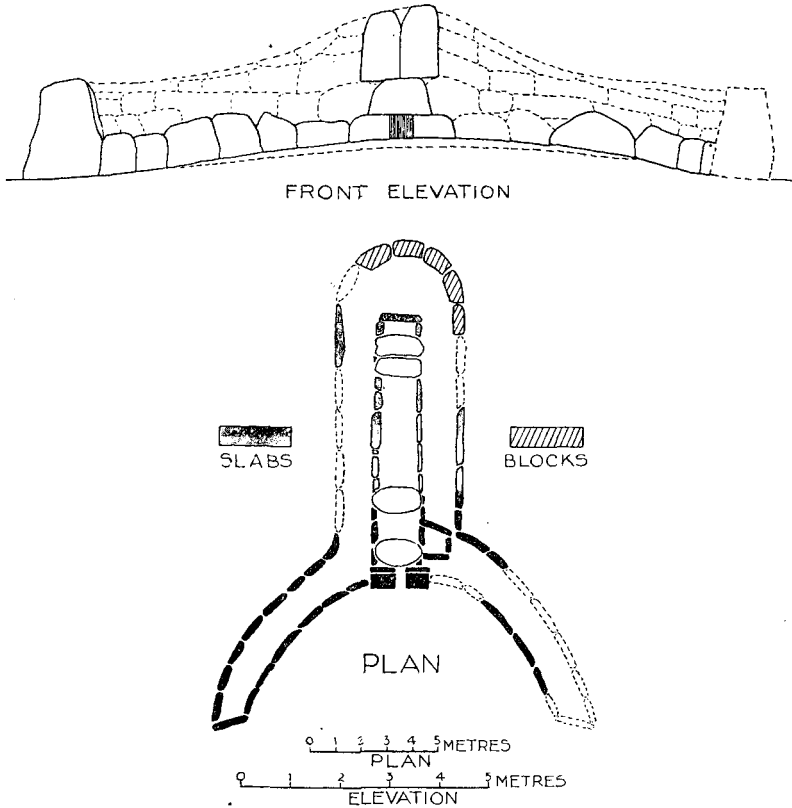


Fig. 8. Plan and elevation, Giant's Grave, at Sas Prigionas, Sardinia, after Dr Duncan Mackenzie.

Caithness, of a built wall. At Vementry the addition of a facing of slabs touching one another is a very unusual feature. The elongation and flattening of the arc in both cases is also peculiar, but the erection of upright stones at the horns where there is no other orthostatic feature in the monument is a unique arrangement. It is of special interest because it is a hint of the practice that was followed in the construction of the façade in Sardinia. Fig. 8, reproduced from a Memoir by Dr Duncan Mackenzie,<sup>1</sup> illustrates this feature as seen at a tomb at Sas Prigionas in Sardinia. The façade consists apparently of slabs set erect touching

*Papers of the British School of Archaeology at Rome*, vol. v. p. 109.

one another, and its horns are marked by stones more massive and taller than any others of the setting save the central portal pair. There the placing of more massive stones at the horns may have had some architectural purpose, and it is difficult to assign any other reason for the presence of the rather tall uprights at Pundswater and Dale. It is perhaps rash to push this comparison on such evidence as is available, but it is permissible to suggest that in this structural detail we have another link between our northern chambered cairns and Mediterranean tradition.

The general conclusion as to the status of the heel-shaped cairn is that it is not simply a degenerate Orkney or Caithness monument, but is a variety of chamber tomb developed independently in Shetland by people with traditions of their own, who perhaps reached the islands, not by way of the north of Scotland, but directly from south and west.

Before realising the possible significance of the contrast between the monuments of the chambered-cairn period in Orkney and Shetland, I was inclined to ascribe it to the lack in Shetland of the superb material for drystone building so abundant in Orkney. It is to that abundance, and to the relative ease with which stupendous flags could be quarried and wrought, that the triumph of the chamber builders, culminating in the incomparable tomb of Maeshowe, was due. To this also may be attributed the absence of signs of decadence referred to earlier. It contributed to a long persistence of the chamber-cairn culture in Orkney. The cult of the collective tombs seems to have resisted the encroachment of that of the Beaker folk in respect of burial custom. No instance has yet come to light in Orkney of a cist burial associated with a beaker.<sup>1</sup> Further, the presence of barbed arrow-heads in chambered tombs in the islands seems to point to their late date, or long persistence. The evidence indicates that the cult of the chambered cairns underwent continuous development, and reached its highest point in Orkney, and that it survived against intruding influences in these islands longer than elsewhere.

I am indebted to the Controller of H.M. Stationery Office for permission to reproduce the photographs on Pl. VI and figs. 1 to 6.

<sup>1</sup> One such has been recorded in Shetland, *Proc. Soc. Ant. Scot.*, vol. lxvii. p. 34.