<table>
<thead>
<tr>
<th>25 RELIEF</th>
<th>26 ASPECT</th>
<th>27 ALTITUDE</th>
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<tbody>
<tr>
<td>LEVEL GROUND</td>
<td>360°</td>
<td>65 = 70m OD</td>
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26 EXCAVATION (EXCAVATOR: DATE: EXTENT: QUALITY)
1. CORCORAN, J: 1963: PARTIAL: SCIENTIFIC

25 BIBLIOGRAPHY (AUTHOR: DATE: TITLE: JOURNAL OR PUBLISHER: VOLUME: DETAIL)
1. ORDNANCE SURVEY: 1975: 1/10 000 MAP
5. RCAHMS: 1911: CAITHNESS INVENTORY: HMS0: P44, NO. 160
6. HMB (SDD): 1985: LIST OF SCHEDULED MONUMENTS OVER*

22 LAND USE ROUGH PASTURE
23 VEGETATION
GU 1329 Burial from main platform in chamber (Human bone). 3055-60 b.p
GU 1338 Burial deposit A on platform (Human bone). 4800-60 b.p.
All dates ex. P.J. Ashmore via telephone. 15.4.1981."

Two chambered cairns, 'A' being short horned, and 'B' round. Both were excavated by Corcoran in August and September 1961 in advance of the raising of the level of Loch Calder which would threaten the cairns.

The excavation of 'A' was intended to identify the position of the chamber and passage, since the general characteristics, including both pairs of horns, were obvious. It, in fact, proved that the cairn was unique in having two chambers, set back to back, approached by passages through the N and S facades. Each consisted of a chamber and antechamber with walls of orthostats and interplaced drystone walling. Each chamber was enclosed by a carefully built stone core, 8ft thick, revetted by a more or less circular wall. The cairn itself was edged by a double wall-face. Careful observation during excavation showed that the various wall-faces interlocked at several points, so the different elements in the structure were interdependent and the whole cairn was of one period. There was some evidence to suggest that the centre was domical and the surrounding, horned, part had been a platform about 5ft high.

**Tulloch of Assery A**

GR: ND/06816189. Prior to excavation this cairn appeared to resemble the known short-horned cairns of the county, such as Orniegill; but with the passage and chamber entered from the northern forecourt. In the sequel the plan of the cairn was similar to that of Orniegill and others but with a passage and chamber entered from each forecourt. This is the first true double-horned cairn to be recognised in the north of Scotland.

The cairn was aligned approximately north-south and delimited by well built dry-stone walling, double in places. It was approximately 100 feet long and at its 'waist' was 46 feet wide. The horns were approximately 80 feet wide measured from tip to tip. Each oval chamber was built of short stretches of drystone walling with orthostats set contiguously with them and entered from a passage and 'ante-chamber' also built of drystone walling. Collapsed roofing material was found in some quantity in the northern chamber but not in the southern which had been extensively disturbed. Circular inner walls were found to surround each chamber.

Deposits of human bones were laid on low dry-stone platforms set along the west wall of the northern chamber and included one partially articulated skeleton. Pottery was not recovered from this cairn but a single flint arrowhead of Secondary Neolithic form was found in the southern chamber together with small flint fragments.
Description. The cairn lies in the low marshy ground at the head of Loch Calder a short distance W of the long cairn, Tulach an t'Sionnach. Excavation of this short-horned mound revealed two chambers, placed back-to-back 13 ft apart, approached from N and S. The following account is taken from the excavation report.

The northern chamber consisted of two compartments; the outer or ante-chamber was rectangular measuring 7 ft 6 in. wide by 5 ft long, the inner was polygonal measuring 10 ft wide by 8 ft 9 in. long. The sides of the ante-chamber were of dry-walling. The main chamber had a back-slabs and an orthostat on each side, all set leaning backwards, and linked by dry-walling. At the entrance to the ante-chamber, and between the ante-chamber and main chamber, were pairs of transversely set portal stones 4 ft 6 in. to 5 ft high. The roof of the main chamber was thought to have been corbelled, and many slabs suitable for this were found in the upper levels of the chamber. The arrangements for roofing the ante-chamber are not known. In the chamber were two low platforms. One across the SW corner had a curved front edge, the other, along the W wall, was rectangular in plan. Two dist-artisticated groups of human bones lay on each platform, and part of a fifth articulated burial lay on large slabs to the rectangular platform.

A small deposit of bone was also found in the W part of the ante-chamber.

The passage, which curved slightly W of the axis of the chamber, was 14 ft 6 in. long. The dry-stone walls were built with a slight outward batter, the width varying from 2 ft 3 in. to 3 ft at ground level, and from 3 ft 6 in. to 4 ft 9 in. at the uppermost surviving course. The remaining height, 3 ft at the entrance and nearly 4 ft farther in, was probably approximately the original height. The entrance was between a pair of portal stones, 3 ft high, on the line of the façade. Between these stones and extending 3 ft up the passage was a careful blocking of laid slabs, and a looser blocking was found at the S end of the passage.

The southern chamber and passage had been greatly disturbed. The main chamber was sub-rectangular in plan, measuring 9 ft 9 in. in both directions. There was a large back-slab, leaning outwards, and an orthostat in each side wall but one set nearer the back of the chamber than the other. The slabs were linked by dry-walling. A pair of slabs (the S slab in drying) projecting only slightly into the chamber, divided the main chamber from the ante-chamber. The SW side was destroyed, but the ante-chamber had probably measured 6 ft 8 in. in maximum width, with dry-built walls. A pair of portal stones (the E stone missing) had formed the entry from the passage.

The passage was 7 ft 4 in. long and 3 ft wide, with dry-built walls. At the entrance was a pair of portal stones, and a transversely set stone also existed in the W wall of the passage. The outer 3 ft of the passage was blocked by laid stones.

The wall faces within the cairn were only partly traced. Around each chamber was a core of carefully laid cairn material, tilted up slightly towards the chamber and edged by a wall-face, enclosing the horizontally laid slabs which supported the backs of the orthostats. The core was generally 8 ft in thickness, and so had a diameter of about 36 ft, though it was only exposed and traceable in certain areas. The core rose above the passage walls and it was faced by wailing 2 ft back from the passage walls, probably arranged thus to allow room for the passage lintels. It is probable that there was a step up in the roofing at its junction with the core. Vertical buttress stones were found in places in the cairn probably designed to minimise movement of the cairn material.

The cairn had horned forecourts facing N and S, measuring 81 and 80 ft across. From entrance to entrance the cairn measured 60 ft 6 in., and across the waist 45 ft. The edge of the cairn was defined by well-built wailing. At the façades the walling remained up to 3 ft high at the entrances, probably the original height, diminishing to only a few inches high at the tips of the horns. The lowest course of the wailing was in a shallow trench, probably cut to mark out the plan of the cairn. There were inner wall-faces 2 ft 6 in. to 3 ft behind each façade, but their relation to the side walls could not be established owing to disturbance; it is unlikely that they continued into the horns. The maximum surviving height of the inner walls on the NW side was 4 ft. At the S passage this wall coincided with the wall-face of the cairn core, and was built into the passage walls at the point where their height became greater. At the S passage the inner wall on the E side stopped the S portal at the entrance to the passage, but on the W side it was aligned on the upright stone in the passage wall. The maximum surviving height of the outer side wall-faces was 2 ft. It is suggested by the excavator that the original appearance of the cairn was the stepped, inner rectangular wall-face being higher than the outer wall-face, and the central core rising as a dome over the chamber roofs.

Outside the wall-faces edging the cairn was a considerable quantity of stone. Except at the horns there were layers of slabs inclining against the outer wall. The excavator considered that some of this material may have been slipped cairn material, but that much of it had been deliberately laid. The material extended between 9 and 13 ft from the wall-face in the forecourts, and between 12 and 15 ft from the sides.

Finds. Human remains.

All from the S chamber. On the SW platform were two collections of bones, one representing a mature adult probably elderly male and an adolescent, the other representing an adult, 38-40 years old, probably female. The bones in the former group showed signs of burning. The bones of the latter group had apparently been deliberately encased in clay. On the NW platform were two collections of bones also, one of an individual not further identified, the other of a male adult, 38-40 years old, together with some teeth of an adolescent and a tooth possibly of a third individual. On a loose arrangement of slabs near the centre of the chamber were the articulated tightly flexed remains of an adult, over 20 years old, probably male.
The situation in the Orkney-Cromarty province is complicated by the appearance of heel-shaped cairns at the same time as, or possibly slightly earlier than, the long cairns. The two cairn forms are likely to be related and to develop in a parallel series. The three adjacent but strangely contrasting cairns, Tulach an t'Sionnaich and Tulloch of Assery A and B (CAT 58, 69, 70) should provide the clues to elucidate the relationship of the various forms of chamber and cairn. Typologically the chambers were well spaced out, Tulach an t'Sionnaich being an early passage-grave, the two bipartite chambers at Tulloch of Assery b being relatively early in the Orkney-Cromarty series, and the large tripartite stalled chamber at Tulloch of Assery A being a relatively late form. The first chamber was later enveloped by a heel-shaped and then by a long cairn, both likely to be early examples of their types. But the bipartite chambers were built in one with a short horned cairn, a form developed from the heel-shaped cairn but almost certainly contemporary with developed long cairns, which are known to cover a variety of chambers derived, some at several removes, from the bipartite plan. It therefore seems necessary to assume either that the bipartite chambers continued to be built in the N at the same time as their derivatives, or that the short horned cairns evolved considerably earlier than the long double-horned cairns they so closely resemble. The late chamber at Tulloch of Assery A is under a large round cairn appropriate to phase four.

EXCAVATIONS AT LOCH CALDER, CAITHNESS, 1961

During July, August and September, 1961, three chambered-cairns threatened with partial or complete flooding were excavated at the northern edge of Loch Calder. The bulk of the work was carried out by workmen recruited in Thurso with some voluntary assistance from members of the Atomic Energy Research Establishment at Dounray and the excavation was directed for the Ministry of Works by Dr J. X. W. P. Corcoran, FSA, of the Department of Archaeology, University of Glasgow.
EXCAVATION OF THREE CHAMBERED CAIRNS
AT LOCH CALDER, CAITHNESS


INTRODUCTION

Three cairns, Tulloch an t-Sionnach and the two Tullochs of Assery, lie at the northern end of Loch Calder, in the parish of Halkirk, some five miles SW. of Thurso in Caithness (fig. 1). In June 1961 the writer was invited by the Inspectorate of Ancient Monuments of the (then) Ministry of Works to excavate the cairns, and this was completed during the summer of that year. The level of Loch Calder was about to be raised, as part of a scheme to increase the county’s water supply, by the construction of a barrage to the N. of the cairns which, as a result, were to be submerged either completely or partially.

The cairns lie on the Old Red Sandstone of the Thurso Flagstone group, forming part of the Caithness Flagstone Series. This flagstone, usually pale ochre or pale blue in colour, was laid down in a land-locked basin during a series of cycles of sedimentation deposits, which may be identified by the presence of ripple-marks, current bedding and fossil land plants, and by the absence of marine fossils. The ease with which the stone may be split into thin slabs for paving and roofing has encouraged the use of Caithness Flagstone as building material in recent times, as may be seen from vernacular architecture and flagstone dykes in the county. Evidence of intensive working in the past is provided by disused quarries in the vicinity of Thurso and Loch Calder. Neolithic immigrants were no less appreciative of the building potential of this flagstone, as shown by their handling of it in the construction of both Tullochs of Assery.

Tulloch an t-Sionnach and the Tullochs of Assery formed part of a group of chambered cairns centred on Loch Calder (fig. 1). The three cairns of differing plan were situated close together on level ground within 300 ft. of the northern line of the loch, as it was in 1961. The Tullochs of Assery lay 100 ft. apart. Tulloch an t-Sionnach lay 700 ft. to the E. of Tulloch of Assery A, and all three were situated approximately 215 ft. above Ordnance Datum (fig. 2).

In the Royal Commission’s Inventory for the county¹ the description of Tulloch an t-Sionnach, as it was in 1910, agreed with its appearance fifty years later. The Tullochs of Assery were described as ‘mounds’,² and this name was retained on the latest edition of the 6-inch Ordnance Survey map, although earlier editions had referred to ‘houghs’. Before excavation it was apparent that the smaller of the two mounds was a short-horned cairn and, despite the opinion expressed in the Inventory, the projection of upright stones through the turf mantle of the larger mound was more suggestive of a chambered cairn than of any other type of structure.

Tulloch an t-Sionnach was excavated during July 1961, with some additional work at the end of September of that year and in April 1965. The Tullochs of Assery were excavated during mid-August and the greater part of September 1961. In this report the horned cairn is referred to as Tulloch of Assery A, and the circular cairn as Tulloch of Assery B. They are discussed in order of excavation.

SUMMARY

Tulloch an t-Sionnach. A Passage Grave set in a heel-shaped cairn, a type known hitherto only in the Shetland Isles, formed the southern part of a long complex structure. Most of the structural details of the former could be paralleled in one or more of the Shetland cairns. Burnt and unburnt human and animal bone were found in the paved and possibly corbelled chamber, and a secondary cremation deposit had been inserted in the forecourt. At some undefined date subsequent to the main use of the heel-shaped cairn, but possibly at the time Beakers were in use in Caithness, a long, stone structure, apparently without chamber or cist, was added to the cairn. The composite structure was enclosed within a revetment wall which, in the forecourt of the heel-shaped cairn, overlaid cairn slip. A few featureless sherds of undecorated Neolithic pottery and two sherds of Beaker provided the only indication of relative dating.

Tulloch of Assery A. A passage, antechamber and chamber opened from each forecourt of a short-horned cairn, which had a N.-S. orientation. There was some evidence of structural techniques, including the use of extra-revetment. In the northern chamber, which had probably been corbelled, burial deposits of unburnt bone were placed on two stone platforms. Surviving remains of the latest burial lay in articulation near the entrance to the chamber. There were no Beakers in the northern chamber. Evidence of extensive disturbance, including an apparent nineteenth-century occupation layer, accounted for the almost complete clearance of the southern chamber. The only artifact of recognisable type was a petit tranche dérivative flint arrowhead which was found in the southern chamber.

Tulloch of Assery B. A large circular cairn enclosed a long, narrow orrastatic passage, opening from the SE., and a rectangular chamber of Camster type. The side walls of the latter were of dry-stone walling, reinforced by the use of large slabs to form end walls and two pairs of projecting orthostats, all of which contributed to the support of a probable barrel-vault, also of dry-stone construction. Unburnt human bone lay on a discontinuous paving, below which was a pre-cairn deposit of burnt bone, charcoal and sherds of undecorated Neolithic pottery. The chamber was surrounded by a massive inner wall, and there was other evidence of inner structural reinforcement.