INTRODUCTION.

By far the majority of the surviving chambered cairns in the Black Isle lie near the summit of the Millbuie, the rounded sandstone ridge which forms the backbone of the peninsula. Situated approximately at its centre point is Mount Eagle (838 ft.) and the ridge falls away gradually towards each end, the bulk of the cairns lying at heights of 400 ft. to 600 ft. above O.D. Kilcoy lies towards the western end of the Millbuie and here, within the space of less than one mile, are six large cairns which are remarkable for their obvious heterogeneity (fig. 1).

The most westerly cairn of this group is the denuded Clava passage grave of Carnurnan. Half a mile to the SE. of this a ruined round cairn with exposed polygonal chamber (Kilcoy IV) lies 100 yds. from a horned or kidney-shaped cairn with a pair of exposed portal stones capped by a lintel opening on to the centre of the forecourt (Kilcoy V). Half a mile further to the E. again is a group of three round cairns within 200 yds. of each other, one standing to a height of 14 ft. to 15 ft. and apparently untouched (Kilcoy III), a second showing an opened and eccentrically placed cist but seemingly no central chamber (Kilcoy II), and thirdly Carn Glas (Kilcoy I) showing the upper edges of slabs comprising a central bipartite rectangular chamber.

Kilcoy II was excavated in 1908 when the exposed cist yielded a food vessel. Carn Glas was opened in 1906 when Lord Abercromby recovered a single small tanged and barbed flint arrow-head (fig. 2).

The proximity of these morphologically different cairns raises a number of interesting questions. Excepting at Kilcoy, chambered cairns of the Clava group are not found in the same region as cairns of the Orkney-Cromarty group. What is the reason for the exception here? Secondly, no other horned or kidney-shaped cairn is known in the Black Isle or for that matter nearer to it than the Hebrides, Caithness or Northern Sutherland. Does Kilcoy II contain merely a food vessel cist? It does not seem likely

1 P.S.A.S., xlii (1908-9), 131.  
2 Ibid., lxix (1924-5), 71.
Fig. 1.
that a large cairn would be raised in the Middle Bronze Age especially to cover a cist when there were presumably already a number of existing cairns in the immediate locality which could be utilised. Kileoy I and IV are both of Orkney-Cromarty type but, whereas the former has a rectangular orthostatic chamber, the remains of the latter strongly suggest a polygonal chamber composed of alternating orthostats and horizontal walling. To what extent, if any, are the chambered cairns contemporaneous? Each type was being constructed at roughly the same period elsewhere, but the existence in such a small area of three or four peoples each with distinctive ideas on tomb architecture is intriguing to say the least.

It was felt that an examination of the whole group might settle some of these questions and it was decided to begin by a re-excavation of Carn Glas, primarily to recover the exact chamber plan, and, in addition, to make a thorough search for pottery sherds, etc., which might have been missed at the previous opening. The work described below was carried out during the summers of 1955 and 1956. The National Grid reference for the site is NH/578522.

THE EXCAVATION OF CARN GLAS.

This cairn must have been an impressive sight at the end of the last century, for Beaton records that in 1881 it stood 21 ft. high and covered more than a quarter of an acre.\(^1\) Spoliation for dyke and drain building followed and must have reached an advanced stage by 1906 when the opened chamber yielded the arrow-head already mentioned. At the beginning of the present excavation in 1955 the cairn was standing to a general height of no more than 4 ft. and the tops of the upright slabs comprising the chamber were visible, the chamber itself having been filled in with stones subsequent

\(^1\) *P.S.A.S.*, xvi (1881-2), 470.
to the earlier opening and utilised on several occasions for the disposal of sheep carcasses. The east sector of the cairn was particularly badly ruined and it was obvious before the work commenced that the larger part of any entrance passage had vanished. There were indications of a wall round the north perimeter of the cairn suggesting an overall diameter of 70 ft.

It was decided to work inwards from the outermost traces of the passage to the headstone at the rear of the chamber, and subsequently to examine the perimeter wall. The space immediately beyond the original passage entrance had been long under cultivation and it was obvious that no trace of ritual pits, etc., could have survived.

The Excavation of the Passage Remnant.—On removing the infilling of cairn stones it was seen that all semblance of passage walling ceased abruptly 4 ft. E. of the pair of transverse slabs forming the entrance to the ante-chamber. The south side was represented by two slabs, the inner one being set at an angle to the other in order to widen the passage at its point of junction with the ante-chamber. The north side was represented by a boulder and a flat slab which seemed to be the only surviving trace of horizontal walling at this point. The surviving portion of the passage then, was 4 ft. long and 2½ ft. wide, opening out to 3 ft. at its inner end.

The floor was of clay covered with about 2 ins. of clean sand, and above this was an infilling of cairn stones intermingled with brown earth and grass roots. The sand layer yielded a number of pieces of white quartz.

The Excavation of the Ante-Chamber.—At the commencement of the excavation a massive flat triangular slab lay across the north-east corner of this compartment, and this was removed to give access to the interior. Removal of the debris revealed that the ante-chamber was roughly rectangular, measuring 4 ft. in length along the north side, 3½ ft. along the south side, and having a uniform width of 5 ft. The transverse slabs which marked the entrance from the passage were 18 ins. apart and between them, let into the floor, was a triangular sill 3 ins. to 4 ins. thick. A second, more rectangular, sill was found between the pair of transverse slabs which separated the ante-chamber from the chamber proper. Each side of the ante-chamber was composed of a single massive flat slab on edge, that on the north side being found to be split lengthways.

A tiny fragment of burnt bone was found in the south-west corner of the ante-chamber. No quartz was found in this compartment, the floor of which was covered like the passage with clean sand to a depth of about 2 ins.

The Excavation of the Chamber.—On removal of the stone filling it was found that the chamber proper was approximately 4 ft. square. While the north side was composed of a single massive rectangular slab on edge, the south side was formed of a shorter slab with dry-stone walling filling an irregular gap between the side and transverse slabs. The headstone dominated the chamber and its pointed top rose 2½ ft. above the side slabs.
Below the modern filling consisting of stone, earth, grass roots and silt was a layer of sand averaging 2 ins. in depth over a clay floor. The floor was considerably disturbed on the north side of the chamber where a pit was found to contain bones of a number of sheep. It later transpired that they were modern and, in consequence, their introduction had added to the general confusion. Despite this, however, a number of relics were found in the remaining floor area. Four sherds of beaker ware lay close together in the sandy layer 1 ft. from the inner edge of the threshold sill and 18 ins. from the north side of the chamber. Numerous sherds of a coarse Neolithic pot were found close to the foot of the slab forming the south side of the chamber chiefly in the sandy layer, although a few pieces had penetrated into the underlying clay to a depth of 2 ins. or 3 ins. The areas in which each type of pot was found were mutually exclusive and not a single sherd of either type was found anywhere else in the chamber or, for that matter, on the site. Close to the south end of the headstone was found a triangular flint flake and a thin leaf-shaped arrow-head, both in the sandy layer. Parallel to the base of the headstone and about 1½ ins. to 2 ins. from it, a carbonised rod ¼ in. in diameter was traced for about 18 ins. and this strongly suggested an arrow-shaft.
Fig. 6.
Section through Retaining Wall.—Although the wall was in a very ruinous condition the section indicated that a base of large boulders 6 ft. wide had been demarcated by stones on edge and smaller stones had been heaped up to form a core (fig. 6). There was no indication of careful dry-stone walling such as is found in the Orkney tombs but nevertheless the construction was probably quite robust enough to fulfil the function of a retaining wall for the cairn material (Pl. VII, 2).

RELICS.

(1) Flints.—Artifacts of flint comprised the two arrow-heads and flint flake mentioned above. They were all of similar honey-coloured flint and had the following dimensions:

- Flake: \( \frac{1}{4} \text{ in.} \times \frac{1}{4} \text{ in.} \) (Pl. IX, 1).
- Leaf-shaped arrow-head: \( \frac{1}{8} \text{ in.} \times \frac{1}{4} \text{ in.} \times \frac{1}{4} \text{ in.} \) (Pl. IX, 1).
- Tanged and barbed arrow-head: \( \frac{1}{8} \text{ in.} \times \frac{3}{4} \text{ in.} \) (fig. 2).

(2) Bone.—A single fragment of burnt bone was found in the ante-chamber.

Unburnt Animal Bones.—The bones found in the pit on the north side of the chamber presented a problem because due to the disturbed state of the floor it could not be decided on stratigraphical grounds whether they were ancient or modern. Dr Clarke, of the Royal Scottish Museum, reported that all the bones were of sheep and furthermore that only a hornless breed was represented. This at once cast considerable doubt upon the antiquity of the bones. Soil samples taken from the chamber floor showed a fairly strong acidity. Unburnt bone could not be expected to survive for a long period under such conditions. Finally the bones themselves were analysed for nitrogen by the Kjeldahl technique, and found to contain 3-84 per cent. This compared with 1·11 per cent in a piece of authentic Neolithic bone from Skara Brae and 4·52 per cent in a piece of modern sheep bone, all tested under identical conditions. The Skara Brae bone was considerably fossilised while the Carn Glas bones showed no trace of fossilisation. The nitrogen content of the Carn Glas bones, while proving modernity, does suggest a fairly long period of burial and it may be deduced that they were introduced not long after the original opening of the cairn in 1906.

(3) White Quartz and Charcoal.—Quartz was found in the passage remnant only. Small pieces of charcoal occurred sporadically in the sandy layer of chamber, ante-chamber and passage, but nowhere did it occur in patches and never associated with cremated bone.

(4) Pottery.—See Appendix.

DISCUSSION.

Carn Glas represents the remains of a round cairn containing a rectangular bipartite chamber entered by a passage from the east side of the cairn. It is typical of the Camster variants of the Orkney-Cromarty group defined by Piggott, and in the following discussion the individual features discovered at Carn Glas will be compared where possible with other members of the Orkney-Cromarty group and also, for reasons that will appear, with members of the Hebridean group. Constructional features will be considered first, followed by the relics.
The Bipartite Chamber.—The cairns of the Orkney-Cromarty group are characterised by a more or less rectangular chamber divided into compartments by pairs of oppositely placed transverse slabs. The number of compartments range from one as at Achaidh,1 and Boath,2 up to as many as twenty-eight at the Knowe of Ramsay.3 In general the round cairns of simple construction with two compartments occur on the Scottish mainland, and we may instance Torboll and Achany in Sutherland which are both enclosed like Carn Glas in a round cairn.4 To these may well be added the ruined or incompletely exposed chambers at Contin Mains, Ballachnecore, Lower Lechanich, Balnague I, Muir of Conan I, Balvaird, Mid Brae I, and Woodhead I, all in Easter Ross.5 The short-horned cairn of Garrywhin in Caithness has a bipartite chamber 6 as does Kenny’s Cairn although the latter possesses a lateral cell in addition.7 In Caithness the predominating chamber form is tripartite but even here if we are to judge by the surviving roofed example at Camster, the outermost compartment was lintelled and became in effect merely an extension of the passage.8 The corbelled roof covered the two innermost compartments only, giving the effect of a bipartite chamber.

In a number of cases the overall length of the two compartments seems to have been of the order of 20 ft. Torboll and Achany, however, are each about 11 ft. long, and Carn Glas itself is the smallest of all, measuring only 9 ft. in length and 4 ft. in width. It has been found convenient to refer to the inner compartment as the chamber proper, and the outer one as the ante-chamber. This conception receives support at Carn Glas from the fact that the majority of the relics were found in the inner compartment (fig. 4).

Orthostatic Construction.—Like the majority of the Black Isle chambers, that at Carn Glas is built of large slabs set on edge and there is the very minimum of dry-stone walling to fill gaps in the construction. It has been suggested that the reason for this is the nature of the local stone which does not occur in small flat slabs suitable for dry-stone walling. In view of the fact that the builders of both the Clava and Clyde-Carlingford tombs were likewise accustomed to use orthostats for walling, this seems very likely. It is only in Caithness and Orkney that the stone is so ideally suited for the purpose and orthostats may be dispensed with. At Boath in Easter Ross a cairn with a considerable amount of its corbelled roof still in place demonstrates by its comparative crudeness the difficulties which

1 P.S.A.S., XLIV (1909-10), 104.
2 Discovery and Excavation, Scotland, 1956, 24.
3 P.S.A.S., LXX (1935-6), 407.
4 R.C.A.M. (Sutherland), Nos. 134, 447.
5 P.S.A.S., LXXVIII (1943-4), 26; LXXXVIII (1954-6), 65.
6 P.S.A.S., vi (1867-8), 487.
7 P.S.A.S., IX (1870-1), 292.
8 P.S.A.S., vii (1867-8), 495.
beset the local builders. At Achaidh in Sutherland a minimum of corbelling was employed, the bulk of the roof consisting of large flat slabs radiating from a wedged key-stone.

Headstones with Pointed Top.—It has been mentioned before that many of the Black Isle chambers possess a headstone with a more or less symmetrical pointed top: Woodhead I, Balnaguie I, Kilcoy IV and V, Balvaird and Muir of Conan I, in addition to Carn Glas itself. While at Carn Glas and at Balnaguie the headstones are taller than the remainder, this is not a general rule and in fact that at Woodhead is a very small slab.

Lintel at Junction of Passage and Chamber.—A common feature in both undivided and bipartite chambers is a lintel bridging the pair of transverse slabs which separate passage and chamber. Examples are to be found at Achaidh, Boath, Achany, Torboll, Kilcoy V, and possibly Ballachneecore, Red Burn, and Woodhead I. It seems likely that the large triangular slab which was found lying across the north-east corner of the ante-chamber at Carn Glas had originally been placed across the transverse slabs.

Sand Layer on Floor.—All the finds at Carn Glas were made in the 2-in. deep layer of sand which covered the floor, with the exception of a few of the Neolithic sherds which had penetrated the underlying clay. A similar layer of sand in the Achaidh chamber yielded a flint scraper and a sherd of pottery as well as charcoal and comminuted bone.

Threshold Sills.—The flat stones found at Carn Glas between each pair of transverse slabs, were only 3 ins. to 4 ins. in thickness and were embedded in the sand layer. They do not seem to be comparable to the septal stones which occupied similar positions at Rudh’ an Dunain, Unival, and the cairns of the Boyne group. The slabs at Rudh’ an Dunain were considered by Sir Lindsay Scott to have functioned as blocks for wooden doors. The Carn Glas slabs differ from these in that they lie flat like “door-steps” instead of being embedded on edge. We have accordingly avoided the term “septal” and prefer to call them “threshold sills” (Pl. VI, 2).

Septal stones are not unknown in cairns of the Orkney-Cromarty group having been found at Camster long cairn and at Unstan, but flat threshold slabs have not been previously reported. This may be due to their having been removed during spoliation, or on the other hand it may be a local development peculiar to Easter Ross. A similar stone has since been found at the neighbouring cairn of Kilcoy West, but this differed from those at Carn Glas in that it covered a pit containing fire-blackened stones and charcoal.

3 *P.S.A.S.*, LXVI (1931–2), 265.
6 *P.S.A.S.*, VII (1867–8), 485.
7 *P.S.A.S.*, XIX (1884–5), 341.
The Retaining Wall.—Perimeter walls are common features in cairns of the Orkney-Cromarty group and both single and double walls built of flat flags in courses have been noted in Caithness and the Orkneys. Although very much destroyed, the wall round Carn Glas seems to have consisted of concentric rings of boulders on edge with a rubble filling, and it seems quite likely that the considerations which led to the adoption of orthostatic chamber construction in Easter Ross were also responsible for the development of this alternative type of retaining wall.

Orientation.—Archaeologists have tended to ignore the question of the orientation of chambers and passages and, while in general there seems to have been a tendency to place entrances towards the NE., E., or SE., there are notable exceptions which make it impossible to lay down a definite rule. For example, the horned cairns at Rhinavie in Sutherland face due N., as do the cairns on Essich Moor near Inverness. Nevertheless, the frequency with which the Easter Ross cairns in particular were constructed with entrances facing due E. (magnetic) is quite striking and worth mentioning. In addition to Carn Glas, such cairns are Ballachnecore, Contin Mains, Muir of Conan I, Balnaguie I, Kilcoy IV, Woodhead I, and probably a number of others.

In the Hebridean group the entrances at Barpa Langass and Clettraval face due E. while those at Rudh’ an Dunain and Unival face ESE.

Quartz.—White quartz lumps have been found associated with Clava cairns and with cairns of the Hebridean group, notably Rudh’ an Dunain and Achnacree. At Rudh’ an Dunain Sir Lindsay Scott concluded that the quartz had been scattered on the surface of the mound and round the peristalith, while at Achnacree it was found in the chambers. At Carn Glas quartz was only found in the passage remnant. It is difficult to decide whether these lumps had found their way there from the cairn surface during interference but the fact that not a single fragment occurred in either chamber or ante-chamber rather suggests that the pieces were introduced purposely into the entrance passage.

Pottery.—In view of the disturbance which the chamber had undergone during its previous opening and subsequent use for the disposal of sheep carcasses, it cannot be said with absolute certainty that the Beaker pottery was present as a primary insertion. The sherds were found together in the central area of the inner compartment and in the same sandy layer which yielded the Neolithic sherds. The latter were at the foot of the large slab which formed the south side of the chamber. There was no intermingling of the sherds and neither type was found anywhere else on the site, facts which strongly suggest that the pottery at least had been

1 P.S.A.S., xvim (1883-4), 228.
4 P.S.A.S., lxix (1934-5), 480.
comparatively undisturbed. Although the north side of the chamber had been much disturbed, the area where all the pottery was found had suffered less and the sandy layer had a more or less constant depth.

At Cleittraval and Rudh' an Dunain, Neolithic pottery was found stratified below Beaker. At Dounreay, however, sherds of B-Beaker were found in the clay floor associated with Neolithic pottery and unburnt interments. At Achaidh also, a sherd of what was probably a Beaker was found in a primary context. While both of the Carn Glas pots had been deposited during the period when the tomb was in use, no definite information is available regarding the length of time which intervened between them.

**Flint Artifacts.**—It is generally held that while leaf-shaped arrow-heads are associated with all British Neolithic cultures, the presence of tanged and barbed arrow-heads indicates contacts with Bronze Age peoples. Both types were found at Carn Glas and while the leaf-shaped example was found in the same sandy layer as all the pottery and was probably undisturbed because associated with what seemed to be its carbonised shaft, we know only that the tanged and barbed arrow-head was found somewhere in the chamber. Unstan and Yarso° have yielded both types of arrow-head, and the leaf-shaped examples from Unstan resemble that from Carn Glas closely in their symmetry and delicate working. Leaf-shaped arrow-heads occurred alone at Garrywhin, Taversoe Tuack° and Calf of Eday, while tanged and barbed arrow-heads occurred alone at Ormiegill° and at the Hebridean tomb of Barpa Langass.

Flint flakes have been found in many cairns in both the Hebridean and Orkney-Cromarty groups.

**Burials.**—Whether burial at Carn Glas was by inhumation or cremation is not absolutely clear. Unburnt bones would not have survived for long in contact with the acid chamber floor and it seems presumptuous to postulate cremation on the evidence of the single fragment of burnt bone found in the ante-chamber. Nevertheless we know that, while both inhumed and cremated burials are found in cairns of the Orkney-Cromarty group, cremation is particularly common on the mainland, having been found in several of the excavated Caithness tombs. In view of the fact that, despite careful riddling, not even teeth were found at Carn Glas, we are probably justified in concluding that here, too, burial was by cremation.

Fragments of charcoal occurred here and there in the sandy layer in chamber, ante-chamber and passage, but never in patches suggestive of ritual fires.

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1 *P.S.A.S.*, LXIII (1928-9), 140.
2 *P.S.A.S.*, LXIX (1934-5), 325.
3 *P.S.A.S.*, LXXIII (1938-9), 155.
4 *P.S.A.S.*, LXXI (1936-7), 115.
5 *P.S.A.S.*, VII (1867-8), 487.
SUMMARY AND CONCLUSION.

A round cairn of the Camster type with an orthostatic bipartite chamber has yielded Neolithic and Beaker pottery, arrow-heads of both the leaf-shaped and tanged and barbed varieties, a flint flake and a single fragment of cremated bone. Constructional features included threshold slabs, a sand layer on the chamber floor, and a retaining wall of unusual type.

Unfortunately, the relics do not allow us to draw any definite conclusion regarding the period during which the tomb was in use. The leaf-shaped arrow-head must belong to an early period and was probably deposited with the original burial, while the barbed arrow-head and beaker may be grouped together as the accompaniment of a later burial in the chamber. How much later is not clear, and the relationship of the finger-nail impressed pot to the beaker is obscure.

Acknowledgments.—We should like to record our thanks to the owners of the Kilcoy estate, the Eagle Star Insurance Co. Ltd., and to their factor, Mr A. Wallace of Avoch, who readily granted permission for the work to be carried out. The farmer, Mr J. MacIver, was also most helpful and took
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a keen interest in the operations. We are indebted to Dr A. S. Clarke, of the Royal Scottish Museum, for examining the sheep bones for us; and to Mr R. B. K. Stevenson for the report on the pottery.

THE POTTERY.

By Robert B. K. Stevenson.

The four beaker sherds (Pl. VIII, 2) are from a single well-made vessel of sandy micaceous clay, dull reddish buff in colour with a black core. They are decorated with rather fine serrated impressions: five continuous horizontal lines immediately above the base are followed by a plain zone, then by three similar lines as a border to a cross-hatched zone. There had been a cross-hatched zone at the base of the neck, and a lip sherd has horizontal lines outside. In building the pot one or possibly two rings have been added to the base to form the first 1-4 ins. of the wall. The patterns and the shape of the vessel with the wall sloping out at 60° from a 4-in. base, and a rim perhaps 5 ins. in diameter, are appropriate for a NE. Scottish "C Beaker."

The quantity of mostly small secondary neolithic sherds (Pl. VIII, 1) probably also come from a single pot though the outer and inner surfaces have come apart. It is very friable because of the amount of small lumps of quartz and mica. Further the outer part of the wall has been well fired to a brick-red colour with buff surface while the inner is mud-coloured with a grey or black surface. The wall seems to have been over an inch thick, and ring-built as shown by one definite "false-rim." There are no rim or base sherds, but one wall sherd has an interior diameter of 8 ins. The interior has some irregular striations due to wiping during finishing rather than decoration, while the outside was "rusticated" with paired finger-nail impressions and also bears small irregular jabs perhaps made with the broken end of a twig rather like what used to be called "Neolithic B."

Rustication on beakers and on coarse ware associated with them is well known in England and to some extent in Scotland (Glenluce, Hedderwick and Muirkirk). The very coarse fabric of the Kilcoy vessel and its mixture of decoration, as also the "wiped" lines inside, are more reminiscent of ware without beaker influence such as a bucket-shaped vessel from Glenluce Sands, illustrated in the Proceedings.

In default, however, of a clearer understanding of the relations between the "beaker folk" and the various "secondary neolithic" groups that also used rustication, it is unsafe to assume that the two vessels at Kilcoy either were or were not deposited by the same people.

1 P.P.S., 1936, 19 ff.
2 P.S.A.S. (1949–50), Pl. XXVII.
3 Piggott, S., Neolithic Cultures of the British Isles, 341.
1. General view of chamber, ante-chamber and passage from SE. after excavation.

2. View of excavated chamber and ante-chamber showing threshold sills in position.

A. A. Woodham and M. F. Woodham.
1. Neolithic sherds with finger-nail impressions. (The four lower sherds exhibit the somewhat indistinct marks of a stamp.)

2. Beaker sherds.

A. A. Woodham and M. F. Woodham.
Leaf-shaped arrow-head, triangular flint flake and fragment of burnt bone.

A. A. Woodham and M. F. Woodham.