

II.

A STALLED CHAMBERED CAIRN, THE KNOWE OF RAMSAY,  
AT HULLION, ROUSAY, ORKNEY. BY J. GRAHAM  
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MUSEUM OF ANTIQUITIES OF SCOTLAND, AND WALTER G.  
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In the last two issues of the *Proceedings*, vols. lxxviii. and lxxix., we gave an account of the excavations of two Neolithic, long, stalled, chambered cairns of the Rousay type, the Midhowe cairn and the Knowe of Yarso. Both of these constructions had an entrance passage at the eastern end leading into a long, narrow, rectangular gallery or chamber, which was divided into small cells or compartments by upright slabs projecting from the lateral walls. The chamber in the Midhowe cairn was divided into twelve cells, and from the Neolithic level were recovered remains of twenty-five human skeletons, a small number of animal bones, fragments of seven clay urns, and a solitary flint implement, a well-made knife. The Knowe of Yarso had only three cells, but it produced, also from the Neolithic deposit, fragments of twenty-nine human skeletons, a large quantity of animal bones, almost entirely representing red-deer, a few bone tools, and sixty-nine implements and worked pieces of flint. No Neolithic pottery was found, but a few fragments of a Bronze Age food-vessel and two other pieces of pottery came from the top of the relic bed; no doubt these had been intruded at a time later than the primary burials.

In June last (1935) we excavated a third cairn of the same class, the Knowe of Ramsay. This monument is built about 12 yards from the southern edge of a narrow shelf or terrace,<sup>1</sup> some 50 yards wide, on the lower south-western slope of Blotchnie Field, at an elevation of about 200 feet above sea-level, barely a quarter of a mile east of the post-office at the hamlet of Hullion. To the south it overlooks Eynhallow Sound and the island of Mainland beyond, and, like the Knowe of Yarso, before it became dilapidated and covered with grass and heather, it must have formed a very prominent feature in the landscape when viewed from the lower ground.

The Knowe of Ramsay had been very much plundered to provide stones for building houses in the immediate vicinity, and all that

<sup>1</sup> These natural terraces which are to be seen in many parts of Rousay are well illustrated in the background of fig. 1.

remained was a long irregular mound of stones over-grown with grass, measuring 113 feet in length, 27 feet in breadth, and 5 feet in height, with a number of slabs set on end peeping through the surface of a hollow that ran along the summit. These indicated quite clearly the character of the monument, a stalled cairn. Excavation showed that its destruction had been more thorough than that of the Knowe of Yarso, which was bad enough.

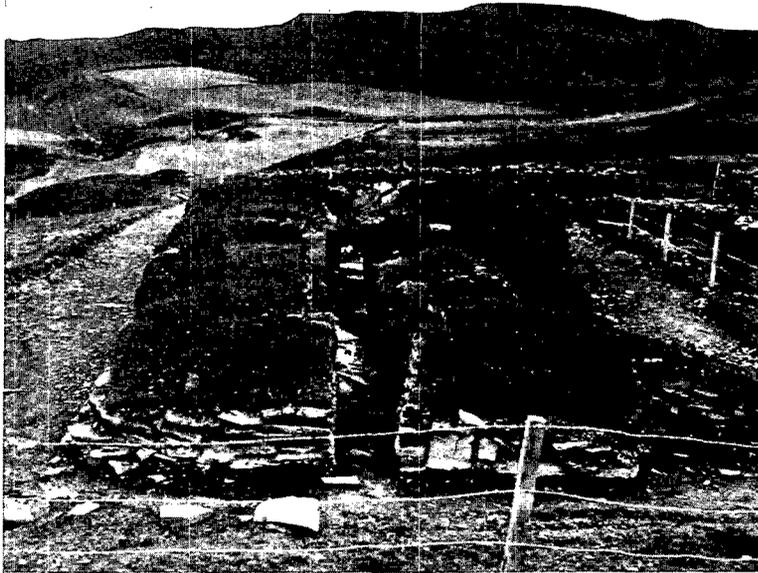
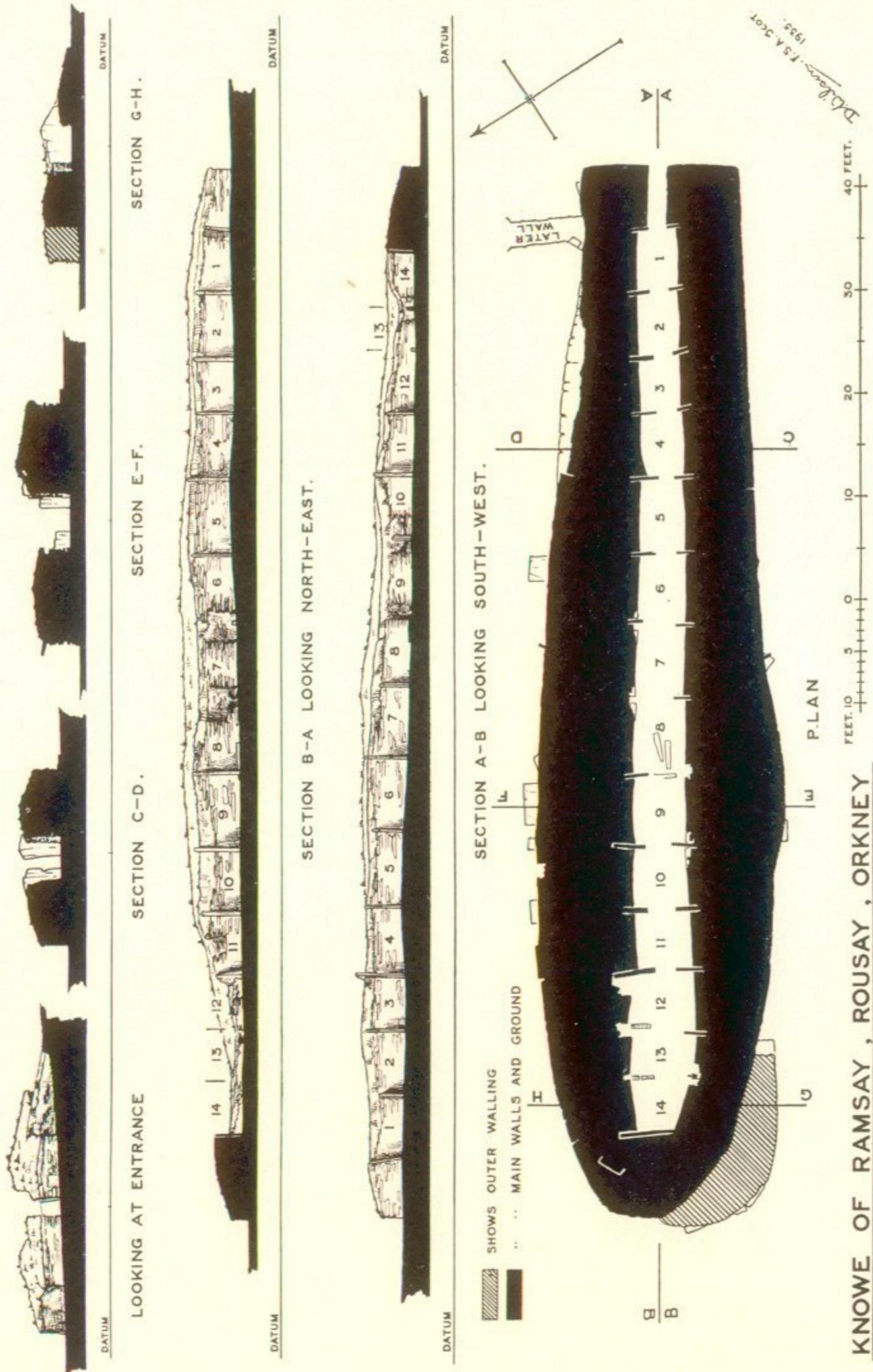


Fig. 1. The Knowe of Ramsay from the south-east.

After its outline had been cleared of the accumulation of soil and broken stones with which it was encumbered, the cairn was seen to be an irregular oblong on plan, with the north-west end rounded, and the sides and south-east end, in which is the entrance to the burial chamber, generally straight (fig. 1). Its main axis runs about  $40^\circ$  magnetic west of north and east of south, or about north-west and south-east. The entrance passage leads into a long, narrow chamber divided into fourteen cells by slabs set on end and bonded into the walls on both sides. These uprights are placed in line opposite each other so as to form a row of stalls on both sides of the chamber, similar to those seen in the Midhowe and Yarso cairns (fig. 2).

*Outer Wall.*—The face of the outer wall is formed of ordinary dry-stone building, but, as already remarked, it is now very much reduced



KNOWE OF RAMSAY, ROUSAY, ORKNEY

Fig. 2. Knowe of Ramsay: Plan and Sections.

in height. At the south-east end it is only 1 foot 9 inches, which height is maintained for about 30 feet along the north-east side; after this it decreases to about 14 inches until it approaches the north sector, where it has been entirely removed. At the north-west end only from 8 inches to 15 inches remain. Along the south-western side it rises from 3 feet 3 inches to 4 feet 2 inches, then decreases to 2 feet 4 inches, and as it gets nearer the south-east end the height is no more than 14 inches. The foundation course does not project outwards beyond the wall face as in the Midhowe and Yarso cairns.

There is a re-entrant angle, 6 inches deep, in the wall on the north-east flank of the cairn, 30 feet from its south-east end, and eastwards from this point there is a disturbed face of building extending for about 20 feet. The reason for this is not clear, as at a distance of from 6 inches to 9 inches in advance of it is a course of foundation slabs in alignment with the other parts of the outer wall. At first it was thought that, as in the other two stalled cairns in Rousay which already had been excavated, there was an inner built face in the thickness of the wall, but no such feature was found in other parts of the cairn, though searched for. Near the re-entrant angle, however, is a vertical joint, and opposite it on the face of the wall on the south-west flank are indications of another. But these joints cannot be traced through the building into the walls of the chamber. Possibly there may have been a change in the plan after the work of building the cairn had been started.

Some 4 feet 9 inches from the south-east end of the north-east side of the cairn is a wall or ramp built *against* it at right angles, and extending outwards for 7 feet 9 inches. It measures 2 feet 6 inches in breadth, and from a height of 2 feet 9 inches slopes down gradually until it dies out. On the west side, in the angle where it abuts on the main building, there is a recess, the lintel of which is 16 inches above ground-level, measuring 10 inches in height, 10 inches in breadth, and 7 inches in depth.

Outside the western sector of the cairn is a casing wall about 21 feet in length, 4 feet 9 inches in breadth at the centre, and 2 feet in breadth at its southern end; it is carried round in the opposite direction as far as the middle of the north-west end of the cairn, into the wall of which it gradually merges (fig. 3).

*Entrance Passage.*—The outer jambs of the entrance passage into the burial chamber are placed 6 feet and 7 feet 5 inches from the north-east and south-east corners of the monument. The passage measures 6 feet 5 inches and 6 feet 2 inches in length along the north and south sides, and 1 foot 8 inches in width. The walls on both sides where

they enter the chamber are 2 feet 4 inches high and a few inches lower at the outer end. The height of the passage cannot be ascertained, as all the stone lintels with which it would be roofed have been carried off.

*Burial Chamber.*—The total length of the chamber is 88 feet, and its inner end, which is formed by a large slab set on edge and measuring 2 feet 10 inches in height and 5 feet 1 inch in breadth, terminates 8 feet 8 inches from the face of the outer wall at the north-west end. The fourteen cells into which it is divided increase in width, though not quite regularly, from the entrance towards the inner end, from 3 feet 11 inches to 6 feet 8 inches, and their length, which is not exactly the



Fig. 3. Knowe of Ramsay: Casing Wall from south-south-east.

same on both sides, varies from 3 feet 11 inches to 7 feet 2 inches (fig. 4). In the same way the projection of the divisional slabs from the walls shows considerable irregularities; it ranges from 7 inches to 1 foot 9 inches, and the gradation is not regular but haphazard. For example, the slabs on the sides of compartment No. 5 on the north side project 1 foot 9 inches and 1 foot 4 inches respectively, while those in the stall on the opposite side project 1 foot and 9 inches. The lateral walls of the chamber, as in the Midhowe and Yarso monuments, are not correctly aligned, there being a difference of 1 inch to 3 inches in the projection of the east and west faces of some of the slabs. They measure from 1 inch to 5 inches in thickness and from 2 feet 6 inches to 4 feet 9 inches in height. The distance between the inner edges of the pairs of uprights in the eastern half of the chamber ranges from 1 foot 8 inches to 1 foot 11 inches, except between cells Nos. 4 and 5, where it is only

1 foot 1 inch. In the western half the variation is from 1 foot 8 inches to 2 feet 7 inches. Generally the tops of the upright flags are fairly level.

Near the south-west corner of compartment No. 5, about 9 inches from the adjoining divisional slab, was a small stone cist of pentagonal plan, the wall of the chamber forming one side. It measured 14 inches in length and 10 inches in breadth at the bottom, but as two of the slabs on the north side slanted outwards at the top it was 20 inches long and 18 inches wide at the mouth. The depth was 18 inches, and the



Fig. 4. Knowe of Ramsay: Burial Chamber from the north-west.

floor was rather more than 1 foot higher than that of the chamber. No relics, human or otherwise, were found in the cist.

While the Knowe of Ramsay is a good example of the distinctive, long, stalled, chambered type of Neolithic cairn, which so far has been recognised only in the Orkney Islands, it differs in some respects from the other three which have been excavated in the island of Rousay. The outer wall is quite plain, ordinary, dry-stone building, with the stones laid on bed and the foundation course in line with it, while in the other three the wall exhibits decorative motives. The Midhowe cairn has a stepped plinth for a foundation, above which the lower part of the wall shows the stones laid obliquely in one direction for some distance and in the reverse direction for the remaining portion. The

A STALLED CHAMBERED CAIRN, KNOWE OF RAMSAY. 413

upper part, which is set back a few inches from the lower and is separated from it by a string course, has the stones built in the opposite direction. In the Yarso cairn and in one at Blackhammer, which was excavated this summer, the foundation course projects a few inches, and in the first the stones are built obliquely in the same direction along the flanks and round one end, and in the second they are set so as to form a pattern of reversed triangles, recalling some of the designs on Orkney Neolithic pottery.

In a distance of less than two miles on the naturally terraced slopes of Blotchnie Field, overlooking Eynhallow Sound, there are five Neolithic cairns: Taiverso Tuick, a two-storeyed example; the Knowe of Lairò, a long-horned cairn; and the three stalled cairns just mentioned. On the seashore, within two miles and a quarter to the north-west, is a stalled cairn at Midhowe. A long, stony mound at Rowiegar a few hundred yards south-east of Midhowe; the Knowe of Lingro towards the north-western corner of the island; a mound near Bigland in the north-east corner; and the Knowe of Craie in the Sourin Valley, though much dilapidated, exhibit surface features suggestive of their belonging to the stalled type of cairn. But they await excavation before their true character can be determined. In some of the islands to the north-east of Rousay there are other ruined cairns that in all probability belong to the same type. One, on the Holm of Papa Westray, described in our *Proceedings*, vol. ii. p. 62, and figured on pl. iii., certainly is a stalled cairn.

Most of the cells, Nos. 3 to 11, had a certain amount of rude paving mostly on the north-east side, but in No. 5 it was carried across to the opposite wall.

Signs of burning were observed in all the cells from No. 6 to No. 11, sometimes on the lateral walls and occasionally in the centre.

Very few artifacts were recovered during the excavation. There were only a bare half-dozen of small shards of reddish ware; the biggest was no larger than a shilling, and consequently it was impossible to determine the character of the pottery. These were found in cells Nos. 2, 5, and 6. The only other relics were six pieces of flint, one a poorly made scraper and the others splinters. These were all calcined except one.

Human bones were scarce and very much broken or decayed. The remains consisted of those of an adult, probably male, from cell No. 3, of an elderly male from No. 5, and two fragments of an arm and a leg bone from No. 8. The bones were not cremated, though several of those from cell No. 5, like some of the animal bones found, were scorched, presumably by the fires that had been lit in the burial chamber after the remains had been deposited there. One of the skeletons exhibited

signs of chronic rheumatism, such as have been so often observed on other Scottish prehistoric skeletons.

Bones of animals were numerous, and there were a few of birds and one of a fish. They included red-deer, sheep and ox, great auk, bittern, cormorant, curlew, duck, sea or white-tailed eagle, pink-footed goose, and conger-eel. Many of the animal bones were broken or splintered, and some, as we have seen, were scorched.

We should like again to express our thanks to Mr James K. Yorston and his son James for the care and intelligence displayed in examining the cairn, and we are grateful to Professor Low and Miss Margery I. Platt for examining the human and animal remains found.

REPORT ON THE HUMAN BONES FROM KNOWE OF RAMSAY,  
ROUSAY, ORKNEY. BY PROFESSOR ALEX. LOW, M.D., F.S.A. SCOT.

The human bones are very fragmentary and mixed with numerous pieces of animal bones.

*Cell No. 3.*—The only human bones are the fragments of an adult, probably male, skeleton, represented by: 2 fragments of sacrum; heads, and the much eroded lower ends of right and left femur, 2 fragments of shaft of femur; fragments of upper and lower ends of a left tibia; fragmentary astragalus and internal cuneiform of a right foot.

*Cell No. 5.*—The human skeletal remains in this cell, while fragmentary, are evidently those of an adult male advanced in years; the bones show evidence of chronic rheumatism, and, further, several of the bones have been blackened by fire.

The skull is represented by fragments of the flat bones and a rather imperfect lower jaw; there are 2 cervical vertebræ; 10 rather imperfect thoracic vertebræ; and the fourth and fifth lumbar vertebræ very much affected by rheumatic changes; the body of the sternum and the remains of 10 right and 6 left ribs. Of the upper limb there persist fragments of both shoulder blades, a third of right clavicle, a fairly complete right humerus, lower end of a right radius, upper thirds of both ulnæ; of the hands there are 2 wrist bones and the remains of 3 right and 4 left fingers. Of the lower limb there remain a fragment of the right hip bone, an imperfect right femur, the head and a piece of the shaft of a left tibia; of the right foot there remain the astragalus, os calcis, cuboid and internal cuneiform, as well as the 4 inner metatarsals; of the left foot a fragmentary astragalus and 4 metatarsals.

*Cell No. 8.*—The only fragments of human bones are the lower third of a left humerus and a small fragment of a shaft of femur.

REPORT ON THE ANIMAL BONES FOUND IN THE CHAMBERED  
CAIRN, KNOWE OF RAMSAY, ROUSAY, ORKNEY. BY MARGERY  
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The animal remains found in this cairn, excavated during the summer of 1935 by Mr. Walter G. Grant and Dr. Graham Callander, form interesting additional evidence of the animals connected with early man on Rousay to those found the previous year at the Knowe of Yarso. The bones, associated again with human remains, appear to be, strange as it may seem, the fragmentary portions of food animals with perhaps the exception of one of the birds. As in the case of the Yarso cairn, skeletal remains of the Red Deer (*Cervus elaphus*, L.) are the most numerous. Apart from the abundance of the latter species, resemblance between the relics of the two burials ceases. The difference between these will be dealt with more fully later. Few bones approach being intact, the majority being extremely broken up, and were so probably at their initial accumulation. This suggests some reason for their fragmentary state, such as the purposeful extraction of marrow or the use of bone splinters as tools, etc. In most cells of the cairn some bones were calcined or charred, and the few pieces of deers' antlers which occur all seem to have been treated by fire, and this may account for their sparse numbers. The various species of animals represented by the bones in the individual cells are noted below.

*Cell No. 2.*—The most numerous relics occurring here were those of the Red Deer (*Cervus elaphus*, L.). Mature animals of a medium size were represented together with young ones as evinced by the presence of numerous milk molars and under-sized ribs. Almost as plentiful as the Red Deer were the remains of sheep, which appear to be of a slender and horned variety. The majority of these bones were from mature sheep. Ox bones took third place in importance—their remains being but very scanty. Many of the larger bones of both deer and ox were split and broken in various ways, possibly for the extraction of marrow. In this cell there was little evidence of calcination. Two bird bones occurred—the humerus of a Cormorant (*Phalacrocorax c. carbo*, L.) and the ulna of a Gannet (*Sula bassana*, L.), together with the shell of a common periwinkle (*Littorina littorea*, L.) from the shore.

*Cell No. 3.*—Very fragmentary remains of the Red Deer predominated here, representing both young and adult animals. Sparse indications of ox and sheep were also found. The majority of the bones were split and calcined, the greater part being the merest fragments too

small for identification. No bird relics were present in this section of the cairn.

*Cell No. 4.*—Bones of the Red Deer again exceeded in numbers those of any other species, their remains being indicative of young as well as mature animals. Ox and sheep were equivalent in numerical importance. All the material was broken up and of little comparative value. The humerus of a Gannet (*Sula bassana*, L.) occurred here, and also the lower jaw of a conger eel (*Conger vulgaris*, Cuv.). The latter is the only relic of piscine nature found in this excavation.

*Cell No. 5.*—Bones of old and many young Red Deer occurred here, milk molars being especially numerous. Two fragmentary burrs of antlers were present, from separate individuals since they differed considerably in thickness. The latter, as also many of the broken bones, were calcined. In addition to the remains of Red Deer, only two broken ribs of an ox were present and the tibio-tarsus of a Cormorant (*Phalacrocorax c. carbo*, L.).

*Cell No. 6.*—Red Deer were represented by almost every bone of the skeleton, though the presence of only three animals could be identified. Ox remains were very scarce, there being rib fragments only, whilst sheep were again unrepresented. The coracoid of a Sea or White-tailed Eagle (*Haliaeetus a. albicilla*, L.) was the only bird bone. Calcined and split bones were numerous.

*Cell No. 7.*—Bones of the Red Deer were again the most abundant, the species being represented by remains from adult and young animals. It is impossible to estimate the number of individuals, owing to the extremely broken state of the fragments. Part of a reasonably large tine was found here. A few sheep bones occurred of a species quite indeterminable. Ox relics were also very scarce and consisted principally of split long bones and broken ribs. Apart from the mammalian species only three bird bones remain to be recorded. These were: the ulna of a Bittern (*Botaurus s. stellaris*, L.); the humerus of a Cormorant (*Phalacrocorax c. carbo*, L.) and the humerus of a Gannet (*Sula bassana*, L.). Many bones had been calcined or split for extraction of marrow.

*Cell No. 8.*—This cell contained more animal relics than any other. There is, too, an increase in the number of bird species. Excepting the latter fact, the proportion of species one to another does not differ materially from that of the cells previously described. Red Deer was again predominant, and among the numerous remains of this species the only cannon bone approaching completeness was found; its measurements are recorded below:

*Metacarpal of Red Deer.*

Maximum length . . . . .	25.5 cms.
Maximum width of proximal end . . . . .	3.1 „
Maximum width of distal end . . . . .	3.5 „
Minimum width of shaft . . . . .	2.2 „

Numerous milk molars, also bones from small immature and fully grown deer in almost equal quantity occurred. Of the adults the majority of the remains indicate deer rather larger than those of the present day, and of decidedly good size for island stock. From the evidence of a particularly large rib head, one deer at least was of enormous size, comparable with the large prehistoric deer of the mainland of Scotland, whose remains are occasionally found in the peat mosses. In this part, too, the third molars of sheep were particularly plentiful, showing the presence of many mature animals. Among the sparse bovine remains is a good metatarsal, indicating an ox of small and slender proportions. Measurements of this bone are given below, together with the corresponding data, for comparison, from the skeleton of an ox of small Shetland race stored in this Museum.

<i>Metatarsal of Ox.</i>	Ramsay, Rousay.	Shetland, R.S.M.
Maximum length . . . . .	23.8 cms.	20.9 cms.
Maximum width of proximal end . . . . .	4.58 „	4.43 „
Maximum width of distal end . . . . .	5.59 „	4.93 „
Minimum width of shaft . . . . .	2.74 „	2.5 „

From the figures it is seen the two oxen were of similar build, the Ramsay specimen being slightly larger. Split bones form a goodly proportion of these mammalian remains and there is some evidence of calcination. Eleven bird bones present in this section represent six species. These are: the Curlew (*Numenius a. arquata*, L.), the Gannet (*Sula bassana*, L.), a Duck whose species is undetermined, a Swan, in all probability the Whooper (*Cygnus c. cygnus*, L.), the Cormorant (*Phalacrocorax c. carbo*, L.) and lastly the Great Auk (*Alca impennis*, L.) which was probably quite common in Orkney during certain seasons, at the time when these remains were assembled.

*Cell No. 9.*—In this cell the bones of Red Deer and sheep occurred in about equal proportions. In kind and condition they resembled those of the foregoing sections. A few ox remains, chiefly ribs, were also present here. The bird relics consisted of the broken ulna and humerus of a Gannet (*Sula bassana*, L.) and the carpo-metacarpus of a Pink-footed Goose (*Anser brachyrhynchus*, Baillon).

*Cell No. 10.*—Red Deer was the most abundant species here, the remains represented young and adult animals similar to those previously described. Sheep and ox bones occurred but in very small numbers. The former species was represented by molar teeth only, and the latter by two rib fragments. Split and broken bones occurred as usual, but there was little evidence of calcination. The humerus of a Gannet (*Sula bassana*, L.) was the only bird relic.

It will be gathered from the previous notes that in every section of the cairn the remains of a presumably wild animal, the Red Deer, exceeds those of the domesticated species. This was the case in the Knowe of Yarso, the contents of which were examined last year, with this difference, however, that here at Ramsay domesticated breeds are definitely present, whereas at Yarso they were so sparse as to indicate possibly an accidental occurrence. The significance of Red Deer in a prehistoric structure in Rousay was commented upon in a previous publication (*Proceedings of the Society of Antiquaries of Scotland*, vol. lxi, Sixth Series, Session 1934–1935, p. 343), and these notes give further confirmation of its occurrence in this locality. Regarding the number of Red Deer typified by the whole of these remains it is quite impossible to estimate exactly because of their very imperfect nature. Taking a right calcaneum as an index, it is certain that there were at least fourteen, and in all probability were actually many more than this.

It is apparent from the species of birds represented that these, too, were of food value to the early inhabitants of Rousay. The species occurring most often is the Gannet, which was used for food extensively in the past and up to recent days still contributed a staple diet for islanders, such as St Kildans. The flesh of the Garefowl or Great Auk was, in addition, greatly prized by fishermen and coast-dwelling tribes in the past. The inclusion of remains of this last species is interesting as indicating no doubt a period when this now extinct, and for many centuries diminishing, species must have been common in the northern islands. The same might be said of the Bittern, and perhaps also of the Sea Eagle which is much less extensively distributed than at one time not many years past. Although these early natives of Rousay appear to have been hunters and herdsman rather than fishers and of sea-faring habit, judging by the paucity of fish remains, a conger-eel, perhaps caught stranded in the rocks, would afford an acceptable though accidental addition to the usual food supply, but this point should not be stressed too much as shell-fish, which could be easily obtained, were represented by a solitary periwinkle.

Further, to the remains recorded under the separate sections above are a handful of the shells of the garden snail (*Cepaea hortensis*, Müller) which occurred in Cell No. 5. These may be of archæological value since they have been recorded in holocene deposits from various localities from time to time. Alternatively, they are of widespread occurrence in the British Isles to-day and may have been included in comparatively recent soils.

My thanks are due to Mr Grant and Dr Callander for kindly submitting the material to me for examination, and also my gratitude to the former gentleman in permitting me to include in the collection of sub-fossil bones at the Royal Scottish Museum these remains which may prove of comparative value at some future date.