

## II.

### THE EXCAVATION OF THE "WAG" OR PREHISTORIC CATTLE-FOLD AT FORSE, CAITHNESS, AND THE RELATION OF "WAGS" TO BROCHS, AND IMPLICATIONS ARISING THEREFROM. BY ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A., F.S.A.Scot.

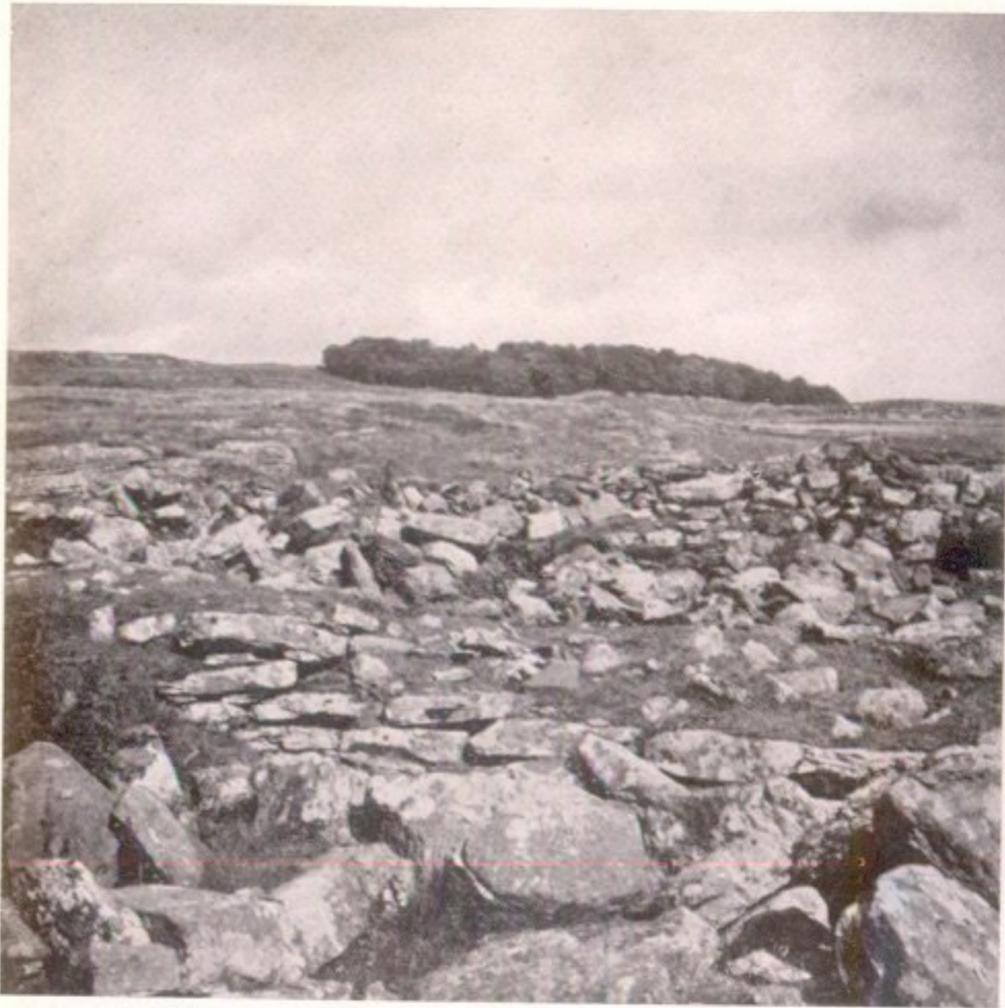
*Read January 13, 1947.*

Since I communicated to the Society, on 25th January 1941, an account of the partial excavation of this "wag" in the previous summer, so many years have passed that some recapitulation of my previous communication may be excusable before proceeding to recount the details of further excavation and to pass comments on the results.

My attention was first directed to these structures in 1910 when examining the Ancient Monuments of Caithness for the Royal Commission on Ancient and Historical Monuments, in the parish of Latheron. They occur almost entirely in the upland part of the parish, for the most part in the straths of Berriedale and Dunbeath, with a few isolated examples at a lower level where the ground merges into the plain, as at Forse and by the broch of Yarrows. Hitherto unnoticed by modern antiquaries, they were designated on the maps of the Ordnance Survey by the comprehensive but inapplicable term of "Picts Houses." The occasional place-name "Wag" or "Wagmore" occurring in their immediate vicinity seems to indicate their original designation, a term for which a derivation has been suggested in the Gaelic word *uamh*—a cave, with its diminutive *uamheg*—pointing to the fact that the completed structure under a roof must have presented a cave-like appearance.

The individual buildings were either oblong with rounded ends, or circular; sometimes single, at other times with both forms in combination. In either case there ran around the interior a covered gallery or arcade, some 3 feet wide, the roof of which, formed of heavy slabs reaching from the wall, was supported on pillars from 5 to 6 feet apart, while other slabs, laid transversely, covered the intervening spaces. The Wag of Forse was the most extensive of these ruins, and being at the same time the most accessible, it was selected for excavation.

In appearance it was a chaotic mass of tumbled stones (Pl. II; 1), some of them of very considerable size, with here and there the head of an upright slab penetrating through the debris, or a few feet of dry-stone building exposed. Over all the mass measured 120 feet by 90, with its main axis lying approximately north to south. Superficially it appeared to consist of four oblong structures, arranged in pairs each with a different alignment, leaving an indefinite mass of ruins between them. The examination was commenced with the most southerly wag, as in it one or two upright slabs projected from the ruin, pointing to its being the best preserved. The result of this excavation, fully described in Volume LXXV of *Proceedings* (1940-41), was the exposure of an oblong building (A on plan) measuring 41 feet 9 inches in length by 15 feet in breadth, surrounded by a wall with an average width of 6 feet and remaining to a height of from 4 to 5 feet, while in the floor five pillars still remained more or less erect around the sides, one of which still supported a roofing slab (Pl. II, 2). The floor was unpaved and, to counteract the natural fall of the ground towards the entrance, it had been lowered by excavation at the inner end. In the south-east corner, to the right on entering, there was recessed a small chamber or "cabin" (B on plan), presumably intended for the cattle-herds, whose duties, besides keeping watch against intruders, human or animal, would also be to make sure that no animal having broken loose from its tether during the night should gore another. The entrance, which was in the south end, had been prolonged at a later period, and opening off the extension by way of a short passage a circular dwelling had been constructed. In this dwelling (Pl. III, 1) a circular hearth had been formed somewhat to the south of the centre, in order to leave a larger area free on the opposite side. On the latter the floor was carefully drained, and on its surface was a slight circular depression covered with minute particles of carbonised vegetable matter, possibly the remains of heather, suggesting the site of a bed. A low narrow tunnel, seemingly intended more for oral communication than for human passage, connected this house with the herd's cabin. The dwelling had been covered with a beehive roof, which had collapsed, so rendering it uninhabitable, and filling the interior with debris which quite concealed its existence prior to excavation. Such is a general statement of the results of the excavation of 1939 fully reported in detail elsewhere.



1. View across the "wag" previous to excavation.



2. View of interior of "wag."

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[To face p. 12.]



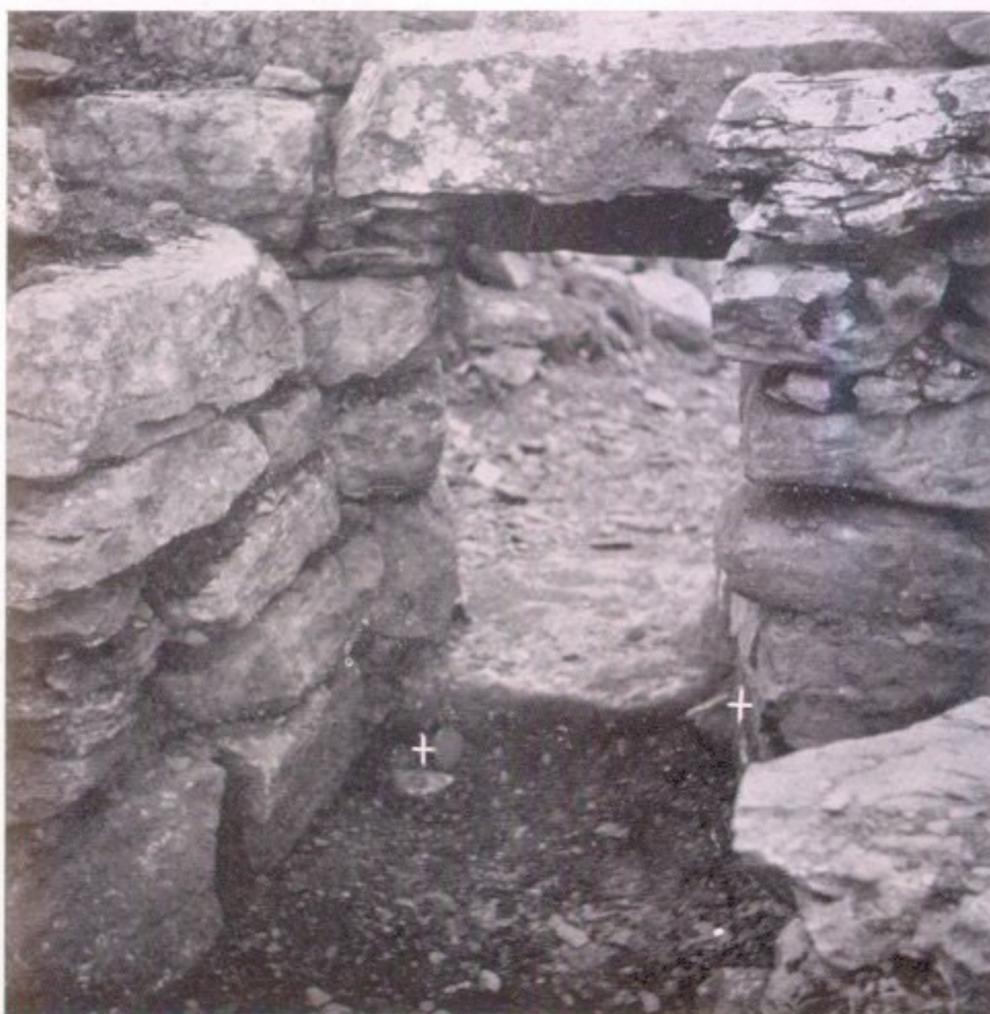
1. Interior of dwelling, showing hearth.



2. Interior of supposed granary with "loading" bench in centre.



1. Doorway into the north or circular "wag."



2. Interior aspect of doorway, showing position of post-holes.



1. Doorway showing relative position of stair.



2. Stair rising to top of tower.

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1. Blocked opening on side of entrance.



2. Foundation of turf wall outside western arc of circular wag.

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1. Dog-kennel in base of turf wall.



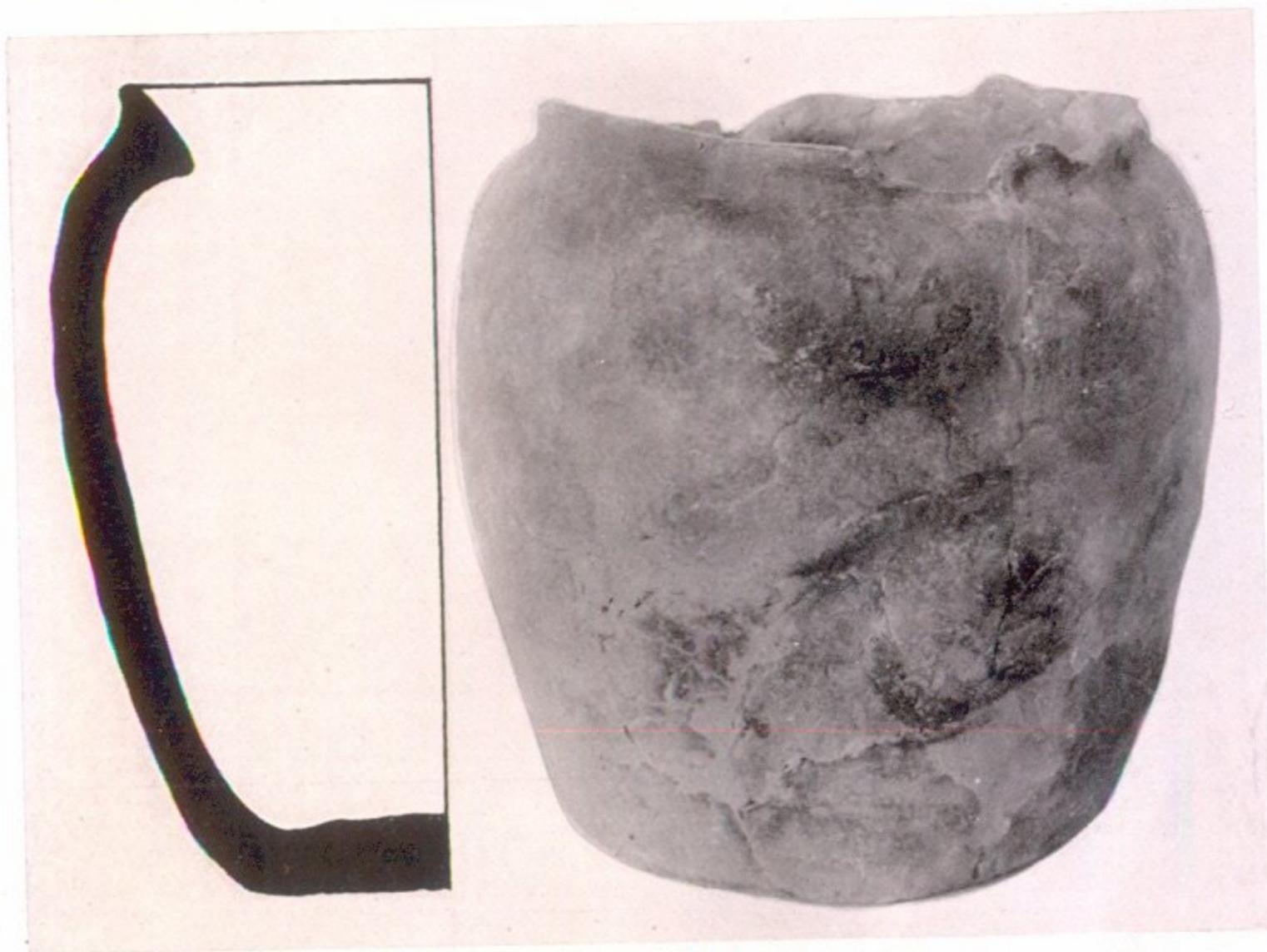
2. Ditch at base of hill on west.



1. Paved area outside southern arc of circle.



2. Two kinds of walling.



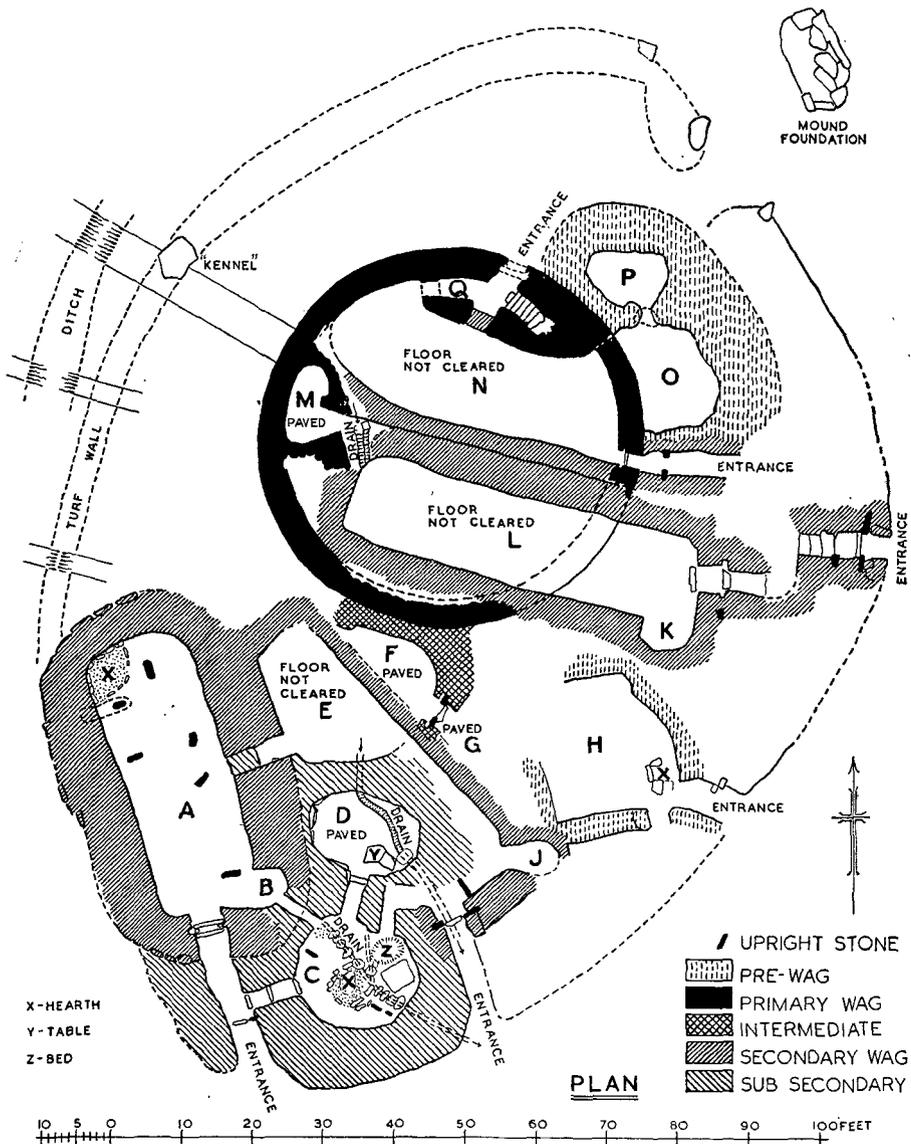
1. Cooking-pot (reconstructed) found on hearth. ( $\frac{1}{2}$ .)



2. A section of wall, showing the character of building.

EXCAVATION OF THE "WAG" AT FORSE, CAITHNESS. 13

As there was an indication that another circular construction had existed to the north of this dwelling and opening out of it, this construction was made



the first object of research last season. The removal of a mass of tumbled stones, largely the remains of a roof, exposed a round chamber (D on plan), elliptical in form and measuring on floor-level 18 feet by 20. Into this a

passage led from the adjacent dwelling C. It was obvious that the building had been erected within the second of the westmost pair of wags and so indicated the previous abandonment of that building, unless, as is possible, the inner end was still made accessible from A by a passage, subsequently closed.

When the circular chamber was cleared it presented features at variance with the preconceived notion of a dwelling (Pl. III, 2). There was no hearth or any indication of a permanent fire within it. The floor had been paved with exceptional care, the paving-stones being carefully laid in close contact. A drain ran across it, and a luting of clay was observed at the junction of wall and floor. Moreover, on the right of the entrance, just within the circle there was a unique feature—a table or bench 1 foot in height, constructed of flat stones, formed in two sections set anglewise and measuring 3 feet in medial length by 1 foot 8 inches in breadth. It stood 2 feet back from the entrance at one end and only 4 inches off the wall at the other. As there is abundant evidence for the consumption of grain in the finding of querns in brochs and other dwellings of this period, there must have been storehouses or granaries for its conservation, and it is suggested that this chamber, so carefully paved and drained, is such a place—while the curious stone construction may well have been a loading bench, on which the receptacle to be filled, sack or creel, was placed, in order that it might the more easily be hoisted on a bearer's back.

With the collapse of the roof over the adjacent dwelling, and the consequent closing of the exit into the main passage of wag A, a fresh exit was probably provided along the side of C and through the wall into the otherwise disused entrance to the abandoned wag. There were some indications of occupation in the portion of the wag (E) into which this passage penetrated, and its doorway with its jambs and sill had been preserved. The bar-hole of the door remained, and thrust within it there was found a circular hammer-stone. Beyond the entrance any further progress into the wag was stopped by a large upright slab, possibly the stone door removed and occupying a position between the wall and the debris. Within what had evidently been the herd's cabin, provided for Wag E, there were quantities of burnt broken stones—presumably a "deer roast" of a later date. They lay in a hole, within which there was no indication of any construction.

Before directing attention to the main mass of ruins, it was considered desirable to examine certain areas which lay between them and the remains of an outer ring of large stones, evidently the base of a turf wall, which appeared to have enclosed the whole area. Considerable beds of nettles on these areas engendered the belief that these might be sites of human occupation, even of kitchen-middens, from which valuable dating material might be recovered, but such sanguine anticipations were doomed to

disappointment. A socket-stone found in one had been used with a stone door of an earlier construction. Numerous burnt broken stones at one spot pointed to another "deer roast," but here again there were no signs of construction.

The mass of ruin within the northmost wag of the group (N on plan) being less formidable than those in its neighbour, and also being at the outer edge of the ruins, was the most suitable portion to which next to turn attention. A large oblong block lying horizontally on the outer limit suggested a lintel *in situ*, and was a desirable starting-point. As the mass of displaced stones surrounding this was removed, its character as a lintel was confirmed and the doorway beneath it was exposed in complete preservation (Pl. IV, 1). Formed in massive masonry, comparable with that of the best broch construction, the doorway measured 3 feet in height and 2 feet 6 inches in width, though slightly narrower at base owing to a bulging profile of one of the basal stones.

Following the face of the wall from the door westwards a circular building was gradually exposed, which, when completely traced, measured 47 feet in interior diameter, the wall of which measured from 4 to 5 feet in thickness, and rose from a heavy scarcement course. At 4 feet within the entrance passage checks in roof and floor indicated the position of the door. There were no bar-holes, but two pointed stones inserted into the passage-way, close to the wall on either side, to a depth of 7 and 9 inches respectively, presumably preserving post-holes (Pl. IV, 2), suggested that the door had been of wood—a view confirmed by the finding of a light socket-stone of sandstone measuring 8 inches by  $4\frac{1}{2}$  with a shallow worn hollow on one surface. The passage wall on the right on entering was recessed to receive the door when open. When closed it may have been held in position by a strut, as in the case of the doorway to wag A,<sup>1</sup> for a stone which might have been the butt against which a stay had rested, at the outer angle of the wall on the right, had been forced out of position.

Over the entrance and extending along the outer wall on either side, a tower had been constructed with a passage leading directly through it to the interior (see plan). On the left of the passage there rose a stair, incomplete where it debouched on the ruined wall-head, but still existing to the extent of seven steps (Pl. V, 1), bonded into the wall on either side, and measuring 3 feet in length by from 5 to 8 inches in height and varying from 10 to 12 inches in breadth (Pl. V, 2). On the opposite side of the entrance passage there was a chamber in the wall which, with a width of 3 feet 9 inches, ran back for a length of 5 feet 6 inches. The original entrance into the interior of the circle was directly opposite the doorway. It had been closed at a later period, and its place supplied by the removal of the back wall of the above-mentioned chamber. Another entrance, which appeared

<sup>1</sup> See Report for 1939 in *Proc. Soc. Ant. Scot.*, vol. lxxv. p. 28.

to have been original, had existed near the centre of the east arc of the circle, where a slot had been formed in the paving as if to form a check for a stone door. Returning to the main doorway, on the left wall on entering, midway between the outer wall-face and the position of the door (Pl. VI, 1), an opening had been made by the removal of several large stones, its secondary character apparent from the chipping observed on the edges of two of the stones remaining *in situ*. When the blocking-stones were removed in order to examine the interior, a slight excavation of the rubble at the back was revealed, but no appearance of any secondary construction. This recess measured 1 foot 10 inches in height, 1 foot 1 inch in breadth, and extended inwards for 3 feet. Its purpose was difficult to determine, as the condition within showed that it was quite unsuited for a dog-kennel, the only obvious explanation.

The purpose of the tower also presented a difficulty, for in view of the situation a watch-tower would have served no practical purpose in the case of an attack on the cattle-folds, considering that the hillside from which the danger would have come rose sharply behind the wags, and even if signalling to the neighbouring brochs was its purpose, no assistance could have been furnished sufficient to disperse a pack of wolves. Evidence of a large wood fire, at a time when peat was used on the domestic hearth, was found in the north-west corner of Wag A. This fire had not been covered by a roof, as if to allow its glare to be reflected in the sky. It has been suggested that cattle would be very reluctant to enter a roofed-in building, with a large open fire ablaze at the inner end of it; but it must be remembered that the cattle of those times did not live under circumstances identical with those of the present day. In many cases they shared the domestic dwelling with their masters, while the fire blazed on an open hearth in the middle of the floor. Such was certainly the case at Jarlshof.<sup>1</sup> In a recess in the circular enclosure of the Wag examined<sup>2</sup> at Langwell in 1910, similar evidence of fire in the shape of charcoal, etc., suggested the use of that recess as a fireplace or furnace, while a large heap of stones against the outer wall of that building may well have been in some degree analogous to the tower at Forse, for though structureless it was outlined with a kerb of stone and, where facing the interior of the wag, by a line of large flat boulders following the outline of the circle, all suggesting some purpose inconsistent with the idea that it was a mere heap of rubble. With these analogies it seems probable that such was the purpose of the tower, and that of the stair to give access to it. If this is a correct explanation, then the stair for the greater part of its length, also the entrance passage and the recess (Q on plan) opposite the entrance to the stair, were under a roof, so as to give proper access to the fire whether open on the wall-head or in a brazier. It will also explain the end attained by the recess in the doorway, which was

<sup>1</sup> *Proc. Soc. Ant. Scot.*, vol. lxxviii. p. 227.

<sup>2</sup> *Ibid.*, vol. xlvi. pp. 77-89.

to serve as a vent and furnish a draught to the fire, a purpose the possibility of which was demonstrated by a simple experiment with a handful of lighted grass. It will be noted (Pl. VI, 1) that the stones employed to reblock the opening have been placed in such a way as to allow a free draught to circulate around them. A roof extending over the stair and the recess opposite would afford a sufficient space on which to erect the fire, while it would also ensure that the material for it, which might well have been kept in the recess Q, was always dry. A store of tinder was necessary if a fire was to be kept in constant use. The only positive evidence for the height of the wall is to be acquired from arriving at a conclusion as to the length of the stair. To allow for a plat at its termination it might have been double its existing length, which would imply a structure of from 10 to 12 feet in height. This is the actual figure suggested by experts as being necessary to counteract the impetuous rush of a pack of wolves at a wall; and 10 feet was also the greatest height which Dr Anderson found to remain in some part of the walls of the Wag at the broch of Yarrow.<sup>1</sup> The entrance through the turf wall does not appear to have been directly in front of the doorway but at a point some 10 feet to the east of it, and thence passing round the ruined earlier buildings. Though search was made in the vicinity no remains of an outer gate were found. The road appeared to have been bottomed with small boulders. Some 15 feet in front of this break through the turf wall and across the centre of a dry ridge occupying a position between two wettish areas and a possible line of approach, there rises transversely a large triangular slab in rear of which lie a number of flat stones, the whole covering a space measuring some 12 feet by 8 feet, probably placed there as an impediment to the onrush of the wolves. It will be seen on the plan that two ruined hut-circles impinge on the wall and tower to the east of the doorway, also that the wall where it bounds these is slightly thinner than elsewhere, and that no entrance through it is shown into either circle. From these facts it is apparent that the circles are the ruins of huts which were in existence before the wag was built; that on the advent of the wag builders, or previously, they were abandoned and became mere heaps of rubble, sufficiently defensive as to permit a reduction in the width and probably also in the height of the wag-wall on this arc. A partial examination of the floor of one (O on plan) revealed remains of human occupation and small sherds of coarse cooking-pots at varying depths.

Though the secondary occupation of the circle (to be described later) had almost obliterated the features of the primary building, against the western arc the remains of two small intercommunicating huts or chambers remained built against the outer wall and partially ruined by the end wall of the secondary wag. Across the floor of one of them there runs a well-constructed drain.

<sup>1</sup> Anderson, *Scotland in Pagan Times* (The Iron Age), p. 223.

At varying distances outside the primary circle according to the character of the terrain beyond, which rises to the moorland on the western arc and falls to the plain on the east, there had been erected a wall of turf upon a foundation of large discontinuous stones (Pl. VI, 2) over the greater part of its length, with a breadth of from 3 to 4 feet and of indefinite height, but presumably approximating to that of the main wall. Towards the centre of the western arc there lies a large, flat stone approximately some 4 feet square supported by uprights at either end and at the back, so as to leave a recess facing inwards towards the main wall of the wag and measuring in width at entrance 1 foot 9 inches, in depth 1 foot 7 inches and in height 1 foot 4 inches, evidently a dog-kennel (Pl. VII, 1). Towards the south the stone foundation had been abandoned, and a low mound rising from the natural surface showed, when sectioned, the lines caused by the decay of the surface grass on the turf of which it was composed. Eventually in this direction this turf wall ran out on the side of wag A. On the east, on the downward slope, it was merely represented by a discontinuous line of boulders, which appeared to finish just short of dwelling C attached to wag A.

Along a section of the west front between the base of the hillside and the line of the turf wall, where there was a slight natural hollow, a shallow V-shaped ditch had been formed (Pl. VII, 2), varying in distance from the wall as the slope of the hill terminated. Where shown in view the distance between wall and ditch was 6 feet, the width of the ditch 7 feet and its depth merely 1 foot 3 inches. Obviously the purpose of this ditch was to impede the onrush of a pack of wolves and prevent their impetus carrying them up the turf wall in front.

The question arises whether these circular wags were entirely roofed in or not. Very strong evidence against it is provided by the fact of the additional defensive measures considered necessary to prevent the ingress of the wolves, to say nothing of the difficulty of spanning a circle of 45 feet. Moreover, one of the main advantages to the oblong form of wag, as illustrated by A on the plan, was the facility with which it could be roofed over, besides the greater economy of space. The occurrence of numerous blocks of stone from 2 to 3 feet in length and 4 to 5 inches square in section, found on the floor of wag A towards the centre, was probably connected with the system of roofing. How light was admitted into the interior so as to allow the tethering of the cattle is not known. That there appears to be a complete absence of external defences around those of the latter form is perhaps even more conclusive evidence of their having been roofed.

Partially set against the southern arc of the circle and founded at a lower level, there is a segment of walling with a doorway at its eastern extremity having both portals *in situ* (Pl. VIII, 1). It will be observed that the floor is paved, not in the manner practised in the wag itself with

large continuous flags, but with small irregularly shaped pieces of flat stone. While the western section of this wall is constructed with similar material and in a like manner to the main outer wall of the wag, the eastern section is built with much lighter stone and with poorer construction (Pl. VIII, 2). It is also noticeable that whereas the foundation-stones of the former section do not rest upon the actual paved floor, those of the latter do, especially recognisable at the doorway. Coupled with this is the fact that on the paving there were found numerous pieces of slag and a few sherds of coarse pottery. It seems evident, therefore, that here are the remains probably of a dwelling of the pre-wag period, which it was intended to adapt to later requirements. The fact that the paving lies directly on the rock further indicates its primary character. That the wall, which separates sections F and E, is a single line of large stones suggests that the area had never been actually completed in the wag occupation, and that F, probably filled with debris, would account for the doorway remaining in its original state.

Though the circular wag was not the primary structure on the site, as is borne out by the remains of the two circular huts against its outer wall to the east of the entrance, and by the finding of odd fragments of pottery at one or two places within the wag at lower levels than its floor, it was probably the first building of its class to be created there.

It is noteworthy that the circular form of wag is to be found for the most part in use in the more inaccessible regions, on the lower slopes of Morven and in Berriedale, while the oblong plan has been chiefly confined to the strath of Dunbeath. An inference to be drawn from this fact is that the stock for the most part taken to the shielings (as in later times) would be cows or cattle generally. The circular wags in the first instance were employed for the protection of such stock in the hill country. In course of time to provide increased accommodation, and at the same time as occupying a smaller area and requiring less construction, the oblong wag was probably introduced. Accordingly with these ends in view two oblong wags were erected within and extending over the eastern arc of the Forse circle, separated by a broad bank composed of earth and stone, between outer walls of stone. Though in external aspect this bank appears to be uniform throughout, it is in fact composed of two separate sections 5 feet and 3 feet wide respectively, with a common wall between them. It may have been that the wag (L on plan), being presumably for cattle, required a higher and stronger wall to carry the heavy lintels for the roofing of the surrounding galleries, while a lower wall and lighter roofing would be sufficient to shelter and protect the lesser animals of the farm stock. On the other hand, the broad bank, which forms the southwest arc of the circle, appears to be of uniform construction throughout, as if to correspond to the tower on the opposite arc and conceivably used for the same purpose.

At the inner or west end of the division between the two oblong wags there has been a considerable amount of reconstruction, or it may be merely the utilization of material from pre-existing early building on the site in which boulders and poorer stone were used. If this is so, it does not, however, explain how the two chambers at the west end, constructed in the primary manner, have been completely isolated, with access closed by the intermediate walls. The entrance into the wag N through the original surrounding wall was comparatively narrow, measuring apparently only some 2 feet or thereby, indicating that it had been intended for lesser stock such as goats, sheep, or swine, while that into its neighbour (L on plan) was of the usual width giving entrance to cattle, 3 feet 6 inches. A single passage furnished with cheeks for two doors, after passing through the turf wall and bifurcating, gave access to both wags.

The length of the outer passages into these wags indicates that there must have been originally considerably more building on this east side between the wags and the turf wall, but as the rough pasturage in front of them had at one time been much under occupation and cultivation, creating a demand for stones for the building of huts and for the boundaries of fields, these had been freely removed. When the change in the character of the wag buildings occurred, the access into the centre of the circle through the inner wall of the tower, directly opposite the gateway 3 feet 6 inches wide, was built up, and at the same time, as previously mentioned, a substitute entrance was provided by lowering to its foundation the wall at the back of the adjacent recess. If the use of this recess was, as suggested, the storing of material for the fire, then this alteration may signify the abandonment of the fire. Such a change may also explain the closing of the vent in the doorway.

Among the ruins, which filled the interior of wag N, no remains of subdivisions were observed, but some such arrangement is obviously implied by the two entrances provided. At several places, as in the hut O against the outer circumference of the circle, in the floor of the cattle-herds' cabin (K), and just inside the main gateway into the circle, where the floor of the wag occupation was broken through, evidence was forthcoming of an earlier occupation, which probably extended over a great part of the site.

The relics found throughout were remarkably few, and the only group came from the interior of the sub-secondary dwelling C connected with wag A, and, as described in detail in the previous report, they consisted of a polished sandstone disc from what appeared to have been a secondary floor-level; a rim section of a small vessel of black pottery and of globular form, having an everted rim, from the same level; an unfinished stone whorl; four segments forming in all a rudely fashioned ring of cannel coal; the rim of a cooking-pot with a series of finger-tip impressions immediately

beneath the rim; the remains of another cooking-pot (Pl. IX, 1) found on the peat fire where it had been crushed by the fall of the roof; numerous cooking-stones or pot-boilers and four complete stone pot-lids with the half of another. Two imperfect saddle querns were also found being used as paving-stones. From this year's excavations the relics found were fewer, the explorations having been almost entirely confined to wags or cattle-courts. They consisted of the remains of three saddle querns, a round pebble of quartz, part of another of similar material, a heavy pebble of fine-grained sandstone, and part of another, all of which have been used as hammer-stones, one of them being found in the bar-hole of the doorway into wag E. A segment of a ring or bracelet of cannel coal was found in the herd's chamber to wag L. While opening out the doorway leading into the circular wag, at a depth of a few inches below the entrance level, there were found three human bones, two of which had been adapted for use as artifacts: (1) a femur head perforated for use as a whorl; (2) the proximal part of the shaft of a right femur, which had been used as a peg, or shaft for some weapon or implement, and of which the posterior aspect shows marked platycnemia; and (3) a humerus from the right side, small and slender but adult. All the bones might have belonged to the same individual.

#### THE RELATION OF WAGS TO BROCHS.

What, if any, is the relation of these wags to the brochs? This question may be considered under three heads: Structural, Cultural, and Economic.

(1) Structurally the resemblance is striking. There is the same massive building; the same compact and regular placing of the stones, which suggests coursing. In both cases the material used is remarkably regular in form, and occasionally stones of unusual weight are employed (Pl. IX, 2). Similarly there is no regular bonding, and the interior of the wall is rubble. The walls are carefully erected on a broad foundation with a projecting scarcement; while lastly a stair in the thickness of the wall is a feature of every broch and is found in the Forse wag.

(2) Culturally. The relics found in the group of buildings at Forse are few in number, and the majority of them came from the circular dwelling C, itself a secondary addition to the oblong wag A. It is not an impressive list, but it contains nothing which might not have been found in a broch! Querns, rubbers, rudely fashioned segments of rings of cannel coal, pot-lids, cooking- or boiling-stones, rudely fashioned pottery. Only the querns call for comment. Of these both varieties were found, saddle and rotary, but whereas the former were represented by some four examples, only broken portions of one rotary quern were found! Moreover, as stressing the evidence for the greater use of the saddle variety, it is worth mentioning that five round pebbles, in whole or in part, with faceted surfaces possibly

produced by rubbing on the querns, were also found, thus indicating a considerably greater employment of the more primitive saddle quern than of the later rotary variety. In those brochs which have been excavated, both kinds of querns have been found, but unfortunately definite statements as to their relative numbers have usually been omitted. From the broch of Ousedale, however, in Latheron parish, the finding of rotary querns only is recorded. In cattle-courts and sheep-pens one would not expect to find relics of human occupation, and except from the dwelling C most of the remains have come from the neighbourhood of the entrances and herdsman's cells.

(3) The Economic relation is even more obvious. We know from ample evidence that the broch owners were pastoral and agricultural people. They had horses, cattle, sheep, goats, and pigs, and they grew grain, bere and oats, the latter recorded as having been found in the broch of Dunbeath in Latheron parish. As bones from kitchen-middens have supplied ample evidence of the farm stock, so the occasional recovery of burnt grain and the numerous finds of querns testify to the growing of grain. While space no doubt could have been found for the grain, occasionally, within a broch, accommodation for the farm stock would be out of the question. Therefore around a number of brochs there have been found clusters of outbuildings, which no doubt, under ordinary conditions, served such a purpose. When, however, the broch owner was faced with extraordinary conditions, such as prevailed on the outskirts of the hill country in Southern Caithness, within range of the packs of ravenous wolves rushing down to the plains in hard weather, then other means had to be adopted of a more comprehensive character. Under such a stimulus the original circular wag of Forse was no doubt constructed, on a slight elevation at the edge of an area of pasture-land just where the moorland falls to meet the plain. There is ample water in the immediate vicinity, and stone nearby to provide perfect building material. The stock of sheep and cattle that to-day browse on the green turf and short heather in the neighbourhood demonstrate the high quality of the pasture. Here within a quarter of a mile a broch occupies a rocky hillock, and at about the same distance farther away a grassy mound shows the remains of another. The menace must have been serious indeed that required the erection of a veritable fortress, with its enclosing stone wall sufficiently high to prevent the onrush of the wolf pack. The circular wag evidently fully serving its purpose may have lasted over a long period, but in course of time the type had developed elsewhere, and there came a call for increased accommodation. So the new plan was adopted, the oblong wag.

Such being the peril and such the means to counteract it, it seems fairly obvious that no broch proprietor living on the border-land, where high land and low land meet, could afford to live without some such construction

to protect his stock. Hence we see in this district the remains of wags, in the adjacent straths of Dunbeath and Berriedale, and to a less extent in Langwell where pasture conditions may not have been so suitable. No estimate has ever been attempted of the duration of life and occupancy of a broch, nor has anyone any idea when the first broch and when the last were constructed, so little modification occurs in their plans and method of construction; and as wags were built to last, there is not the slightest difficulty in synchronising them with the brochs, even though the evidence tends to indicate that the wag was an early adjunct of the broch in the regions where it is found.

Previous to the present research and the examination of the wag of Landwell which I made in 1910, the only examination of a wag was that done, incidentally, by Dr Joseph Anderson in 1866-67, outside the broch of Yarrows, the details and arrangement of which were described in my previous communication. It was of the later or oblong type and seemingly a highly developed example.

On looking at Dr Anderson's plan, it will be observed that there is a broad ditch, isolating the broch and its associated buildings at the end of the peninsula on which they stand, and the deep curve made by the ditch seems to indicate a purpose to enclose some structure between it and the broch. The considerable depth of stones overlying the original soil and intermingled with ashes and food refuse, which Dr Anderson found, and considered as evidence of the post-broch erection of the wag, may have been in part the ruins of the roofing of the existing wag or of a previous cattle-shelter of an earlier type. In any case the evidence is not sufficient to prove that all wags are, by reason of these finds, of a class of structure belonging to a post-broch era.

As for further evidence of the relation of wags to brochs, it is to be found in the distribution of numerous examples of both structures throughout a considerable portion of the parish of Latheron. A great part of this parish to the west, along the border of Sutherland and towards the north in the high hill country by Morven and Braemore, consists of moorland and mountain of little value to farmer or grazier. It is, and always has been, the haunt of the red deer and of such other creatures of the wild, predatory and otherwise, as belonged to any given period. In contrast, the fringe of the coast north of the Berriedale Gap, and inland along the straths of Langwell, Berriedale, and Dunbeath towards the lower slopes of the mountain, have from early times to the present day been cultivated or pastured. Scattered throughout this area, especially in the coastland region, there are no less than thirty-four brochs, a larger number than in any other parish in the county, possibly concentrated there by reason of the security afforded by a rocky coast line, extending from the Sutherland county boundary at Helmsdale almost as far as Wick, without affording

any beach on which a sea raider could land and draw up his boat. To landward the wags occur along the straths from what must have been the limit of range of the wolf packs, continuing into the hills till they reached the lower slopes of Morven, some 800 feet above sea-level. While some of them may be situated where pasturage and land cultivation were practised, the greater number are in situations where the feeding of cattle throughout a considerable part of the year would have been an impossibility. Therefore they must be regarded as having served a seasonal purpose, belonging in fact to summer shielings. A few of the wags, such as those at Langwell and Forse, are situated comparatively near brochs, while those in remote regions may presumably be connected with other brochs, the owners of which, to relieve their home pastures, sent their cattle to the hills in summer.

The construction of a wag must have entailed some considerable command of labour with which to procure and assemble the material, and of masons to effect the construction. One can hardly suppose that such massive and skilfully erected structures were the work of mere cattle-herds. So close to the source of danger as some of these outlying wags must have been, it is reasonable to suppose that their construction must have been completed before the cattle were brought to occupy them. Moreover, the erection of such massive buildings, of an obviously permanent character, seems to indicate some permanent right of possession to land and grazing in their vicinity, and, for a similar reason, to the land in the neighbourhood of the brochs.

The foregoing considerations bring into view the broch owner as a man of property, with considerable wealth in the form of flocks and herds, able to command the services of craftsmen skilled in masonry and not unacquainted with practices followed at the present day. He could also control labour, slave or free, such as was required, to remove from the quarry and to accumulate the not inconsiderable mass of material, much of it of great weight, needed for the construction of these buildings.

Did the broch owner occupy the broch as his permanent home or was it, as has been questioned, merely an impregnable tower to which he could resort with his family on the threat of danger? Though certain brochs have produced few relics, so few in number as to give weight to the idea that the broch was not in permanent occupation, on the other hand the quantities of potsherds, etc. recovered from some of the Caithness brochs point to a different conclusion.

Against the theory of occasional occupancy must be stated the fact that up to date no remains of any substitute dwelling have so far been found. There is, perhaps, something in regard to this question to be learned from the wags and brochs of Latheron. The brochs appear, as far as it is possible to form an opinion from the few excavated or partially exposed examples, all to be typical structures of the completely impregnable character, such

as are found wherever the broch exists. It is in fact the typical residence, not altered by the regional circumstances, nor by the character of the site on which it is built. In Latheron we have seen that the brochs behind an unassailable coast-line rested in security from any seaborne enemy attack, and presumably for the same reason the wags are concerned solely with defence against the attacks of beasts of prey and not against those of man.

Finally the wag is but the adaptation of the available means towards the end desired. Evidently, then as now, Caithness was not a timber-growing region, in which suitable stakes could have been readily procured wherewith to form stockades, the customary method of affording protection from wild beasts among primitive peoples. Suitable building-stone was, however, abundant, and so the men of the brochs, skilful architects and builders, devised and constructed the wags.

My thanks are due to the proprietor, Dr Sinclair, for allowing the excavation to proceed. I must also acknowledge with gratitude the financial assistance received from the Society, who paid for the labour and for my daily motor hire, without which I would not have been in a position to conduct the excavation. I am also much indebted to Mrs Peter Murray Threipland, who very kindly, with the assistance of her husband, produced the excellent plan, and to Mr Calder for preparing it for publication. Lastly I would thank Miss Platt of the Royal Scottish Museum for having furnished me with a report on the three human bones. I was fortunate in again having the services of our Corresponding Member, Mr Simon Bremner, to act as foreman, and of an excellent staff of local labourers.