

FOURTH REPORT OF THE DARTMOOR EXPLORATION COMMITTEE.

(Read at Kingsbridge, July, 1897.)

THE Committee of the Devon Association for the exploration of Dartmoor are glad to be able to give an account, in this their Fourth Report, of a considerable advance made in the knowledge of the prehistoric antiquities on Dartmoor, and of good work having been done during the past twelve months. The works undertaken since the last report was presented have been :

1. The planning of Stall Moor stone row, and the re-erection of some of the fallen stones belonging to it.
2. The planning of the settlement and the stone circle on Langstone Moor, Petertavy Common.
3. The planning of the circle on White Moor, near Cosdon.
4. The excavation of an enclosure on Blackslade Down.
5. The examination and planning of an enclosure at Smallacombe Rocks.
6. The examination of some hut circles on Halshanger Common.
7. The excavation of a cairn and exploration of an untouched kistvaen on Chagford Common.

I. Stall or Staldon Moor. (CXIX. N.W.)

The stone row on Stall Moor is an important example, notable in especial for the large size of the component stones, as compared with the usual size of the menhirs of Dartmoor stone rows. To a great extent, no doubt, the size of the stones was in all cases regulated by the nature and dimensions of the moor-stone blocks available in the neighbourhood; thus on Stall Moor, where the available blocks are all of large size, the row derives an added apparent importance from this fact.

This stone row is single throughout its length, and at no place is there any evidence of the doubling of the blocks, which would be necessary to form the so-called avenues.

As will be stated below, there is evidence of a composite character in this row, which on examination appears to resolve itself into two associated rows placed approximately end to end.

The total length of the associated rows as now remaining is 1640 feet, and the direction from end to end is approximately north and south magnetic. The plan should, however, be referred to for more detailed information on this point.

The total number of stones at present to be found in the rows is sixty-eight, of which three have not been re-erected.

The spacing is very irregular at places, ranging from 69 feet apart, centre to centre, to 8 feet 9 inches and 5 feet 3 inches approximately. It would appear that although the original spacing may not have varied to such an extreme degree as above stated, as stones may have been removed from where are now gaps, yet at no time can any great regularity have existed.

Commencing at the northern end of the associated rows, we find the largest stones and the most regular spacing. After a series of fourteen stones, one of which has been left fallen, as its pit-hole was not discovered, and the general direction of which is 5° west of south, we come to a circle which closes the row, and has apparently consisted of eleven stones, one of which has, however, been considerably displaced, and is not shown on plan. The irregularity of the circle renders it somewhat difficult to state its original diameter, but an approximate value of 16 feet would probably be fairly accurate. This circle was merely one enclosing a ruined cairn. The burial could not be found.

With this first row are associated two cairns, the one to the westward of the row being 26 feet in diameter, and having the possible remains of an enclosing circle of stones. The centre of this cairn is 226 feet distant from the line. On the eastern side, and at a distance to the centre of 136 feet 4 inches from the line, is another cairn, without any trace of an enclosing circle, and 37 feet in diameter.

From the western side of the circle ending the northern row, and tangential to it, starts the second stone row, at first

in a direction approximately parallel, but afterwards trending distinctly to the westward. This line of stones trends in the direction of a cairn, and there are indications that it led to and ended at it; but all this portion of the row has been pillaged for the formation of a wall to a plantation.

On the slope of the hill to the west is a fairly perfect but small kistvaen. The coverer has been carried off, probably for employment in the construction of the wall.

II. The settlement on the slope above the Walkham, opposite Greenaball, has been carefully surveyed and planned by Mr. F. Bligh Bond and the Rev. J. K. Anderson.

It stretches over a considerable space, and comprises five distinct enclosures or pounds; but there are traces of other enclosures. There are something like forty-three huts. Several of these, and these the smallest, are constructed in the enclosure walls, very much after the manner of those on Shapley Common. It may be remembered that some of the huts were explored under adverse circumstances—bad weather and inexperienced workmen, continually changing—in 1894, and that an account of them was given in the report of 1895. A good many more huts then demanded examination. It is the intention of the Committee, all being favourable, to proceed with the further exploration of this very interesting settlement in the spring of 1898, and the plan will be published along with the description of the continued excavations there.

The circle on Langstone Moor, or Petertavy Common, is one of the finest on Dartmoor. It stands on the *col* between the bogs in which rises the Petertavy brook and the valley of the Walkham, opposite Mis Tor.

The plan of this circle, together with some cairns near it, will be given next year.

III. White Moor Circle. (LXXVII. S.W.)

The circle on White Moor, a portion of Cosdon, is very inferior in size and dignity to that on Langstone Moor, but then it has been sadly mutilated; one stone has been entirely removed. Three are only represented by their heads, that were struck off by the quarrymen and left as useless, who carried away the stones themselves to serve as gate-posts in the newtake walls of South Zeal Common.

As mentioned in a previous report, there exists a singular gap in the continuation of this circle, and no pit-hole could be found to indicate that a stone had been removed. A line drawn between the upright standing on the left of this gap and the highest stone immediately opposite, and south by south-east, strikes the menhir, the White Moor Stone, distant some 500 feet.

A great deal of speculation has been ventured on relative to the orientation of the rude stone monuments of the Neolithic and Bronze Age, and your Committee, whilst noting facts, in no way desire to appear to in any way sanction these theories. Their object is to collect and to register facts. There will be time enough to draw conclusions after there has been a sufficient number of facts registered; but theorising before-hand is altogether undesirable in their opinion.

The number of stones that originally formed the circle was nineteen; of these eighteen remain, one is completely gone, but the pit in which it stood remains, as well as the "spalls" where it was chipped into shape by the masons. Three others, as already mentioned, are represented only by the heads, which had been struck off by a sharp blow. The diameter of this circle is from 65 feet 6 inches to 66 feet 2 inches. It will be remembered that last year the fallen stones were set up by the Committee. On revisiting the circle in May, 1897, it was found to be literally strewn with felted hair, the cattle having used the stones as rubbing-posts so as to relieve themselves of their winter coats. Had not the stones been well planted, the cattle would have had them all down again.

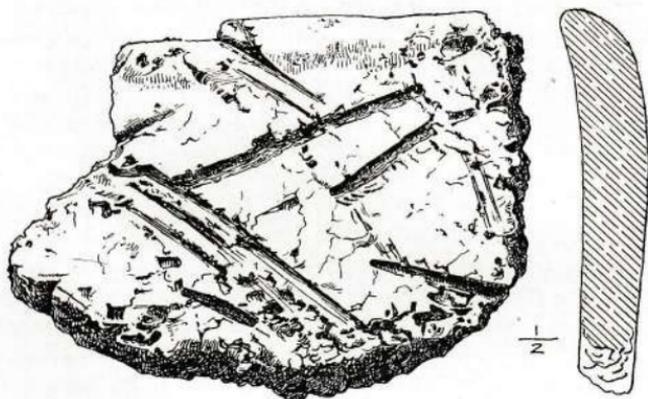
IV. Blackslade Down. (CVIII. N.W.)

The exploration of the hut circles in this locality was undertaken last August, with the kind co-operation of Mrs. Dymond, of Blackslade.

Operations were commenced at Tunhill Rocks, a fine collection of boulders overlooking the steep descent to the valley of the East Webburn.

By referring to sheet CVIII. N.W., it will be seen that a small enclosure is attached to the summit of these rocks, containing one hut circle. The dimensions of this small "pound" are 82 feet east and west and 73 feet north and south. The foundations of the wall, about 4 feet wide, are in a very ruined condition, and no entrance can now be traced. A ruined wall starts from the south-eastern corner

PLATE I.



PORTION OF COOKING POT, TUNHILL ROCKS.

(Page 149.)

and runs some distance in the same direction, until lost in the clumps of furze on the common.

The hut circle is 23 feet in diameter, with remains of double walls, entrance south, all more or less ruined. The slope of the ground is towards the doorway, and, as usual, the lowest portion of the floor of the hut gave the best results.

Near the south-west circumference was a large fallen stone which had evidently come from the wall, and on lifting this indications of pottery were observed, and ultimately sherds representing about one-third of a large cooking pot were recovered. The three largest fragments represented about one-quarter of the flat bottom, four inches of the rim of the vessel, extending to about the same in depth, and a portion of the wall of the pot with a raised band one inch wide and one-quarter of an inch in depth. The ornamentation consists of deep lines arranged so as to form an imperfect chevron pattern. (See Plate I.) The fragment representing the wall of the pot is three-quarters of an inch thick, and half an inch of this from the inside to the outside is much blackened by cooking operations. This rude hand-made pot must have been very similar in all respects to the almost perfect specimen found at Raddick Hill, and figured Plate X. in last report.¹

Both the pots appear to have been made by artificers who had much in common, for the paste, pattern, and ornamentation are very similar. This similarity in specimens found so far apart, and each situated so near what are now the eastern and western confines of the moor, is interesting, and indicates that these pot-makers and users were probably contemporaneous and identical people. The circle also yielded a fragment of flint, a fired "cooking" stone, wood-charcoal, and a small piece of grey slate.

Not far north-west of the hut circle, and within the enclosure, there appeared to be the remains of a small building just showing above ground. This was carefully dug out, and disclosed walls of small stones dry-laid in courses, forming an erection the western wall of which was 10 feet long, the eastern wall 9 feet 8 inches long, and the north wall 6 feet long. The southern end appeared to curve some distance inwards, forming a rounded end; but here the wall was very indistinct, and seemed to form part of the entrance into the building. The floor of this erection was

¹ *Trans.* vol. xxviii. p. 191.

15 to 18 inches below the surface at the north end, and yielded some fibrous charcoal, small sherds of reddish rotten pottery, and a few fragments of a thin well-made paste, which was quite black when found, but dried to a brown colour. The latter were probably portions of a small drinking vessel, and appeared to be much superior in make and materials to any of the pottery thus far found.

A well-made flint scraper of half-moon shape (see Plate II., Fig. 1) and a few small fragments of flint, the latter showing traces of having been fired, were also found embedded in the floor of the building, which was formed as usual of "calm" trodden hard. This erection might have served as a small dwelling or shelter, or it might have been used simply as a cooking place. It is the nearest approach to a rectangular building associated with a hut circle which the Committee has yet explored.

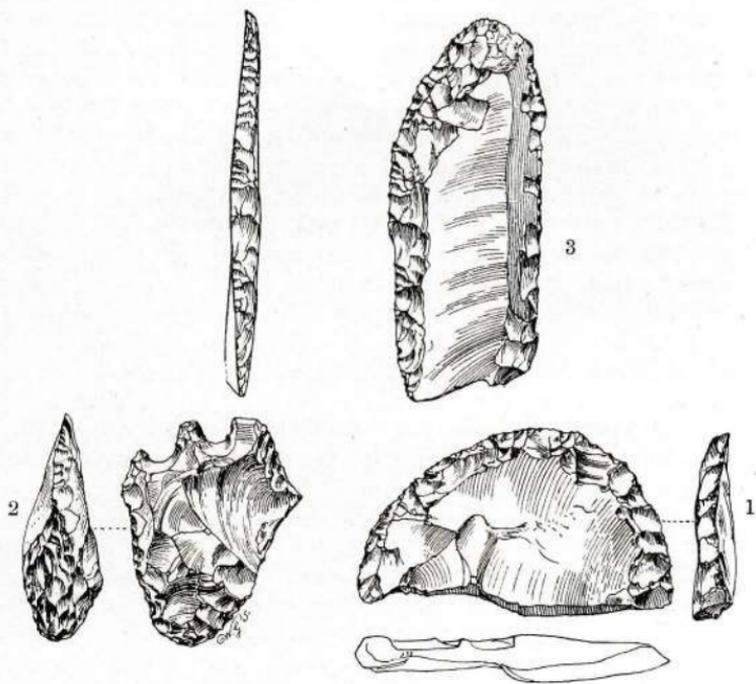
It is probably of the same period, for although the thin dark pottery found in the floor seems to indicate an advance in the potter's art, the reddish rotten fragments found with it represented portions of as rude a vessel as the remnants of the cooking pot found in the contiguous hut circle.

The cooking pots were doubtless made in a heavier and rougher pattern, so as to stand the internal application of heated stones used in the cooking operations, whilst the smaller vessels were made with better and finer mixed paste, forming thinner and lighter walls.

About 400 yards south-east of the Tunhill Rocks enclosure is a kistvaen lying longitudinally N.N.E. to S.S.W. The measurements are as follows: N.N.E. end stone 2 feet 4 inches long and 4 inches wide; the corresponding stone at S.S.W. is 2 feet 6 inches long and 6 inches wide; the E.S.E. side stone is 3 feet 7 inches long and 3 inches wide; whilst that at W.N.W. is 3 feet 4 inches long and 5 inches wide. The present depth is $2\frac{1}{2}$ feet. The cover-stone lies by the kist, which is situated in a ruined and pillaged cairn 40 feet in diameter.

In 1871 the Messrs. Amery, of Druid, Ashburton, examined the soil in the bottom of this kist, and on sifting this found a piece of wood-charcoal, and a few small, thin fragments of pottery, buff coloured, paste extremely well mixed; but the sherds were too small to identify, no ornamentation being visible. These very interesting fragments of authentic kistvaen pottery are in the possession of Mrs. Dymond, of Blackslade.

PLATE II.



FLINT IMPLEMENTS.

(Pages 150, 154, 158.)

V. The group of hut circles in and around the enclosures marked on the Ordnance Survey as Foale's Arrishes was next examined; the old name is Torr Town or Torr Hill. It probably received its modern name from some squatter who seems to have hazarded its cultivation, for attempts appear to have been made to gather the surface stones in heaps, so that a scanty tillage might be pursued between. Croker, in his *Guide to Eastern Escarpment of Dartmoor* (1851), calls this place Torr Hill. He remarks: "Tor-hill, south of this trackway (from north side of Rippon Tor, and now difficult to find through overgrowth of furze and heather), has its eastern face almost partitioned into squares by the number of track-lines intersecting each other; many of these squares contain circles, and there is a circular enclosure almost as large as Grimspound occupying one portion of the face of the hill containing hut circles. Both the hut circles and enclosure are much dilapidated, and a fourth of the eastern circumference of the latter has almost disappeared. The west side of the hill looking towards Widecombe has some circles of erect stones close set, in the progress of demolition for mending the road."

The road-menders have been busy since 1851, for no trace of the enclosure "almost as large as Grimspound" can now be recognized, and it is to be feared that several of the hut circles have also been demolished. Two hut circles have disappeared since the Ordnance Survey of 1885, and road-menders were robbing the ancient track-lines at or about the time this exploration was in progress.

Representations have been made to the County and District Councils on this and the destruction wrought on Sherberton Common, and it is to be hoped that these will have the effect of restraining men who apparently grub up the nearest stones and break them up for road metalling, quite regardless as to whether they form portions of ancient monuments, or are mere surface stones lying as Nature placed them. All who value the ancient monuments strewn over the surface of Dartmoor and the commons adjacent thereto should keep a strict watch, especially on stone monuments situated near roads, and cases of spoliation, or attempts at same, should be promptly reported to the Hon. Secretary of the Dartmoor Preservation Association, Plymouth. The danger is far greater outside the limits of the Forest than within, for the Duchy authorities are anxious to preserve these interesting relics. Lords of manors would be rendering a great service if they would interest themselves in this

matter, for much of the damage is done by men who are ignorant of the injury they are doing, and who are apparently not under the close supervision of the surveyors placed over them.

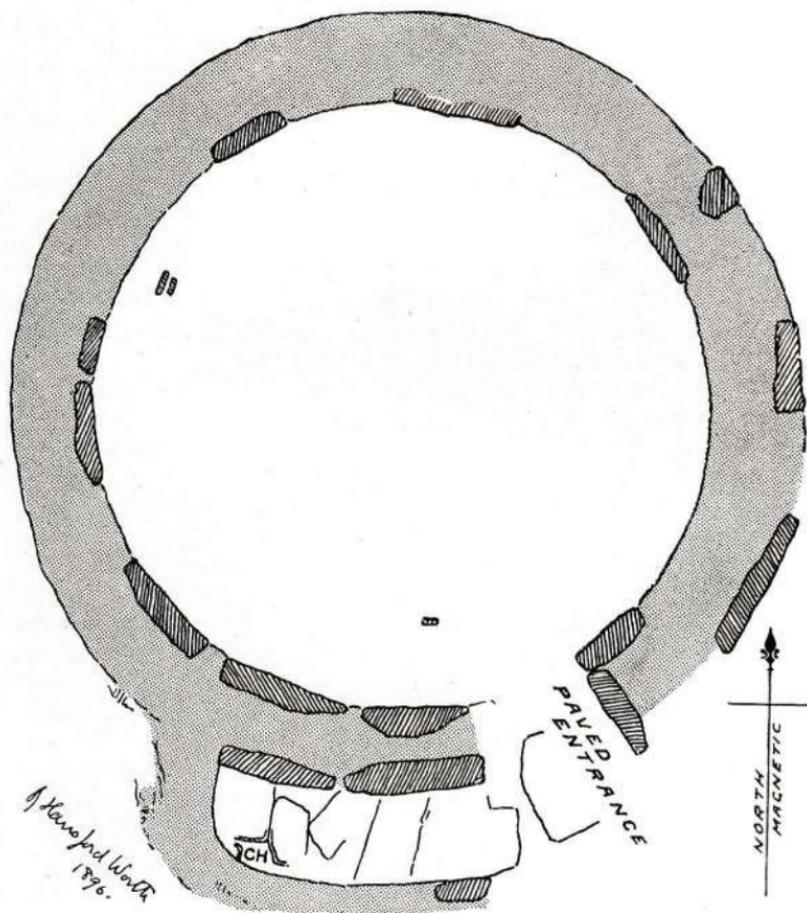
Hut Circle No. 1. This stands within one of the squares formed by what Croker calls track-lines intersecting each other. It is in reality one of the square enclosures lying west of a track-line which starts from the high ground between Pil Tor and Top Tor, and proceeds in a S.E. direction until it is lost in the upper portion of Blackslade Mire.

The accompanying plan (Plate III.) gives the details of this fine circle, which is in a fair state of preservation. It had evidently been previously opened in the centre—it is supposed by the late Mr. Robert Dymond—but as far as can be ascertained, without result.

The exploration commenced as usual at the entrance and followed the western circumference, the lowest portion of the circle; about one-third was laid bare, together with patches on the eastern and south-eastern sides. The latter gave no results; but the main excavation, which was unusually deep—3 to 4 feet—yielded a potsherd similar to Raddick Hill and Tunhill Rocks type, a flint flake which had evidently been used as a knife, and a fragment of the same material. There were also found a fragment of blackened pottery, probably part of the interior of a cooking pot, and some charcoal in the floor, but not so much as might be expected in so large a habitation. A curious feature in the hut was a small stone standing 6 inches above the floor just inside the western side of the entrance, and two more standing side by side 15 inches above the floor near the north-western circumference. These stones seemed to have been fixed so as to follow the sweep of the circle, and were firmly earth-fast. They were not observed between these points. They had a surface length of only 8 to 10 inches, and were thin slabs of granite let into the ground for some purpose unknown to the Committee. They were not suitable for supporting planks of wood to form seats, nor could they be portions of a stone dais or platform, for they occur in the part of the hut showing the greatest signs of occupation.

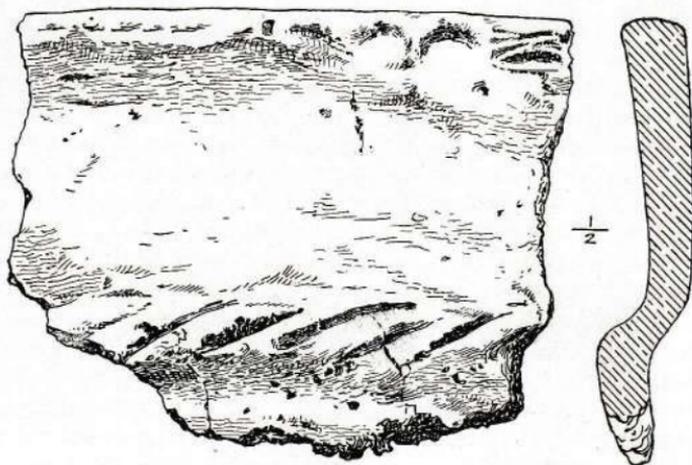
Outside the entrance on the western side was a heap of stones which seemed at one time to have formed part of the circle. This was removed, and disclosed a semilunar-shaped erection (see plan), which contained a cooking hole and

PLATE III.

FOALES ARRISHES, HUT N^o 1.

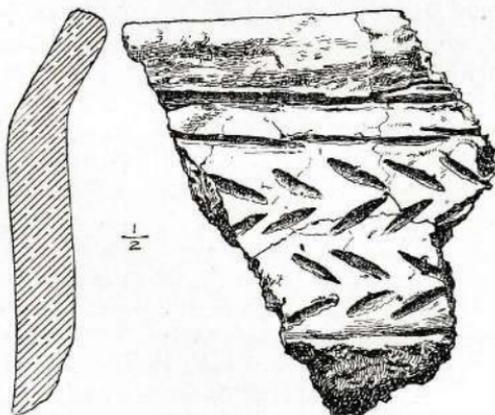
- Scale - 10 feet to 1 inch

PLATE IV.



FROM HUT CIRCLE NO. 2, FOALE'S ARRISHES.
(Page 153.)

PLATE V.



FROM HUT CIRCLE NO. 8, FOALE'S ARRISHES.
(Page 155.)

hearth, with much charcoal and some fragments of thin pottery. The whole of the floor was paved, forming a cooking place or kitchen *outside* the hut. Considering the size of the hut circle—from 30 to 31 feet in diameter, involving a large roof, which would be most difficult to keep weather-tight in the winter, whether thatched or made of skins—and the position of the main fire and cooking place, the Committee is of opinion that this hut circle probably represents a summer habitation; and if this surmise be correct, it is an interesting illustration of the great antiquity of the summering of cattle on Dartmoor, for these huts and enclosures on the moor generally are the dwellings and paddocks of a primitive people, whose chief support was evidently obtained from their flocks and herds. Most of these examined thus far, of much smaller dimensions, appear to have been permanent habitations; and this is the first instance which suggests to the Committee, on exploration, that some of the very large hut circles may have been resided in during the summer season only.

Hut Circle No. 2. In the same rectangular enclosure as No. 1, and standing within a rudely circular paddock of its own, which measures 51 feet north to south, and 64 feet east to west. The paddock wall is very much ruined, but where more perfect is $3\frac{1}{2}$ feet wide, and now stands about 2 feet in height.

The hut circle is 20 feet in diameter, with an imperfect entrance facing the S.E. Just inside the south portion of the circle, and near the doorway, was found a cooking hole, 18 inches by 12 inches and 10 inches deep, and in and about this the remains of a vessel of pottery, probably a cooking pot. These sherds consisted of two pieces of the rim and some fragments of the wall or sides; other specimens appeared to be somewhat redder in colour, and appear to be part of another vessel. The largest sherd (see Plate IV.) is a portion of the rim down to the shoulder of the vessel, which is ornamented by deep diagonal lines, impressed apparently by a broad-edged piece of wood or stone. This same implement seems to have been used in shaping the neck, for by holding the sherd in a suitable angle of light the perpendicular markings of the same breadth as the length of the impressed diagonal lines are plainly visible. These markings are not visible in the illustration.

It will be noted, however, that on the right hand near the rim the artist has depicted two semicircular depressions. These are most interesting, for they are thumb marks made

by the potter, and from their size would indicate a woman's touch. The wall of this vessel shows a thickness of three-eighths of an inch, increasing to half an inch in the upper portion of the neck. The inside of the wall below the shoulder is partly blackened through, as if it had been in contact with cooking processes. This discolouration is not visible in the interior of the neck. The paste, brown in colour, has the clay well mixed with fine quartz, some of the coarser particles showing up white and distinct.

The materials and workmanship are superior to the Raddick type of cooking pot, the contours being more ambitious, as the section in the illustration demonstrates. From the curve of the fragments of rim recovered the mouth diameter was close on 8 inches, and the pot was probably about 10 to 12 inches deep, or nearly of the same cubical capacity as the Raddick pot.

The redder pottery, previously alluded to as probably part of another vessel, has been finished off by coating it with a thin layer of fine clay, baking a brick-red. This was brushed on, for the surface shows a number of fine lines not all evenly distributed nor always going in the same direction. The sherds are too small to indicate size or character of the vessel.

This circle also yielded three rubbing stones of red grit, and three fragments of flint.

Hut Circle No. 3. Diameter, 23 feet. No trace of charcoal visible, nor any definite floor. The only object found was a flint flake, which seemed to have been used as a knife.

Hut Circle No. 4. Diameter 18 feet. No sign of human occupancy observed.

Hut Circle No. 5. Diameter 27 feet. No sign of human occupancy observed.

Hut Circle No. 6. Diameter 22 feet. Neither charcoal nor floor could be found. It yielded one rubber of grit; no flints or sherds.

Hut Circle No. 7. Diameter 28 feet. In the centre of the circle was a triangular flat stone 18 inches long, probably the foot-stone of central support of roof. This circle yielded a few fragments of pottery of the Raddick type, some charcoal, a flint spall, and a double-notched scraper. (See Plate II., Fig. 2.) Single-notched scrapers are fairly common, but this is the first double one the Committee has met with. They are supposed to have been used for scraping arrow sticks or similar pieces of round wood or

bone. The tiniest variety are suitable for fashioning bodkins or needles of bone.

Hut Circle No. 8. Diameter 27 feet. Entrance facing south was well defined, 2 feet 4 inches wide. A cooking hole, 18 inches by 14 inches and 8 inches deep (No. 1), was found in an unusual position, for it lay just inside the west part of the doorway. Between this and the entrance the sherd figured Plate V. was found under a large flat stone which had evidently fallen from the wall. It forms part of a pot which, judging from its blackened interior and the permeation of this colour almost through its total thickness, and the position in which it was found, must have been used for cooking purposes. The ornamentation consists of two incised lines under the cornice forming the rim, and two sets of chevron markings made apparently by some semi-circular, blunt-edged instrument, for the lines forming each chevron vary in length according to the depth to which the instrument was pressed into the plastic clay—the deeper it went the longer the impression became. The sherd is half an inch thick, of coarse texture, clay and quartz. The exterior face has been finished with fine clay baked to a light reddish brown.

Another cooking hole (No. 2) was found near the S.E. wall of the circle, which measured 12 inches by 9 inches and 12 inches deep. This was covered by a flat stone, 19 inches by 16 inches, whether by accident or design could not be determined. More potsherds were found in the hole, but none of these bore ornamentation, nor were they large enough to determine the character of the vessel to which they once belonged.

Near the western wall of the circle was an oval depression in the calm, 3 feet by 2 feet and 7 inches deep, evidently used as a fireplace, for it contained wood-charcoal, and the clay of the "calm" showed traces of firing. Both the cooking holes yielded charcoal, but no cooking stones were observed. The floor of the hut yielded two flakes and a thumb scraper of flint, also a well-formed crystal of quartz. There was a flat stone in the centre of the hut sunk in the floor, measuring 16 inches by 12.

NOTE.—The hut circles 3 to 8 are outside the enclosures known as Foale's Arrishes; Nos. 3 and 4 lie west of the enclosures; Nos. 5, 6, and 7 north; and No. 8 close to the wall of the enclosure facing N.W.

The whole of the eight circles in and about Foale's Arrishes are large, the smallest, No. 4, having a diameter of 18 feet,

and the largest, No. 1, being no less than 30 feet. There were doubtless central supports for the roofs in the whole of them; in some, the footstones on which the supports stood were found *in situ* embedded in the floors. The walls of the huts are generally massive, but ruined—4 to $4\frac{1}{2}$ feet thick; they are mostly double walls with smaller stones and earth between. The height of wall of No. 1 inside S.W. portion of circumference from the floor must have been 5 feet at least, for this measurement is almost attained in its present ruined condition.

VI. Halshanger Common. (CVIII. N.E.)

On the invitation of Mrs. Woodley, of Halshanger, the Committee investigated a small group of hut circles lying close to the corner of the newtake wall separating Horridge and Halshanger Commons.

Only two were examined. The first was 14 feet in diameter, and this yielded faint traces of charcoal from the floor, which was unusually deep down for so small a circle; two broken rubber stones of grit; one flint flake, used as a knife or scraper; a spall of the same material; two or three pieces of grey slate; and portions of a disc of blue slate about $2\frac{1}{4}$ inches in diameter, with edges ground down. There were very large stones in this circle; one, fallen inwards, was too heavy to move without suitable levers, which were not at the time available.

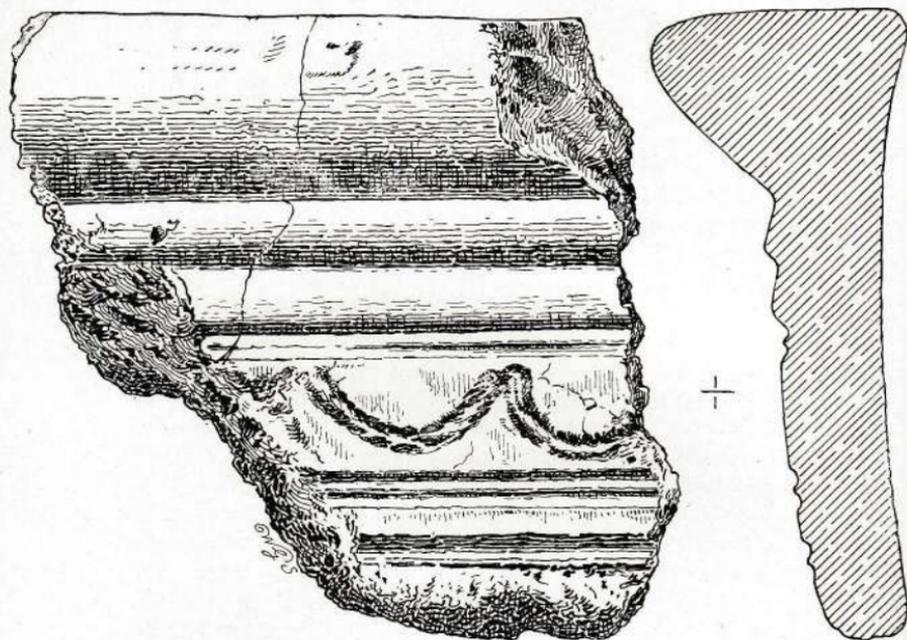
The second circle was a large one, 27 feet in diameter, with stones of considerable size. No charcoal was seen, but two or three fragments of very red pottery were found, one being the portion of the rim of a small vessel. As the Committee desired to commence the investigation of the hut circles at Smallacombe Rocks, permission for which was very readily accorded by the Rev. Prebendary Wolfe, the further investigation of the hut circles on Halshanger Common was postponed, as well as some other examples on Mountsland Common.

Smallacombe Rocks. (C. S.E.)

In the Ordnance map these are given as Grea Tor—an error of the surveyors.

Smallacombe Rocks lie at the western limit of Hay Tor Down, a cluster of boulders forming a tor rising slightly above the summit of the down, and abruptly descending to the valley of the Becka Brook. This descent is strewn with boulders, some of immense size, producing as fine a "clatter"

PLATE VI.



FROM HUT CIRCLE NO. 1, SMALLACOMBE ROCKS.

(Page 157.)

of rocks as any on Dartmoor. Amongst these is a great logan stone, weighing by computation 38 tons—probably the largest boulder in Devon—which can be appreciably rocked by one person.

The area in and about the tor has been enclosed by the erection of a wall, consisting mostly of vertical stones, and there are two hut circles (Nos. 1 and 4) placed on each side of the approach to this enclosure from the down. There are traces of walls connecting these two circles, but they are almost obliterated.

Stone-cutters have been at work about this tor; some boulders have been broken up, and huge pieces have been wedged off others. One flat boulder on the south side of the main group of rocks has been toppled over upside-down. This has a well-defined rock bason now lying underneath, which will some day puzzle the curious to account for its extraordinary position.

The poor quality of the stone saved this magnificent collection of rocks from destruction. Some damage has been done in years past, but the weathering of the granite is gradually effacing the evidence of man's handiwork.

There are two more circles (Nos. 2 and 3) lying a little in advance of Nos. 1 and 4.

The examination of the four circles commenced on August 24th, 1896.

Hut Circle No. 1. Diameter, N. and S. 26 feet, E. and W. 29 feet; entrance faced S.S.E. The more perfect portion of the wall is 4 to 4½ feet thick, built of large stones forming inner and outer faces, some vertical, and others laid on their flat in courses, with a filling between of small stones and earth.

The lowest point of the floor to the top of the highest part of the wall was 4 feet 3 inches.

The hut is placed on a gentle slope, and digging commenced at the lowest end west of doorway. This yielded two nodules of flint and two flakes, together with numerous sherds, the remnant of a pot.

Two of these sherds represent portions of the rim. (See Plate VI., which represents the most perfect piece.) The rim has a heavy cornice, with three grooves following below, and then a festoon-like ornament formed by pressing plaited cord or sinew on the clay when plastic. Below this again the same impression in lines, and here unfortunately our knowledge of the form and ornamentation of this interesting pot ceases, for the other sherds are but portions of the wall, not

sufficient to form anything like a restoration. The paste is of the usual kind, clay which has baked a reddish brown, mixed with quartz and powdered granite. From the curve produced by the two pieces of the rim the mouth diameter of this pot must have been close on 1 foot. No cooking place was found, and but little charcoal. This hut has been a good deal pulled about by the stone-cutters, for their spalls or chippings of granite were found underneath the turf, and close on the original floor of the hut.

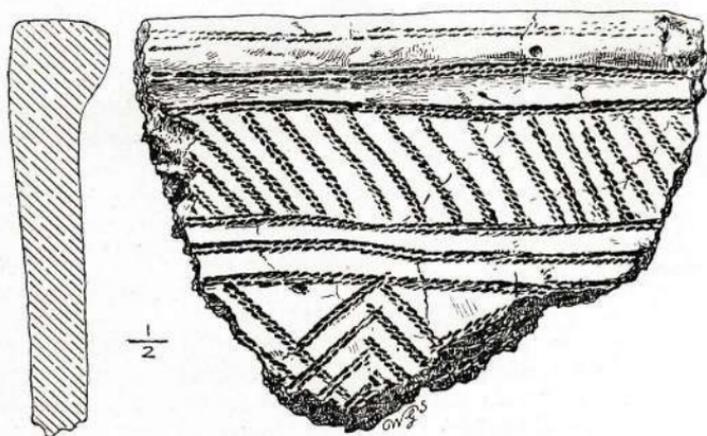
Hut Circle No. 2. Diameter 22 feet. One jamb of the doorway left, facing the south. This circle gave one piece of flint and a pebble of red grit. It had been much disturbed by stone-cutters.

Hut Circle No. 3. Diameter 24 feet. Four feet from the east circumference of wall was an upright stone, fixed firmly and deeply in the "calm." It was 16 inches above the floor, 10 inches in length, and 4 inches thick. It occupied the same relative position as the three stones found in hut circle No. 1, Foale's Arrishes. Only a little charcoal was seen, but several small sherds of pottery were recovered, one a part of the rim of a pot with zigzag impressions of a twisted cord or thong on the flat surface of the rim, and diagonal lines produced by the same means running down the neck.

This circle had also been pulled about, and was in a ruinous condition.

Hut Circle No. 4. Diameter 30 feet. Double wall 3 feet thick, packed between with earth and small stones. The ruined entrance faces the south. The surface of the circle sloped towards the north. The examination was commenced at the lowest portion, and a trench was dug, following the wall, and worked towards the west 22 feet long, 4 feet wide, and 2 feet deep. Charcoal was found strewn on the floor in one place thick enough to suggest the site of a fireplace. The other finds were part of a rubber of dense dark slaty stone, and a well-worked flint knife (see Plate II., Fig. 3), and a well-used flake of the same material. As this seemed to exhaust the northern portion of the circle, we opened west of entrance, and worked towards the previous trench, still following close to the wall. Here we found much charcoal, the remains apparently of another fireplace, and a considerable number of sherds, representing portions of two pots—one large and highly ornamented with a twisted cord or thong pattern, and the other a shallow, wide-mouthed vessel, without ornamentation. The most important sherd of the larger vessel is represented by Plate VII., and is the most elaborately ornamented

PLATE VII.



FROM HUT CIRCLE No. 4, SMALLACOMBE ROCKS.

(Page 158.)

of any we have yet found on Dartmoor. Like all the rest, it is hand-made, with paste of reddish brown, permeated by black carbonaceous matter. It was probably a cooking pot, with wide mouth of from 10 to 12 inches in diameter.

As the summer work of the Committee was now terminating, the further exploration of this hut was suspended.

Owing to the break-up of the fine weather, the planning was not completed, and has had to be deferred till next season.

VII. Kistvaen, Chagford Common. (XCIX. N.E.)

An unviolated kistvaen was discovered on Chagford Common under a cairn not under 2 feet high, and so trodden out of shape by cattle that it was not recognised as certainly a cairn till pick and spade had been employed upon it. For an account of the results the Committee refer to the Report of the Barrow Committee.

In conclusion, your Committee are desirous of calling special attention to the pottery, the forms and ornamentation of the vessels.

The pottery of the hut circles of Dartmoor belongs to an early type, but not the earliest. It is all hand-made. Most of the vessels are very imperfectly burnt, and are of very coarse mixture of clay and quartz sand. The majority of the vessels have rounded bottoms, and were sunk in the floor; nevertheless, there have also been found some that had flat bottoms. Whereas some of the pottery is extremely coarse, other specimens are comparatively fine. In character, the paste is precisely that of the period which is most generally known as the Barrow pottery age, which is also that of late neolithic tools and weapons, and of the introduction of bronze.

The vessels that had been used as cooking pots were all reddened externally, but were very black within at the bottom and over half way up, and the black disappeared towards the throat and mouth. This blackness was due to the carbonization of the animal matter that had been cooked inside the pots through the agency of hot stones put into them with the flesh that had to be cooked.

With regard to the shapes of the vessels recovered, there seem to be three.

1. A rude round or flat-bottomed vessel with lugs and a broad rim, like a cuff of a sleeve turned back.

2. A shallow round-bottomed and wide-mouthed vessel.

3. A well-shaped urn. This only found in the Chagford Common kistvaen.

The decoration employed was either—

1. Made by pressing a string against the clay before it was baked.
2. By marking the soft clay with a sharpened or rounded bit of stick, flint, or bone, either in lines or dots.
3. Or by ornamenting it with the finger nails, so as to form a rude pattern.

The nature of the decorations is constant. It consists of bands, lines, dots, and zigzags, and is precisely that everywhere found in connection with megalithic monuments of the Neolithic and early Bronze Age. Not a trace has been found of the peculiar ornamentation introduced at the same time as iron, which is, indeed, found on bronze ornaments, but only on those of a late period.

As so little appears to be known which bears upon the composition of prehistoric pottery, the Committee has determined to commence a scientific examination of typical sherds obtained during recent explorations, the leading ideas being to extract information as to whether the potters used the native clay of Dartmoor, and as to whether the sand and quartz present in the pottery was added in the working up of the clay, or was present in the clay as found, and used by the pot-makers in its natural condition.

The first instalment of this investigation is here presented, and it is intended to continue it in the next report, for more chemical determinations and microscopical examinations must be made of sherds and Dartmoor clays before there will be sufficient data to draw conclusions.

If satisfactory scientific evidence is forthcoming as a result of these experiments, considerable light will be thrown on a most interesting subject; and as the Committee is unable to trace any similar investigation, details and figures will be given so that the interested reader may follow the particulars, and see exactly how the resulting inferences are arrived at.

If it can be shown that the inhabitants of the hut circles made their own cooking pots, the possible uses of the large number of grit pebbles, designated rubber stones in the reports, with faces worn down by attrition, may possibly be explained, for some of them may be the implements used by the ancient potters for working up the clay into a suitable condition for building up, moulding, or shaping the vessels.

That this working up of the raw material, and even the levigation of the clay was understood, is amply demonstrated

by the fact that the "slip," or covering, of fine creamy clay laid on both the exterior and interior of the vessels prior to baking is present on many of the potsherds, and it is also clear that this was laid on by a brush either made for the purpose, or some ready-made natural object, such for instance as a hare or rabbit's hind foot.

Clay, which is chiefly formed by the decomposition of the feldspars, is of various grades and qualities.

Kaolin or china clay, the purest unctuous clay.

Potter's and pipe clay, plastic, free from iron; mostly unctuous; usually containing some free silica.

Fire-brick clay possesses the same characteristics as the former, but contains more silica or sand.

Ferruginous or ordinary brick clay, containing iron in the state of oxide or carbonate, and consequently baking red. There are other forms of ferruginous clay, but these are at present of no interest for this report.

Most of the hut-circle pottery is red or reddish in colour, so that we have to mostly deal with clay containing iron, and the percentage of this has been ascertained, and is expressed as oxide of iron Fe_2O_3 .

The samples tested have been dried at 212°F ., and the quartz gravel or sand when present has been previously separated.

Any deviation from this is specially mentioned.

Experiment No. 1. Sherd forming portion of a cooking pot found in hut circle No. 9, Raddick Hill (see Report No. 3)—

Contained coarse fragments of gravel and sand	12 per cent.
Clay (containing fine silica, not separated)	88 „
	100 per cent.

The clay, plus fine silica, contained oxide of iron 11.84 per cent. Colour of sherds brick-red, coated inside and out with a "slip" of fine clay. This vessel was similar in paste and ornamentation to the whole cooking pot found in hut circle No. 3, Raddick Hill, and figured Plate X. Report No. 3. The only apparent difference in the two vessels is that the bottom of the latter was slightly rounded, whilst the former was flat.

Microscopically examined, and selected particles tested by the aid of a blow-pipe and reagents, this sample gave the following results:

A very few fragments of quartz, stained slightly red by the presence of iron. Other mineral constituents other than

clay consisted, with exception of fragments, of a dark slate-coloured rock, with distinct traces of foliation. This rock proved to be an altered sedimentary rock (schist), probably derived from the borders of the moor. Such fragments occur in natural clay, and do not represent added gravel.

No granitic material.

Experiment No. 2. Examination of black carbonaceous matter on the inside of the body of the cooking pots, and permeating the walls to from half to three-quarters of their total thickness.

A. Sample obtained from the interior of a potsherd, hut circle No. 8, Foale's Arrishes.

B. Similar sample from hut circle No 1, Tunhill Rocks. These were treated with ether in the cold, filtered and evaporated down, and gave distinct oily globules of rancid fat, which flared on ignition, emitting characteristic smell.

Remains of grease due to cooking operations held in the pores of the pottery.

Experiment No. 3. Sherd from hut circle No. 1, Smallacombe Rocks

Contained total gravel and fine silica	44.60 per cent.
Clay	55.40 „
	100.00 per cent.

The clay contained oxide of iron 8.88 per cent. Colour dull red, coated outside with "slip" of fine clay. Interior not so treated; this was light brown.

This pottery is better baked, tougher, and not nearly so friable as sherd examined in No. 1 experiment.

Microscopical and Blow-pipe Examination.—A very few fragments of quartz, forming an inconsiderable percentage of the total sand and gravel.

The remainder of the gravel constituents showed an imperfectly-developed crystalline structure, and proved to be pyroxene (probably Augite), derived apparently from an altered sedimentary rock. Such gravel is found in clays on the borders of Dartmoor, and represents in this case original ingredient of the clay mass.

No trace of added gravel.

No trace of granitic matter.

Experiment No. 4. Sherd from hut circle No. 1, Tunhill Rocks, of same type as sherd in No. 1 experiment (described for convenience in further examples as Raddick type—coarse,

thick paste used in the manufacture of cooking pots)—contained on the inside much black carbonaceous matter due to cooking operations. It was found impossible to satisfactorily separate the clay of this sherd from the gravel and fine sand. Very hard fragments of well-burnt clay resisted all efforts, but the imperfectly-treated clay contained oxide of iron, 4.88 per cent.

Microscopical and Blow-pipe Examination.—Only a very few fragments of isolated quartz. The remaining gravel consisted of fragments of quartz-tourmaline rock, apparently schistose. Again such materials as occur in the clay-beds near Dartmoor. No added gravel. No granitic material.

Experiment No. 5. Sherd from hut circle No. 4, Smallacombe Rocks. Raddick type, but not so rude; portion of a shallow vessel, probably not a cooking pot; not ornamented. Fine silica, difficult to separate. Clay contained oxide of iron, 5.92 per cent.

Microscopical and Blow-pipe Examination.—Rounded, irregular-shaped particles, black when moist, slate-coloured when dried. In oxidising flame became white throughout. Silicate of alumina reactions. White, hard-baked clay stained by carbonaceous matter.

One fragment of red clay with specks of white.

No quartz or rock fragments.

Apparently a relatively "fat clay."

The white clay need not necessarily be derived directly from china clay deposits on the moor. Its origin may either have been from china clay deposits or from some of the clays of the lower lands; instances of such, which contain no appreciable iron oxide, are known.

Accepting the percentages of oxide of iron as guides indicative of variations in ferruginous clay, it is clear that as far as the chemical examinations are concerned the potsherds experimented on are formed of clay which has been derived from different deposits taken from localities distant from each other. For instance, compare No. 1, which is from Raddick Hill, near Princetown, with No. 5, from Smallacombe Rocks, near Hay Tor. The oxide of iron contained in the former is just double that contained in the latter.

In order that proper comparisons may be made, the Committee is collecting samples of crude Dartmoor clay, especially from the districts in which the examined pottery has been found, and it is hoped that this may result in some light being thrown on the matter.

At present only two samples have been received, and both of these are from Archerton and Row Tor Marsh, near Post Bridge, localities which have not yielded much pottery, nor do these samples bear directly on the potsherds examined. The following results were obtained on their examination:

Experiment No. 6. Crude clay from Archerton Newtake. Rough sample, not very unctuous.

Total gravel, quartz, and fine sand	. 40 per cent.
Clay	. 60 „
	<hr/> 100 per cent.

Clay contained oxide of iron, 2.52 per cent.

Microscopical and Blow-pipe Examination.—The greater part of the gravel and sand from this clay consists of quartz grains of varying size.

There are a few isolated grains of tourmaline, and some grains compounded of quartz and tourmaline.

A very few flecks of mica also occur.

Traces of felspathic matter.

Purely granitic constituents.

Experiment No. 7. Crude clay from Row Tor Marsh. Much more unctuous than No. 6. Gave same proportions of gravel, quartz, fine sand, and clay as No. 6.

The clay contained oxide of iron, 2.66 per cent., practically the same amount as 6. Both these crude clays were found almost in the same newtake. They differ only in degrees of unctuousness. The similarity in percentages of oxide of iron bears out the efficacy of regarding this constituent of ferruginous clay as a means of determining locality. If potsherds contain clay which gives a certain range of percentages of oxide of iron, and the crude clay of the neighbourhood corresponds, and *provided the microscopical examination of the gravel* bears this out, it may be fairly inferred that the pots were made of local clay.

Microscopical and Blow-pipe Examination.—Precisely similar to No. 6.

Neither of these clays, so the chemical examination says, would be suitable for making the pottery examined thus far; but general deductions must be deferred until opportunities, as previously stated, present themselves for further experiments both with more sherds and samples of clay from various localities.

This it is to be hoped may be presented in the next report.

It will be seen that in the whole of the above cases the sand and gravel recovered from the potsherds is such as is normally found in the clays bordering on Dartmoor. The constituents which would be found in any china clay deposit on the moor itself are in every case absent.

As regards the sherds so far examined and reported on, it may therefore be safely stated that the clays were probably obtained in the neighbourhood of the moor, but not within the granitic area.

There are no traces of gravel and sand added by the potter, the natural clay containing sufficient of these constituents.

An instance of the use of china clay in prehistoric potting having become known in the course of excavations at Legis Tor, and the present experiments having a strictly limited range, the Committee regard general deductions as impossible at the present stage of the inquiry.

Along with this report the Committee are glad to be able to give the plan of the Legis Tor Settlement, the plan of the circles on Cosdon, and that of the fine stone row on Stall Moor.

S. BARING-GOULD.

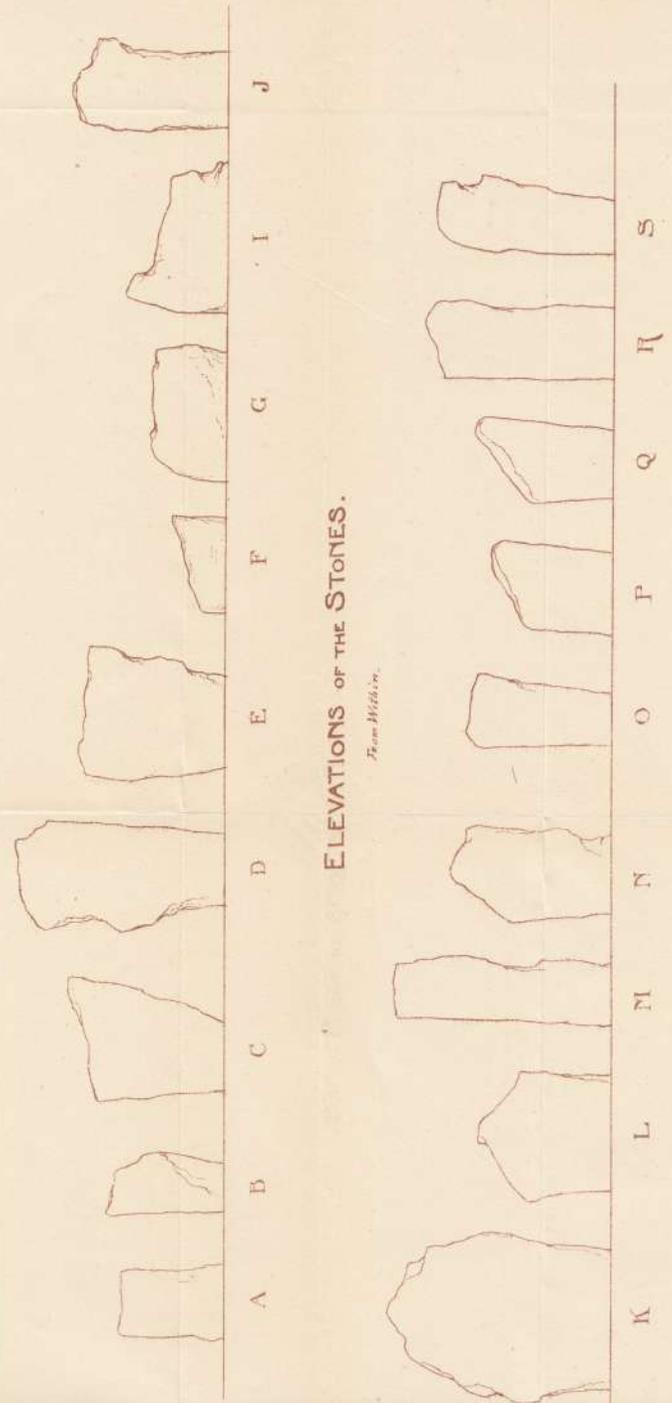
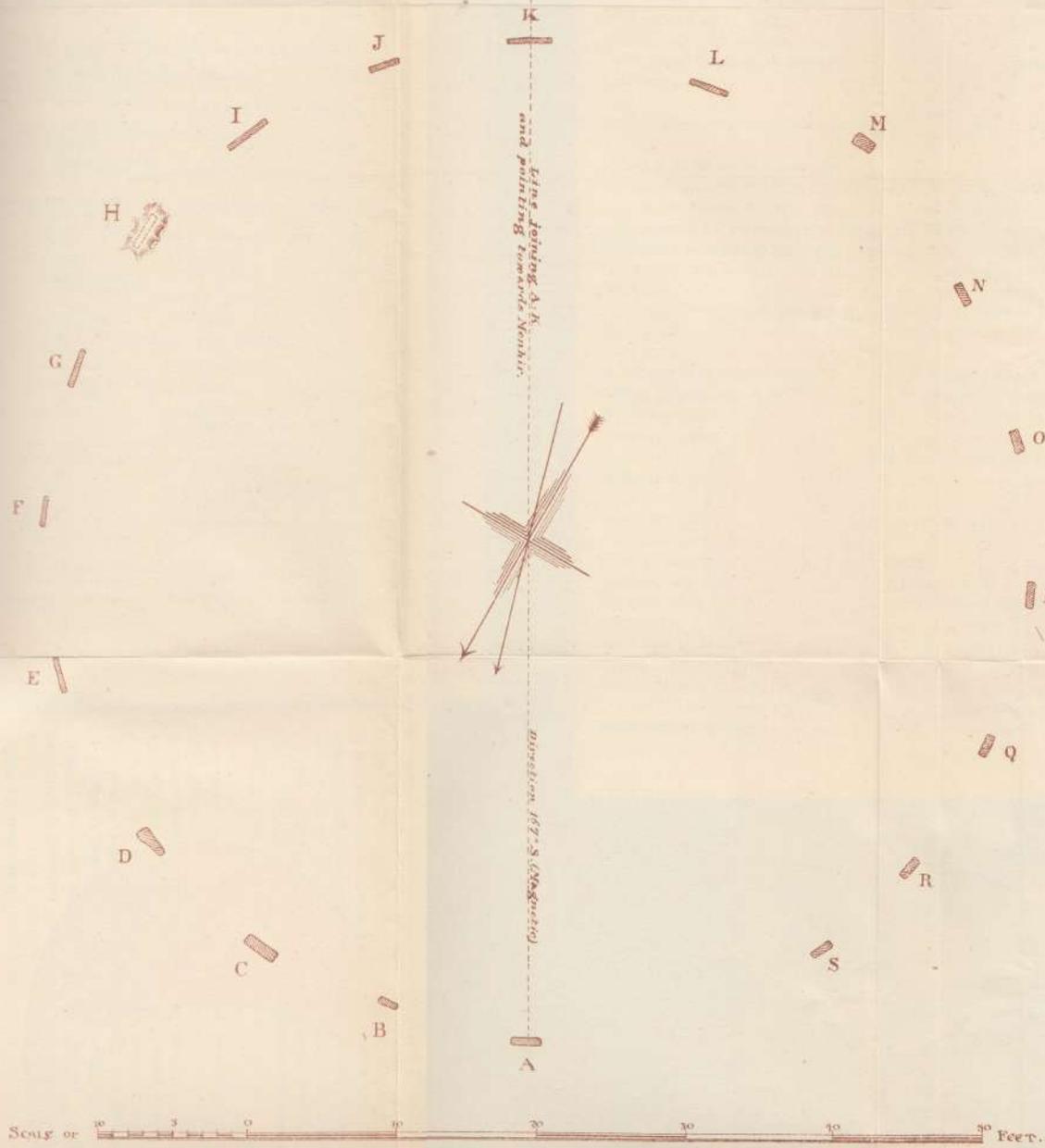
R. BURNARD.

J. BROOKING ROWE.

J. DUKE PODE.

R. HANSFORD WORTH.

STONE CIRCLE ON COSDON,
DARTMOOR.



Scale of 0 to 6 Feet.