

## IV.

## TRIAL EXCAVATIONS AT THE OLD KEIG STONE CIRCLE, ABERDEEN-SHIRE. BY PROFESSOR V. GORDON CHILDE, B.LITT., F.S.A.SCOT.

Stone circles with a Recumbent Stone between the two highest pillars represent a type peculiar to Aberdeenshire and the adjoining counties of Banff and Kincardine. Despite the surveys of sixty-four of these monuments and the excavation of one by Mr Coles,<sup>1</sup> the age of the type is still a legitimate subject for discussion<sup>2</sup> that can only be settled by more productive excavation. The Stone Circle on the farm of Old Keig seemed a suitable site for a trial dig aiming primarily at a solution of the chronological problem; the monument is so ruinous as to be of small value in solving structural problems, so that investigations on the latter would not be prejudiced by a partial excavation if unproductive. It has, moreover, been previously disturbed, as a letter written in 1692 by Professor Garden of Aberdeen to John Aubrey demonstrates.<sup>3</sup>

The initiation of the fruitful operations at the site to be described here was due to Mr Mansfield D. Forbes, of Clare College, Cambridge. Lord Forbes and Messrs Mortimer, his tenants at Old Keig, gave ready permission and much assistance, for which the excavators wish here to record their gratitude. Mr Forbes asked the writer to take command of operations and prepare the report. Mr W. J. Varley of Liverpool University kindly undertook the surveying, and assisted as well in the work of excavation. Mrs Doris Dingwall, Miss M. E. Crichton Mitchell, Mr A. W. Franklin, Mr J. W. Layard, and Mrs Varley also lent invaluable assistance. No hired labour was employed except for filling in at the end. The excavation in the occupation levels was carried out with trowel and penknife, which accounts for a relatively high percentage of relics. Operations were begun on 1st September and lasted fourteen days.

The circle<sup>4</sup> stands on a slight crest on a ridge running up to the Hill of Airlie, which is crowned by a fort termed the Barmekin (929 feet

<sup>1</sup> *Proceedings*, vol. xxxiv. p. 140; vol. xxxv. p. 188; vol. xxxvi. p. 489; vol. xxxvii. p. 91; vol. xxxviii. p. 257; vol. xxxix. p. 193.

<sup>2</sup> Hadrian Allcroft, *The Circle and the Cross*, chap. viii.      <sup>3</sup> *Archæologia*, vol. i. p. 320.

<sup>4</sup> Earlier references are: James Garden (1692), *Archæologia*, vol. i. p. 320; J. Logan (1827), *ibid.*, vol. xxii. p. 201 and pl. xxiii; F. R. Coles (1901), *Proceedings*, vol. xxxv. p. 211; and Bishop G. F. Browne (1921), *On Some Antiquities in the Neighbourhood of Dunecht House, Aberdeenshire*, p. 78. The existing wind-break is not shown on Logan's figure nor on an early estate plan (undated, but probably older than 1827).

O.D.). The circle now lies in a narrow windbelt planted with firs and spruces. This plantation is probably subsequent to 1827, though it includes older trees. A farm road, banked on either side, crosses the plantation immediately to the south of the circle. Of the monument a Recumbent Stone, two flanking Pillars, and a third undoubted orthostat to the east survive. Five other earthfast stones in the vicinity look as if they had been disturbed. The Recumbent and Pillars stand in a more or less circular bank, which merges into the dykes bounding the plantation on either side but crosses the belt again on the north. Here two large blocks projected above the turf, but were found to be loose. Three trees were still growing within the circle, and the stumps of others are visible on its bank.

Our excavations were limited to digging a trench 7 feet 9 inches wide across the circle at right angles to the Recumbent and equal in width to half its length. The (south) eastern edge of our excavation, hereafter called line A (the opposite edge being referred to as line B), accordingly coincides with the diameter of any circle of which Recumbent may form a chord, and so is likely to represent the true diameter of our circle (fig. 1). The bearing of line A is 43 degrees W. of S., magnetic, but for convenience in description it will be treated as if running north and south. Distances are reckoned in feet along line A, the inner face of Recumbent at turf-level (691.62 O.D.) being taken as 0. The section was extended southwest of Recumbent on the same line for 24 feet (but only 2 feet wide for the last 12). Here distances are given negative values with reference to the same zero point. From 3 to -9 the section was widened to 10 feet, to allow of the exposure of the base of West Pillar. Between 35 and 39 it was extended 2 feet east of line A, where a scraggy larch-tree was removed. The section was cleared down to virgin soil over its whole width, save between 24 and 32 and beyond 66; in these sections a strip 2 feet 6 inches wide from line A was cleared to this depth. Between 32 and 54 the strip cleared was wider, but varied in breadth owing to the presence of large stones.

Immediately under the turfs a loose buff loam was encountered. Stones projected through the loam south of Recumbent between -6 and -9, between 0 and 9, between 24 and 54 (save for a strip 2 feet 6 inches wide from line A between 32 and 53), and on the northern segment of the bank from 65 to 77. Between 10 and 24, and again from 54 to 65, only a few stray loose stones occurred in the loam.

In these stoneless areas the loose buff loam passes over almost insensibly, 6 to 9 inches below the turf, into a darker, more compact soil sometimes resembling clay in consistency. This "clayey layer" was normally about 5 inches thick and contained everywhere small

TRIAL EXCAVATIONS AT THE OLD KEIG STONE CIRCLE. 39

EXCAVATION OF A STONE CIRCLE  
AT OLD KEIG.  
Sept. 1932.

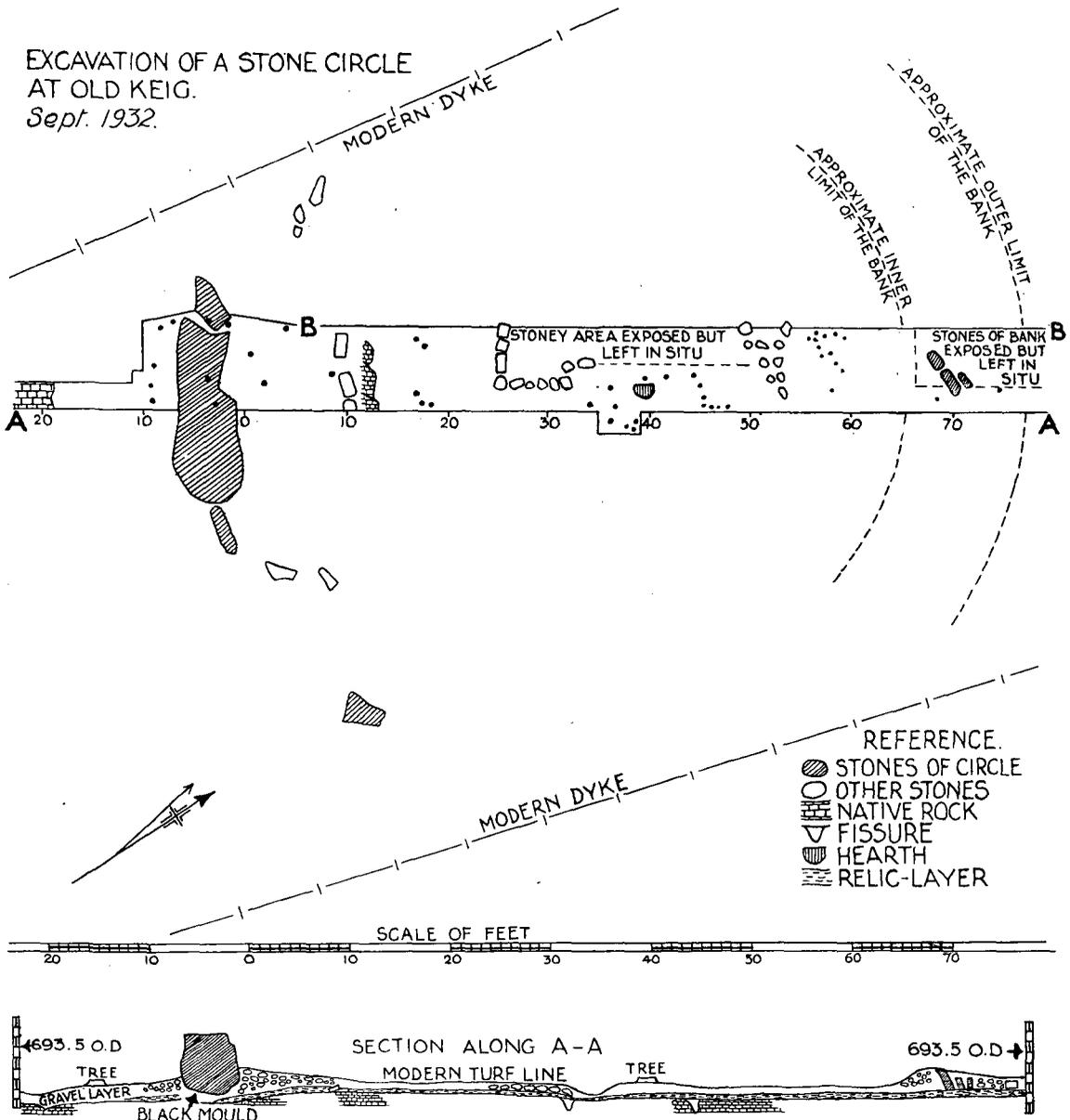


Fig. 1. Old Keig Stone Circle: Plan and Section.

fragments of charcoal. Most of the relics were recovered from it. It rests between 54 and 66 upon a fine yellow sandy gravel. This is virgin soil, and was found also outside the circle bank to the north and south of Recumbent. In places, notably between -22 and -18, between 9 and 13, and near 45, the underlying bedrock outcrops in ridges through it. Within the circle area (save under the stony patch near the centre) and under the bank on the north, the surface of virgin soil lies almost level at  $689.40 \pm .15$ . Somewhere about 0 it begins to slope perceptibly to the south-west, so that between the outer face of



Fig. 2. Old Keig Stone Circle : Segment of bank on north-east.

Recumbent at -6 and -22 the fall is 1 foot. In this strip the fall was observed to be quite continuous (apart from minor unevennesses due to rock fissures), so that here at least there was no fosse round the circle. North of 70 a similar but more gentle slope seems to begin.

The clayey layer in general follows the contour of the gravel. It passes continuously under the bank on the north and under the western end of Recumbent, but it disappears completely outside the bank at 77 and beyond Recumbent at  $-9\frac{1}{2}$ . The interpretation of this deposit must be postponed till the structural features of the monument have been described.

*The Bank* to the north of the section is composed of boulders with loose loam between them (fig. 2). The innermost were noted at

65 × 5/7 and 66 × 2/4, but these were quite loose and rested on the clayey layer as if fallen forward. Beyond came a mass of boulders from 68 to 77. But between 68 and 71 more closely juxtaposed slabs, 14 to 18 inches high and 4 to 6 inches thick, stood on edge or on end on the clayey layer.<sup>1</sup> Some were embedded in it to a depth of 1 to 3 inches, but it was in every instance interposed between their bases and the gravel. At 68½ a sherd was found in this layer under the stones of the bank and only 1 inch above the gravel.

*The Recumbent* is a block of sillimanite gneiss, 16 feet long on top, 6 feet thick (at 691·50 on line A), and 6¼ feet high (at -3 × 2¼). The top is nearly flat and lies approximately horizontal. The outer or south-west face is slightly convex. A large slice has been split off along a plane of cleavage from the inner face near the western end; a portion of this was lying on the turf against the body of the stone. The base is very uneven. In longitudinal profile it slopes up towards the western end. Viewed transversely, it is seen to be keeled. The lowest points reached lie at -2½ on line A (689·20), at -3, 2¼ feet out (688·84), and at -5¼, 3½ feet from A (689·10). The flatness and horizontal alignment of the top and the tapering to the west are features that I have observed in other Aberdeenshire circles of this type.

At its centre along our line A the turf came to within almost 4 feet of the top of the Recumbent on the inside and to within 4½ feet on the outside. The turf in each case rested upon a stony bank which sloped up towards the western end. The stump of a fir-tree that had grown upon this bank right against the outer face of Recumbent stood 3 feet out from line A. The banks were composed of small stones and medium-sized boulders resting in loose loam. The fragment split off Recumbent rested on the bank on the inner side, projecting above the turf. On the inside the bank seems to slope up from between 6 and 9 to 0, though disturbed by a fir growing close to the edge of our section at 8. Further excavations may show this bank to have been part of a platform such as occurs in other similar monuments. The large boulders at 9 might mark the edge of such a platform. On the outside the bank extends from -6 to -9 only. On both sides the bank rests on the clayey layer, while on the inner side it covered also the larger boulders immediately in front of and under Recumbent.

The cavities under Recumbent on either side of its keel were filled with a very loose black mould. No relics were recovered from this deposit, and its texture shows that it had been formed naturally in spaces protected from downward pressure. Boulders and broken slabs of rock lay in this mould, but only a few of these were tightly wedged

<sup>1</sup> Compare Aikey Brae, Old Deer, *Proceedings*, vol. xxxviii, p. 266.

in between the underside of the stone and the native rock or virgin soil. Under the upward tapering western end of Recumbent an irregular row of large boulders lay in and under the loose mould (fig. 3). The largest was a prism of local rock (garnet biotite hornfels) 2 feet long by 1 foot by 1 foot. None of these boulders, when fully examined, seemed to be giving effective support to the Recumbent itself. All rested on or were quite superficially embedded in the clayey layer.

Recumbent was found to be resting on bedrock (biotite-cordierite



Fig. 3. Old Keig Stone Circle: End of Recumbent Stone after excavation from south-west.

hornfels) only along a line about  $2\frac{3}{4}$  feet out from line A between  $-2\frac{3}{4}$  and  $-4\frac{1}{4}$ . At these points the lower face of the stone was in contact with ridges of bedrock at 689'04 and 688'83 respectively. From here the keel of Recumbent slopes upwards in the direction of line A, and fir-roots, presumably from the tree whose stump stands on the bank outside, pass right under the stone as far in as  $-3$ . On line A itself a boulder was firmly wedged in between the base of Recumbent and bedrock.

The gravel runs continuously under the hollow western end of Recumbent, dipping from 689'90 at  $-1$  to 689'50 at  $-5$ . There was, however, an irregular depression, perhaps the bed of a stone, about 4 inches deep at  $-5$  on line B. A bed had been scooped out in the

gravel, at least for the lowest part of the Recumbent. Its lowest point is fully 4 inches below the average level of the top of the gravel surface at -6, and, as remarked, that surface sloped up over the space now occupied by the stone. In the face of the tunnel dug under Recumbent along line A the edge of the excavation was actually visible and has been faithfully reproduced on Mr Varley's section.

The "clayey layer" too ran continuously under the hollow western end of the Recumbent, underlying the boulder row and covering the sloping gravel, but filling up the shallow depression at -5 B. It also runs a couple of feet in under the Recumbent from its inner side, but is definitely interrupted by the keel and is conspicuously absent where the bed had been scooped out for the latter. It follows either that the layer in question was cut through in hollowing out the bed for Recumbent, or that its formation was hindered by the presence of the stone. In the first case, which seems at the moment the more probable, the layer must have been in existence before Recumbent was placed in position.

Rim sherds were found at the base of the clayey layer against the foot of West Pillar (No. 59) and in the pocket in the gravel (No. 36). Another rim sherd (No. 60) was found 2 feet under Recumbent 1 foot in from line A, but part of the same vessel was found in the clayey layer under the stones of the bank at  $1\frac{1}{2} \times 3$ .

*West Pillar* is 8 feet 10 inches high (from its true base), 3 feet wide, and  $2\frac{1}{4}$  feet thick along the edge nearest the Recumbent. Its summit rises  $5\frac{1}{4}$  feet above the turf at its base. It was not considered safe to expose the base of this heavy stone except along the edge next Recumbent. Here the pillar was supported for the most part by packing-stones resting on the clayey layer (fig. 4). From its south-west corner, however, there projects downwards from the main mass of the stone a sort of tongue about 1 foot 1 inch wide and only 2 to 3 inches thick. This spur penetrates through the clayey layer into the underlying gravel to a depth of  $4\frac{1}{2}$  inches. It cuts clean into the gravel, which is undisturbed all round, and is surrounded with a thin envelope of darker soil fitting it like a skin. Charcoal was found in this soil right under the stone, and a potsherd (35) on the edge of the depression in the gravel. It looks as if the tongue had been forced into the gravel rather by the weight of the pillar than by deliberate preparation of the ground.

*The Stony Area* between 24 and 54 presumably marks the site of the central ring cairn characteristic of these Aberdeenshire circles. It has unfortunately been disturbed, presumably by the operations mentioned by Garden in 1692, and by subsequent tree-planting; a

young larch was, in fact, growing at  $37\frac{1}{2}$  close to the apparent centre of the circle. The stones are boulders and rock-fragments of substantial size, often over 1 foot in diameter and closely packed together. All seemed to rest *upon* the clayey layer, but it must be remembered that here excavations were carried down to virgin soil only along a strip 2 feet 6 inches wide from line A. The cairn material actually crossed this strip only between 24 and 32, though projecting into it between 50 and 53. In the last-named region a layer of charcoal was observed immediately under the stones. Between 36 and 46 numerous but minute



Fig. 4. Old Keig Stone Circle: Boulders under Recumbent Stone.

fragments of cremated *human* bone and fragments of at least seven pots, one nearly complete, turned up in the loam and disturbed soil from 2 to 15 inches below the modern turf surface, immediately above virgin soil. Between 38 and 39 there was a layer of particularly black soil, and adjacent to it, but 2 to 3 feet out from line A, a patch of soil 18 inches square baked red by fire. Between 33 and 54 the average level of virgin soil is from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches lower than elsewhere in the section, and the material is distinctly paler in colour. The surface of the gravel too is interrupted by projecting ridges of bedrock. Between these are fissures. One between  $43\frac{1}{2}$  and  $44\frac{1}{2}$  attained a depth of 18 inches, but was filled with rather dirty loose gravel quite devoid of relics. Between 31 and 32 there was another hole 8 inches deep filled

with loose gravel equally sterile. I believe both depressions to have been natural and to have been sealed over before the deposition of the bones and pottery and the kindling of the fire at 39.

We may now turn back to the so-called clayey layer. In texture and appearance this resembled the muddied soil that all too soon covered our nicely cleaned sections of gravel if we trampled upon them after a shower, and that can be seen upon farm paths in the vicinity. It is, in fact, an occupational deposit due to the builders of the monument and/or subsequent visitors thereto. A connection between this deposit and the monument is established by its restriction to the area of the circle and a narrow strip in front of Recumbent. That it is also coeval with the circle might be a plausible inference from the following facts. In the first place, it is older than the bank at the north of our section, the irregular boulder row under the hollow end of Recumbent, the banks on both sides of the stone, and some at least of the boulders of the central cairn, since all these rest upon the layer. It might, however, be argued that the banks are secondary, while the central area was admittedly disturbed. Secondly, as far as our excavation went, the West Pillar seemed to rest on and be supported by a packing, itself bedded on the clayey layer, though a tongue of the stone admittedly penetrates the layer. Thirdly, it seemed likely that the bed for Recumbent had been scooped out in and through the deposit. If this be right, the relics embedded in the clayey layer must be accepted as dating the monument.

Of course, the formation of the deposit may have continued after the erection of the stones. But as it exhibits no stratification, its formation presumably went on without interruption during the period in which the monument was in use, and there is no means of distinguishing such a period from that of the actual erection.

The relics upon which we must rely in dating the monument consist of potsherds. In these there are really only two classes, but the second class can be subdivided into three varieties.

Class I., fine red ware, 6 to 7 mm. thick and fairly homogeneous though including visible grits, exceptionally attaining a length of 4 mm. While red on both surfaces, a dark core is visible in section. The surface is now quite rough, but might once have been covered with a slip of which no trace survives. This ware is very rare and was represented exclusively by minute fragments. All without exception were found in a small area close to line B between 56 and 60 and lay either right on the gravel or not more than 2 inches above it. One sherd bears a herring-bone pattern executed with a square-toothed comb. It is thus marked out as belonging in all likelihood to a beaker.

Class II. (fig. 5) is of a quite different character. It comprises all

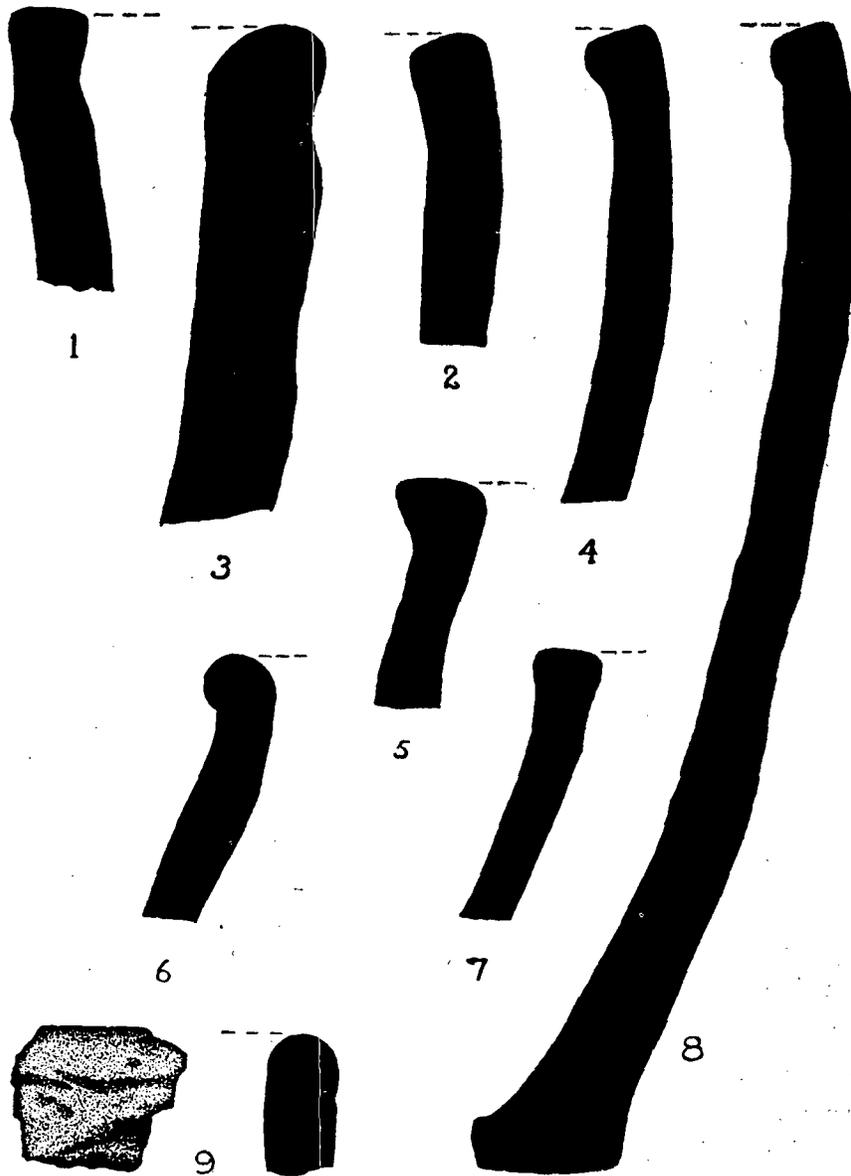


Fig. 5. Old Keig Stone Circle : Sections of Pottery. (3.)

the pottery found with the cremated human bones in the disturbed central area and the sherds from under Recumbent and below the banks. One sherd occurred between 56 and 60, but it lay nearly 3 inches higher in the clayey layer than the beaker sherds. All sherds of Class II. are comparatively hard-burned, but are gritty and unpolished. We distinguish the following varieties, though the differences are probably of no historical significance:—

1. Coarse red ware, 6 to 14 mm. thick, includes a good deal of large grit; exterior reddish to buff and slightly smoothed over; core and interior black; rather soft.
2. Coarse black ware, agreeing generally with 2 but black throughout.
3. Brown ware, 6 to 11 mm. thick; paste comparatively even; brown on both surfaces but darker towards the core.

Most sherds seemed to belong to rough cooking-pots with either quite straight walls or a slight bulge two-thirds of the way up. None of the sherds suggested the presence of shoulders or necks. One or two sherds belonged to shallow dishes with inverted rim. The rims all showed careful treatment. The most distinctive, group A, are flattened, the edges being left relatively sharp. Such rims may overhang slightly, *y*, inwards or, *z*, outwards. The potter has produced the overhang by running the thumb along just under the rim while the first finger pressed down upon it; the imprints of the digits can just be felt in some cases. A rare, B, type of rim is simply rounded. Everted rims are absolutely missing. The bases are all flat and tend to be slightly splayed out.

Sherds often clustered in groups. The more important specimens are as follows:—

Between 40 and 46 × 2½, fragments of at least four vessels:

- 29, portions of an urn of ware 3, with rim A; perhaps the urn which had contained the cremated human bones found lying hereabouts.
- 27, ware 1, rim A *y*, discontinuous row of very shallow finger-tip impressions just below rim on outside.
- 28, ware 1, rim B, with double groove immediately below rim produced by a blunt-pointed implement.

From 34 to 39:

- 45, rim A *y*, ware 1.
- 46, rim A, ware 2; below rim a wide shallow groove.
- 43, rim A, ware 3.

No sherds were found under the stones of the cairn between 24 and 32, but under and near Recumbent we collected:

- 60, rim A *z*, ware 1, but rather light buff and blackened externally

just below rim. Part was found under the bank at  $1\frac{1}{2} \times 3$ , and part right under Recumbent at  $-2 \times 1$ .

36, rim B, ware 2, but rather fine and unusually hard-burnt. It belongs to a bowl and is inturned slightly. Found in the pocket in the gravel 4 inches deep at  $-5$  on line B.

35, rim of ware 2, with shallow groove below it from top of gravel right against base of West Pillar.

Beyond Recumbent several coarse sherds of ware 1, including pieces of a base and perhaps all belonging to one vessel, turned up between  $-7$  and  $-8$ .

Besides potsherds, two small scrapers of flint turned up right on the gravel, one at  $58 \times 4$  and the other at  $65 \times 3$ .

The excavators and the Society have to thank Lord Forbes for most courteously agreeing to present the relics to the National Museum.

Among the relics, the pottery assigned to Class II. needs special mention, since it seems to date the monument. The following points may help to fix its chronological position:—

Flattened rims may be seen on many late cinerary urns from Scottish urnfields, and typologically our urn 29 might be regarded as a final degeneration of the overhanging-rim-cordoned urn series.<sup>1</sup> At the same time the relatively hard quality of the ware, the finger-and-thumb treatment of the rims, and the association of flat with rounded and inverted rims differentiates our ware from any recognised group of Bronze Age pottery in Scotland.

On the other hand, it does to some extent approximate in technique to much of the pottery of the Roman period, generally termed here Early Iron Age. Even the rim-flattening distinctive of our group is occasionally found on sites of that period, though the edges are seldom so sharp.<sup>2</sup> Nevertheless, the complete absence of the eversion that was the truly characteristic mode of treating the rim in Roman times would preclude such a dating of the Old Keig wares. These ought rather to occupy an intermediate position. Now, in the Sculptor's Cave at Covesea<sup>3</sup> Miss Benton did find pottery absolutely identical with ours, attributable to a Late Bronze Age (or Hallstatt) occupation. More recently Mr W.

<sup>1</sup> A series of urns in the Museum of the United College at St Andrews illustrates this very well. Cf. Elgee, *Early Man in N.E. Yorkshire*, fig. 30, 6.

<sup>2</sup> About ten per cent. of the rims from Traprain Law show some sort of flattening. Cf. *Proceedings*, vol. xlix. fig. 12, 12-13; more remote parallels in the Museum come from Iron Age sites on Lewis (Bragar, HR. 601); Port of Ness (HR. 757); Rudh' an Duin (GT. 67); and Coll (H.D. 324).

<sup>3</sup> *Proceedings*, vol. lxxv. p. 190, fig. 11. The metal finds and bone-work suffice to prove Late Bronze Age and Roman period occupations. The pottery belonging to the latter is easily distinguishable from that here mentioned, which might thus be connected with the Late Bronze Age types even had it not been stratigraphically associated therewith.

Thorneycroft has shown me rims, identical with those from Old Keig, from two hut-circles in Glenshee, which he will describe at a subsequent meeting. Other sherds from the same circles have an internal bevel, apparently produced by the same finger-and-thumb treatment as used at Old Keig; one belongs to a jar showing a distinct shoulder exactly like one of the few sherds from Heathery Burn Cave in County Durham. A small fragment of iron was found in one circle, but no Roman pottery, and only a saddle quern. Still more recently Mr A. O. Curle has collected, in the course of his fruitful excavations at Sumburgh Head, Shetland, flattened rims from a deposit which was at least pre-bronch. These sites suggest a basis for the isolation of a ceramic group intermediate between the native cordoned urns of the Late Bronze Age and the domestic pottery of Roman times.<sup>1</sup>

Such a group has long been recognised in England; indeed, several such groups are now distinguished. Rims of our type A would in Southern England be assigned to the Late Hallstatt phase and the culture termed Iron Age A by Hawkes.<sup>2</sup> But there such sherds are often associated with vessels exhibiting the well-known "Hallstatt" profile, and even polished Hallstatt ware. Farther north the settlement on Castle Hill, at Scarborough, offers similar rims from urns with less pronounced profiles and unmixed with burnished wares, but often showing finger-print ornament either on applied strips or on the body of the pot itself.<sup>3</sup> While this group is probably no later than Iron Age A, the flattened rim in the north may outlast the Hallstatt phase (to which it is confined in Southern England) and is, in fact, seen on a very crude pot of La Tène II. Age from Danes' Graves in Yorkshire, East Riding.<sup>4</sup>

The English evidence seems to justify the connection of pottery like ours with intrusive movements from the Continent in Late Bronze Age-Hallstatt times. In drawing attention for the first time to such movements, O. G. S. Crawford<sup>5</sup> proposed treating them all as one and identifying them with that responsible for the flood of foreign types with which the Late Bronze Age in Great Britain opens. Such a simple formula is no longer accepted. At least three phases of intrusion are

<sup>1</sup> A pot (EE. 100), from Sordale Hill, Caithness, and a rim sherd from Tents Muir, Fife (BN. 111) may belong to the same group.

<sup>2</sup> *Ant. J.*, vol. iv. p. 355, fig. 14; vol. vii. p. 483; 'St Catherine's Hill,' *Proc. Hampshire Field Club*, xi., fig. 12, P 1, A 131, Q 4, X 3 (for type A), and *Mis.* 14, E 64 (for type B); *Arch.*, vol. lxxvi. p. 15, figs. 4-6; *Proc. Bristol Speleo. Soc.*, vol. iv. (1931), p. 27, fig. 3, 2-7.

<sup>3</sup> *Arch.*, vol. lxxvii. p. 187, figs. 15, 16, 18, 23, 31; cf. Wheeler in Rowntree's *History of Scarborough*, pp. 20 and 404.

<sup>4</sup> *Arch.*, vol. lx. p. 263. I have to thank Mr Hawkes for drawing my attention on the original to this feature, which is invisible in Greenwell's figure.

<sup>5</sup> *Ant. J.*, vol. ii. pp. 27-35.

represented by the pottery:<sup>1</sup> The first brings Deverel-Rimbury urns to Southern England and originates ultimately on the Lower Rhine in Hallstatt B-C,<sup>2</sup> say about 700 B.C. or a trifle earlier; the second from the same quarter, but pronouncedly influenced by the "Harpstedt" type from beyond the Rhine,<sup>3</sup> is best illustrated at Scarborough; the third introduces to Southern England the pottery of Final Hallstatt affinities so well known from All Cannings Cross. In addition, Hawkes seems ready to postulate at least two intrusions to explain the diffusion respectively of the group of foreign bronze types associated with leaf-shaped swords with U hilt-plates and that associated with "carp's tongue" swords.

No pottery has been hitherto directly associated with the foreign bronze types, but it would be tempting to identify the movements responsible for their introduction with some of those demonstrated by intrusive pottery. That is, however, chronologically impossible as far as the first group (U swords) is concerned, if the bronzes dredged up from Huelva Harbour<sup>4</sup> be taken as an unitary hoard; for there a Sicilian fibula of a type which had gone out of fashion before the foundation of Syracuse (734 B.C.) was associated with a native British spear-head of the Late Bronze Age (as at Denhead). Perhaps Mr Curle will produce the relevant pottery from Shetland. Or perhaps the new bronzes merely reflect the journeys of merchant-smiths and tinkers trading new goods for our gold, tin, and scrap-metal, but not settling, at least as distinct communities.

At the same time the foreign bronzes were being used by the immigrants at Scarborough and the occupants of Heathery Burn Cave. And the latter are connected by their pottery (through Glenshee) and bone-work (through Sculptor's Cave) with the folk cremated and buried at Old Keig. Neither at Scarborough nor Heathery Burn are true Hallstatt forms included in the metal-work, though the former site is probably Hallstatt in time.<sup>5</sup> On the other hand, in the Braes of Gight hoard, armlets like those from the Sculptor's Cave are associated with a neck-ring apparently derived from the Late Hallstatt type belonging to the Selz-Dangstetter culture,<sup>6</sup> while the bracelets themselves are known in the Rhine valley at the same period.<sup>7</sup>

Even the associated metal types would thus be compatible with a

<sup>1</sup> For all these see Kendrick and Hawkes, *Archaeology in England 1914-1931*, chaps. ix and x.

<sup>2</sup> *P.Z.*, vol. xxi. p. 169.

<sup>3</sup> *Mannus*, vol. xvii. p. 292.

<sup>4</sup> Ebert's *Reallexikon*, s.v. Huelva.

<sup>5</sup> Cf. Hawkes and Kendrick, *loc. cit.*, pp. 137 ff.

<sup>6</sup> Cf. *P.Z.*, vol. xi. p. 174; Schaeffer, *Tertres funéraires . . . de Haguenau*, vol. ii. p. 217.

<sup>7</sup> Schaeffer, *op. cit.*, fig. 175, 15.

Late Hallstatt date for the Old Keig pottery. But just as in Scotland (as elsewhere in the Highland Zone) the Hallstatt types tend to be accompanied by the products of native smiths, so too the new ceramic features may be assimilated to native traditions. The absorption of intrusive cultures on which Fox<sup>1</sup> insists would explain the comparative rarity of such innovating pottery and perhaps even the similarity already noted to older native forms. And indeed the occurrence of such a ceramic group in connection with a megalithic monument is itself an instance of the assimilation of exotic by autochthonous elements. Nevertheless, one important result of the excavation at Old Keig is the clearer definition of a ceramic class first recognised only two years ago.

No less important is the suggestion it affords that Recumbent Stone Circles may have been erected in Late Hallstatt times. That conclusion is not so revolutionary as might appear; for the evidence in favour of a pure Bronze Age date is very slender. Against the bracer from Candle Hill, Old Rayne, might be set the stone ladle from *under* the causeway leading to a circle at Crookmore, near Alford. But, after all, the sherd of ? beaker-ware from Old Keig, though not absolutely certain, suggests reserve in attributing an Iron Age date to the monument as a whole. We hope by completing the excavation of the site next year to determine the relation of the beaker, if such it be, to the rest of the monument.

The excavators wish to thank Professor Elliot Smith of University College, London; Dr Robert Campbell, Reader in Petrology, University of Edinburgh; Mr M. Y. Orr of the Royal Botanical Garden, Edinburgh; and Dr Ogg of the Macaulay Institute, Aberdeen, for examining and reporting on material collected during the excavation.

*Report on the Bone Fragments.* By Professor G. ELLIOT SMITH, F.R.S.

The bone fragments sent to me are too small to permit much information to be revealed. It is possible to say, however, that—

- (a) The bones are human;
- (b) They have been cremated—see the characteristic fissuring in the enclosed X-ray photograph (not reproduced here);
- (c) They belonged to a young adult (B is the fragment of a fully grown but still separate cranial bone).

*Petrological Report.* By Dr R. CAMPBELL, F.R.S.E.

Recumbent Stone : Sillimanite gneiss.

Prism : Garnet-biotite hornfels.

Bedrock under Recumbent : Biotite-cordierite hornfels.

<sup>1</sup> *The Personality of Britain*, p. 31.

The Recumbent Stone is not of local origin. Similar rocks occur in the Don valley between Kemnay and Tillifourie, and there are also areas of gneisses shown on the 1-inch map both to the west and to the north. The prism is probably local.

*Report on the Charcoal from the Clayey Layer.* By Mr M. Y. ORR,  
by courtesy of the Regius Keeper.

The charcoal is too much carbonised to admit of microscopic examination, and the identifications given below are based on the appearance of the broken surface only, and are therefore subject to correction. It is not possible, for example, to distinguish Willow from Poplar by macroscopic characters alone. Nor is it easy to separate either from Birch. Material of other trees represented does not present the same difficulties, for the distinctive features of Alder, Oak, and Hazel are obvious, even without microscopic examination.

Willow or Poplar:	35	pieces.
Hazel:	34	„
Alder:	25	„
Birch?:	13	„
Oak:	6	„

*Report on Gravel and Clay.* By Dr W. G. OGG.

The amount of material was insufficient to make anything like a complete investigation. . . . All we can do at present is to give you some idea of the possible nature of the two samples from their appearance. Before doing much in the way of analysis I should require to take much larger samples of each class of material (including the surface) and from several different spots.

The sample marked "gravel" which you mentioned in your letter as a glacial sand, and which you yourself questioned, appears to be part of the soil profile and not the unaltered parent material of the soil. It obviously contains an accumulation of oxides of iron, and is probably from what we term the "B" horizon of the soil (the layer of accumulation). It appears to be slightly more gravelly than your sample marked "clay," but if the parent material is a glacial sand this variation in texture is quite usual.

Your "clay" sample has all the appearance of the surface or sub-surface layer of a normal soil. It contains organic matter—remains of roots, pieces of charcoal, etc.—and had it not occurred below the level of the surrounding surface soil, I should have said it was the surface

or "A" horizon. After ignition it has an appearance very similar to that of your sample marked "gravel," and I suspect that within the circle the original surface soil may have been removed, and during occupation the subsurface material (similar to your sample marked "gravel") had organic matter incorporated with it. The organic matter gives it the rather "clayey" feel.

I think, therefore, that both samples may have been the same originally, and that the difference is due to organic matter worked into the "gravel." Had the so-called "clay" been originally the surface layer, it would probably have given a greyer appearance after ignition.

A mineralogical examination of the coarser material from both samples did not show any difference in origin.