

VIII.

REPORT ON STANDING STONES AND OTHER REMAINS, NEAR FOWLIS WESTER, PERTHSHIRE. BY ALISON YOUNG, F.S.A. SCOT.

Read October 16, 1943.

On the Moor of Ardoch, near Fowlis Wester (Ordnance Survey 6" sheet, 96 N.W.) is a group of stone monuments which were investigated by permission of the Laird, Captain Stirling Home Drummond Moray. The work was carried out in June 1939, with the co-operation of Miss M. Stirling and Miss K. M. Richardson, F.S.A.

The site is at the highest point of a ridge of moorland, running east and west on the 800-foot contour line. The ground dips on the north to Loch Mealbrodden before rising to Milquhanzie and Bracketriggs Hills, both 1150 feet above sea level. Westwards, the Loch Earn Hills can be seen, roughly 20 miles away, and on the east the Sidlaws. There is a sharp fall to Strathearn, and across this fertile valley to the south rise the Ochils.

The stones lie on the foothills of the Sma Glen Pass, the old entrance to the highlands, which must have been used as a "way" from all time. Fig. 1 shows Stone "A"; Stone "B," now fallen, the socket shown on Plan in dotted outline; and two groups of stones, the smaller 42 feet, the other 100 feet from Stone A. Stones visible before excavation are marked in black on the Plan, the outlines indicating their extent when stripped. This complex is noted in the *New Statistical Account* in 1837,¹ which states, "Fowlis appears to have been a favourite seat of the Druids," but notes, more succinctly, a double circle at the eastern group; the outer ring had disappeared when Mr Coles made his record and plan in 1910.² The *New Statistical Account* mentions forty stones in the outer

Coronation. The ascending pedigree was, in each form, taken to the founder of that particular "House." Now, this proceeding is, like the Heraldic Funeral, most closely associating "The Family" with religious observance—and in its modern form is immediately related to the fifth Commandment. The custom, however, is clearly "tribal" and the oral tracing backwards of the line to the Founder of the House is directly paralleled in Maori custom, where the occupants of an island trace their lineage (and that of their Chieftain—in actual instance a Maori Chieftainess) back to those who "came in on the canoe." Originally, no doubt, the custom related to actual ancestor-worship, since the Founder became a "private-god" (if I may so describe him!), and the Representer had the added influence of being the re-embodiment of the deified *eponymus*. Certainly a number of very ancient families—e.g. the Macleods and the Jarls of Orkney—trace their lineage back to Scandinavian deities, whilst others, such as the Earls of Northumberland, deduced their origin from wild animals, evidently the "totem animal" of the tribe. These things, however, carry the subject beyond the province of the Herald or the Genealogist, and into those of the Prehistorian and the Archæologist. Such aspects, however, emphasise the far-reaching significance and historical value of examination of such records as these two processional rolls.

¹ *New Statistical Account*, vol. xlv.² *Proc. Soc. Ant. Scot.*, vol. ix. series iv. (1910-11), p. 89.

ring, but excavation revealed only ten earthfast stones or sockets. This eastern group appears to have been a cairn, now denuded, leaving two circular settings. Very few hand-stones were left, and a nearby dry-stone dyke and an old track passing close by the standing stone may account for much of the missing cairn material.

The outer ring of the cairn has an approximate diameter of 26 feet taken from the centre of the stone or socket, and the inner circle is 16 feet across

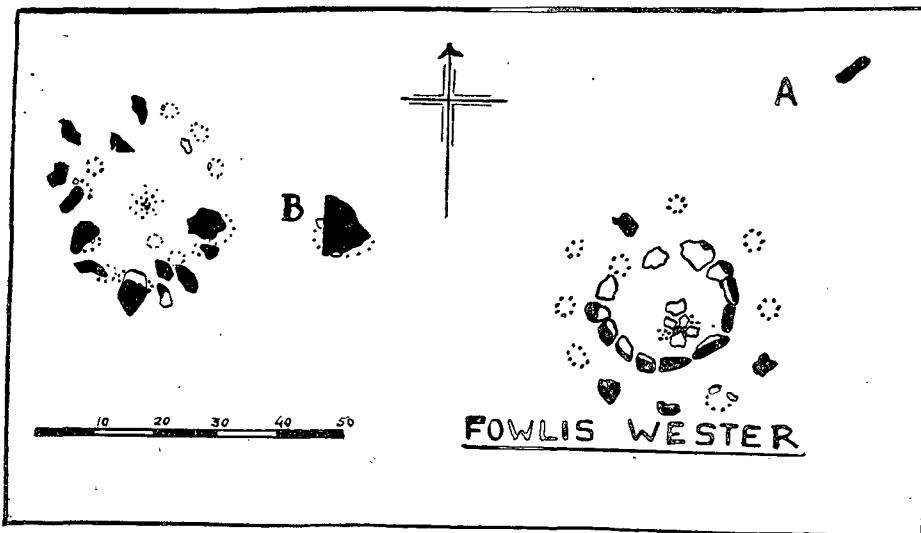


Fig. 1. General plan.

(Pl. XXIV, 1, 2, 3). The whole area has been planted and tree roots have caused a certain amount of damage, but the position of the missing outer stones could be traced in spite of this localised disturbance. Small slabs of sandstone were used as bedding or wedges for most of the earthfast stones and similar material remained in the sockets, which all contained quartz chips, and in some cases black earth. A made-up clay floor covered the area within the inner circle of stones (fig. 3), the outer uprights were up-ended in the natural clay. This floor was levelled within the central ring, of which the stones lay mostly on the long edge. These boulders were closely set, and packed with black earth and quartz chips. Lumps of charcoal, the size of a walnut, were found to a depth of 3 inches in the levelled floor and were probably trodden in.

There was some reddening of the clay in the inner ring, probably due to heat; burnt bone fragments and charcoal lay scattered over the stippled area (fig. 2), with patches of greasy black earth and concentration of bone at the centre. The bone, unfortunately, is in too poor a state to identify;

it had been deposited mainly in two scoops in the made-up clay; Stones P, Q, R, and S had then been laid in place and the whole covered with hand-stones. The larger boulders were packed round with black earth and white quartz, and lay in hollows on the levelled floor.

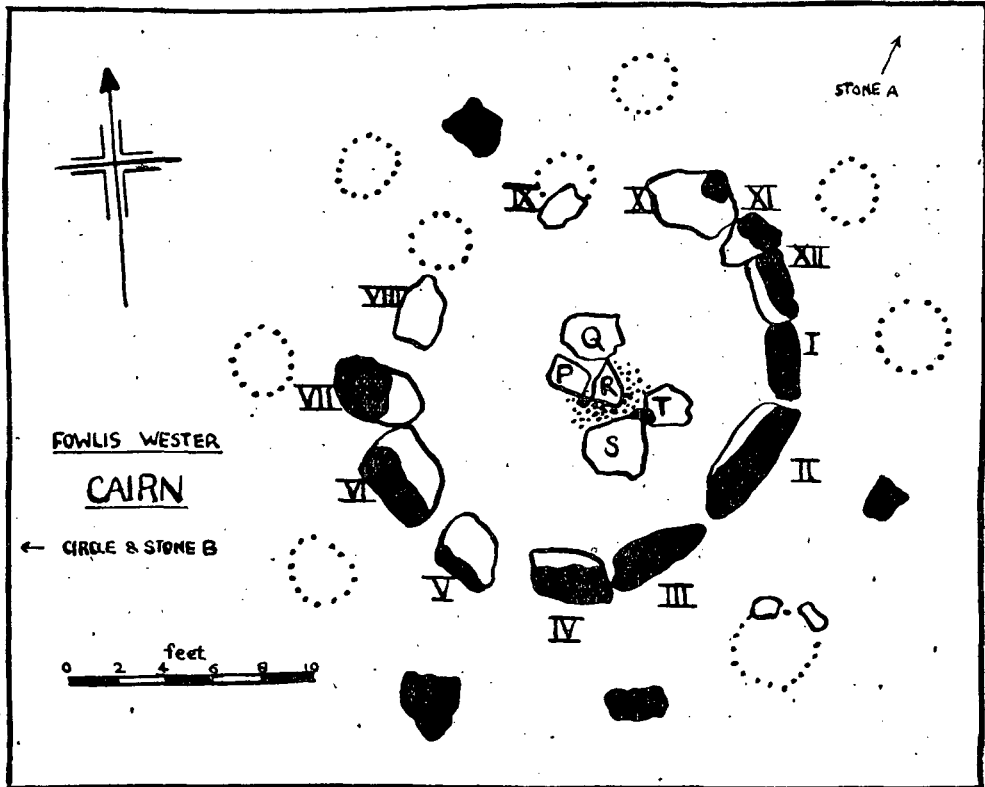
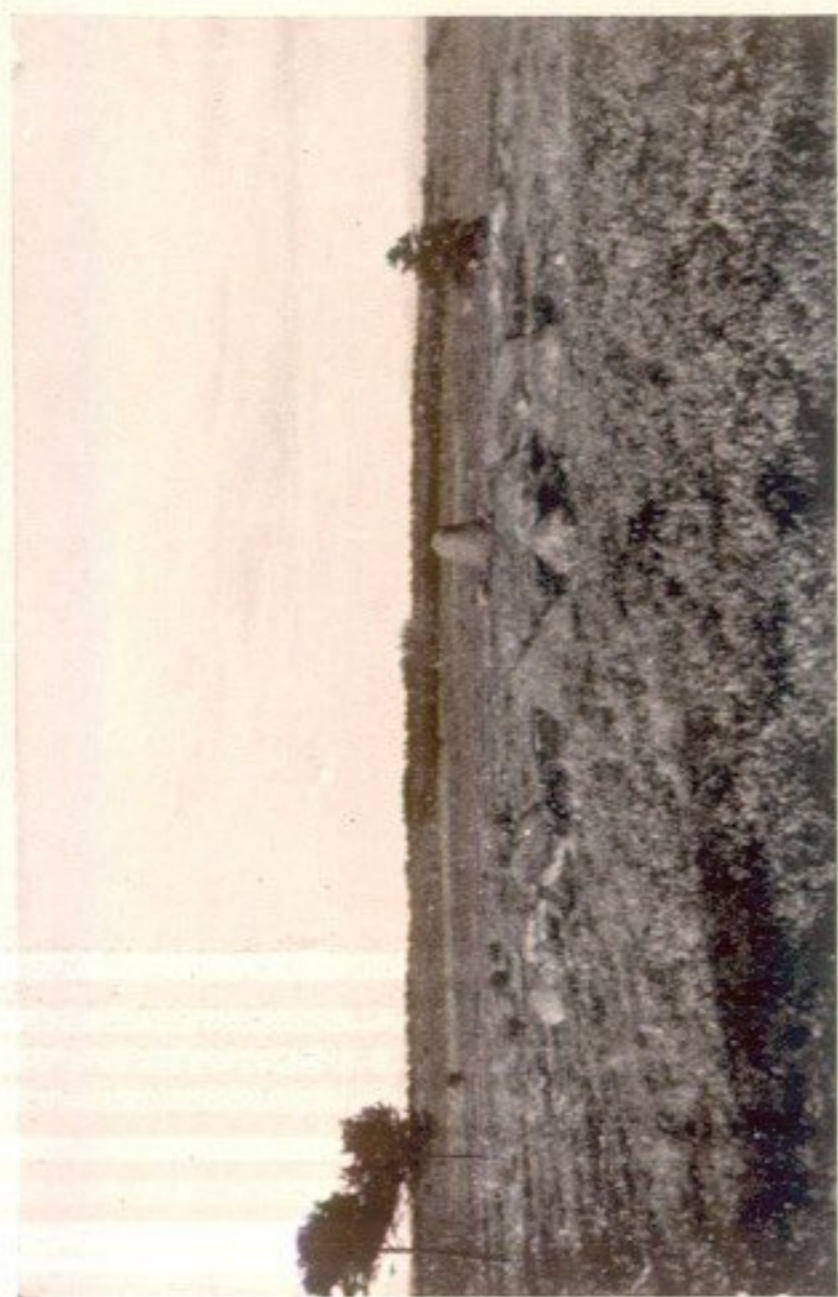


Fig. 2.

Stone "5" (Pl. XXIV, 4) had three cup-marks facing inwards. These were covered, even in the denuded state of the cairn, and must have been well below the original surface. They were the only markings on the site, other than one cup on the standing stone "A."

The western group of stones (fig. 4) was of a different character, the last of Dr Callander's series,¹ a simple circle. The tree roots had done more harm here than at the cairn, and the ground was considerably disturbed. Some of the stones had been blasted, which probably accounts for the fact that none remains upright; No. 1 has fallen towards the centre, and

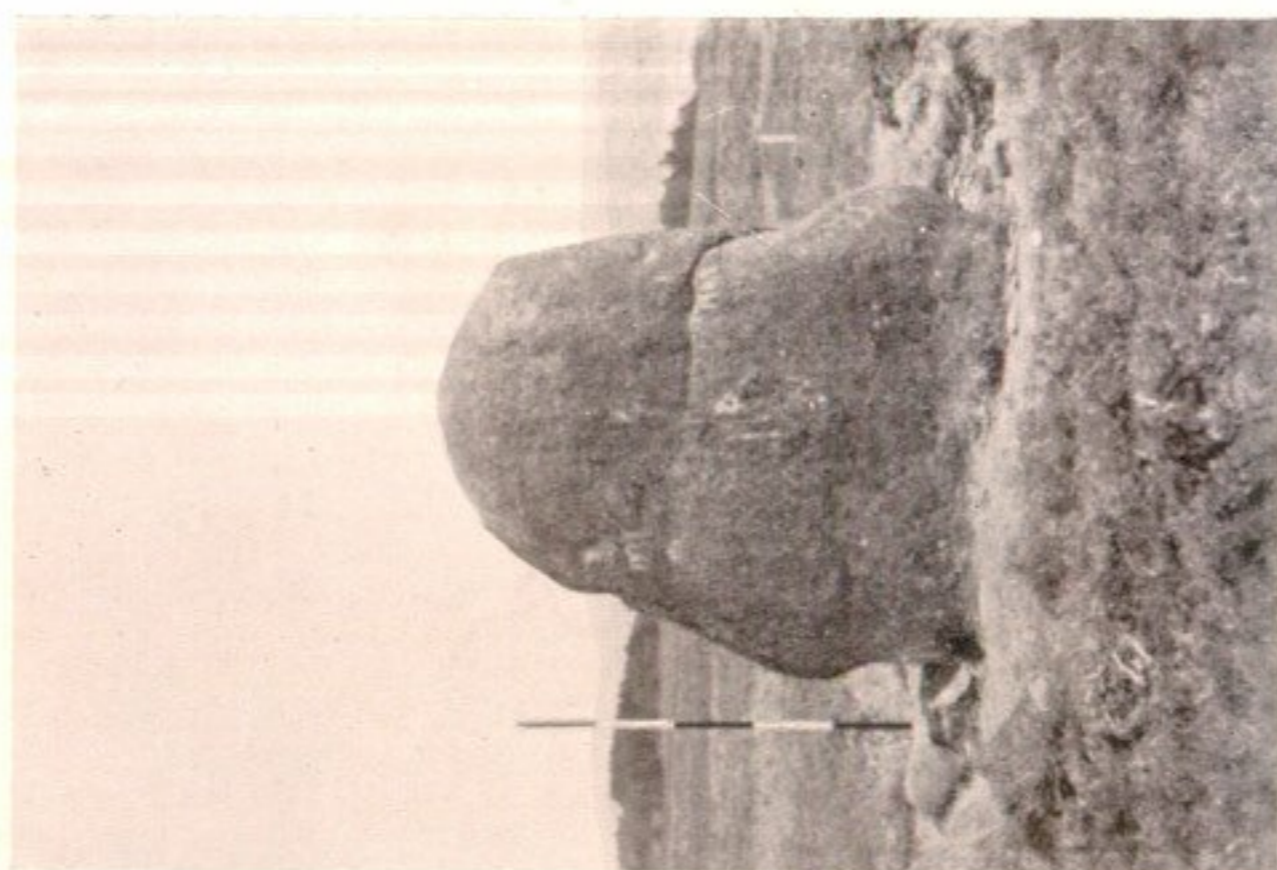
¹ *Archæologia*, vol. lxxvii. p. 97.



2. General view.



3. Stone A.



1. Stone A, east face.

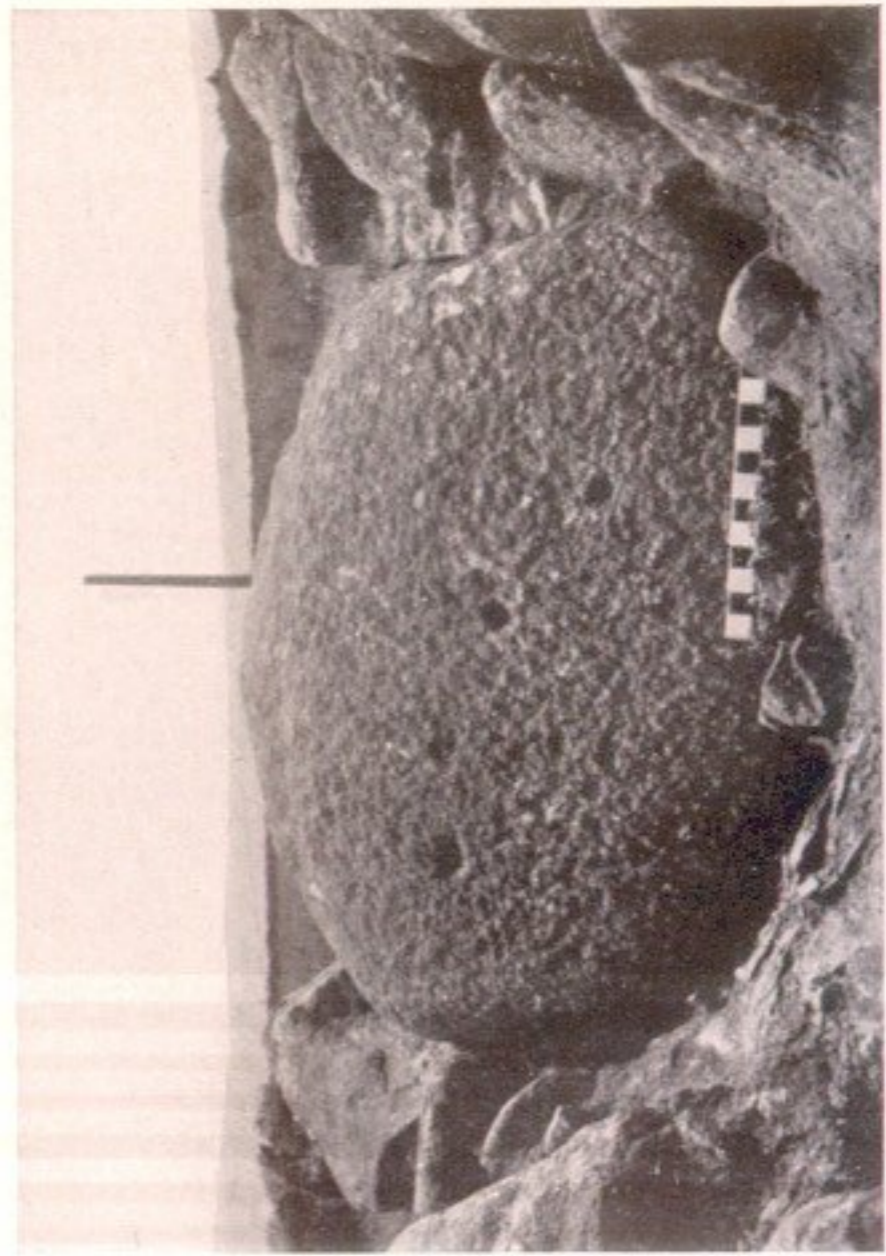
ALISON YOUNG.

STANDING STONES NEAR FOWLIS WESTER.

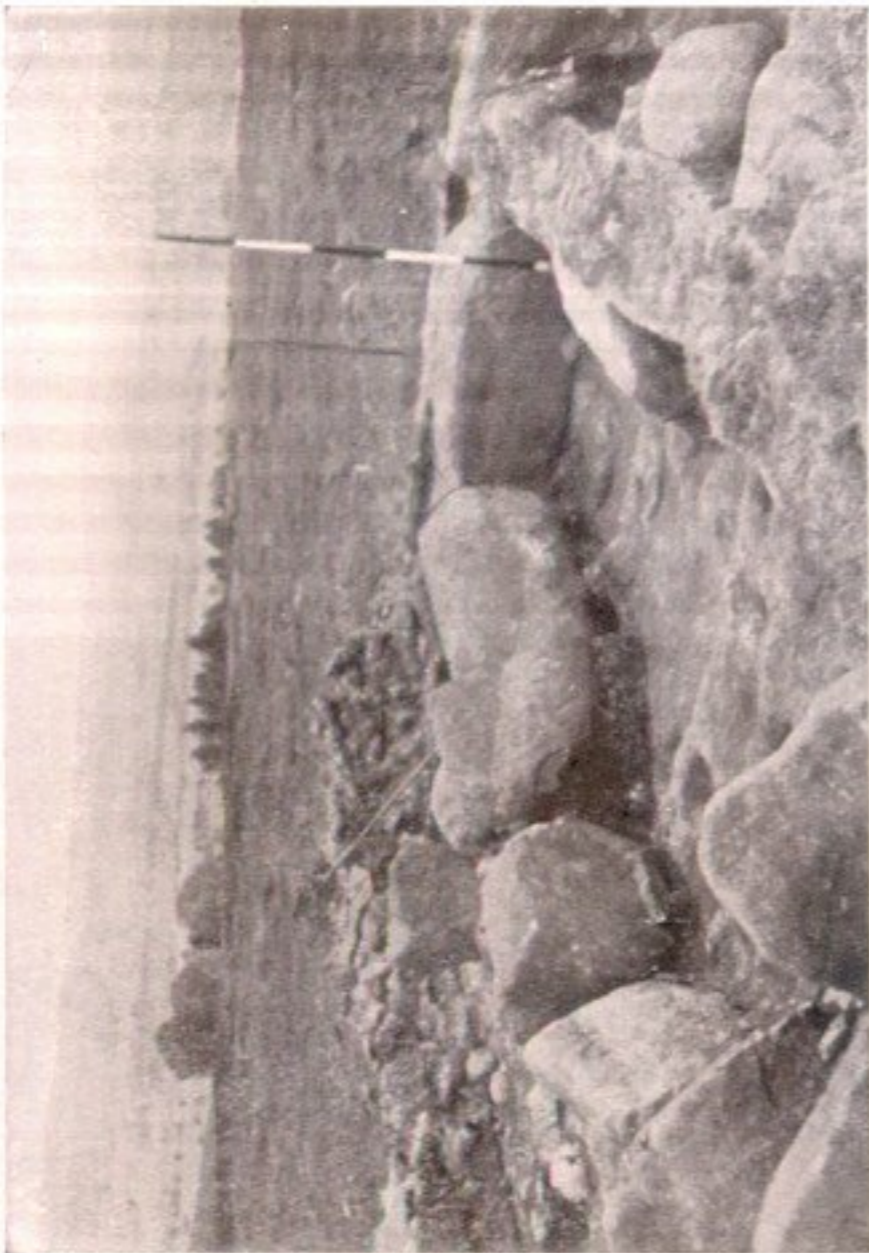
[Facing p. 176.



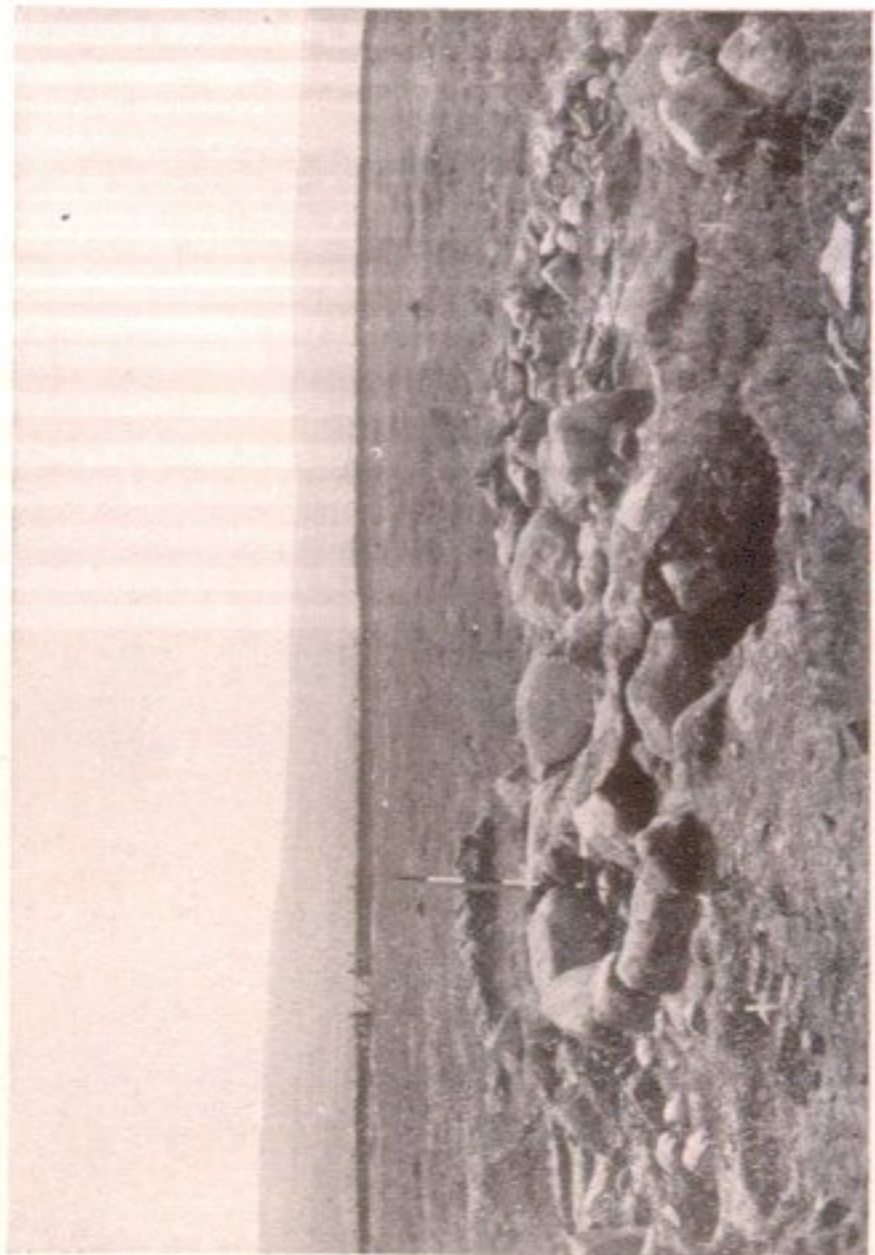
2. Inner ring of cairn facing east.



4. Stone V, fig. 2.

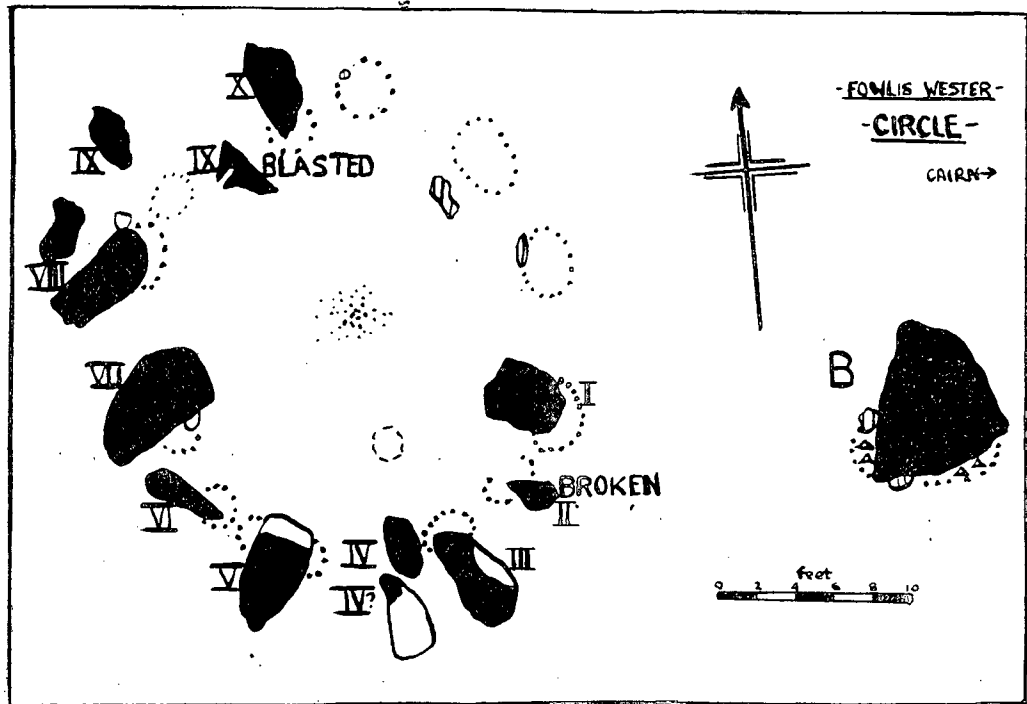
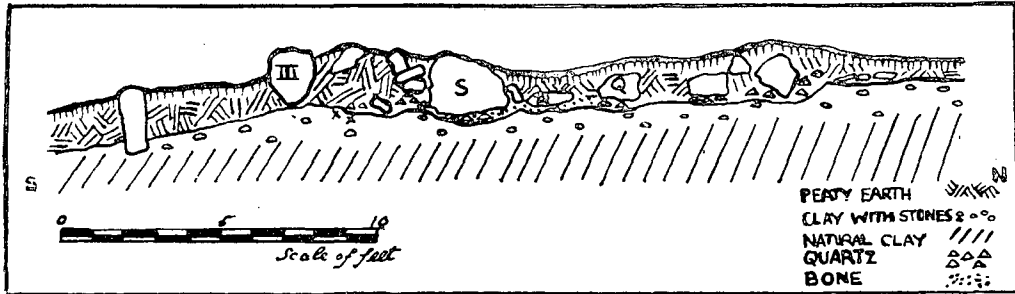


1. Inner ring of cairn facing south-east.



3. Cairn facing south.

the rest are all either sloping or fallen outwards. No. 9 is in two pieces, and a missing third is probably the foundation for a straining post in some



nearby fence. Three other stones are split, and though, over all, these stones are larger than the cairn boulders (the largest measures 7 feet x 4 feet), the sockets are shallow and ill-prepared in comparison. Wedge stones remained in most of the hollows of disturbed earth, and in each case a few white stones were used.

No floor, ditch, or inner stone-setting was found, and the only evidence of burning was a discoloration of earth at two points: in the centre, and in a shallow circular pit (shown on the Plan in dotted outline). Minute particles of burnt bone and charcoal had been deposited, apparently after burning. In both cases the change of soil was well defined, and was between 3 inches below the present ground level and a depth of 15 inches. No artificial markings are to be found on any of the stones of the western group, and, though the boulders themselves are large and well chosen, the slovenly treatment of the sockets seems to indicate degeneracy.

Stone A (Pl. XXIII, 1-3) now stands 6 feet above ground level, and is buried to the depth of 2 feet in a pit approximately $7\frac{1}{2} \times 6\frac{1}{2}$ feet, dug into the natural clay. At the foot of this schistose boulder, to the east, fragments of unidentifiable burnt bone and charcoal were found, in greasy black earth, mixed with quartz chips. White water-worn stones were packed in a pit on the east side, the largest measuring 18 inches \times 5 inches, and a row of these was carefully placed across the west face at a depth of 6 inches below the present surface. Mr M. Y. Orr kindly examined the charcoal, and reported all the samples from the site to be hazel. The stone appears to stand on a little mound, no ditch could be traced, nor any connection with the other monuments. This standing stone has suffered at the hands of those who desire to perpetuate their initials, and a small and much weathered cross must have been added many years ago, but the only cup-marking is about 3 feet above present ground level. The packing of this stone in its bed hollowed in natural clay is akin to that at Monzie.¹

Stone B is now fallen, apparently the broad face was north and south, the loose earth filling in the socket showed no trace of bone or charcoal, nor was there any evidence of the elaborate quartz make-up recorded at Stone A, though packing stones lay under and around it, and a few quartzes were in the disturbed earth. The overall measurements are 9 feet in length, and 7 feet 5 inches at maximum breadth. It has long since lain in its present position, partly resting on small boulders, and the sheep, using it for shelter, have worn a deep path round it. The socket could only be traced when the trodden earth was cut away.

Apart from quartz, which lay on the clay floor and was built between and under the inner stones of the cairn, the only artefacts recovered were two slabs of sandstone, approximately 3 inches in diameter. These had been chipped into a roughly circular shape, and were both in the peaty subhumus of the eastern group. One was picked up by H.M. Inspector of Ancient Monuments, on his visit to the site, while the men were deturfing, the other was embedded in the peaty earth, and came from the centre of the cairn.

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiii. (1938-39), p. 66.

Of this group, the cairn is the oldest from its form, and the most intricate as regards structure. Not in the earliest Bronze Age tradition, its building implies knowledge and careful choice of subsoil; the patch of clay overlying sandstone, on which it was built, is of no great extent, as was proved by its absence at the circle on the west, and a trial trench 20 feet to the east. The levelled made-up clay floor argues some planning of the medium. Charcoal and small stones buried in the clay floor of the central circle give the impression of a trodden mass on which the stones of the inner ring and cairn were laid and built into position with special material. Mr Lacaille has kindly reported on quartz found on the clay floor, and the use of these white stones was characteristic of the cairn and standing stone "A," and suggests a ritual significance. The roughly circular pattern of these stones on Plan indicates no gap, the long stones are used end to end, and the uprights of the outer ring indicate that height was of little importance to the builders. The central clay showed traces of heat at various points, but these seem too slight for the burning suggested by Dr Zeuner, and the probability is that the bone fragments and ash were deposited after burning.

Of the west circle there is little to add, but that it appears to be a late interpretation of the tradition. The stones themselves have assumed a greater importance than in the cairn, they are larger, and set up to show their greatest height, but otherwise this monument is of the simplest construction. At the spot chosen for the circle the soil is unsuitable for uprights of such a size, a shallow, sandy loam overlying rock, so that the tradition of adding to a group of existing monuments overcame any foresight in the building. Stone "A" would appear to be nearest in dating to the cairn, from its setting. The character of the row of water-worn quartz on the west face was paralleled at Monzie, where these appeared at the base of the circle stones on the inner face. As a group these stones are an example of traditional sites, extending in use over a long period; of the persistence in form and of its gradual change.

REPORT ON THE QUARTZES. By A. D. LACAILLE.

Mrs Young's notices of raw and split quartzes from Monzie¹ and Fowlis Wester are the first important references to discoveries of the kind since Sir Arthur Mitchell summarised² evidence from around Crinan and Loch Nell, Argyll. He spoke of broken quartzes and chippings of flint and other rocks in connection with several cist and cremation burials. Prior to that Dr John Stuart, Sec. S.A.Scot., commented³ on quartz chips from prehistoric graves at Warrackstone, Aberdeenshire. Hence, the Fowlis Wester and Monzie sites are links in a chain of distribution, the significance of which may be shown by future discoveries.

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiii. (1938-39), pp. 65-6.

² *Ibid.*, vol. xviii. (1883-84), pp. 266-91.

³ *Ibid.*, vol. vii. (1866-68), pp. 24-5.

The archæologists who previously mentioned fractured quartzes associated with graves did not remark on the character of the pieces or indicate that they bore signs of workmanship. In the present instance we are confronted with the products of a fully developed industry. This appears from the objects illustrated (fig. 5, Nos. 1-9).

The Fowlis Wester group comprises two qualities of rock: (a) crackled hyaline quartz, and (b) dull and milky white vein-quartz. The first is the better represented. It appears in the form of pebbles and artifacts. The second occurs as struck lumps and artifacts. Apart from the pebbles and free lumps, little untreated or unused workshop débris is recognisable. Hence, if the objects are truly representative, it must be inferred that implements were chosen for incorporation in the deposit. The working-site was probably in the neighbourhood.

The artifacts consist of improvised or accommodation-tools, mostly fragments of split nodules showing signs of wear, rather than dressing, along an edge, and well-defined flake- and core-tools. In all the struck specimens the fracture-features bespeak both the poor grade of rock and its erratic response to intentional blows. As a whole the Fowlis Wester series compares with the quartzes in a mixed stone industry noted at Luss, Dumbartonshire.¹

Flake Implements.—Besides utilised flakes with worn edges, some trimmed specimens stand out. Nos. 1 and 2 are knives made in flakes struck from cores. No. 1 is of inferior milky vein-quartz, and No. 2 of an exceptionally good hyaline sort. Both artifacts are provided with retouched steep backs, doubtless for finger pressure. This feature is not common in quartz tools, as flakes seldom presented themselves in convenient form. But the treatment of the cutting-edge on the right differs in each specimen. In No. 1 this was prepared by the lengthwise removal of slivers by a technique evidenced in many quartz industries.² It was adopted when the rock was poor and not responsive to finer treatment. That the material of No. 2 was found more tractable is indicated by the few retouches which gave the working-edge its required keenness.

No. 3 shows a wide but thin flake of vein-quartz worn by use near the right-hand top corner. Its most interesting features are the fairly developed swelling of percussion on the one face and the rather pronounced negative or hollow of percussion on the other. These prove that the piece was detached from a well-flaked core.

No. 4 is a fine awl fashioned in a conveniently shaped flake of hyaline quartz, triangular in section. Its two edges bear retouches near the tip on the nether or bulbar face.

Because of its treatment I consider No. 5 an arrow-head. The flake in which it is prepared was struck from a core and thinned down by dressing the faces. Its alternate long edges are trimmed and its base reduced by the detaching of slivers.

Core-Tools.—Among the core-tools, a pick, No. 6, is noteworthy. The piece is worked in milky vein-quartz and appears to be burnt. Its curving tip is more delicately flaked than the body of the tool. In shape and treatment this specimen recalls the "Cushendun pick,"³ of which Irish early Mesolithic (Larnian) form it may well be a descendant.

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiv. (1939-40), pp. 6-8; *Trans. Glas. Arch. Soc.*, vol. ix. pt. ii. (1940), pp. 318-28.

² *Trans. Glas. Arch. Soc.*, vol. ix. pt. ii. (1940), p. 327.

³ *Proc. Roy. Irish Acad.*, vol. xlvi. section C, No. 1 (1940), pp. 57-8, fig. 16, Nos. 75-7.

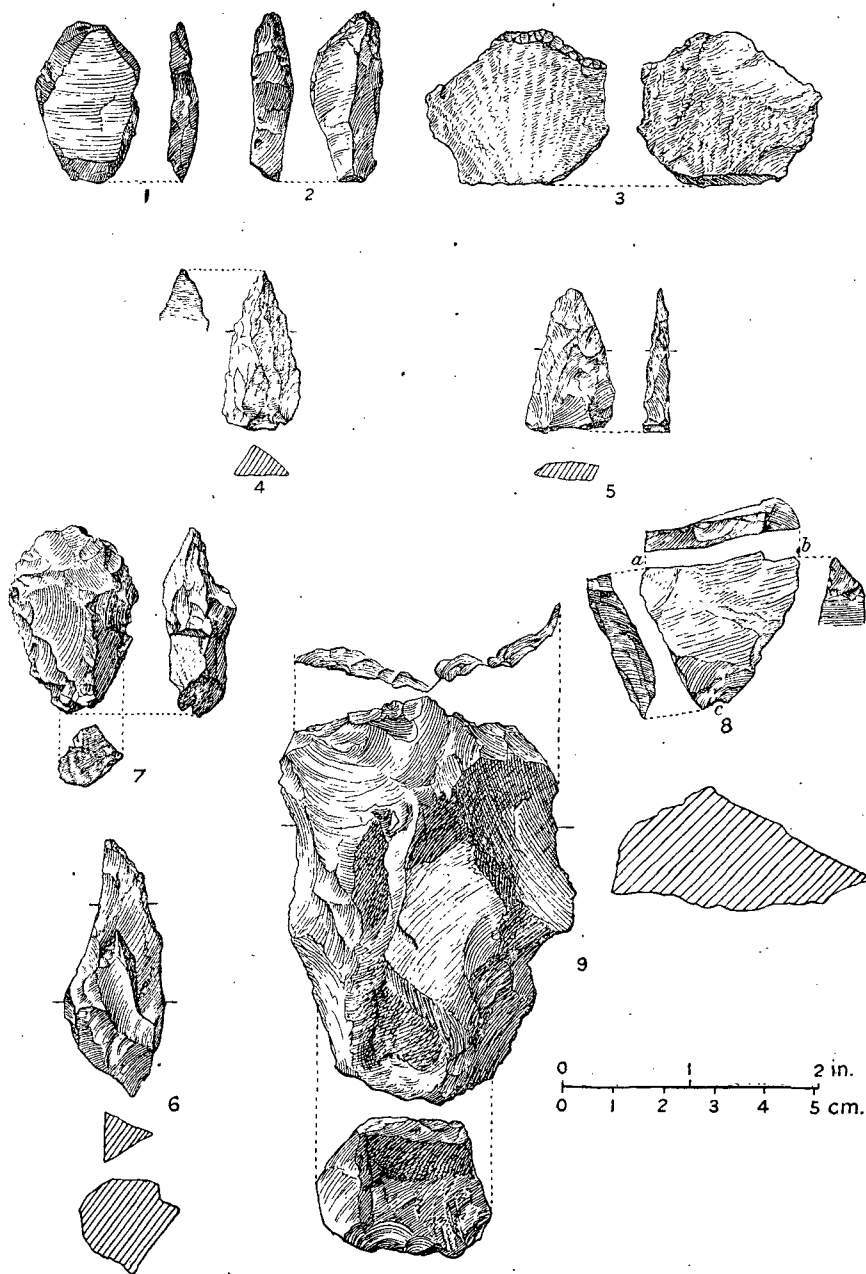


Fig. 5. Quartz implements from Fowlis Wester.

Similar objects made in flint, some certainly earlier than the Fowlis Wester example but generally much later than the Irish, have been recognised in collections from coastal sites in western and south-western Scotland. As this littoral type differs from such core-tools as have been found up till now in the Tweed valley,¹ it is all the more interesting that it can be noted so far inland.

No. 7, another small hand-pick, is worked in a pebble of hyaline quartz. It is flaked all over save at the butt. Like No. 6, this implement can be matched in Northern Ireland and, as I believe, in south-western Scotland and on the west coast. It appears to be a western European form which is prominent as a well-developed ingredient of the late Tardenoisian (Neolithic) of Sauveterre-la-Lémance (Lot-et-Garonne).²

Were No. 8 made of flint it would be worthy of notice anywhere. But being found in Scotland and fashioned in a piece of tabular vein-quartz, it is outstanding as a member of a rare class. Flint triangular tools of this type consist of thick flat pieces of pebbles rather than flakes, and occur usually as scrapers, and sometimes as graters or combinations of both. The Fowlis Wester specimen conforms to the standard of thickness, and is a compound tool. Two of its steep sides are faceted in their length, a third partly so. At *a* they intersect in a chisel-edge. When intact the end *b* was probably similar. A graver-like edge is formed at *c* by the meeting of the sides, that on the left bearing two well-defined narrow facets. The lower part of the face figured here is flake-scarred apparently by accident and not by intent.

This form must derive from the late Tardenoisian (Neolithic) of the western European littoral, as at Ségur, Plassac (Charente-Inférieure).³ That it may have reached Scotland by way of Ireland and across the North Channel is suggested by several examples from a site at Castlereagh, Co. Down,⁴ and by analogous objects from coastal sites in our south-western counties. Those I have identified seem to be late and uncommon expressions of the angle-graver. They are the parallels of small flint triangular and thick angle-gravers from the Mainland of Orkney.⁵ It is significant, therefore, that an example can now be recorded from a site in the heart of Scotland.

The interest of No. 9 lies mainly in its treatment. It is a massive compound scraper made in a split cobble of cracked hyaline quartz of poor quality. The natural surface has been flaked to remove irregularities which would have hampered the grasp. In one place the edge has been retouched to a pronounced hollow, probably to serve as a spokeshave. The wide working-end is edge-trimmed by the removal of slivers on the rough nether or separation surface.

Evidently this stone industry produced tools to meet existing local needs. The manufacturers were exponents of a lithic craft which embodied different flint traditions in a region lacking a native supply of tractable rock. Thus, archaic as well as atypical commonplace artifacts and advanced implements occur together. The ancestry of some outstanding forms lies in western Mesolithic cultures. This connection is the more interesting considering the character of the structure with which the wrought quartzes are associated.

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiv. (1939-40), pp. 8-10.

² *Archives de l'Institut de Paléontologie Humaine*, Mémoire 14, 1935, pp. 26 and 28, fig. 15, No. 10.

³ *Bull. Soc. Préhist. Franç.*, vol. xxix. (1932), pp. 376 ff.

⁴ *Proc. Roy. Irish Acad.*, vol. xlv. Section C, No. 5 (1938), p. 135, and fig. 10, Nos. 12, 20-23.

⁵ *Proc. Soc. Ant. Scot.*, vol. lxxii. (1937-38), pp. 137-8, and fig. 2, Nos. 2 and 4.

REPORT ON SAMPLES OF SOIL FROM THE EAST CIRCLE, FOWLIS WESTER. By FREDERICK E. ZEUNER, Department of Geochronology, London University Institute of Archæology.

A. Geological Situation.

The stone circles of Fowlis Wester lie on Old Red Sandstone of Devonian age. About a third of a mile to the east, two basaltic dykes crop out, extending eastwards.

Two miles to the north-west, the great Highland Boundary Fault passes the stone circles in a north-easterly direction. This fault normally separates the Old Red from the Dalriadan series of metamorphic rocks, which is of pre-Devonian age and composes the Grampian Mountains. Just opposite Crieff and Fowlis Wester, however, there is a small patch of Old Red, enclosing an intrusion of porphyrite, on the Highlands side of the fault. Beyond this patch and south-west and north-east of it, the Dalriadan rocks are exposed. They consist of slates, phyllites, mica-schists and biotite-gneiss, quartzite and schistose grits. Of all these Highland rocks, except the slates, fragments are found in the samples from the Fowlis Wester stone circles. The same applies to the porphyrite and the basalt mentioned above. Small pieces of a granitic appearance are present also, though the nearest granite is found $8\frac{1}{2}$ miles west of Fowlis Wester. These fragments, however, are small and possibly derived from the biotite-gneiss.

The great variety of pebbles observed in the samples from Fowlis Wester suggests that ice from the Highlands passed over the site of the stone circles, coming from west or north-west.

B. Investigation of the Samples.

Of the three samples from the east circle, that numbered "3" proved to be of the greatest interest. It therefore is considered first.

Sample 3: Earth on Clay, under Stone, with Charcoal.—The material is of a somewhat unusual texture, light in weight, sandy and powdery, and slightly compact. It is readily friable, and of an iron-brown colour. It contains no pollen, and the amount of organic matter contained is low compared with peaty soils of the neighbourhood. The ignition loss, which includes water, is only 17 per cent.

A sieve analysis revealed that the major portion of the material consists of a partly compacted ashly dust mixed with sand and a large amount of grit of crystalline rock (gneissic or granitic). The larger fragments, above 3 mm., are Old Red Sandstone. This composition differs remarkably from that of the two other samples.

Two pieces of charcoal, measuring about 10 mm., and numerous small fragments of charcoal, were found. The large pieces were hazel, and the small ones showed no recognisable differences from this species.

The value for the concentration of hydrogen ions (pH) is 6.2. This means that the material is slightly acid, though much less acid than the two other samples, or peaty soils generally. The reaction for iron is very strong. Phosphates and carbonates are entirely absent.

These results strongly suggest that the layer is not composed of a naturally

formed soil, but of material intensely modified by burning. It is not an occupation layer as the charcoal might indicate, as traces of phosphates would normally be present in this case. Neither has it anything to do with peat. In fact, the ashy texture of the finer grades, the intense reddish-yellow colour of fragments of half-compacted dust, and the presence of charcoal in a matrix poor in organic matter are almost conclusive evidence for burning.

The large amount of crystalline grit is surprising. It is probably not natural.

Sample 2: Earth under Compacted Quartz.—This material is brown and sandy and contains a certain amount of peaty matter. Its reaction is correspondingly more acid, namely, 5.4. The sieve revealed that most of the material above 1 mm. consists of crystalline debris of granitic appearance. Some vein-quartz is present, but Old Red Sandstone is comparatively scarce.

Sample 1: Black Earth and Quartz Packing under Stone 3.—This material is almost black and decidedly rich in organic matter. It is almost a sandy peat. It is very acid, the reaction being as low as 4.6. Phosphates and carbonates are, of course, absent.

The sieve showed that there is a considerable admixture of coarse fragments of rock above 10 mm. diameter. Most of these are Old Red Sandstone, but very conspicuous angular fragments of vein-quartz are frequent also. In the finer grades down to 1 mm. Old Red Sandstone and vein-quartz are the most frequent. They are followed in frequency by small angular fragments of a granitic or gneissic rock, and of mica-schist and phyllite. A few specimens were observed of porphyrite, basalt, grit and quartzite.

This sample contains a much larger variety of rocks compared with the other two. I am inclined to interpret it as an ordinary peaty soil formed on some kind of glacial deposit.