

BURIAL SITE AT KIRKBURN, LOCKERBIE

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SUMMARY

A SMALL hillock in Annandale in SW. Scotland was initially resorted to by users of Neolithic and Beaker pottery; at this time or shortly thereafter a primary burial or ritual deposit was made, which became the focus of a flat cremation cemetery which continued in use as such, apart from the insertion of two inhumation burials, down to the Middle Bronze Age.

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GENERAL REMARKS AND EXCAVATION REPORT

The site is on a small knoll or hillock (Nat. Grid Ref. NY 130832) on the farm of Kirkburn, Lockerbie, Dumfriesshire (see fig. 1) one of many similar knolls in the neighbourhood. It is 220 ft. above sea-level and lies on a spur on the E. slope of a ridge lying between the Kirk Burn and the River Dryfe (see fig. 2) which both flow into the River Annan about 2 miles to the SW. The ground falls away steeply on the E. of the site to the marshy bed of the Kirk Burn some 40 ft. below it. The main geographical feature however of the site is its close proximity to one of the principal routes in SW. Scotland, viz. that leading northwards round the head of the Solway Firth, through Annandale into Clydesdale and upper Tweed-dale.

The knoll and the ridge of which it forms part have a fairly thin topsoil, 9 in. or so deep on the hillocks, lying on a red sandy matrix of glacial origin containing many small rounded boulders of Silurian stone, locally termed 'whinstone'. The ground is good dry arable land which requires no artificial drainage.

The 1857 Ordnance Survey map marks the site with the entry 'Urn with human bones found here' and in the hedgerow 30 ft. to the SW. 'stone'. No additional information has been obtained regarding these entries¹; no stone is now visible. The site is not marked by any cairn or mound, nor apparently by any ditch.² Early in

¹ The original *Ordnance Survey Name Book* is silent on this subject, but the Survey's informant was probably Mr David Dobie of Kirkburn, a keen antiquary - per A. L. F. Rivet. Since the find spot is situated only a couple of fields away from the front of Dryfesdale Manse, but is not referred to in the *New Statistical Account* of the parish written in January 1836, the find would probably have been between that date and 1857.

² A ditch was not searched for by excavation.

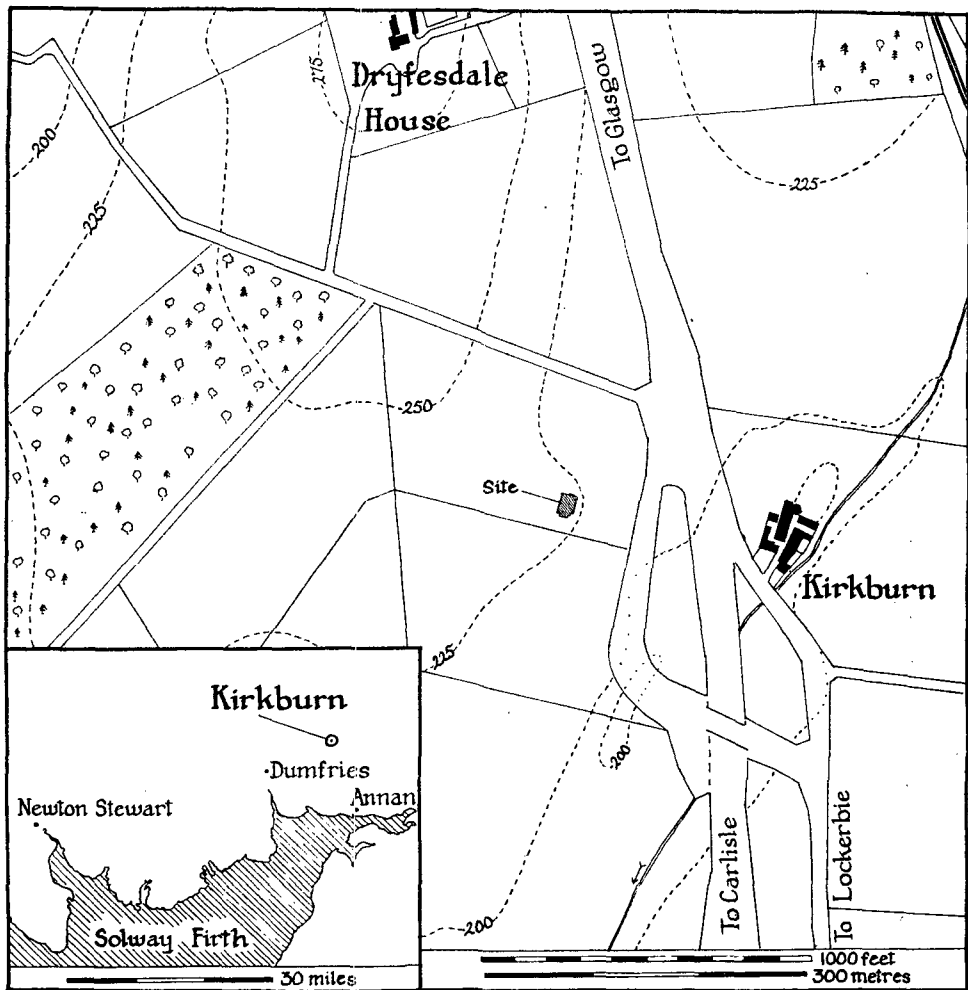


FIG. 1. Location map

1961 the writer of this report, who was aware of these entries on the map, noticed that the site had been ploughed. A surface inspection by him revealed a small scatter of calcined bones. These were confirmed as cremated human bone by Dr A. B. Cameron, of Lockerbie, who himself visited the site the same day and found another scatter several feet away. After it had been ascertained that the knoll might be affected by the construction of the by-pass round Lockerbie, then scheduled for an early start,¹ the writer with the assistance of one or two friends carried out an evening and week-end investigation of the site extending over three months in the spring of 1961.

¹ In the event, the knoll was not utilised for bottoming as intended, the contractors removing instead a hillock a few hundred yards to the S. on the farm of Beckton, thereby destroying a palisaded enclosure with which was apparently associated Rinyo-Clacton pottery - see *T. Dumf. & Gall. N.H. & A. Soc.*, xli.

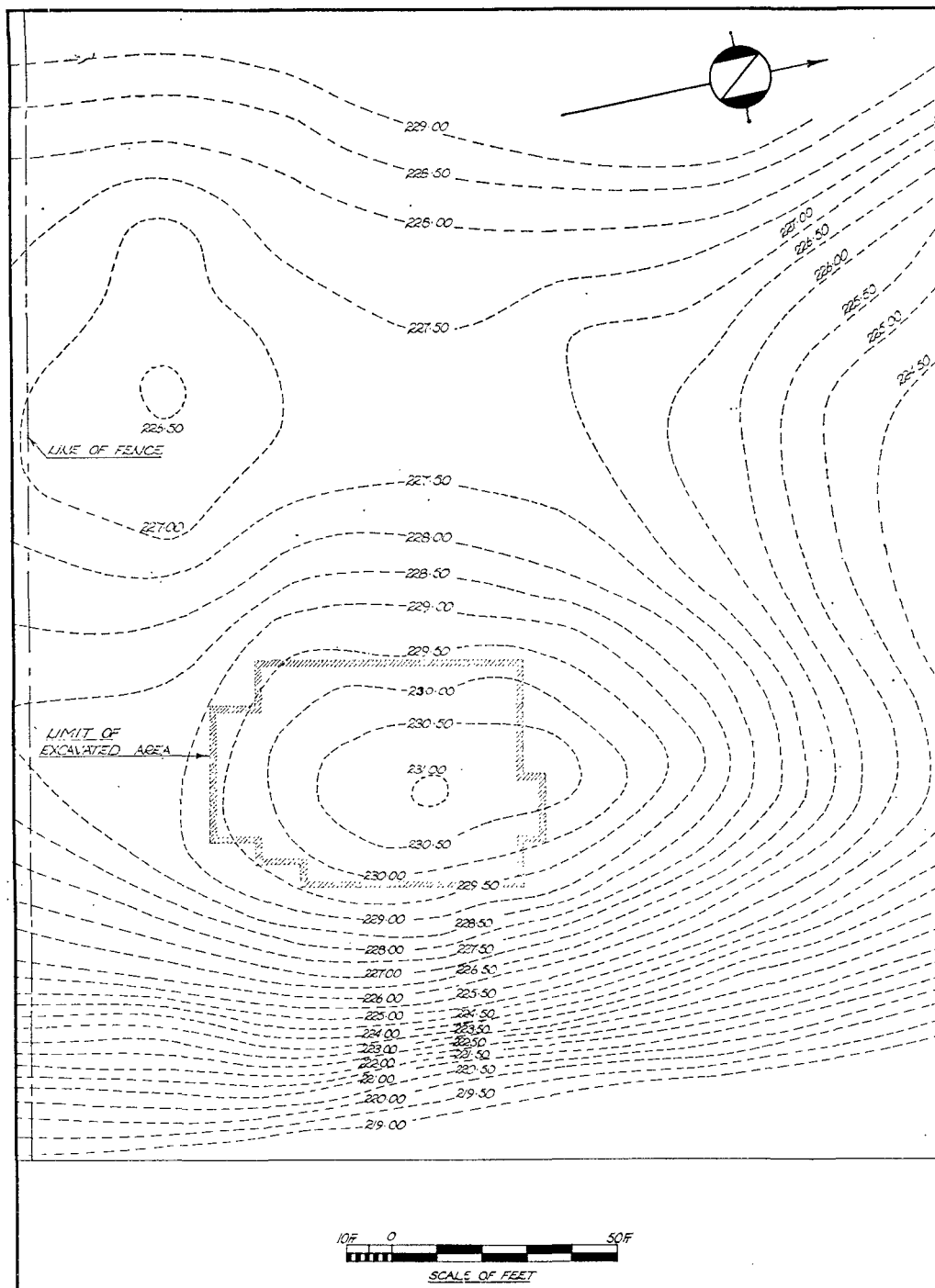


Fig. 2. Kirkburn: contours – heights in feet above Ordnance Datum

A grid of 10 foot squares was laid out using the hedgerow on the SW. as a baseline. The first square opened revealed prehistoric remains and further squares were opened until the whole of the top of the knoll had been uncovered and no further features appeared. Balks were left initially between the squares but these were of little value as there seemed to be no undisturbed soil from which relevant sections could be observed lying between the modern topsoil and the subsoil.

The topsoil contained quantities of recent pottery and burnt lime with occasional fragments of cremated bone, and flakes of flint. The latter, and sherds of pottery, found when clearing away the topsoil are referred to as 'on top of subsoil'. The final area excavated was 70 by 50 ft., and scattered over it were about sixty prehistoric pits (see General Plan fig. 3). Some of these contained cremation burials, but two probable inhumation burials in cists also occurred; some had sherds of pottery and/or flints, but several had merely a filling of carbonised wood and burned and blackened stones. The Pottery (see Report by Dr Longworth p. 120 below) was found to fall into four cultural groups - Neolithic A, Beaker with associated coarse wares, Food Vessel and Cinerary Urn - and this arrangement is followed in the description of the pits and other features which follows this section.

It will be seen that the Neolithic Pottery came from two trenches and associated pits. The former would seem to have held simple shelters or screens.

From six pits, rather scattered and tending to be largish came a remarkable variety of Beaker Pottery and associated with it a coarse ware not falling into any definite culture. While, generally speaking, these two cultures appear on the site unmixed, in one pit (No. 9) Neolithic sherds were found with the coarse ware elsewhere on the site associated with Beaker Sherds. This pit was however divided into two levels by a layer of stones, and as Dr Longworth points out, these levels may indicate two occupations and the apparent mixing be accidental.

While there is no direct evidence that the above mentioned pits were funerary as opposed to domestic the next pit to be described, No. 24, was clearly funerary in origin. As will be observed from the plan and description, it was much larger than any other pit on the site, and contained, in a packing of stones, a black deposit, a few cremated bones, and a small quantity of finely comminuted pottery with whipped cord decoration - possibly food vessel, although pottery of similar decoration from elsewhere on the site (Depression 36) was of Beaker thickness. This pit, however, not only was to form the centre of a semicircle of cremation burials, but appears to have a significant physical relationship both to the Neolithic trenches and Beaker Pits 16 and 17.

Lying to the SE. of Pit 24 were two cists closely similar in general style of construction. The larger (Cist II) unlike the smaller (Cist III) had a capstone extant (Pl. XII) and contained a food vessel. Although one or two scraps of cremated bone were associated with these cists there was insufficient to constitute a burial - nor were there any apparent signs of inhumation burials. The soil on the site is not very acid, but perhaps lime applied in recent times has reduced this. On the other hand the soil from the bottom of these cists showed an enriched phosphate content as compared with the soil outside. It appears likely therefore that these two cists

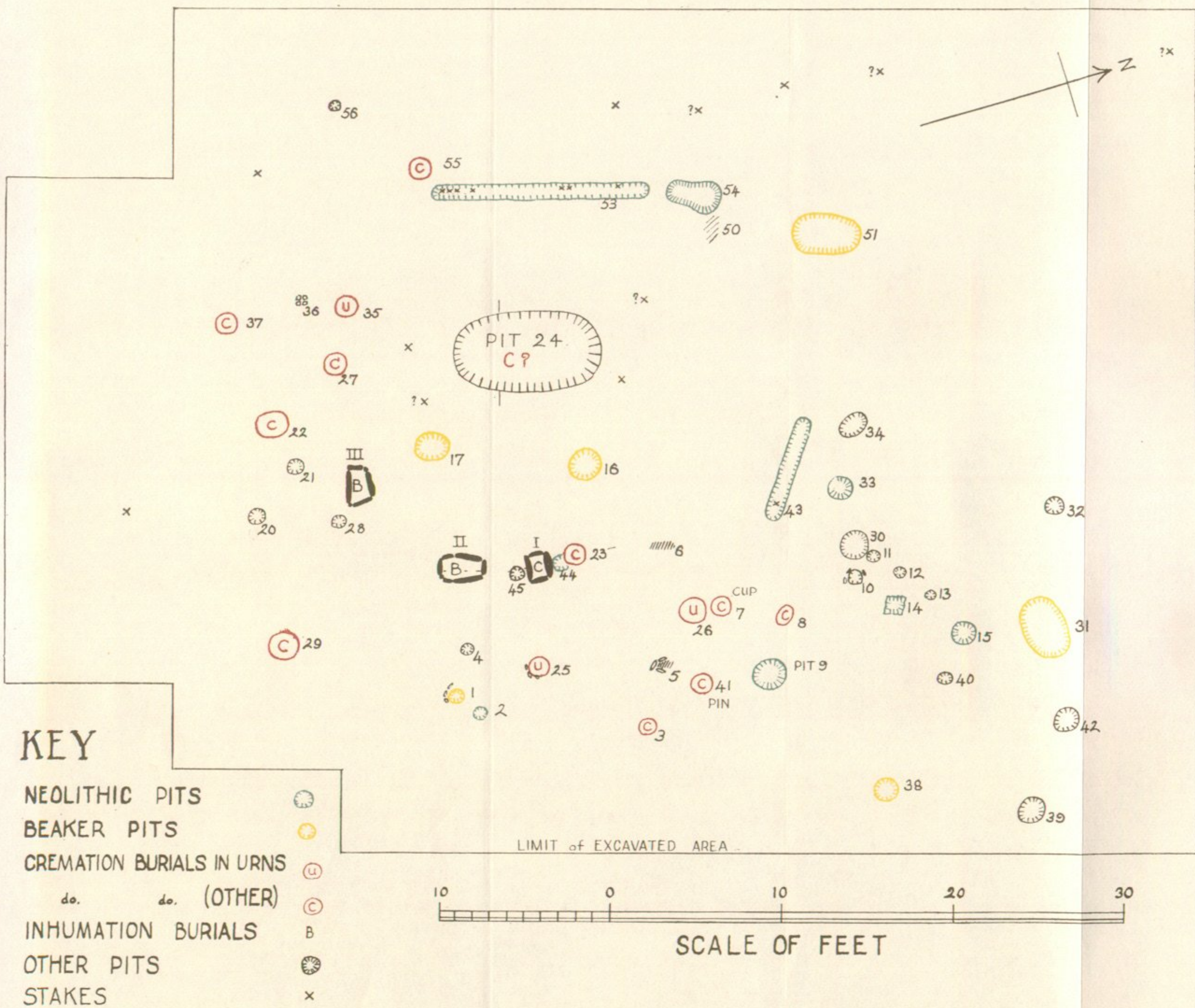


Fig. 3. Kirkburn: General plan

contained inhumation burials, possibly of children, in view of their small size. It will be noted that a fragment of cremated bone was found behind one of the stones of Cist II in a position where it could hardly have arrived by worm action; this would indicate that cremated bone existed on the site when this cist was made.

Forming the S. and SE. portion of a circle centred on Pit 24 was a straggling group of cremation burials. While some burials may have been ploughed away in recent times, fourteen probable burials survived, representing sixteen persons, all adults, only two of whom had reached middle age and one half had died as young adults. Ignoring the urn referred to on the O.S. map, three burials, of four persons were in cinerary urns while one burial of two persons was contained in a small cist (No. I). The remainder of the burials were in pits in the ground without sign of any textile or other container. All three of the urn burials were accompanied by grave goods, while of the unurned burials one was accompanied by burned fragments of an accessory cup and a second by a bone pin and bone bead.

About a dozen pits failed to yield any pottery so cannot be assigned to any particular culture. It will be observed that these however tend to fall into two groups – four lie on the SE. portion of the site and may be the remains of destroyed cremation burials while the remainder are larger and are grouped among the Beaker and Neolithic pits with which they should perhaps be associated.

Several of the pits contained flints, burnt and blackened stones, and hazel nut shells, and in one case a small pitchstone flake with utilised end. Associated with Beaker and coarse ware in Pit 51 was a flake of stone axe retouched for use as a scraper (fig. 9d).

Several stake holes were observed, and where remnants of the stake remained, are indicated as definite stake holes on the plan, other similar pockets in the subsoil but without stakes being shown as possible stake holes. These holes, which were 3 in. diam. and 3 to 6 in. deep, are of course not necessarily prehistoric. It will be observed that while some of the stake holes seem to form a line along the W. boundary of the site, others seem to be connected with Pit 24.

Only in one case did two features bear a stratigraphical relationship to each other, viz. the cremation burial in Pit 23 being later than Neolithic Pit 44. However it will be noticed from fig. 5 that Cist I had encroached on Neolithic Pit 44 from which it had been separated by a stone slab. Furthermore to the S. of Pit 45 was an excavated area about the same size as Cist II. This area contained clean refilled subsoil and had encroached on Pit 45 from which it had been separated by three stones. It seemed as if this excavated area represented an attempt to make the cist there, which was abandoned for a spot a little to the S. when it was found that the work was interfering with an existing pit. If valid, these suggestions imply that the earlier pits are not only funerary, as opposed to domestic, but were respected as such by the makers of these two cists.

ACKNOWLEDGMENTS

The writer is primarily grateful to Mr James Jackson of Kirkburn who not only allowed the work to be undertaken but took a keen interest throughout, also to his

son Frank for assisting from time to time, and filling in afterwards. He is also grateful to his small band of assistants, mostly members of the Dumf. & Gall. Nat. Hist. and Antiquarian Society, of whom the principal were Mr Robert Little, Miss A. E. Fullen and Dr A. B. Cameron. Mr R. B. K. Stevenson not only visited the site and gave advice, but prepared the Notes on the Flints. Dr I. H. Longworth prepared the full and detailed Report on Pottery, the drawings of which are also his, while Miss A. S. Henshall contributed the drawings of the other small finds. The colour blocks for the General Plan were loaned by the Dumfriesshire & Galloway Society as also three of the half-tone blocks. Mr Andrew Taylor, of the Roads Department of Dumfriesshire County Council kindly surveyed the site and provided fig. 2. The writer is also indebted to Drs Lisowski and Spence for the Report on the Bones, and to Mr Allard H. Johnson for the Report on the Soil.

DESCRIPTION OF THE PITS AND CISTS

Note: all depths are below the top of the subsoil

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
NEOLITHIC A		
2	Pit with very black infilling containing carbon and carbon ash, also a sherd of pottery.	6 in. diam. 3 in. deep
9	A fairly large circular pit containing one fragment of cremated bone in greasy soil with carbon, carbonised twigs, hazel nut shells, sherds and flint flakes. Half way down the pit was roughly lined with flattish stones. The pottery occurred both above and below these stones but the flints were largely in the upper levels.	2 ft. diam. 1 ft. deep
14	An irregularly shaped depression with greasy black soil and two indeterminate sherds.	1 ft. 4 in. diam. 1 ft. 4 in. deep
15	A neatly made circular pit with dark infilling containing two sherds.	1 ft. 6 in. diam. 10 in. deep
33	Circular pit packed with blackened and splintered stones and dark filling. One flake of flint and two sherds, also hazel nut shells.	1 ft. 7 in. diam. 10 in. deep
43	Trench - straight 7 ft. long by 1 ft. to 1 ft. 3 in. wide by 8 in. deep in centre shallowing to 5 in. at E. end and 3 in. at W. end. Packed with largish stones (say 10 by 6 by 6 in.) and 6 in. from E. a stake or post hole 3 in. diam. extending 10 in. into subsoil - two sherds of pottery in neighbourhood of stake hole (also one flint?).	
44	Small pit to N. of Cist I containing carbon and ash also two sherds of pottery (and blackened pot boilers?). (This pit was partly below and therefore earlier than cremation burial in pit No. 23 on plan.)	10 in. diam. 7 in. deep

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
51	See under 'Beaker'.	
53	<i>Trench</i> straight 13 ft. long by 10 to 12 in. wide, depth varying from 3 in. at ends to 7 in. in centre. Packed irregularly with largish stones. Infilling brown at ends, but black in centre, also sherds, fragments of calcined bone and carbonised hazel shells. Carbonised wood occurred in patches with grain vertical (decayed stakes?).	
54	Pear shaped pit a few inches from N. end of long trench – containing dark infilling with black pottery sherds also pockets of whitish sand with flecks of carbon.	3 ft. long 1 ft. 9 in. wide at broad end, 1 ft. wide at narrow end; 6 in. deep
BEAKER AND COARSE WARES RELATED TO BEAKER		
1	Dark greasy infilling with one sherd, possibly originally lined on the periphery with stones, one or two of which remained.	1 ft. diam. 4 in. deep
9	See under 'Neolithic A'.	
16	A neatly made circular pit containing a good number of assorted sherds, carbon in a black greasy filling (suggesting accumulation of domestic material?). No bone. Sherds appeared to line the periphery.	2 ft. diam. 8 in. deep
17	An oval pit with flints, sherds, carbon and greasy black soil. Also a stone 'potlid'. Flints in upper layers. Half way down, the pit appeared roughly stone-lined. The filling was suggestive of domestic material. Also one or two patches of yellow or buff sand. No bone. This pit partially covered by subsoil at N. end.	2 ft. long 1 ft. 6 in. wide 1 ft. deep
29	See under 'Burials'.	
31	An oval pit oriented E. and W., containing very black infilling, with carbon ash, blackened and splintered stones, hazel nut shells and sherds.	4 ft. long 2 ft. 6 in. wide 9 in. deep
38	Pit with dark infilling, flints, black and splintered stones, sherds and carbonised hazel nut shells. The infilling dark in upper layers but hardly distinguishable from the sandy subsoil in the lower levels – yet two flints were found right at the foot.	1 ft. 3 in. diam. 2 ft. 3 in. deep
51	An irregular <i>depression</i> or pit containing in upper layers carbonised wood, blackened stones, sherds, flints, stone scraper, and hazel nut shells all in dirty subsoil – in lower layers clean refilled subsoil with sherds and flints, $\frac{1}{2}$ doz. small splinters of calcined bone occurred scattered throughout the pit.	4 ft. long 2 ft. 6 in. wide 1 ft. deep

*No. on Plan**Remarks**Dimensions*

? FOOD VESSEL

- | | | |
|----|---|--|
| 24 | A large oval pit (Plate XIII and fig. 5) – oriented NE. and SW. and neatly packed with stones varying in size from 18 by 6 by 12 in. to 6 by 6 by 3 in. or smaller. A number of the stones were placed vertically and were so tightly packed that they were difficult to remove. The upper filling among the stones was of black (almost purplish) greasy soil, in which was part of a cockleshell and a few cremated bone splinters. Below the upper levels the soil filling was of two kinds. In the centre of the pit and just below the top was an area 1 ft. 6 in. long, broad and thick of black greasy earth containing a few splinters of cremated bone (rather soft), carbon, and small sherds of a vessel with whipped cord decoration. The filling of soil between the stones throughout the remainder of the pit was of dark brown earth and also contained an occasional fragment of bone and sherd. The relative position of the bone and pottery in the pit seemed to indicate that these had been scattered among the stones, as the latter were being packed into position. The SW. end of the pit was a few inches deeper than the NE. and the stones at the former end tended to be larger. The stones throughout the pit seemed too tightly packed for them to have collapsed into position on the decay of a wooden coffin or small mortuary building. They were definitely not of the nature of 'tumble'. | 9 ft. long
4 ft. 6 in. wide
1 ft. 8 in. deep
at NE. end
1 ft. 10 in.
at SW. end |
| 36 | Shallow basin of four flat stones containing, in a black deposit, sherds of pottery with whipped-cord decoration. | 10 in. diam. |

BURIALS

- | | |
|--------|---|
| Pit 25 | This biconical urn (1) containing a 'clean' cremation burial, was found inverted in an irregular hole in the subsoil. There was no neatly made pit, and the area between the urn and the subsoil had been repacked with the latter. The urn had been placed on the subsoil. The remains of a circle of protective stones remained on the SE. side. Outside the urn 4 in. to the NE. occurred a scatter of bone and a small bronze blade. The portion of the urn next to these had collapsed, and from the finding of two or three scraps of bronze inside the urn at this point, there appears no doubt that the blade had been originally inside the urn. The urn appeared to have been thrust downwards and to the SE. about 3 in., |
|--------|---|

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
	suffering considerable damage. The base had been ploughed away.	
Pit 26	This cordoned urn (2) burial differed from the preceding in that it had been placed inverted in a neat circular pit. The filling of the pit outside the urn was of dirty black soil containing a few black and splintered stones. The urn was placed on a spread of similar stones. The base of the urn had been ploughed away, and one or two sherds were found in the topsoil.	Pit 2 ft. diam. 1 ft. deep
Pit 35	Pit with collared urn (3) in NW. side, laid inverted on three flattish stones. The base was 7 in. below the top of the subsoil and the remainder of the pit contained a dark infilling with a few bone fragments and one sherd pottery. Several flat stones were placed in the pit around the urn and one was pressing its body which it had fractured. When the urn was lifted its contents remained behind. The cremated bones, on top (as found) of which was lying a plano convex flint knife occupied only 3 in. or so at the mouth of the urn. The remainder of the urn was filled with a fine loam (which presumably had percolated in through the cracks). Below the three stones on which the urn was laid was found a further handful of cremated bones.	Pit 1 ft. 9 in. diam. 1 ft. 10 in. deep
Cist I	A small neatly made cist (figs. 4 and 5) oriented E. and W. The floor consisted of subsoil and the walls each of one slab of local 'Whinstone'. There was no trace of a capstone, but one remaining stone, corbelled over a corner, and a scatter of three stones to the SW. suggest that the cist may originally have been covered by a corbelled top of relatively small stones, which had been displaced by the plough. One flat roofing stone had fallen in against the E. side after the burial had been inserted. The cist contained fine loam and the 'clean' (i.e. with little or no carbon or burnt stones) cremated bones of two persons. Among the bones and broken into three was a small burnt flint flake, Internal dimensions 8 by 11 by 10 in. deep.	
Cist II	This larger cist (figs. 4 and 5) had a cap of whinstone 2 ft. by 1 ft. 9 in. by 10 in. to 1 ft. thick, weighing perhaps 400 lb. (Pl. XII). After this had been placed or slid into position resting on the sides, smaller stones had been neatly packed round about, but even so there were numerous small spaces by which fine earth could have percolated into the cist by worm action. The	

*No. on Plan**Remarks**Dimensions*

capstone was about 3 in. lower at the NW. corner than at the SE., and although only some 6 in. below the surface of the field this tilt had enabled the plough to ride over it. The cist was built up of slabs made from local boulders - split and laid with the flat surface innermost and approximately vertical. The west wall consisted of three main slabs, the S. four, the E. four, and the N. 1; Interstices were packed with smaller stones. The floor consisted of natural subsoil. The cist was coffin shaped, 11½ in. wide at the head, 9½ in. at the foot and of a maximum width of 1 ft. 4 in. some 9 in. from the head. The length 2 ft. 2 in. (Pl. XIII). The bottom was 2 ft. 9 in. to 3 ft. below ground-level and 1 ft. 6 in. below the underside of the capstone. It was oriented NE. and SW., with the head of the 'coffin' to the SW.

The cist was filled to within 3 in. of the capstone with fine loam. The upper layers of this had two or three fragments of cremated bone, but apart from these there was no evidence of a cremation burial, nor any *apparent* signs of an inhumation burial. At the bottom of the cist at the widest part, lying on its side was a food vessel, its base touched the W. side of the cist and its mouth faced E. Lying on top of and

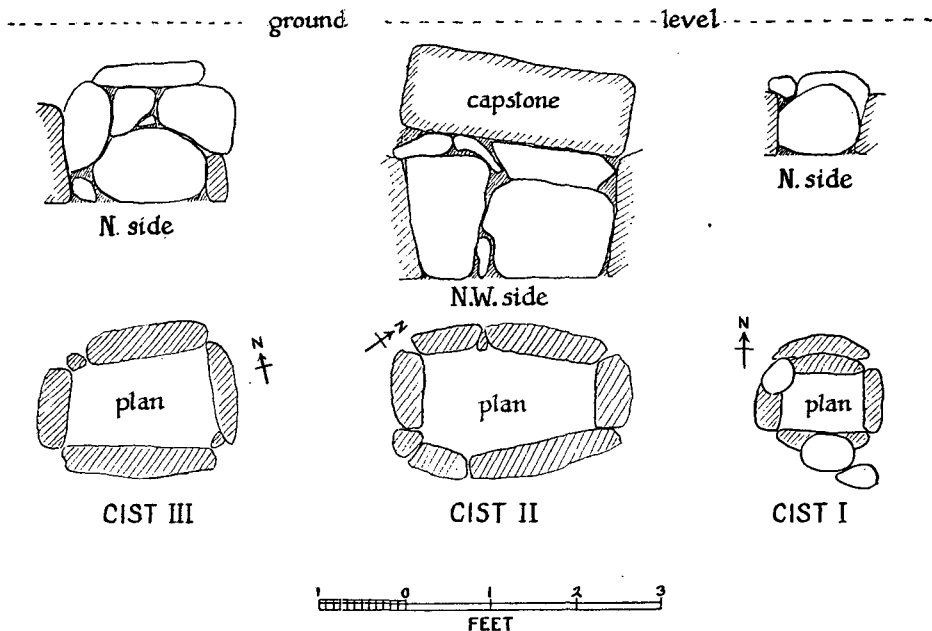


FIG. 4. Kirkburn: cists; elevations above, plans below

No. on Plan

Remarks

Dimensions

against the sides of the food vessel (as if to protect it) were three flat stones each about 6 in. square. A soil sample was taken from the subsoil in the bottom.

No cup and ring marks or other decorations were observed on the stones of this or the other cists.

On removal of the side and end slabs it was found that they occupied a roughly oval, steep sided, pit 3 ft. long by 2 ft. 5 in. wide. Behind a slab at the SW. end was a piece of cremated bone. On the NE. side of the pit was a shelf cut in the subsoil 1 ft. 10 in. broad by 9 in. deep and extending to 1 ft. 4 in. into the wall of the pit, where it merged into Pit 45 from which it had been separated by a line of stones. This shelf contained clean refilled subsoil.

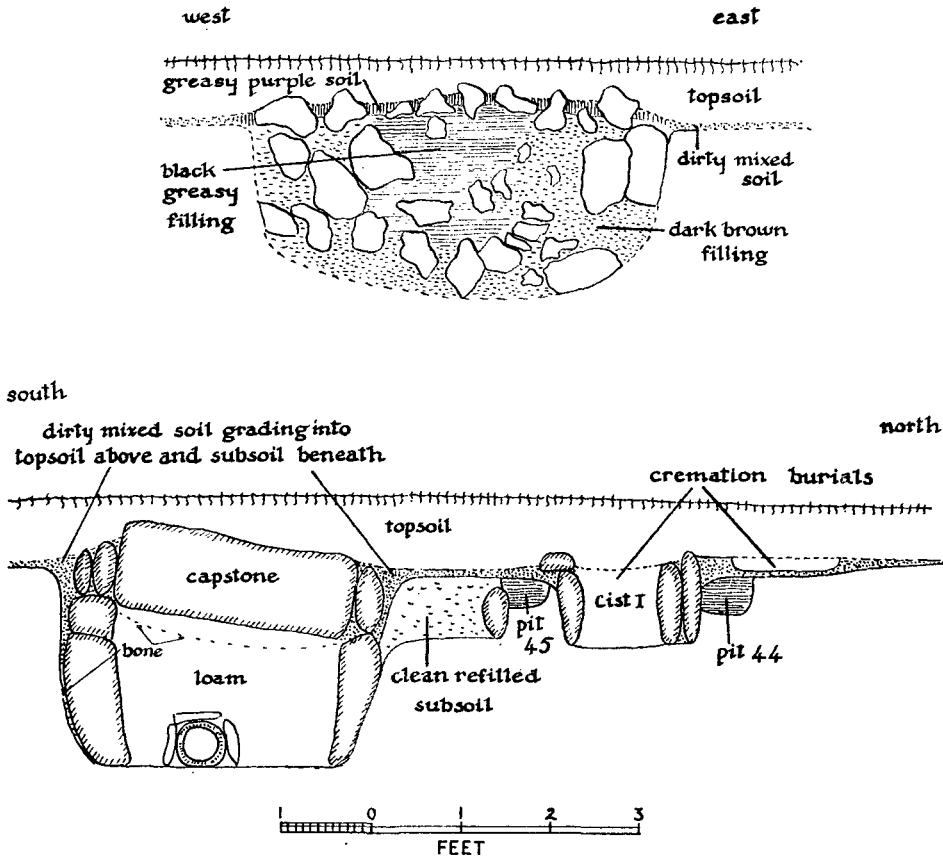


FIG. 5. Kirkburn: sections of Pit 24 (above) and Cists I and II (below). Both to same scale

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
Cist III	<p>This Cist III (fig. 4) oriented E. and W. was similarly built to Cist II, except that no capstone was extant and it was more irregular in shape. The filling was loam, with only a few cremated bones scattered (both horizontally and vertically) throughout - also one flake of flint. Internal dimensions were as follows: W. end 10 in., S. side 18 in., E. end 17 in., N. side 15 in. Depth 1 ft. 7 in. into subsoil. The E. end had collapsed inwards, somewhat. The floor was of the natural subsoil. A sample of soil was taken from the floor.</p> <p>On removal of the side and end slabs it was found that they occupied a steep sided oval hole in the subsoil 3 ft. long by 2 ft. 9 in. wide. In the interstices were fragments of cremated bone, particularly at the E. end where also were found two further flakes of flint.</p>	
3	Shallow depression in subsoil, circular, filled with carbon and carbon ash and a few calcined bones.	1 ft. diam. 2 to 3 in. deep
7	A neatly made circular pit containing a very 'dirty' (i.e. greasy carbonaceous) cremation burial. Accompanying the bones were blackened sherds of an accessory cup, also black and splintered stones. The bottom appeared lined with such stones. The bones seemed to have been placed around the periphery of the pit, but the parts of the small cup were mainly to W. side of the hole.	1 ft. 6 in. diam. 1 ft. 1 in. deep
8	An irregularly shaped depression or pit containing a 'clean' (i.e. no carbon or ashes) cremation burial. At the bottom of the pit was a bed about 1 in. thick of clean black ash containing no bones. A small flint flake accompanied the upper bones.	1 ft. 9 in. diam. 7½ in. deep
22	Pit with dark discoloured soil, with a few fragments of calcined bones and a few pieces of broken quartz.	2 ft. long 20 in. wide 10 in. deep
23	The lower part of an urnless cremation burial occupied a neat circular area at the bottom of the topsoil. There was no pit into the subsoil and the bones were accompanied by a fair amount of ash. Much of the bone is finely pulverised. It was a turn up of bones from this burial that gave the clue to the site.	1 ft. 3 in. diam. 2 in. depth of burial left on top of subsoil
24	See '? Food vessel'.	
27	A shallow circular pit containing dark infilling with a splinter or two of cremated bone, and a sherd, possibly of urn.	1 ft. 3 in. diam. 5 in. deep

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
29	An irregularly shaped pit dug into the subsoil containing a cremation burial mixed with wood ash, and carbon. On the surface of the subsoil a stone was set into the SW. side, and one or two stones (about 6 in. diam.) lay on top of the filling. Accompanying these stones and in the upper few inches of the filling were two sherds of beaker pottery.	2 ft. 3 in. diam. 12 in. deep
37	Pit with dark filling, black and splintered stones, burnt earth, carbon and a few cremated bones.	1 ft. 8 in. diam. 10 in. deep
41	Urnless cremation burial in irregular pit in subsoil - much carbon mixed with bones particularly in upper layers. Accompanied by a bone pin and a cylindrical bone bead.	1 ft. diam. 7 in. deep
53	See 'Neolithic A'.	
55	Cremation burial. The remains or lower part (?) of a clean cremation burial occupied a round shallow pit in the subsoil.	1 ft. 3 in. diam. 3 in. deep
UNDATED FEATURES		
4	Deposit of carbon, carbon ash and greasy black soil - no pottery or bones - circular.	1 ft. diam. 5½ in. deep
5	Three stones, flattish, inserted into the subsoil on edge, containing an area of black soil. (The appearance is that of a hearth - not a posthole.)	Stones are natural - 6 by 6 by 1½ in. approx. - black area 1 ft. by 4 in. approx. and 3 in. deep
6	A black patch on the top of the subsoil - fairly straight edges (gave the impression of a decayed plank?).	2 ft. long 5 in. wide depth ½ in.
10	An irregularly shaped depression containing carbon, dark soil, and blackened splintered stones and flanked by one or two stones. (Gave the impression of a hearth.)	1 ft. diam. 3 in. deep
11	A neatly made small circular pit containing black carbonaceous material, with burnt flints.	9 in. diam. 4 in. deep
12	As No. 11, but no flints.	9 in. diam. 4 in. deep
13	As No. 12 (Although these three pits on the plan give the impression of postholes, there was no sign of packing stones, and the diameter was too large for stake holes; furthermore the carbon was in small separate pieces with the grain running in various directions.)	9 in. diam. 4 in. deep
20	Pit with black greasy carbon.	11 in. diam. 7 in. deep

<i>No. on Plan</i>	<i>Remarks</i>	<i>Dimensions</i>
21	Pit with dark but clean soil.	1 ft. 3 in. diam. 6 in. deep
28	A shallow circular depression containing dark infilling, and a flint. A sherd was lying on the NW. edge on top of the subsoil.	18 in. diam. 2 to 3 in. deep
30	A deep slightly oval pit, containing in the upper levels an infilling of topsoil sterile of any datable find - (although Victorian pottery, and lime occurred elsewhere in the topsoil in abundance). In the bottom, slightly eccentric, was a lower pit 12 in. in diam. extending downwards for a further 9 in. This lower pit contained a filling of black carbonaceous material, two flints and a fragment of calcined bone, it was covered by a layer of refilled but clean subsoil material.	2 ft. 3 in. long 2 ft. wide 1 ft. 5 in. deep
32	A circular pit with dark infilling.	1 ft. 3 in. diam. 1 ft. deep
34	Irregularly shaped pit, layer of stones on top, two flint flakes and one flake of pitchstone in dark infilling.	2 ft. long 1 ft. 6 in. wide 11 in. deep
39	Pit with dark infilling. On the top was a circular layer of packed stones: stones (some blackened and splintered) also occurred at random throughout the remainder of the pit. The filling also contained carbon and carbonised hazel nut shells.	1 ft. 9 in. diam. 1 ft. deep
40	A small circular pit similar to Nos. 12 and 13.	7 in. diam. 2 to 3 in. deep
42	An oval pit, with dark infilling containing a few pieces of broken stone, carbon and carbonised hazel nut shells.	2 ft. diam. 1 ft. deep
45	Small pit to S. of Cist I similar to 44, but without sherds.	10 in. diam. 7 in. deep
50	An area of white or buff sand (old turf?) containing flecks of carbon lying on top of subsoil and having two sherds of pottery and piece of quartz.	3 by 2 ft. approx.
56	Small pit, as No. 12 also blackened and splintered stones.	7 in. diam. 5½ in. deep

APPENDIX I

Pottery and Other Small Finds

by I. H. LONGWORTH, M.A., PH.D., F.S.A. SCOT

(Note. All small finds are now in the National Museum of Antiquities, Edinburgh)

The site has yielded a wide range of pottery styles and traditions. The majority of sherds can be assigned with some confidence, but a certain number of undecorated wall sherds cannot be so placed and in the following schedule these have been listed as 'indefinite'.

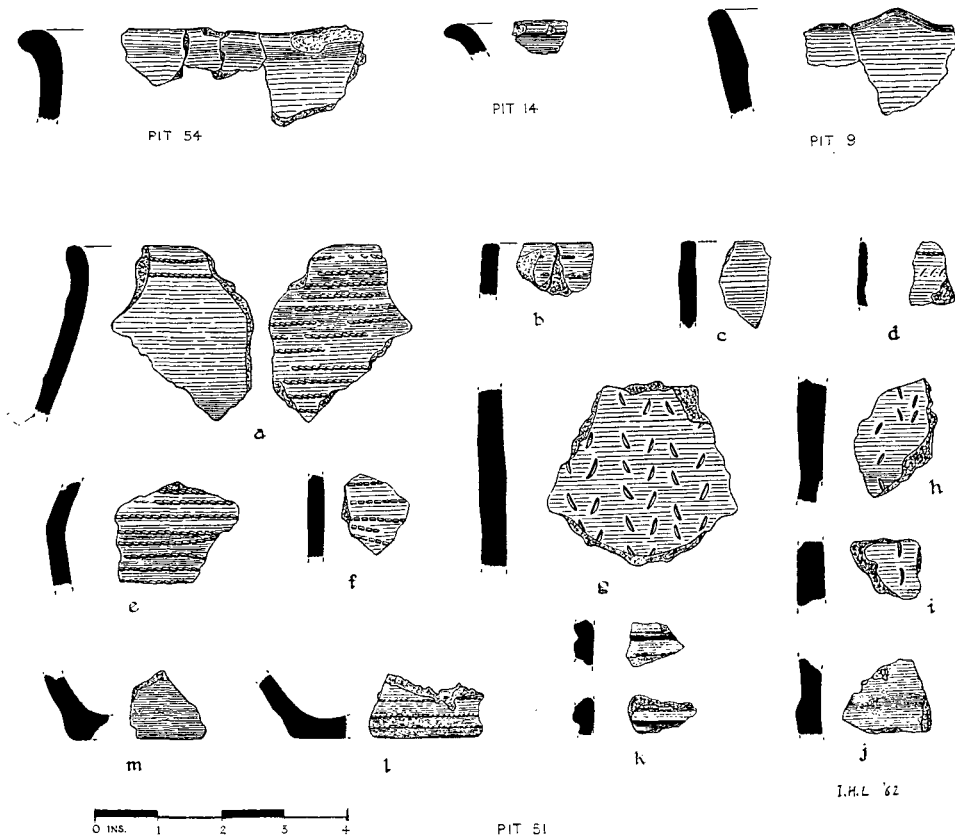


FIG. 6. Kirkburn: selection of pottery; Neolithic and Beaker ($\frac{1}{3}$)

KIRKBURN

Schedule of Pottery

Western Neolithic

- Pit 2. Undecorated wall sherd of fairly hard brown paste tempered with grits including micaceous quartz, heavily eroded, most of external surface lost.
- Pit 9. Rim and wall sherds of hard brown paste tempered with a little grit, surface smoothed, undecorated. The rim (fig. 6) has a peaked projection and slight internal moulding $\frac{3}{4}$ in. below the lip.
- Pit 14. Two sherds probably from the same vessel of fairly hard dark grey to brown paste tempered with quartz grit, surface smoothed, undecorated. The rim (fig. 6) is of a simple rolled over form.
- Pit 33. Two small wall sherds, probably from the same vessel, of fairly hard dark brown paste tempered with grit, external surface lost.
- Trench 43. Small undecorated fragment of wall of hard brown ware tempered with micaceous grit, external surface lost.
- Pit 44. Small fragment of hard dark brown paste.
- Depression 51. Small fragment of fairly hard dark brown paste tempered with quartz, external surface lost.

Trench 53. Small wall sherds of fairly hard dark brown paste tempered with a little grit including quartz, mostly very abraded.

Pit 54. Sherds and fragments probably all from the same vessel, of a fairly hard coarse paste tempered with large grits, brown both faces, surfaces somewhat eroded. Rim (fig. 6) of a simple rolled over form.

Grooved Ware

Depression 51. Two wall sherds of fairly soft brown paste decorated with horizontal grooves (fig. 6*k*).

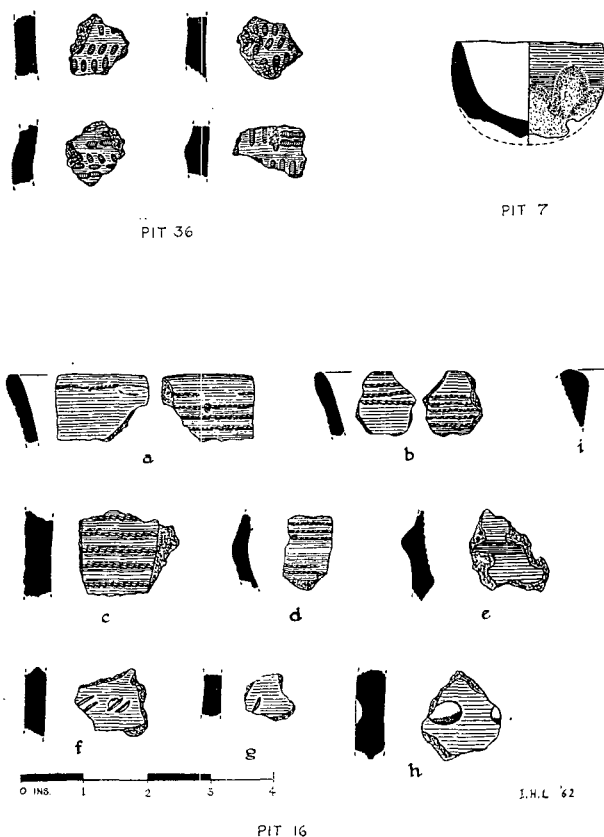


FIG. 7. Kirkburn: selection of pottery; Beaker, Food Vessel (?) and Accessory Cup ($\frac{1}{3}$)

Beaker

(a) *Corded*

Pit 16. Twenty-nine sherds (fig. 7 *a* to *d*) including two rims and three fragments of shoulder of a fairly hard fine compact paste, brown both faces, surface smoothed. Decoration consists of horizontal twisted cord lines; one rim (fig. 7*b*) carries traces of three twisted cord lines inside the lip; the other (fig. 7*a*) traces of two.

Pit 17. Wall sherd of fairly hard paste, light brown both faces, surface smoothed, decorated with horizontal twisted cord lines. Two small wall sherds of similar paste but with quartz grit seem to be decorated with paired twisted cord horizontal lines, the 'twist' being in the same direction.

Pit 27? Small wall sherd of fairly soft paste, lacking internal surface, light brown externally, decorated with horizontal twisted cord lines.

Depression 51. Twenty-four sherds (fig. 6*a*, *e* and *l*) including three fragments of rim, two fragments of shoulder and one fragment of decorated base angle, of fairly hard paste some tempered with large grits, brown both faces often with grey core and surface smoothed. Decoration consists of horizontal twisted cord lines. The rims carry two, possibly three, twisted cord lines inside the lip. One fragment of wall of hard paste, lacking internal surface, carries a twisted cord line above a row of finger nail impressions (fig. 6*d*).

(b) *Combed*

Depression 51. Two sherds including small rim fragment, not necessarily from the same vessel. The rim carries two rows of horizontal rectangular toothed comb impressions with remains of a row of jabbed decoration beneath. The wall sherd has slightly radiating horizontal lines made with a similar comb stamp (fig. 6*f*).

(c) *Incised*

Depression 51. Two small rim sherds from the same vessel, of a hard compact sandy light brown paste, decorated with remains of horizontal roughly incised lines (fig. 6*b*).

(d) *With finger nail impressions*

Pit 16. Five wall sherds of a fairly hard compact light brown paste carrying impressions made with a finger nail. The sherds are not large enough to show whether this forms part of a finger pinched rustication (fig. 7*f* and *g*). The internal surfaces of the two sherds illustrated are burnished.

Depression 51. Three wall sherds of a fairly coarse hard paste tempered with large grits, light brown both faces with grey core, surface mainly smoothed, decorated with light finger-pinched rustication (fig. 6*g* to *i*).

(e) *Other*

Pit 1. Small heavily abraded wall sherd of hard compact paste, external surface eroded, internal surface greyish brown. Probably Beaker.

Pit 16. Three fragments from the inside edge of a rim, and one fragment with remains of an external cordon, of a fairly hard brown paste, undecorated (fig. 7*e* and *i*). One fragment of wall of compact brown paste with an oval impression and traces of a second probably made with the finger tip (fig. 7*h*). The pit also contains fragments of undecorated wall and base. Another fragment found 6 in. to S. of this pit.

Pit 17. Three undecorated wall sherds.

Pit 29. Undecorated fragment of wall of fairly hard paste, light brown externally, dark greyish brown internally, surface smoothed.

Pit 31. Undecorated wall sherds of a fairly hard paste tempered with grit, light brown externally, grey internally.

Pit 38. Three undecorated wall sherds of a hard paste, tempered with grit, brown both faces, surface smoothed.

Trench 43. Minute fragment from internal edge of a rim, probably from a beaker, undecorated.

Depression 51. Undecorated sherds of wall and base including coarse wares (fig. 6*c* and *m*). One hard, grit tempered sherd with well marked shoulder (fig. 6*j*).

Surface. Small undecorated wall sherd heavily eroded, lacking internal surface, of rather soft grey to brown paste.

Food Vessel

Cist II. Ridged Food Vessel (fig. 8, top right).

Diam. of rim: 6.7 in. max.

Height: 6.7 in. max.

Diam. of base: 3.2 in. max.

The vessel is of a fairly hard paste tempered with a large quantity of coarse grit, light brown both faces, surface smoothed. Decoration on the external surface and rim bevel consists of incised herringbone pattern broken in the two grooves by single rows of diagonally jabbed impressions made with a blunt implement.

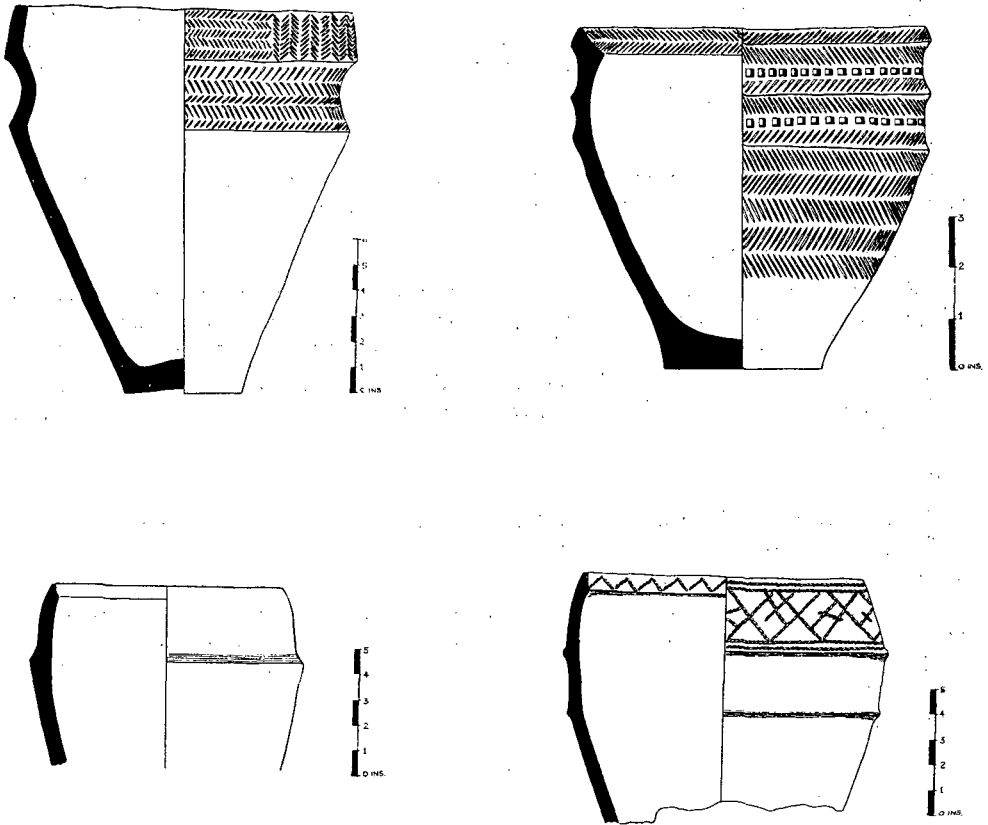


FIG. 8. Kirkburn: Food Vessel (top right) and Cinerary Urns

Pit 24. Small fragments retaining one face only, of a hard brown paste, external surfaces light brown internal light brown to grey brown. Five small fragments carry short whipped cord 'maggots'.

Depression 36. Four small sherds including two fragments of shoulder, of a fairly compact, hard paste, brown both faces with dark grey core, decorated with small whipped cord 'maggots' (fig. 7).

Collared Urn

Pit 35. Diam. of rim: 12-13.1 in.

Height: 15.1 in. max.

Diam. of base: 4.75 in. max.

The urn (fig. 8, top left) is of a fairly hard paste tempered with a little grit and slightly porous, brown both faces with the surface smoothed. The collar is decorated with horizontal rows of incised herringbone broken by panels of vertical incised herringbone. The neck carries further rows of herringbone in the same technique.

Cordoned Urn

Pit 26. Diam. of rim: 10.6-11.1 in.

Height (surviving): 10 in.

The urn (fig. 8, bottom right) is of a fairly hard coarse paste tempered with a large quantity of coarse grits, brown both faces with darker, greyish patches externally below the rim. Decoration is confined externally to a rough twisted cord lattice/lozenge pattern enclosed by pairs of horizontal twisted cord lines set between the mouth and first cordon. The internal rim bevel carries a twisted cord chevron pattern.

Bipartite Urn

Pit 25. Diam. of rim: c. 9 in.

Height (surviving): c. 7.2 in.

The urn (fig. 8, bottom left) is of a fairly hard, very coarse paste tempered with a large quantity of large grits, brown both faces with the surface only roughly smoothed. The vessel is undecorated. The profile as drawn has been reconstructed from two overlapping pieces.

Accessory Cup

Pit 7. Diam. of rim: 2.3 in.

Height (surviving): 1.5 in.

The Accessory Cup (fig. 7, top right) is of a very hard, fine compact paste, patchy reddish brown and grey giving clear evidence of re-firing. Much of the surface has flaked away under heat but sufficient remains to show that the cup was undecorated.

Indefinite

Pit 9. Undecorated wall sherds of a fairly hard paste tempered with a fair amount of grit, light brown externally, greyish brown internally, surface smoothed.

Pit 15. Two undecorated wall sherds from the same vessel, of a hard heavily gritted ware, grey to brown externally, reddish brown internally.

Pit 27. Undecorated wall sherd, external surface eroded, of a coarse brown paste.

Pit 29. Undecorated fragment of wall of fairly soft brown paste lacking internal surface.

Pit 44. Undecorated wall sherd of a laminated paste tempered with a large quantity of quartz and other grit, light brown both faces.

Depression 51. Small fragment of greyish brown paste has remains of an incised lozenge/lattice decoration.

Area 50. Fragment of undecorated wall, brown both faces with dark grey core.

Surface. Fragment of undecorated wall, purplish brown surface.

BONE

1. Large bone pin (fig. 9a), calcined. Fragments of the shaft are missing but otherwise complete. The head has been carefully squared and pierced with an hour-glass perforation. The maximum length of the pin is 7.55 in. with a maximum width at the head of 0.65 in.

TABLE I
TABLE OF POTTERY

Pit No.	Western Neolithic	Grooved Ware	Beaker, Corded	Beaker, Combed	Beaker, Incised	Beaker, Rusticated	Beaker, Other	Food Vessel	Collared Urn	Cordoned Urn	Bipartite Urn	Accessory Cup	Indefinite	
1							*							
2	*													
7												*		with cremation
9	*												*	
14	*													
15													*	
16			*			*	*							
17			*				*							
24								*						some cremated bone
25											*			contained cremation
26										*				contained cremation
27			*										*	some cremated bone
28														
29							*						*	with cremation (sherds in filling)
31							*							
33	*													
35									*					contained cremation
36								*						
38							*							
43	*						*							
44	*												*	
50													*	
51	*	*	*	*	*	*	*						*	some cremated bone
53	*													some cremated bone
54	*													
Cist II								*						
Surface							*						*	

Fragment of bone bead (fig. 9c), calcined. The segment is from a tubular bead, diam. approximately 0.3 in. and length, 0.65 in. The ends of the segment have been carefully smoothed.

The pin and bead were found together with cremation in Pit 41.

2. Bone pin (fig. 9b) of 'skewer' pin type, calcined. The pin is complete but for the extreme tip, with a length of 4.9 in. and maximum diam. of 0.25 in. at the head. The pin throughout its length has been worked to an oval to circular section.

Found in Cordoned Urn 2 in Pit 26.

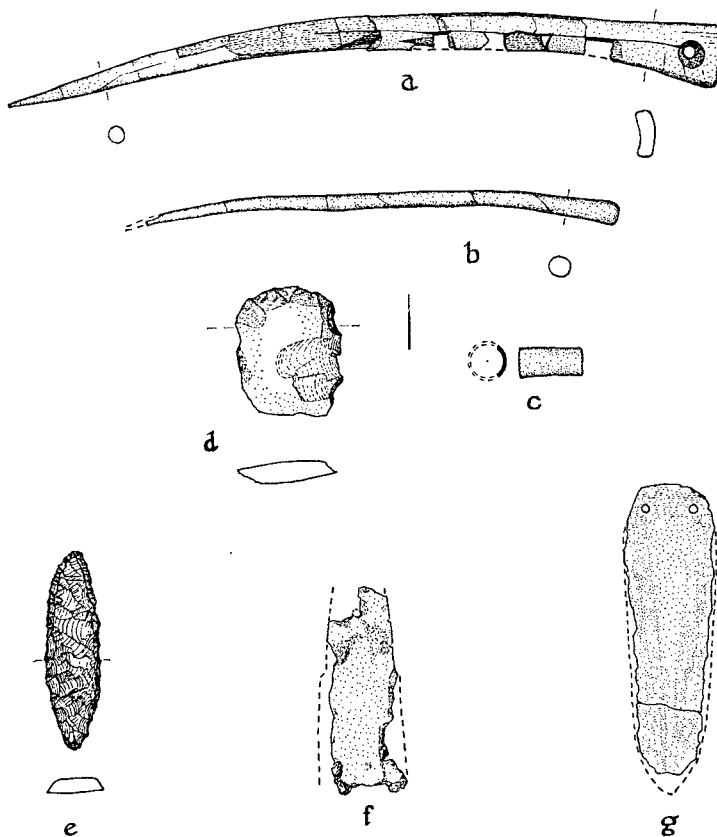


FIG. 9. Kirkburn: other small finds (all $\frac{1}{2}$) a, b and c - bone; d - stone; e - flint; f and g - bronze

BRONZES

Small knife (fig. 9g) with two slender rivet holes, lacking top, 3 in. long, maximum width 0.95 in. The blade shows shallow fluting on each face and the edges are bevelled. A simple lunate haft mark survives. Unburnt.

Found inside Urn 2 in Pit 26.

Part of a tanged and rivetted blade (fig. 9f), with broad tang and remains of a single rivet-hole. Much of the blade has been lost. Overall surviving length 2.25 in., maximum width of tang 0.65 in. Traces of bevelled edge one side, just below the surviving shoulder. Unburnt.

Found with Urn 1 in Pit 25.

FLINT

Small plano-convex knife (fig. 9e) of banded grey flint, pressure flaked, with steep flaking along the edges, 2.05 in. long with a maximum width of 0.6 in. Unburnt.

Found inside Urn 3 in Pit 35.

DISCUSSION

Though the range of pottery traditions on the site is considerable, the actual occurrence of one with another is relatively rare. This can be readily appreciated from Table I where the contents of individual pits and features have been expressed in tabular form. Some comment is, however, required with regard to the Western Neolithic and Beaker sherds.

Pits 2, 14, 33, 53 and 54 yielded only sherds of Western Neolithic pottery, but in Pits 9 and 44 these occur with wall sherds of less definite nature. It is worth noting that in Pit 9 the filling is not homogeneous as a definite division was observed, defined by stones, at about half its depth. Sherds were present both above and below this division, but unfortunately no note was taken at the time as to where individual sherds occurred. It is perhaps reasonable to suggest that the difference in fabric represented by these sherds echoes the stratigraphy, but this cannot be established beyond doubt. The Western Neolithic bowl from this pit with its peaked projection from the lip (fig. 6) is itself worthy of note as having no obvious parallel in Scottish Neolithic Pottery. In two further pits sherds of Western Neolithic ware and sherds of Beaker were found together. The nature of these finds, however, courts caution. The minute fragment, probably from the lip of a Beaker, found with a Western Neolithic sherd in Pit 43 could well be fortuitous and represent contamination by worm or root action, and conversely, the small sherd of undoubted Western Neolithic fabric from Depression 51 could similarly be intrusive. In support of some degree of contemporaneity on the site of these two traditions, the presence of small quantities of cremated bone in Pits 27, 51 and 53 suggests that some at least of the unaccompanied cremations belong in fact to the Late Neolithic and that both Beaker and Western Neolithic wares were deposited in the pits during the life of this cemetery.¹

Depression 51 is of importance as yielding a wide range of Beaker wares together with two sherds of grooved ware and more indeterminate wall sherds. Amongst the Beaker coarse wares are three sherds with light finger-pinched rustication (fig. 6g to i) of a type well known on Beaker pottery in Southern and Eastern England,² but still rare as yet in Scotland. At least one sherd of similar pottery was recorded many years ago with a mass of corded Beaker sherds from Midden 1 at Tusculum, North Berwick.³ The range of techniques found on that site, including combed, incised and undecorated Beaker as well as corded, compares closely with the contents of Depression 51. A stratigraphical division was observed in this pit and some doubt must remain as to whether all the pottery recovered was necessarily the product of one deposition, but if total contemporaneity between the various forms of Beaker and coarse wares cannot in this instance be claimed as proven, on the analogy of Tusculum no great lapse of time need necessarily separate them. No such doubts need arise in the case of Pit 16 whose homogeneous filling incorporated both corded and rusticated sherds. The filling in this pit also included an undecorated Beaker coarse ware, one sherd of which carries a pronounced shoulder (fig. 7e). This forms a timely reminder that, as at Tusculum, along with the more characteristic forms of Beaker 'fine' ware, various forms of coarser ware are likely to emerge as more domestic sites are fully examined.

Little can be said of the small sherds of Food Vessel from Pit 24 and Depression 36, but the double ridged vessel (fig. 8, top right) from Cist II is of a form with a fairly wide distribution in Southern and Eastern Scotland and Northern and Eastern England. This need not be separated by any great length of time from the Collared Urn (fig. 8, top left) which belongs to the Primary

¹ cf. Giants' Hills Long Barrow, Skendleby, Lincs, where Corded Beaker sherds, found in the make up of the Mound were earlier than or contemporary with sherds of Western Neolithic from the old ground surface and elsewhere. *Arch.*, LXXXV, 53.

² e.g. on late Bell Beaker pottery from Stone Point, Walton and Dovercourt, Essex. *P.P.S.*, II, 189, fig. 3, Nos. 1 and 2.

³ *P.S.A.S.*, XLII (1907-8), 276, fig. 12, No. 9.

Series of the Collared Urn tradition, carrying three of the traits used to define that series.¹ In England and Wales such a vessel could probably be assigned to a fairly early date, say Wessex II, and need not be appreciably later in Scotland. The use of a panelled design for the collar incorporating vertical herringbone is a rare feature but can be compared with a vessel from Tyringham, Bucks.² A relatively early date is supported by the association with the Urn of a plano-convex flint knife. As originally demonstrated by Professor Clark,³ this type of knife occurs in closed grave groups most frequently with Food Vessels. Subsequent discoveries have only confirmed this emphasis, but it is worth noting that no fewer than six plano-convex knives have now been found with Urns of the Primary Series.⁴ This common usage of a specialised flint type can itself be used to support the suggestion of a considerable degree of co-existence between the two traditions inherent in the pottery itself.

The Accessory Cup (fig. 7, top right) of a simple undecorated flattened, hemispherical form is a type with wide distribution, being found as far afield, for example, as Lancaster⁵ and Doncaster⁶ in the N. of England and Wiltshire⁷ in the S. A similar cup accompanied a cremation and small collared vessels of the Primary Series in Barrow 21 on Stanton Moor, Derbyshire⁸ and another was found inside an early Collared Urn in a barrow on Allerston Warren, Yorkshire, N.R.⁹ These associations form a warning not to relegate the simple and undecorated automatically to an ultimate stage at the end of a pottery series. It is clear that this type of cup had already appeared at an early date and probably originates in the small unpretentious domestic cup which would be common to many of the native Neolithic cultures. Such an element is certainly already present in the Western Neolithic at domestic sites like Peacock's Farm¹⁰ and Hurst Fen¹¹ and again in the West Kennet Long Barrow.¹² A similar element appears in Late Neolithic contexts for example in the Ronaldsway Culture of the Isle of Man,¹³ in association with Peterborough Ware at Iver in Bucks.,¹⁴ and in the type of small undecorated bowl accompanying a Corded Beaker at Brackmont Mill, Leuchars, Fife.¹⁵

The Cordoned Urn (fig. 8, bottom right) cannot, at present, be closely dated but is likely to belong to the Middle Bronze Age. Professor Piggott has recently summarised¹⁶ some of the arguments for no longer assuming that Cordoned Urns are, by definition, Late Bronze Age in date. It is worth emphasising that the unilinear theory of pottery devolution implicit in the schemes of Abercromby,¹⁷ and later Professor Grimes,¹⁸ can no longer be accepted. These schemes saw a development of the Cordoned Urn in the latter part of the Collared Urn tradition, parallel to a development of the Bipartite Collared Urn and due to a similar 'degeneration' from sharp to slack profile. It can now be demonstrated that Bipartite Collared Urns have already appeared well before the close of the Primary Series¹⁹ and have a regional and cultural rather than a chronological significance, being confined almost exclusively to Southern and Eastern England. Conversely, Cordoned Urns cannot be shown to stem directly from the Collared Urn tradition. As recently as 1959,²⁰ May and Collins attempted to restate this line of devolution, but their hypothetical scheme is unsupported by any form of evidence. What evidence there is suggests that the type-forms which characterise the first three stages of their scheme form a contemporary assemblage rather than a devolutionary series,

¹ *P.P.S.*, xxvii, 267-8, namely, Formal traits 3 and 4 and decorative trait 2.

² *ibid.*, 296, No. 103, fig. 10.

³ *Ant. J.*, xii, 2, 158-62.

⁴ Besides the examples under discussion, *P.P.S.*, xxvii, Schedule I, Nos. 75, 142, 257, 285, 299.

⁵ Unpublished. Lancaster Museum.

⁶ Unpublished. Doncaster Museum.

⁷ From between Amesbury and Grateley. Unpublished. Salisbury Museum.

⁸ *op. cit.*, Schedule I, No. 192.

⁹ *ibid.*, Schedule I, No. 260.

¹⁰ *Ant. J.*, xv, 301, fig. 12, No. 42.

¹¹ *P.P.S.*, xxvi, 233, fig. 22, p 30.

¹² Piggott, S., *The West Kennet Long Barrow excavations 1955-56* (1962), 35, fig. 10, W 3 with further references.

¹³ Piggott, S., *Neolithic Cultures of the British Isles* (1954), 348, fig. 60, Nos. 3 and 4.

¹⁴ *Records of Bucks*, xiii, 287-99.

¹⁵ Publication forthcoming, cf. Sangmeister, E., *Die Jungsteinzeit im nordmainischen Hessen, Teil III, Die Glockenbecherkultur und die Becherkulturen* (1951), Taf. XIII, Nos. 1, 4, 8, 9, 11.

¹⁶ Piggott, S., in *The Prehistoric Peoples of Scotland* (1962), 94-95.

¹⁷ Abercromby, J., *Bronze Age Pottery* (1912).

¹⁸ Grimes, W. F., *The Prehistory of Wales* (1951), 94, fig. 30.

¹⁹ *op. cit.*, Schedule I: e.g. Nos. 13, 41, 52, 76, 136, 192, 208-10, 212, 226, 236, 237, 249, 254, 262, 327, 334, 340, 358.

²⁰ *U.J.A.*, xxii, 34-39.

and all three forms have certainly already appeared before the close of the Primary Series.¹ In Barrow 114 on Calais Wold² urns of stages 1 and 2 are found in association in a closed grave group with a token necklace including jet and segmented faience beads. A similar association occurred in the ring cairn at Todmorden though here the vessel of stage 1 was used as a covering vessel for an urn of stage 2.³ Vessels of stage 3 have not been found in direct association with other forms of Urn but one occurred in the Todmorden ring cairn cemetery already cited.⁴ That all these forms are likely to be broadly contemporary is strongly suggested by the occurrence of examples in Northern and Western England carrying identical forms of decoration. This comprises a marked regional style employing patterns made in linear incised technique with lattice decoration on the neck. Vessels of the Secondary Series⁵ of stage 1 carrying this decoration come from e.g. Coniston, Lancs.,⁶ Barnside Common, Yorkshire, W.R.,⁷ and Broomrigg, Cumb.⁸; of stage 2 from e.g. Monsal Dale, Derby,⁹ Silsden, Yorkshire, W.R.,¹⁰ and Boulby B 8 Yorkshire, N.R.¹¹; and of stage 3 from Stanton Moor T 16, Derby.,¹² Garlands, Cumb.,¹³ and Little Mell Fell, Cumb.¹⁴ Since all three forms have already appeared in the Primary Series of the tradition it follows that all three are likely to be contemporary at least at the commencement of the Secondary Series. It may be added that though vessels of the third stage are practically confined to Northern England, true Cordoned Urns in this region are absolutely rare and readily distinguishable from vessels of the Collared Urn Series.

It seems preferable to seek the origin of the Cordoned Urn as Professor Piggott has suggested¹⁵ in a separate tradition of the Late Neolithic whose distribution is likely to extend over parts of Scotland and Ireland. At present this is not explicit. Professor Piggott has pointed to Lough Gur Class II ware as the most likely source, but the actual date and context of this ware has recently been challenged.¹⁶ It is at this stage, I think, unnecessary to argue the merits of a single site in SW. Ireland. The answer may well arise more generally amongst the coarse wares on Beaker sites of which hints are offered by sherds from Kirkburn in Pit 16 and Depression 51 (e.g. figs. 6 and 7). Such a suggestion is given weight by the recurrence of Beaker decorative usages on Cordoned Urns. Typical Beaker devices are the use of 'reserved' decoration as on the Cordoned Urns from Garrowby Wold Barrow 169, Yorkshire E.R.¹⁷ and Shanwell, Milnathort, Kinross-shire¹⁸; the use of complex motifs like lattice¹⁹ filling, as for example, on the Cordoned Urns from McKelvie Hospital, Oban, Argyll,²⁰ Magdalen Bridge, Joppa, Midlothian,²¹ Blair Drummond, Perthshire²² and on the urn from Shanwell already cited, or the devolved flag-motif on two vessels from the Magdalen Bridge Cemetery.²³ Though many of the Cordoned Urns like the one from Kirkburn incorporate simple single zone designs which were probably copied from usages of the Collared Urn tradition, complex motifs

¹ op. cit., Schedule I, stage 1: e.g. Nos. 99, 154, 174, 175, 195, 238, 307, 318; stage 2: e.g. Nos. 45, 62, 68, 171, 239, 247, 255, 259, 284; stage 3: e.g. Nos. 265 and 295.

² Mortimer, J. R., *Forty Years* (1905), 169, figs. 424-6.

³ Russell, J. L., in Ling Roth (1906), *The Yorkshire Coiners*, 307-22, fig. 225.

⁴ *ibid.*, fig. 224.

⁵ Which can be briefly defined as Collared Vessels which show typological development away from the ancestral usages, possessing either none of the traits used to define the Primary Series or with only a single residual trait remaining.

⁶ *T.C.W.A.A.S.* (1910), n.s. x, 342-53.

⁷ *Reliquary*, v, 147-8.

⁸ *B.A.P.*, 11, fig. 79.

⁹ *Y.A.J.*, xxv, 48-52, Pl. IVB.

¹⁰ *T.C.W.A.A.S.* (1957), n.s. LVI, 6-12, fig. 4, No. 1; the vessel has thinner walls and a more prominent

shoulder than this drawing suggests.

¹¹ *T.C.W.A.A.S.* (1952), n.s. LII, 178-80, fig. 2.

¹² *D.A.J.*, LVII, 21-42, Pl. V, T 16 A.

¹³ *T.C.W.A.A.S.* (1957), n.s. LVI, 6-12, fig. 4, No. 1; the vessel has thinner walls and a more prominent

shoulder than this drawing suggests.

¹⁴ *T.C.W.A.A.S.* (1952), n.s. LII, 178-80, fig. 2.

¹⁵ Originally in *Ant. J.*, xxxv, 235-7, and more recently in *The Prehistoric Peoples of Scotland* (1962), 96.

¹⁶ by Case, H. J., in *P.P.S.*, xxvii, 206 ff.

¹⁷ Mortimer, J. R., *Forty Years* (1905), fig. 368. Compare this with Necked Beakers from Loddington,

Northants (Abercromby, J., *B.A.P.*, 1 (1912), fig. 66), Warter Wold (*ibid.*, fig. 107) and on a handled Beaker

from Aldro 116 (*Forty Years*, fig. 107).

¹⁸ *P.S.A.S.*, xix (1884-5), 114-17, fig. 3. Compare the use of reserved lozenges with Beakers from Fighel-

dean, Wilts. (*B.A.P.*, 1, fig. 5), Winterbourne Stoke, Wilts. (*ibid.*, fig. 9), Monsal Dale, Derby. (*ibid.*, fig. 54),

Garrowby Wold 124, Yorkshire E.R. (*ibid.*, fig. 124) and Lillburnsteds, Wooler, Northumberland (*ibid.*,

fig. 159).

¹⁹ Compare Beakers cited in note 17.

²⁰ *P.S.A.S.*, xxxii (1897-8), 58, fig. 1.

²¹ *P.S.A.S.*, xvi (1881-2), 423, fig. 2.

²² *P.S.A.S.*, lxiii (1928-9), 394, fig. 2.

²³ *P.S.A.S.*, xvi (1881-2), 423, fig. 2, and 425, fig. 4. Compare these with typical Beaker 'flag motifs',

e.g. Durrington 93 (*B.A.P.*, 1, fig. 4), East Kennet, Wilts. (*ibid.*, fig. 10), Grind Low, Derby. (*ibid.*, fig. 50)

and Towthorpe 21 Yorkshire E.R. (*Forty Years*, fig. 27).

of the type mentioned above are extremely rare in that tradition. It is far more plausible to derive these direct from Beaker sources and an origin for the whole amongst the coarse wares of that tradition.

The association of a small bronze rivetted knife with the Cordoned Urn is entirely in keeping with the known associations of this type of vessel in Scotland. Mr James Barber has demonstrated that associations of small bronze blades and razors are of far more frequent occurrence with Cordoned than with any other form of Urn in Scotland.¹ The bone pin, also associated, is interesting as resembling the form of 'skewer' pin defined by Atkinson in 1951 as a 'type-fossil' of an element within the Secondary Neolithic Cultures of the British Isles. On purely empirical grounds, therefore, the association of such a pin would suggest an early rather than a late date within the Bronze Age, and similar pins have likewise been found with early Collared Urns in Blanch Barrow 241 Yorkshire E.R.² and in the ring cairn at Todmorden, Yorkshire W.R.³

The Bipartite Urn (fig. 8, bottom left) does not fall easily into any category but seems related to a vessel found in 1880 at Shuttlefield near Lockerbie.⁴ The form is perhaps developed from the bipartite Food Vessel with a marked shoulder about half the height of the vessel, and a slightly concave neck above, e.g. vessels from Kerrera, near Oban,⁵ and Rudhill, Kilmartin,⁶ Argyll, and Birkhill, Stirlingshire,⁷ and both are probably ultimately to be derived from late Necked Beaker forms of the type termed by Clarke, group 3⁸ and exemplified by vessels from Eynsham,⁹ and Cassington, Oxon.¹⁰ Like the Urn from Kirkburn, the Shuttlefield vessel lay inverted over a cremation and was accompanied by a small bronze knife.¹¹

While the cultural affinities of the pottery are fairly obvious the chronological succession is less certain. The pits containing sherds of Western Neolithic ware and Beaker are likely to be the earliest features on the site together with some at least of the unaccompanied cremations. The exact relationship between these wares remains debatable, but in at least one instance, Pit 44, sherds of Western Neolithic and others of less definite affiliation lay in a stratigraphical relationship earlier than a cremation burial in Pit 23. The remaining burials show the continuity in use of the site for funerary purposes. The Accessory Cup with the cremation in Pit 7 might indeed be part of the original cremation cemetery since other cups have been shown to have early associations, and it can be recalled that an Accessory Cup was found with a cremation in Aubrey Hole 29 in the Stonehenge I cemetery. Similarly, the bone pin and fragment of bead with the cremation in Pit 41 would not be out of place in such a context. The Food Vessel from Cist II, presumably once with an inhumation, marks an abrupt change in burial rite but this need not be far removed in date from the Collared Urn inverted over a cremation in Pit 35. The remaining urn burials cannot be placed in the sequence with any certainty but are perhaps most likely to represent the final burials in the cemetery.

APPENDIX II

Objects of Flint and Stone

by R. B. K. STEVENSON, M.A., F.S.A., F.S.A.SCOT.

There are few well-made flint implements, the exceptions being the knife found with urn 3, three small round scrapers and one larger scraper. The majority of the flints are broken flakes or splinters, a few having been utilised, and nearly half having been burnt. A mesolithic element at the site is seen in the microlithic flakes from Pit 17, the small narrow flake from Pit 36, perhaps the flake

¹ Information kindly supplied by Mr Barber from his unpublished M.A. thesis.

² *P.P.S.*, xxvii, Schedule I, No. 227.

³ *ibid.*, No. 314.

⁴ *P.S.A.S.*, xiv (1879-80), 280-2.

⁵ *P.S.A.S.*, LXVI (1931-2), 407, fig. 5.

⁶ *P.S.A.S.*, vi (1865-6), 350 (not illustrated) Nat. Mus. Reg. No. HPO 7.

⁷ *P.S.A.S.*, xxi (1886-7), 265 (not illustrated) Nat. Mus. Reg. No. EQ 239.

⁸ *P.P.S.*, xxviii, 378, fig. 5.

⁹ *P.P.S.*, xxiii, fig. 3 bottom and *Oxon*, xxi, 7, fig. 2; *Oxon*, XLII, 17, fig. 5; *Oxon*, 21.

¹⁰ *Oxon*, xxi, 17, fig. 5. *Oxon* 7.

¹¹ The knife has a short broad tang broken across a single rivet hole. Though the hafting is therefore identical to a Class IA razor the blade is narrow and slightly concave.

from Pit 35, perhaps the small scrapers and the curious flint flake with rounded head from Pit 38 and perhaps the chert rod from Pit 51. It is quite likely that the presence of these implements is due to scatter from an earlier activity at the site. Besides flint, blue-grey chert, and very occasionally quartz and pitchstone were used. An interesting find in Pit 51 was a flake from a ground stone axe flaked into a scraper (fig. 9d).

Pit 9. Large utilised triangular flake of speckled grey flint, 2.2 by 1.9 in.; part of an end and side scraper of dark grey flint with white blotches, 1 by 0.5 in.; fragment of a flake of similar flint; fragment of a flake of grey speckled flint; part of a burnt flake from a well flaked core, ? Microlithic.

Pit 10. Fragment of flake with finely retouched edge; fragment of flake with some retouch at the end; flake fragment. All burnt flint.

Pit 17. Two rather rough scrapers of grey flint, some cortex remaining, 1.1 by 1.2 in. and 1 by 1.1 in., utilised flake of pale grey flint, 1.3 by 0.7 in., and a small splinter, all burnt; flint flake, 0.7 by 0.65 in. and eight tiny fragments, burnt; five microlithic flakes of grey flint, three burnt, one scorched and one unburnt, the largest 0.5 by 0.3 in.; unworked splinter of white quartz, 2.6 by 1.3 in., from a pebble.

Pit 34. Narrow flake of dark grey translucent flint, cortex along one side, the tip finely retouched, 1.2 by 0.45 in.; part of a burnt flint flake; part of a flake from a pitchstone pebble, the end utilised, 0.5 by 0.45 in.

Pit 35. Part of a tiny flake of dark grey flinty chert, 0.45 in. long.

Pit 36. Damaged small flake of mottled grey flint, 0.6 in. long.

Pit 38. Two broken burnt flint flakes with steeply retouched edges, 1.1 by 0.85 in. and 1 by 0.7 in.; broken burnt flake of dark grey flint with one shallowly retouched edge, 0.9 by 0.8 in. (cf. Cist III); a curious narrow burnt flake, 0.7 by 0.35 in., retouched to a rounded head which is smooth, ? strike-a-light; fragment of a thermally fractured flint with careful retouch along the edge, 0.9 in. long; scorched flake, 0.65 by 0.45 in.

Pit 39. Broken scorched grey flint flake, the edges utilised, 1.05 by 0.85 in.; scorched dark grey flint flake 1.05 in. long; small grey flint flake.

Pit 51. Curious small triangular-section worked rod of blue-grey chert, the end abraded, 0.95 by 0.25 in., ? strike-a-light; three small round scrapers, grey flint, one scorched, 0.5 to 0.6 in. across; broken duck-bill scraper of pale grey flint with some cortex, 0.8 by 0.45 in.; splinter of grey flint, possibly utilised; another splinter of flint and one of clear quartz. Also a flake from a stone axe made into a broad end-scraper, 1.1 by 1.35 in. (fig. 9d).

Pits 8, 30, 31. Only one splinter, one flake and three splinters (one burnt) of flint respectively.

Cist I. Small blade, 1.05 by 0.4 in., scorched.

Cist III. Fragments from the bases of burnt flint flakes, retouched along the sides, probably leaf-shaped points, one large, about 2 in. across, the other small, 0.6 in. across.

With Urn 3. Plano-Convex Knife. See description by I. H. Longworth, p. 128 *supra*.

Surface finds. Small round scraper of dark brown-grey flint, 0.55 by 0.5 in.; almost round chunky scraper of pale grey flint, 0.85 by 0.8 in., the thick butt also utilised as a scraper by holding the implement on end; large scraper with steep rounded end made from a pebble of grey cherty flint with cortex remaining, 1.5 by 1.15 in.; part of a core of dark brown-grey flint, 1.3 by 0.8 by 0.6 in., the edges much damaged by secondary use; part of a core of blue-grey chert, 1.3 by 0.8 by 0.6 in.; piece of transparent quartz from which tiny flakes have been removed, 0.7 by 0.5 by 0.4 in.; small flake from a core of white flint; broken flake of mottled grey flint, one edge

with steep retouching; narrow flake .08 in. long, one edge utilised and two other utilised flint flakes; part of a flake of yellowish-brown flint, very fine retouch along one edge; twelve unburnt and eight burnt small flakes or splinters of flint; splinter of blue-grey chert.

APPENDIX III

The Cremated Bones

by F. P. LISOWSKI and T. F. SPENCE

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TABLE II

THE CREMATED BONES

(Summarised, the full report being lodged with the Society's papers, Ed.)

<i>No. on Plan</i>	<i>Individuals Represented</i>	<i>Sex</i>	<i>Age</i>	<i>Pathology</i>	<i>Remarks</i>
Urn 1	1	? F	Young ad.	Osteoarthritis	Skull, few but rather large pieces.
Urn 2	2	M & ?	„	Nil	Skull, large fragments.
Urn 3	1	? M	„	Nil	Skull, numerous vault fragments.
„ (below stones)	—	—	—	Healed meta-tarsal fracture	? part of Urn 3 due to spilling.
Cist I	2	?	Adults 1 large 1 small	Nil	Pieces of charcoal among contents.
Cist II (upper filling)	—	—	—	—	A few vault fragments of skull only.
Cist III (in filling)	1	?	?	Nil	A few fragments of skull, teeth, vertebral column, thorax. ? part of Cist I. The question arises whether all three cists might not belong together and might represent a single cremation instead of three individuals. However a cursory attempt to align some of the fragments from these cists proved impossible.
3	*	*	*	—	Skull, one vault piece, others a few miscellaneous fragments.
7	1	? F	Adult Probably middle aged	A fused vertebral fragment ? osteoarthritis	
8	1	? F	„	Osteoarthritis	Mostly small pieces.

No. on Plan	Individuals Represented	Sex	Age	Pathology	Remarks
22	*	*	*	—	Skull, a few vault fragments.
23	? I	?	? Adult	Nil	
24	*	*	*	Old rib abscess	
29	I	? F	? Young ad.	Osteoarthritis	Many large pieces.
37	*	*	*		Skull, several vault fragments.
4 ¹	I	? F	? „	Nil	
53	*	*	*	—	A few miscellaneous fragments.
55	I	? F	? „	Nil	

* Did not allow any diagnosis. May be part of the other cremations.

APPENDIX IV

The Soil

by ALLARD H. JOHNSON, B.SC., A.R.I.C.

Phosphate determination. The following are means of two determinations on each sample of 'total phosphate' after digestion with perchloric acid.

Soil from site	50 mg. P per 100 g. air-dry soil
Soil from Cist II	110 mg. P „ „ „ „
Soil from Cist III	150 mg. P „ „ „ „

Discussion. The individual determinations on each soil were not very concordant; the reason may be due to soil heterogeneity, only to be expected in the case of the two latter samples. However the figures given are sufficiently precise to show that the first is within the normal range for field soils and there has been enrichment with phosphate in the other cases.

Taking the archaeological evidence together with the above it is suggested that the larger cist seemingly undisturbed which contained only two or three fragments of cremated bone, and these in the upper filling, may have contained an inhumation, perhaps of a skeleton disarticulated before burial such as is known elsewhere. The phosphate level is not however so absolutely high as to make this appear certain.

It is further suggested that the smaller cist from which cremated bone was recovered in somewhat greater quantity had contained a cremation burial, the bones of which were insufficiently calcined to prevent their dissolving. The fact that the phosphate concentration found here was higher than in the other case presents no particular problem in view of the small area available for the bones to be placed upon. This hypothesis would be strengthened if it could be shown that the bones recovered from this cist were the incomplete remains of one individual; and also if any of the other cremations on the site showed evidence of the solvent action of the soil.

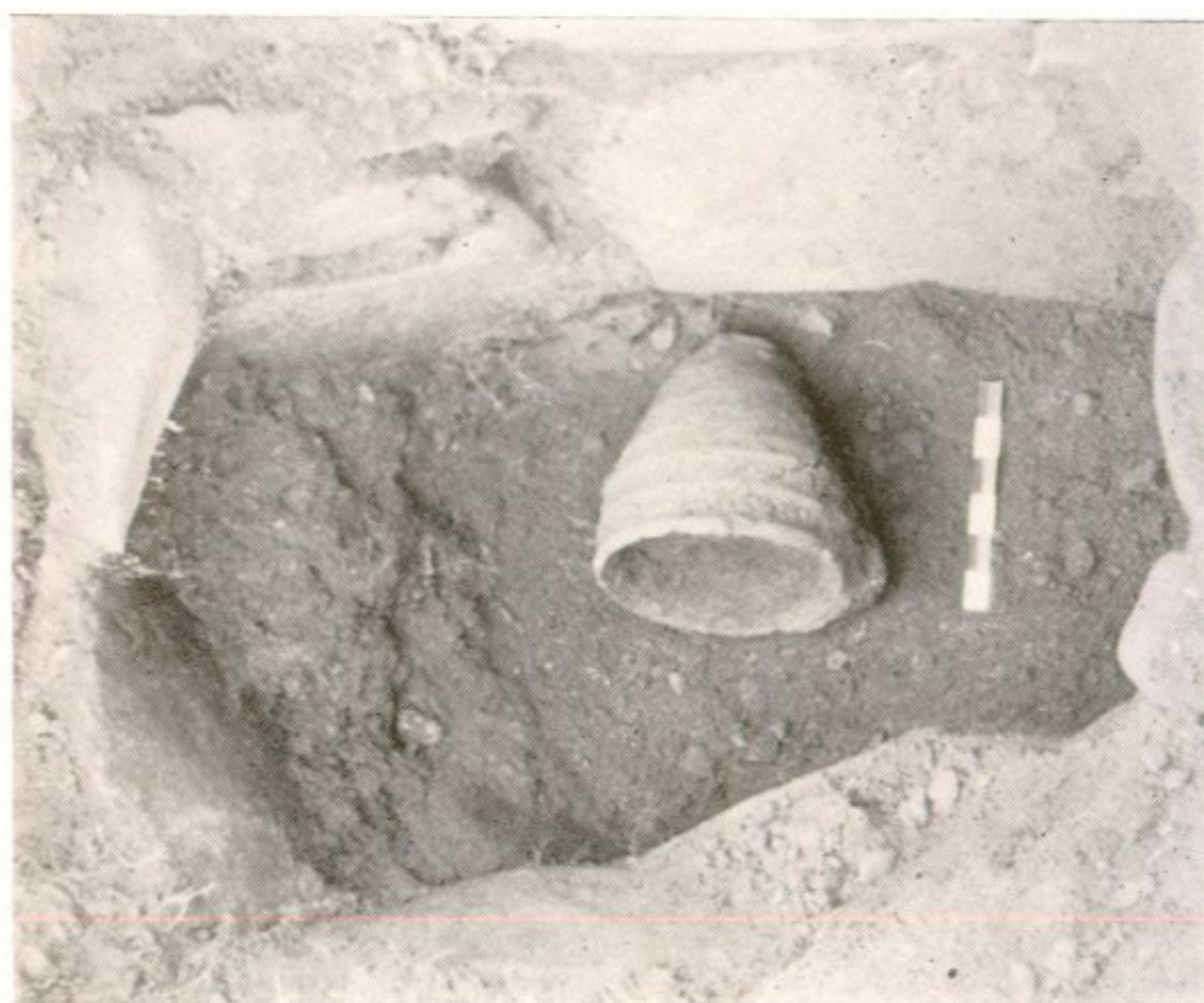
I am inclined to rule out the filling of the cists with 'occupation earth', hut floors or the like such as would contain more phosphate than the 'natural'. There is no charcoal or the like to suggest this. Hence one can say that both cists contained rather more bone at one time than was found on excavation.

Acidity (pH value). The pH of the soils was determined with a glass electrode-calomel electrode combination at a soil:water ratio of 1:2.5.

Results

Soil from site . . .	pH 6.5
Soil from Cist II . . .	pH 6.0
Soil from Cist III . . .	pH 6.5

Discussion. The soils are distinctly but only slightly acidic. The number of comparative cases available to me is not very large, but the two soils from which I have seen virtually intact bones recovered were alkaline (pH 7.5-8). I do not think the above figures rule out the disappearance of bones by soil action, and since distinct evidence of phosphatic enrichment of the soil in the cists has been obtained it is likely that this happened.



2. Food vessel in Cist II before removal



1. Capstone of Cist II *in situ*



2. Pit 24, with filling stones partially removed at S. end



1. Gist II