

A Bronze Age Burial Site at Kinneil Mill, Stirlingshire

by *J. W. Marriott*

The site is in the parish of Muiravonside, Stirlingshire (N.G.R. NS 97457820), 2 miles NW. of Linlithgow. It was discovered in January 1965 during gravel-quarrying operations by the Forth Valley Sand and Gravel Co. Ltd. Bones and pottery had been disturbed in the course of stripping the overburden to the E. of Castle Hill and this was reported to the National Museum of Antiquities. Visits were made by Miss A. S. Henshall, on the Museum staff, and Mr P. R. Ritchie, Inspectorate of Ancient Monuments, Ministry of Public Building and Works. Two short cists with inhumations had already been found, and remains of seven cinerary urns were recovered during these visits. Cremated bone was discovered in the hole holding urn No. 1 and this represented a further individual. Two ditches were observed by Mr Ritchie in section in the quarry face. The quarry company agreed to transfer their operations elsewhere while an excavation was carried out.

The excavation, mostly at weekends, was undertaken by members of a class on Archaeology organised by the University of Edinburgh Department of Adult Education and Extra-Mural Studies. It took place in difficult weather conditions, the subsoil being frozen hard for part of the time. During the excavation an inverted Collared Urn with a cremation, an urnless cremation and a small ash-pit containing calcined bone fragments with carbonised matter were found. The surviving arc of an apparently circular ditch was excavated and part of a further ditch was uncovered beneath a quarry access road. Before abandoning the site in April 1965, an earth-moving machine carefully scraped the topsoil away in the unexcavated areas adjoining the site, but no further finds or soil marks were uncovered. The area has since been completely removed by further gravel quarrying.

THE SITE (fig. 1)

Castle Hill stands about 250 yds. S. of the River Avon and 2 miles NW. of Linlithgow. The A9 road between Linlithgow and Falkirk passes 200 yds. to the S. of it. The burial site lay immediately to the E. of the hill at an altitude of 130 ft. O.D. The area is covered with Late Glacial gravels overlying sandstones, mudstones and limestones which are exposed beside the River Avon. Castle Hill was once 210 ft. high but has been extensively quarried for gravel by a previous company and little but a shell of the hill remained at the time of the excavation.

There is some doubt as to whether Castle Hill had been fortified. The New Statistical Account of Scotland mentions that a number of 'stone coffins' had been found there.¹ Quarry workers said that a number of 'stone coffins' had been removed from the hill by the previous company, and local farmworkers visiting the site referred to stories of such features having been found

¹ *NSA*, VIII (1845), 210. The record of defences on the hill seems to be due to misinterpreting the cultivation

terraces on the side of the hill, see RCAMS, *Inventory of Stirlingshire*, No. 504

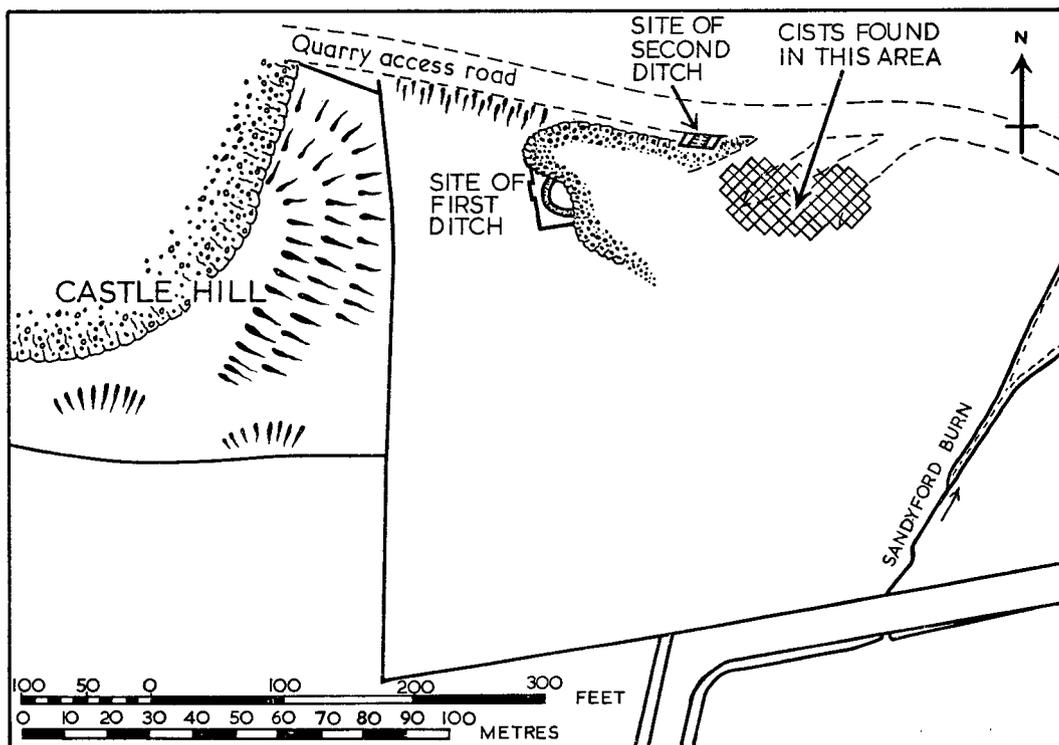
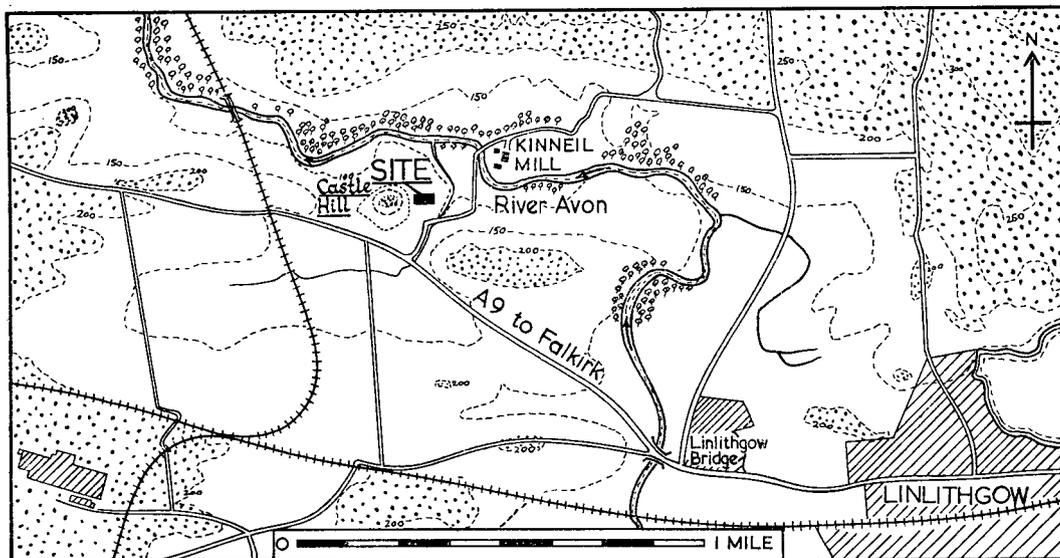


FIG. 1. Situation and general plan of site

along the banks of the River Avon. Unfortunately there are no precise details of these finds, but it is possible that they represent further Bronze Age burials.

THE EXCAVATION

Extensive gravel quarrying had recently been in progress and the whole area had become a complex of quarrying, tipping and approach tracks. The site of the finds had been quarried away from a generally easterly direction to a depth of about 8 ft. Even after quarrying operations had been stopped to allow excavation to take place the edge of the site continued to collapse slowly.

The two short cists, found and removed by the Quarry Company before the investigations, came from an area approximately 120 ft. E. of the centre of the ring-ditched cremation cemetery. Subsequent quarrying had made it impossible to fix their position accurately but an approximation was given by the digger-driver and is shown on the site plan (fig. 1). He had re-interred one of the skeletons near the River Avon, and said that it was found crouched 'with a pile of something like black burned silk' on the chest. This substance was 'black, diagonally crossed like strands of fabric' and had powdered when he tried to pick it up. Subsequently some of the bones and teeth were recovered, badly damaged due to being waterlogged and frozen solid in the interval. With them was a small piece of medieval pottery. An undecorated Food Vessel was found in one of the cists.

The positions of the seven cinerary urns recovered before the excavation are given on fig. 2, though it is only possible to correlate urns Nos. 1-5 and No. 8 with the reconstructed pottery. There is some doubt about identifying the others due to the difficult circumstances in which they were found. The remains of urns Nos. 6 and 7 have become mixed. These urns are referred to as A, B and C in Miss Henshall's report.

The West Ditch (fig. 2, Pl. 7a, b)

About 2 in. of topsoil remained on the area immediately W. of the quarry. This was removed and, as anticipated, revealed the arc of a silted-up ditch linking the two sections observed in the quarry face.

Sections of the ditch were dug at the N. end and towards the centre (see figs. 2 and 3, Pl. 7a), and then it was completely excavated. It varied between 5 ft. and 6 ft. 9 in. wide and between 1 ft. 10 in. and 2 ft. 3 in. deep. The bottom of the ditch was rather rounded but it had been irregularly dug, with variations in the steepness of the sides and instead of progressing in a smooth curve it changed direction fairly sharply at two points.

The bottom of the ditch contained a light soft sand to a depth of 5 or 6 in., although this layer was missing in places (see the S. face of the central ditch section). Above this was dark, rather wet sand for some 6 in., and this shaded into an overlying layer of light soft sand about 4 or 5 in. deep. The top filling of the ditch was a dark hard sand which was mixed with gravel in many places. Part of a broken stone ring, and an irregular piece of shale, worn by use as a rubber, were found at the top of this layer. In the dark wet sand between 3 in. to 10 in. above the ditch bottom were twenty stones up to 1 ft. 6 in. long, in three groups. They appeared to be random groupings and no significance was attached to their presence.

The fact that the subsoil had been frozen solid would have helped to protect it from damage while mechanised soil removal was taking place so close above it. As exposed by excavation the ancient surface was hard and gravelly with several pockets of soft sand. In the area enclosed by the ditch two areas with indications of extensive burning were found. One (marked B3 on the plan) was approximately 4 ft. long and tapered from 1 ft. wide at the N. end to 8 or 9 in. at the S. end. The second area (marked B4) was approximately 4 ft. long by 3 ft. wide. Two stones of

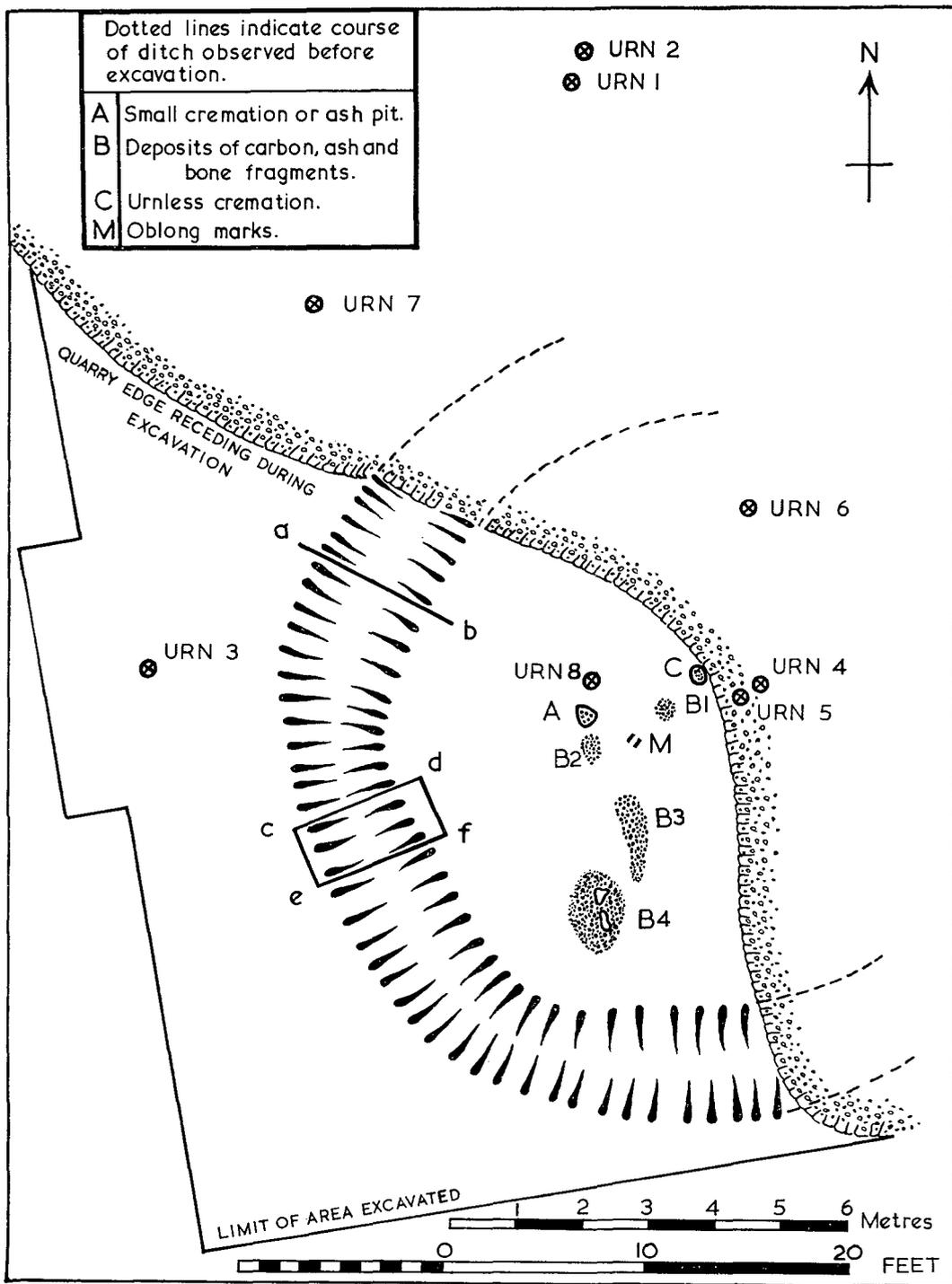


FIG. 2. Plan of site at West Ditch

reddish colour lay within it. Both areas were covered with blackened fine sand mixed with charcoal. The edges were irregular and indistinct but the deposit was approximately half an inch thick all over.

Two smaller areas (marked B1 and B2 on the plan) were composed of darkened sandy soil with bone fragments. The first was 10 in. to 11 in. across and the second measured 14 in. by 9 in. Both were approximately half an inch deep.

Two sharply defined oblong marks appeared between these areas. They were parallel, measured 6 in. by 2 in., by half an inch in depth and lay 9 in. apart. They were both filled with fine dark sand and were impressed into paler soft sand. It seems unlikely that they were contemporary with the ancient surface.

The Burials

An urnless cremation (marked C on the plan) was found at the edge of the quarry, and about 5 ft. farther W. lay an inverted Collared Urn containing a second cremation. The base of the urn had been crushed and projected a little way above the striped surface. The base was tilted slightly to the E. and the mouth had apparently not been closed. The hole in which it stood had been filled with a mixture of fine sand and carbonised matter. Because of its damaged condition it collapsed as it was being removed but has been reconstructed (Pl. 7c).

A small hollow (marked A on the plan) 1 ft. 10 in. SSW. of this urn contained sand, charcoal and bone fragments. It was roughly circular, about 13 in. in diameter and $4\frac{1}{2}$ to 5 in. deep. The contents appeared to be a small cremation, but there was little bone and it could have been an ash-pit connected with the urn burial.

Examination of the cremations from the area of the W. ditch (Appendix III) produced the following results: urn No. 1, one adult individual, possibly male, possibly over 30 years old; part of a cremation beside urn No. 1, one individual, immature or young adult female; urn No. 2, one male of about middle age; urn No. 3, possibly two individuals (one duplication of a bone), adult, possibly female; urn No. 6 or 7, one individual, possibly adult; cremation without urn (marked C on plan), one individual, possibly adult. Unfortunately, no report is available on the cremations in urns Nos. 4, 5 and 8.

The East Ditch

About 105 ft. ENE. of the approximate centre of the area enclosed by the W. ditch the section of a second ditch was seen in the quarry face. Excavation of a segment showed it to be about 8 ft. 6 in. wide and 3 ft. deep and to contain compact dark brown soil with many stones. These were scattered throughout the filling, a large number being 6 to 9 in. across.

Unfortunately this ditch was almost directly underneath a quarry access road which was in constant use, but with the co-operation of the quarry company it was possible to excavate about 10 ft. of it. It followed a NE. course and trial scrapings of the access road showed that it was curved, with the concave side of the arc to the E. The ground to the N. of the road had been quarried, and subsequent tipping operations had filled up much of the area, burying any section of the ditch existing there.

CONCLUSIONS

It seems reasonable to assume that the first (or W.) ditch was circular, in which case the area enclosed would have been some 25-35 ft. in diameter, and urns Nos. 4 and 5 as well as the urnless cremation would have been situated near the centre. Preservation of the ancient soil surface with traces of burning and the fact that urn No. 8 projected slightly above this surface

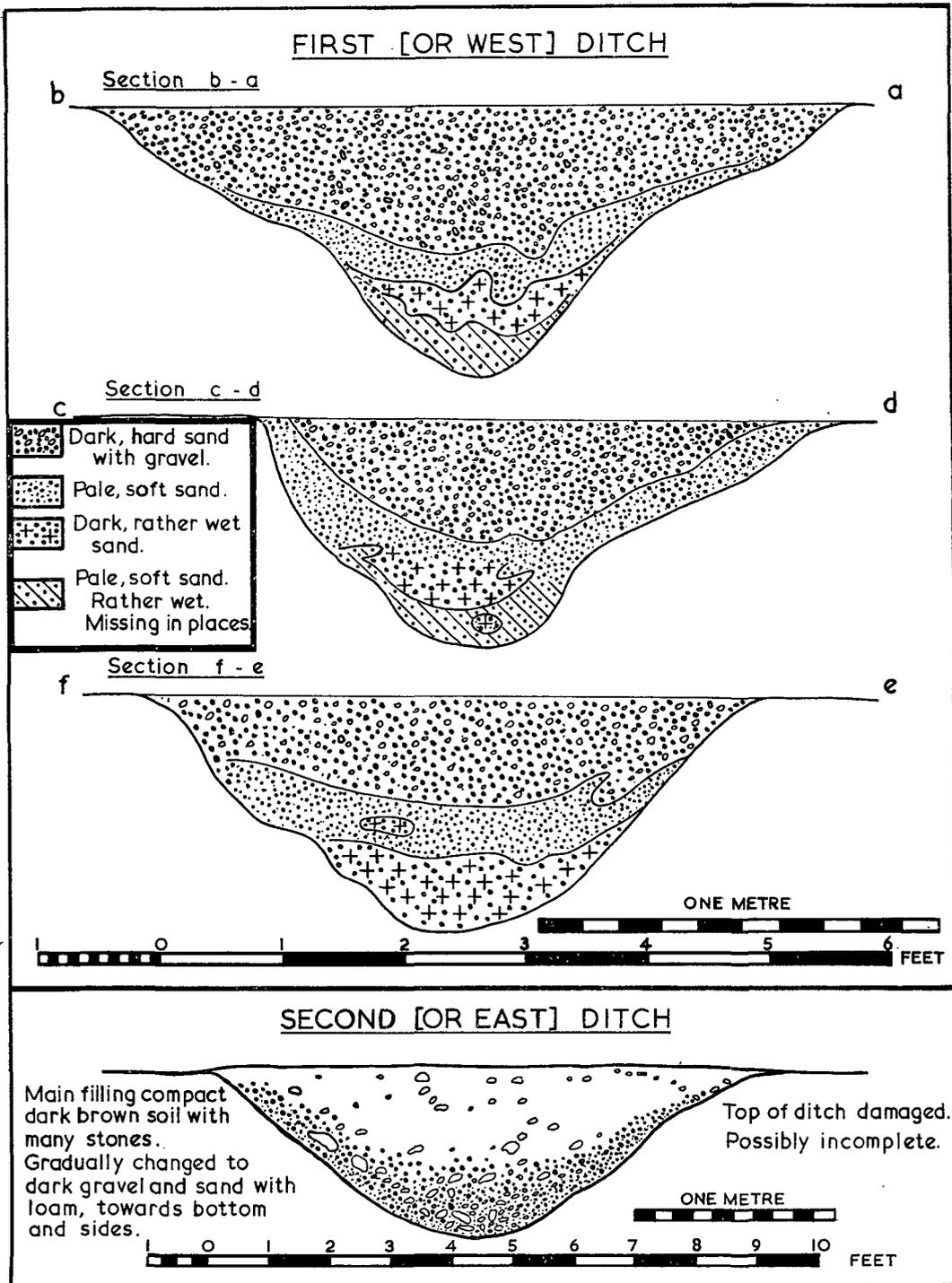


FIG. 3. Sections of ditches

may indicate that the enclosure had been covered with a protective layer in the form of a cairn or barrow. The topsoil removed by the quarry company from the area of the site had been tipped nearby, but examination of the tips did not show a higher than average proportion of stones. The ditch silt, however, was almost entirely sand. This could mean that the area within the ditch had been covered with the sand and gravel dug from the ditch and that the barrow had weathered away and was eventually ploughed out. A possible explanation of the small ash-pit (marked A on the plan) is that it was the lower part of a secondary burial, the upper part of which had disappeared with the barrow.

Even less is known about the more easterly ditch; the two short cists may have been associated with it, but, in the event, it was impossible to determine the precise relationship. Even if it had been possible to excavate the ditch below the access road the additional length (some 15-10 ft.) would probably not have added much to our knowledge of the site,

ACKNOWLEDGMENTS

Special thanks are due to Mr W. Griffith of the Forth Valley Sand and Gravel Co. Ltd. who gave every possible help during the excavation. Thanks are also due to Miss A. S. Henshall and Mr P. R. Ritchie for the advice and assistance so willingly given at all times. The drawings of the urns and other finds are by Miss Henshall as is the report on the pottery. It would not be possible to name all the helpers who travelled from Edinburgh in the most discouraging weather conditions, but without them the excavation could not have taken place.

APPENDIX I

The Finds (fig. 4)

by A. S. Henshall

Cinerary Urns

1 Cordoned Urn which was found intact, but fell apart when lifted and has been reconstructed. There is one cordon inside the rim, and two on the exterior, the upper defining the very slightly inturred neck. The neck is decorated with lines of deep comb impressions. The teeth of the comb are widely set and round in cross-section, tending to look square or oblong where the comb has slipped. The pattern, between two horizontal lines, consists of a row of chevrons made with a double line, the alternating triangles filled with double V's. Another horizontal line runs just below the cordon.

The ware is thin even for a Cordoned Urn, heavily gritted and fairly hard, with a fine slip covering the rather lumpy surface. The colour is mid brown with areas of dark grey outside, entirely dark grey inside. During reconstruction two breaks along building rings were observed (EQ 751).¹

2 Cordoned Urn which was found intact except for rather more than half the base destroyed during stripping operations before excavation. There are three cordons outside, the upper 1 in. below the rim, the middle one at the base of the deep vertical neck. Decoration is by impressions of a coarse two-ply string. One faint line appears on the internal bevel of the rim for part of its circumference. Outside, there are three lines between the rim and the upper cordon, with one group of five slanting lines at about $\frac{1}{2}$ in. intervals crossing them. On the neck are bold chevrons composed of two lines joined by slanting lines, the intervening triangles filled with a varying number of horizontal lines but generally leaving the apex unfilled. The design is bordered by two horizontal lines above, and one line below which does not run round the whole circumference.

The ware of the lower part is similar to that of the Food Vessel, but over the upper part the fine surface is mostly missing, and grits of varying sizes mostly quite large are visible (EQ 752).

3 Sherds from the collar and upper part of the body of a Collared Urn, comprising about a quarter of the vessel. The urn is undecorated. There is a gentle cordon estimated to be $2\frac{1}{4}$ in. below the collar,

¹ Museum catalogue number (Nat. Mus. Ant. Scot.).

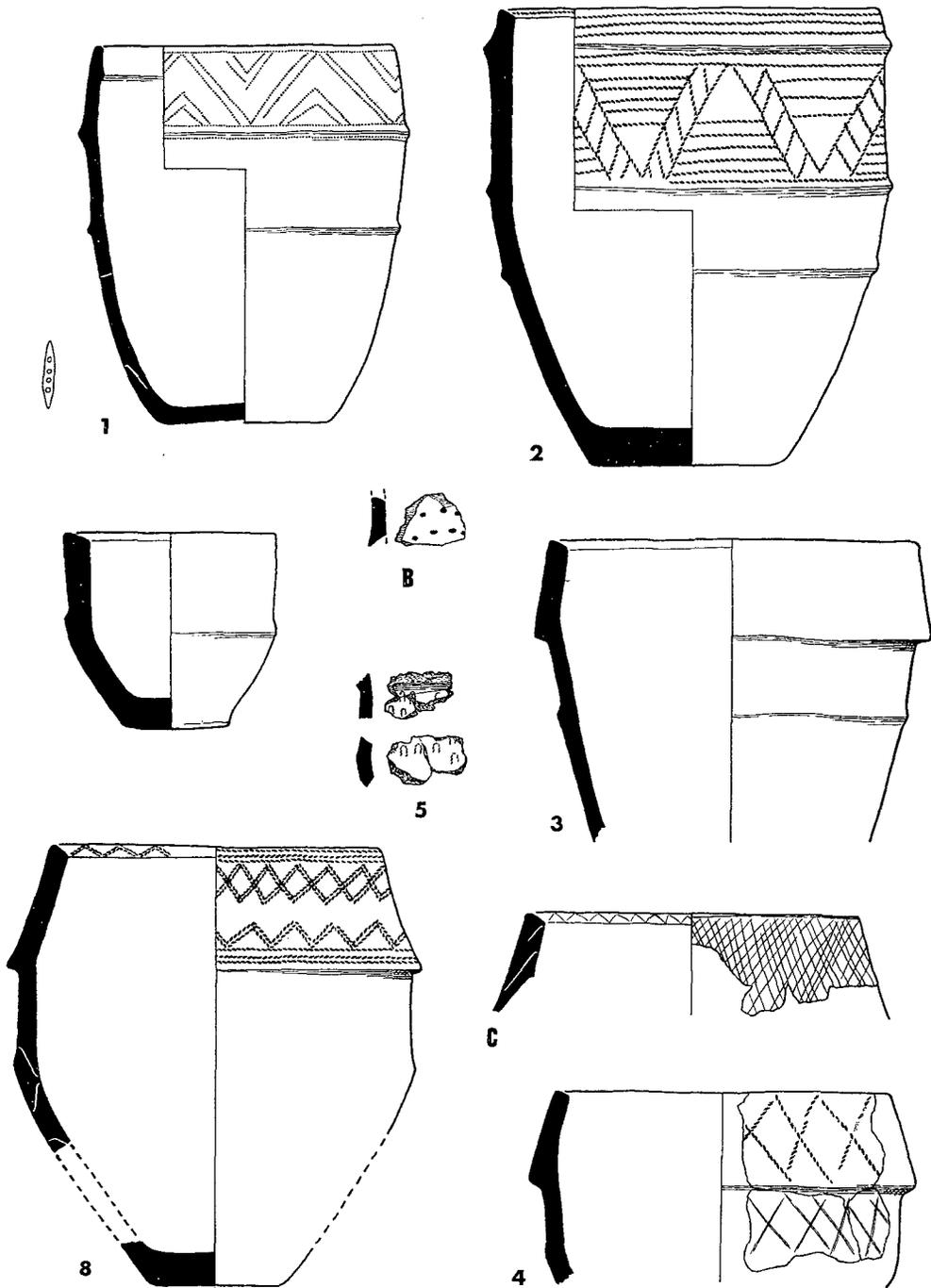


FIG. 4. The finds ($\frac{1}{2}$)

but there is no join between the two groups of sherds. The ware is rather friable, heavily tempered with fairly large angular grits. Over the surface there is a fine buff slip, but the outer surface is uneven and some of the larger grits show through; the core is black (EQ 757).

4 Sherds of a Collared Urn comprising about a third of the upper part of the vessel, but few sherds actually joining. The collar is decorated with a lattice of rather thick string impressions, and the neck is decorated with a lattice of incised lines. The ware is similar to that of the other Collared Urns (EQ 756).

5 A few small sherds probably from the neck of a Collared Urn, one sherd having a concave curve from just below the collar, and another sherd retaining part of a gentle shoulder below which it is undecorated. The depth of the neck is not known. Between collar and shoulder the pot was decorated with small hoops of impressed fine string arranged in horizontal rows. The ware is similar to 3, but rather thinner with a buff-pink slip outside (EQ 760).

8 Upper half of a Collared Urn, restored, some isolated body sherds, and the detached base. The collar is decorated with plaited-cord impressions. Below the rim and also above the lower edge of the collar there is a horizontal plaited impression supplemented by a two-ply string impression, together forming a triple line. Below the upper line is a row of diamonds formed by two rows of overlapping chevrons, and above the lower horizontal line is a row of chevrons. A row of faint chevrons runs round the rim bevel. The pattern has been very carefully executed. The ware is similar to, but rather less friable than, that of the other Collared Urns, with a particularly thick slip outside, pink-buff becoming dark grey at the rim. The inside surface is fairly smooth, dark brown. The lines of the building rings of the body below the collar can be traced and are curious in that the joins lie in alternate directions (EQ 754).

Urns 6 and 7 cannot now be definitely identified, but the sherds are listed here as A, B and C.

A Seven sherds from the wall of an urn, the largest sherd having a cordon very like that on 3. The diameter at this point is $10\frac{1}{2}$ in., so the urn is slightly larger than 3. The ware is similar, but rather less friable and distinguished from that of 3 by a fine dark brown interior surface (EQ 758, not illustrated).

B A wall sherd decorated with round or oval impressions arranged in two or more horizontal rows. The ware is similar to 3 and A but is dark grey-brown in colour. Probably the sherd is from the neck or collar of a Collared Urn (EQ 759).

C Sherds of a Collared Urn comprising about two-thirds of the collar and a few isolated sherds from the neck and body. The collar is unlikely to be more than a fraction deeper than the surviving 3 in., but the sherds from the angle between collar and neck cannot be joined. The collar is covered with a lattice of deeply incised but irregular lines. Along the rim edge is a single irregular line, and a row of transverse and slanting lines form a row of triangles round the internal rim bevel. The neck is undecorated. The ware is similar to 3 and A, with pinkish buff surfaces and a slip outside. The joints of three building rings can be traced on the collar (EQ 755).

Bone 'toggle' cut from a thin sliver of bone, rather less than 1 mm thick, burnt and slightly warped in consequence (EQ 753). Found in urn 1. (Illustrated immediately to l. of Urn 1 in fig. 4.)

Food Vessel in the form of a bipartite bowl with the vertical neck divided from the lower part by a slight shoulder about half-way down. The rim has a slight bevel. The walls are unusually thick, about $\frac{3}{4}$ in. The ware is heavily gritted but covered by a fine pink mid-brown slip so that the grits are mainly obscured. The vessel, though cracked, was recovered intact (EQ 750). From one of the short cists. (Illustrated immediately below Urn 1 in fig. 4.)

Sandstone ring, half surviving, rather irregular but external diameter about $1\frac{1}{4}$ in., internal diameter about $\frac{5}{8}$ in., square in cross-section. Use unknown, but the central perforation is too large for a spindle whorl (EQ 763, not illustrated). From the top filling of the W. ditch.

Piece of shale, chisel-shaped, $2\frac{3}{4}$ by $1\frac{1}{4}$ in., faint striations on one face, both ends damaged, perhaps used as a rubber (EQ 762, not illustrated). From the top filling of the W. ditch.

Rim sherd of a medieval jar, rectangular-section rim with estimated internal diameter of $6\frac{1}{2}$ in.; buff-pink fairly hard ware with fine grits (EQ 761). Found with the re-interred skeleton.

Comment

Undecorated Food Vessels are unusual, and are difficult to classify on the basis of their form, which, like that from Kinneil Mill, may not fall within the recognised groups. Three Scottish examples, besides that from Kinneil Mill, may be associated with urn cemeteries.¹

¹ Brackmont, Fife, *PSAS*, LXXXIII (1948-9), 224 ff.; Doonfoot, Ayrshire, *TDGNHAS*, XLII (1965), 38; Maxwelltown, Dumfriesshire (the surface is damaged

and may have been decorated), *ibid.*, 39; also *PSAS*, xcvi (1962-3), 364 f.

Cordoned Urns have recently been discussed by Piggott and Longworth.¹ Cord-impressed or incised decoration is normal, but the actual motif on urn 2, with chevrons made of double lines linked by transverse lines, is unusual. It is worth noting its appearance on two other Cordoned Urns, from Brackmont Farm (probably part of the same cemetery which produced an undecorated Food Vessel) and Oban.² The latter was probably associated with a battleaxe which would suggest a date in the sixteenth, or possibly fifteenth, century, contemporary with the Wessex culture of southern England, and probably with its first phase.³ The other Cordoned Urn from Kinneil Mill was decorated by a comb with fine round-section teeth, a technique which appears to be confined to this form of urn: a good parallel comes from Seamill, Ayrshire.⁴

The bone toggle with four perforations was found in urn 1. A similar smaller toggle with two perforations was found in an unusual and very large Cordoned Urn at Balnabraid, Argyll, and another was with the cremation inside an Enlarged Food Vessel urn at Woodhead of Garvock, Dunning, Perthshire.⁵ A broken four-hole specimen has been found recently with a cremation associated with a bronze blade and bone crutch-headed pin at Rahinashurock, Co. Westmeath.⁶ Small riveted blades are associated with Cordoned Urns in Scotland, and not with other types of urn. A crutch-headed pin came from a Cordoned Urn at Balneil, Wigtownshire⁷ where it was associated with a faience quoit bead, the burial dating to the fifteenth or fourteenth century B.C.; crutch-headed pins may be dated by their Wessex culture contexts, mainly belonging to its second phase.⁸ A broken object which may be part of another bone toggle with six holes was found in a chambered tomb at Largantea, Co. Derry (published as a 'dagger-plate'). The deposits in the chamber were disturbed but included sherds of Beakers, Food Vessels and Cordoned Urns.⁹

Collared Urns 3 and 8 do not belong to Longworth's primary series.¹⁰ Among a number of Scottish undecorated Collared Urns two may be noted among the urns from the enclosed urn cemetery at Loanhead of Daviot, Aberdeenshire.¹¹ While an incised lattice is often found on either collar or neck, the close-set hatching of urn C is unusual.¹² A rather less common decorative technique is plaited-cord impressions, which seems to be confined to Collared Urns. There are several examples in the National Museum, one coming from the Loanhead cemetery. Impressed string hoops, such as appear on vessel 5 at Kinneil Mill, play a minor part in the decoration of Collared Urns, appearing in a row on the shoulder, or a few rows on the neck. The sherd B with impressed dots can be paralleled on urns where dots appear on the collar or neck. The combination of plaited cord on the collar and hoops on the shoulder of the urn from Monklaw, Jedburgh, and of dots on the neck and hoops on the shoulder of that from Marchhouse, Ayrshire,¹³ clearly show that these small sherds at Kinneil belong to the collared group of urns.

APPENDIX II

Kinneil Mill Soil Samples

by H. McKerrell

National Museum of Antiquities of Scotland

Samples¹⁴

- 1 Large bag of wet sand.
- 2 Soil from cremation beside Urn No. 1.
- 3 Soil from extended stain B3.

A proportion of each of the three samples was dried at 120°C and finely ground. These specimens were then used to obtain the experimental results listed below.

¹ Piggott, S., in *Prehistoric Peoples of Scotland* (1962), 94 f.; *PSAS*, xcvi (1962-3), 129 ff.

² *PSAS*, lxxxiii (1948-9), 227 f.; *ibid.*, xxxii (1897-8), 58 f.

³ *PPS*, xxxii (1966), 207, 218, 241, type IV A.

⁴ *PSAS*, xvii (1882-3), 72.

⁵ *ibid.*, liv (1919-20), 179; *ibid.*, xli (1906-7), 9 f.

⁶ *Riocht na Midhe*, 3 (1963-6), 227 ff.

⁷ *PSAS*, l (1915-6), 302 ff.

⁸ *PPS*, iv (1938), 85 ff.; *ibid.*, xxii (1956), 37 ff.

⁹ *UJA*, i (1938), 173 ff.

¹⁰ As defined *PPS*, xxvii (1961), 263 ff.

¹¹ *PSAS*, lxx (1935-6), 293 ff.

¹² The nearest parallels in the National Museum are a small urn from the Braid Hills, Edinburgh, *PSAS*, xxxiv (1899-1900), 492, and an urn from Carnousie, Banffshire, xvi (1881-2), 237.

¹³ *ibid.*, lxviii (1933-4), 79 f.; lviii (1923-4), 337 f.

¹⁴ NMAS Lab. Ref. 028/68.

Phosphorus content

- 1 200 p.p.m. phosphorus.
- 2 400 p.p.m. phosphorus.
- 3 1,500 p.p.m. phosphorus.

Sample 1 may be presumed to provide a rough indication of the background soil phosphorus content, and clearly Sample 3 (and to a lesser extent Sample 2) has an abnormally high level. Bearing in mind the nature of the soil (wet aerated sand) it seems most likely that the high phosphorus level is due to insoluble calcined bone.

Weight loss upon ignition and colour comparison

- 1 Weight loss 3.2%. Lightest shade of brown of the three samples.
- 2 Weight loss 4.7%. Darkest shade of brown.
- 3 Weight loss 3.9%. Intermediate shade of brown.

All three samples were identical in colour after ignition (orange-red sand colour). The weight loss results parallel the colour changes, both being most marked for Sample 2. It seems probable therefore that the organic material content increases in the order Sample 2 . . . 3 . . . 1.

Microscopy

Specimens of each of the dried but unground samples were mounted separately in cold curing resin, then ground, polished and examined by reflected light microscopy. All three specimens were largely composed of similar sand grains but in addition each contained small fragments of charcoal (up to 2 mm across). Samples 2 and 3 were also observed to contain small fragments of bone (up to 0.5 mm across), in the case of Sample 3 there was as much bone as charcoal. Emission spectroscopy was used to confirm the visual observation of bone by analysis of isolated fragments.

The exact nature of the stains from Samples 2 and 3 cannot be determined from the results above. The actual staining itself is seen to be due to the higher level of organic material at the stain area than in the surrounding soil, but it is not at all clear whether this staining is due to organic material resulting directly from procedures or operations carried out *in situ*, or to precipitation of percolating humus over subsequent years by the then buried surface.

The high phosphorus contents, the presence of bone and charcoal, and the insoluble nature of the bone material from Samples 2 and 3 tend to confirm the idea that the stain areas were either actual cremation sites or the places of deposition of material resulting from cremations.

APPENDIX III

The Cremations

by C. B. Denston

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The aim, methods and limitations of the study of cremated remains have been fully discussed by Gejvall,¹ Lisowski² and the writer.³ They remain the same in this case. It is important to note however that individual attributions of fragments may be an expression only of probability and not certainty.

Cremation in Urn 1

General Colour predominantly light brown with a few fragments dark brown to black. Larger

¹ *Forvännan*, XLII (1947), 39 ff. *Kungl. Vitterhets Historie och Antikvitets Akademiens Handl.* Del. 60:2 (1948), 153 ff.

² Powell, T. G. E. and Daniel, G. E., *Barclodiad y Gawres* (1956), 62 ff., Appendix B; *JRSAI*, LXXXIX (1959), 26 ff.; Piggott, S., *The West Kennet Long Barrow* (1962), 90 ff., Appendix II.

³ Denston, C. B., *A cremation from Stonea Barrow and A cremation from Whiteditch Bridge, Feltwell, Norfolk*. Unpublished mss. reports in Duckworth Laboratory archives. *PPS*, xxxi (1965), 49 ff.

fragments often twisted and distorted with elliptical cracks. Outer table split from inner one on some cranial fragments. Length range is up to 89 mm.

Skull: seven fragments of the mandible including pieces of left side of body and coronoid process, from the area of mental protuberance, right ramus and left condyle; thirteen fragments of the maxilla, mostly alveolar borders or central position, one from lateral border of nasal aperture and frontal process, two of the parietal bone; five fragments of the frontal bone, one showing internal crest, four from superior border of orbits; eleven fragments of the temporal bone including two mastoid processes, four pieces from area of mandibular fossae, one petrous portion; two fragments of the right and left zygomatic bones; one styloid process; body of hyoid bone; twenty-four fragments of the cranial vault showing sutures or serrated edges; one hundred and eight other fragments not attributable to any specific area; fragments range from 13 mm to 56 mm. *Teeth*: thirteen roots and four root fragments, including at least three maxillary molars, one mandibular molar and six single-rooted teeth. *Femur*: six fragments, one from the shaft, showing the *linea aspera*, one from the head and the rest from the distal extremity; length range 29–76 mm. *Tibia*: seven shaft fragments, length range 50–89 mm. *Fibula*: four shaft fragments, length range 63–83 mm. *Humerus*: four fragments from the shaft, two from the head, length range 39–64 mm. *Radius*: five shaft fragments, length range 43–69 mm. *Ulna*: six fragments, two from proximal third of shaft and one from distal extremity, length range 22–64 mm. *Ribs*: sixteen fragments, length range 15–45 mm. *Scapula*: three fragments, length range 29–42 mm. *Vertebral column*: sixty-two fragments. *Patella*: one posterior surface of left patella. *Talus*: two fragments. *Cuboid*: one fragment. *Carpal bones*: one lunate and one trapezoid bone. *Metatarsal and metacarpal bones*: seven fragments from shafts and fourteen possible shaft fragments, four distal extremities. *Phalanges*: seventeen shaft fragments and five extremities; six distal phalanges, possibly all of the hand. *Long bone fragments*: three hundred and thirty-five, length range 15–45 mm. *Miscellaneous cancellous bone*: numerous fragments, length range 10–40 mm. *Miscellaneous fragments*: numerous, length range 3–40 mm.

Pathology The inferior border of the anterior aspect of one of the cervical vertebrae and the distal extremity of an ulna displayed some osteophytic growth.

Number of individuals One.

Sex ? Male.

Age Adult ? over thirty years.

Cremation beside Urn 1

General Colour light brown. Fragments small and few. Length range 4–39 mm.

Skull: one fragment of a maxilla displaying two tooth sockets; two fragments of the cranial vault showing sutures; twenty-seven fragments not attributable to any specific area; length range 8–39 mm. *Teeth*: two roots, possibly of molar teeth. *Long bone*: forty-eight fragments, length range 9–38 mm. *Miscellaneous cancellous bone*: twenty-seven fragments, length range 8–26 mm. *Miscellaneous fragments*: numerous, length range 4–34 mm.

Pathology None.

Number of individuals ? One.

Sex Immature or young adult female.

Age Unknown.

Cremation in Urn 2

General Colour predominantly light brown but some fragments light to dark grey. Larger fragments often twisted and distorted. Length range up to 112 mm.

Skull: twelve fragments; three of the parietal bone showing sutures, one of a parietal and occipital bones joined by the lambdoid suture, one of the temporal bone; one of the left zygomatic bone; five fragments of a mandible, all joining, with parts of the rami and coronoid processes; other fragments not attributable to any specific area; length range 22–112 mm. *Teeth*: two roots of mandibular molars, and one root of a premolar tooth. *Femur*: two fragments from the head. *Tibia*: four shaft fragments, length range 33–46 mm. *Ribs*: five fragments, length range 31–58 mm. *Scapula*: two fragments. *Vertebral column*: forty-four fragments. *Patella*: one fragment. *Metatarsals, metacarpals and phalanges*: one shaft fragment from a metatarsal bone; one shaft fragment of a metacarpal bone; five other fragments not attributable to any specific bone. *Miscellaneous long bone fragments*: thirty-four fragments, length range 19–86 mm. *Miscellaneous cancellous bone*: eighty-five fragments, length range 2–44 mm. *Miscellaneous bone*: numerous fragments, length range 2–75 mm.

Pathology At least four thoracic and one lumbar vertebrae affected by osteophytic growth.
Number of individuals One.
Sex Male.
Age Adult, ? middle-aged.

Cremation in Urn 3

General Colour predominantly light brown. Larger fragments often twisted and distorted with elliptical cracks. Outer table split from inner one on some cranial fragments. Length range is up to 63 mm.
Skull: two fragments of the superior borders of two separate right orbits; two fragments of zygomatic bones; one fragment of a mastoid process; a zygoma of a temporal bone; one fragment of a maxilla; two fragments of a mandible; thirty-seven fragments showed serrated sutural edges; one hundred and sixty-two fragments not attributable to any specific area; length range 7-49 mm. *Teeth*: two roots and three fragments of roots. *Fibula*: four shaft fragments, length range 22-51 mm. *Ulna*: two fragments from proximal extremities, one from right and one from left ulna; one possible shaft fragment; length range 37-45 mm. *Humerus*: one distal extremity fragment. *Innominate bone*: three fragments. *Scapula*: two fragments. *Foot*: one cuneiform bone. *Hand*: one process of a hamate bone. *Ribs*: ten fragments, length range 14-36 mm. *Vertebral column*: fifteen fragments. *Metacarpal and metatarsal bones*: twelve shaft fragments; nine distal or proximal extremities; one distal extremity of first metacarpal bone. *Phalanges*: two distal phalanges; another complete save for proximal extremity; three distal and three proximal extremities; five other fragments. *Miscellaneous long bone fragments*: three hundred and ninety-five, all from shaft, length range 7-63 mm. *Miscellaneous cancellous bone*: numerous fragments, length range 5-37 mm. *Miscellaneous bone*: Numerous fragments, length range 3-39 mm.

Pathology None.
Number of individuals ? Two.
Sex ? Both female.
Age Uncertain, ? adult.

Cremation in Urn 6 or 7

General Colour predominantly light brown. Few cranial fragments had the outer table split from the inner one. Up to 36 mm in length.
Skull: ninety-five fragments; one fragment of superior border of right orbit of frontal bone; fragment of right zygomatic bone; fragment of a coronoid process of mandible; length range 6-30 mm. *Teeth*: three root fragments. *Miscellaneous long bone fragments*: seventy-two from shafts, length range 8-36 mm. *Miscellaneous cancellous bone*: fifty fragments, length range 5-13 mm. *Miscellaneous bone*: numerous fragments, length range 3-26 mm.

Pathology None.
Number of individuals ? One.
Sex Unknown.
Age Uncertain, ? adult.

Cremation without Urn (C on plan)

General Colour predominantly light brown. Some cranial fragments had the outer table split from the inner one. Up to 37 mm in length.
Skull: one hundred and thirty fragments; one from glabella area; two from superior border of an orbit of the frontal bone; one from alveolar border of a maxilla; one of a zygomatic bone; three fragments of a mandible; eight fragments had serrated sutural edges; other fragments not attributable to any specific area; length range 10-36 mm. *Teeth*: five root fragments. *Phalanges*: four fragments. *Miscellaneous long bone fragments*: one hundred and twenty-three shaft fragments, length range 11-37 mm. *Miscellaneous cancellous bone*: one hundred and five fragments, length range 3-20 mm. *Miscellaneous bone*: Numerous fragments up to 33 mm in length.

Pathology None.
Number of individuals ? One.
Sex Unknown.
Age Unknown, ? adult.

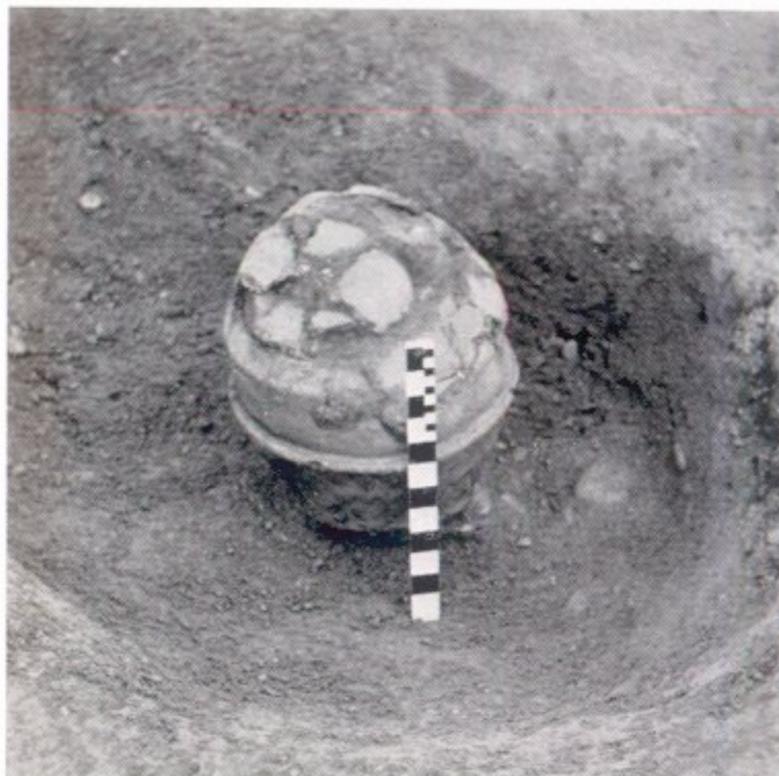
	<i>Total weight in gm</i>	<i>Weight identified</i>	<i>% of total identified</i>
Cremation in Urn 1	1,704.2	1,073.1	63.0
Cremation beside Urn 1	104.8	66.1	63.1
Cremation in Urn 2	450.2	383.6	85.2
Cremation in Urn 3	1,087.8	690.9	63.5
Cremation in Urn 6 or 7	194.4	81.4	41.9
Cremation without Urn	338.3	169.3	50.0



a Section at N. end of West ditch



b West ditch after excavation



c Urn No. 8 *in situ*