## The Excavation of a Barrow at Woodhouse End, Gawsworth, Near Macclesfield.

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## SUMMARY

This was a Beaker monument, with a primary central deposit contained within a pit. The wide, low mound was formed in three separate phases, and the shallow, irregular quarry-ditch therefore assumed in places a double or triple concentric form. Four satellite cremation burials were deposited in a regular arc within the south-west quadrant and a further one was placed a short distance outside the centre of this arc. A large number of potsherds and flints were widely dispersed throughout the tumulus and ditches. Two stone hammers and two pieces of jet rings were found. Structural features within the mound included a fire-pit, a channel, and an oval pit, the purposes of which are all unknown. Two modern intrusions had disturbed the fabric of the mound.

## Phase 1

(1) The site is stripped of turf and topsoil.
(2) The Channel is dug, use is made of it, and it is then filled in.
(3) The Beaker Pit is dug, the primary central deposit is made, and the Beaker cairn is constructed.
(4) The Beaker mound is made, largely with sand taken from a quarry-ditch, in a continuous process which starts with the infilling of the Beaker Pit.

## Phase 2

(1) The Fire-Pit is dug through the existing barrow fabric and used: then it is filled with earth.
(2) The Oval Pit is dug through the existing barrow fabric and fulfils its function. A filling largely consisting of cobbles is completed with earth.
(3) Four satellite cremation burials are placed in the quarry-ditch, which is then infilled, at first partly with cobbles, then with earth and domestic debris, the latter including bones, charcoal, potsherds and flints.

## Phase 3

(1) A fifth satellite cremation burial is inserted into the cobbles of the quarry-ditch infill.
(2) The Beaker mound is raised and enlarged with material taken from a further, outer quarryditch. All existing features with the exception of this outer ditch are covered, and a cobble capping is then laid over the whole.
(3) The outer quarry-ditch is filled in with stones, earth and domestic debris.

## INTRODUCTION

The Woodhouse End Tumulus (SJ96/914695) is situated close beside the A523 route between Macclesfield, Cheshire and Leek, Staffordshire (Fig.1).

The necessary excavation work was carried out entirely by volunteers. Excavation commenced on the 10th September 1966 with a preliminary survey and lasted almost exactly two years, work taking place mainly at weekends, but also during the afternoons and evenings whenever possible, particularly during the summer. Work was held up between November 1967 and March 1968 owing to the presence of foot-and-mouth disease in the area.
All finds and records are lodged at the Grosvenor Museum in Chester. The site now remains to be seen as a tumulus, restored as nearly as possible to what is thought to have been its original appearance. That part of the monument lying outside a north/south line 10 yards ( 9 m ) west of the central point has been left undisturbed.


Fig. 1 Location maps

## THE BARROW

The barrow lies on the 550 feet ( 160 m ) contour, on the forward slope of a hill running down eastwards to the Cow Brook in the valley below (Figs. 1 and 2). From the eastern bank of this stream the barrow appears to stand on a crest, but the hillside behind continues to rise to a spot height of 583 feet ( 175 m ). The steep-sided valley through which the brook runs indicates the massive Red Rock Fault which here divides the Lower Carboniferous Yoredale sandstones and shales to the east from the red Triassic rocks underlying Woodhousegreen to the west, where the Red Marl which forms the uppermost member of this series is about 100 feet ( 30 m ) in thickness. The actual separation of the Derbyshire Dome from the Cheshire Basin takes place along the Red Rock Fault, running here along a north/south line. The valley bottom is flat and poorly drained, and the ancient banks of a shallow but fairly wide lake are clearly discernible. Even today a prolonged spell of rain will bring about the formation of a small lake in what is at best marshy ground.
The Pleistocene deposits overlying the area were laid down during the Quaternary Ice Age and consist largely of clays with wide patches of both fine and coarse sands and some gravels. All these were seen in the lower basic material below the barrow, and above them lies the layer of erratic boulders, cobbles and pebbles which provided packing for the quarry-ditch and pits within the mound and the capping which enveloped the whole. These stones include granites, greenstones, felspars, porphyries, basalt, quartz and siliceous grits, many of which are clearly striated. Also


Fig. 2 Contour map of barrow
present are rough and sub-angular pieces of rock of local origin swept from the adjacent hills to the east. Orange-coloured silica sand and quartz gravel were common in the central area of the mound and in many places were found running down below the quarry-ditch.

During the period in which the construction of the barrow is thought to have fallen forests of the pedunculate oak (Quercus robur) formed the dominant plant cover for this area, with the hazel (Corylus Avellana) by far the most widespread shrub.

## THE EXCAVATION

Woodhouse End lies a dozen miles or so west of the edge of the Carboniferous Limestone plateau of Derbyshire, where the local cultures of the Neolithic and Early Bronze ages are well characterised. Between this limestone outcrop and the Cheshire Plain proper are to be found many groups of barrows. The Woodhouse End site was thought to justify examination quite simply because a very slight uplift on the crest of a hill seemed too abrupt a feature to be entirely natural. Topographically the site offered some encouragement that it might in fact be that of a barrow, though the outline of the supposed mound was both broken and indefinite. An oval depression in the centre represented an obvious disturbance of one kind or another, and the possibility seemed very strong that an excavation of sorts had been carried out by local barrow diggers in the late 19 th century. While it seemed most improbable that a genuine barrow could have escaped their attention no mention of such an enterprise could be found in the very sparse local records. Available aerial pictures showed no sign of any disturbance other than that noted. Nevertheless, in view of imminent hedging and ditching operations on the rim of the mound, it was decided that an examination of the site should be made and might prove of value.
Work was carried out on a grid system of five-foot squares laid out on a north/south line. The unit was found to be most convenient for use by a small team, being large enough to take two workers at a time, yet small enough to allow very accurate recording of find-spots and other features, and easily covered by boards for protection whenever it was necessary. As the nature of the ground made sifting quite impracticable the major part of the excavation was carried out by brushing and trowelling.

Some 6 to $8 \mathrm{in} .(0.15$ to 0.2 m$)$ of humus covered the whole of the monument (Fig. 3). Beneath this the cobble capping of Phase 3, in a setting of rich-brown soil, formed a more or less intact envelope across the whole of the tumulus within the limits of the ditchworks of this phase. (Unless otherwise stated all depths are given as measured from the modern ground surface). A layer of similar rich-brown soil, 6 to $8 \mathrm{in} .(0.15$ to 0.2 m$)$ deep and thickly strewn with pebbles, comprised the next lower stratum and marked the enlarging process of Phase 3. Last came the Beaker mound of Phase 1 which, excluding the area of the Beaker Pit itself, was nowhere more than 8 to 10 inches ( 0.2 to 0.25 m ) deep and characterised by the presence of a distinctive orange-coloured sand. The latter, where the thickness of applied material was $1^{\prime} 6{ }^{\prime \prime}$ (c 0.5 m ) or more, is denoted by the dotted area of Figure 4. No turf-line or ancient worm-worked soil was to be seen along the base of the mound, and differentiation here between basic soils and barrow material was extremely difficult.

## Dug-Out No. 1

Excavation was begun on the west side of the central north/south grid-line in such a way as to encompass the depression in the summit of the mound. This depression was found to mark a comparatively recent disturbance. (Figs. 3, 4A, 5 and 6.) Stratification was sharply-defined and included layers of a light-brown sand strikingly different from all the other sands disclosed beyond the limits of the disturbed area. Fragments of hessian were mingled with the extraneous sand. The soil also contained many large stones, both roundish and angular, singularly similar to one another in size, and weighing on average about 12 pounds ( 5.5 kg .). Towards the bottom of the cavity were many recent remains, including metal, glass and earthenware debris. A portion of clay pipe stem bore the name and address of a local maker and could have been produced no later than 1939. The disturbance at the deepest point was $5^{\prime} 3 "(1.6 \mathrm{~m})$ and formed as almost square cavity of some $6^{\prime}(1.8 \mathrm{~m})$ each side. It was subsequently identified as a dug-out constructed by the Home Guard in 1940 .

Total clearance of the modern intrusion showed a marked concentration of large stones in that part of the undisturbed barrow fabric nearest the centre of the tumulus.


Fig. 3 Sections of mound and burial arc


YARDS

Fig. 4 Plan of structural features, ditches and pits


Fig. 5 Plan of Beaker Pit (with dug-out no. 1)

The Beaker Pit
The clearance of those grid units which contained Dug-Out No. 1 exposed a section of the mound ten feet ( 3 m .) in length along the north/south centre line of the tumulus. Directly below the midpoint of the barrow the cross-section of an obvious cairn was disclosed. The cairn had been built within a pit (Figs. 3 and 4B), both features having been partially destroyed during the construction of Dug-Out No. 1 .

The tip-lines of barrow material could now clearly be seen dipping sharply towards the centre of the mound, outlining both cairn and pit and illustrating the continuous process of pit-filling and barrow-building included in Phase 1 (Figs. 5 and 6). The apex of the cairn still held a large oval stone which stood on end like a keystone and marked the eastern limit of Dug-Out No. 1 at this point. Below this stone lay undisturbed sand inside what was in effect a small chamber within the cairn. This sand was very fine in composition and noticeably darker in colour than the surrounding


Fig. 6 Elevation of Beaker Pit (with dug-out no. 1)
soils. In brushing this soil away from the stones of the cairn the bowl of an earthenware vessel was revealed. Protection for the vessel against falling pebbles and soil was provided and the overlying sand removed, disclosing a long-necked Beaker (Fig. 7). A very small amount of sand had fallen into the vessel, the rim of which lay $3^{\prime}(0.9 \mathrm{~m})$ below the ground surface. The pot lay at an angle of about 45 degrees to the horizontal, with the mouth towards the south-east and higher than the base. The limit of Dug-Out No. 1 passed between 2 and 3 inches ( $25-30 \mathrm{~mm}$ ) from the bowl of the vessel. Just beneath the waist of the Beaker, at a depth of $3^{\prime} 5^{\prime \prime}(1.04 \mathrm{~m})$ from ground level, a large flint knife was found. (Fig. 11d)


Fig. 7 The beaker

The remaining portion of the cairn extended only $2^{\prime}(0.6 \mathrm{~m})$ east of the central grid-line of the barrow and comprised nothing more than the thickness of the cairn wall itself. The base of the pit reached a depth of $3^{\prime} 8^{\prime \prime}(1.12 \mathrm{~m})$ from ground level at a point directly below the Beaker, dipping to a maximum depth of $3^{\prime} 10^{\prime \prime}(1.17 \mathrm{~m})$ at the westernmost point, where severance by the dug-out had occurred. No human remains or soil stains suggesting the presence of an inhumation burial were seen and no fragments of bone or of further pottery were found within the pit, but a layer of compacted black ash about $1 / 2 "(13 \mathrm{~mm})$ thick lined the base of the pit in that area immediately beneath the stones of the cairn. The general level of the floor of Dug-Out No 1 was more than a foot $(0.3 \mathrm{~m})$ below that of the cairn-pit.

## The Channel

Starting at a point $7^{\prime}(2.1 \mathrm{~m})$ south of the central point of the barrow, and at a depth of $2^{\prime} 9^{\prime \prime}(0.9 \mathrm{~m})$ from ground level, the Channel ran horizontally and slightly east of south for a distance of 4' $(1.2 \mathrm{~m})$ with a maximum width of $1^{\prime} 3^{\prime \prime}(0.38 \mathrm{~m})$ and an average thickness of about $2^{\prime \prime}(50 \mathrm{~mm})$ (Figs. 4 F and 8). In shape it might be likened to a tongue, eventually coming to a point at the southern end, the material of which held numerous pebbles and which although considerably blackened contained only a very small quantity of charcoal. The whole feature had been covered over with the same clean grey sand, so typical of the basic soils beneath the barrow, as that upon which it lay, and which at first sight appeared quite undisturbed. The overlying sand was easily brushed away from the soil of the Channel, which proved to have a much firmer consistency. No fragments of bone, pottery or flint were found within the feature, which may represent the first tangible ceremonial use of the site.


Fig. 8 Plan and elevation of channel and fire pit

## The Quarry-Ditch

There was no clear-cut and well-defined quarry-ditch. The feature was a very rambling and indefinite affair, sometimes double or even triple in character, with pits or strings of pits in concentric arcs. It varied in depth, measured from ground level to the basic soil beneath between a very few inches and a little over $3^{\prime}(0.9 \mathrm{~m})$ but rarely exceeded $2^{\prime}(0.6 \mathrm{~m})$. In general it was quite shallow and little more than a scrape. The internal diameter of the whole complex varied between $20^{\prime}$ and $37^{\prime}\left(6\right.$ to 11 m ) and the external diameter between $60^{\prime}$ and $73^{\prime}$ ( 18 to 22 m ) but even these dimensions have necessarily to be given where the depth was $1^{\prime} 6^{\prime \prime}$ or more (c 0.5 m ) in order that anything like a coherent plan of the form may be obtained. The shaded portion of Figure 4 indicates this area. In some cases maximum depth, or something very close to it, was achieved within a very restricted area, thus producing a deep and narrow pit. The holes formed in this process did not fall into any recognisable pattern, nor did they show signs of ever being occupied by burials, timber posts or standing stones.
The packing material of the ditches was primarily and largely composed of cobbles, although these were not always found in the deepest parts. For example, that portion of ditch due east of the

Beaker Pit, measuring sometimes 10 or 11 feet across ( 3 to 3.3 m ) and laid with cobbles, was little more than a foot $(0.3 \mathrm{~m})$ in depth and was more in the nature of a pavement than an infilled ditch. In a ditch-pit about 4' (1.2 m) north-west of Inurned Cremation 3 an egg-shaped 'headstone', measuring $1^{\prime}$ by 7 or 8 inches ( 0.3 by c. 0.2 m ) stood on end. Smaller stones had been packed around the base of the larger, prior to infill, in order to hold it in an upright position during that operation.
Two cobbles from the ditch-packing at widely separated points proved to be unfinished stone hammers (Fig. 12).

The final filling of the ditches was a rich-brown earth, sometimes with a considerable admixture of bone fragments, potsherds and pieces of flint. Also characteristic of the whole ditch area was the presence of very small fragments of charcoal. Heavy deposits of ash were found, and in two places were associated with fragments of bone and evidence of heat. In those places where no cobble filling was found the earth used as infill was almost indistinguishable from the basic soils beneath, as in one instance where clay extracted from one point had apparently been replaced directly upon the basic clay at another. In such a case the presence of extraneous materials, and especially that of charcoal or ash, was all that served to show demarcation. Bone fragments were a characteristic peculiar to the ditch area and were found nowhere else in the tumulus except in the immediate vicinity of the burials, where they were for the most part human in origin. With very few exceptions other bone fragments recovered from the ditches, and presumably animal in origin, were minute and in a very friable condition. Sometimes stones or pottery had been hurled into the ditch with such force that the main point of impact, particularly in the case of earthenware, was clearly marked by the presence of larger pieces, while the smaller fragments were often to be found fanning out towards the ditch bottom. In a number of cases it was found possible to collect fragments of a particular cobble from quite widespread points in the ditch area and to reassemble them in their entirety.

While the phasing of the ditchworks is necessarily arbitrary the scope of Phases 1 and 2 is sufficiently indicated by the presence of potsherds derived from jabbed and impressed, roundbased Peterborough earthenware. Potsherds of these types were found to be concentrated within a circular area of $22^{\prime}(6.6 \mathrm{~m})$ radius with the Beaker as a centre, but it was the infilling stages of Phases 1 and 2 which had covered the burials, including those two contained in collared urns, sherds from which type of vessel were found only outside the circle. It therefore seems likely that the burial urns, deposited during Phase 2, were contemporary with vessels used for one purpose or another by the mound-workers of Phase 3.

The length of the time interval between phases seems likely to remain unresolved. In a physical sense it is equally difficult to say just where the work of one phase ended and that of the next began. The fashion in which this work was carried out is exemplified in the manner in which Unurned Cremation 2, placed in position during Phase 2, was almost completely removed and dispersed during a later stage of that phase. Similarly, the urn in Inurned Cremation 1, also deposited during Phase 2, was subsequently damaged and partially dispersed during Phase 3, while that of Inurned Cremation 3 was deposited, damaged and dispersed during the final phase.

## The Fire Pit

This pit had been dug through the barrow fabric of Phase 1 and had intruded upon the northern end of the Channel. It was roughly circular in plan, with a diameter varying between 3 and 4 feet ( 0.9 to 1.2 m ) (Figs. 4C and 8). The deepest point of the pit, at $2^{\prime} 9^{\prime \prime}(0.84 \mathrm{~m})$ below ground level, lay slightly off-centre and towards the south. Stones of cobble size had been piled up in a heap on the pit bottom to a height of $1^{\prime} 9 \prime \prime(0.53 \mathrm{~m})$ and were heavily blackened by ash. Charcoal was plentiful within the pit, and recognisable pieces of twigs and branches could everywhere be seen thrust into the crevices between the stones. The orange-coloured sand of the barrow fabric into which the pit was dug had been changed to bright red by the action of heat to a distance of 2 or 3 inches ( 50 to 75 mm ) beyond the walls of the pit. So heavy was the concentration of charcoal and ash that the outer limits of the pit were in all planes clearly marked by blackened soil. No fragments of bone or flint were found in the structure, nor were any fragments of pottery. Since the purpose of this pit is unknown it cannot be assigned to any particular stage of Phase 2.

## The Oval Pit

This feature measured roughly $8^{\prime \prime} 6^{\prime \prime}$ by $6^{\prime \prime} 9^{\prime \prime}(2.5$ by 2.0 m$)$ and was aligned almost exactly south to north towards the Beaker Pit (Fig. 4D). The pit, inserted through the barrow fabric of Phase 1 and reaching a maximum depth of $2^{\prime} 7^{\prime \prime}(0.79 \mathrm{~m})$ from ground level, was filled with cobbles and larger stones. By far the largest of these, similar in size and shape to the 'headstone' already


Fig. 9 Grid-section plan, showing find spot and burials
noted in the quarry-ditch, had been erected and braced in a similar manner on the rim of the feature at that point nearest to the Beaker Pit. Many small pieces of charcoal were found in the pit, but there was no trace of bone, pottery or flint. As with the Fire-Pit, and for the same reason, it is impossible to assign this feature to an appropriate stage in Phase 2.

## Dug-Out No. 2

This trench, similar in function and date to that in the centre of the tumulus, ran slightly east of north and was roughly rectangular, measuring some $6^{\prime} 3^{\prime \prime}$ by $2^{\prime \prime} 8^{\prime \prime}(1.9$ by 0.8 m$)$ and with a depth of $3^{\prime}(0.9 \mathrm{~m})$. The base of the pit measured $5^{\prime} 5^{\prime \prime}$ by $2^{\prime}(1.6$ by 0.6 m$)$ (Figs. 3 and 4 E ). During construction a very small area of the stone packing of the Oval Pit and of the quarry-ditch itself had been removed. No bone fragments, potsherds or flints were found within the feature.

## THE SATELLITE BURIALS

The physical arrangement of these burials followed a fairly regular pattern and warrants a precise account of the distances involved. The burials were five in number, of which the main group of four were spaced out quite evenly, in an arc which fitted neatly within the south-western quadrant of the barrow and between the compass bearings of 205 and 260 degrees. (Figs. 3 and 9) The burials belong, as do the Fire-Pit and the Oval Pit, to a stage of Phase 2 which cannot be placed in sequence.
Reading from south-east to north-west the arrangement was as follows:

| Burial | Distance from Beaker |  |
| :--- | :--- | :--- |
| Inurned <br> Cremation 1 <br> Inurned | $22^{\prime} 3^{\prime \prime}(6.68 \mathrm{~m})$ |  |
| Cremation 2 <br> Unurned | $22^{\prime} 7^{\prime \prime}(6.78 \mathrm{~m})$ | $8^{\prime} 4^{\prime \prime}$ from I/C $1(2.50 \mathrm{~m})$ |
| Cremation 1 | $21^{\prime} 8^{\prime \prime}(6.50 \mathrm{~m})$ | $8^{\prime} 0^{\prime \prime}$ from I/C $2(2.40 \mathrm{~m})$ |
| Unurned <br> Cremation 2 | $23^{\prime} 9^{\prime \prime}(7.13 \mathrm{~m})$ | $5^{\prime} 5^{\prime \prime}$ from U/C $1(1.62 \mathrm{~m})$ |

The outermost burial, I/C 3, lay on a bearing of almost exactly 235 degrees from the Beaker findspot, that is to say at 45 degrees to the Grid North line, and $25^{\prime} 9^{\prime \prime}(7.72 \mathrm{~m})$ distant from that vessel, or some $3^{\prime}(0.9 \mathrm{~m})$ beyond I/C 2 . (The Beaker is here used merely as a convenient point of reference). The point marking the surveyed centre and summit of the tumulus lay at an average distance of $20^{\prime} 3^{\prime \prime}(6.08 \mathrm{~m})$ from each burial of the main arc, with a total gross variation of only $1^{\prime} 3 "(0.38 \mathrm{~m})$.
There can be no certainty as to the authenticity of $U / C 2$ (q.v.) as a burial, but the siting is sufficiently close to the general pattern as to justify its inclusion. At the same time it is noteworthy that the ditchwork which almost completely removed the supposed remains of U/C 2 culminated in a pit which at $3^{\prime}(0.9 \mathrm{~m})$ below ground level was circular and $1^{\prime}(0.3 \mathrm{~m})$ across, and which lay at a point $8^{\prime \prime} 9^{\prime \prime}(2.63 \mathrm{~m})$ westwards along the burial arc from $\mathrm{U} / \mathrm{C} 1$.

## Inurned Cremation 1

In this burial the urn had been placed in an upright position on the floor of the quarry-ditch, which at this point was $1^{\prime} 6 "(0.46 \mathrm{~m})$ below ground level (Figs. 3 and 9). Only the lower portion of the urn, from the shoulder-cordon to the base, remained intact, the vessel having been deposited during Phase 2 of the tumulus construction and then damaged and partially dispersed during Phase 3. From cordon to ground level the distance was $1^{\prime}(0.30 \mathrm{~m})$.
The contents of the vessel were relatively undisturbed, having settled down below the level of the cordon. They consisted of burned bones, mixed with ash and fine charcoal; a clay object tentatively identified as an ear or nose-stud, (Fig. 13F); a small flint flake, and a larger, calcined flint implement which had been included with and burned with the skeletal remains.

## Inurned Cremation 2

The principal vessel in this burial, the funerary vessel itself (Figs. 3 and 9), had been inverted upon interment, and the very considerable damage which it has sustained occurs mainly in the


Fig. 10 The funerary urns, accessory vessel and 'mouth bellows'
portion from base to shoulder-cordon. That part from the shoulder up to and including the crown is in fair condition (Fig. 10L). The main vessel had been deposited on a layer of gravel 1'6" ( 0.46 m ) below ground level, with $7^{\prime \prime}(2.1 \mathrm{~m})$ of soil remaining above. Touching this vessel on the northwest, and also inverted, was an accessory vessel, (Fig. 10K), placed with its upper rim on a level with the uppermost edge of the crown of the larger vessel. It was packed tightly with gravelly soil.

The contents of the funerary urn were relatively undisturbed, apart from a few bone fragments which had been carried varying distances away by the action of earthworms. This movement had occurred only horizontally, or vertically upwards, through the interstices of the cracked vessel, the hard gravel layer below having effectively prevented any movement in that direction. Charcoal and ash were mixed with the skeletal remains, and the whole had settled down into a compacted mass.

A flint knife had actually been included in the process of cremation and is now calcined and fragmented. Within the larger urn were some pieces of an earthenware object provisionally identified as a mouth-bellows (Fig. 10J), and also associated with the burial was a small fragment of flint.

## Unurned Cremation 1

This burial was contained within a pit very similar in shape and volume to the burial vessels of I/Cs 1 and 2, being rather like an inverted beehive in form, about $11^{\prime \prime}(0.28 \mathrm{~m})$ in diameter and of equal depth (Figs. 3 and 9 ). This pit had been dug into the floor of the quarry-ditch itself, so that the upper level of the pit and the floor of the ditch were equidistant from the surface of the tumulus at $2^{\prime}(0.60 \mathrm{~m})$. Included in this burial was a calcined flint flake tool.

## Unurned Cremation 2

Tangible remains were here so meagre as to render it doubtful whether or not a burial was ever in fact deposited at this point. Nevertheless the siting is so close to the general pattern of the main burial arc that it has been included as the possible residue of a burial which had largely been removed (Figs. 3 and 9).

The remaining portion of the pit was identical in shape to that of $\mathrm{U} / \mathrm{C} 1$, and like that burial had been dug into the basic soils beneath the barrow. It contained black ash and a very few minor bone fragments, but was only between 5 and 7 inches (125-180 mm) in depth. The quarry-ditch at this point, sweeping down in a north-easterly direction from ground level to a depth of over $3^{\prime}(0.9 \mathrm{~m})$ within a lateral distance of only $3^{\prime} 6^{\prime \prime}(1.05 \mathrm{~m})$ (a gradient of almost 1 in 1 ) had cut right through the feature. Some three-quarters of the burial may therefore have been removed.

## Inurned Cremation 3

Early in Phase 3 of the mound construction occurred the insertion of this burial into the cobbles of the quarry-ditch filling (Figs. 3 and 9). Only the broken rim and crown of the vessel concerned in the burial remained, but this was sufficient to show that the urn had been placed in an inverted position. At its uppermost point the rim was $11^{\prime \prime}(0.28 \mathrm{~m})$ from ground level and $9^{\prime \prime}(0.23 \mathrm{~m})$ from the basic soil beneath the tumulus at this point. Cobbles from the ditch packing had been placed around the remaining portion of the vessel in such a way as not to crush it, but other cobbles were piled so closely above it that no space was left in which the bowl of the vessel could have been accommodated. None of the missing fragments was found, nor were any comparable with them in colour or texture. A very few minute bone fragments and a little ash remained.

## OBJECTS OF EARTHENWARE

## The Beaker

The form of the vessel is that of a somewhat modified long-necked beaker with two applied ribs or cordons, one just below the rim and the other around the waist. The rim has a rounded lip and slopes outwards to the rim cordon. The bowl has a pronounced 'lob' (Fig. 7).
The outer surface of the vessel is generally light-buff in colour with reddish and black tones. Internally the finish is greyish, and the interior of the bowl proper is heavily speckled with black.

The rim, both cordons, and the edge around the base are jabbed at intervals with a cuneiform instrument. The comb-like instrument used to imprint the main decorative theme had six squarish teeth. Double parallel lines made with this tool appear below the band of rim decoration and both above and below each of the cordons. Between the rim and the upper cordon are diagonal comb impressions, generally running downwards from right to left but occasionally also from left to right, when they form a vague cross-hatched design. The upper half of the vessel between the rim and waist cordons has a pattern of hatched triangles and lozenges with intervening reserved saltires, numbering sixteen in all. Rows of horizontal lozenges filled with vertical hatching leave a reserve zig-zag around the bowl. There are four rows of eight complete lozenges. Although it is in remarkably fine condition the Beaker has sustained some damage.

When found the Beaker lay at an angle of some 45 degrees to the horizontal, with the neck uppermost and lying towards the south-east, and with the vertical cracks in the neck aligned across the sloping bank of sand inside the cairn chamber upon which the vessel rested. There was a handful of fine, dark-brown soil within the Beaker, and beneath this soil were a number of small fragments of a blackish, flaky material. These were in fact earthenware 'crumbs' whose source was the large fracture of the body.

## The Funerary Urns

The two funerary vessels of I/Cs 1 and 2 are collared urns and are completely undecorated. They are of a coarse ware, dull buff in colour, made from a clay mixed with grit and poorly fired. The interior surfaces are black.

A reconstruction of the probable dimensions and form is made possible if the details from the surviving portions are combined. (Fig. 10L)

## The Accessory Vessel

This vessel has an uneven globular body, with a flattened, outcurving rim and an internal bevel (Fig. 10K). A slight narrowing of the body at a point just below the rim forms a shallow neck.
The vessel is of a coarse, dull buff ware similar to that of the funerary urns, and is undecorated. It is intact except for three small chips in the rim. The missing fragments were not found.

## The Stud

This is a pulley-shaped object of baked clay, (Fig. 13F).

## The 'Mouth Bellows'

This object is of baked clay, brick-red in colour, fragmented and incomplete. It originally had the shape of a hollow cone (Fig. 10J).

## The Potsherds

A total of 315 fragments of pottery were found in the quarry-ditch and mound construction materials. They appeared mainly in the ditch, particularly in the north-west quadrant, although other concentrations occurred. (Fig. 9) Many of the pieces are very small indeed and of little more than statistical significance. About half are small weathered 'crumbs' without any decorative characteristics. Very few sherds are above $3^{\prime \prime}$ ( 75 mm ) in length, and joining pieces are relatively few. (Illustrations, Figs. 14-19) The average depth at which the sherds were found was $1^{\prime} 3^{\prime \prime}$ $(0.38 \mathrm{~m})$ below ground level, but no pattern of deposit at any particular depth emerges.

See Appendix II.

## OBJECTS OF STONE

The Flints and Cherts

|  | Grey | Brown | Calcined | Chert | Totals |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Fragments | 97 | 22 | 27 | 18 | 164 |
| Artifacts | 21 | 5 | 4 | 2 | 32 |
| Totals | 118 | 27 | 31 | 20 | 196 |

The flint and chert pieces were found widely dispersed throughout ditch and tumulus alike and lay at an average depth of $1^{\prime}(0.03 \mathrm{~m})$ (Fig. 9). As with the potsherds, there was no pattern of deposit at any particular level. The flint classified as 'grey' in fact covers all shades from white to black, but seems to represent various states of what is basically the same material. Some is opaque and dull, but some is of fine quality and translucent. This class accounts for some $60 \%$ of the total number of pieces.

The 'brown' flint actually varies between a light ochre and a dull red in colour. Although appearing in both opaque and translucent forms it seems generally to be of poorer quality than the grey type. This may, however, be a fallacy formed on a quantative basis, since only about $14 \%$ of the total number of pieces belong to this type, including the largest artifact from the site, the Beaker knife itself (Fig.11d).
The calcined or fire-crackled pieces have effectively lost their source identity, and though some examples seem to be of a superior flint to others the variation may have been brought about by the degree of heat to which the specimens have been subjected. Representation in the total is $18 \%$.
The chert from which $10 \%$ of the artifacts and debris was derived is almost certainly of fairly local origin, since erratic pebbles of a similar material were found on the site. It is blackishgrey and has the appearance of pitch. Although inferior for tool-making purposes to all but the poorest types of flint this stone was nevertheless used in the manufacture of a small number of artifacts.

Although flint is not found locally it represents some $90 \%$ of the total number of fragments and artifacts discovered. Many very small fragments have been made into tools, some of which show signs of having been refurbished for further use after being broken. Most are damaged and show signs of considerable use. With the single exception of the arrowhead (Fig. 12cf), where the nature of the artifact required that it should be balanced, all the implements, including the Beaker knife, are worked on one face only. On pieces used as scrapers the bulbar end is trimmed to form a working edge; on knives the bulbar end is towards the hand. On the convex edges of knives the re-touching is unremarkable, but on all concave edges and some straight ones very fine serrations produce a saw-like function.



Fig. 12 The Stone Hammers


Fig. 13 The Jet Rings and the Stud

## The Jet Rings

Fragments of two different jet rings were found.
The first (Fig. 13, orn 1) lay upon the ancient barrow surface beneath $5^{\prime \prime}$ ( 0.15 m ) of loam (Fig. 9; Sec. K14). Grooves left by the tool used in shaping the jet can clearly be seen running laterally across the inside of the ring.

The second (Fig. 13, orn 2) lay at a depth of $7^{\prime \prime}(0.18 \mathrm{~m})$ below the barrow surface (Fig. 9; Sec. K2).
Objects of this period made of jet, shale or lignite, similar in design to the rings from Woodhouse End, are sometimes described as 'ring-pendants' and are perhaps girdle-fasteners (Proc. Soc. Antiq. X, 29; Oxoniensia, VIII-IX, 34).
A shale ring from Aldbourne associated with a pygmy cup is of a like size (Ashbee, 'The Bronze Age Round Barrow in Britain', 1960, Fig. 45.4).

## The Stone Hammers

Two unfinished stone hammers were found. Both were included as part of the quarry-ditch packing.
The first (Fig. 13;em) is a smooth mudstone and lay at a depth of $1^{\prime \prime} 7^{\prime \prime}(0.48 \mathrm{~m})$ below ground level, (Fig. 9; Sec. B10). The tool marks are those of an implement with a tip barely $1 / 16$ " ( 1.6 mm ) in width and about $1 / 8 "(3.2 \mathrm{~mm})$ in length. Perhaps a dozen pockmarks appear on the opposite face.
The second hammer is of a rough gritstone and lay at a depth of $1^{\prime} 6^{\prime \prime}$ ( 0.48 m ) (Fig. 9; Sec. H2). Here again an apparent attempt at perforation appears on both faces of the stone, although the work is less concentrated in area. Pocking also occurs on both ends of this stone, particularly on the lesser end, the face of which has been flattened.

## See Appendix III.

## APPENDIX I

(From a report by C.B. Denston, Department of Physical Anthropology, University of Cambridge)

## INURNED CREMATION 1

Colour: light brown
Identified weight: 422.0 gm
Unidentified weight: 380.0 gm
Size of fragments: $0-51 \mathrm{~mm}$ overall length

| Skeletal material identified | Weight in gm |
| :--- | :---: |
| Skull | 98.0 |
| Long bones | 311.0 |
| Other bones | 13.0 |

Fragments under the category of other bones are those of innominate bone; axis and atlas; ribs; phalanges, and a metacarpal bone.

## Skull

A right and a left mandibular fossa; fragments of the petrous portions of a right and a left temporal bone; the superior margin of a right orbit, displaying the frontal process; a piece of sphenoid bone; the frontal process of the right half of a maxillary bone; a left zygomatic bone; the internal crest of a frontal bone, displaying the retention of the metopic suture; a right occipital condyle; three fragments of a mandible, and the remains of three teeth.

The skull fragments are very small in size with no recognisable duplicate portions. The mandibular fossae appear to be from separate individuals, their special features suggesting that one individual was a more developed person than the other. The proportions of the interior surface
of the corpus of a mandible suggest an immature individual. The appearance of the occipital condyle also suggests an immature individual over six years of age, as it displays no sign of the basilar-occipital union.

## Long bones

The fragments of long bones are also small in size, the proportions of the bones suggesting female affinities. Two portions from the proximal extremity of a radius, or from two separate radii, are of small proportions, indicative of female affinities. The epiphyses of these two bones have united to the shafts, so suggesting adulthood. Non-union of the epiphysis at the distal extremity of either a femur or a tibia, as displayed by another fragment, suggests an immature individual.

## Other bones

The extremity of a metacarpal bone, adult; two phalanges, adult; two phalanges, immature, and an odontoid process of an axis, immature.

## INURNED CREMATION 2

Colour: light brown
Identified weight: 263.4 gm
Unidentified weight: 315.0 gm
Size of fragments: $0-69 \mathrm{~mm}$ overall length

| Skeletal material identified | Weight in gm |
| :--- | :---: |
|  | 106.5 |
| Long bones | 153.0 |
| Other bones | 3.9 |

Fragments under the category of other bones are those of posterior articular facets of vertebrae; phalanges; metacarpals and metatarsals.

## Skull

A petrous portion of a right temporal bone; a right zygomatic arch; a mandibular fossa; the superior margin of a left orbit; a supercillary ridge, including a right orbital foramen; a right zygomatic bone; the frontal process of the right half of a maxillary bone; parts of occipital bone; parts of parietal bones; a portion of a frontal bone, displaying the internal crest; a mental protuberance of a mandible, displaying the genial tubercle.

While there are no duplicate portions of skull to indicate the presence of more than one individual, the dimorphism of the recognisable fragments listed under the heading of 'Skull', and others of the vault of the cranium, suggest this possibility. Features of the fragments from the areas of the supercillary ridges and superior margin of the orbits suggest affinities with the skull of a male person rather than that of a female. Other fragments would seem to support this assessment of sex. A frontal process of the right half of a maxillary bone, and a frontal process of a right zygomatic bone, coupled with some fragments of the vault of a cranium, display different dimorphism and are suggestive of female affinities rather than those of a male.

## Long bones

The fragments of long bones are small in size and display no conclusive evidence of the number of individuals involved, sex, or age at death. The fragments appear not to be from robust bones, however, and a portion of the shaft of a radius (the only fragment identified as coming from a specific bone) suggests female affinities.

A distal phalange of the hand, the features of which suggest adulthood, is nearly intact. There is a mixture of fragments of metacarpals, metatarsals and phalanges, the smallness of which bones, on the whole, suggests the female sex.

## UNURNED CREMATION 1

Colour: light brown
Identified weight: 580.5 gm
Unidentified weight: 282.0 gm
Size of fragments: 0-59 mm overall length

Skeletal material identified
Skull
Long bones
Other bones

Weight in gm
167.5
330.0
83.0

Fragments under the category of other bones are those of innominate bone; sacrum; vertebrae; calcaneum; scapula; ribs; metatarsals, and phalanges.

## Skull

Recognisable fragments from specific areas of the cranium are as follows: the superior margin of a left orbit; part of an occipital bone, displaying the internal crest and external nuchal ridge; the petrous portion of a right temporal bone; a right zygomatic bone; right and left zygomatic arches, and a portion of the frontal bone displaying the internal crest. From specific areas of the mandible are a right condyle; a right coronoid process; an alveolar border displaying tooth sockets, and a ramus. The teeth are one upper molar, one lower molar, and seven roots.

## Long bones

The fragments are rather small in size, the only distinctly recognisable portions being from the fibula, radius and ulna. No duplicate portions of bone from either skull or long bones are recognisable, therefore suggesting that only one individual is represented by the remains. No conclusive evidence as to sex or age at death can be ascertained from the long bone fragments, but features of the fragments from the areas of the orbits and occiput, and the thickness of the bone from the vault of the cranium, suggest male affinities, and the appearance of the sutures an adult. The remains which considerably help to establish the sex and age at death are two portions of the iliac crests of innominate bones demonstrating that full fusion of the epiphyses had taken place, indicating that the individual was an adult, and the proportions and appearance of the crest, suggesting a male rather than a female. The size and character of five posterior spines of lubar vertebrae also suggest male affinities and adulthood, as does the size of a glenoid fossa of a scapula. The greatest aid in establishing an age at death is a partially intact public symphysis; this demonstrates that the typical ridge-and-furrow pattern of adolescence had disappeared, being replaced by a smoother surface with a definite outline, and this, compared with modal standards of Todd's ten typical phases, would possibly place the development of the public symphysis in the 39-45 years age range.

## APPENDIX II

(From a report by T. G. Manby, Doncaster Museum)

## The Beaker

This is a complete vessel of Clarke's Developed Southern British Beaker Class (S2). It belongs to the second phase of development of the class and displays some of the innovations of this phase in the panel motifs and the cordons. Equal diameters at rim and waist place the Woodhouse End Beaker in the 'cylindrical neck' variant class that has a generally eastern distribution in England (Clarke; 1, 212).

The Beaker displays some close affinities with vessels of the Peak District that suggest it can be regarded as an outlier of that distribution. Three rim-cordoned beakers with cylindrical necks from the Peak District were found at sites on its western fringe in Staffordshire, only a few miles south-east of Macclesfield. A vessel found at Swinscoe, with inward-sloping rim and a rim cordon,
and displaying the reserve saltire pattern (Clarke; No. 834, Fig. 939), is the closest parallel to the Woodhouse End Beaker. A beaker found at Wetton has zonal decoration (Clarke; No. 835, Fig. 861), and a beaker from Deepdale has reserved saltire decoration and reserved chevron decoration in alternating panels on the neck (Clarke; No. 829, Fig. 862). None of these three Staffordshire beakers shows notching of the cordons, neither do they have the second cordon at the base of the neck. The latter feature is found on two funnel-necked beakers from Bradwell in the north of Derbyshire: one vessel has two rim cordons and both have the reserved chevron pattern arranged in panels (Clarke; Nos. 110 and 119, Figs. 822 and 823).

## The Funerary Urns

The features of this urn type allow it to be assigned to Longworth's Secondary Series of urns. Completely plain collared urns are scarce.

## The Accessory Vessel

This vessel has its closest parallels among the Food Vessels of Abercromby's Type 5a (Abercromby, 1912; 1, 93-4) or with Type 4(i) of the present writer's revision of Abercromby's scheme (Manby, 1957; 4). This is one of the scarcer Food Vessel forms that is represented at only two of the Peak District sites. Sherds of a plain vessel accompanied a cremation in a cist, Burial A at T. 21 on Stanton Moor (Manby, 1957; 23, A37), and sherds of a second Food Vessel with cord decoration were present. The second vessel of this class comes from Fin Cop, Monsal Dale, and has cord lines and stab impressions around the upper part of the body (Manby, 1957; 14, A3).

## The Stud

Studs in a variety of materials, including jet, shale, amber and pottery, are known in Early Bronze Age contexts in Britain and Northern Europe. The pottery studs represent simple plastic versions of the carved and polished mineral forms. The studs occur in two basic forms:
(1) Studs with the top domed and of smaller diameter than the base:
(2) Studs with top and base of equal diameters.

The Woodhouse End stud belongs to the first of these two classes and compares closely in size with a pair of jet studs found, one on each side of the neck of a crouched inhumation burial in a grave beneath Barrow 70, Wharram Percy, on the Yorkshire Wolds. The position of the studs lead the excavator to suggest that they had been worn as ear ornaments (Mortimer, 1905; 47 and 75). A pair of this form, but larger and with highly-polished concave bases, were found by Thomas Kendall in a barrow at Crosscliffe, north of Pickering (Yorkshire Museum, 1948). A second pair of these studs, found with other jet ornaments, came from a barrow at Nawton Towers, to the west of Pickering (McDonnell, 1963; 345-6, Fig. 2, 1-2).
The second class of stud is represented by a pair of carved jet studs from a barrow near Fylingdales on the North Yorkshire coast (Elgee, 1930; Fig. 37). A single jet stud of this class was picked up on Rishworth Moor, near Huddersfield (Huddersfield Museum). Also in the Pennines was the pottery version of a stud found with a secondary cremation in the Whitelow Barrow, near Bury in the Rossendale Hills. The pottery stud from Stanton Moor, Barrow T. 13, is of the same class and was found inside a pygmy accessory vessel within a collared urn placed as an accessory to cremation Burial J. (Heathcote, 1936; Pl.1). This Stanton Moor site, on the eastern side of the Peak District, repeats the association of a pottery stud with a collared urn of Longworth's Secondary Series as represented at Woodhouse End.

## THE POTSHERDS FROM THE MOUND MATERIAL

The sherds fall into two classes that reflect the distribution within the mound. Sherd groups in the northern half of the mound belong to gritty fabrics assignable on grounds of shape and decoration to the Peterborough Ware class of the Neolithic period. Two sherd groups south of the barrow centre represent pieces of two Bronze Age vessels, one certainly a collared urn.

## Peterborough Ware

This class is represented by some 162 sherds of the total from the mound, mostly from the northwest quadrant. There is a marked increase in the state of weathering as the sherd size decreases. Study of the rims indicates that at least 23 vessels are represented, although only one profile can be reconstructed. (Illustrated sherds, Figs. 14-19, as indicated below in brackets)

AA(19), U Shoulder fragments. Coarse brown gritty fabric. Diagonal cord maggot impressions on the neck. Crude incised horizontal lines, with diagonal strokes in between, on the body.

| $\mathrm{AC}(19)$ | Shoulder fragment. Dark-brown fabric with reddish surface and fine angular grit. |
| :--- | :--- |
| Horizontal rouletted impression on the body; diagonal bone impressions at the base |  | of the neck.

AE(14), AS, Six body sherds. Reddish-buff surface with dark-grey core; small crushed stone AZ, BG(14), DE, V
$\mathrm{AH}(15), \mathrm{AQ}$, HT(15)

Heavy rim. Dark-brown laminated fabric with profuse angular grit, buff surface. Rows of bird-bone impressions on the rim.
$\mathrm{AO}(15)$

AW(14) Heavy rim. Smooth brown fabric with angular grit up to $\frac{1}{4}$ " long ( 6 mm ). Bone-end impressions on the rim bevel.
$\mathrm{BC}(16) \quad$ Heavy rim, buff to reddish tones, dark-grey core, profuse stone grit, laminated fabric. Rows of bone-end imprints on top of the rim, stick-end impressions in rows inside and outside the rim.

BE(14) Heavy rim. Weathered fragment. Brown laminated fabric, dark-grey core. Incised lines across rim.
BK(16), DM Deep rim, dark-brown, dark-grey core, gritty laminated fabric. Incised lines and strokes on the rim bevel and exterior of the rim.
$B O(15)$, Joining sherds from the upper part of a bowl of $6^{\prime \prime}(0.15 \mathrm{~m})$ diameter rim. Smooth
$\mathrm{BX}(17)$, buff fabric, dark-grey core; angular grit. Bird-bone impressions in lines on the BY, T
BQ(15)
Heavy rim. Dark-brown to dark-grey fabric. Stab impressions on the neck.
BR(15) Deep rim. Plain, brown with dark-grey core.
BT Body sherd. Reddish-buff exterior, dark-grey core with profuse flint grit. Boneend impressions in horizontal rows.
BU(17) Simple rim. Dark-brown fabric. Two lines of stab impressions on top of the rim.
CN(17), DU Heavy rim. Dark-grey laminated fabric, smooth buff surfaces. A row of bone-end impressions.

CP(18), BH, BI, BM, BN, BP, BW, BV, CM, CS, CT, CV, CY, DO, DP, DQ, EA
DD(14) Body sherd. Dark-grey laminated fabric with buff-toned interior. Decorated with a row of diagonal maggot impressions.

DJ(17) Rim sherd. Dark-buff, blackish interior. Three rows of angular bone impressions on the upper rim, one row of rodent-teeth impressions (group of four incisors) on the inside of the neck.

EZ(14) Body sherd. Buff fabric with quartzite grit, dark-grey core. Lines of bone-end impressions.
$\mathrm{FB}(14) \quad$ Heavy overhanging rim. Smooth orange-buff laminated fabric with profuse crushed grit. Rows of bird-bone impressions on the rim and shoulder.
FF(14) Body sherd. Buff fabric with quartzite grit. Dark-grey core, smooth interior. Bone-end impressions in horizontal rows.

FZ(19), GH Thin, outcurving rim. Dark-brown to grey laminated fabric. Cord maggot impressions forming herring-bone patterns inside and outside the rim.
G(16)
Thick heavy, overhanging rim. Reddish-brown exterior, brown interior. Laminated
gritty fabric. A fine, incised lattice over the top of the rim and within. Stick-end impressions in rows inside and out.
T-shaped rim. Plain brown fabric, dark-grey core with angular grit.
HX(15) Rim, round-topped. Brown fabric with fine angular grit. Diagonal impressions on top of the rim.
IG(18) A thick rim. Dark-brown fabric with crushed stone and pebble grit. Decorated with rows of stick-end impressions.


Fig. 14 Pot Sherds

Rim sherd. Dark-buff fabric with profuse crushed limestone and quartzite grit. Rows of bone-end impressions on the rim bevel and inside the rim.
Out-turned rim. Plain brown fabric, dark-grey core, fine angular grit.
Heavy rim. Smooth reddish-brown fabric with profuse stone grit. Impressions of a notched stick on top of the rim and inside.

Thick rim. Buff laminated fabric with dark-grey core; angular grits up to $3 / 8$ " ( 4 mm ) long. Rows of bone-end impressions on the top and exterior of the rim; horizontal incised lines on the interior.


Fig. 15 Pot Sherds


Fig. 16 Pot Sherds


Fig. 17 Pot Sherds

## Bronze Age Pottery

A group of sherds from the area south-west of I/C 1 belong to a collared urn. Some of the sherds join together to form part of the neck, shoulder and body of the vessel. The sherds are unweathered, with a buff surface, dark-grey core and interior, and sparse stone grit. Two neck sherds (KY and KZ) from a vessel about $7^{\prime \prime}(0.18 \mathrm{~m})$ in diameter at the shoulder show vertical, horizontal and diagonal cord impressions. Of the shoulder sherds, KT(Fig. 19) shows vertical cord impressions and LA(Fig. 18) impressions made with a bunched, knotted cord in a 'dog's-paw' pattern. One small sherd (LF) is from the lower edge of the collar; the base angle is also represented (KU). The interior of the vessel is smooth and bears traces of a carbon layer. Other sherds belonging to this vessel are: HA, JV, KI, KL, KS, KP, KV, KW, KX, LB, LC, LD, LE, LF, and LG.


Fig. 18 Pot Sherds

A group of sherds from the south-east quadrant of the barrow appear to belong to another Bronze Age vessel, but the form is uncertain. The sherds are in a smooth buff fabric with a dark-grey core. Five sherds, JO(Fig. 18), JI, JP, JR and JS, show impressions of a round-toothed comb of 7 or 9 teeth; these are either vertical or horizontal on the neck of the vessel. The dimensions of the vessel are uncertain, but the thickness of the walls varies from $1 / 2^{\prime \prime}$ to $5 / 8^{\prime \prime}(12$ to 16 mm$)$.

## Discussion

The Peterborough pottery from Woodhouse End is the largest assemblage of its kind from the North Midlands. The number of vessels represented in this group exceeds that of all the Peak District sites put together.


Fig. 19 Pot Sherds

The general characteristics of the group under discussion are the heavy rims, the deep necks, and the preference for closely-spaced tooled decoration employing the articular end of a bird bone or a notched stump. It is significant that the usually favoured cord-impressed decoration is represented by only two sherds, and these form a thin-profiled rim (FZ, Fig. 19 and GH). The best parallels for this rim profile and cord maggot decoration are to be found in Ebbsfleet-style assemblages at Thornton Dale (Manby, 1956, 3, Fig. 2.1) and Green Howe, North Deighton (Woods, 1971, 10, Fig. 4. 7), both in Yorkshire, and at West Kennet in Wiltshire (Piggott, 1963, Fig. 11, p. 5).

The remainder of the pottery shows the typical heavy moulded rims of the Mortlake style (Piggott, 1954): the deep-collared and incurving rims of the Fengate style are absent. The deep rim of the reconstructed bowl (sherds BO(Fig. 15), BX(Fig. 17), BY and T) has a parallel in a heavy, larger rim from Bryn yr Hen Bobl, Anglesey (Hemp, 1936, Fig. 2.14). This also shows the same decorative feature of short incised lines running diagonally from each tool impression.

Deep-rimmed Mortlake-style bowls of similar size are well represented in Neolithic pits from Heathrow, Middlesex, although they lack the narrow bevel on top of the rim (Grimes, 1960, 188-191, Fig. 75.2 and 76). The size and deep rim of the Woodhouse End bowl are reminiscent of the bowl from the Church Dale Rock-Shelter near Buxton (Clark, 1953, 229, Fig. 2).

A good parallel in a Mortlake-style assemblage is available for the double internal bevel of sherd AO in Figure 15. This compares in profile with a weathered rim with cord maggot impressions from Craike Hill, near Driffield (Manby, 1958, 227, Fig. 4.5). A better parallel is provided by rims with the same double internal bevel with incised herring-bone decoration and external finger-nail lines which come from Site 19 at Carnaby Top, near Bridlington. These rims, however, belong to vessels with conical bodies and narrow flat bases associated with obvious Fengate-style vessels.

A most tantalising problem is presented by the curvilinear pattern on sherds AE(Fig. 14), AS, AZ BG(Fig. 14), DE and V: these appear to belong to a pattern of alternating semi-circles and
horizontal line-filled panels. Similar patterns executed with a twisted cord were employed on the T-rims of late Peterborough Ware vessels found at Ford, Northumberland (Longworth, 1969, 260, Figs. 1, 3, 4) and at Boynton, East Yorkshire. Pendant curvilinear swags decorate the interior of the Mortlake-style bowl from the ditch filling of the Badshot long barrow, Surrey (Keiller and Piggot, 1939, 142, Fig. 55).

The features of the Woodhouse End Peterborough Ware pottery place it in the Mortlake style. The general associations of the Mortlake style show it to have been contemporary with beakers of the All-Over-Cord and European Bell Beaker classes. This pre-dates the advent of Developed Southern British Beakers, such as that in the primary deposit at the Woodhouse End barrow, by three or four centuries. The Mortlake-style pottery at Woodhouse End may represent the archaeological content of soil scraped together to build the barrow mound. This idea is supported by the small size and weathered condition of many of the sherds. The incorporation of this earlier debris from an earlier occupation is probably the accidental result of the use of the same area of cleared land by successive communities, centuries apart.

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## APPENDIX III

## THE FLINT ARTIFACTS

## Sawing tools

$a$
(Fig.11) Both edges worked, on one face only.
Bulb of percussion at tip.
Grey flint.
d Flake
(Fig.11) Both edges and squared-off tip worked, on upper face only.
Bulb of percussion at butt end.
Brown flint, some cortex remaining on upper face.
Knife found associated with Beaker.
$f \quad$ Blade.
(Fig.11) Worked on right-hand edge and on upper face only.
Bulb of percussion at tip.
Grey flint.
$b$
(Fig. 11) Single right-hand convex edge worked, fine retouching on one face only, serrations. Bulb of percussion at pointed (working) end.
Grey flint.
$n$
(Fig. 11) Left-hand concave, right-hand convex edge and tip all worked, one face only, fine retouching, serrations.
Bulb of percussion at tip (working end).
Grey flint, cortex at butt end.
bm Blade.
(Fig.11) Broad working on left-hand convex edge, fine serrations on right-hand concave edge.
Bulb of percussion at butt end.
Grey flint, cortex at extreme tip.
cp Narrow blade, slender, tip broken off.
Triangular section.
Size $1 \frac{1}{4}{ }^{\prime \prime}$ by $7 / 16^{\prime \prime}$ by $1 / 8^{\prime \prime}$ ( 31 by 11 by 3 mm )
Right-hand slightly concave edge worked, on one face only, no pronounced serration.
Bulb of percussion at tip (working end).
Grey flint.
cz Flake, pointed, tip broken off.
(Fig.11) Slightly convex left-hand edge and slightly concave right-hand edge worked on one face only. No pronounced serration.
Bulb of percussion at tip (working end).
Brown flint with cortex at butt end.
$d d \quad$ Fragment of strong, narrow blade. Tip only.
Triangular section.
Size $7 / 8$ " by $1 / 2^{\prime \prime}$ by $3 / 16^{\prime \prime}(22$ by 13 by 5 mm ).
Short left-hand edge and longer right-hand edge, both straight, worked on one face only, with serration.
Grey flint with cortex on left face.
$d n$
Roughly rectangular flake, strong, broken across butt end.

Narrow flattish section.
Size $5 / 8^{\prime \prime}$ by $1 \frac{1}{8}$ " by $3 / 16^{\prime \prime}$ ( 16 by 29 by 5 mm )
Worked on all three edges, particularly the longest one, one face only, with small re-touching flakes.
Bulb of percussion at butt end.
Grey flint.
$e b \quad$ Trapezoidal fragment, very strong flake, damaged.
Triangular section.
Size $15 / 8^{\prime \prime}$ by $13 / 8^{\prime \prime}$ by $7 / 16^{\prime \prime}$ ( 41 by 35 by 11 mm )
Part of one worked edge remaining, one face only, with small re-touching flakes.
Grey flint.

## Dagger or heavy point

be Fragment of strong, broad blade, pointed tip and butt both broken off.
D-shaped section.
Size $1^{3 / 4} 4^{\prime \prime}$ by $9 / 16^{\prime \prime}$ by $3 / 8^{\prime \prime}(38$ by 14 by 10 mm$)$
Both slightly-convex edges broadly worked, one face only.
Calcined flint.

## Half-round Scrapers

ao Flake.
(Fig.11) Semi-circular edge with slight angle at one point, broadly worked, one face only. Grey flint with cortex at butt end.
$b t \quad$ Oval flake, strong, tip and butt broken from originally long, narrow flake.
Narrow, flat section.
Size $1^{\prime \prime}$ by $11 / 16^{\prime \prime}$ by $3 / 16^{\prime \prime}$ ( 25 by 17 by 5 mm )
Both convex edges and tip broadly worked, one face only; heavier right-hand edge reworked round on to broken butt, thus completing the semi-circle of the scraper. Grey flint.
de $\quad$ Roughly circular flake, strong, with thick leading edge.
'Thumb-nail' type scraper.
Flattish section.
Size $3 / 4^{\prime \prime}$ by $3 / 4^{\prime \prime}$ by $3 / 16^{\prime \prime}$ ( 19 by 19 by 5 mm )
Full semi-circle of edge broadly worked, one face only.
Black chert with cortex on un-used edge.

## End scrapers

$a q \quad$ Narrow flake, strong. Triangular section.
Size $1^{1 / 8 "}$ by $3 / 4^{\prime \prime}$ by $5 / 16^{\prime \prime}$ ( 29 by 19 by 8 mm )
Working discernible only around semi-circle of tip, on one face only.
Calcined flint with cortex on left-hand edge and base.
$d a \quad$ Roughly triangular flake, strong, with strong rounded tip.
Triangular section.
Size $13 / 16^{\prime \prime}$ by $3 / 4^{\prime \prime}$ by $3 / 16^{\prime \prime}$ ( 30 by 19 by 5 mm )
Worked around semi-circle of tip, one face only.
Grey flint.
$d u \quad$ Flake.
(Fig. 11) Worked around semi-circle of broad end only, one face.
Grey flint. Polished with much use.

## Leaf-shaped scrapers

$l$
Flake.
(Fig. 11) Worked all around edge with exception of butt, on one face only, with long flaking.
Bulb of percussion at working end.
Grey flint.
Very fine tool with good flint technique of long flaking, in advance of all artifacts with possible exceptions of saw $b m$ and arrowhead $c f$.

Flake
(Fig.11) Very small amount of re-touching on whole edge with exception of butt end. Bulb of percussion on working end.
Brown flint.
Poor workmanship, rudimentary artifact.

## Arrowhead

$c f \quad$ Leaf-shaped with tip missing.
(Fig. 11) Worked over both faces and re-touched on edges.
Grey flint.
Edges worked alternately to give balance. Good technique with long flaking.
Original length of artifact can be estimated as $1^{\prime \prime}$ ( 25 mm ).

## Miscellaneous scrapers

at Roughly triangular flake, strong, uneven shape.
Flattish section.
Size $1^{\prime \prime}$ by $1^{\prime \prime}$ by $3 / 16^{\prime \prime}$ ( 25 by 25 by 5 mm )
Original edge re-touched with small flakes was broken off leaving relieved concave edge which was in turn worked in a similar manner.
Grey flint with cortex on flat right-hand edge where flake was struck off.
dj Fragment from edge of heavy convex scraper, worked around.
Triangular section.
Size $5 / 16^{\prime \prime}$ by $1^{\prime \prime}$ by $5 / 16^{\prime \prime}$ ( 8 by 25 by 8 mm )
Black chert with cortex on upper face and right-hand edge.
et Fragment from edge of heavy convex scraper.
Triangular section.
Size $3 / 8^{\prime \prime} \times 1 \frac{1}{8}{ }^{\prime \prime} \times 1 / 4$ " ( 10 by 29 by 6 mm )
Worked around remaining edge.
Grey flint.

## Miscellaneous tools

di Squarish, heavy fragment.
(Fig.11) Convex leading edge shaped and re-touched.
Bulb of percussion at butt end where fragment was struck off.
Grey flint with cortex on left-hand face and butt.
An efficient plane or spokeshave.
ej Narrow, rough flake.
Roughly triangular section.
Size $13 / 8^{\prime \prime}$ by $5 / 8^{\prime \prime}$ by $5 / 16^{\prime \prime}$ ( 35 by 16 by 8 mm )
Worked on both faces of slightly-concave left-hand edge and on upper face only of sharply concave re-entrant on right-hand edge.
Bulb of percussion at forward edge.
Grey flint with cortex where flake was struck off.
Dual-purpose tool with adaptation for shaft-shaping worked into two faces.
$f u \quad$ Roughly triangular fragment, tip of pointed instrument.
Triangular section.
Size $3 / 8{ }^{\prime \prime}$ by $5 / 8^{\prime \prime}$ by $1 / 8^{\prime \prime}(10$ by 16 by $3 \mathrm{~m} ı \mathrm{~m})$
Worked only on edge, crude technique but on both faces.
Brown flint.

Narrow, irregular blade, strong. Angled to right at tip, which is fairly pointed. Triangular section.
Size $1 \frac{1}{8} " \times 1 / 2 " \times 1 / 4 "(28$ by 13 by 6 mm$)$
Worked with small re-touching flakes on right-hand concave edge and around tip. Bulb of percussion at tip.
Grey flint.
Has the appearance of a combined saw and groover. Could only efficiently be used by a left-handed person.

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