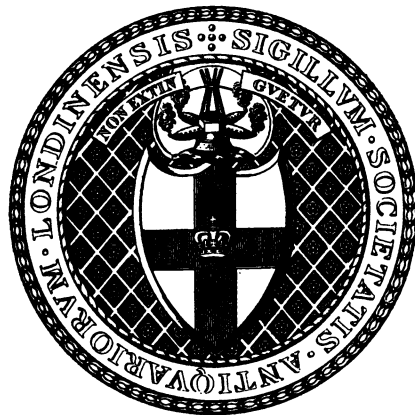


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No. XXIX

Durrington Walls:
Excavations 1966-1968

By
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with
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PREFACE

THE large circular earthwork situated north of the town of Amesbury in south Wiltshire has been one of the more neglected prehistoric monuments. A description of the remains was not published until 1812 by Sir Richard Colt Hoare, at which time the bank had been much mutilated by ploughing. The continuation of this process for more than 150 years until the present day has reduced the earthwork for the most part to a chalky streak in the ploughed soil.

The site was scheduled under the Ancient Monuments Acts in 1928 but by 1966 the enclosure ditch had not been sectioned, nor had any formal excavation been undertaken in the interior. In 1966 the Ancient Monuments Division of the Ministry of Public Building and Works was notified by the Wiltshire County Council of a proposed re-routing of the A345 road from Amesbury to Marlborough, designed to eradicate a stretch of highway with a bad accident record, which traversed the east half of the Durrington enclosure. An assessment was made of the possibilities of diverting the road elsewhere but geological considerations made such alternative routes impractical. The matter was referred to the Ancient Monuments Board for England who recommended that the scheme be accepted, provided that the County Council gave facilities for careful excavation and recording in the area proposed for the new road. These excavations were undertaken in the autumn of 1966 and the summer of 1967. In 1966 the ditch and bank of the enclosure were excavated where they were to be crossed by the route of the proposed road. In addition, the bank was sectioned in its south sector and an area investigated to the south of the enclosure. These excavations were the subject of an interim report in 1967.¹ In the following year, the strip of land which represented the route of the new road across the eastern half of the enclosure became available for excavation which was undertaken from June to August. During this season the east entrance to the enclosure was located and partially excavated and the remains of important timber structures were found in the interior. In addition, the route of the proposed road was totally excavated south of the enclosure as far as Totterdown Clump. An interim report on these excavations was published in 1968.²

In November 1967, contractors working on behalf of the Wiltshire County Council excavated an outfall trench some 0.50 m. wide which cut through the bank of the enclosure to the south of the east entrance. A quantity of Late Neolithic refuse was recovered from the old land surface under the bank and samples of the soil were obtained with a view to studying the environment of the time. In February 1968 a previously unsuspected enclosure of Iron Age date was discovered to the north of the Neolithic enclosure, near the road known as the Packway which runs west to Larkhill Camp from the Stonehenge Inn. This enclosure was identified in the course of building the new road and the supervision of its excavation was undertaken by Mr P. Donaldson under the direction of the author. This settlement has been called the Packway Enclosure on account of its proximity to that road.

Finally, in June 1968 a strip of turf was removed in order to lay a footpath to a bus shelter

¹ Wainwright, 1967.

² Wainwright, 1968.

to the south of the Neolithic enclosure. Mr P. Drewett kept a watch on these operations which revealed the terminal of a shallow ditch — possibly part of a barrow ditch.

Under the supervision of the writer, the work in 1966 and 1967 was carried out by volunteer labour and with men and machinery provided by R. Butcher and Son of Warminster. The extent of the excavation and the complexity of the structures uncovered made heavy demands on the skill and stamina of the supervisors in charge of the individual sites and it was their efforts which alone made the work possible. Mr P. Donaldson and Mr P. Drewett supervised the excavation of the Southern Circle and Mr B. Sewell that of the Northern Circle, whilst Miss A. Good controlled the daily flow of finds. Mr J. Clarke provided help in the field and in numerous ways in the preparation of this report, whilst my wife organized the physical welfare of the volunteer labour force. Other assistants who bore special responsibilities during the excavation include Mr R. Evans, Mr J. Huntries, Mrs I. Wade and Dr D. White.

Permission for the excavation was given by the owners of the land, who were the Wiltshire County Council, Messrs Wort and Way of Salisbury and the Executors of the estate of the late J. J. Toomer. The maps, plans and sections in this report are by Mrs C. Boddington who also prepared the drawings of the pottery and bone objects. The flint artifacts were drawn by my wife, figs. 20–29, 89–93 by Mr P. C. Compton and fig. 105 by Mr D. Neal. The reconstruction drawings of the buildings are by Mr C. Musson. The photograph for plate I is by Dr J. K. S. St Joseph; plate *XIIa* is by Mr J. Hampton of the National Monuments Record; plates II, III, *IVa*, VI, X, XII by the School of Army Aviation under arrangements made with the Royal Commission on Historical Monuments; plate *IVb* by the Packway Studios, Larkhill; Plate *Va* by Dr J. Evans and the remainder by staff photographers of the Ministry of Public Building and Works with the exception of plate *XIIb* which was provided by the Ministry of Defence.

The problems of the site have been discussed with many colleagues and the writer wishes to express his particular gratitude to Dr I. H. Longworth of the British Museum for his major contribution on the Neolithic pottery; to Mr C. Musson, then a research student at the Department of Archaeology in the University College, Cardiff, for his discussion of the architectural problems of the timber structures, to Professor R. J. C. Atkinson of the University College, Cardiff, for his assistance in calculations concerning the timber circles and the enclosure bank and ditch, and to Dr I. F. Smith.

Most grateful thanks are given to all those who have contributed specialist reports and advice in the compilation of this monograph, notably Mr R. Harcourt for his study of the numerous animal bones; Professor G. W. Dimbleby and Dr J. G. Evans for their studies of the fossil pollens and land mollusca respectively; Dr F. S. Wallis and Mr E. D. Evens of the Implement Petrology Survey of the South-West for their reports on the non-local rocks; Mr G. C. Morgan for his report on the charcoals; Mrs L. A. Finch for her report on the petrological examination of certain sherds; Mr R. Burleigh for his note on certain radiocarbon dates and Miss R. Powers for her account of the human skeletal remains. Mr V. R. Rickard of the Ancient Monuments Laboratory of the Ministry cleaned and conserved the metal objects found during the excavation and the fabrics of the Iron Age sherds were examined and commented upon by Mr P. Fowler of the University of Bristol. A geophysical survey of the area to be destroyed was carried out by Mr A. J. Clark of the Ancient Monuments Laboratory before the 1967 excavation. In the autumn of that year an extensive

geophysical survey of the enclosure was undertaken to determine the line of the enclosure ditch and to confirm whether or not other timber structures had existed in the interior. Some of the results of this survey have been incorporated in the main site plan (fig. 3).

As a result of the archaeological work negotiations have taken place to prevent any ploughing of the enclosure in the future. The finds have been deposited in the Salisbury Museum.

USE OF THE RADIOCARBON DETERMINATIONS

Throughout this work the chronology derived from the radiocarbon dates discounts both main aspects of the carbon-14 discrepancy problem which have recently become apparent from the work of Suess and others based on carbon-14 measurement of tree-ring sequences (Olsson, 1970). First, none of the dates have been calibrated in terms of calendar years. Secondly, if the fine structure of the published curve is correct, it is possible that some of the determinations fall into one of the less sensitive regions. This could have the effect that dates which now appear to form an ordered sequence may not really do so. Until further work has verified the detailed shape of the discrepancy curve, perhaps using material from other geographic regions, it seems desirable that tentative calibration of the dates should not be made. The sequence of raw dates provided, backed by the stratigraphy, has been taken as the basis of a working hypothesis for the chronological arguments embodied in this work.

SUMMARY

Excavations between 1966 and 1968 within and around the oval earthwork near Durrington Walls, Wiltshire, in advance of a road improvement scheme, recorded the remains of timber structures within the enclosure which are considered to have been roofed buildings and which can be compared with neighbouring Woodhenge and with the Sanctuary on Overton Hill. The earliest evidence for occupation on the site predates the enclosure and can be assigned by radiocarbon determinations to the middle of the third millennium B.C., whilst the bank and ditch were not constructed until the beginning of the second millennium. At the same time, or perhaps a little later, a large timber structure with its roof supported on concentric rings of oak posts was built within the south-east entrance to the enclosure and a similar though smaller structure approached by an avenue was built to the north of it. A geophysical survey has established that more timber structures were built within the enclosure but the nature and date of these is not known. Considerable quantities of Grooved Ware sherds together with associated flint and bone artifacts and animal bones were recorded from the enclosure earthworks and from the timber structures and these have been described and placed in their cultural context. In addition, the status of Grooved Ware in the early second millennium B.C. has been reviewed in respect of its origins, style, chronology and associations and a gazetteer of the relevant sites has been compiled. The area was also settled in the Late Pre-Roman Iron Age and this evidence is discussed in a final chapter. Throughout this work radiocarbon dates are expressed, following normal practice, on the basis of the Libby half-life for carbon-14 of 5568 years without further correction.

I. INTRODUCTORY

DURRINGTON WALLS is a nearly oval enclosure surrounded by a ditch with an external bank, which excavation and a geophysical survey showed to be breached by two entrances in the east and west. The dimensions of this enclosure, taken from the midline of the bank, are 487 m. from north-west to south-east and 472 m. from north-east to south-west. On the basis of its plan, with the bank outside the ditch, the enclosure is assigned to the category of prehistoric ceremonial circles known as henge monuments. This term was first employed by Kendrick and Hawkes¹ and its two opposed entrances place it in Class II of that category as defined originally by Professor Piggott.² The great size of the enclosure distinguishes it from the majority of Class II henge monuments and relates it rather to ceremonial circles such as Avebury in north Wiltshire, Marden in the Vale of Pewsey and Mount Pleasant to the east of Dorchester.

The bank and ditch enclose a small dry valley on cultivated chalk land which leads directly onto the River Avon, and amongst ceremonial circles Durrington Walls is unique in such a siting although proximity to water is normal for Class II henges as a whole. The enclosure is contained by the 385 ft. and 260 ft. contours to the west and east respectively, there being a descent of 12.1 m. from the south lip of the valley to the bottom of the combe and a similar drop of 15.2 m. from the north lip of the valley. It lies some 60.9 m. north of the Woodhenge timber structure excavated by Mrs Cunnington and 1.8 miles north-east of Stonehenge (fig. 1).³ The flat surface around the edge of the combe to the north, west and south is occupied by the very eroded remains of the bank. The ditch is situated inside the bank further down the slope and pursues a much more irregular course. The interior of the enclosure was crossed by the old route of the A345 which descended into the combe from the south before turning sharply right and emerging from the valley to the south of the Stonehenge Inn. This route has now been replaced by the new road on its embankment above the valley floor, which crosses a ditch terminal of the east entrance and traverses the east half of the enclosure before emerging onto level ground to the north of the Neolithic enclosure.

Centuries of ploughing have obliterated the ditch of the enclosure in every sector save the north-east, where it is still visible as a shallow depression, and has also flattened the bank save in that same sector. As a result, the most conspicuous man-made features on the site are the lynchets which follow the line of the ditch and cross the bank in the south sector and which obscure the ditch and the inner edge of the bank in the west and east (fig. 3). The combination of these agricultural processes and man-made features render the site much less impressive today than it would have been in the middle of the second millennium B.C.

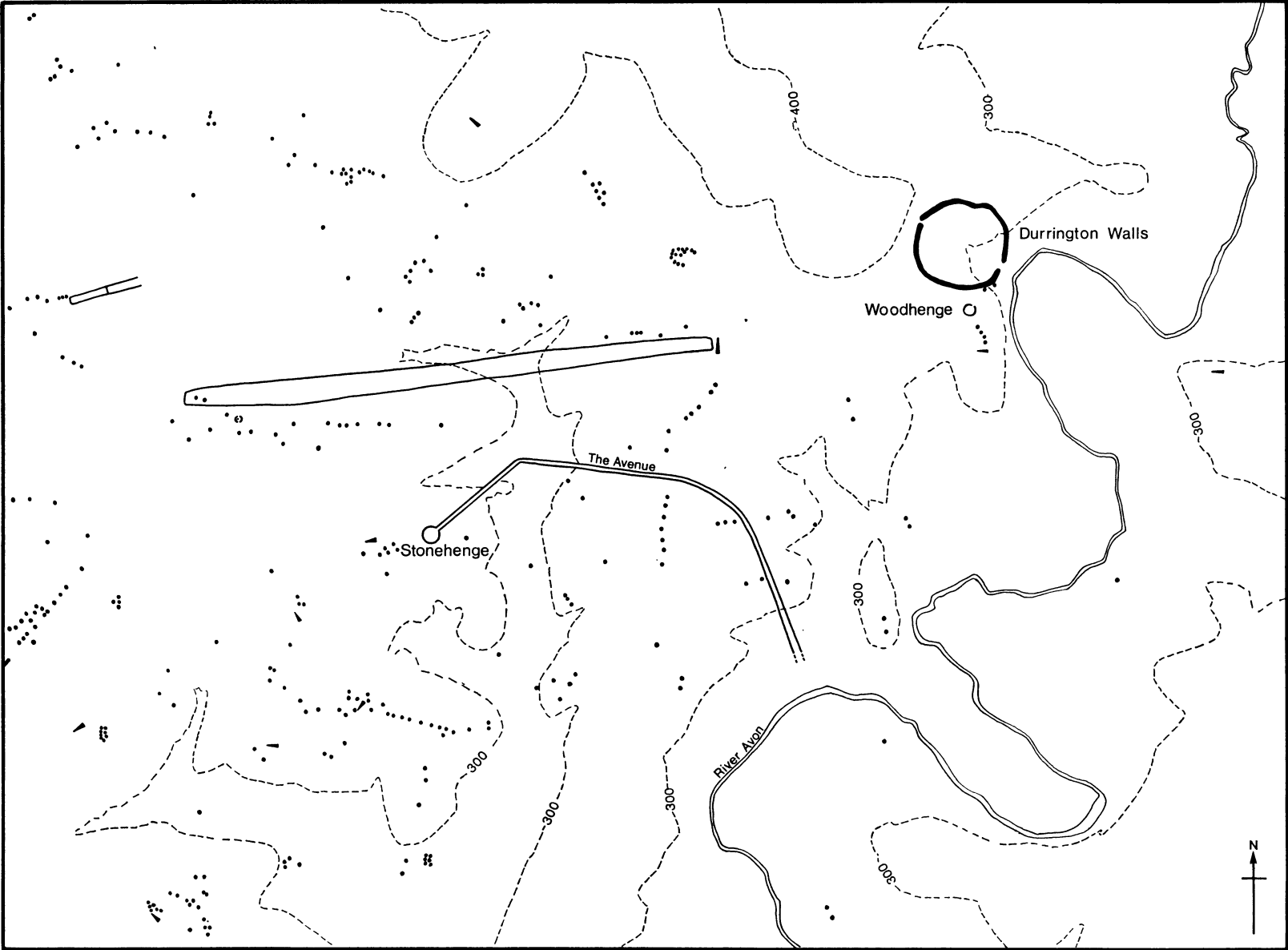
However, although ploughing has resulted in the erosion of the bank and the chalk bedrock around the edge and upper sides of the valley, this process has also entailed the drift of a protective covering of soil into the bottom and onto its lower slopes. In places this mantle of soil attained a depth in excess of 1.5 m. This means that although the post-holes of timber structures which were recorded on the upper slopes have been badly eroded, the remains of the buildings which were found in the bottom of the valley were extremely well preserved.

¹ Kendrick and Hawkes, 1932, 83-98.

² Piggott, S. and C. M., 1939, 140.

³ Nat. Grid Ref. SU 150435.

LOCATION MAP FOR DURRINGTON WALLS



0 1000 5000
Scale in Feet

0 1000
Metres

• Round Barrow — Long Barrow (•) Fargo Plantation

FIG. 1

THE ARCHAEOLOGICAL ENVIRONS OF DURRINGTON

A large number of prehistoric antiquities are concentrated in the immediate vicinity of Durrington Walls. A number of these have been recorded through chance discoveries — an example being the Packway Enclosure, the existence of which was unsuspected until it was revealed by the road-workings. The distribution of these sites around Durrington Walls is given in fig. 2.

Woodhenge (SU 150434)

Situated some 60.9 m. south of Durrington Walls and excavated by Mr and Mrs B. H. Cunington between 1926 and 1928, Woodhenge consists of a circular enclosure surrounded by a ditch with an external bank and one entrance. This enclosure is 67 m. in diameter and contained a setting of six concentric rings of post-holes which have been interpreted as supports for the roof of a large circular building. Pottery associated with this structure includes Grooved Ware and fragments of Beaker. Two comparable structures were found within the Durrington enclosure in 1967 and the Woodhenge structure will be considered in greater detail when these are discussed.

Woodhenge: Circle 1 (SU 15134323)

Two concentric ditches of a ploughed-out round barrow which surrounded a central grave. The grave contained the crouched skeleton of a man which was associated with a Long-Necked Beaker and a perforated axe-hammer of tourmaline granite from the Land's End region. The battle-axe is a type artifact in Stage 1 of Mrs Roe's developing series of such implements,¹ which are normally assigned to a long-necked Beaker/Food Vessel horizon.²

Woodhenge: Circle 2 (SU 15134326)

An irregular circular ditch some 24.3 m. in diameter of a ploughed-out round barrow, which appears to have been dug through a rectilinear setting of stake-holes. Seven pits were found within the ditch, one of which contained an unaccompanied crouched skeleton and another contained a cremation with three small sherds of Grooved Ware.³

Woodhenge: Circle 3 (SU 15114328)

A circular ditch of a ploughed-out round barrow which enclosed one pit containing a few animal bones, a piece of burnt clay and a flint scraper. Grooved Ware was obtained from the bottom of the ditch.⁴

Woodhenge: Circle 4 (SU 15104330)

The circular ditch of a ploughed-out round barrow with no internal features. Grooved Ware was obtained from the bottom of the ditch.⁵

¹ Roe, 1966.

² Cunington, 1929, 42f., pl. 39.

³ Cunington, 1929, 45f.

⁴ Cunington, 1929, 47, pl. 39, 3.

⁵ Cunington, 1929, 49f., pl. 45.

EXCAVATION PLAN AND ENVIRONS
OF DURRINGTON WALLS

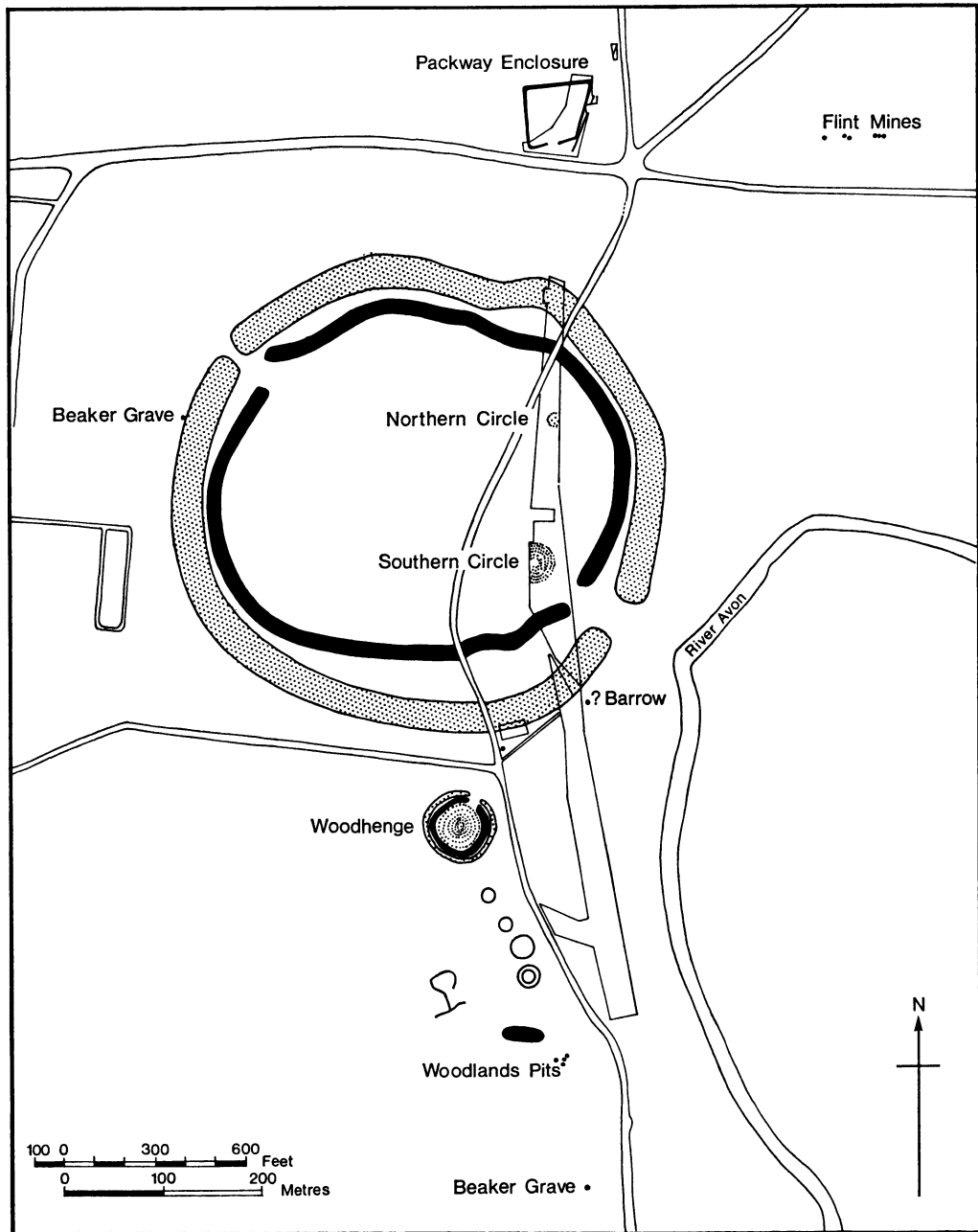


FIG. 2

Durrington Walls: south side 1 (SU 152435)

Sir Richard Colt Hoare recorded a mound 'on the south side of Durrington Walls'. He excavated this mound, which had the external appearance of a barrow, to a depth of 3.3 m. but no interment was found. There was no visible trace of this barrow in 1966 but on a map published by Hoare,¹ its location appears to be similar to a group of pits or post-holes which were found in the 1966 excavations and which have been designated Structure A.

Durrington Walls: south side 2 (SU 15144348)

The crouched burial of an adult female associated with a debased Bell Beaker was excavated by A. St J. Booth in 1951 east of the A345 south of Durrington Walls. In the surrounding ditch were found the horn-cores of *Bos longifrons* and much human refuse.²

Totterdown Clump (SU 15134317)

West of Totterdown Clump occur three conjoined round barrows which may be superimposed on a long barrow. They were dug into by Sir Richard Colt Hoare³ who recorded a few ashes and charred wood from one barrow, a skeleton and a 'drinking cup' from the second and a 'circular cist like a well' in the third, from which a tunnel rose nearly to the top of the mound.

Totterdown Clump (SU 152430)

In 1932 a crouched burial in a circular grave was found on the north side of a house called 'Woodhenge'. The filling of the grave pit contained sherds of Grooved Ware.⁴

'Above Durrington Walls' (SU ? 148438)

A flat grave recorded by Colt Hoare⁵ which was covered by a sarsen stone and contained a skeleton with a flint dagger, a small whetstone and a shale or lignite conical button or pulley ring.⁶

In addition, a crouched skeleton is reported to have been found in May 1916 in the course of digging trenches at Durrington, but there was no record of any object with it.⁷

Ratfyn, Amesbury (SU 15954205)

In 1920, skeletons, Grooved Ware and an axe-hammer of dark olive-green close-grained quartzite of Mrs Roe's Stage 1 were obtained when two houses were built on the Amesbury-Ratfyn road, one mile south-east of Woodhenge on the other side of the River Avon. In 1934 Dr J. F. S. Stone located the site of these 1920 excavations at the back of Millmead House in Ratfyn Lane and found a ditch and some pits. The ditch was not dated and only Pit 5 produced finds in any quantity — mainly flints, Grooved Ware and a large scallop shell.

¹ Hoare, 1812, facing page 170.

² Stone, Piggott and Booth, 1954, 164, fig. 9.

³ Hoare, 1812, 170.

⁴ Cunnington, 1935.

⁵ Hoare, 1812, 172, pl. XIX.

⁶ Cunnington, 1954, 234.

⁷ *Wilts. Arch. Mag.*, XLI (1920), 184.

The 519 flints included blades, saws, transverse arrowheads and cores, whilst the animal bones included remains of ox, pig, red deer and roe deer, together with the fragmentary right scapula of a Brown Bear.¹

'Woodlands', south of Woodhenge (SU 15174313)

Four pits were excavated by Dr Stone in 1947 and 1948 in the garden of a house called 'Woodlands', 274 m. south-east of the centre of Woodhenge. The pits produced a quantity of human debris which included Grooved Ware, a chipped flint axe, part of a Graig Lwyd axe, transverse arrowheads, serrated flint flakes, bone pins, antler picks, marine shells and animal bones.^{2,3}

Flint mine pits (SU 155440)

In 1952 a series of trial flint mine pits were discovered east of the Stonehenge Inn and north of Durrington Walls in the side of a pipe-trench. Three pits were interpreted as open-cast flint workings as they consisted of shallow depressions some 60 cm. deep which had been designed to extract material from a poor quality flint seam. Two antler picks were found in the spoil that had been thrown out of the pits. Of the three additional pit-shafts that were discovered, one possessed low galleries at the base of the shallow shaft and in another the flint had been removed by undercutting. However the flint was generally of a poor quality and the shafts were not extended. Antler picks, a rake and a broken or incomplete transverse arrowhead lay on the floor of pit-shaft 5.⁴

The Egg-Shaped Enclosure (SU 15054320)

A penannular oval, or more exactly egg-shaped enclosure, bounded by a palisade ditch, one terminal of which is extended in a straight line to the south of the enclosure where it meets a linear ditch. Twenty-five pits were found within this enclosure of which one produced about 100 grains of charred barley.⁵ Pottery from the ditch is of Middle to Late Bronze Age type.

The Packway Enclosure (SU 152441)

A trapezoid or kite-shaped enclosure surrounded by a ditch and presumed inner bank which was discovered to the west of the Stonehenge Inn during road building operations in 1968. Pottery from the ditch and from two internal pits dates this enclosure to the end of the pre-Roman Iron Age.

The concentration of secular, sepulchral and ritual remains of the Late Neolithic period in the vicinity of Durrington Walls conveys the impression that the area was intensively settled at that time. As a religious centre it must have been highly regarded, as shown by the remarkable concentration of timber buildings on the west bank of the River Avon and Stonehenge being close at hand. Of these structures, Woodhenge has been known for 40 years but has now been placed in perspective as an outlier belonging to a group of similar structures which lie within the bank and ditch of Durrington Walls.

¹ Stone, 1935A.

² Stone and Young, 1948.

³ Stone, 1949.

⁴ Booth and Stone, 1952.

⁵ Cunnington, 1929, 49f., pl. 45.

THE HISTORY OF THE SITE

The enclosure has a history in archaeological literature which extends back only to the early nineteenth century. The earliest description we have of the site is by Sir Richard Colt Hoare and runs as follows: 'The site of this ancient settlement is decidedly marked by a circular embankment, partly natural, and partly artificial, which shelters it from the south-west winds. . . . Having been for many years in tillage, its form is much mutilated; but from what remains it appears to have been of a circular form, and to have had a vallum all around it on the high ground, but not on the east side near the water. We picked up a great deal of pottery within the works'.¹ It would appear from this description that the enclosure had suffered damage from ploughing at that date, but despite the record of a great deal of surface pottery little or none has been collected from the fields in this century despite periodic searching.

The next description of the site is that by Mr P. Farrer (over a century later than Colt Hoare),² who illustrated his account with a contour plan and four sections. The plan is remarkably accurate when one considers that the bank and ditch had virtually been obliterated in their north, west and south sectors. Working from surface indications, Mr Farrer located the west and east entrances and noted that the line of the ditch to the south of the east entrance was clearly visible as a crop-mark in 1917. Fifty years later even this slight indication had been destroyed, but with its help Mr Farrer measured the causeway of the east entrance and found it to be 9.1 m. wide. The result of his careful observation is that his plan of the enclosure ditch differs very little from that determined by excavation and geophysical survey.

In addition to his survey of the enclosure Mr Farrer observed a section which was cut through the bank in its west sector in 1917 when a drain was laid from Larkhill to a soak-pit (fig. 3). In this area the bank is masked by a lynchet of post-Neolithic age beneath which some 45 cm. of bank composed of chalk lumps was preserved intact. On top of the bank was found a skull and other human bones. Beneath the bank a fossil soil some 9 cm. thick was preserved, on top of which was an occupation layer of charcoal, flints, burnt bone and one potsherd which was identified as part of a Beaker by Mrs Cunningham and Dr Blackmore. As the remains of the bank were clearly undisturbed over the charcoal layer it is reasonable to assume on this evidence that the bank was constructed after the deposition of this potsherd. Mr Farrer's valuable contribution to a study of Durrington Walls was therefore twofold: he had produced the first accurate plan of the site and recorded the first observations concerning an excavation of any kind into the earthwork. If these observations were correct, he had provided a *terminus post quem* for the building of the bank.

Farrer's description of the site was followed by an account written by O. G. S. Crawford in 1929 who attempted to supplement the earlier description by means of aerial photographs and his personal observations. The photographs are of good quality, and the writer is indebted to staff of the Royal Commission on Historical Monuments for their assistance in obtaining prints from the original negatives, which have played an important part in composing the general site plan (fig. 3). By means of these photographs Crawford was able to

¹ Hoare, 1812, 169.

² Farrer, 1918.

prove the existence of the west entrance, as the ditch terminals could be located as crop-marks.¹ Moreover, he was also able to point to the existence of a rectilinear enclosure sited against the lynchet at the place of the west entrance, and two concentric ditches just west of the centre of the enclosure.² However, although on Crawford's amended plan the line of the bank is plotted with accuracy, the alignment of the ditch in its south sector was moved further to the south to conform with the observed course of the bank. It is clear from both the aerial photographs and the evidence of the 1967 excavations that Mr Farrer's observations were the more correct in this respect and that there was a substantial berm between the bank and ditch in this area.

Although Crawford did not find any pottery on the surface he did find half of a perforated stone mace-head near the centre of the enclosure.³ Dr H. H. Thomas of the Geological Survey identified it as an 'olivine diorite which in this instance is characterized by decomposed crystals of olivine showing as small dull red grains'. He pointed out that 'rocks of similar character occur along the Welsh borders at Rowley in Shropshire, south of Wellington'.

Although Dr Crawford's account was written 'to clear the ground' for urgently needed excavations on account of the uncertainties concerning the plan, date and internal structures of the monument, this work was not undertaken. The site was included in Professor Atkinson's list of henge monuments as a Class II type⁴ but no new information regarding the enclosure came to light until the winter of 1950-1 when the Amesbury R.D.C. excavated a pipe-trench 90 cm. wide and 1.2 m. deep across the east half of Durrington Walls (following the east verge of the A345). A subsidiary pipe-trench crossed the field to the south of Woodhenge which contained the barrow circles excavated by Mrs Cunnington. This pipe-trench was studied by A. St J. Booth of Amesbury, Professor S. Piggott and Dr J. F. S. Stone, who were able to record what was in effect a north-south section across the enclosure.

Eighteen metres outside the southern bank was a ditch enclosing a circular area 11.2 m. in diameter with a shallow central grave which had been partly cut away by the pipe-trench. The grave contained the remains of a small contracted skeleton associated with a large asymmetric and unornamented Bell Beaker.

It was suggested that the main enclosure ditch in its southern sector was located to the south of the lynchet⁵ but it was not possible to establish its dimensions. A gap in the bank of some 5.4 m. was taken to represent the position of the ditch and it was therefore suggested that the bank was piled up on both sides of the latter. However, the evidence of aerial photography and of the 1967 excavation indicates that in fact the ditch lies to the north of the lynchet (fig. 3). It seems likely that the gap in the bank noted by Booth and Stone was due to erosion by ploughing. Furthermore, this gap is not wide enough for the ditch as recorded in the 1966-7 excavations. The evidence of the pipe-trench suggests rather that the bank at this point is well in excess of 30 m. wide and that it is separated by a berm more than 27 m. wide from the ditch to the north of the lynchet.

A few sherds of Grooved Ware were recorded from the old land surface below the bank and at its southern edge a double row of post-holes was discovered. This discovery prompted further excavations in 1952 which are described below.

¹ Crawford, 1929, pl. III.

² Crawford, 1929, fig. 3.

³ Crawford, 1929, fig. 1.

⁴ Atkinson, 1951, 96.

⁵ Stone, Piggott and Booth, 1954, 162-4, fig. 3.

As far as the bank and ditch in the north sector were concerned the pipe-trench revealed that the ditch had been dug into an existing small dry valley and was separated from the bank by a berm. The width of the bank was 27.4 m. and beneath it was preserved a fossil soil up to 27 cm. thick in places. Flint implements and sherds of Grooved Ware were recorded from the top of this old land surface. In addition, a group of 7 Iron Age pits was recorded inside the enclosure to the south of the ditch. The pottery from these pits is best paralleled in the Little Woodbury series and objects from them included three unfinished miniature cups of chalk and one chalk block with concave scraped surfaces.

The subsidiary pipe-trench crossed the field south of Woodhenge and passed through Mrs Cunnington's barrow circle No. 3. Midway between Woodhenge and the egg-shaped enclosure was found a large Late Bronze Age vessel standing in a hole in the chalk and, 198 m. from the road, the ditch of another barrow circle was cut through and produced a number of sherds of the late Middle Bronze Age.¹

THE EXCAVATIONS OF 1951-1952

The pipe-trench in the winter of 1950-1 and small exploratory cuttings in 1951 disclosed a number of post-holes with Late Neolithic domestic rubbish scattered around and in them. In 1952 it was decided to extend the excavations in this area so as to obtain more information concerning their purpose and extent. A double line of post-holes was traced along the southern edge of the bank for a distance of some 20.7 m. and post-holes at right-angles to this line suggested that one might be dealing with buildings of rectilinear plan. However, cuttings to the south of the bank which were intended to check this theory produced no post-holes. In addition to the post-holes, lengths of discontinuous hollows also followed the rear of the bank, mainly to the south of the post-holes save at the west end of the alignment where the post-holes were dug into the filling of the hollows. The latter were never more than 60 cm. deep and pre-dated the building of the bank. The post-holes, whose diameter rarely exceeded 30 cm. and depth never exceeded 45 cm., also appear to pre-date the bank — albeit by a very small margin, for they were standing when the bank was thrown up and bank debris flowed around and between them.

Subsequently, a quantity of domestic debris accumulated on top of the bank talus and as the posts rotted some of the material fell into the sockets. This refuse included Grooved Ware, two scraps of Beaker, flints, animal bones and charcoal. As a result it was established that Late Neolithic material occurred both below the bank and on top of the bank talus. In the case of the latter the material included a little Beaker pottery and, if Mr Farrer's account of the 1917 section is to be believed, a fragment of Beaker pottery had also been recorded from the old land surface under the bank.

Charcoal obtained in these excavations from under the bank of the henge² was submitted for dating by the radiocarbon technique and produced dates of 2625 ± 40 B.C. (Gro 901a) and 2635 ± 70 B.C. (Gro 901). These dates were published by Professor Piggott³ who described them as 'archaeologically unacceptable'. His reasons were that small scraps of Beaker were found at Durrington in addition to the abundant Grooved Ware and similarly,

¹ Stone, Piggott and Booth, 1954, 164-6.

² Stone, Piggott and Booth, 1954, fig. 4, cutting III.

³ Piggott, 1959.

at neighbouring Woodhenge, Bell Beaker pottery was contemporary with the Grooved Ware. In view of these associations the date from Durrington should conform with other Beaker dates from Britain and the Netherlands which were not earlier than 2000 B.C. Moreover, as the rusticated ornament on some of the Woodhenge pottery was thought to be derived from rusticated Pot Beakers, the date for related material from Durrington could hardly be earlier than these pots. This problem was unresolved until the 1966 excavations produced additional material from the old land surface under the bank which suggested a possible explanation.

The finds from the pipe-trench and from the excavations were described in detail by Professor Piggott,¹ who concluded that, with differences in detail, the pottery was closely allied to that from Woodhenge and from the Woodlands pits nearby. Other artifacts included scrapers, borers, a transverse arrowhead and a knife with flat edge retouch of flint, and a bone pin. Of the abundant animal bones, pig comprised 61% and ox 35%, with sheep or goat comprising 3.5% and horse 0.3%.

THE EXCAVATIONS OF 1966-1967

(fig. 2 and pls. II, III)

Before excavations began in September 1966 certain problems presented themselves concerning the methods to be adopted so that an area of such great size could be investigated. The threatened area consisted of a strip of variable width, 18.2 m.-39.6 m. wide and 761.9 m. long, as the writer had decided not only to excavate totally the route of the road across the henge itself but also the area between the enclosure bank and Totterdown Clump to the south. In addition, the route of a proposed slip road to Woodhenge necessitated investigation (fig. 2). As far as the interior of the enclosure was concerned it was clear that nothing less than total excavation would suffice. First, on account of Woodhenge which led one to suspect that similar structures might exist in the vicinity, and secondly the dry valley, which implied that any structures in the bottom of that valley would be well preserved by soil having silted down the slopes, even though the remains of structures on the upper sides of the valley would probably have suffered badly from erosion. As a result of these suppositions it was necessary to commit finance in advance of the excavation in the belief that such expenditure would be rewarded. The area between the enclosure bank and Totterdown Clump was outside that covered by the scheduling order. Nevertheless, in view of the barrow circles discovered by Mrs Cunnington in the field south of Woodhenge it seemed necessary that the threatened area east of Woodhenge should also be investigated. Therefore, the route of the road from the enclosure bank to Totterdown Clump and that of the slip road to Woodhenge were totally excavated. However, the area was completely blank of any prehistoric pits or post-holes with the exception of one setting close to the enclosure bank (Structure A).

The most difficult problem facing the excavators was the removal of the ploughsoil which varied in depth from 15 cm. on the northern brim of the valley to 1.5 m. in the bottom. This problem was overcome by the use of JCB (3c) mechanical excavators which have a back-actor and a front blade or bucket. By using the back-actor on these machines the

¹ Stone, Piggott and Booth, 1954, 169-77.

overlying ploughsoil can be removed to the top of the natural chalk, or just above it if preferred, with great accuracy and delicacy in the hands of a skilled operator. An added complication was that the excavators were not permitted to stray outside the threatened area so that all the spoil had to be transported up the south face of the combe and dumped in an archaeologically sterile area. This was accomplished by means of a fleet of dumper trucks, up to a dozen serving four excavators, of which nine or ten were usually operative. However, it was found necessary to provide a small dumping ground within the threatened area on the north face of the valley and this limited space was not excavated. Without the use of machinery the excavation could not have been undertaken; the only disadvantage is that all unstratified finds in the ploughsoil are lost unless they are seen at the moment they are uncovered. This loss, however, is more than compensated for by the extensive areas it is possible to clear, with no damage to any pits or post-holes that may have been dug into the underlying chalk.

In September 1966 permission to enter the interior of the enclosure had not been granted and work was therefore concentrated on the bank and ditch where they were due to be crossed by the road in the north sector and on the outer half of the bank in the south sector. In addition, a start was made on stripping the route of the road south to Totterdown Clump. In the days prior to the 1967 excavations in June a geophysical survey was carried out by Mr A. J. Clark of the Ancient Monuments Laboratory which established the position of the south ditch terminal of the east entrance. In addition, a geophysical survey was undertaken of the area between Durrington Walls and Totterdown Clump. The subsequent excavations concentrated on the strip across the interior of the henge initially and then extended to the south to complete the excavation as far as Totterdown Clump. In the course of the excavations in the interior of the enclosure the remains of two major timber structures were found. The Southern Circle was sited inside the east entrance in the bottom of the valley and consisted of a series of concentric circles of post-holes representing the remains of a building similar to Woodhenge, but differing from that structure in that there were at least two major building phases represented. This structure provided the most complex technical problems, for owing to its position in the bottom of the valley the original dimensions of the post-holes had been preserved and were up to 1.8 m. wide and 3.0 m. deep in some instances, whilst the interlocking post-holes and ramps made the excavation a complex matter.

To the south of the junction of the old and new road routes a second timber structure was found — the Northern Circle, comprising two concentric circles of post-holes approached by an avenue of timber uprights from the south. The erosion of the chalk through ploughing in this area had been particularly heavy and only the base of each post-hole was preserved.

The eastern third of the Northern Circle lay outside the threatened area and was not excavated. Similarly, the western third of the Southern Circle was not to be destroyed and was therefore not excavated. The non-excavation of these areas was an act of deliberate policy, for it was considered that, as no threat existed, the interests of posterity would best be served by leaving a sample of each structure for excavation by a future generation. However, the parts of each structure which lay in the path of the projected road were totally excavated before the contractors for the Wiltshire County Council proceeded with their work.

In the autumn of 1967 a pipe-trench was dug through the southern terminal of the bank at the east entrance to provide drainage from the road down to the River Avon. This trench

revealed a section through the bank which had a particularly well preserved fossil soil beneath it at this point. Samples were taken from this soil by Dr J. G. Evans of the London Institute of Archaeology and Mr L. Biek of the Ancient Monuments Laboratory in order to attempt to determine the environment of the time. In addition, the old surface was littered with Late Neolithic pot-sherds, flint implements and fragmentary animal bones. Finally, at the end of 1967 the contractors extending the road to the north of the enclosure bank recorded a row of large post-holes. Unfortunately, owing to the circumstances of discovery of these post-holes it was not possible to establish their relationship to the bank.

THE EXCAVATIONS OF 1968

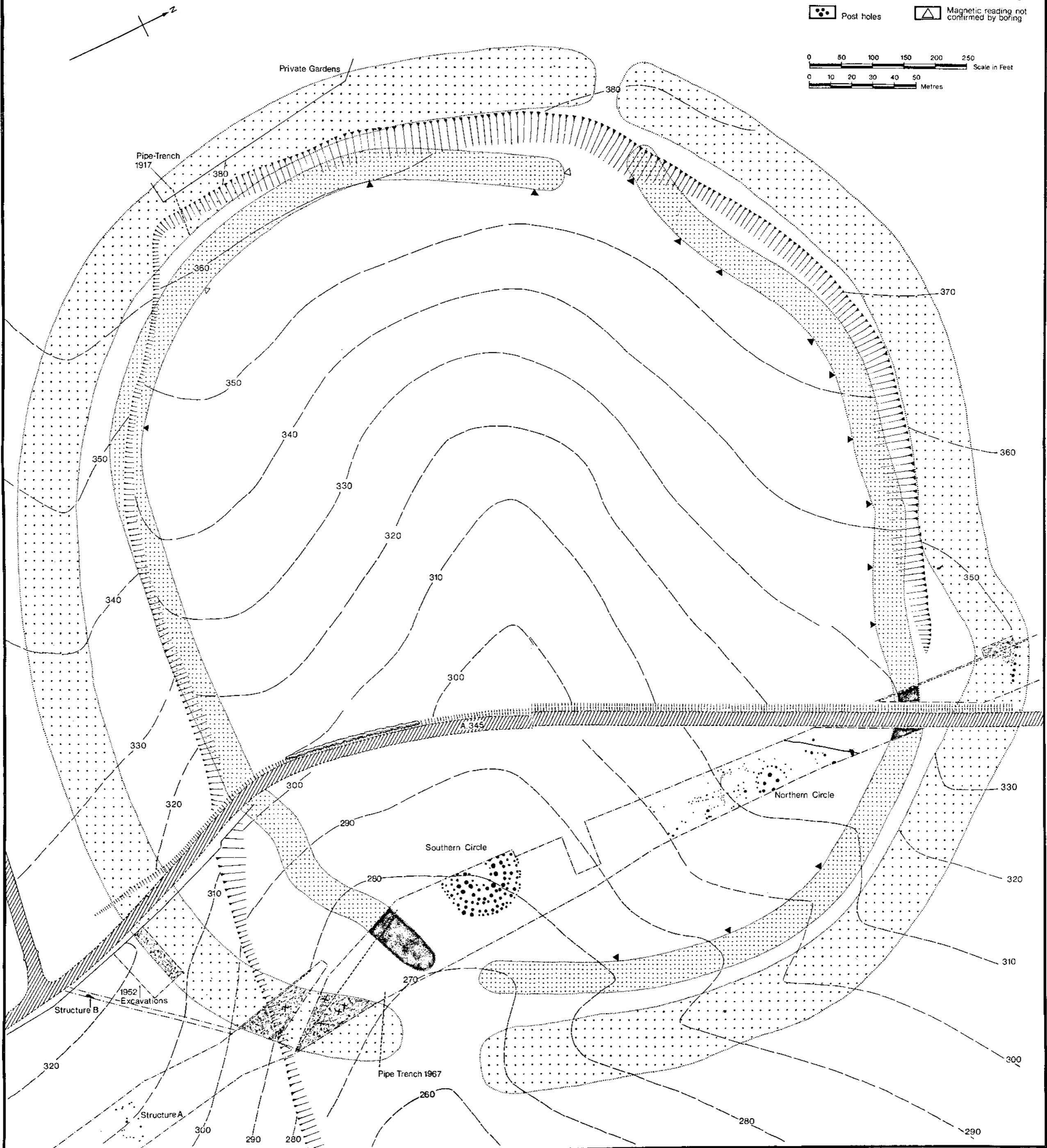
In February 1968 an enclosure of Iron Age date was discovered by the contractors some 152 m. north of the Durrington enclosure and west of the Stonehenge Inn.¹ There was no indication on the ground surface of the existence of this enclosure, the bank of which had been completely flattened by the plough. Unfortunately, some 1.2 m.-1.5 m. of chalk had been removed in preparation for the laying of the road, but the enclosure ditch was still visible, as were two pits in the interior, and the routes of foot-paths alongside the highway were available for investigation. This excavation was supervised by Mr P. Donaldson in February and March under wet and icy conditions and his records form the basis for the account of the enclosure given in this monograph.

Finally, in June 1968 a strip of turf was removed from the old road south of Woodhenge to the route of the new road, in order to lay a foot-path to a bus-shelter on the latter. Mr P. Drewett kept a watch on these operations and performed a small excavation on a length of ditch which was exposed as a result. At the same time, a rubbish trench 19.2 m. long and 45 cm. wide was dug through the outer part of the enclosure bank where it had been investigated by Professor Piggott. The 1952 excavations were located in the side of the rubbish pit which added little information to that obtained in 1952 or 1967.

¹ Grateful thanks are due to the representative of the Wiltshire County Council on the site who informed the writer of the discovery and facilitated the excavation in many ways.

DURRINGTON WALLS, WILTSHIRE

GENERAL PLAN OF THE ENCLOSURE



II. DESCRIPTION OF THE STRUCTURES AS REVEALED BY EXCAVATION

THE BANK

(figs. 3–8 and pl. Va)

THE bank is sited on the flat ground surrounding the combe on its north, west and south flanks and descends the sides of the valley where it opens out towards the River Avon in the east (fig. 3). This siting is probably due to the necessity for a level surface on which to build a bank 27.4 m.–30.4 m. wide, and the resultant enclosure has a SE–NW diameter of 487 m. and a SW–NE diameter of 472 m. measured from the midline of the bank. The latter diameter is not typical as it incorporates an eccentric bulge in the bank; if the latter had continued on a regular alignment the diameter would have been 451 m. The plan is therefore an oval with an east–west elongation.

However, if the centre of a line bisecting the east and west entrances at the bank terminals be taken as a focal point, it is possible to draw a true circle which cuts some part of the bank at every point except the eccentric bulge in its north sector. Such a circle has a diameter of 441.9 m. and the imaginary line bisecting the entrances cuts post-hole 23 of the Southern Circle whilst just avoiding passing through the entrance to that structure. This line has an orientation of $123^{\circ} 30'$ from north.

The bank is breached by two entrances in the north-west and south-east, at the same points in the circuit as the causeways across the ditch. The west entrance is clearly visible on the ground as a break in the low chalky mound that is the bank at this point. From the west entrance the bank proceeds in a regular curve around the west and south edges of the combe, keeping to the flat ground. At the point where it swings east the bank passes through some private gardens along the upper edge of the west lynchet, but thereafter it can be clearly seen under the right conditions as a low chalky mound which the plough has eroded deeply. East of the old road, the bank turns north down the side of the combe to the east entrance in the bottom of the valley. This stretch of bank is crossed by the south lynchet and cannot be seen at all on the ground on either side of this feature, although excavations have proved that it is present.

The east entrance is in the very bottom of the valley where it approaches the river and it is now very difficult to measure its original width. Farrer measured it in the early years of this century and found it to be 9.1 m. wide but it is not now possible to trace the bank terminals any closer to each other than 38 m. North of the east entrance the bank swings in a shallow curve towards the old road and this is its best preserved sector where it is clearly visible, except when the corn is at its height.

West of the old road the bank is again much ploughed out and is separated from the ditch by the north lynchet. The most unusual feature, however, is that the bank curves outwards in a semi-circle and then straightens out again east of this anomaly. There is a similar

outward bulge in the alignment of the ditch. One interpretation of this feature is that the bank and ditch swerved outwards to avoid a pre-existing structure. However, no such structure was recorded in the 1966 excavations and perhaps the answer lies under the old route of the A345.

West of this anomaly the bank swings round in a shallow curve, keeping always to the flat ground, until it terminates at the west entrance which appears to be some 12.1 m. wide.

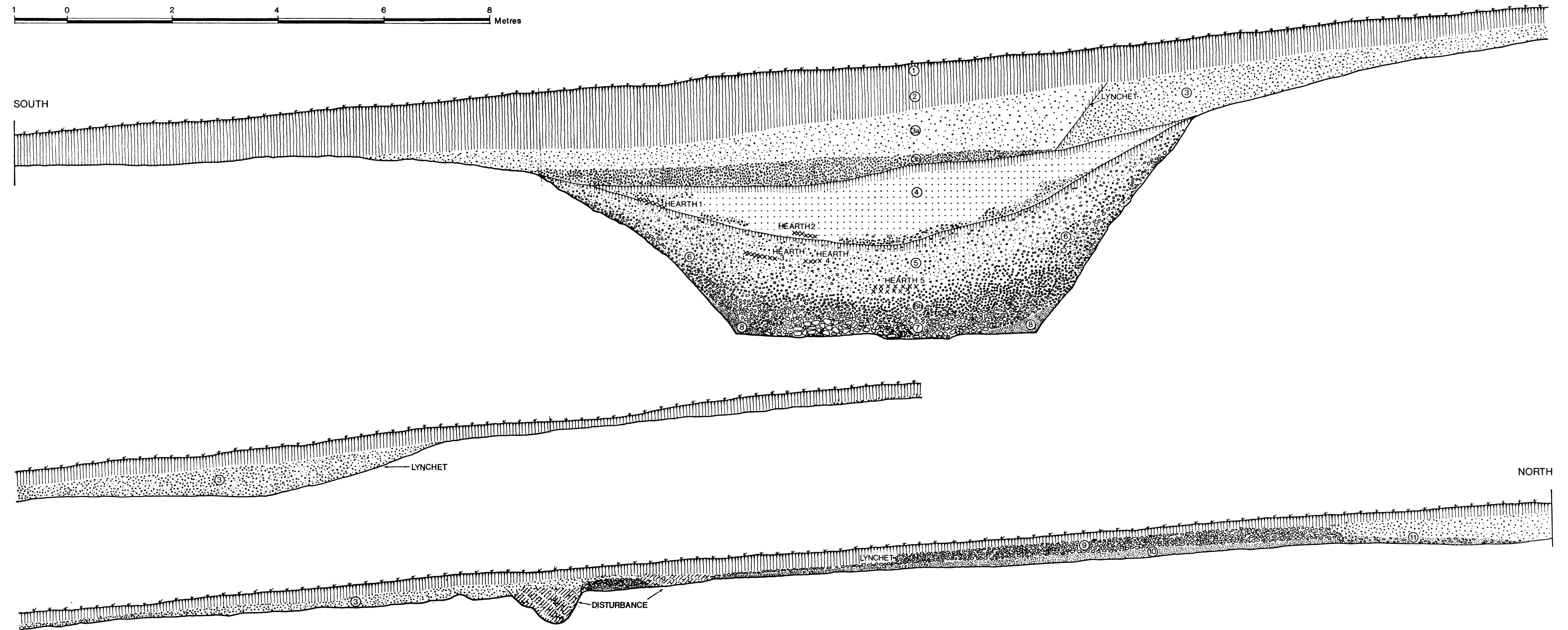
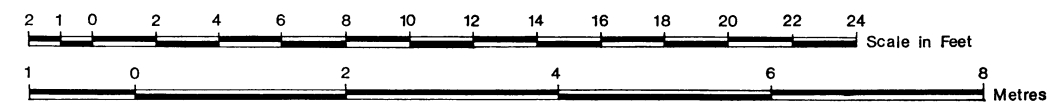
The Bank in its North Sector (figs. 4, 5 and pl. IIa)

Prior to its excavation in 1966 there was no sign of the bank in the area which was to be destroyed by the new road. The ground surface sloped gradually from north to south towards the bottom of the combe and the modern ploughsoil had accumulated to a depth of 60 cm. against the hedge along the western side of the old road and to a depth of 1.2 m. over the centre of the ditch. This overburden was removed with machinery along the line of the proposed new road to a point 85 m. north of its junction with the old road. The ditch was located in its presumed position but the distance from the outer lip of the ditch to the inner edge of the bank was 35 m.

The bank had been much eroded by ploughing, but part of its base was intact and had preserved a fossil soil beneath it. However, in the east sector of the cutting the bank had been completely destroyed. Where present, it was preserved to a maximum height of 30 cm. and was composed of large, clean lumps of chalk tightly rammed together (fig. 4, layer 9). The old land surface beneath it consisted of a dark-brown crumbly soil with few stones which attained a maximum thickness of 21 cm. (layer 10). On top of this soil and penetrating it for a distance of some 7 cm. was a rich but localized occupation layer which produced pottery, flints, bone and charcoal. The 370 sherds represent some 21 pots which are of Middle Neolithic character with rolled, everted and thickened rims (P1-18). Sherds of three pots, however, were of different fabric and can be classified as Grooved Ware. A radiocarbon determination on charcoal in association with this occupation refuse gave the result 2450 ± 150 B.C. (NPL-191).

On the basis of the extent of the fossil soil, the surviving width of the bank is 14.9 m. However, the bank material had been removed on both the inner and outer faces by two lynchets and as a result the bank was reduced to a single layer of chalk lumps at one point. Moreover, there are slight indications that originally the bank extended much nearer to the ditch. Along the line of the section the inner edge of the bank was destroyed by a tree-hole and bank material *in situ* does not recur to the south of this disturbance. However, there is a definite though localized rise in the level of the natural chalk in this area which may have been protected by a bank at one time. An extension of the bank to this point would add 3 m. to its width, with the possibility that it was once much wider. A very pronounced lynchet had eroded deeply into the natural chalk between the bank and the ditch and a similar lynchet was identified in the later silts of the latter (fig. 4, layer 3). Clearly, a bank would not survive under such conditions of heavy ploughing. The 1950-1 pipe-trench indicated an original width for the bank of 27.4 m. with a berm 10.3 m. wide, and similar dimensions may be presumed for the bank in the 1966 cutting, which is barely 24.3 m. to the west.

DURRINGTON WALLS, SECTION OF BANK AND DITCH IN NORTH SECTOR



facing p. 14]

FIG. 4

Nevertheless, even a bank with a presumed width of 30.4 m. would entail a berm some 19.5 m. wide.

In 1966, the area cleared down to bed-rock ended at what was presumed to be the outer edge of the bank. However, when in November 1967 the County Council bulldozed the

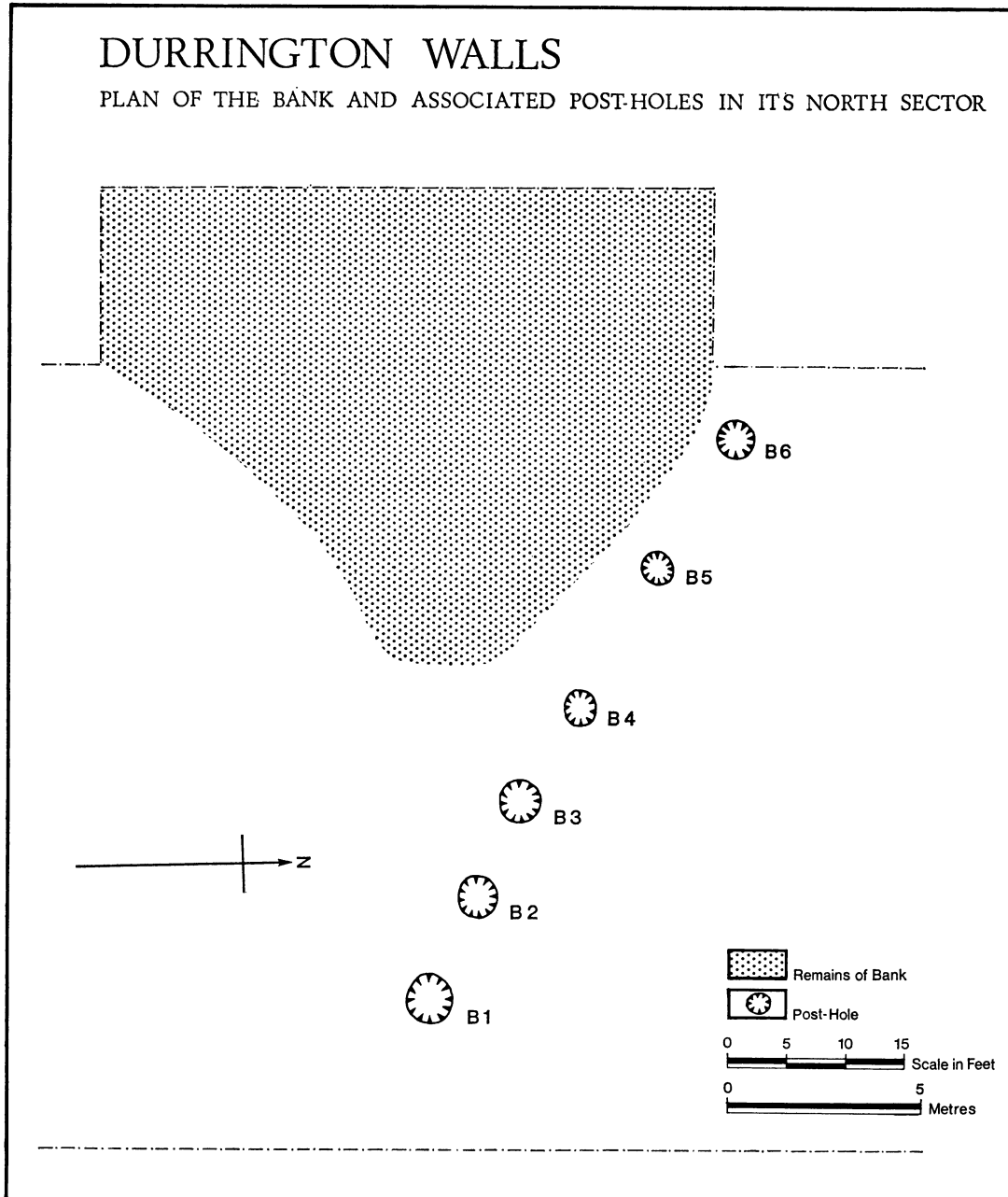


FIG. 5

route of the new road to link up with the 1966 excavations, a line of post-holes was discovered across the cutting, less than 1 m. to the north of the 1966 excavations (fig. 5). Unfortunately, the post-holes were only discovered after some 1.2 m. of bed-rock had been removed.¹ This means that their relationship to the bank is unknown — they could be earlier, contemporary, or even later in date. However, a small excavation will be sufficient to test this point.

The 'post-holes' have been interpreted as such because of their alignment, but as their maximum preserved depth was only 15 cm. it was not possible to obtain objective evidence for their function such as post-'pipes'. However, their interpretation as post-holes seems reasonable and they would have held substantial timbers as their original depth was between 1.5 m.—1.8 m. if one allows for subsequent weathering. The width at the base of the six post-holes (B1-B6) varies from 76 cm. to 1.06 m. and they are spaced at intervals which vary from 1 m. to 1.5 m. Although the post-holes lie outside the observed extent of the bank in the excavated area it would be unwise to assume that they conform with the outer edge of the bank, as does the double line of much smaller post-holes recorded in the 1952 excavations, since surface indications suggest that the bank may have extended beyond the post-hole alignment where it is better preserved. Further speculation is valueless until the relationship of the post-holes to the bank has been established.

The Bank in its South Sector (figs. 6-8 and pl. Va)

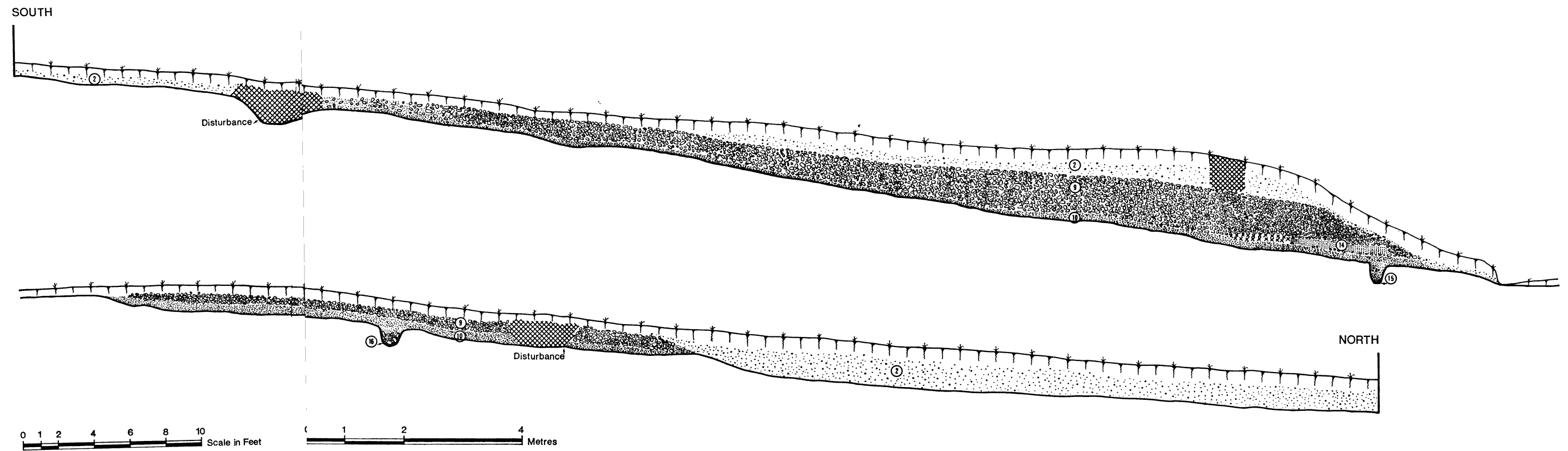
In the 1967 excavations large areas of the fossil soil beneath the enclosure bank were exposed and excavated where the bank was to be destroyed by the new road (fig. 3). Late Neolithic pottery was found scattered on this old land surface, together with a thin scatter of flint flakes and implements. In five instances concentrations of flint artefacts were found which presumably represent the sites of small chipping floors where implements were prepared. A total of 3058 flints were recorded which represent 27% of those found in the excavations.² Of these 35 were implements (1% of the total), which include seven transverse arrowheads, scrapers, a fabricator, knives, a fragmentary axe and two adzes. In addition one leaf-shaped arrowhead, patinated matt white, can be assigned to the earlier Middle Neolithic occupation of the locality, although no pottery attributable to this phase was found on the old land surface under the bank in 1967.

The main section across the bank and ditch revealed that the former was 32.3 m. wide at this point and was separated from the ditch by a berm with a minimum width of 22.8 m. (fig. 6). The bank was not visible on the ground before excavation began as it had been much destroyed by ploughing. It was preserved to a maximum height of 45 cm. but had been totally destroyed by the plough for a length of 7.9 m. in its centre. The bank was composed of fresh chalk lumps with some air-spaces (layer 9) and the old land surface was present wherever the bank had been preserved (layer 10).

¹ Grateful thanks are due to Mr B. Colman, the County Council representative on the site, who recognized the fugitive remains and informed the writer who excavated and planned the features whilst work on the road was temporarily suspended.

² Excluding those of Middle Neolithic type from under the bank in its north sector.

DURRINGTON WALLS, SECTION OF THE ENCLOSURE BANK IN THE SOUTH SECTOR



facing p. 171

FIG. 7

DURRINGTON WALLS, SECTION THROUGH THE ENCLOSURE BANK AND DITCH

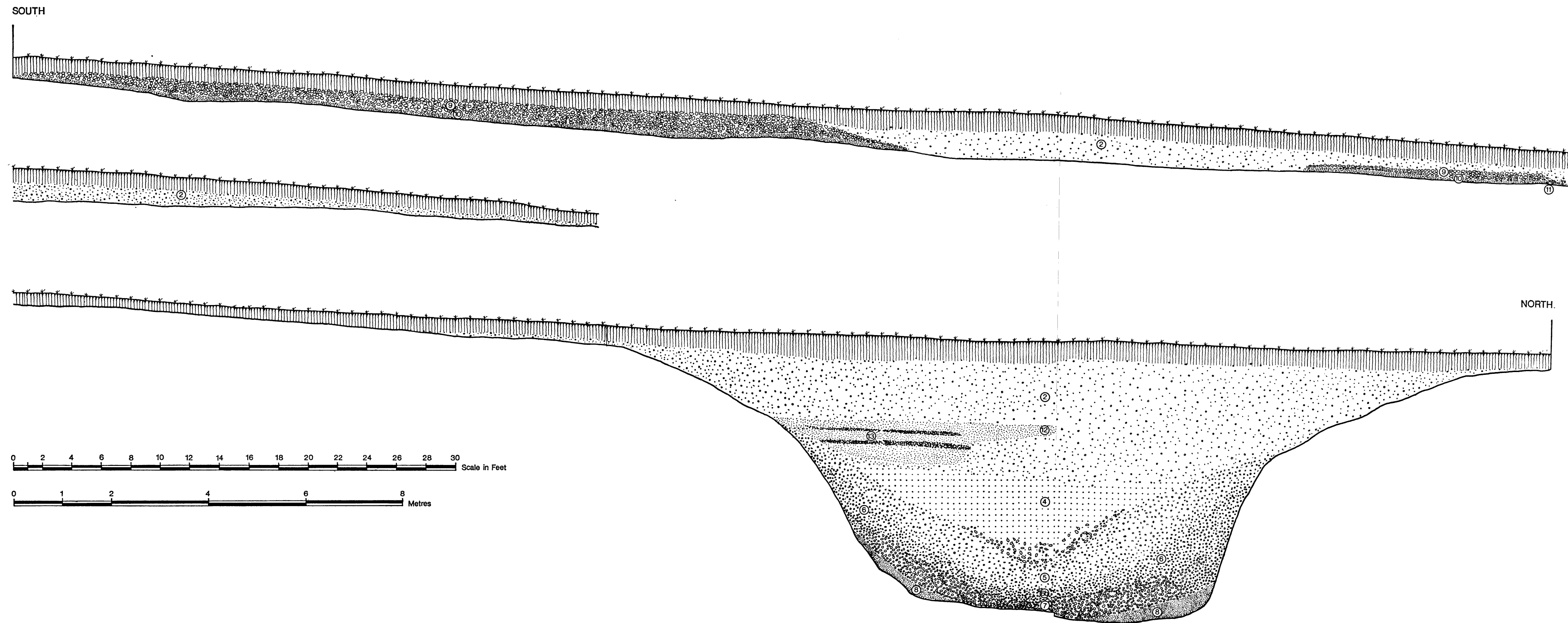


FIG. 6

A second section was recorded through the bank along the west edge of the excavation where it was overlaid by the south lynchet (fig. 3). This was the best preserved sector of bank excavated in the two seasons (fig. 7) as it was preserved to a height of 76 cm. under the aggraded material of the lynchet. When the section is corrected for obliquity the bank is seen to be 30.4 m. wide but entirely cut through by the erosion scar of that same lynchet. The width of the bank, however, is a minimum figure as its outer edge was disturbed by a tree-hole and the inner edge may well have been truncated by a small lynchet which had formed there. The ground on which the bank was built slopes slightly from south to north at an angle of some 10° from the horizontal. The bank was composed of fresh chalk lumps — some up to 30 cm. in diameter, with frequent air-spaces — and the material is clearly deep-chalk from the enclosure ditch (fig. 7, layer 9). The bank rested on top of a reddish-brown crumbly soil — the land surface at the time when the bank was built (layer 10). On top of this soil in the section was a single hearth around which were found a few sherds of coarse pottery of Late Neolithic fabric. To the north of the hearth, under the scarp of the lynchet, the chalk lumps of the bank rested on a low mound of greyish-brown soil some 15 cm. high (layer 14) which in turn rested on the old land surface. This low mound presumably represents the turf and topsoil which was removed from the top of the ditch when its excavation was begun in Late Neolithic times.

The fossil soil sealed the tops of two small post-holes (layer nos. 15 and 16) which had been dug to a depth of 30 cm. into the natural chalk and which pre-date the bank by an unknown margin. No other post-holes were recorded under the bank in the area excavated. However, in June 1968 upon the conclusion of the road improvement scheme, a rubbish trench 19.2 m. long and 45 cm. wide was dug through the outer part of the bank and through the area of the 1952 excavations. The latter could be seen in the sides of this cutting which added little information to that obtained in 1952 or 1967, apart from the recording of two post-holes set in a short length of gully under the centre of the bank. These post-holes, not more than 30 cm. deep and 30 cm. in diameter, were dug through the old land surface but were clearly earlier than the bank which passed uninterruptedly over them.

In November 1967 a pipe-trench was dug from the new road east to the River Avon and sectioned the enclosure bank just south of the east entrance (fig. 3). The section of the bank in this trench was drawn by the writer and is reproduced in fig. 8.¹ The ground slopes gently from west to east at this point towards the River Avon and the bank was not visible on the surface. In section it proved to be 25.9 m. wide with a maximum height of 45 cm. As usual it was composed of chalk blocks and rested upon a well preserved fossil soil. A large quantity of Late Neolithic pottery, flints and fragmented bone was obtained from the top of the old land surface and was clearly part of a much larger spread of human refuse in this area.

A total of 115 sherds were recovered from the old ground surface beneath the bank in its southern sector and a further 152 sherds were recovered from the old land surface revealed by the pipe-trench. These consist entirely of Grooved Ware.

¹ Dr J. G. Evans of the Institute of Archaeology, University of London, obtained samples of the fossil soil which was preserved beneath the bank in this cutting and in the section portrayed in fig. 7, with a view to obtaining evidence concerning the environment of the time.

DURRINGTON WALLS

SECTION OF 1967 PIPE TRENCH THROUGH THE BANK

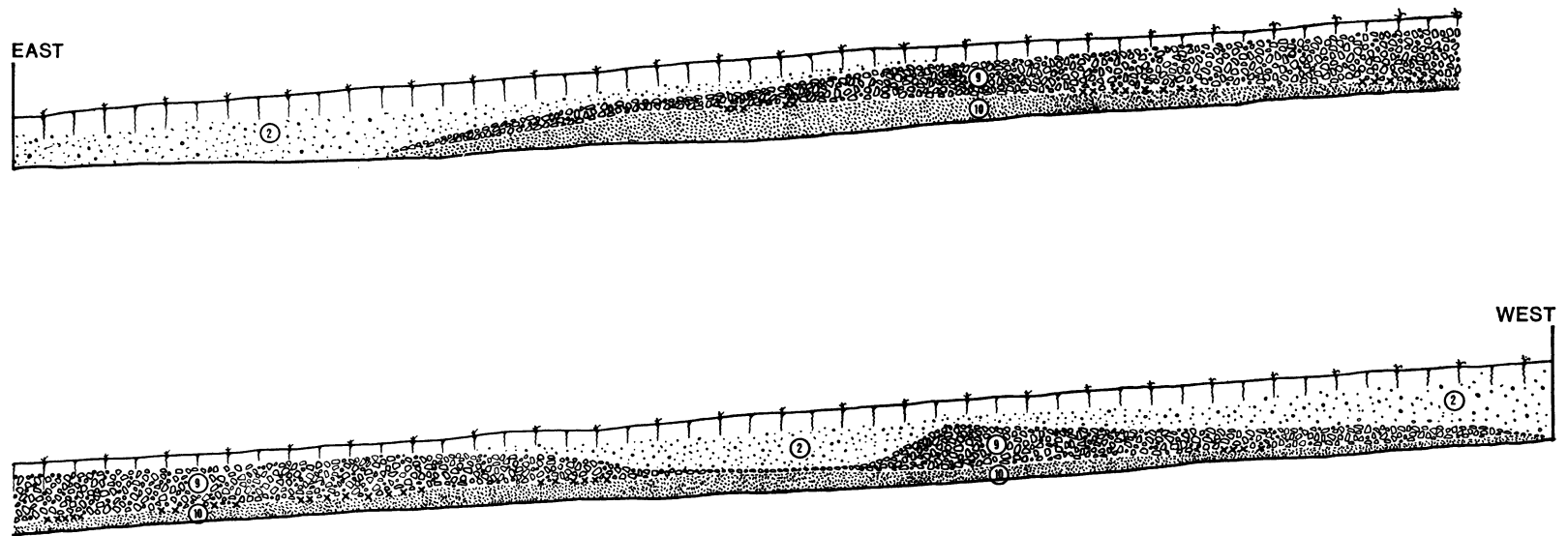


FIG. 8

THE DITCH

(figs. 3, 4, 6 and pls. IV*b*, V*b*)

The enclosure ditch pursues an irregular course as compared with that of the bank. The diameters of the enclosed area are 374 m. from south-west to north-east and 396 m. from south-east to north-west. The greater part of the course of the ditch was established by the use of aerial photographs, geophysical means and probing, save where it was determined by excavation. South of the west entrance the ditch is overlaid in part by the foot of the west lynchet and swings south and east in a shallow curve, conforming for the most part to the line of the bank although it diverges from the latter at the entrance. The ditch then adopts a nearly straight alignment towards the valley bottom and the east entrance and is covered by the south lynchet as far as the old road. This alignment resulted in the creation of a wide berm between the ditch and the bank — the latter maintaining its more regular route around the southern edge of the valley. East of the old road, the ditch swings in and then outwards again before straightening out at the terminal, thus describing a semi-circular diversion. This anomaly can be clearly seen on an aerial photograph of the site in the Crawford collection but unfortunately could not be tested by geophysical means owing to the disturbance caused by the embankment of the new road and the traffic on it. The anomaly may be the result of bad planning by the diggers of the ditch but could also have been deliberately intended to avoid a pre-existing structure.

The east entrance is 22.8 m. wide and from its northern terminal the ditch is aligned north and then west to the old road in a shallow curve. This is its best preserved sector where it can be seen as a shallow hollow when the site is under plough or stubble. West of the old road the ditch swings out and then inwards again in a localized anomaly, observed on an aerial photograph in the Crawford collection, similar to that noted west of the east entrance. In this case the curve of the ditch is matched by an even more pronounced curve of the bank. West of this point the ditch is not visible at all on the surface but a geophysical survey shows that it follows a rather irregular curve west and then south at the foot of the north lynchet (pl. II*a*). At the west entrance, which is 30.4 m. wide, the ditch curves outwards and the terminals appear to be offset. This entrance is visible on an air photograph published by O. G. S. Crawford.¹

The Ditch in its North Sector (fig. 4 and pl. IV*b*)

As excavated the ditch is 12.8 m. wide,² with a flat bottom 5.7 m. wide and 5.4 m. deep from the modern surface (fig. 4; pl. IV*b*). All the silted material in layers 5–8 must have been derived from the sides of the ditch — probably by frost weathering, as the great width of the berm precludes any rubble having been incorporated from the bank. The clean chalk rubble (layer 7) is only 91 cm. thick in the centre of the ditch and most of it seems to have come from the upper part of the inner face where the chalk is particularly rotten. Practical experiment has shown that the bottom of a smaller ditch of comparable profile can be

¹ Crawford, 1929, pl. III.² The section as dug was not radial owing to the restricted area available for excavation. In the published section drawing the resultant asymmetry has been corrected.

covered and silt accumulate to a height of 1.2 m. near the sides in the space of four years.¹ From the bottom of the ditch the deposits were as follows:

Layer 8: A fine, rather clayey grey silt deposited in the inner and outer angles of the ditch bottom. This is the rapid silt which formed immediately after the digging of the ditch.

Layer 7: Large angular blocks of chalk rubble with no earth and a cellular structure. This rubble is derived from the upper sides of the ditch.

Layer 6: Smaller chalk rubble — clean and with air-spaces near the bottom of the ditch (layer 6B) but interspersed with rainwashed chalk and earth nearer to the sides (layer 6).

Layer 5: A brown, rather clayey soil containing rounded lumps of flint and chalk. This is clearly a slower silt with a weathered surface on which two hearths were found.

Layer 4: The slow silts which formed in the sheltered hollow between the upper sides of the ditch. The deposit is a fine, grey-brown silt with a very few small rounded chalk lumps. Like layer 5 this deposit also has a weathered surface where the material found its angle of rest.

Layer 3: An old ploughsoil, cut through by a lynchet on which a soil formed. The material within the field formed by this lynchet is also ploughsoil with more chalk near the base (layer 3B).

Layer 2: The modern ploughsoil.

Layer 1: The topsoil.

Five hearths were found in the ditch silts. Of these, hearths nos. 1 and 2 were on the weathered horizon between layers 4 and 5, nos. 3 and 4 were found in the body of layer 5 and no. 5 was an extensive area of burning which occurred in the lower part of 5 in the bottom of the ditch. If, as the practical experiment at Overton Down suggests, the large and small chalk rubble in the bottom of the ditch (layers 6-8) accumulated within a decade, then material from these deposits should be regarded as contemporary with the early usage of the enclosure.²

No pottery was obtained from the rapid silts (layer 8) but three antler picks were found lying on the rock bottom of the ditch where they had been dropped in Late Neolithic times. However, at the base of the chalk rubble, 45 cm. above the bottom of the ditch, were found four undecorated sherds of thin, black sandy fabric with an orange exterior. These sherds are very weathered and it is possible that they were lying on the ground surface prior to their incorporation in the rubble as a result of the collapse of the upper sides of the ditch.

Hearth 5 occurred in the lower part of layer 5 and produced numerous pot-boilers, burnt bones and sherds of pottery. The latter comprised parts of two Beakers, one decorated with finger-nail rustication (P598), the other with a deeply scored incised zone decoration (P601).

Charcoal from the hearth produced a radiocarbon determination of 1610 ± 120 B.C. (BM-285). Clearly the passage of time represented by the accumulation of layers 6 and 7 is of critical importance in evaluating the relationship of this radiocarbon determination and the pottery to the construction of the enclosure. Dr Isobel Smith has suggested that similar chalk rubble in the bottoms of the ditches at Windmill Hill accumulated in less than

¹ Jewell and Dimbleby, 1966, 340-1.

² With the usual reservations concerning pre-ditch material that can theoretically become incorporated in the

basal silts as a result of the collapse of the upper edges. Such material should be distinguishable on the grounds of differential weathering.

a decade.¹ On this basis the author suggested in a preliminary report² that hearth 5 was likely to be attributable to the early usage of the enclosure. However, as a result of the 1967 excavations a radiocarbon determination was obtained from the very bottom of the ditch near the south-east entrance of 1977 ± 90 B.C. (BM-398). It is clear that this date is to be attributed to the building of the enclosure and that BM-285 represents a later stage in its silting. The amount of silt which accumulated in the centre of the ditch bottom is less than that in the Windmill Hill ditches. This is partially due to the much larger size of the Durrington Walls enclosure ditch, in particular its great width. The C₁₄ date for hearth 5 is entirely consistent with the late Beaker sherds associated with it.

Rim-sherds of Ebbsfleet type occurred at the base and near the top of layer 5 which was capped by a weathered surface, suggesting that the ditch silts had reached an angle of rest by that phase. Hearth 3 occurred above one such sherd; from this hearth charcoal has given a radiocarbon determination of 1680 ± 110 B.C. (BM-286). This determination lies well within the range of error for BM-285.

The slow silts (layer 4) above this weathered horizon produced Hallstatt material and layer 3 bead-rimmed pottery of La Tène type. A virtually stoneless deposit above this ploughsoil produced a single sherd of Romano-British pottery.

The Ditch in its South Sector (fig. 6 and pl. Vb)

In the 1967 excavations a sector of ditch 34.1 m. long was excavated from the south terminal of the east entrance. Initially, a trench 3 m. wide was excavated to the floor of the ditch (fig. 6) and as the upper silts (layer nos. 2, 4, 12 and 13) were virtually sterile they were removed by machine over the remainder of the sector in order to get down to the earlier silts. The great quantity of pottery, stone tools, bone and antler of the Late Neolithic period obtained from the latter justified this course of action. An obvious disadvantage is that no objects were recorded from the upper silts³ but this seemed a small price to pay in view of the fact that the sector of ditch examined was to be buried under the road embankment. Therefore, after the completion of the initial 3 m. wide cutting which was dug by hand, the machine was employed down to the top of layer 5 and layers 5 to 8 were removed manually.

As excavated the ditch was 17.6 m. wide and 5.7 m. deep from the modern surface, with a flat base 6.7 m. wide (fig. 6). The silting profile is much the same as that described from the north sector with the exception that an erosion gully had formed in the thick layer of ploughsoil and hillwash (layer 2) overlying the ditch silts proper. This gully ran from west to east along the length of the ditch and was filled with alternate layers of fine grey to brown silt and gravel lenses (layers 12 and 13). Material of this type can only have been deposited by water and the silted ditch must have served as a temporary stream bed in Iron Age or Romano-British times.

The chalk floor of the ditch was rather uneven but its depth remained constant up to the terminal. The latter was slightly squared with a nearly vertical face. Late Neolithic pottery was scattered throughout the earlier silts (layers 5-8) but human debris became much more common as the ditch terminal was approached until it occurred in thick ashy lenses

¹ Smith, 1965, 11.

² Wainwright, 1967, 174.

³ These produced Hallstatt and La Tène material in 1966.

against the rock face of the ditch. The distribution of the pottery, flints and animal bones in the ditch conforms with the concept of material being thrown into the latter by people leaving or entering the enclosure via the causeway. In particular, the transition zone between layers 6B and 7 was rich in pottery, unpatinated flint implements of high quality, well preserved animal bones and fragments of antler.

Antler picks were found sporadically on the floor of the ditch, but at a point near the midline of the latter and 18.2 m. from the terminal a group of some 57 antler picks were found (pl. Vb). This pile of picks rested directly on the rock floor of the ditch and had presumably been used to excavate the latter into the natural chalk whereupon they had been discarded in a heap when the work was completed. The tines of the picks were worn and a number were broken, although this may have been caused by the weight of the overlying chalk rubble and earth. It is not necessary to invoke ceremonial contexts for this deposit. It would have been a very human reaction to throw one's implements into a heap in the relief of having completed such a major undertaking as the enclosure ditch at Durrington Walls. No scapula shovels were recorded, nor were any pits or post-holes found in that part of the entrance causeway which was excavated.

The flint artifacts found in the primary silts comprise 7% of the total number found during the excavations and of these 18% were implements. This is a very high proportion when compared with an implement percentage of 3% from the site as a whole. The implements include a transverse arrowhead, scrapers, a fragmentary flaked axe and a chopper. Radiocarbon determinations of 1977 ± 90 B.C. (BM-398), 2015 ± 90 B.C. (BM-399) and 2050 ± 90 B.C. (BM-400) were obtained from charcoal, bone and antler respectively in layer 7 at the base of the ditch (Appendix X). These determinations immediately post-date the construction of the latter.

The pottery from this ditch terminal comprises 842 sherds, the main concentration of which lies in layers 5-8 though stray sherds of Grooved Ware occur as high as layer 3. The only Beaker sherd stratified in the ditch, belonging to a vessel of the Southern British tradition, came from layer 4-5, and this is matched by a second sherd from an unstratified context.

THE BERM

(figs. 3, 4, 6)

Whereas the bank follows the level ground around the edge of the combe, save where it swings in from the north and south towards the east entrance, the ditch was not governed by these considerations. As a result, divergencies occur between the alignments of the bank and ditch of which the most marked occurs in the south-east sector, where the ditch develops a nearly straight alignment towards the east entrance. The maximum divergence of ditch from bank of 42.6 m. occurs in this sector and although the berm is not constant it is never less than 6 m. wide. An average of a number of measurements of the berm gives a width of 20.7 m. No structures were found on it in the course of the excavations and it seems likely that it resulted from the necessity of building the bank on level ground, whereas such considerations were not so important for the ditch.

DURRINGTON WALLS

GENERAL PLAN OF SOUTHERN CIRCLE



Fig. 9

THE SOUTHERN CIRCLE

(figs. 3, 9–14 and pls. IVa, VI–XI)

The post-holes of a complex circular structure, which has been called the Southern Circle, were located 27.4 m. north-west of the east entrance into the main enclosure (figs. 3, 9). This structure was sited on a comparatively flat piece of ground in the bottom of the combe at the foot of the northern slope into the valley. As a result of its position the post-holes and their associated structures were excellently preserved by a deposit of ploughsoil 0.91 m.–1.5 m. thick, which had silted down the northern slope into the bottom of the valley as a result of centuries of ploughing and normal erosion processes (fig. 10). Conversely, the very process which had caused such erosion of the structures around the brim of the valley had resulted in the preservation of those in the valley bottom and one can expect the other structures which undoubtedly occur on the valley floor to have maintained an equally high standard of preservation.

The ploughsoil proved to be sterile of human artifacts and was removed by machinery to the main dump south of the Neolithic enclosure after which the excavation continued by hand digging. Fortunately, the weather was dry; if it had been otherwise these techniques could not have been employed, as was amply demonstrated in the closing stages of the excavation. Some two-thirds of the structure lay within the area to be covered by the new road and the features within this area were totally excavated. Fortunately, they included an entrance to the structure and a platform outside this entrance which produced the bulk of the numerous artifacts. The excavation of that segment of the circle to the west of this area was considered at the time but was rejected for two reasons. First, it seemed desirable to preserve a portion of this most important structure for future generations who may wish to re-examine the results of the 1967 excavations.¹ Secondly, the segment did lie outside the area to be destroyed by the new road and its excavation was not governed by necessity.

It was clear from the beginning of the excavation that one was dealing with a structure akin to Woodhenge and also that, unlike this structure, the Southern Circle included several phases of reconstruction. This much was clear from the intersection of certain post-holes and from a steep-sided palisade trench which cut straight across the southern part of the structure on a west–east alignment (fig. 9).² It became apparent as the excavation progressed that the earliest structure on the site comprised four nearly concentric circles of slender posts, and was fronted on the south-east side by a façade of closely set timber uprights, the centre circle of which was enclosed by a four-post structure, which had been renewed on several occasions. When this structure had fallen into decay (there was no indication that the Phase 1 posts had been deliberately removed), it was replaced by a much larger structure of six nearly concentric rings of more massive posts, the pits and ramps for which frequently intersected with the smaller post-holes of Phase 1 or destroyed them altogether. On these grounds of size and post-hole intersections it was possible to isolate two main phases.

Phase 2 could be further subdivided as it was clear that the outer ring (2A) was constructed later than Circle 2B. However, this is a technicality and probably means no more than that

¹ Cf. Atkinson, 1956, 203.

Messrs P. Donaldson and P. Drewett who undertook the immediate supervision of this complex excavation.

² The writer wishes to express his particular gratitude to

the circles were constructed from the inside out. In Phase 2 the majority of the post-holes were approached by ramps, which when excavated presented a bewildering pattern to the visitor but had some coherence when planned. The single entrance in the south-east sector was demarcated by two large post-holes outside which was a platform of chalk blocks and flint gravel. On this platform was an extensive area of burning around which was scattered a great quantity of pottery, flints, animal bones and antler. Finally, the southern segment of the structure was crossed by a palisade trench when it had fallen into disrepair. The debris found in this feature dates it to the Late Pre-Roman Iron Age and it is discussed in detail in the chapter appertaining to structures of that date.

One cannot over-estimate the importance of the good preservation of the post-holes and their associated structures. This was such that no plough had ever created any disturbance and as a result the artifacts lying on the surface of the exposed platform outside the entrance were still in position, and the blocks of chalk which had been used to pack some of the posts still projected above the surrounding level of the sub-soil. This suggests that the turf within the structure had not been stripped off, although no trace of this horizon was found save where it had been occasionally preserved by extensive chalk packing. Moreover, the nature of the preservation of the pits dug to receive the posts, of the decayed 'pipes' or 'cores' of the latter and the material used to pack the timber uprights, made it possible to record not only the original dimensions of the post-holes but also the sizes of the timbers they had contained and to attempt a reconstruction of the process of decay which produced the sections reproduced in figs. 118-35. These sections have been published in Appendix VIII with uniform numbering of the layers, as they were too numerous to include in this descriptive section.

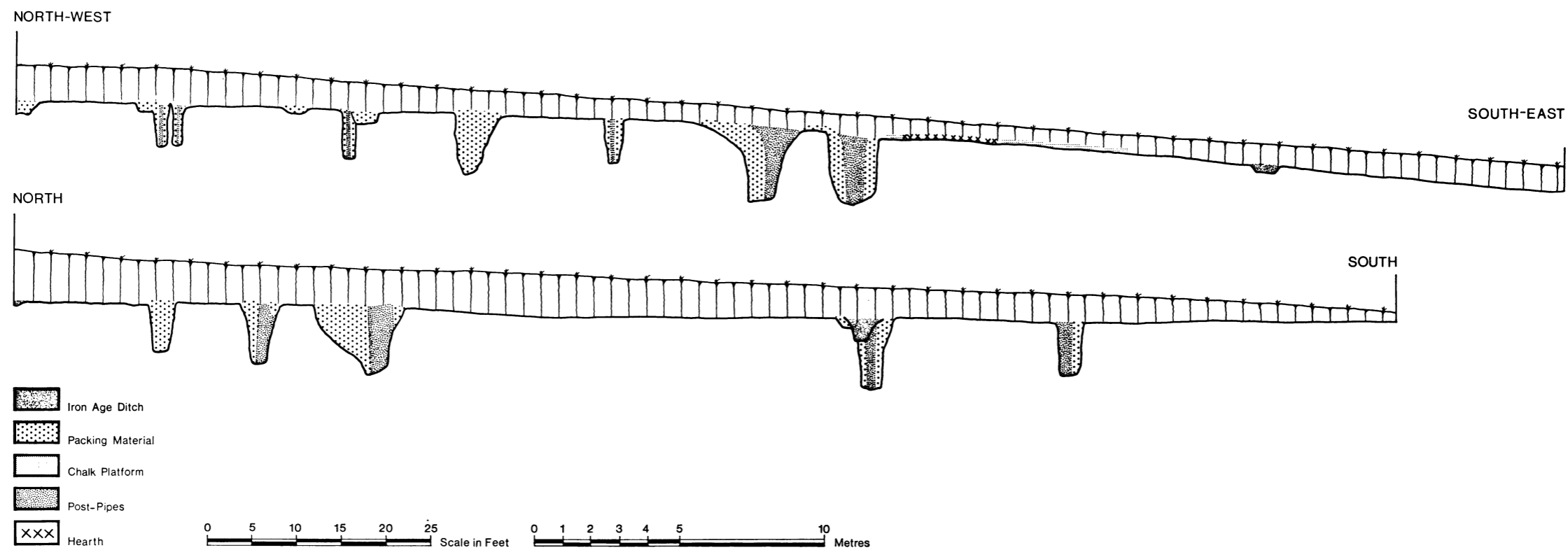
The Phase 1 post-holes were not ramped save in the case of the rectilinear setting around Circle 1D (fig. 11) and are so narrow in relation to their diameter that they must have been dug with the 'jump-bar' technique such as may have been used at Circle No. 1 in the Priddy Group.¹ The majority of the Phase 2 post-holes in Circles 2B-2F were approached by ramps, the details of which are discussed below. It is clear that once the posts were in position and had been packed with chalk blocks and rammed powdered chalk, they decayed in that position and were not extracted.² As the post decayed the space it occupied became filled with a brown friable soil with small weathered chalk lumps which were easily visible in section (layer 4). Although the surrounding packing remained relatively undisturbed its upper part weathered into the cavity left by the decay of the post so that a weathering cone was produced not unlike those which form in the upper sides of ditches. The contents of this weathering cone consisted of the derived packing material at the base (layer 3A) which frequently merged into a thin weathered horizon representing the angle of rest after the 'cone' had formed. This means that after the posts had decayed their position would have been indicated for a while by shallow hollows. These hollows, however, would soon have filled with a fine silt, partly fluvial and partly aeolian (layer 3), as a result of natural weathering processes.

The structure was remarkable for the great quantity of pottery sherds, flint artifacts, animal bones and antler picks which it produced. The majority of this debris came from the

¹ Tratman, 1967, 104.

² An alternative explanation is that they were cut off at ground level but this is impossible to prove either way.

DURRINGTON WALLS SCHEMATIC SECTION OF THE SOUTHERN CIRCLE



facing p. 24]

FIG. 10

surface of the platform outside the entrance, principally from around the area of burning, and a little of this material had slipped into the weathering cones of the adjacent post-holes, principally the entrance post-holes nos. 22 and 23. The bulk of the remaining refuse was obtained from the post-holes — invariably from layer 3A or the base of layer 3. The antler picks, however, which were numbered in hundreds, had initially been used to dig the post-holes and had then been incorporated in the packing material. A small number of artifacts were obtained from the surface of the chalk within the structure and even fewer from the old land surface beneath the platform. Finally, a small amount of material came from the Iron Age palisade trench, where it was in a derived position, having presumably come from the post-holes cut by this feature.

The stratigraphical position of the pottery and flints in layer 3A at the base of the weathering cones means that technically they post-date the timber structure. However, this seems inherently unlikely and a much more probable explanation is that the sherds, flints and animal bones were placed around the timber uprights, possibly as offerings. When the posts decayed and the weathering cones formed, the material would fall into the latter and become incorporated in its basal deposits. A similar practice was deduced from the evidence at the Sanctuary on Overton Hill¹ where concentrations of sherds were found in the post-holes. Evidence for the ceremonial breaking of pots near the uprights of stone circles is not hard to find, as at Lough Gur in Grange Townland² and Carneddau Hengwm in Merionethshire³ — both of embanked circle type. No pottery or flint implements were obtained from the packing materials of the post-holes and ramps, or from the 'pipes'. This interpretation is possible only because of the absence of erosion which would have destroyed the upper parts of the post-holes and dispersed the sherds, flints and bones. In particular, the platform would have disappeared at a very early stage in such a process and our knowledge of the structure would have been much poorer.

The identification of the post-'pipes' in almost every instance made it possible to produce an accurate plan of Phase 2 by plotting the positions of the decayed timbers (fig. 14). Clearly, a plan of the actual timber positions is preferable to a plan of the post-holes alone and the conditions on the site enabled this to be done. It was not possible or necessary to achieve this in the case of Phase 1 where the post-hole diameters were very small and the timbers had been set centrally in them. The laborious task of calculating the centres of the circles of both Phase 1 and Phase 2 and of applying appropriate statistical tests to establish the significance, if any, of their eccentricity, was undertaken by Professor R. J. C. Atkinson whose detailed report is appended. The second problem does not appear to have been treated specifically by statisticians and for this reason the calculations have been described in detail (Appendix VI). Professor Atkinson concludes that it is not possible to assert whether groups of rings belonging to Phase 1 and Phase 2 were set out from a common centre or not. A positive conclusion is that Circles 2C, 2E and 2F could well have been struck from a common centre but there is no supporting evidence for these rings constituting a separate structure of different date from the remainder. Similarly, there is no acceptable evidence that Circles 2A, 2B and 2D constitute a separate concentric group. Finally, there is no evidence for the use of the megalithic yard of 2.72 ft. in the layout of the timber circles.⁴

¹ Cunnington, 1931, 315.

² O'Riordain, 1951, 73-4.

³ Crawford, 1920.

⁴ Thom, 1967, 73-7.

Phase 1 (figs. 9, 11, 13 and pls. VIIa, VIIIa, IXa)

Phase 1 of the Southern Circle consists of four nearly concentric rings of timber uprights with radii of 15.02 m., 11.62 m., 7.37 m. and 1.12 m. The innermost ring (1D) is surrounded by a rectilinear setting of four posts which are distributed around the circumference of a circle with a radius of 3.85 m. These post-holes are the only ones in this phase which are approached by ramps and they were renewed on several occasions. To the south-east the structure was fronted by a façade with a recorded length of 37.1 m., which restricted access to the circle from the direction of the River Avon and the east entrance to the main enclosure.

As one would expect, the structures of this phase have only partially survived, the remainder having been destroyed by the Phase 2 post-holes or by the Iron Age palisade trench. Parts of the circuits of Circles 1A-1C were unexcavated but the whole of Circle 1D and the rectilinear setting lay within the area which was to be covered by the new road. Moreover, the presumed south-west sector of the façade was destroyed by stream erosion of the chalk bed-rock in the area between the Southern Circle and the enclosure ditch. However, the evidence from the well-preserved north-east half of the façade is that the posts may have decreased in size from the centre outwards. If this is not due to differential erosion, and there is no cause to suspect it in this case, then one can visualize the façade tapering in height from the centre to its extremities in much the same way as do the façades of certain Cotswold-Severn chambered tombs.¹ A gap in the façade where it approaches Circle 1A could be original as it is fronted by a single post-hole (139) set slightly north-east of centre and there are corresponding gaps in Circles 1A and 1B which suggest the presence of an entrance into the structure (fig. 11).

The post-holes are small in diameter in relation to their depth — the average diameter for all post-holes is 57 cm. and the average depth 1.14 m. This peculiarity is even more marked when one examines the averages for the individual circles which are given below:

TABLE I
*Details of the Southern Circle; Phase 1**

Circle	Mean radius	No. of posts		Average spacing	Average PH diam.	Average PH depth	Average post diam.	Average ramp length
		Excavated	Presumed					
1A	15.02	5	?	—	0.54	1.14	0.19	—
1B	11.62	20	?44	1.6	0.53	1.37	0.21	—
1C	7.37	11	?	—	0.54	1.44	0.18	—
1D	1.12	6	6	1.15	0.60	0.42	0.18	—
Rectilinear setting	3.85	8	8	—	0.60	1.40	0.21	1.7

* Measurements are given in metres.

With the exception of the post-holes of the rectilinear setting there are no ramps and the pits must have been dug by means of the 'jump-bar' technique, which consists of driving a stout pointed stake vertically into the subsoil. The posts, which were between 15 cm. and 21 cm. in diameter, were inserted centrally into the holes and packed around with rammed

¹ Cf. Piggott, 1962, 17.

DURRINGTON WALLS

SOUTHERN CIRCLE: PHASE 1

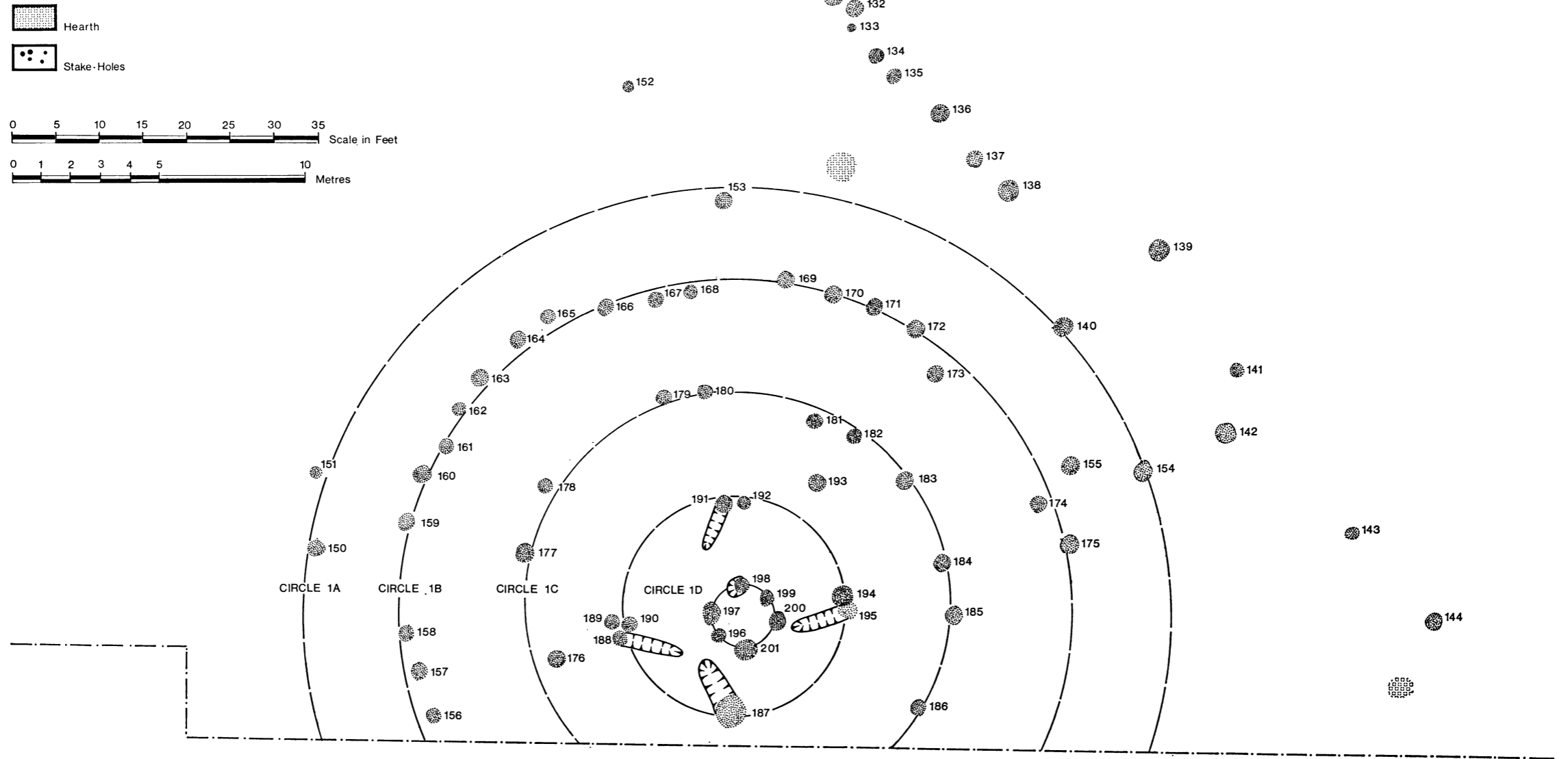


FIG. 11

soft chalk (layers 7A and 8A) into which was thrown the occasional antler pick. There is no indication that the timbers were ever withdrawn but on the other hand there is only occasional evidence for the formation of weathering cones in the upper parts of the post-holes. This may be due, however, to the comparatively narrow diameter of the posts and destruction of some of the evidence by Phase 2 post-holes. However, the ramps of the rectilinear setting point inwards, which may suggest that this setting was erected before Circle 1D or after the latter had decayed, otherwise the posts of this innermost circle would have obstructed the work.

Circle 1D is clearly not concentric with any of the others, it is not related stratigraphically to them and on average its post-holes are much more shallow. Its attribution to Phase 1 is therefore tentative and dependent on the following factors. First, the post-holes are not ramped and are therefore more akin to Circles 1A–1C and secondly, post-hole 198 and the 'pipe' of 197 were sealed with a layer of red ash. Although the latter cannot be assigned with certainty to Phase 2 the probability is that this is so and that Circle 1D is therefore a component of Phase 1. However, there is a possibility that Circle 1D represents an independent structure which pre-dates both Phase 1 and Phase 2, but there is no positive evidence to support such an interpretation. As a component of Phase 1 it did not form part of the roof-supporting timbers but existed as a free-standing circle within the precincts of the building. No burials or pits were found within the central area. Unfortunately, no charcoals from this phase were sufficiently well-preserved to permit any identifications of the timbers employed.

The Façade (figs. 9, 11 and pl. IXa). The façade is a more or less straight alignment of closely set post-holes, sited tangentially to Circle 1A in its south-east sector and thus restricting access to the Phase 1 structure from that direction. The north-east part of the façade is well preserved for a distance of 16.1 m. from its terminal (post-holes 123–38) but there is a break where it nears Circle 1A and it can only be recognized again at the equivalent point south-west of the circle at post-hole 142. South-west from this point the alignment is poorly preserved and is represented by only two post-holes (143 and 144) which give a total known length for the façade of 37.18 m. This destruction is due mainly to stream erosion of the chalk bed-rock in the area between the Southern Circle and the enclosure ditch. The gap which occurs where the façade nears Circle 1A is 11.2 m. wide and could be original as it is fronted by a single post-hole (139) set slightly north-east of centre. There is some disturbance in this area by Phase 2 post-holes and the Iron Age palisade trench but it seems possible that post-hole 138 represents an original terminal to the façade at its centre. It follows that there was a gap in the façade at this point to allow access to the circles and this suggestion is supported by corresponding gaps in Circles 1A and 1B.

The evidence from the well-preserved north-east half of the façade is that the posts decreased in size from the centre outwards, as the post standing in 138 was 30 cm. in diameter and that in 129 was 21 cm. in diameter. Similarly, the dimensions of the post-holes range from 67 cm. in diameter and 67 cm. deep for 138 to 21 cm. in diameter and 15 cm. deep for 123. The relationship of the façade to Phase 2 is shown in that post-holes 131, 132 and 133 are sealed by the gravel platform of that phase and that 138 is covered by the Phase 2 chalk-block platform and cut by post-hole 45 of that phase. Furthermore, post-hole 139 is cut by post-hole 23 and partially sealed by chalk packing of Phase 2, whilst 142 is cut by the ramp of post-hole 48.

Circle 1A (figs. 9, 11). This ring is represented by only five post-holes (140, 150, 151, 153, 154) of which three lie on the perimeter of a circle with a radius of 15.02 m. The spacing of the post-holes is highly irregular and ranges from 2.5 m. between 150 and 151 to 17 m. between 151 and 153. Having regard to this irregularity it may be only tentatively suggested that 140 and 154 mark the location of a defined gap opposite an entrance through the façade. The average diameter of the post-holes is 54 cm. with a maximum diameter of 76 cm. (154) and a minimum of 38 cm. (153) and there is no consistency in this respect. Similarly, there is considerable variation in post-hole depth — with an average of 1.14 m. the maximum depth is 1.44 m. (140) and the minimum 88 cm. (150) and only two of the five post-holes are within 15 cm. of average. Of the four measurable 'pipes', 140, 151 and 154 are 18 cm., 15 cm. and 18 cm. respectively in diameter and 153 has a diameter of 24 cm. Post-holes 140, 150 and 153 are cut by features of Phase 2 and 154 is cut by the Iron Age palisade trench.

Circle 1B (figs. 9, 11). This ring is represented by 20 excavated post-holes (nos. 156-75) of which 52% lie on the perimeter of a circle with a radius of 11.62 m. The two major divergencies from this circle are between 163-5 and 167-8. These sectors are in two nearly straight alignments, which may indicate that different parts of the circle were erected by separate gangs and that in these two instances a circular plan was not adhered to. Where the circle is well preserved the average space between the posts is 1.6 m. with a maximum of 1.9 m. (163-4; 165-6) and a minimum of 1.2 m. (167-8). The agreement is quite good as 56% of the spacings are between 1.2 m. and 1.5 m. and a rough estimate on this basis suggests that the original circle possessed 44 posts. In the wider spaces such as between post-holes 158-9 and 168-9, intervening holes may have been destroyed in the Phase 2 reconstruction, but the gap between 173-4 is 5.7 m. and as there are no intrusive Phase 2 post-holes this gap may be original and represent the continuation of an entrance-way into the structure. There is a gap of 7.3 m. between 175 and the limit of the excavation to the west. However, the presumed perimeter of the circle has been destroyed by the structures of Phase 2 and by the Iron Age palisade trench.

The average diameter of the post-holes is 53 cm. with a maximum diameter of 60 cm. (160, 163, 166, 170-2, 175) and a minimum of 45 cm. (156-8, 161, 162, 165, 167-8). The consistency is therefore very good as all the diameters are within 7 cm. of the average. The average depth of the post-holes is 1.3 m. with a maximum of 1.9 m. (157) and a minimum of 91 cm. (156, 159 and 160) with 50% of the holes within 15 cm. of average. It was possible to measure six post-'pipes' which had an average diameter of 21 cm. The diameter of the largest was 27 cm. (175) and of the smallest 18 cm. (167, 171). Post-holes 156-66 and 168-75 were all cut by features of Phase 2.

Circle 1C (figs. 9, 11, 13). This ring is represented by 11 post-holes (176-86) of which 64% lie along the perimeter of a circle with a radius of 7.37 m. The divergence amongst the five post-holes not on this alignment is not great save for 176 which was set 76 cm. inside the perimeter. The spacing of the post-holes is most irregular and seems likely to have been so originally, as not all the gaps in the circuit can be explained by the Phase 2 reconstruction. The average diameter of the post-holes is 54 cm. with a maximum diameter of 68 cm. (177) and a minimum of 45 cm. (178, 180, 182); all the diameters are within 13 cm. of average.

The average depth of the post-holes is 1.4 m. with a maximum depth of 1.8 m. (184) and a minimum of 1 m. (176), which reveals a considerable range between the maximum and minimum depths. Of the four post-'pipes' which could be measured, 176, 183 and 184 are 21 cm., 21 cm. and 18 cm. in diameter respectively and conform closely to the average of 18 cm. The post-diameter for 178, however, is 12 cm. which is considerably less than average. All the post-holes of this ring with the exception of 178, were cut by features of Phase 2.

Circle 1D (figs. 9, 11, 13 and pl. VIIa). This ring lay entirely within the excavated area and is the only circle not related stratigraphically to Phase 2. It is represented by six post-holes (196-201) all of which lie along the perimeter of a circle with a radius of 1.12 m. The average spacing between the post-holes is 1.1 m. with a maximum spacing of 1.5 m. and a minimum of 91 cm., so that there is surprising irregularity in this respect for a circle with such a small radius. The diameters of the post-holes average 60 cm. with a maximum diameter of 82 cm. (201) and a minimum of 45 cm. (196, 199). The average depth of the post-holes is 42 cm. with a maximum depth of 60 cm. (197) and a minimum of 24 cm. (196). All the post-'pipes' could be measured and average 18 cm. in diameter with a maximum diameter of 22 cm. (200, 201) and a minimum of 15 cm. (196, 199).

The ring is not cut by any post-holes or ramps of Phase 2 and its age relative to that structure cannot be established on these grounds. However, like those of Circles 1A-1C the posts are not ramped. Moreover, the top of the 'pipe' of 197 is sealed by a thin layer of red ash and the top of post-hole 198 is sealed by a thicker layer of red ash which extended to the north of the pit. It seems likely that this burning can be attributed to the reconstruction associated with Phase 2 and Circle 1D is therefore assigned to Phase 1 with the proviso that it may have constituted a separate structure in its own right. As the reconstruction of this ring is that of a free-standing timber circle within the precincts of a roofed building it is difficult to establish its relative age in the absence of stratigraphical evidence. But in view of the demonstration of a similar free-standing non-structural circle within the Phase 2 building the writer is inclined to associate Circle 1D with Phase 1, whilst bearing in mind the reservations outlined above. The ring did not enclose any burial or ritualistic feature.

The Rectilinear Setting (figs. 9, 11, 13 and pl. VIIIa). This is not a true ring but a rectilinear setting of four post-holes and their replacements (187-92, 194-5) which are based on a circle with a radius of 3.85 m. Four post-holes are approached by ramps (187-8, 191, 195) which are aligned inwards, and are the only post-holes of Phase 1 to possess such features. That these ramped post-holes are earlier than their replacements is shown by the fact that 195 is cut by its replacement (194) and that the only post-hole which remained unreplaced throughout these alterations (187) is approached by a ramp. The importance of these posts is emphasized by the fact that they were renewed on several occasions — 188 twice (189, 190), 191 once (192) and 195 once (194). Post-hole 187 was not renewed and it is of interest to note that this post had the greatest diameter of the four and was therefore least likely to require renewal.

The average diameter of the post-holes was 60 cm. with a maximum diameter of 1 m. (187) and a minimum of 39 cm. (188). The average depth of the post-holes was 1.3 m. with a maximum of 1.7 m. (195) and a minimum of 1.2 m. (187, 189, and 192). The average diameter of the posts was 21 cm. with a maximum diameter of 38 cm. (187) and a minimum

of 15 cm. (188-90, 195). The ramps are aligned inwards and have an average length of 1.7 m. with a maximum length of 2.1 m. (188) and a minimum length of 1.5 m. (191). Post-holes 188, 191, 194 and 195 are cut by features of Phase 2.

The flint artifacts recorded from features of Phase 1 numbered 50 or 1% of the total found in the excavations. The implements include two scrapers and two piercers. In addition, nine antler picks were found (from post-holes 134, 141, 152, 187, 188 and 194) but no bone implements and only a few splinters of animal bone. Only 46 sherds came from post-holes of Phase 1 and the majority of these were recorded from two post-holes, 139 in the outer circle and 188 near the centre of the structure. All were of Grooved Ware with the exception of three sherds of Beaker (P591-2) which were recorded from post-hole 139. However, post-hole 139 is cut by post-hole 23 of Phase 2 so that about one-third of it has been removed. It is possible that the Beaker sherds recorded as having come from 139 could have arrived in that position (i.e. overlying the post-‘pipe’), during the Phase 2 occupation. They were certainly not sealed in a position in which contamination by Phase 2 activities was not possible.¹

Phase 2 (figs. 9, 10, 12-14 and pls. VI-XI)

In its second phase the Southern Circle comprises six nearly concentric circles of more massive timber uprights with radii of 19.46 m., 17.86 m., 14.67 m., 11.46 m., 7.60 m. and 5.37 m. Certain of these rings correspond in plan with those of Phase 1; in particular Circles 2D and 2E correspond with Circles 1B and 1C respectively. It is clear from the sections of the Phase 1 post-holes that these timbers had decayed *in situ* and had not been extracted before the Phase 2 reconstruction but nevertheless the plan of the original structure must still have been visible — either as slight hollows in the turf or as rotted stumps. It was not until the structure had reached this stage of dissolution that it was decided to rebuild it as a much larger and elaborate edifice to a pre-determined plan.²

TABLE II
*Details of the Southern Circle; Phase 2**

Circle	Mean radius	No. of posts		Average spacing	Average PH diam.	Average PH depth	Average post diam.	Average ramp length
		Excavated	Presumed					
2A	19.46	30	50	2.3	0.76	0.42	0.30	—
2B	17.86	22	36	3.0	1.1	1.6	0.51	1.7
2C	14.67	20	34	2.8	1.1	1.7	0.48	1.4
2D	11.46	16	24	2.9	1.4	2.1	0.57	2.0
2E	7.60	9	12	3.8	1.8	2.3	0.64	3.0
2F	5.37	8	10	3.1	0.85	1.5	0.24	1.9

* Measurements are given in metres.

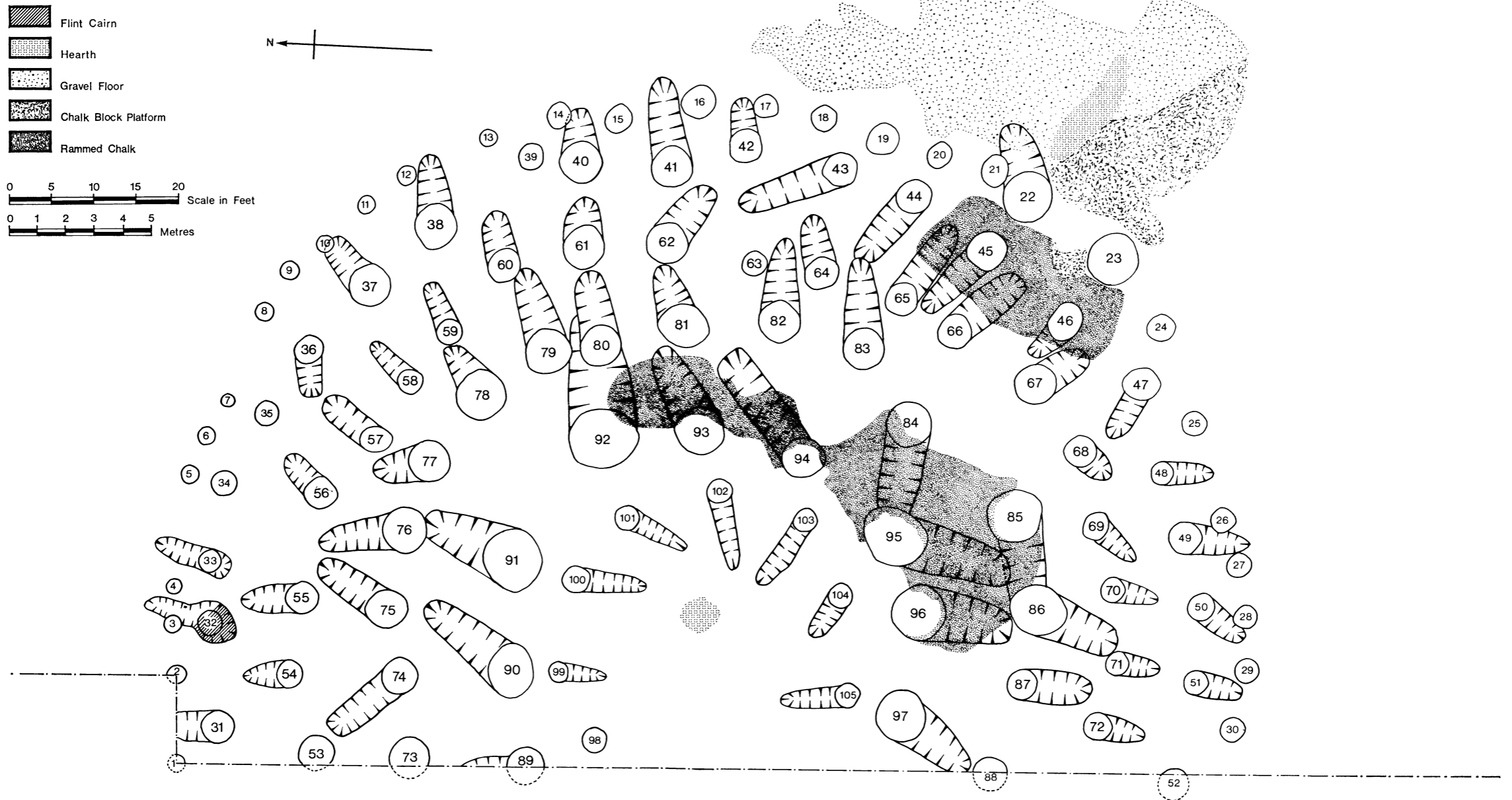
¹ While this account was in the press, a radiocarbon determination of 1810 ± 170 B.C. (NPL-239) was obtained on antler picks from post-holes 133, 134, 141, 193 and 194. The application of one standard deviation gives a potential range of 1980-1640 B.C. with the probability that the true

radiocarbon age lies at the beginning of the second millennium in view of the determinations obtained for Phase 2.

² This much can be deduced from the general similarities with Woodhenge.

DURRINGTON WALLS

SOUTHERN CIRCLE: PHASES 2A AND 2B



facing p. 30]

FIG. 12

The posts of the six-ring structure were much larger than in Phase 1 and required correspondingly larger post-holes, which were mostly approached by sloping ramps to aid the insertion of the heavy timbers. All the post-holes and ramps were excavated within the area which was to be destroyed but no ring was completed within this area. However, it is estimated that some 60% of Circle 2A was recorded and excavated and 80% of Circle 2F. The preservation of the post-holes was excellent, owing to the structure having been sited at the bottom of the combe where it had been covered with a thick deposit of ploughsoil (fig. 10), and in almost every case it was possible to identify the position of the decayed posts. These post-'pipes' have been plotted and the resultant plan (fig. 14) represents an accurate record of the original position of each timber upright. The interpretation of the post-hole sections has already been discussed and each section is illustrated and described in figs. 118-35 and Appendix VIII.

The post-holes were excavated into the chalk with antler picks which were then added to the packing material around the timber uprights. These implements are discussed in the section on the finds and it is sufficient to say at this juncture that 345 picks were recorded from the packing material of the post-holes of Phase 2. The average dimensions of these post-holes fluctuated between each ring but in Circle 2E where the largest posts were recorded, the holes averaged 1.8 m. in diameter and 2.3 m. deep, whilst post-hole 95 in this series was 2.2 m. in diameter and 2.9 m. deep. The excavation of such pits must have been a considerable undertaking, quite apart from the hewing, dragging and erection of the timbers to go in them. For pits of such dimensions the provision of ramps would have been essential, not only for inserting the timber uprights but also to enable the construction gangs to carry out their work. In general, the ramps tend to increase in length according to the diameter of the post to be placed in the hole but this is not invariably so. In the main they are aligned outwards, suggesting that the circles were constructed from the inside out and this is confirmed in several instances where post-holes cut through the ramps of circles inside them. For example, in Circle 2D post-holes 76 and 80 cut through the ramps of the adjacent inner circle which should indicate that Circle 2D was dug later than Circle 2E. However, the evidence is inconsistent as the ramp of post-hole 84 of Circle 2D is cut by post-hole 95 of Circle 2E (figs. 9 and 13).

Similarly, the ramps in Circle 2B with one exception (36) are aligned outwards, except in the area of the entrance where they are directed inwards to key in with the ramps of Circle 2C. This, however, is a special case, and suggests that the entrance was probably planned from the outset. Circle 2F consistently differs from this generalization in that all its ramps point inwards. This should mean that the ring was dug after Circle 2E, the posts of which would have obstructed the work if the ramps had been aligned outwards in the normal way. Moreover, Circle 2E is a special case in that the post-holes are smaller and the timbers they supported are also smaller in diameter than any of the posts in Circles 2A-2E. If one accepts the roofed building interpretation for the remains as a whole, Circle 2F must have been non-structural and comprised a free-standing ring of timber uprights at the centre of the building.

In the general plan of the Southern Circle (fig. 9) Circle 2A has been designated a separate structural phase. The reason for this is that in five instances the post-holes cut through the ramps of Circle 2B (3, 10, 14, 26 and 28) and must therefore have been dug later than these

ramps. However, the distinction is a technical one and probably means no more than that the rings were constructed from the inner to the outer. If so, the actual interval between the construction of Circle 2E and Circle 2A may have been one of only hours or days. This is emphasized by the fact that post-hole 21 cuts through the ramp of entrance post-hole 22 even though these two post-holes are adjacent in the same circle and are presumably contemporary. The explanation here may be that the entrance post-holes were the first to be erected in Circle 2A, but this detail serves to illustrate that the separation of Phase 2 into two periods in fig. 9 may well have no effective chronological relevance and is included for the sake of completeness.

A prominent feature of Circle 2A is the entrance, which faces south-east towards the causeway over the main enclosure ditch. It is 3.8 m. wide and was flanked by two posts 1.06 m. and 91 cm. in diameter which were embedded 2.4 m. and 1.9 m. respectively into the natural chalk. These two posts are the largest timbers which were employed in the structure (22 and 23). The entrance was fronted by an irregular platform which sealed beneath it a thin fossil soil (fig. 12; pls. X*b*, XI*b*). The maximum dimensions of this platform were 17.6 m. from north to south and 8.5 m. from east to west. Immediately in front of the entrance gap it was composed of blocks of fresh chalk embedded in the fossil soil whilst north of this area the platform consisted of rolled flint gravel. At the junction between the two materials occurred an extensive area of burning which had scorched the underlying platform material and around which was littered a very great quantity of pot-sherds, flint and bone artifacts and animal bones. The gravel platform in part overlay the ramp of post-hole 22 and must therefore be contemporary with or subsequent to it. The former can be regarded as a platform outside the building proper on which offerings may have been made and rituals performed prior to entering the structure itself. Supporting evidence is provided by the fact that the great proportion of sherds, flints and bones from the Southern Circle as a whole were obtained from the surface of this platform and very little from the chalk surface within the structure, although concentrations of refuse had fallen into the post-holes. One may assume, therefore, that the debris on the platform is of a non-domestic nature, a conclusion which has already been argued for the material in the weathering cones of the post-holes.

Fragments of charcoal of a sufficient size to enable the timbers from which they were derived to be identified were obtained from 14 post-holes and have been examined by Mr G. C. Morgan of the Ancient Monuments Laboratory, Ministry of Public Building and Works (Appendix V). The charcoals examined were obtained from the sides of the post-holes and are probably the residue which resulted from the deliberate charring of the bottoms of several posts. Out of 16 specimens, 14 are of oak, 2 of hawthorn and 1 of ash. From the preponderance of oak it is reasonable to assume that it was employed for building purposes and for the calculation of the weights of the timbers the use of green oak timbers has been assumed throughout. The posts were packed around with fresh chalk lumps (layer 8), which frequently projected above the level of the surrounding chalk, and tightly rammed powdered chalk (layer 7) interspersed with the occasional antler pick or lump of sarsen. This hard packing material extended into the ramps, which were also levelled off, where it frequently rested on a thin band of humus (layer 9). This thin humic layer probably represents a short interval between the digging of the post-holes and the erection of the timber

DURRINGTON WALLS, SOUTHERN CIRCLE: DETAILED PLAN OF CENTRAL AREA

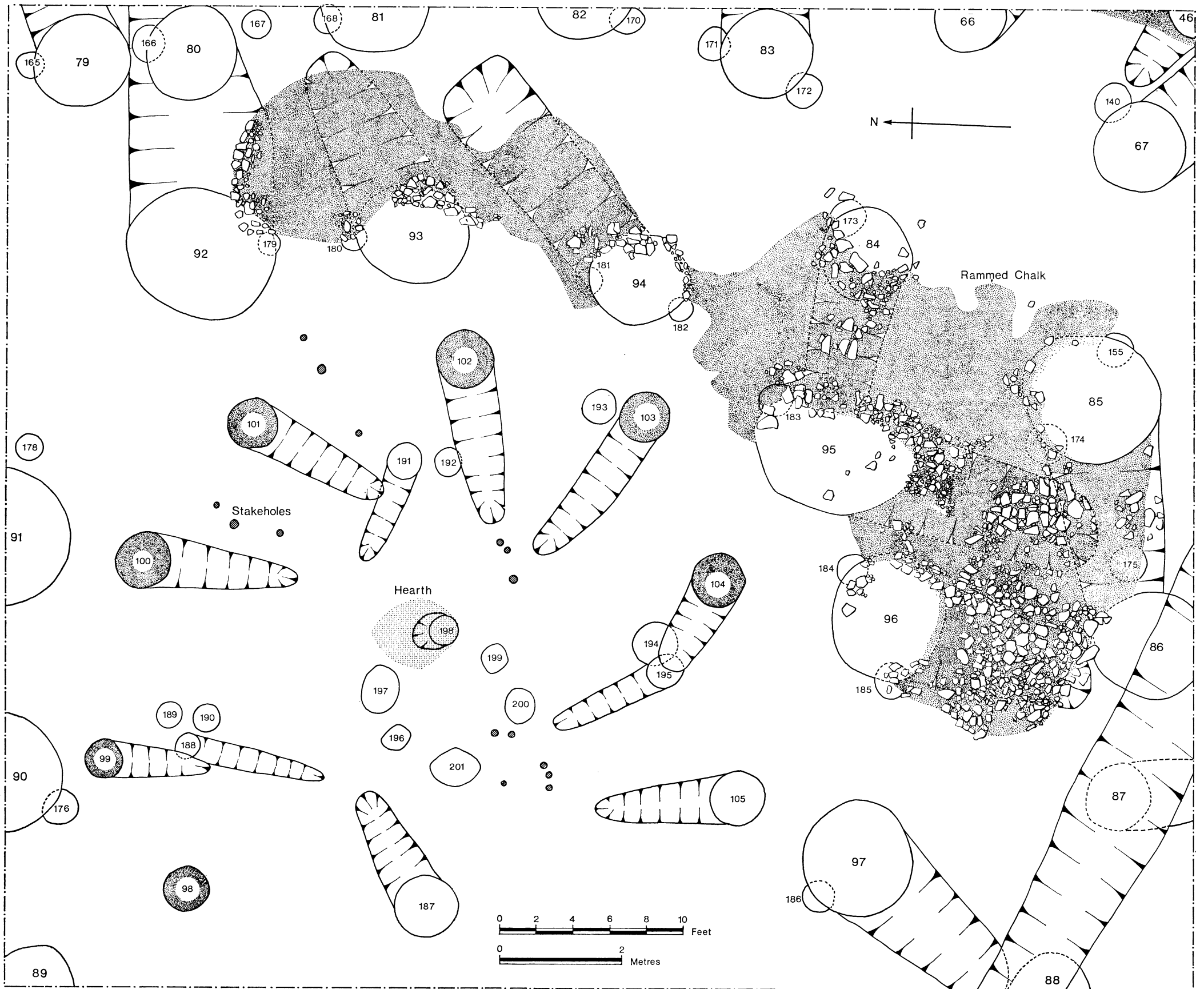


FIG. 13

uprights — a state of affairs which is confirmed by the occurrence of a thin deposit of small chalk rubble at the bottoms of many post-holes (layer 6), which was probably derived from the sides of the latter by natural weathering processes before they were sealed by the packing material. However, no finds were recorded from this context, and only antler picks from the packing material. All the pottery, flint artifacts and animal bones were recorded from the bases of the weathering cones (layer 3A). In two areas, inside the entrance and between post-holes 92 and 96 in Circle 2E, the rammed chalk packing extended over the areas between the ramps and post-holes, where it rested on a thin fossil soil (fig. 12).

No burials, pits or features of a ritualistic nature were found within Circle 2F at the centre of the structure, save for a deposit of red ash which covered post-hole 198 of Phase 1 and a sporadic scatter of undated stake-holes. The structure appears to have decayed *in situ* and not been dismantled, as there are no signs of any deliberate removal of the posts. However post-hole 32 of Circle 2B was covered with a cairn of flints at some time after the post had decayed and the weathering cone had formed (fig. 119). The intention behind the building of this cairn is unknown and it may have been of a symbolic nature.

Circle 2A (figs. 9, 12, 14). This ring is represented by 30 excavated post-holes (1–30) of which 80% lie on the perimeter of a circle with a radius of 19.46 m. The agreement is less close, however, if one examines the plan of the post-‘pipes’ (fig. 14), of which 43% lie on the perimeter of this circle. Nevertheless, when one considers the problems involved in raising the timbers to a vertical position inside pits with diameters much larger than those of the posts, then the proportion which actually lie on the perimeter of the circle is quite high. The divergencies are chiefly caused by a local eccentricity of alignment between post-holes 8–12 which comprise a slight outward bulge. There is considerable variation in the spacing of the posts. The average spacing is 2.3 m. with a maximum interval of 4.1 m. (4–5) and a minimum of 1.5 m. (5–6, 6–7, 9–10). In the northern sector of the ring the post-holes tend to cluster in groups of 3, 3 and 5 (2–4, 5–7, 8–12) but this tendency is less marked along the remainder of the circuit. The localized deviation from the perimeter of a true circle and a tendency to group spatially may indicate that parts of the ring were erected by separate gangs. The ring may originally have possessed some 50 posts in its circuit if one employs as a guide the average spacing between the timber uprights.

An important feature of Circle 2A is the entrance in its south-east sector (post-holes 22 and 23). It was originally 2.7 m. wide and flanked by two posts 1 m. and 91 cm. in diameter, which were embedded to depths of 2.4 m. and 1.9 m. respectively. These were the largest timber posts employed in the circle but only post-hole 22 is approached by a ramp. The gravel platform in front of the entrance in part overlies this ramp and must therefore be contemporary with or subsequent to it.

A case can be argued for Circle 2A being later than the adjacent Circle 2B, as in five instances the post-holes of the former cut through the ramps of the latter (3, 10, 14, 26 and 28) and must therefore have been excavated later than these ramps. However, it is not possible to establish the time interval involved which may have been no more than hours or days. This is emphasized by the fact that post-hole 21 cuts through the ramp of entrance post-hole 22, whilst these post-holes are adjacent in the same circle and are presumably contemporary. The evidence may be interpreted as meaning simply that the rings were constructed from the

inner to the outer, in which case Circle 2A is not a separate phase in its own right although it has been portrayed as such in fig. 9 for the sake of completeness. The relationship of Circle 2A to Phase 1 is shown by the fact that entrance post-hole 23 cuts through post-hole 139.

Entrance post-holes 22 and 23 are each 1.8 m. in diameter and 2.4 m. and 1.9 m. deep respectively. They are much larger than the average for this circle and have been left out of the following calculations. Similarly, the posts they held were 1.0 m. and 0.91 m. in diameter and have been excluded from the calculations relating to post size. The average diameter of the remaining post-holes of Circle 2A is 76 cm. with a maximum diameter of 1.1 m. (16) and a minimum of 45 cm. (7). The diameters of the post-holes tend to increase in size as they approach the entrance. The depths of the post-holes average 42 cm. with a maximum depth of 79 cm. (21) and a minimum of 18 cm. (9) and they tend to increase in depth near the entrance. Out of 24 measured 'pipes' the average post diameter is 30 cm. with a maximum diameter of 53 cm. (16) and a minimum of 18 cm. (7). None of the post-holes are approached by ramps with the exception of No. 22 which is an entrance post-hole.

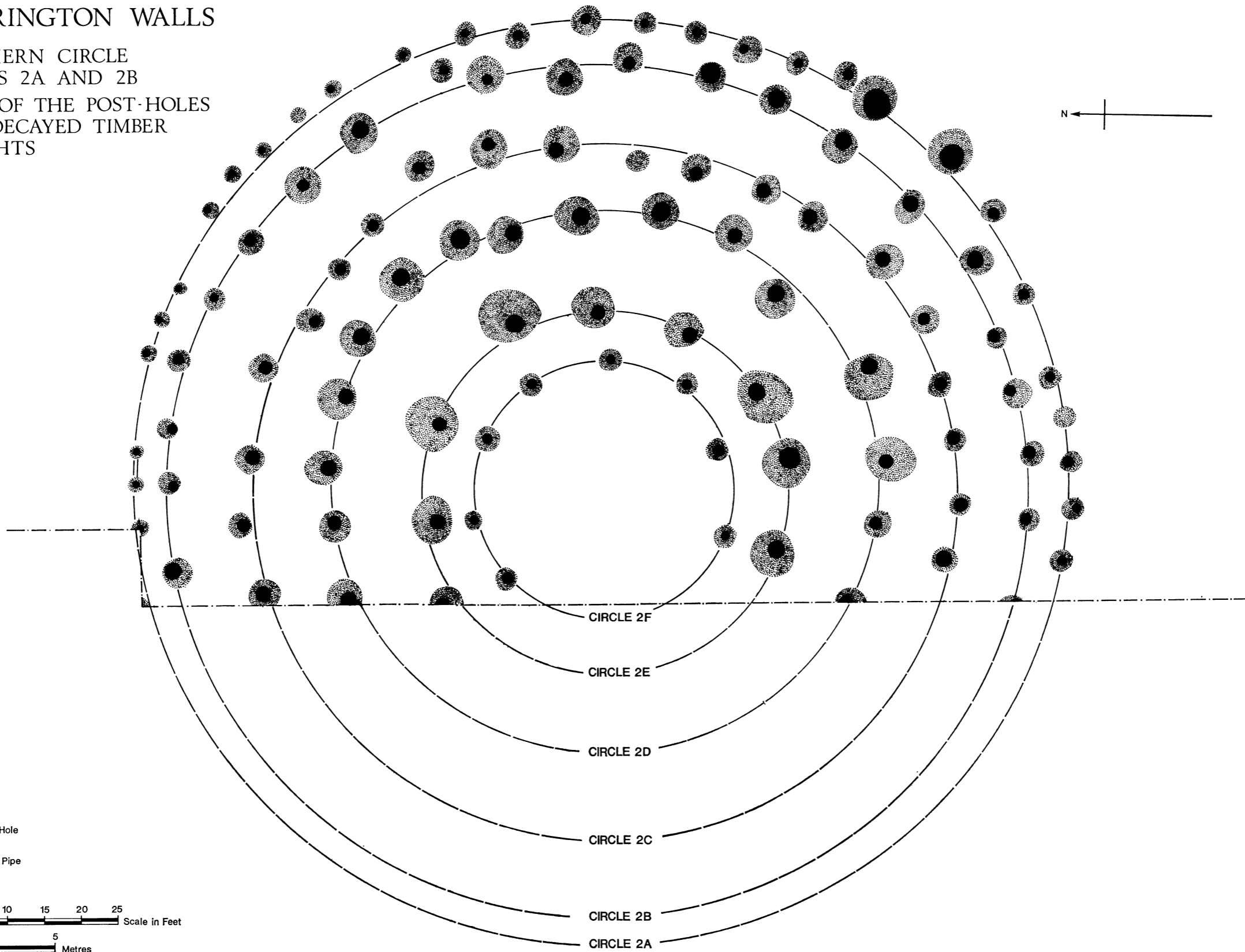
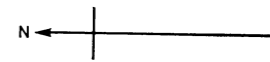
Circle 2B (figs. 9, 12, 14). This ring is represented by 22 excavated post-holes (31-52) of which 95% lie on the perimeter of a circle with a radius of 17.86 m. The 'pipes' of the original timber uprights were located in every case and of these 77% are cut by the perimeter of the circle. The agreement between the post-holes and the calculated circle is therefore very good and only 35 lies off the perimeter of the latter. The average spacing between the posts is 3 m., the maximum interval recorded being 4.2 m. (38-9) and the minimum 1.8 m. (39-40). These measurements serve to emphasize the eccentric siting of 39 for the spacing between 38 and 40 is 5.6 m. and a post could have been placed between them centred at 2.8 m. from each, which is near average. Given an average interval of 3 m. between the posts, a total of 36 posts can be calculated for the complete ring.

The average diameter of the post-holes is 1.1 m. with a maximum diameter of 1.7 m. (38) and a minimum of 73 cm. (33). The average depth is 1.6 m. with a maximum depth of 2.4 m. (46) and a minimum of 88 cm. (36). There is considerable variation in post-hole depth and only 32% are within 15 cm. of average. The average post-diameter is 51 cm. — the largest post recorded being 82 cm. (43) and the smallest 22 cm. (35). These figures indicate considerable variation in post-diameters — eight are 60 cm. or more in diameter and only six are within 25 cm. of average. There is no consistent grouping of the larger posts but those in the vicinity of the entrance are larger than average. Similarly there is considerable variation in the length of the ramps. The average length is 1.7 m. with a maximum of 3.1 m. (43) and a minimum of 1.2 m. (42 and 46). The ramps tend to increase in length according to the size of the posts with which they are associated, so that post-holes 34 and 35 which contain posts 30 cm. and 22 cm. in diameter respectively have no ramps, whereas 43 which held a post 82 cm. in diameter has a ramp 3.1 m. long. However, this is not always so, as in the case of 41 which held a post 60 cm. in diameter approached by a ramp 2.4 m. long, as opposed to 47 with its post 70 cm. in diameter and ramp 1.5 m. long.

Of the 22 excavated post-holes, 18 were approached by ramps which with one exception were aligned outwards (36) except in the area immediately within the entrance where they are aligned towards the centre in order to key neatly with ramps of Circle 2C. The ramp of 43 cuts through a hearth of Phase 1 and 44, 45 and 48 cut through post-holes of this phase,

DURRINGTON WALLS

SOUTHERN CIRCLE
PHASES 2A AND 2B
PLAN OF THE POST-HOLES
AND DECAYED TIMBER
UPRIGHTS



Post-Hole
Post-Pipe

0 5 10 15 20 25 Scale in Feet
0 5 Metres

FIG. 14

thus demonstrating their relative age. At some time after the upright in post-hole 32 had decayed the socket was partially covered by a cairn of flint nodules.

Circle 2C (figs. 9, 12, 14). This ring is represented by 20 excavated post-holes (53-72), of which 85% lie on the perimeter of a circle with a radius of 14.67 m. The 'pipes' of the timber uprights were located in 19 instances and of these 55% are cut by the perimeter of this circle. The maximum divergence from this line is 1 m. for post-hole 60 and is due to the fact that this sector is made up of a nearly straight alignment of 4 post-holes (57-60). A similar anomaly occurs in the case of 67 which forms a straight alignment with 65 and 66. These anomalies suggest that the circle was built by separate work-gangs whose sectors did not merge with each other to form a true circle. The average spacing between the posts is 2.8 m. with a maximum interval of 3.8 m. (55-6) and a minimum of 2.2 m. (58-9; 65-6; 69-70). On this basis a total of 34 posts can be calculated for the complete ring. 63 is a very doubtful post-hole. Unlike the others in the ring it does not have a ramp and is only 15 cm. deep. There is a suggestion in its section that it held the butt of a timber upright but such a timber must have had other means of support.

The average diameter of the post-holes is 1.1 m. with a maximum diameter of 1.5 m. (61) and a minimum of 82 cm. (58 and 71). The average depth of the post-holes, if one excludes 63, is 1.7 m., with a maximum depth of 2.5 m. (66) and a minimum of 1.3 m. (69). Two of the deepest post-holes (65 and 66), 2.2 m. and 2.5 m. deep respectively, are situated in the vicinity of the entrance. The average post-diameter is 48 cm., the largest post having a diameter of 60 cm. (72) and the smallest a diameter of 33 cm. (57). Of the 19 'pipes' measured, 79% are within 7 cm. of average. The average length of the ramps is 1.4 m. with a maximum length of 2.7 m. (65) and a minimum of 83 cm. (68). Despite the range between the maximum and minimum lengths, 66% of the ramps are within 30 cm. of average, which is an unusually high percentage. The ramps are invariably aligned outwards, which suggests that the ring was constructed after Circle 2D.

Post-holes 55 and 67 cut through post-holes of Phase 1 and the ramp of 54 cuts through a hearth of Phase 1. The rammed chalk packing in the ramps of post-holes 65, 66, 45 and 46 of Circle 2B extended over the ground surface between the ramps and post-holes in this area, where it sealed a thin fossil soil.

Circle 2D (figs. 9, 12, 14). This ring is represented by 16 excavated post-holes (73-88), of which 94% lie on the perimeter of a circle with a radius of 11.46 m. The post-'pipes' were recorded in every case and of these 55% are cut by the perimeter of this circle. The only post-hole off this alignment (84) is sited opposite to the entrance and its position may be due to this feature; it is also unusual in that its ramp is aligned towards the centre. The average spacing between the posts is 2.9 m. with a maximum interval of 4.8 m. (84-5) and a minimum of 2.2 m. (74-5; 79-80). This emphasizes the eccentric siting of 84 for the interval between 83 and 85 is 6 m. and if 84 had been sited symmetrically between them the spacing would have been near average. On the basis of an average interval of 2.9 m. between the timber uprights a total of 24 posts can be calculated for the complete ring.

The average diameter of the post-holes is 1.4 m. with a maximum diameter of 1.8 m. (78) and a minimum of 1.08 m. (87). The average depth of the post-holes is 2.1 m. with a maxi-

mum of 2.4 m. (84 and 88) and a minimum of 1.5 m. (77). The average diameter of the timber uprights is 57 cm. with a maximum diameter of 68 cm. (77, 82, 84 and 85) and a minimum of 42 cm. (87). The average length of the ramps is 2 m. with a maximum length of 2.5 m. (83) and a minimum of 1.2 m. (78). There is considerable variation in the dimensions of the post-holes and the ramps.

The ramps are invariably aligned outwards, save in the case of 84 and 85 which may well have been dug before the others in the ring since their ramps are cut by 95 of Circle E and 86 of Circle D. The remainder of the ring appears to have been dug later than Circle 2E as post-holes 76 and 80 cut through the ramps of the latter. On the whole the evidence again points to construction of the circles from the inner to the outer save with regard to 84 and 85. The Iron Age palisade trench cuts through post-holes 86, 87 and 88 and 12 post-holes cut through features of Phase 1, thus establishing their relative age.

Circle 2E (figs. 9, 12-14). This ring is represented by nine excavated post-holes (89-97), all of which lie on the perimeter of a circle with a radius of 7.6 m. The 'pipes' of the timber uprights were located in every case and of these 66% are cut by the perimeter of this circle. The average spacing between the posts is 3.8 m. with a maximum interval of 5.1 m. (91-2) and a minimum of 3.0 m. (95-6). On this basis a total of 12 posts can be calculated for the complete ring.

The average diameter of the post-holes is 1.8 m. with a maximum diameter of 2.2 m. (95) and a minimum of 1.3 m. (89). The average depth is 2.3 m. with a maximum depth of 2.9 m. (95) and a minimum of 1.6 m. (93). The timber uprights average 64 cm. in diameter with a maximum diameter of 83 cm. (96) and a minimum of 51 cm. (89, 91). It is clear from these dimensions and from Table II that Circle 2E is composed of the largest post-holes and, on average, the largest timber uprights. The largest of the latter are exceeded in size only by the two entrance posts. The average length of the ramps is 3.0 m. with a maximum length of 5.1 m. (92) and a minimum of 1.9 m. (97). As always, there is considerable variation in these lengths which do not fluctuate in ratio to the size of the posts. The ramps are all aligned outwards and in two cases (91 and 92) are cut by post-holes of Circle 2D, suggesting that in part Circle 2E was erected first. Of the 9 recorded post-holes, 8 cut through features of Phase 1. The rammed chalk packing material in the ramps of post-holes 92-6 and 84-5 of Circle 2D extended over the ground surface between the ramps and post-holes in this area. It sealed a thin fossil soil from which a few sherds were obtained.

Circle 2F (figs. 9, 12-14). This ring is represented by eight excavated post-holes (98-105), all of which lie on the perimeter of a circle with a radius of 5.37 m. The 'pipes' of the timber uprights were located in every case and of these, 75% were cut by the perimeter of this circle. The average spacing between the posts is 3.1 m. with a maximum interval of 3.5 m. (104-5) and a minimum of 2.7 m. (98-9). On this basis a total of 10 post-holes can be calculated for the complete ring.

The average diameter of the post-holes is 85 cm. with a maximum diameter of 1.0 m. (102) and a minimum of 64 cm. (99). The average depth is 1.5 m. with a maximum depth of 1.9 m. (104) and a minimum of 1.0 m. (99). The timber uprights average 24 cm. in diameter with a maximum diameter of 27 cm. (100, 101 and 103) and a minimum of 21 cm. (99). The

post-holes and the timbers they contained are therefore smaller than those in the other circles and reverse the general trend towards an increase in size from Circles 2A to 2E. The average length of the ramps is 1.9 m. with a maximum length of 2.4 m. (103) and a minimum of 1.4 m. (99). All the post-holes, except for 98, possess ramps which are aligned inwards towards the centre of the circle. This is contrary to the general tendency of the ramps in Circles 2A–2E to be aligned outwards and may mean that Circle 2F was constructed later than the others, or at least later than 2E, which would have interfered with the erection of the posts if the ramps had pointed outwards. The inward alignment of the ramps must also mean that the Phase 1 circles (i.e. the rectilinear setting and Circle 1D) were no longer standing or else they would have interfered with the work, and indeed the ramps of post-holes 99, 101, 102 and 104 cut through post-holes and ramps of the rectilinear setting.

The Phase 2 structures of the Southern Circle produced 59% (6753) of the flint artifacts from the site as a whole. Of these, 47% were obtained from the platform in front of the entrance, 36% from the post-holes and 17% from the chalk surface within the structure. The implements include 81% of the arrowheads from the site — mostly of the transverse variety although two barbed and tanged specimens were also found — and 49% of the scrapers. There was a notable lack of axes — only one broken greenstone axe from post-hole 87. In addition, 67% of the pins and awls were recorded from the Southern Circle and 80% of the antler picks — 354 in all. Objects of stone were confined to the fragmentary greenstone axe referred to above although lumps of sarsen were used in the packing of certain post-holes. Marine shells were also found in small quantities. Three radiocarbon determinations are available for Phase 2 of the Southern Circle.

BM-395: 1950 ± 90 B.C. from antler in the packing (layer 8) of post-hole 92 (fig. 130).

BM-396: 2000 ± 90 B.C. from charcoal (*Quercus robur*) from the base of post-hole 92 (fig. 130).

BM-397: 1900 ± 90 B.C. from animal bones obtained from the packing material (layer 8) of post-hole 92 (fig. 130).

Post-hole 92 housed an oak post 76 cm. in diameter which entails a possible variation of up to 175 years for BM-396, dependant on whether the sample was obtained from the centre of the heart-wood or from the sapwood. As the provenance of the sample in this context could not be established then BM-395 and 397 provide a more reliable indicator of the date of the construction of the building.

The great majority of the sherds recovered from the site came from the Southern Circle. Amongst these the largest group came from the soil in the weathering cones of the post-holes. Amongst this group of 2216 sherds all but 17 are of Grooved Ware type, the remaining sherds comprising one rim sherd of Peterborough ware from post-hole 44, and Beaker sherds from post-holes 22, 23, 33, 50, 71, 74, 83, 95, 102 and 139. Of these sherds, 46 were recovered from Phase 1 contexts and have been described above. The second largest group of sherds (1306) were recorded from the surface of the platform and include seven sherds of Beaker and a single weathered sherd of a Middle Neolithic bowl, whilst 32 fragments, including one Beaker sherd (P589), were recorded from the fossil soil sealed by the platform. However, this single sherd was obtained from the northern part of the platform where it was composed of flint gravel and had been subjected to fluvial action. The old land surface below the

platform had been eroded and was exposed through holes in the platform in places. It is possible that the single Beaker sherd was recorded from one of these eroded patches where it could have been deposited during Phase 2 times. In addition to these large groups, 105 sherds of Grooved Ware were recorded from the surface of the chalk within the Southern Circle, 35 sherds of similar type from the Iron Age palisade trench and 2 sherds from below the chalk packing of the posts in Circle 2E.

THE MIDDEN

(figs. 9, 15, 16 and pl. XIa)

An elongated oval hollow, aligned roughly north-south with maximum dimensions of 12 m. and 6.7 m. was sited outside the north-east perimeter of Circle 2A of the Southern Circle (fig. 9). The northern end of the hollow had been terraced into the slope of the valley to a depth of 60 cm. and the mid-line of its floor therefore presents a virtually level surface when viewed in its north-south section. However, a section at right-angles to this, from east to west, shows that a shallow bowl-shaped hollow with gently sloping sides was excavated out of the side of the hill (fig. 16).

The hollow was partially surrounded to the north and to the south by two arcs of stake-holes (106-21, *vide* Appendix VIII and fig. 16 for description and sections). The northern arc is composed of seven stake-holes and roughly follows the edge of the scarping which produced the hollow. This is matched by a much larger arc (113-21) with a chord of 10.8 m., which surrounds the hollow to the south and also partially in the east and west. The soil contained in the hollow was black and ashy and contained a very great quantity of animal bones, pottery and stone tools. The material was confined strictly within the hollow and did not extend onto the surrounding land-surface. Charcoal from the ashy soil, which in the centre of the hollow was 30 cm. thick, produced a radiocarbon determination of 2320 ± 125 B.C. (NPL-192). The sample was not concentrated but collected as small lumps throughout the deposit wherever they occurred.

Initially, it was considered that the hollow and its surrounding stake-holes were the remains of an oval hut. The reasons for this interpretation were the superficial resemblances with terraced hut platforms of Iron Age date within the ramparts of many hill-forts and the great quantity of human debris. However, on reflection it was apparent that the total lack of any internal post-holes to support a roof rendered this theory untenable. Moreover, it seems unlikely that such a mass of rubbish would have been allowed to accumulate within the confines of a hut, even allowing for the problems inherent in transferring modern standards of hygiene to a Neolithic community.

The most likely interpretation of the structure is that it represents the remains of a midden. The rubbish would have been thrown into a previously prepared hollow which was shielded for aesthetic or ceremonial reasons by light fences to the north and south. Unfortunately, its date relative to the structures of the Southern Circle could not be established on stratigraphical grounds. The alignment of the southern arc of stake-holes intersects with that of Circle 2A and it seems unlikely that these features were erected at the same time but in no case is there an intersection of post and stake-hole.

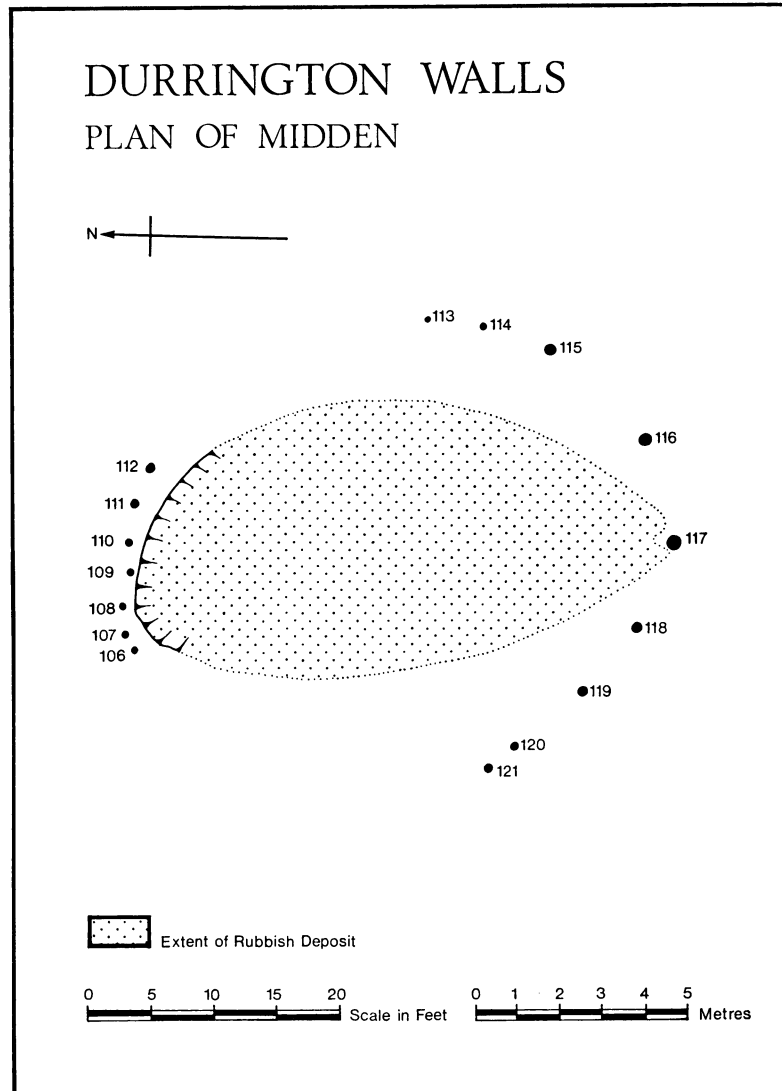


FIG. 15

It is a matter for conjecture whether the Midden was of a utilitarian or a ceremonial character. It seems likely that its purpose was to receive the refuse derived from activities connected with the Southern Circle, but one cannot establish objectively whether such refuse was deposited with ceremony or whether the Midden was simply a convenient place for its disposal. Certainly the arcs of stakes could have served a dual purpose in shielding a hollow full of rotting refuse from the eyes of either the punctilious or the profane.

A total of 243 flint artifacts (2% of the whole) were recorded from the Midden deposits. They include 14 implements amongst which are scrapers and transverse arrowheads. Implements of bone include 4 complete and 4 broken pins and 5 antler picks. The group of

DURRINGTON WALLS, SECTIONS OF THE MIDDEN

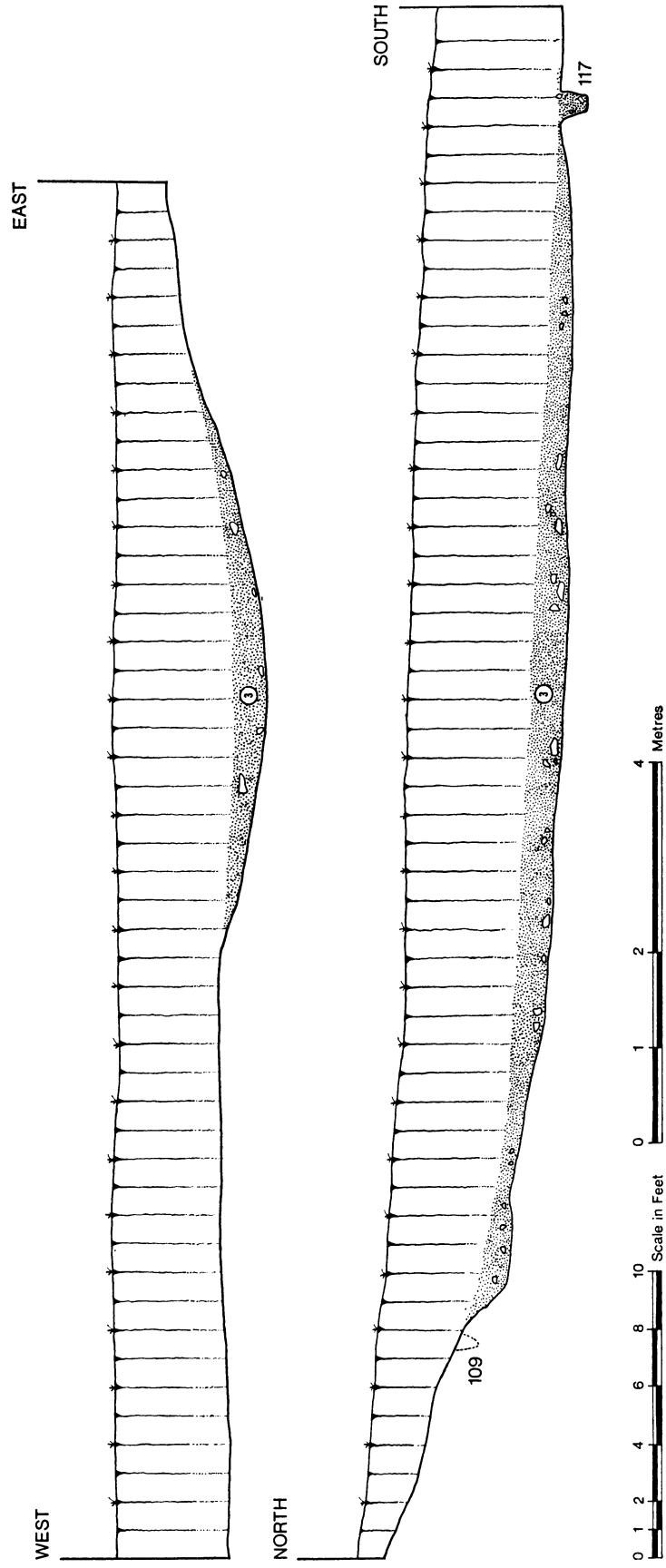


FIG. 16

981 sherds from the Midden are particularly noteworthy for the 25 Beaker sherds which comprise almost half the number of Beaker sherds from the entire site. Three Middle Neolithic rim sherds were also recognized within the group (P19, P21).

THE NORTHERN CIRCLE

(fig. 17 and pl. XIIa)

The timber structure referred to as the Northern Circle was sited 121 m. north of the Southern Circle on the northern crest of the dry valley (fig. 3). In this position it had not been protected by an accumulation of hill-wash and ploughsoil and the post-holes had been much destroyed by ploughing and the natural processes of erosion. In most cases only the very bases of the post-holes had been preserved and there was no indication of the diameters of the timber posts they had once held. In a number of instances the most shallow post-holes had been destroyed altogether and their existence is therefore inferential. It is not surprising, however, that with variations in post-hole depth the most shallow post-holes have been eroded and others remain. Despite these uncertainties, it is possible to establish the main outlines of a double circle of timber uprights approached from the south by an ill-defined avenue of spaced posts which pass through a protective façade. Approximately two-thirds of the concentric circles were excavated, along with the whole of the avenue and the façade. The remaining post-holes lie in the field to the east of the new road and were not excavated, as they were outside the threatened area and were not essential to the understanding of the structure. Details of the individual post-holes are given in Appendix VIII and their sections reproduced in figs. 136-8.

Phase 1

It is tentatively suggested that the structure may have been built in two phases, but the evidence for this is extremely tenuous owing to the small size of the putative Phase 1 post-holes and the heavy erosion noted above. Moreover, there were no post-hole intersections to give a guide to the existence of an earlier phase and the latter has been determined solely on post-hole size and alignments.

The possible Phase 1 structure is represented by an outer arc of 4 small post-holes (fig. 17, 15-18) which have an average diameter of 38 cm. and an average depth of only 12 cm. It is possible that this arc is a part of what was once a complete circle with a diameter of approximately 30 m. and that the remainder has been destroyed by erosion. A possible inner circle is represented by an arc of 5 post-holes (10-14) with a radius of approximately 9.7 m. and a chord 17 m. long. Four of the post-holes lie on the arc, the fifth (11) lies 60 cm. inside it. The spacing of these post-holes is irregular; they have an average diameter of 42 cm. and an average depth of 10 cm. Owing to the short lengths represented it is not possible to establish with any degree of certainty whether these arcs have a common centre.

Leading away down the slope of the valley, south-south-east from the outer arc, are a series of small post-holes which on the basis of size and alignment may represent the last vestiges of an avenue similar to that of Phase 2 (19-26). The spacing of the post-holes is irregular and clearly a large number have been destroyed if this was indeed an avenue. In a short sector

(20-2) where three post-holes survive, the spacing is at 1.5 m. intervals but this is not confirmed by the distribution of the remainder. The diameter of the post-holes is uniformly 30 cm. save for 26 which is 19 cm. and the average depth is nearly 9 cm., which is even shallower than for the arcs described above.

Clearly, the evidence for Phase 1 is very tenuous. There are no means of determining the date of the post-holes and they are put forward very tentatively as belonging to a possible early phase. Nevertheless, it is felt that the evidence, admittedly weak, is such that one must at least admit to the possibility of a Phase 1.

Phase 2

The structures of Phase 2 are much more certain and comprise two concentric circles of post-holes approached by an avenue through a façade. Even so, certain post-holes of the avenue and façade have been destroyed by erosion and necessitate some interpretation of the excavation record.

The outer circle comprises 15 excavated post-holes (27-41), which belong to a circle with a diameter of 14.4 m. Some 20 post-holes are estimated for the complete circle, based on the average spacing of 2.3 m. between the post-holes. The maximum interval between the post-holes is 2.6 m. and the minimum 2.1 m. but there is a 3 m. gap in the circuit between post-hole 27 and the east edge of the excavation in which no post-hole could be found. Additional post-holes (34, 38 and 41) are set inside the circuit along the southern perimeter and may be replacements. The average diameter of the post-holes is 76 cm. However, this average is distorted by the inclusion of 41 which has an unusually large diameter of 1.2 m. If this anomaly is excluded the average diameter is 73 cm. The average depth of the post-holes is 33 cm. with a maximum depth of 70 cm. and a minimum of 15 cm. It is clear that there is considerable variation in this respect and that if ploughing had continued, several post-holes in the circuit would have been obliterated, resulting in selective erosion. Owing to the latter, post-‘pipes’ were preserved in only five instances (27, 28, 34, 40 and 41) and the posts appear to have had a uniform diameter of 39 cm. In the case of 41 which is set inside the circuit the post appears to have had a somewhat larger diameter of 54 cm. In every case the posts were packed with small chalk rubble and although 37 and 38 may have preserved the impressions of the decayed timbers the evidence is inconclusive.

The inner ring comprises four post-holes approached by ramps (42-5). The post-holes are evenly spaced at 5.1 m. intervals, save for the gap between 42 and 45 which is 3.9 m., and lie on the perimeter of a circle with a diameter of 6.5 m. The post-holes are of uniform size and have an average diameter of 1.5 m. which is just over twice as large as those holes for the outer circle. The average depth of the post-holes is 1.1 m. with a maximum depth of 1.3 m. and a minimum of 1 m. All the ramps are aligned outwards from the centre of the circle — that for 45 presumably lies in the unexcavated area to the east. The average length of the ramps is 2.1 m., but there is considerable variation with 3.3 m. for 42 and 1.5 m. for 44. After the posts had been erected they were packed around with chalk rubble. Presumably the inner circle was erected first, otherwise the posts of the outer ring would have interfered with the work. The ‘pipes’ were preserved in all four post-holes and had an average diameter of 59 cm.; they penetrated to the bottom of the post-hole in each case.

All finds occurred in the upper deposits of the post-holes (e.g. fig. 136, 45, top of layer 4)

DURRINGTON WALLS
PLAN OF NORTHERN CIRCLE

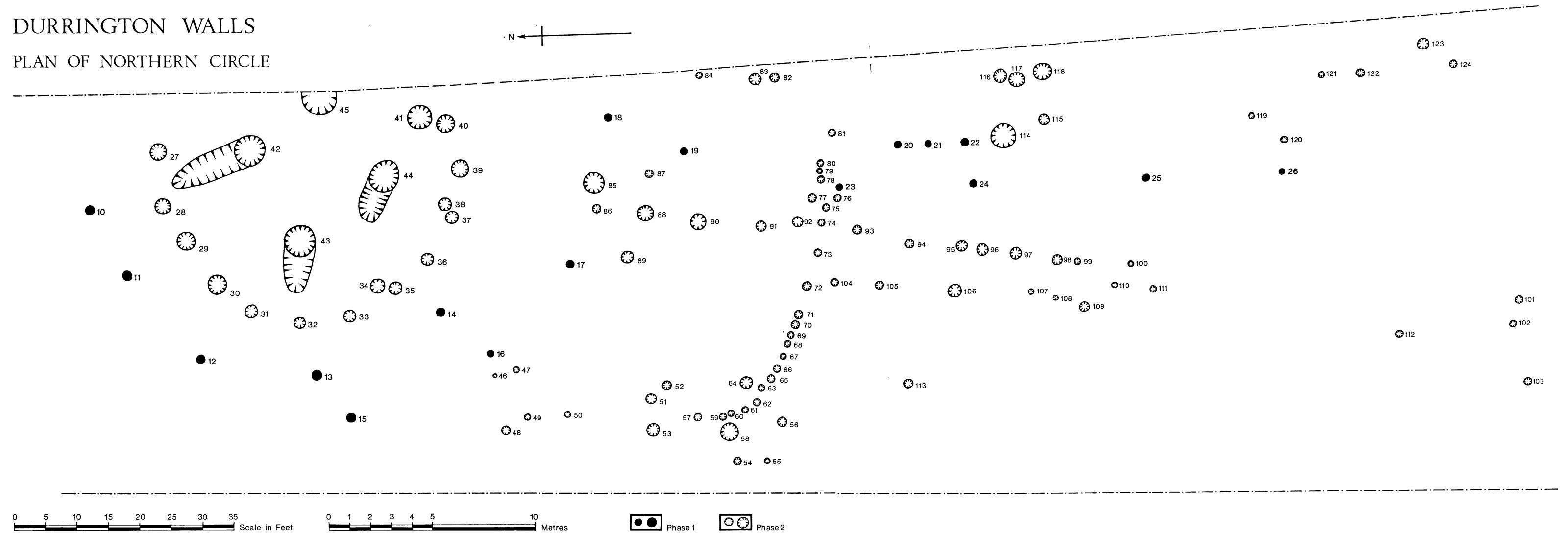


FIG. 17

facing p. 42]

which means that they arrived in this position after the post had decayed and therefore technically post-date the structure. However, it has been argued in the case of the Southern Circle that a more likely explanation is that the sherds and flints represent the remains of offerings around the bases of certain posts. The centre of the circle was completely blank, although any evidence for hearths and superficial structures would have disappeared owing to erosion, and no finds were made on the chalk surface around and within the circle.

The slightly curved line of post-holes which form the façade (fig. 17, 57, 59-63, 65-82) is sited 17.5 m. south of the outer circle. The west half of the façade is the more complete and from its incurved terminal to the suggested entrance gap is 9.75 m. If the entrance gap were placed symmetrically then one must assume an alignment of similar length on its east side. However, the post-holes of this sector were largely ploughed away and only a few are left to hint at its former existence. The average diameter of the post-holes of the façade is 36 cm. with a maximum of 45 cm. and a minimum of 19 cm. The average depth of the post-holes is 13 cm. with a maximum depth of 19 cm. and a minimum of 6 cm. Clearly, when one is dealing with remains of such an eroded character even a slight reduction in the depth of a post-hole will result in its disappearance. This façade consists of closely set posts with an entrance gap, up to which runs an avenue of timbers, and it was clearly designed to restrict access to the building to the north of it, although such restriction would have been mainly symbolic as this barrier would have had a presumed length of only 22.7 m. It can be compared with the façade to the south-east of the Southern Circle in its first phase and even, on a much lower level, with the arcs of stake-holes shielding the Midden to the north of the Southern Circle. Such structures were clearly intended to shield the sacred areas from the secular or the profane and may even have marked the boundary beyond which only the selected few could tread. No finds were recorded from any post-holes of the façade.

The avenue approaches the façade from the south (fig. 17, 86, 88-100, 104-111). It is represented by spaced post-holes and is of irregular width which varies from 1.6 m. to 2.2 m., save where it passes through the façade where it broadens to 3.2 m. A central post-hole at this point hints at the presence of a gate (73). There is a considerable range in the diameter of the post-holes with a maximum of 76 cm. and a minimum of 19 cm., the average being 45 cm. There is similarly a considerable range in the depths of the post-holes between 36 cm. and 7 cm. with an average of 15 cm., which implies that the more shallow post-holes may have disappeared. This is confirmed by the fact that to the north of the façade the course of the avenue is indicated only by its northern edge. It does not appear to meet the outer circle and stops 6.4 m. to the south of it, thus giving a total recorded length of 24.6 m. for the avenue.

The posts are not regularly spaced, nor are they opposed to each other on either side of the avenue and the whole structure has a peculiarly haphazard appearance which contrasts with the symmetry of the circles to the north. Despite these reservations the remains are sufficiently well-preserved to justify the interpretation placed upon them. Presumably the avenue does not lead directly up to the outer circle because it was intended to provide a ceremonial way through the façade which was itself designed to restrict access to the building. Once this façade had been crossed one was in the precincts of the structure and further direction was unnecessary.

A few finds were recorded from the Northern Circle, all from post-holes of the Phase 2

rings. These are fully described in the section on the finds. A total of 261 flints were recorded, of which 243 came from post-hole 43 and the 13 implements include one transverse arrow-head. Two antler picks were found but no bone artifacts whilst animal bones were rare and fragmentary. Only 67 sherds were recorded from the structure and are all of Grooved Ware with the exception of one Beaker sherd (P571).¹

STRUCTURE A

(figs. 18, 19)

The excavation of the area from south of the enclosure to Totterdown Clump was begun in 1966 and completed the following year (figs. 2 and 3). The only structure found in this sector was a group of pits or post-holes sited 64 m. to the south of the enclosure bank on the 310 ft. contour and designated Structure A. From this structure the ground slopes away steeply to the north and the bottom of the combe, to give an unimpeded view of the interior of the enclosure.

The 19 pits or post-holes cover an elongated area 18.2 m. by 10.6 m. and have undergone heavy erosion by the plough (figs. 18 and 19). The main argument against their interpretation as rubbish pits is that only four of them produced any pottery (3, 4, 8 and 24) and only five any struck flints (1, 2, 3, 4 and 12). Moreover, in plan, 5 and 6 form a right angle with 1, 3, 4 and 5 although this may well be fortuitous. However, ploughing has been so intense that in many cases the pit contents have been ploughed away and the possibility of the pits being for rubbish disposal cannot be ruled out. In profile, the pits frequently resemble tree-hollows in their irregularity, but their filling is quite unlike that found in such features and this possibility is unlikely.

It must be emphasized, however, that there is nothing to commend the interpretation of these features as post-holes other than that they fall into a vaguely rectilinear plan. The profiles of the pits are most irregular and no 'pipes' could be recorded although admittedly this may be due to the erosion of the upper parts of the pits. Professor R. J. C. Atkinson has suggested to the writer that the pits may represent the sitings of willow posts which will spread roots if stuck in the ground. This would explain the irregular character of the pit profiles in some cases. No charcoal fragments from this structure were large enough for identification but no charcoals of willow were recorded from the main enclosure.

If it is accepted that these pits held such posts then one can assume an enclosure of irregular rectilinear plan, incomplete on its south side and surrounding an irregular pit. This pit was completely sterile.

Parallels for Structure A may be sought a short distance to the west where Mrs Cunnington excavated a group of barrow circles in the field south of Woodhenge. In particular, Circle 2 enclosed a rectilinear setting of post-holes which surrounded a group of pits.² Like Structure A this setting was open on one side and may well have pre-dated the barrow. It may be significant that Sir Richard Colt Hoare described an 'elevated mound, bearing the appear-

¹ While the account was in the press, a radiocarbon determination of 1955 ± 140 B.C. (NPL-240) was obtained on an antler pick from post-hole 42. This date agrees well

with those from Phase 2 of the Southern Circle and the base of the enclosure ditch.

² Cunnington, 1929, pl. 39.

DURRINGTON WALLS
STRUCTURE A

1-18 Post Hole Numbers

0 2 4 6 8 10 Scale in Feet

0 2 Metres

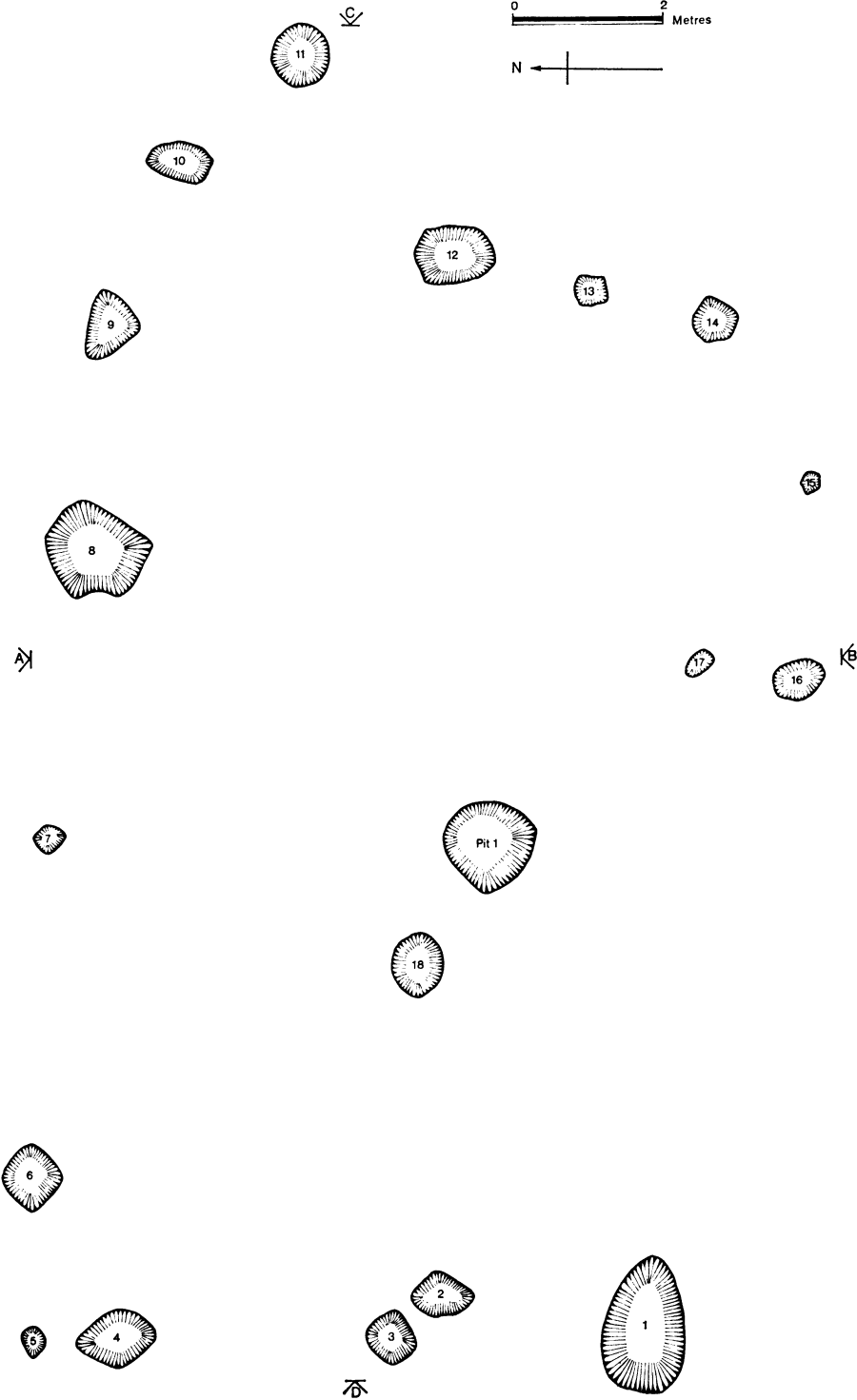
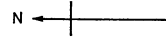
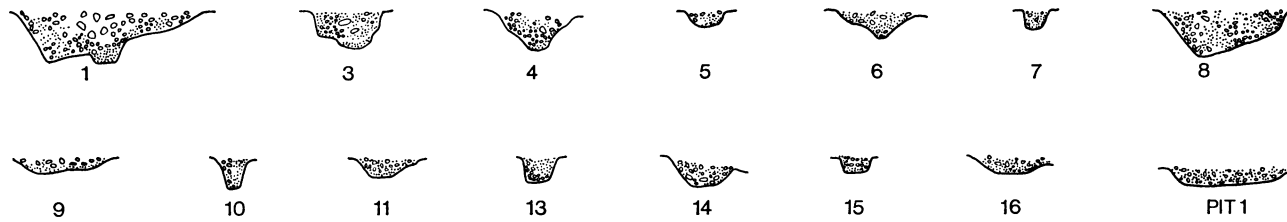


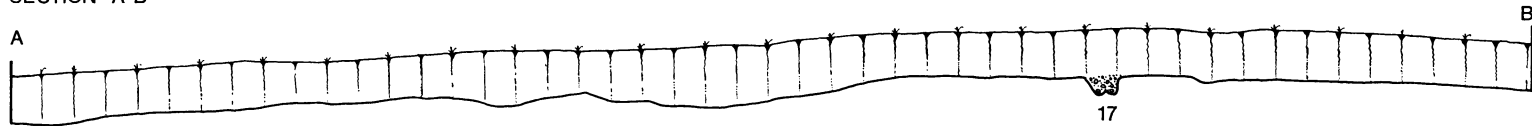
FIG. 18

DURRINGTON WALLS, SECTIONS OF STRUCTURE A

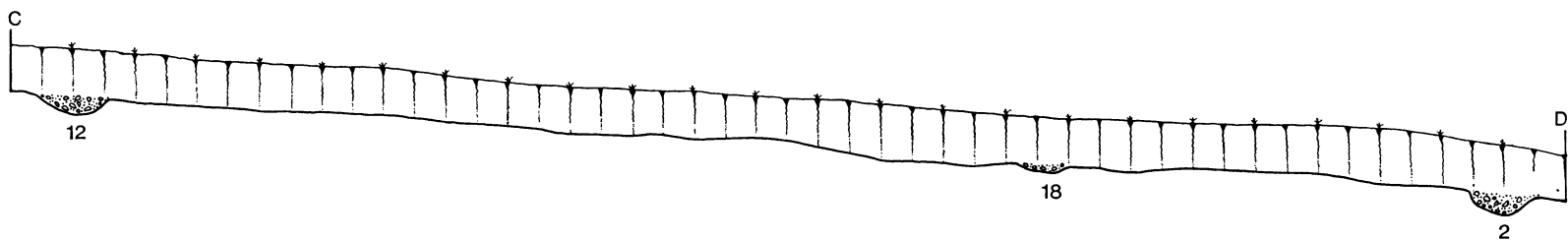
SECTIONS OF POST-HOLES



SECTION A-B



SECTION C-D



0 2 4 6 8 10 Scale in Feet

0 2 Metres

FIG. 19

ance of a barrow' on the south side of Durrington Walls¹ and marked it on his map in much the same position as Structure A is located. There is no trace of this barrow on the ground today but it is tempting to correlate it with the structure excavated in 1966.

Flint artifacts were recorded from five pits (1, 2, 3, 4 and 12). No implements were included among the 30 flints and the only artifacts worthy of note are a blade from pit 4 and a single-platform core from pit 12. In addition, fragments of bone were recorded from pits 3 and 4. Eighteen sherds of Grooved Ware, including two finely decorated rims, were recorded from Structure A. The style of decoration in these rims can be matched on sherds from the surface of the platform outside the Southern Circle and helps to place Structure A within the life-span of the latter.

STRUCTURE B

(fig. 3)

In June 1968 a strip of turf 2.1 m. wide and 83.8 m. long was removed from near the junction of the Fargo road with the old A345 to the route of the new road, in order to lay a foot-path to a bus shelter on the latter. Mr. P. Drewett kept a watch on these operations which uncovered the terminal of a shallow ditch at a point 10 m. from the east edge of the old road. This length of ditch, of which 3.0 m. was revealed, was 1.2 m. wide and 45 cm. deep, with steeply sloping sides and a flat bottom 54 cm. wide. This ditch had been dug through an artificial hollow whose extent could not be ascertained owing to the restricted area available for its investigation. The finds, all of which come from the upper fill of the ditch, comprise 27 unretouched flint flakes, a little fragmentary bone and 15 small body sherds.

Of these sherds, 14 are less than 6 mm. in diameter and of a sooty black crumbly fabric which contains occasional large flint grits. The remaining sherd is rather larger (3 cm. × 15 cm.) and of similar fabric with an orange exterior. The sherds are very weathered but their fabric resembles that of the Late Neolithic material from the main enclosure.

It is not possible to determine the character of this ditch from the limited area investigated but it seems possible that it forms part of a barrow circle similar to those recorded to the south of Woodhenge by Mrs Cunningham. However, the fact that it has a terminal may argue against this tentative conclusion.

¹ Hoare, 1812, 170.

III. THE NEOLITHIC POTTERY

By I. H. LONGWORTH

A TOTAL of 6337 pre-Iron Age sherds were recovered from the 1966 and 1967 excavations.¹ Of these 5861 can be classified as Grooved Ware, 397 as Windmill Hill and related wares, 71 as Beaker and related wares and 1 as Peterborough Ware. The pottery will be described first according to location and then in detail under these headings.

The pottery recovered from the 1950-1 pipe trench and from the 1952 excavations has been fully described by Professor Piggott² and is not included in this section. These finds are, however, discussed in a later section when considering the Durrington Walls pottery in relation to finds from other sites.

THE 1966 EXCAVATIONS

(a) From the old land surface beneath the bank in its northern sector

A total of 370 sherds³ were recovered from the ancient soil beneath the northern bank during excavations in 1966. Of these 362 belong to bowls of Windmill Hill Ware representing at least 21 vessels. The remaining eight sherds, representing a further three vessels, can be classified as Grooved Ware. With the exception of two small Middle Neolithic rim sherds, all the rims and decorated sherds are illustrated, P1-18.

(b) From the ditch in its northern sector

With the possible exception of a single sherd of Windmill Hill type from layer 3, the pottery recovered from the ditch is of a quite different character to that recovered from beneath the bank. The bulk of the pottery is a plain soft ware tempered with large quantities of sand and a little grit, with grey exterior and reddish brown core. The fabric is not dissimilar to some of the Early Iron Age fabrics represented in the upper levels of the ditch. These sherds are distributed through layers 4-6, the majority coming from layer 4 (15 sherds), 12 from layer 5 and a single sherd from layer 6. In addition, two sherds were recovered from Hearth 3 in layer 5. Only two rims were recovered, both from layer 5, P22 and P23.

Three plain and rather weathered wall sherds of a sandy fabric were recovered from a point 6 in. above the level of the ditch bottom, but are too indeterminate to allow precise identification.

Hearth 5, at the junction of layers 5 and 6, yielded sherds from two Beakers, one decorated with finger-nail rustication, P598, the other with a deeply scored incised zone decoration, P601.

¹ I would like to record my sincerest thanks to my wife, Clare, for her invaluable help in sorting and recording the pottery.

² Stone, Piggott and Booth, 1954.

³ Excluding fragments of less than $\frac{1}{4}$ in. square.

THE 1967 EXCAVATIONS

(a) From the old land surface beneath the bank in its southern sector and from the pipe-trench

One hundred and fifteen sherds were recovered from the old ground surface beneath the bank in its southern sector and a further 152 sherds were recovered from the old ground surface revealed by the pipe-trench. These consist entirely of Grooved Ware and include 7 rims and 3 fragments of base angle.

TABLE IIIA

Context	Total no. of sherds	Grooved Ware																	
		Grooved Ware	Beaker	Neo. A	Peterborough	Rims	Base angles	Plain or featureless	Grooved	Incised	Impressed	Twisted cord	Comb	Whipped cord	Rusticated	Stab and drag	Decorated cordons	Plain cordons	
Bank OLS	110	110	—	—	—	—	—	80	15	4	—	—	—	—	—	—	—	—	—
Pipe-trench OLS	152	152	—	—	—	2	3	63	56	6	6	1	—	—	5	—	18	30	—
OLS	5	5	—	—	—	5	—	—	—	4	1	—	—	—	—	—	—	—	—
Totals	267	267	—	—	—	7	3	143	71	14	7	1	—	—	5	1	26	34	—

(b) From the Southern Circle

The vast majority of sherds recovered from the site came from the exploration of the Southern Circle. The finds will be described under seven location headings:

- (i) The post-holes
- (ii) The occupation earth
- (iii) The surface of the platform
- (iv) The old land surface sealed beneath the platform
- (v) The redeposited material in the Iron Age palisade trench
- (vi) From below the chalk packing in Circle E
- (vii) The Midden.

(i) *The post-holes.* By far the largest group of sherds from the site came from the soil in the weathering cones of the post-holes. Of the 2216 sherds so recovered all but 17 can be classified as Grooved Ware. The remaining sherds comprise one rim sherd of Peterborough Ware from post-hole 44, and Beaker sherds from post-holes 22, 23, 33, 50, 71, 74, 83, 95, 102 and 139.

As Table IIIB demonstrates, the bulk of the Grooved Ware was recovered from post-holes of the second phase. Only 46 sherds came from those of Phase I and the majority of these

TABLE IIIB continued

Context	Grooved Ware																	
	Total no. of sherds	Grooved Ware	Beaker	Neo. A	Peterborough	Rims	Base angles	Plain or featureless	Grooved	Incised	Impressed	Twisted cord	Comb	Whipped cord	Rusticated	Stab and drag	Decorated cordons	Plain cordons
73	30	30	—	—	—	2	1	4	—	1	—	—	—	—	—	22	—	10
74	9	8	1	—	—	—	—	5	1	1	1	—	—	—	—	—	—	2
75	3	3	—	—	—	—	—	1	—	2	—	—	—	—	—	—	—	1
76	38	38	—	—	—	1	—	23	2	3	2	—	—	—	2	—	—	9
77	10	10	—	—	—	1	—	7	1	—	1	—	—	—	—	—	—	1
78	1	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
79	4	4	—	—	—	1	—	1	1	—	2	—	—	—	—	—	—	2
80	11	11	—	—	—	1	—	3	4	1	1	—	—	—	1	—	—	3
81	26	26	—	—	—	—	—	11	2	1	5	—	—	—	1	—	1	7
82	5	5	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	2
83	13	12	1	—	—	—	—	4	1	1	3	—	—	—	—	1	1	1
84	5	5	—	—	—	2	3	1	—	—	2	—	2	—	—	—	—	—
85	38	38	—	—	—	3	3	15	7	11	—	2	—	—	3	2	5	
86	20	20	—	—	—	1	—	12	3	3	—	—	—	—	—	3	3	
87	7	7	—	—	—	—	—	6	1	—	—	—	—	—	—	—	—	—
89	15	15	—	—	—	—	1	13	—	2	—	—	—	—	—	—	—	—
90	109	109	—	—	—	4	4	56	2	7	3	1	—	—	1	2	1	45
91	66	66	—	—	—	4	2	36	2	5	1	—	—	—	—	3	5	
92	3	3	—	—	—	—	—	2	—	1	—	—	—	—	—	—	—	—
95	13	12	1	—	—	1	—	2	—	1	—	—	—	6	—	—	—	—
97	14	14	—	—	—	1	1	4	6	—	—	—	—	—	—	—	—	7
98	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
99	2	2	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1	—
100	3	3	—	—	—	1	—	—	—	—	3	—	—	—	—	—	—	—
102	4	3	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—
103	1	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
127	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
137	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
138	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
139	22	19	3	—	—	2	—	9	3	5	1	—	—	—	—	—	—	4
141	1	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
171	3	3	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—
187	1	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
188	17	17	—	—	—	1	—	16	—	—	—	—	—	—	—	—	—	1
192	2	2	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—
Totals for post-holes	2216	2199	16	—	1	109	74	1035	431	215	124	39	8	1	30	52	105	433
Occ. earth	105	105	—	—	—	4	3	52	33	10	4	—	2	—	—	—	2	16
Surface of platform	1306	1298	7	1	—	66	31	641	337	145	57	4	4	—	6	10	128	69
OLS below platform	32	31	1	—	—	1	1	13	12	2	2	—	—	—	—	—	1	3
I.A. palisade trench	38	38	—	—	—	4	1	15	10	1	9	—	—	—	—	—	1	7
OLS below chalk packing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Circle E	2	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Midden	981	953	25	3	—	35	17	605	122	93	19	15	13	—	5	8	25	137
Plough above platform	37	36	1	—	—	—	—	31	4	—	—	—	—	—	—	—	1	1
Totals	4717	4662	50	4	1	219	127	2392	949	467	215	58	27	1	41	70	263	667

from only two post-holes, 139 in the outer circle, and 188 near the centre of the structure. Three sherds of Beaker, P591-2 were recovered from post-hole 139. With such a restricted sample the absence of the rarer decorative techniques in the sherd collection in Phase I need not necessarily be considered significant.

Though pottery was recovered from a large proportion of the post-holes of Phase II, the distribution is not entirely even. There is noticeably less pottery from the central area and from the outer circles in the northern sector. The main concentrations occur in four locations: the heaviest being round the entrance, post-holes 21-3 and 44-5; in the southern sector of the outer circles, post-holes 50-51 and 71; in the eastern sector of the outer circles, post-holes 42 and 62, and the northern sector of the inner structure, post-holes 90-1.

(ii) *The occupation earth.* One hundred and five sherds of Grooved Ware were recovered from the surface of the natural chalk within the Southern Circle, including four rims and three fragments of base angle.

(iii) *The surface of the platform.* The second largest group of sherds, 1306 in number, were recovered from the surface of the platform outside the entrance to the structure. The collection included, in addition to Grooved Ware, seven sherds of Beaker and a single weathered sherd of Middle Neolithic bowl. A further 36 sherds of Grooved Ware and a single sherd of Beaker were recovered from the plough soil remaining above the platform.

(iv) *The old land surface beneath the platform.* The 32 sherds from the old land surface sealed by the platform do not differ from the main collection of Grooved Ware from the site. A small fragment of Beaker, P589, was also recovered.

(v) *The Iron Age palisade trench.* The 38 sherds recovered from the Iron Age palisade trench are all Grooved Ware and represent material from the old ground surface and post-holes re-deposited in the fill of this later feature.

(vi) *Below the chalk packing in Circle E.* Two sherds of Grooved Ware came from beneath the chalk packing in Circle E.

(vii) *The Midden.* The third major group of sherds from the site, totalling 981, came from the midden to the north-east of the Southern Circle. This is especially noteworthy for the number of Beaker sherds, 25, found with the Grooved Ware, representing almost half the number of Beaker sherds recovered from the entire site. Three Middle Neolithic rim sherds can also be recognized amongst the collection, P19 and P21.

(c) The Northern Circle

In comparison to the Southern Circle, pottery from the Northern Circle is sparse. Only 67 sherds were recovered from the structure and all save one are Grooved Ware. The exception is the Beaker sherd P571.

TABLE IV

Context	Total no. of sherds	Grooved Ware	Beaker	Neo. A	Peterborough	Grooved Ware														
						Rims	Base angles	Plain or featureless	Grooved	Incised	Impressed	Twisted cord	Comb	Whipped cord	Rusticated	Stab and drag	Decorated cordons	Plain cordons		
N ₂ (2)	3	3	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—
N ₃ (6)	2	2	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
N ₄₀ (4)	6	6	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	1
N ₄₁ (4)	17	17	—	—	—	1	—	10	1	1	1	—	—	—	—	—	—	—	—	5
N ₄₂ (4)	6	6	—	—	—	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—
N ₄₃ (4)	19	18	1	—	—	1	—	10	2	1	—	—	—	—	—	—	—	—	—	6
N ₄₄ (4)	14	14	—	—	—	1	1	11	2	—	1	—	—	—	—	—	—	—	—	1
Totals	67	66	1	—	—	3	1	47	5	2	2	—	—	—	—	—	—	—	—	13

(d) The ditch in its southern sector

The ditch section cut in 1967 incorporated a terminal adjacent to one of the main entrances to the enclosure. It seems hard to believe that the array of pottery, comprising 842 sherds, did not arise largely through the custom of throwing fragments of pot into the ditch when entering or leaving the enclosure. Table V details the pottery in its layers. The main concentration of sherds lies in layers 5–8, though stray sherds of Grooved Ware occur as high as layer 3. The only Beaker sherd stratified in the ditch, belonging to a vessel of the latest Southern British tradition, came from layers 4–5, and this is matched by a second sherd from an unstratified context. The total exclusion of other wares from this section is interesting when compared to the picture obtained in 1966 in the section through the northern sector where Grooved Ware was rare and apparent Middle Neolithic pottery prominent. The recurrence of late Beaker, however, at approximately the same stratigraphic position in the two ditch sections, is worthy of note.

(e) Structure A

Eighteen sherds of Grooved Ware, including two finely decorated rims, were recovered from Structure A in 1966. The style of decoration on the rims is well matched by P₂₁₉ and P₂₂₀, both from the surface of the platform, and helps to place the structure within the life span of the main site.

WINDMILL HILL WARE

The sherds found sealed beneath the bank in the northern sector represent 21 vessels of which two, P₁₅ and P₁₆, carry short vertical incised lines internally, immediately beneath the rim. Heavy rims of rolled-over and everted form predominate, though simple rim forms

TABLE V

Context	Total no. of sherds	Grooved Ware	Beaker	Neo. A	Peterborough	Grooved Ware													
						Rims	Base angles	Plain or featureless	Grooved	Incised	Impressed	Twisted cord	Comb	Whipped cord	Rusticated	Stab and drag	Decorated cordons	Plain cordons	
Ditch 8	377	377	—	—	—	7	4	136	95	4	—	—	—	—	—	—	—	3	160
Ditch 6B-7	225	225	—	—	—	6	5	52	152	11	4	—	—	—	—	1	1	9	40
Ditch 5-6B	166	166	—	—	—	20	15	83	13	40	2	10	—	—	—	5	—	2	33
Ditch 5 term	21	21	—	—	—	1	—	11	3	5	—	1	—	—	—	1	—	—	2
Ditch 5 upper	1	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Ditch 4-5	35	34	1	—	—	—	2	23	7	2	—	—	—	—	—	2	—	—	—
Ditch 3	2	2	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
Ditch U/S	15	14	1	—	—	1	—	4	7	2	—	1	—	—	—	—	—	1	2
Totals	842	840	2	—	—	35	26	311	277	65	6	12	—	—	9	1	15	237	

TABLE VI

Context	Total no. of sherds	Grooved Ware	Beaker	Neo. A	Peterborough	Grooved Ware													
						Rims	Base angles	Plain or featureless	Grooved	Incised	Impressed	Twisted cord	Comb	Whipped cord	Rusticated	Stab and drag	Decorated cordons	Plain cordons	
Structure A	18	18	—	—	—	2	—	7	4	6	1	—	—	—	—	—	—	2	—

are also present, e.g. P12. All the rim forms can be matched amongst the flint- and sand-gritted sherds from the ditches at Windmill Hill,¹ and the internal decoration can also be paralleled in that context.² A similar but much weathered sherd, P20, from the surface of the platform outside the Southern Circle, probably represents an old find reincorporated and clearly belongs to this same series.

Of the two vessels represented by rim sherds found in the midden to the north-west of the Southern Circle, one has a simple rim, P21, the other, P19, a T-rim of the type which forms a recurrent but rare component of most Middle Neolithic assemblages.³

¹ Smith, 1965, 43ff. The forms fall within the range defined in fig. 11 as A-D.

² e.g. *ibid.*, fig. 25, no P156.

³ e.g. *ibid.*, fig. 11, rim form E; Clark, Higgs and Longworth, 1960, fig. 21, P20 and 21.

The pottery recovered from the ditch in its northern sector, quite different in character to the flint-gritted Windmill Hill Ware from beneath the bank, deserves special comment. The rim sherd, P23, at once recalls one of a group of curious sherds from Windmill Hill,¹ again in sandy fabric. The stratified positions of the sherds from Windmill Hill, like those from Durrington, would seem to establish that these sherds must be treated as a component of the Middle Neolithic assemblage. The thickened rim sherd, P22, of similar paste is perhaps best paralleled in form, though not in fabric, by a rim from Maiden Castle.²

PETERBOROUGH WARE

The only example of this ware from the site is a single rim sherd, P24, from post-hole 44. This sherd, though weathered, can probably be classified as Mortlake Ware.

GROOVED WARE

Fabric and construction

The sherds of Grooved Ware recovered from the site display a wide range of fabric and consequently the state of preservation varies considerably. While a small number of sherds appear to have been well fired, i.e. above a temperature of 800°C., the vast majority are friable with external surfaces ranging from light grey to brown enclosing an inner dark grey core. Tempering materials added to the clay include shell, grog, sand, crushed burnt flint, limestone and sandstone. Of these the most consistent additives appear to be grog and/or shell and sand. A selection of sherds representing the range of fabrics which appeared identifiable macroscopically were submitted to Mrs L. A. Finch of the M.P.B.W. Laboratory, and her report appears as Appendix IX.

With the exception of the sherds P456 A–D, which may have been beaten out from a single clay source, the Grooved Ware appears always to have been coil built.

In the subsequent catalogue all rims and sherds preserving base angle have been drawn unless minute or fragmentary.³ Wall sherds have been selected to display the total range of decoration represented on the site. Less common techniques and motifs are therefore proportionately over-represented in the illustrations. A breakdown of the assemblage according to location and type of decoration can be obtained from Tables III–VI.

Form

Despite the size of the sherd collection, it has not proved possible to reconstruct more than a handful of pots in their entirety. In the majority of instances individual vessels are represented by only a small fraction of their total. Emphasis must consequently be placed mainly on lesser components of form, especially the rim and base.

As far as can be judged from the sherd collection, the majority of vessels belong to flat-based vase forms whose height is considerably greater than their width. Upright straight-

¹ Smith, 1965, fig. 29, P233.

² Wheeler, 1943, fig. 30, no. 83.

³ I am grateful to Mrs C. Boddington for making drawings of the pottery in this report.

barrel-sided vessels are characteristic and many of the rims suggest that closed forms are recurrent. Open forms of the straight splay-sided Clacton type seem to be almost entirely absent,¹ but vessels with trunco-conic bodies and recurved rims are well represented. The minimum number of vessels represented, as suggested by the rim count, is 209, but this is likely to be a conservative estimate. A large proportion of the vessels seem to have their external surface divided into an upper and lower zone, by a horizontal cordon set a quarter to a third way down the height from the rim. A similar effect is sometimes created on vessels without cordon, by a change in the decorative scheme at this point.

Rim forms

The 266² rims recovered from the site display a wide range of shape. Thirty-four different forms can be defined and are illustrated in fig. 20.

- | | |
|---|--|
| 1. Pointed upright | 17. Flattened with deep internal concave surface |
| 2. Rounded upright | 18. Pointed, internally bevelled |
| 3. Flattened upright | 19. Pointed, internally bevelled with convex external collar |
| 4. Pointed closed | 20. Pointed with expanded internal bevel |
| 5. Rounded closed | 21. Rounded with internal bevel |
| 6. Flattened closed | 22. Flattened with internal bevel |
| 7. Upright asymmetrically pointed | 23. Flattened with internal vertical or slightly concave bevel |
| 8. Everted with internal bevel | 24. Pointed with deep vertical bevel |
| 9. Inturned | 25. Internally and externally bevelled |
| 10. Expanded inturned | 26. Externally bevelled |
| 11. Expanded inturned above further moulding | 27. Externally bevelled with internal thickening |
| 12. Sharply inturned | 28. Rounded with internal thickening |
| 13. Internal concave surface above horizontal moulding | 29. Rounded asymmetric with internal thickening |
| (a) shallow | 30. Flattened with internal and external mouldings |
| (b) medium | 31. Pointed Z |
| (c) deep | 32. Everted above external moulding |
| 14. Rounded with internal concave surface | 33. Shallow bead |
| 15. Rounded with deep internal and external concave surfaces | 34. Deep bead |
| 16. Rounded with shallow internal and external concave surfaces | |

The majority of the rims can be grouped under three main headings. Slightly less than half can be classified as simple, represented by forms 1-7, 22% have well marked internal bevels, represented by forms 18-25, and a further 14% carry a concave internal moulding,

¹ The very coarse undecorated storage vessel P27 is the nearest approximation.

² Fragmentary rims are excluded from the ensuing analysis, and rims from the same vessel are treated as a single occurrence.

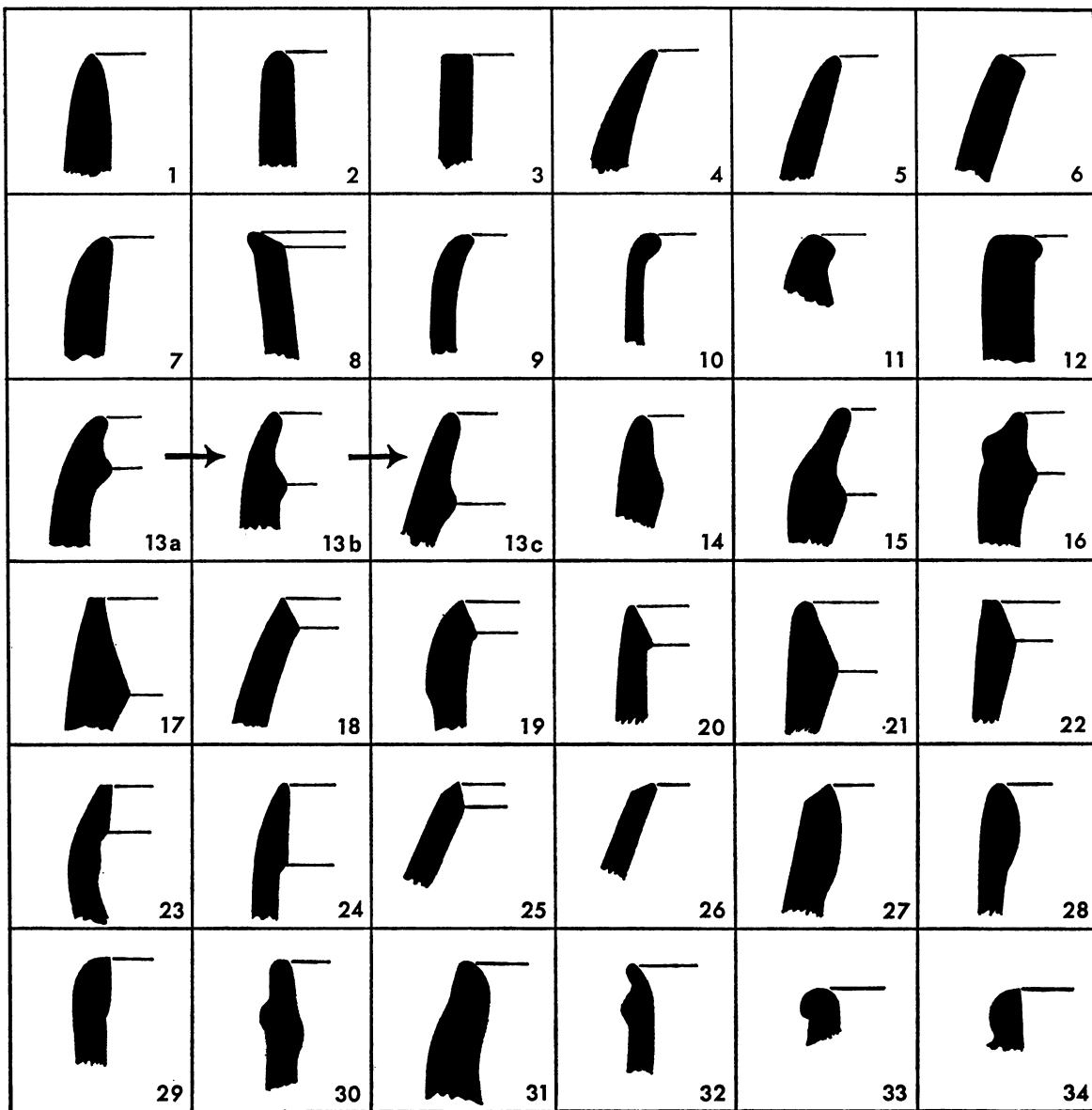


FIG. 20. Rim forms

forms 13–17. The remaining forms comprise together only 14%. Full frequencies are set out in fig. 21.

It is noticeable that with the minor exception of forms 11, 32 and 34, undecorated rims occur in forms otherwise carrying typical Grooved Ware decoration. There seems no reason to doubt, therefore, that undecorated vessels form an integral part of the complete assemblage.

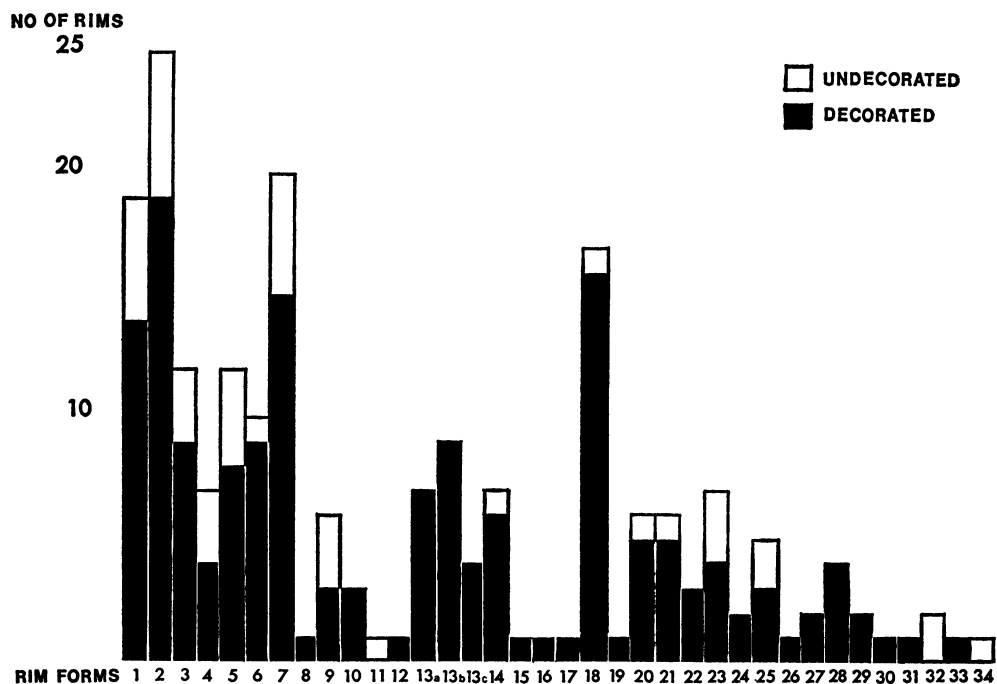


FIG. 21. Frequencies of rim forms

Bases

No evidence for other than flat bases was recovered from the site with the possible exception of P453 and 456 A-D which may represent open bowls rather than lids. Of the 157 fragments of base angle studied which were capable of analysis, the most frequent form showed a simple angle formed by wall and base (fig. 22 A). Next most frequent were bases in which the wall made a concave entry with the base, often more or less vertical at that point (fig. 22 B). In only 17 instances was the vessel provided with a well-marked protruding foot (fig. 22 C),

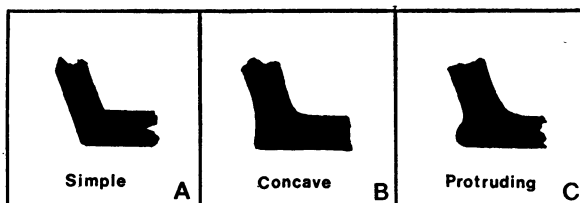


FIG. 22. Forms of base angle

while the number of undecorated vessels carrying forms A and C outnumber those carrying decoration by a fair margin; the concave form B occurs more frequently on decorated than on undecorated pots. It must be stressed, however, that the figures for undecorated base angles need not necessarily be taken as synonymous with undecorated vessels. It is possible

that some at least come from decorated vessels in which the ornament does not extend to the very base of the pot. The actual figures are:

	A	B	C
Undecorated	33	18	10
Decorated	23	26	7

Lugs

Four vessels carry horizontally perforated lugs, P219-20, P317 and P523. In P219-20 and P317 the perforation cuts deep into the wall of the vessel.

Binding holes

Five sherds carry circular holes drilled after firing for the reception of binding thongs to repair cracks in broken vessels. Their presence in the assemblage is interesting as placing beyond doubt that some vessels were already old and in need of repair when brought to the site.

Sherds with rubbed edges

Two sherds, P450 from the old land surface beneath the northern bank and P449 from the surface of the platform, are curious in having edges carefully rubbed down till smooth. No obvious explanation can be put forward for this feature unless the sherds are a by-product in the manufacture of grog for adding back into pottery.

Decoration

The three most common decorative techniques employed in the ornamentation of the pottery from Durrington Walls are grooving, the use of applied or pinched-out cordons and incision. Of lesser numerical importance are various forms of impression, twisted cord, stab-and-drag, finger-pinched and finger-nail rustication and comb. The use of whipped cord is confined to a single sherd, and no case of plaited cord is present in the collection. In the following table the number of sherds carrying one of the decorative techniques is followed by a column expressing these as a percentage of the total number of decorated sherds of Grooved Ware from the site, to the nearest $\frac{1}{2}\%$.

TABLE VII

	<i>No. of sherds</i>	<i>% of decorated sherds</i>
Grooved	1306	44
Incised	554	19
Impressed	231	8
Twisted cord	71	2·5
Comb	27	1
Whipped cord	1	—
Rusticated	55	2
Stab-and-drag	72	2·5
Decorated cordons	306	10·5
Plain cordons	951	32

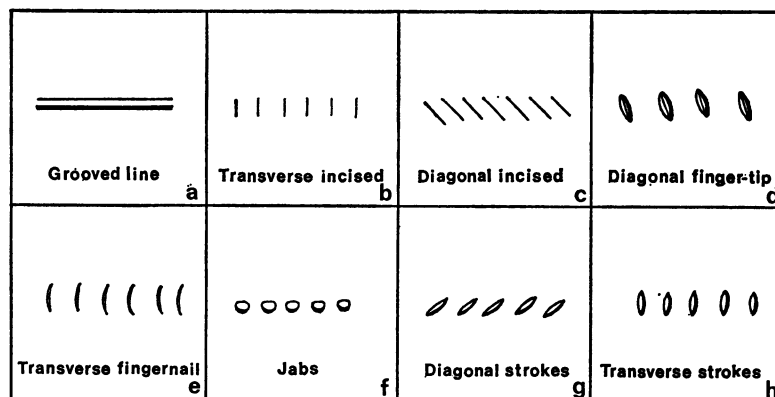


FIG. 23. Decorative components used on top of rims

Rim decoration. Decoration applied to the top of the rim is a rare feature in the assemblage, occurring only 18 times. The range of techniques employed is consequently restricted (fig. 23), being confined to the use of a single grooved line, finger-nail or finger-tip impressions, and a small range of simple incised and impressed strokes and jabs. No marked preferential combination between rim form and decoration appears:

TABLE VIII

	<i>Rim forms</i>													
	1	3	5	6	7	12	13a	13c	14	20	22	23	29	Indef.
a	—	—	—	—	—	—	1	—	—	—	—	—	1	—
b	—	—	1	—	—	—	—	—	—	—	—	—	—	—
c	—	—	—	—	—	—	—	—	—	—	—	1	—	1
d	—	—	—	—	—	1	—	—	—	—	—	—	—	—
e	—	—	—	1	—	—	—	—	—	—	—	—	—	—
f	1	—	—	—	1	—	—	—	—	1	1	—	—	—
g	—	2	—	—	—	—	—	1	2	—	—	—	—	1
h	—	—	—	—	—	—	—	—	—	—	—	—	1	—

Internal decoration. Internal decoration is a more consistent feature, occurring on some 49 vessels. In all but nine instances the decoration is confined to a narrow zone immediately beneath the rim or on the rim bevel. In one instance, P452, the decoration clearly covers a major part of the internal surface of the vessel. The thin walled sherds P453 and P456 A-D may belong to open bowls or lids.

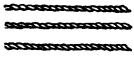
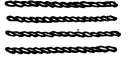
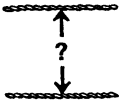

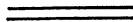

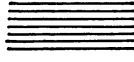
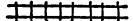
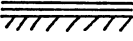
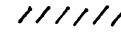

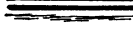
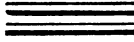
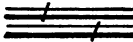

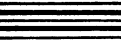
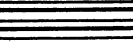
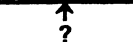
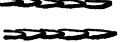
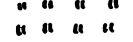
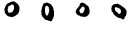

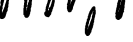
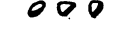
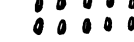



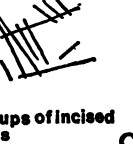
 3 twisted cord lines a	 4 twisted cord lines b	 Twisted cord lines indefinite number c	 Single incised line d	 Double incised line e	 Discontinuous double incised line f
 7 incised lines g	 Rough ladder pattern h	 Incised lines with fringe i	 Short diagonal incised lines j	 Single grooved line k	 Single grooved line with bordering ridges l
 Double grooved line m	 Double grooved lines crossed by short incised lines n	 3 grooved lines o	 4 grooved lines p	 5 grooved lines q	 Grooved lines indefinite number r
 Double lines of stab-and-drag s	 Bone impressions t	 Irregular jabbd impressions u	 Horizontal strokes v	 Vertical strokes w	 Angular jabbd impressions x
 Double row of jabbd impressions y	 Incised filled triangles z	 Incised filled lozenges AA	 Complex incised BB	 Groups of incised lines CC	

FIG. 24. Components used in internal decoration

Techniques employed and motifs created have no great range and are illustrated in fig. 24. Twisted cord occurs five times, always to create simple horizontal lines. Incision, stab-and-drag and grooving are used in a similar way. On four occasions short diagonal incised lines are employed, twice in isolation, once to fringe horizontal incised lines and once to cross grooved horizontal lines. On one occasion only does an incised ladder pattern appear, P220. A variety of impressed jabs and strokes are used in single or double rows or occasionally in more haphazard arrangements.

Of rare occurrence, but of particular interest, are sherds from eight vessels which carry complex incised decoration apparently over areas of the internal surface not confined to those adjacent to the rim. The complex patterns, none of which can be totally restored, include such elements as filled triangles, reserved chevrons, filled lozenges, filled and reserved chevrons and bands of herringbone filling, as well as areas covered with more haphazard groups of incised lines, P452-9.

TABLE IX

	<i>Rim forms</i>																			
	1	2	3	4	5	6	7	10	13a	18	20	21	22	24	25	27	28	29	Indef.	Wall
a	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
b	—	—	—	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—
c	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	2	—
d	—	—	—	—	—	I	—	—	—	—	—	—	I	—	—	—	—	—	—	—
e	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
f	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—
g	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
h	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
i	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
j	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	I	—
k	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	—
l	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
m	—	—	I	—	—	—	—	—	—	I	—	—	—	—	I	—	—	—	—	—
n	—	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—
o	—	I	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
p	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I	—	—	—
q	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—
r	—	I	I	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	2	—
s	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—
t	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
u	—	I	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—
v	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—	—	—	—
w	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I	—	—
x	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—	—
y	—	—	—	—	—	—	—	—	—	—	I	—	—	—	—	—	—	—	—	—
z	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
AA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I
BB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I
CC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4

Internal decoration

On one occasion the internal angle of the base, P451, has been enhanced by three horizontal lines, the uppermost in stab-and-drag, the lower lines in grooved technique.

The associations of rim form with types of internal decoration are summarized in Table IX.¹

External Decoration

(a) Cordons

(i) Undecorated vertical

Under this heading are placed cordons, usually applied, which carry either no decoration or no decoration distinct to the cordon as opposed to the wall of the vessel on which it occurs. In this way cordons which carry decoration which has spilled over from the decoration of the wall are treated as undecorated.

Vertical and, more rarely, horizontal cordons are sometimes used in isolation as the only decoration of the external surface of the pot. These are usually multiple, either widely spaced, e.g. P34, or closely set, e.g. P46, but occasionally triple settings of vertical cordons are employed, e.g. P45.² In two instances vertical plain cordons are themselves subdivided into deep zones by horizontal cordons, P26 and P47.

The majority of plain vertical cordons are, however, employed to subdivide the body of the vessel into vertical panels, which are then 'filled' with decoration in a variety of techniques. The cordon is not always single. Double cordons are found, either set close together, P61, or apart, e.g. P54 and P59. In other instances the area between the double cordons has been decorated with a 'ladder pattern' of short horizontal grooved lines, P50-3. One instance of a vertical wavy cordon can also be noted, P58.

The most common techniques used in filling the panels are grooving and incision to form filled triangles or groups of opposed diagonal lines, e.g. P28 and P29. Less commonly, grooved diagonal lines set in the same plane are used, e.g. P63. Other forms of filling include twisted cord, e.g. P98, finger-pinching, e.g. P110, impressions, e.g. P103, stab-and-drag, e.g. P92, and groups of lightly incised diagonal lines, e.g. P106. Further combinations of techniques are not common, but finger-pinched rustication occurs with grooving, e.g. P107-8, and jabbed impressions with both incision and grooving, e.g. P102 and P77. Diagonal plain cordons occur on a small number of sherds showing that occasionally the vertical body panels were themselves subdivided in this way, e.g. P66 and P113.

Where enough of the vessel survives, it is noticeable that the upper 'collar' decoration usually differs from that used on the body. Vertical cordons are essentially a lower body decoration and are not normally used to decorate the upper zone. In three instances diagonal cordons take their place, twice plain, i.e. P28 and P73, and once decorated, P125. In other cases cordons are not employed and decoration is confined to grooved, incised, jabbed and stab-and-drag patterns. In several instances the ornamentation used itself emphasizes the difference between the upper and lower body of the vessel, e.g. P48, P49 and P77.

On a number of sherds the junction of the vertical cordons with the main horizontal cordon

¹ P451 has been excluded from this table.

² In some cases the size of the sherd prohibits a definite

statement that this is the sole form of decoration being employed.

subdividing the external surface of the vessel has been emphasized by pressing a thumb into the clay, thus creating a disc with a hollow centre, e.g. P72.

(ii) Decorated vertical

As with plain cordons, decorated cordons are employed most frequently to subdivide the lower body into vertical panels. The variety of decoration used on the cordons themselves is considerable (fig. 25), i.e.:

1. Vertically grooved, e.g. P173
2. Vertically grooved plus grooved herringbone, e.g. P170
3. Grooved herringbone, e.g. P157
4. Rusticated, e.g. P166
5. Transverse strokes, e.g. P119
6. Diagonal strokes, e.g. P120
7. Impressions, e.g. P128
8. Transverse incisions, e.g. P149
9. Diagonal incisions, e.g. P150
10. Discontinuous diagonal strokes and impressions, e.g. P156
11. Finger-nail/tip impressions, e.g. P124

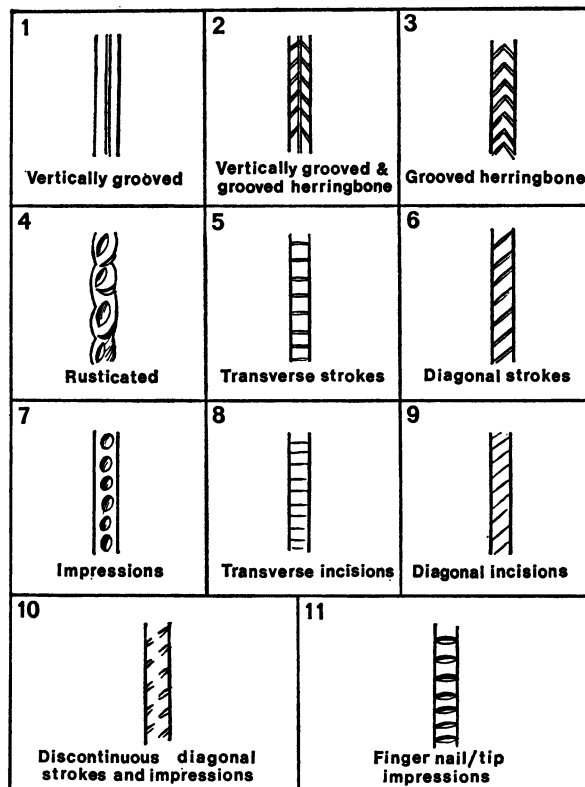


FIG. 25. Types of decorated vertical cordons

Decorated vertical cordons are usually used singly, but double, e.g. P141, and triple, e.g. P120, examples also occur. Only rarely are they used in isolation, e.g. P123 and P124, the majority being associated with filled panel decoration. In this, grooved and incised filled triangles and opposed groups of diagonal lines are the most frequent. Other techniques include finger-pinched rustication and impressions, and in a few instances the vertical panels have been further subdivided by diagonal cordons, e.g. P130 and P142.

In two instances, where sufficient of the vessel survives, vertical cordons extend to the rim, i.e. P125 and P149, but in the majority of cases they appear to end at the main horizontal cordon. As with the plain cordons the junction between decorated and plain cordon is sometimes emphasized by a finger-tip disc.

(iii) Other cordons

In the majority of cases the main horizontal cordon dividing the external surface of the vessel into an upper and lower zone appears to have been left undecorated, but in a few instances this too has been ornamented. Jabbed impressions, finger-tip impressions and rustication are employed, P196–P200.

Diagonal cordons, as already mentioned, occur both in the upper and lower zones of decoration but in the majority of cases they appear to belong to the upper zone. They occur both plain and decorated, usually singly, e.g. P183, but double cordons are also known, e.g. P184, and in one instance a double opposed arrangement, i.e. P185. Curvilinear settings are rare but are found, e.g. P191 and P192.

(b) Incision

The term incision is used here to mean simply a line drawn in the clay with a sharp instrument, before firing.

Amongst the most finely and carefully decorated vessels recovered from the site are a series whose body decoration has been divided into vertical panels by vertical incised lines, i.e. P206–21. In this way, incised lines take the place of the cordons described in the previous section. The vertical line is usually single, but on two vessels, P219 and P221, double incised lines are used, and on another the scheme is further elaborated by horizontal incised lines subdividing the vertical panels, P207. The filling in most instances is made with incised filled triangles, but a few sherds show less elaborate use of vertical incised lines to make similar vertical divisions in the decorative scheme, e.g. P206 and P210.

Fig. 26a, b summarizes other motifs created in incision. The majority are variations on horizontal lines, used in isolation, to split or enclose patterns, diagonal lines, herringbone, filled and unfilled triangles, or groups of opposed diagonal lines. A few sherds, however, are clearly fragments from more complex schemes employing transversely filled bands, lozenges, chevrons, sometimes coupled with reservation.

Incision is also occasionally combined with other techniques: twisted cord, stab-and-drag, finger-pinched rustication and jabbed impressions.

(c) Grooving

The term grooving is used here to mean lines drawn in the clay with a blunt instrument, before firing.


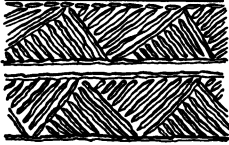



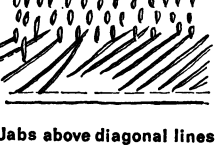
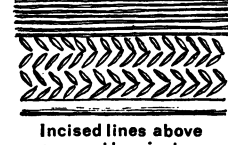

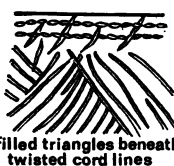
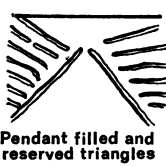
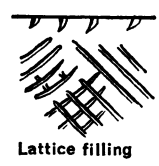


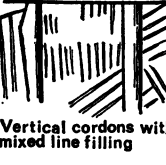
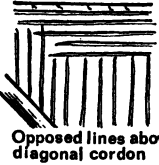
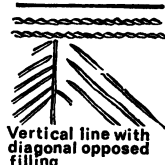
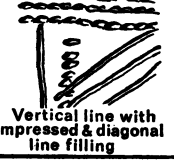
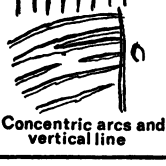
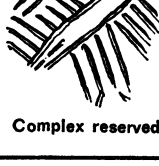
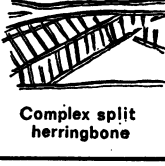
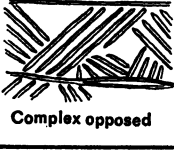
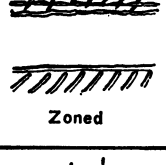
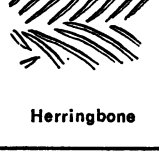
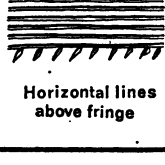
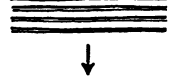


POSITION	DECORATIVE FEATURE			
 <p>RIM TO CORDON</p>	 <p>Split filled triangles</p>	 <p>Filled triangles</p>	 <p>Opposed groups of lines</p>	
	 <p>Opposed and chevron filling between diagonal cordons</p>	 <p>Jabs above diagonal lines</p>	 <p>Incised lines above grooved herringbone</p>	
 <p>BENEATH RIM</p>	 <p>Filled triangles beneath twisted cord lines</p>	 <p>Pendant filled and reserved triangles</p>	 <p>Lattice filling</p>	 <p>Diagonal and lattice filling within converging cordons</p>
	 <p>Diagonal line filling within angled cordon</p>	 <p>Vertical cordons with mixed line filling</p>	 <p>Opposed lines above diagonal cordon</p>	 <p>Vertical line with diagonal opposed filling</p>
	 <p>Vertical line with impressed & diagonal line filling</p>	 <p>Concentric arcs and vertical line</p>	 <p>Complex reserved</p>	 <p>Complex split herringbone</p>
	 <p>Complex opposed</p>	 <p>Zoned</p>	 <p>Herringbone</p>	 <p>Horizontal lines above fringe</p>
	 <p>Horizontal lines</p>	 <p>ABOVE CORDON</p>	 <p>Opposed groups of incised and twisted cord lines</p>	

FIG. 26a. Components of incised external decoration



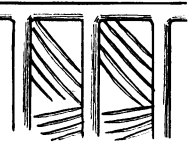
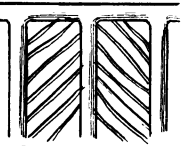
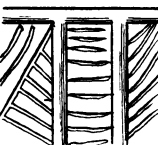
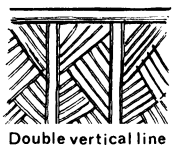

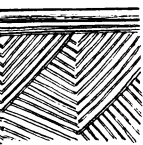

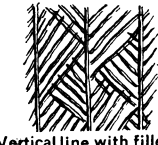


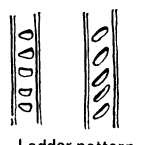
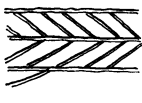
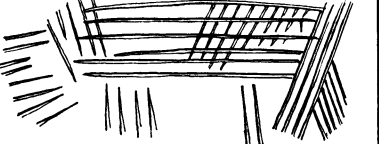



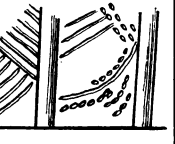
POSITION	DECORATIVE FEATURE			
 <p>BODY BENEATH CORDON</p>	 <p>Filled triangles</p>	 <p>Opposed groups of lines</p>	 <p>Opposed line filling</p>	
	 <p>Filled triangles and grooved ladder pattern</p>	 <p>Double vertical line with filled triangle filling</p>	 <p>Vertical line and filled zoned decoration</p>	 <p>Opposed filled triangles</p>
 <p>BODY</p>	 <p>Vertical line with filled triangle filling</p>	 <p>Group of diagonal lines</p>	 <p>Multiple triangles</p>	 <p>Ladder pattern</p>
	 <p>Split herringbone</p>	 <p>Complex line decoration</p>	 <p>Opposed diagonal lines and arcs</p>	
	 <p>Herringbone above pinching</p>	 <p>ABOVE BASE</p>	 <p>Line and jab filling</p>	

FIG. 26b. Components of incised external decoration

Apart from the motifs already described, in which filled triangles and opposed groups of diagonal grooved lines figure prominently, grooving is used repeatedly but the range of motif created is not great (fig. 27). Horizontal lines to enclose or border patterns occur frequently. The remaining instances largely comprise cases where short grooved strokes are employed to create bands of short diagonal lines, herringbone, and complex diagonal chequer-board pattern, or less obvious schemes, incorporating vertical herringbone and opposed groups of strokes.

(d) Cord decoration

While whipped cord appears only on a single sherd, P373, twisted cord seems to be a more regular component in the range of decorative techniques employed on the site.


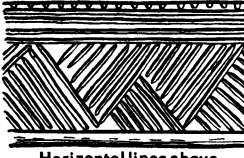
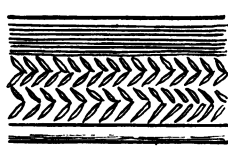

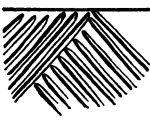
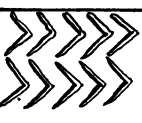
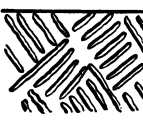


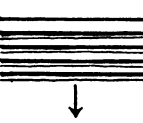

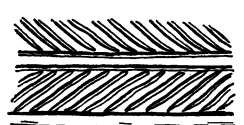





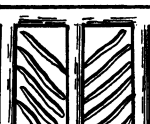
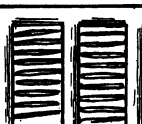
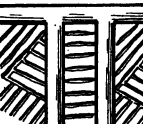




POSITION	DECORATIVE FEATURE		
 <p>RIM TO CORDON</p>	 <p>Horizontal lines above filled triangles</p>		 <p>Incised lines above herringbone</p>
 <p>BENEATH RIM</p>	 <p>Filled triangles</p>	 <p>Herringbone</p>	 <p>Metopes</p>
	 <p>Filled lozenges</p>	 <p>Horizontal lines above impressions</p>	 <p>Horizontal lines</p>
 <p>ABOVE CORDON</p>	 <p>Split herringbone</p>		 <p>Fingernail filled triangles</p>
 <p>BODY BENEATH CORDON</p>	 <p>Filled triangles</p>	 <p>Opposed groups of lines</p>	 <p>Diagonal cordon with line filling</p>
	 <p>Opposed line filling</p>	 <p>Horizontal line filling</p>	 <p>Ladder pattern</p>
 <p>BODY</p>	 <p>Diagonal line filling</p>	 <p>Vertical chevron line filling</p>	 <p>Vertical chevron</p>

FIG. 27. Components of grooved external decoration

Internally its use is confined to horizontal lines, e.g. P378, and externally a zone of horizontal lines immediately beneath the rim is often employed, either in isolation, e.g. P376, or as an upper border to more complex multiple-technique ornamentation, e.g. P375. Combinations here are confined to horizontal, vertical or diagonal plain cordons, decorated horizontal and vertical cordons, incision and grooving. In some instances twisted cord has been used to create the filled-triangle filling between vertical cordons more characteristically found in grooved and incised techniques. On one vessel, P470, twisted cord lattice and opposed groups of lines are used as a filling agent between finger-tip concentric circles. The main usages and combinations are illustrated in fig. 28.

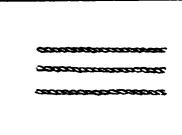
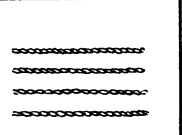
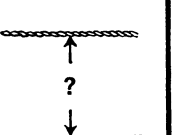
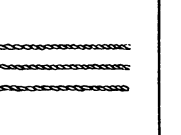
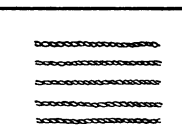
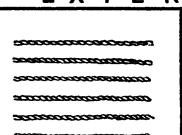
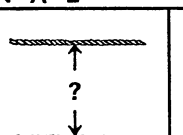
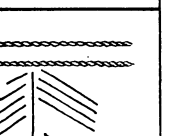
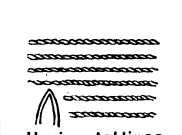

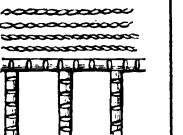
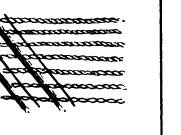
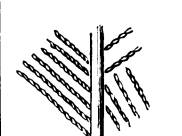
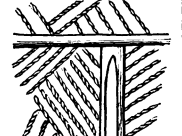


INTERNAL			EXTERNAL
 3 horizontal lines a	 4 horizontal lines b	 Indefinite number of horizontal lines c	 3 horizontal lines d
EXTERNAL			
 6 horizontal lines e	 More than 6 horizontal lines f	 Indefinite number of horizontal lines g	 Horizontal lines above incised panel decoration h
 Horizontal lines and grooved decoration i	 Horizontal lines above incised filled triangles j	 Horizontal lines above decorated cordons k	 Horizontal lines and plain diagonal cordons l
 Opposed groups of lines and vertical plain cordons m	 Opposed groups of lines and vertical plain double cordons n	 Opposed groups of lines with grooved lines and plain cordons o	 Lattice and opposed groups of lines between concentric circles p

FIG. 28. Components of twisted cord decoration

(e) Comb

A small number of sherds carry comb-impressed decoration. Three different techniques can be noted:

- (a) Use of a point-toothed comb to create short line motifs, e.g. P393.
- (b) Use of a rectangular-toothed comb to create similar motifs, sometimes combined with grooving or plain vertical cordons, e.g. P394-400.

- (c) Use of a toothed comb dragged lightly across the surface of the vessel creating groups of lightly incised parallel lines, e.g. P401-2.

The use of a comb is not common but clearly indicates absorption of traditions more at home in a Beaker context.

- (f) Finger-pinched, finger-tip and finger-nail rustication

Finger-pinching occurs on a small number of sherds often in association with plain or vertical applied cordons. Used in this way it forms a filling to panels created by the vertical cordons. On two sherds finger-pinching has been used to create 'plastic' ridges of the type more familiar on late Beaker domestic ware, e.g. P424.

The use of simple finger-tip decoration appears to be rare at Durrington, and confined to a small number of decorated cordons. Occasional use is also made of finger-tipping as a bordering element or in more haphazard use.

Finger-nail impressions are equally rare, occurring on top of the rim (fig. 23 e), to decorate cordons or haphazardly on the surface of a vessel.

- (g) Stab-and-drag

Stab-and-drag appears as an occasional technique, usually used to create horizontal lines employed either in isolation or as bordering lines. More complex patterns in the form of filled triangles and groups of opposed lines are also found in the technique, e.g. P438-9.

- (h) Other impressions

A variety of implements appear to have been used to create jabbed impressions, some of which are certainly made with the end of a bone, e.g. P103. In the main, the impressions are used either haphazardly or to make horizontal or vertical rows.

In only one instance are jabs used to create a dotted filling to a complex design — a rim sherd with a grooved chevron and lozenge design, P317.

Curvilinear decoration. On at least four vessels curvilinear decoration is employed as a major component of the decorative scheme immediately below the rim and above the horizontal cordon, when this is present (fig. 29). In only one instance is this decoration quite clearly a spiral, P471, formed by a finger-tip groove, each spiral being separated and enclosed by horizontal grooved lines. On the remaining vessels the curvilinear decoration seems more likely to be grooved or finger-tip grooved concentric circles, separated and enclosed by more complex motifs. In one case, P474, the scheme appears to consist of short vertical strokes above horizontal grooved lines enclosing, at one point, grooved herringbone, at another, grooved filled triangles. On a second vessel, P462-9, the curvilinear designs are separated by various motifs comprising horizontal grooved lines, horizontal and diagonal grooved lines and grooved lattice. On a third vessel, P470, twisted cord takes the place of grooving to form lattice, filled triangles and bordering horizontal lines.

Other examples of the use of curvilinear decoration seem extremely rare, being confined to two sherds, one carrying short vertical strokes above arcs set against a vertical incised line, P475; the other, arcs set against opposed diagonal incised lines, P477. In both cases the curvature of the lines may be fortuitous rather than intentional.

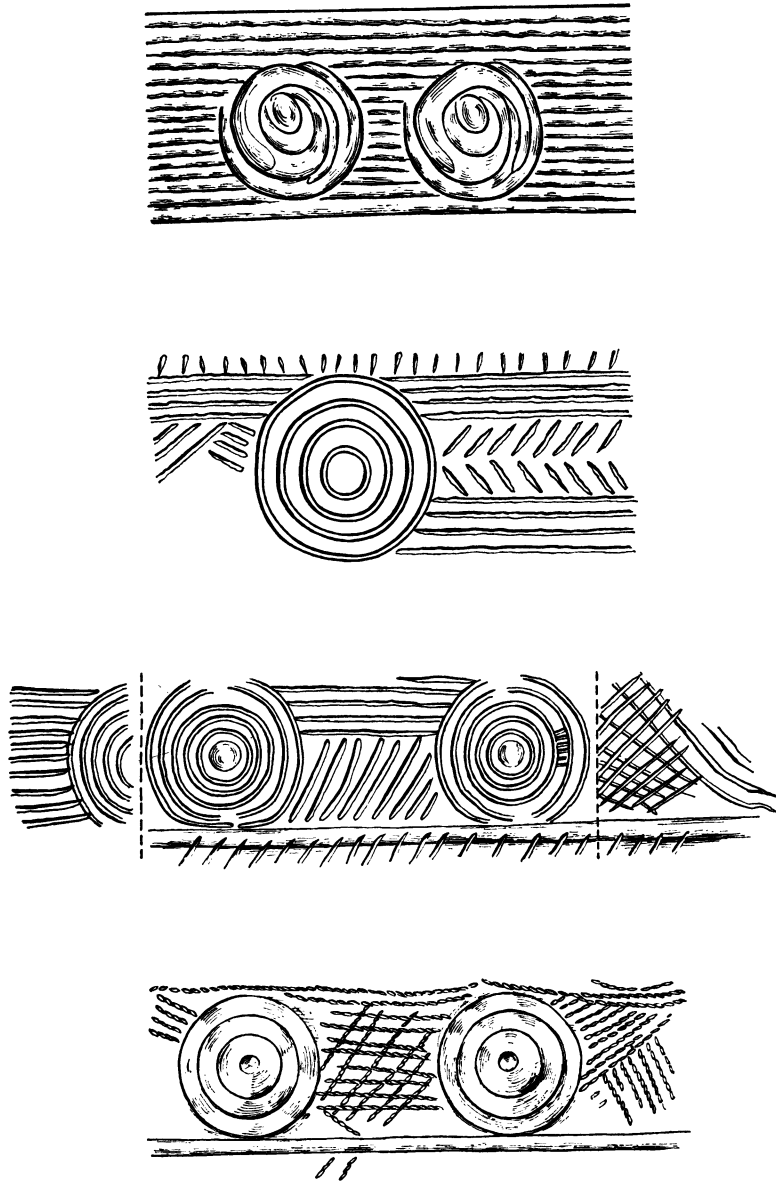


FIG. 29. Spiral and concentric circle decoration

BEAKER

The 71 sherds of Beaker and related pottery recovered from the site represent a minimum of 27 vessels and a probable maximum of 38. No vessel is represented by more than a small fraction of its total, and many of the sherds are too small to allow detailed comment.

Cord

Two small rim sherds, P568 and P569, represent the only sherds from the site which might

be considered to belong to All-Over Cord Beaker. Both were found in the material from the surface of the platform.

Comb-decorated

Eighteen sherds carry comb decoration including one base angle and four rims. With the exception of P571 from the Northern Circle, all the sherds come from the Midden, the surface of the platform or from the plough soil above the platform.

None of the sherds appears to belong to early Beaker groups whereas several carry traits which are positively late. P576 with its alternate rows of comb lines and finger-pinching resembles a Beaker from Ely, Cambs., belonging to phase 2 of Clarke's Northern British tradition,¹ and the wall sherds P578 incorporating an 'ermine' fringe could well belong here.²

Incised

Seventeen sherds carry incised decoration and are likely to belong to an advanced stage of the Southern British tradition. Two sherds, P595-6, from a similar, if not the same vessel — one found stratified in the southern ditch layer 4-5, the other from the same ditch section but unstratified — clearly belong to the latest phase of the Southern British tradition when biconical shapes become typical. The form and use of rough multiple incised chevron decoration is strikingly similar to a Beaker from Wilsford G62.³ Two features, however, of the Durrington Walls sherds are atypical: the use of dot filling visible above the shoulder of P596, and the long horizontal perforation through the shoulder visible in P595.

Two sherds almost certainly from the same Beaker P593-4, one from the Midden, the other from post-hole 50, carry a carefully executed incised vertical panel decoration, the panels being filled with alternate reserved and lattice-filled triangles. This design suggests that the vessel belongs to the latest phases of the Southern British tradition, when lattice-filled incised designs became prevalent, and here too belong four sherds from a squat, presumably biconical Beaker with protruding foot and lattice-filled incised design from post-hole 71, P597 A-D.

The remaining sherds decorated with incised filled and reserved triangles, while belonging to the Southern tradition, date perhaps to an earlier phase, though the heavy bevel on the rim P586 is again a later feature.

Rusticated

Six sherds, probably from the same vessel, carry a light haphazard finger-nail impressed decoration of the type normally associated with relatively early Beaker pottery, P604 A-D. A sherd from post-hole 95, P602, carries a lightly incised stroke ornament, similar to that on a squat Beaker from Brandon Fields, Suffolk,⁴ and a second sherd, P603, probably from a similar vessel but incorporating a horizontal line motif comes from post-hole 102. Both sherds are likely to belong to early Beaker groups.

¹ Clarke, 1970, No. 69.

² cf. *ibid.*, No. 1140, an N2 Beaker from Shrewton 5K, Wilts.

³ *Dev. Cat.* No. 135; Clarke, 1970, No. 1177.

⁴ Clarke, 1970, No. 853.

The remaining sherds carry the types of heavy rusticated decoration more comparable to the domestic component of late Beaker assemblages. Under this heading would fall the sherds from hearth 5, in the northern ditch section, P598 and two sherds, P599 and P600, from the Midden. Here too, perhaps, should be placed the stroke and ridge decorated Beaker, also from hearth 5 in the northern ditch, P601.

Related vessels

Under this heading may be placed a small number of sherds which, if not actually from Beakers themselves, are clearly closely related. These comprise two rims from the Midden, one with diagonal comb lines, P607, the other carrying an incised zoned decoration of short vertical lines enclosed between horizontal lines, immediately beneath the rim, P608.

The remaining sherds, a rim from the surface of the platform, P605, and a wall sherd from post-hole 83, P606, carry a finely executed decoration both internally and externally of rectilinear patterns outlined with incision and filled with comb or pointed implement impressions. The form of the rim suggests that these may come from shallow lids rather than bowls.

CATALOGUE

(figs. 30-64)

- P1 Three rim sherds of compact paste tempered with flint grit, grey externally, grey to brown internally.
Old land surface beneath northern bank.
- P2 Rim sherd of compact paste tempered with flint grit, grey to brown externally, brown internally, internal surface weathered.
Old land surface beneath northern bank.
- P3 Rim sherd of compact sandy paste tempered with flint grit, grey externally, brown to grey internally.
Old land surface beneath northern bank.
- P4 Rim sherd of compact paste tempered with flint grit, grey to brown both faces.
Old land surface beneath northern bank.
- P5 Rim sherd of compact, slightly porous paste tempered with flint grit, grey to brown externally, grey internally.
Old land surface beneath northern bank.
- P6 Three rim sherds of compact paste, tempered with flint and other grit, grey to brown externally, more generally grey internally.
Old land surface beneath northern bank.
- P7 Two rim sherds of compact rather sandy paste tempered with flint grit, grey to reddish-brown both faces.
Old land surface beneath northern bank.
- P8 Rim sherd of compact rather sandy paste tempered with flint grit, grey to reddish-brown both faces.
Old land surface beneath northern bank.

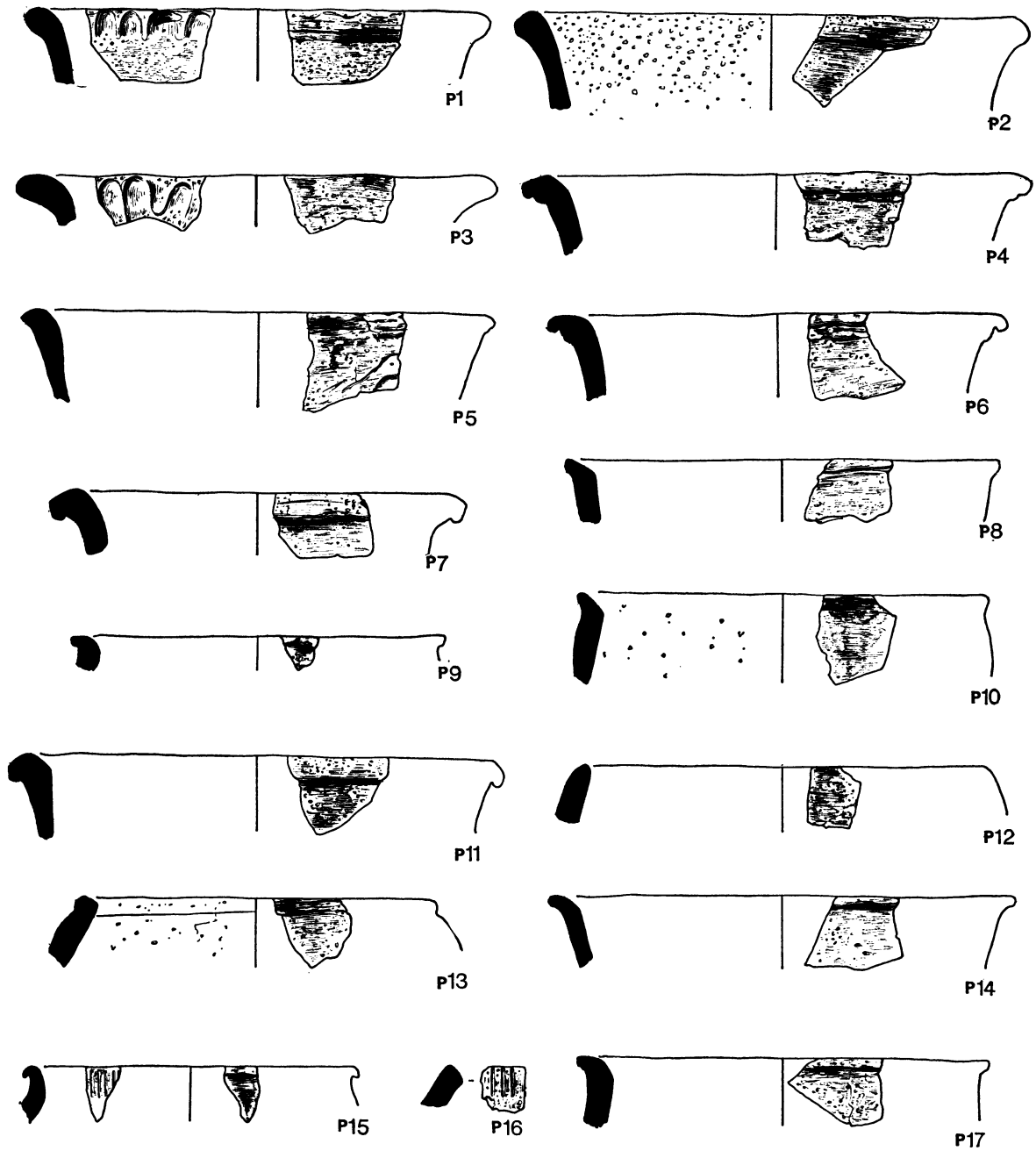


FIG. 30. Middle Neolithic Pottery ($\frac{1}{3}$)

- P₉ Rim sherd of compact paste, tempered with flint grit, grey to reddish-brown both faces.
Old land surface beneath northern bank.
- P₁₀ Two rim sherds of compact sandy paste tempered with flint grit, grey to brown both faces.
Old land surface beneath northern bank.
- P₁₁ Three rim sherds of rather soft paste, tempered with a large quantity of flint and other grits,
dark grey throughout.
Old land surface beneath northern bank.
- P₁₂ Rim sherd of compact rather sandy paste tempered with flint and other grit, grey externally,
grey to reddish-brown internally.
Old land surface beneath northern bank.
- P₁₃ Rim sherd of compact sandy paste tempered with flint grit, orange throughout.
Old land surface beneath northern bank.
- P₁₄ Two rim sherds of fine compact paste, tempered with a little flint and grog, light grey to brown
throughout.
Old land surface beneath northern bank.
- P₁₅ Rim sherd of compact sandy paste, tempered with a little fine flint grit, orange to grey both
faces.
Decoration: internally, short vertical incised lines beneath the rim.
Old land surface beneath northern bank.
- P₁₆ Rim sherd of compact sandy paste, tempered with flint grit, reddish-brown both faces.
Decoration: internally, short vertical incised lines beneath the rim.
Old land surface beneath northern bank.
- P₁₇ Two rim sherds of compact paste, tempered with flint grit, light brown both faces with grey core.
One sherd carries remains of incomplete drill hole, made after firing.
Old land surface beneath northern bank.
- P₁₈ Rim sherd of compact sandy paste tempered with flint grit, grey throughout.
Old land surface beneath northern bank.
- P₁₉ Undecorated rim sherd of compact sandy paste with some fine grit. Patchy red to dark grey
throughout.
Midden.
- P₂₀ Undecorated rim sherd of compact sandy paste. Red throughout. Heavily weathered.
Surface of platform.
- P₂₁ Two undecorated rim sherds of compact paste tempered with much fine grit. Brown externally,
grey internally with grey core.
Midden.
- P₂₂ Rim sherd of compact paste tempered with some flint grit, black throughout, burnished inside
and out.
Northern ditch, layer 5.
- P₂₃ Rim sherd of compact sandy paste tempered with some shell and other grit, grey both faces with
reddish-brown core.
Northern ditch, layer 5.
- P₂₄ Rim sherd of crumbly paste. Red to grey externally, red internally. Weathered.
Decoration: rows of blurred impressions.
Post-hole 44.
- P₂₅ Thirty-five sherds of vessel including rim, of fairly compact paste tempered with grit including
shell. Patchy brown to dark brown externally, brown internally with grey core.
Decoration: below the rim a single row of impressions above horizontal grooved lines with a

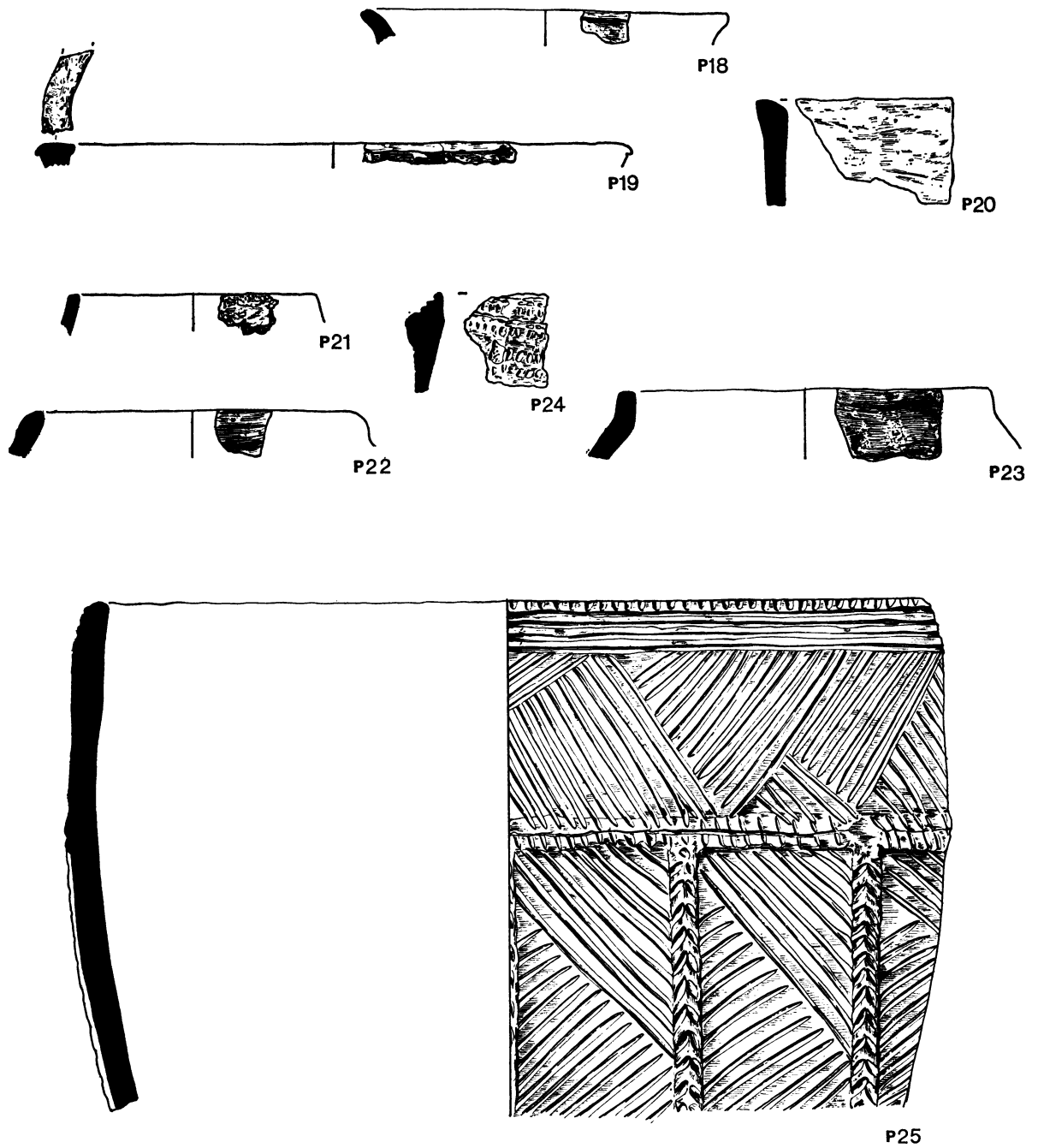
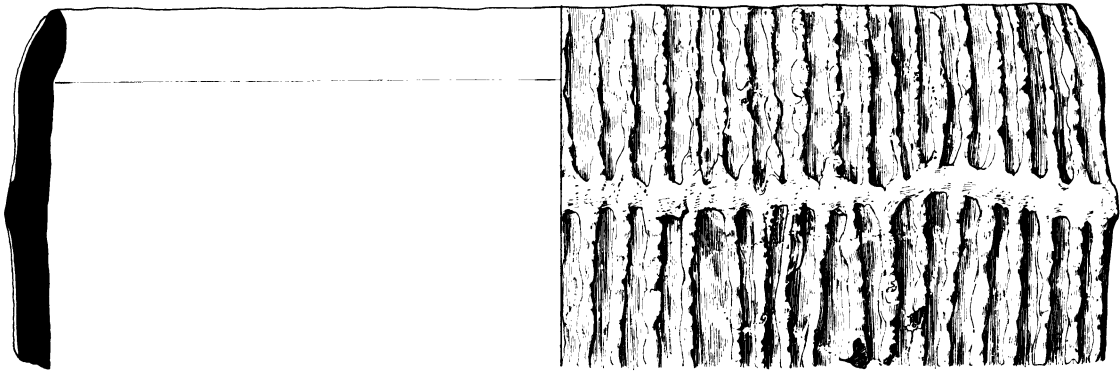
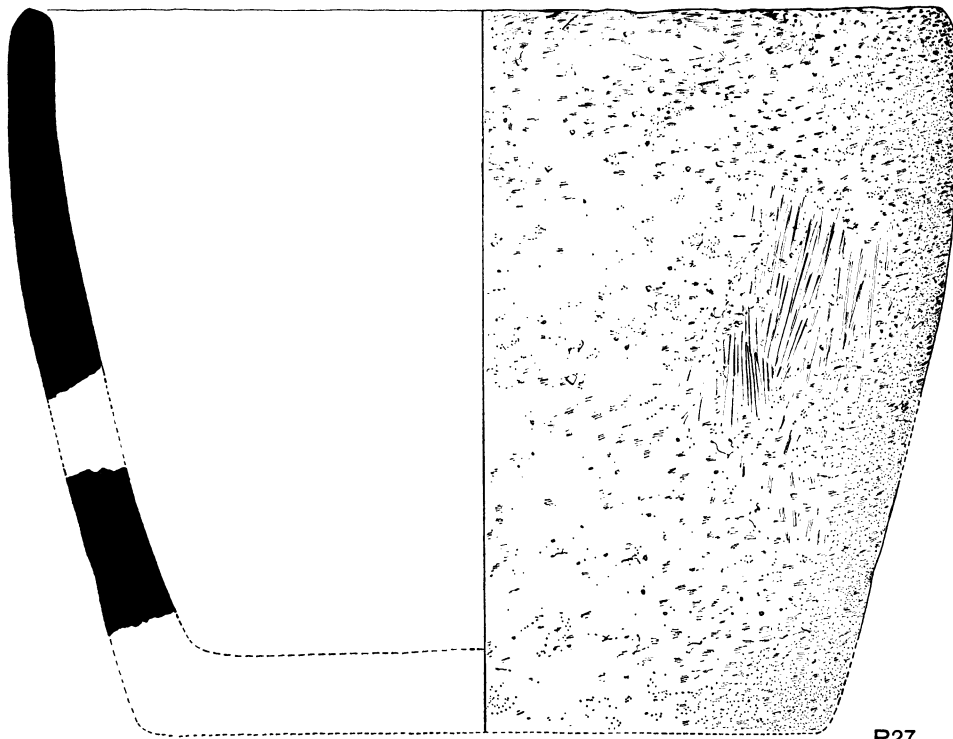


FIG. 31. P18-23 Middle Neolithic: P24 Peterborough Ware: P25 Grooved Ware ($\frac{1}{4}$)



P26



P27

FIG. 32. Grooved Ware ($\frac{1}{4}$)

grooved filled triangle design beneath. This decoration is bordered beneath by a horizontal cordon, itself decorated with a horizontal groove and transverse impressions, and from this descend vertical cordons decorated with grooved herringbone separating panels of grooved filled triangles.
Surface of platform.

- P26 One hundred and thirty-seven sherds including rim from a vessel of coarse paste tempered with a considerable amount of grit and grog. Reddish-brown to grey externally, brown to grey internally with dark grey core.
 Decoration: irregular plain applied vertical cordons broken some way down the vessel by a broader horizontal plain cordon.
 Southern ditch, layer 8.
- P27 Sherds, including rim, from a vessel of very coarse paste tempered with large quantity of grit. Brown both faces with dark grey core. Undecorated.
 Post-hole 44.
- P28 Two sherds from the rim and body, of flaky paste tempered with crushed shell. Light brown to grey both faces with dark grey core. Surface in parts eroded. Has been smoothed.
 Decoration: combines diagonal applied cordons and diagonal incised lines above a single horizontal cordon. From this descend vertical cordons dividing the surface into panels, some filled with diagonal and opposed diagonal incised lines.
 (Possible grain impression on internal surface.)
 Post-hole 51.
- P29 Thirteen sherds including rim of fairly soft paste tempered with grit including grog and a little flint. Brown with some orange tones both faces, with grey core.
 Decoration: on the internal edge of the rim a single row of diagonal impressed strokes. On the external surface two, extending to four, rows of diagonal to vertical impressed strokes above groups of diagonal incised lines. Beneath the collar, vertical cordons enclose and separate panels of opposed diagonal grooved lines, some of which run onto the cordons.
 Post-hole 51.
- P30 Base angle of flaky paste tempered with grit. Brown to grey externally, grey internally.
 Decoration: remains of vertical plain cordons.
 Post-hole 49.
- P31 Base angle, patchy brown to grey both faces with dark grey core. Remains of vertical plain cordons.
 Midden.
- P32 Base angle of fairly compact paste tempered with grit, light brown both faces with dark grey core.
 Decoration: vertical plain cordons.
 Midden.
- P33 Base angle of coarse paste tempered with grit. Brown both faces with dark grey core.
 Decoration: roughly vertical applied cordons.
 Post-hole 97.
- P34 Four sherds comprising the base and lower part of a vessel of compact paste. Light brown externally, dark grey internally. Surface smoothed.
 Decoration: vertical applied plain cordons.
 Post-hole 50.
- P35 Three sherds including base angle of flaky paste. Light brown to grey externally, brown internally with dark grey core.
 Decoration: remains of wide vertical cordons.
 Southern ditch, layer 8.
- P36 Rim sherd of compact sandy paste. Dark grey externally, reddish brown internally.
 Decoration: externally a plain vertical applied cordon extends beyond the line of the rim.
 Post-hole 51.

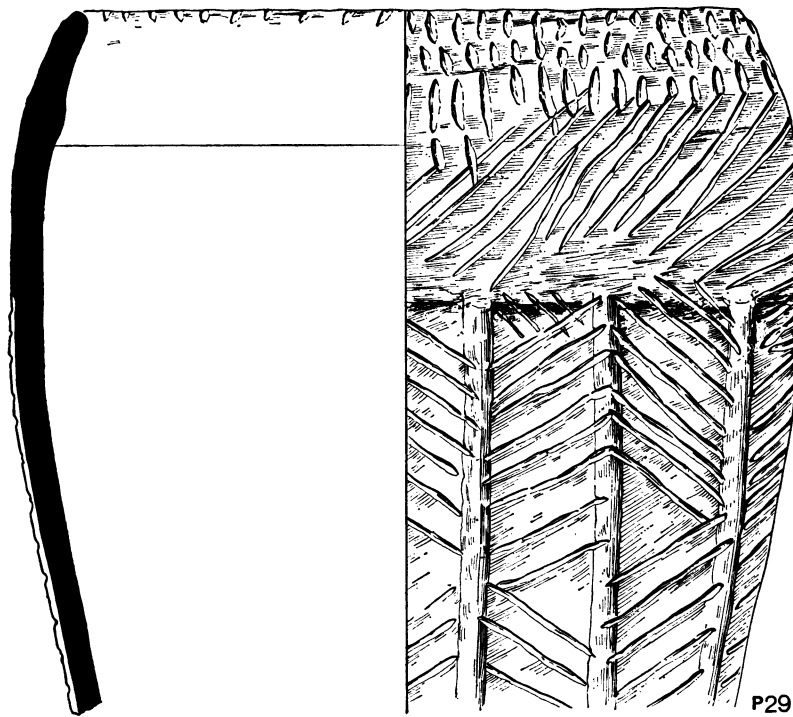
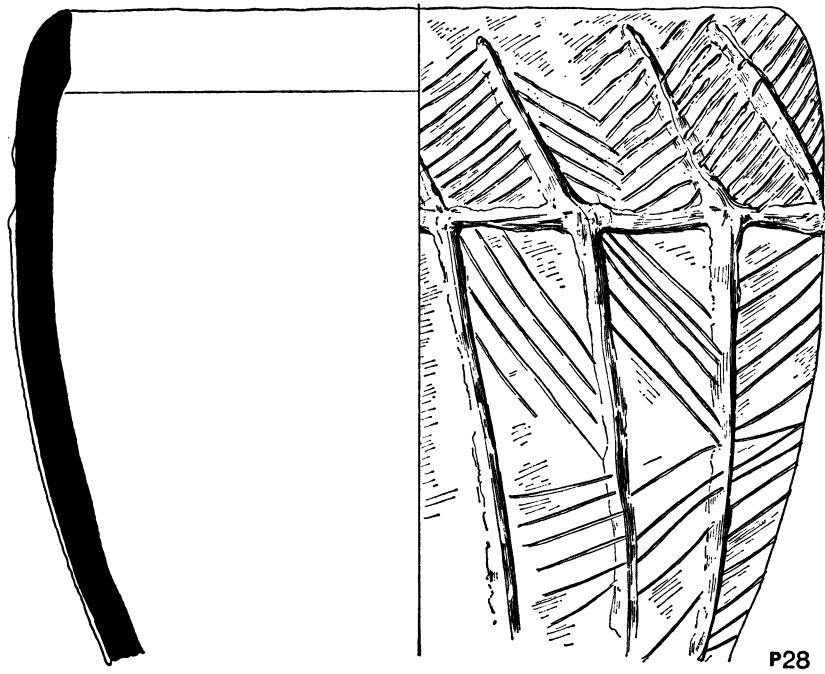


FIG. 33. Grooved Ware ($\frac{1}{3}$)

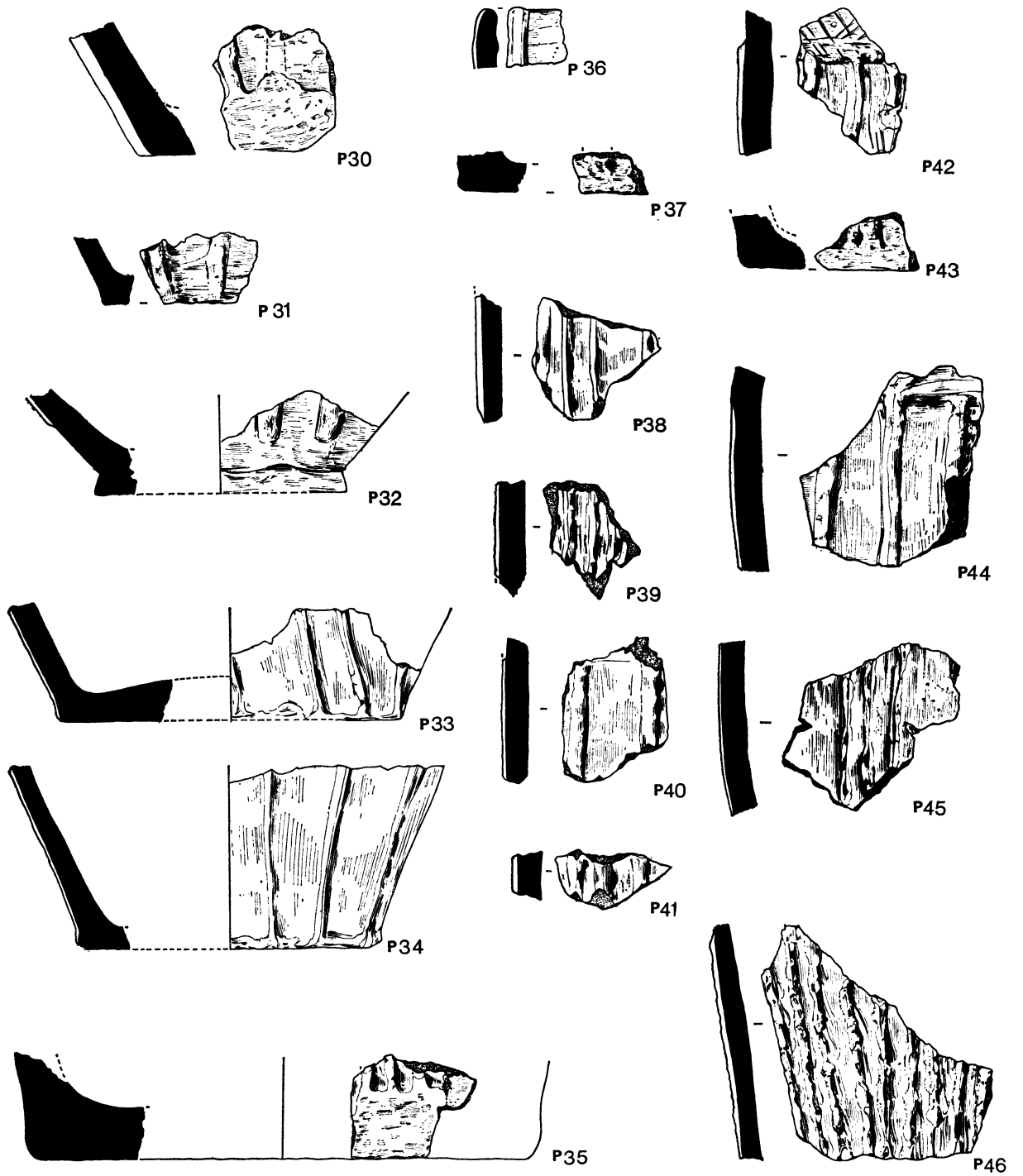


FIG. 34. Grooved Ware ($\frac{1}{3}$)

- P37 Base angle of flaky paste tempered with a little grit and grog. Light brown throughout. Remains probably of vertical cordon.
Post-hole 91.
- P38 Wall sherd of flaky paste tempered with much crushed shell. Brown externally, grey internally.
Decoration: vertical plain cordons.
Surface of platform.
- P39 Wall sherd of flaky paste, brown both faces with dark grey core.
Decoration: plain cordons.
Post-hole 21.
- P40 Wall sherd of flaky paste. Light brown externally, grey internally, surface smoothed.
Decoration: plain vertical cordons.
Post-hole 68.
- P41 Wall sherd of flaky paste tempered with much shell. Light brown both faces with grey core.
Decoration: plain cordons.
Post-hole 21.
- P42 Wall sherd of compact paste tempered with large grits including flint and ?chalk. Brown externally, light brown internally with dark grey core.
Decoration: remains of incised ornament above horizontal plain cordon from which descend three plain vertical cordons.
Post-hole 78.
- P43 Base angle of coarse paste tempered with large grits and some grog. Reddish brown to brown externally, internal surface lost. Dark grey core. Undecorated, probable remains of slight vertical plain cordon.
Occupation earth.
- P44 Wall sherd of compact paste tempered with some grit. Patchy grey to brown both faces with dark grey core.
Decoration: vertical plain cordons above and below horizontal plain cordon.
Post-hole 71.
- P45 Wall sherd of fairly compact paste tempered with shell. Brown both faces with dark grey core.
Decoration: three vertical plain cordons.
Post-hole 50.
- P46 Wall sherd of compact paste tempered with grog and shell. Reddish brown both faces with dark grey core.
Decoration: multiple applied irregular vertical cordons.
Post-hole 49.
- P47 Wall sherd of crumbly paste tempered with grit including shell and grog. Brown both faces with dark grey core. Heavily weathered.
Decoration: two horizontal plain cordons separate and enclose vertical cordons.
Midden.
- P48 Twenty-five sherds including wall and base of a vessel of compact sandy paste tempered with shell. Patchy brown both faces with dark grey core.
Decoration: grooved triangle pattern filled with diagonal finger-nail impressions above plain cordon from which descend vertical to diagonal applied cordons.
Midden.
- P49 Two sherds including rim of coarse paste tempered with grit including chalk. Brown externally to dark brown internally with dark grey core. Surface smoothed.
Decoration: a zone of horizontal incised lines above grooved herringbone. These zones are

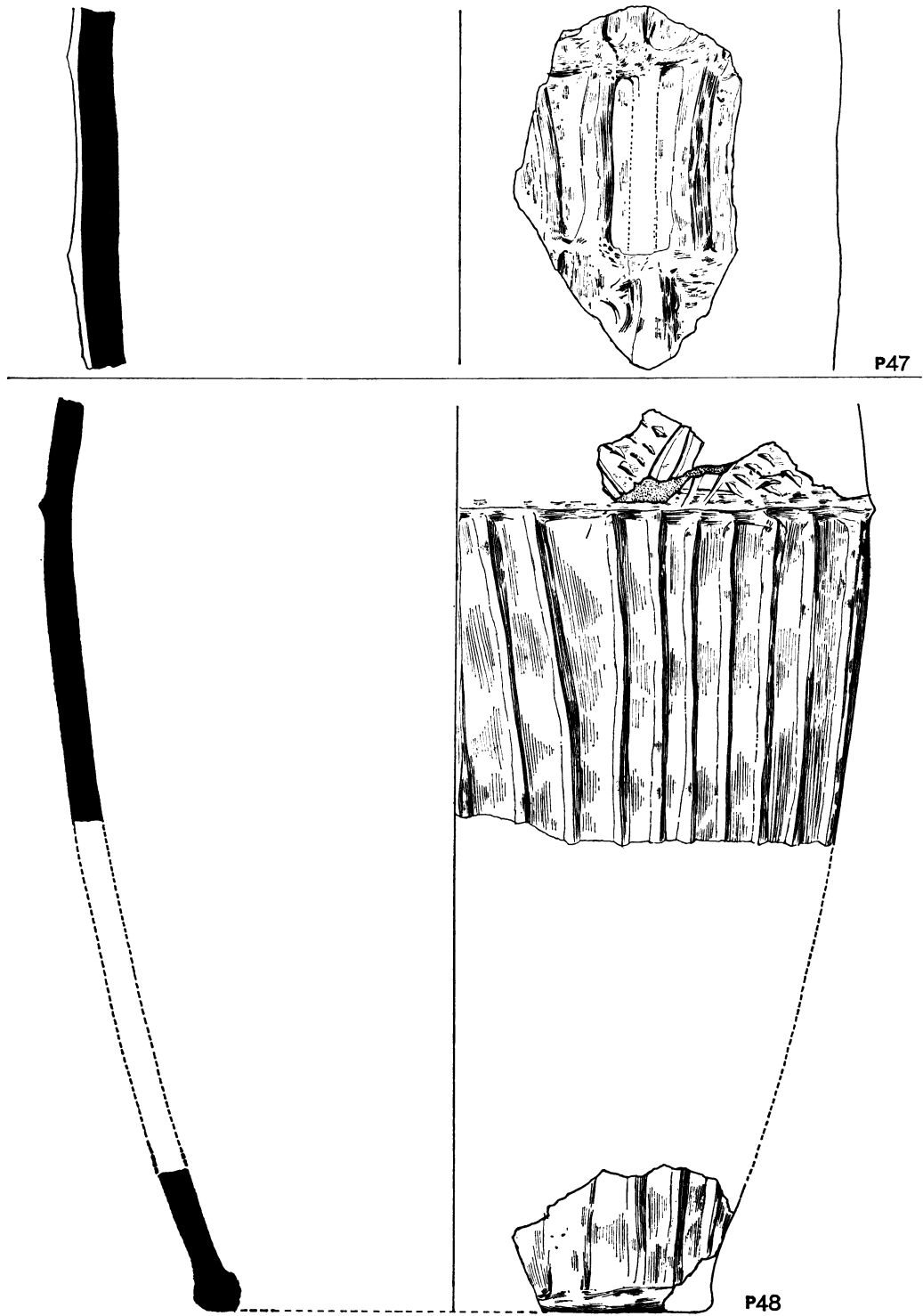


FIG. 35. Grooved Ware ($\frac{1}{3}$)

terminated by a horizontal cordon from which descends a vertical cordon separating panels of diagonal incised lines and horizontal grooved lines.

Post-hole 22.

- P50 Three wall sherds of compact sandy paste tempered with grit. Reddish brown externally, dark grey internally.

Decoration: row of grooved herringbone above cordon. From this descend two plain cordons enclosing short horizontal grooved lines and separating panels of diagonal incised lines and filled triangles.

Midden.

- P51 Wall sherd of compact paste tempered with shell. Reddish brown externally, reddish brown to grey internally.

Decoration: remains of diagonal grooved lines above horizontal cordon. From this descend a pair of cordons enclosing horizontal stab-and-drag strokes and separating panels of diagonal and opposed diagonal incised lines.

Post-hole 46.

- P52 Wall sherd of compact paste. Reddish brown externally, brown to grey internally.

Decoration: two vertical cordons enclose horizontal stab-and-drag impressions and separate panels of diagonal and opposed diagonal incised lines.

Post-hole 21.

- P53 Two fragments including base angle of vessel of sandy paste tempered with some grit. Brown externally, brown to dark grey internally.

Decoration: vertical plain applied cordons enclosing short horizontal grooved lines and separating panels of incised filled triangles.

Post-hole 45.

- P54 Wall sherd of flaky paste tempered with grit. Light yellowish brown both faces with grey core.

Decoration: two applied vertical cordons separate panels of diagonal grooved lines.

(? grain impression.)

Post-hole 37

- P55 Wall sherd of compact sandy paste. Brown externally, brown to grey internally.

Decoration: double plain cordon and lightly incised opposed lines.

Post-hole 45.

- P56 Wall sherd of crumbly paste tempered with a little shell or chalk. Orange throughout.

Decoration: remains of diagonal lightly grooved lines above horizontal cordon. From this descend two plain applied vertical cordons to one side of a panel of diagonal grooved lines.

Post-hole 33.

- P57 Wall sherd of compact paste tempered with some shell. Brown throughout.

Decoration: double vertical cordon separating and crossed by opposed diagonal incised lines.

Post-hole 23.

- P58 Wall sherd of compact paste tempered with much shell. Light brown externally, grey internally with dark grey core.

Decoration: vertical wavy cordon separates opposed diagonal grooved lines.

Southern ditch, layer 6B-7.

- P59 Wall sherd of compact sandy paste. Light brown both faces with dark grey core.

Decoration: pair of vertical plain cordons separate panels of incised lines.

Post-hole 70.

- P60 Wall sherd of compact paste tempered with some grit. Grey externally, light brown internally.

Decoration: vertical cordon decorated with central groove separates diagonal grooved and opposed diagonal grooved lines.

Surface of platform.

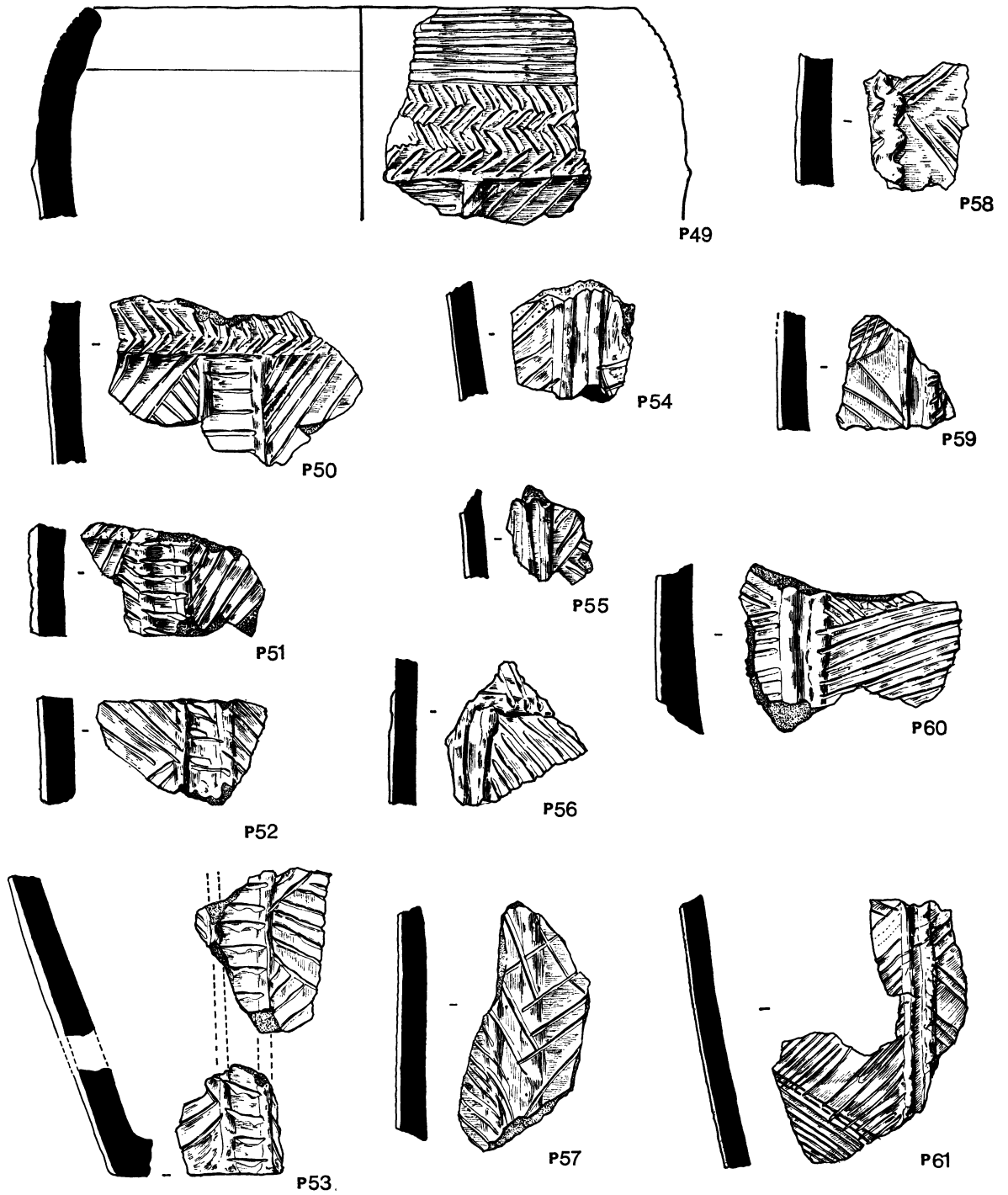
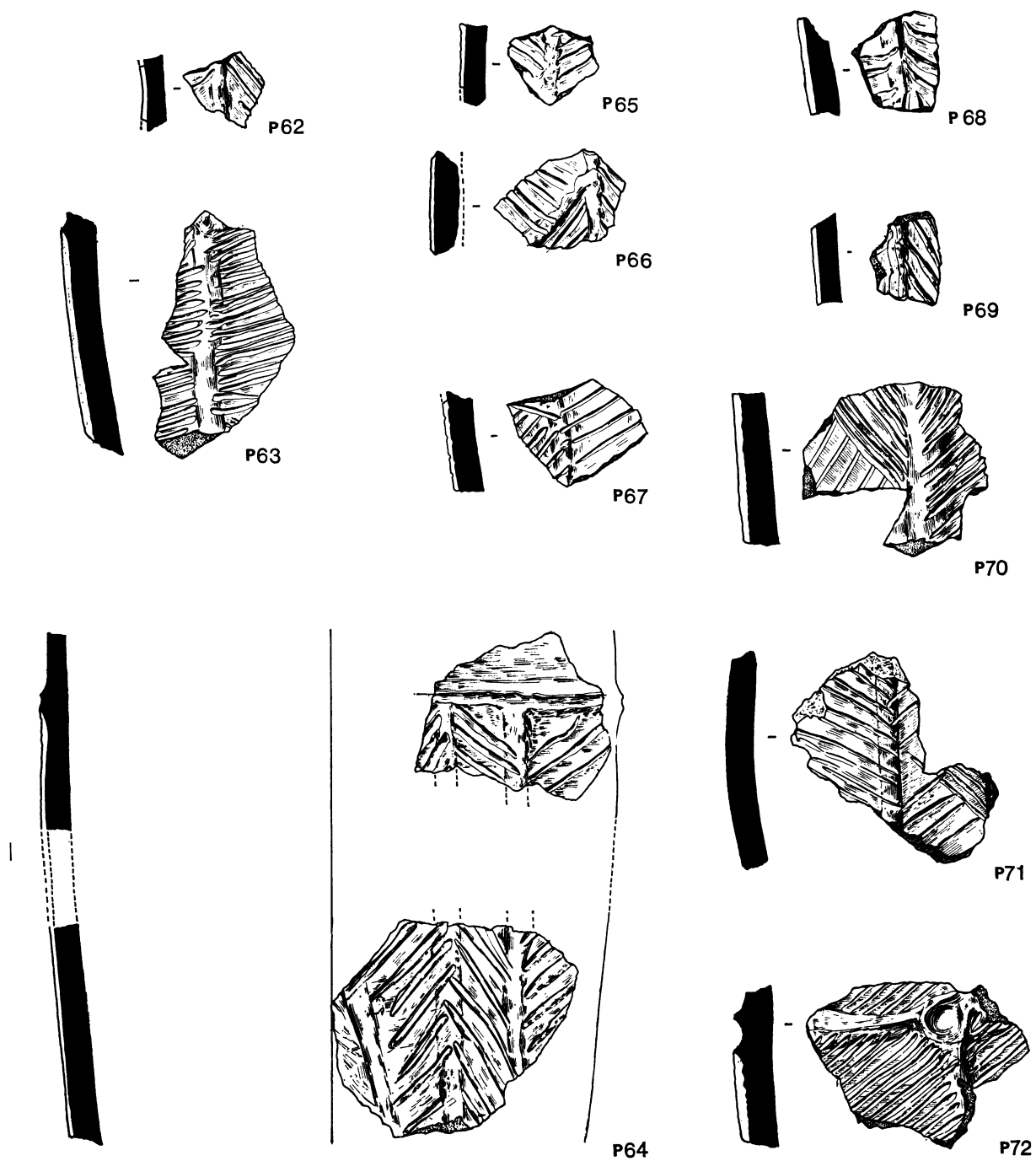
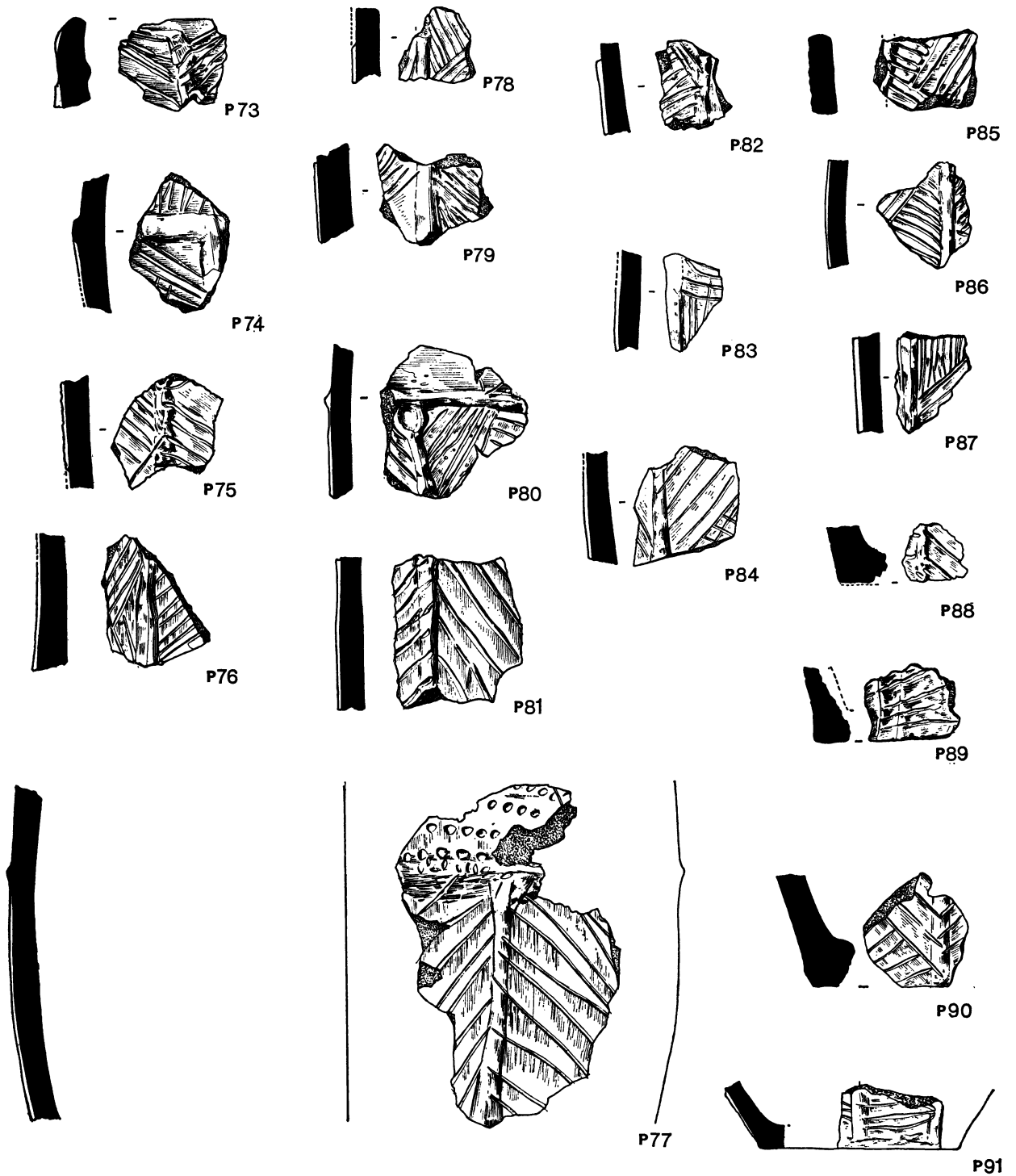


FIG. 36. Grooved Ware (1/3)

- P61 Wall sherd of sandy paste tempered with shell. Orange throughout.
 Decoration: double vertical plain cordon separates complex incised panelled decoration.
 Post-hole 139.
- P62 Wall sherd of compact paste tempered with grit. Grey to light brown externally, greyish brown internally, with dark grey core.
 Decoration: plain cordon separates lightly grooved diagonal lines.
 Post-hole 43.
- P63 Wall sherd of compact paste tempered with some flint. Brown to grey externally, light brown internally.
 Decoration: vertical plain cordon separates diagonal grooved lines. Finger-tip impression probably marks junction of vertical and horizontal cordons.
 Southern ditch, layer 8.
- P64 Two wall sherds of fairly compact paste tempered with grog and grit. Light brown both faces with dark grey core.
 Decoration: horizontal cordon carrying broad shallow groove from which descend vertical cordons separating panels of grooved diagonal and chevron lines.
 Post-hole 70.
- P65 Wall sherd of flaky paste, greyish brown both faces with dark grey core.
 Decoration: vertical cordon separates diagonal grooved lines.
 Post-hole 43.
- P66 Wall sherd of flaky paste, brown externally, internal surface lost.
 Decoration: vertical and diagonal cordons separate and enclose grooved lines.
 Post-holes 62.
- P67 Wall sherd of compact paste tempered with much fine grit. Brown both faces.
 Decoration: vertical cordon separates groups of diagonal and opposed diagonal grooved lines.
 Post-hole 23.
- P68 Wall sherd of compact paste tempered with ?grog and a little grit. Orange both faces with light grey core.
 Decoration: vertical cordon separates panels of grooved lines.
 Post-hole 62.
- P69 Wall sherd of compact paste tempered with some grit. Brown externally, grey to brown internally with grey core.
 Decoration: plain cordon separates diagonal grooved lines.
 Post-hole 50.
- P70 Wall sherd of compact sandy paste tempered with some shell. Grey externally, brown internally with grey core.
 Decoration: vertical plain cordon separates panels of diagonal grooved lines and grooved filled triangles.
 Southern ditch, layer 8.
- P71 Wall sherd of flaky paste tempered with grit including crushed burnt flint. Light brown both faces with dark grey core.
 Decoration: groups of diagonal and opposed diagonal incised and grooved lines run over a slight vertical cordon.
 Post-hole 45.
- P72 Wall sherd of sandy paste tempered with large quantity of grit including shell. Patchy grey to brown externally, brown internally with dark grey core.
 Decoration: junction of horizontal and vertical plain cordons marked by a finger-tip disc. Above the horizontal and on each side of the vertical cordon, diagonal grooved lines.
 Southern ditch, layers 6B-7 and 8.

FIG. 37. Grooved Ware ($\frac{1}{3}$)

- P73 Rim sherd of flaky paste tempered with crushed shell. Black throughout.
Decoration: groups of opposed incised diagonal lines run onto a diagonal cordon.
Post-hole 51.
- P74 Wall sherd of fairly compact paste tempered with much grit. Patchy brown externally, grey internally with grey core.
Decoration: vertical plain cordon descends from horizontal plain cordon with remains of diagonal grooved lines in the angle, and traces of incised lines above horizontal cordon.
Pipe-trench old land surface.
- P75 Wall sherd of flaky paste tempered with some grit. Orange throughout.
Decoration: cordon separates panels of incised opposed diagonal lines.
Post-hole 42.
- P76 Wall sherd of flaky paste tempered with shell. Grey internally, orange externally with dark grey core.
Decoration: plain vertical cordon separates groups of incised lines.
Post-hole 23.
- P77 Wall sherd of fairly compact paste tempered with some grog. Patchy reddish brown to grey externally, brown internally with dark grey core.
Decoration: remains of diagonal incised line and horizontal rows of impressions above and on horizontal cordon. From this descends a vertical cordon separating panels of lightly incised diagonal lines. Surface smoothed.
Post-hole 90.
- P78 Wall sherd of compact paste. Light brown throughout.
Decoration: vertical cordon separates finely incised opposed line motif.
Post-hole 33.
- P79 Wall sherd of sandy paste tempered with some grit. Reddish brown both faces with dark grey core.
Decoration: applied plain vertical cordon with diagonal incised line decoration on either side.
Post-hole 12.
- P80 Wall sherd of flaky paste tempered with large quantity of shell. Yellow throughout.
Decoration: remains of incised decoration above horizontal plain cordon. From this descends vertical plain cordon with finger-tip disc at junction. The vertical cordon separates panels of opposed diagonal incised lines.
Post-hole 44.
- P81 Wall sherd of compact paste tempered with some grit. Reddish brown externally, reddish brown to grey internally with grey core.
Decoration: plain vertical cordon separates panels of lightly incised diagonal lines.
Post-hole 70.
- P82 Wall sherd of compact paste. Light brown externally, brown internally with dark grey core.
Decoration: applied vertical cordon and opposed incised lines.
Post-hole 74.
- P83 Wall sherd of compact paste tempered with grog. Reddish brown externally, greyish brown internally with dark grey core.
Decoration: remains of plain cordon and opposed incised lines.
Post-hole 81.
- P84 Wall sherd of compact paste tempered with some grit. Brown to dark grey both faces.
Decoration: vertical plain cordon separates groups of opposed diagonal incised lines.
Surface of platform.

FIG. 38. Grooved Ware ($\frac{1}{3}$)

- P85 Wall sherd of compact paste tempered with grit including quartz. Brown both faces with dark grey core.
Decoration: remains of vertical cordon and opposed incised line pattern.
Post-hole 65.
- P86 Wall sherd of compact paste tempered with grit. Grey to brown both faces with grey core.
Decoration: plain vertical cordon separates panels of lightly grooved opposed diagonal lines.
Southern ditch, terminal layer 5.
- P87 Wall sherd of fine compact paste. Grey to brown externally, brown internally.
Decoration: plain cordon with roughly executed finely incised opposed line motif.
Post-hole 62.
- P88 Base angle of fairly compact paste tempered with a little grit. Brown externally, reddish brown to grey internally.
Decoration: vertical applied cordon with remains of horizontal and diagonal incised lines.
Post-hole 22.
- P89 Base angle of sandy paste. Brown externally, internal surface lost. Grey core.
Decoration: remains of vertical cordon and diagonal incised lines.
Post-hole 21.
- P90 Base angle of sandy paste tempered with a little grit. Brown externally, dark reddish brown to grey internally.
Decoration: an incised filled triangle pattern runs onto a vertical cordon.
Occupation earth.
- P91 Base angle of compact paste. Greyish brown externally, light brown internally with grey core.
Decoration: remains of vertical plain cordons enclosing and separating incised lines.
Southern ditch, layer 6B-7.
- P92 Thirteen sherds including rim of flaky paste. Dark grey to brown externally, brown internally with dark grey core.
Decoration: roughly horizontal stab-and-drag lines above diagonal stab-and-drag lines, combining lower down the body with vertical plain cordons.
Post-hole 73.
- P93 Six sherds of a vessel of flaky paste tempered with some shell. Brown to grey both faces.
Decoration: rows of diagonally placed short strokes above horizontal cordon, the upper surface decorated with a row of diagonal strokes in similar fashion. From the horizontal cordon descends a vertical plain cordon separating further vertical rows of diagonally placed strokes. One sherd shows remains of binding hole.
Surface of platform.
- P94 Eleven sherds including base angle of vessel of flaky paste tempered with a little grit. Brown externally, dark grey internally.
Decoration: applied vertical cordons separating panels of stab-and-drag lines.
Post-hole 73.
- P95 Wall sherd of compact paste tempered with a little grit.
Decoration: diagonal twisted cord lines above horizontal plain cordon. From this descend two applied plain vertical cordons adjoining panel of diagonal twisted cord lines.
Southern ditch, unstratified.
- P96 Two wall sherds of flaky paste tempered with a little shell. Light brown to brown externally, dark brown to grey internally with grey core.
Decoration: a vertical plain cordon separates panels of diagonal twisted cord lines.
Post-hole 85.

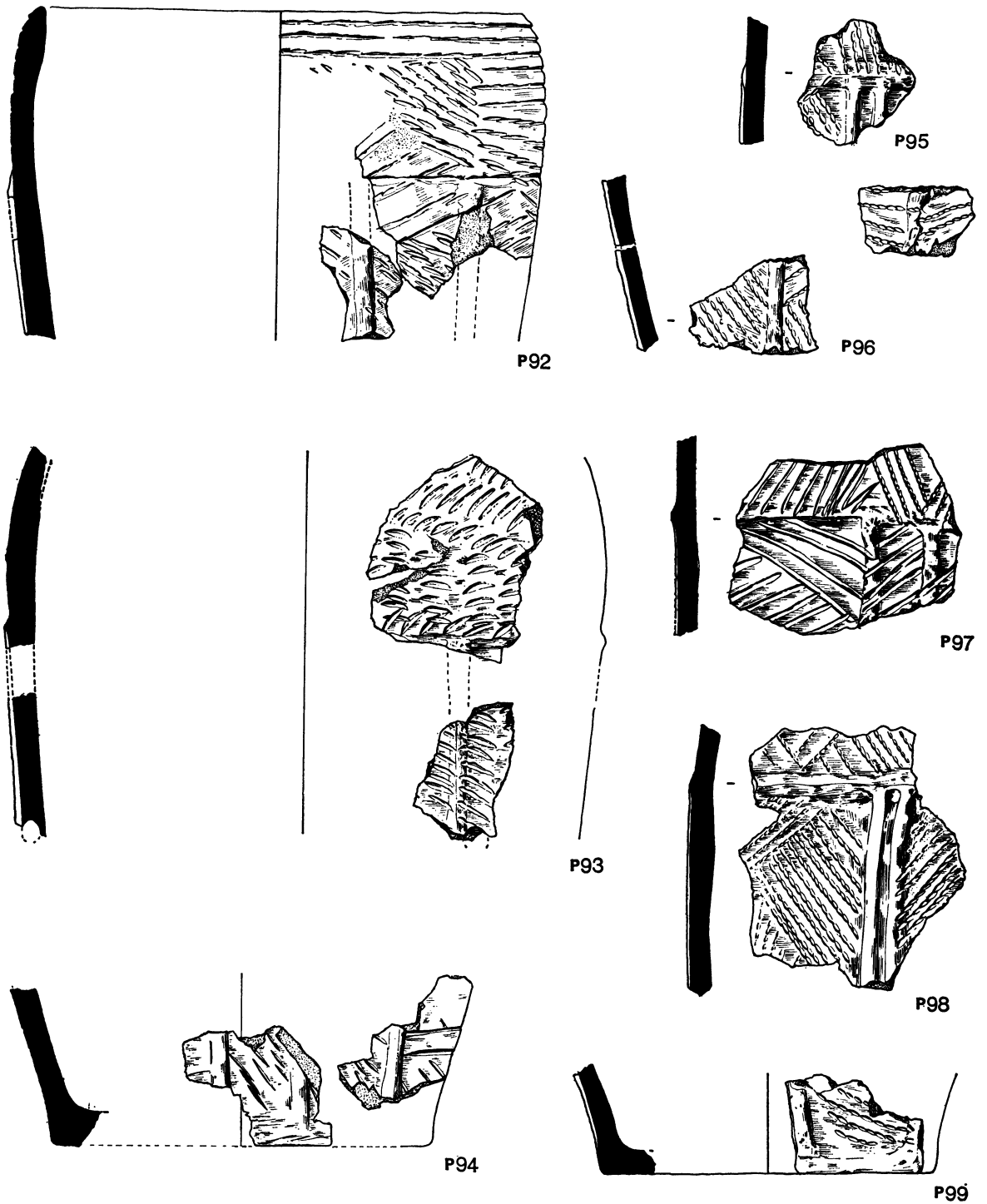
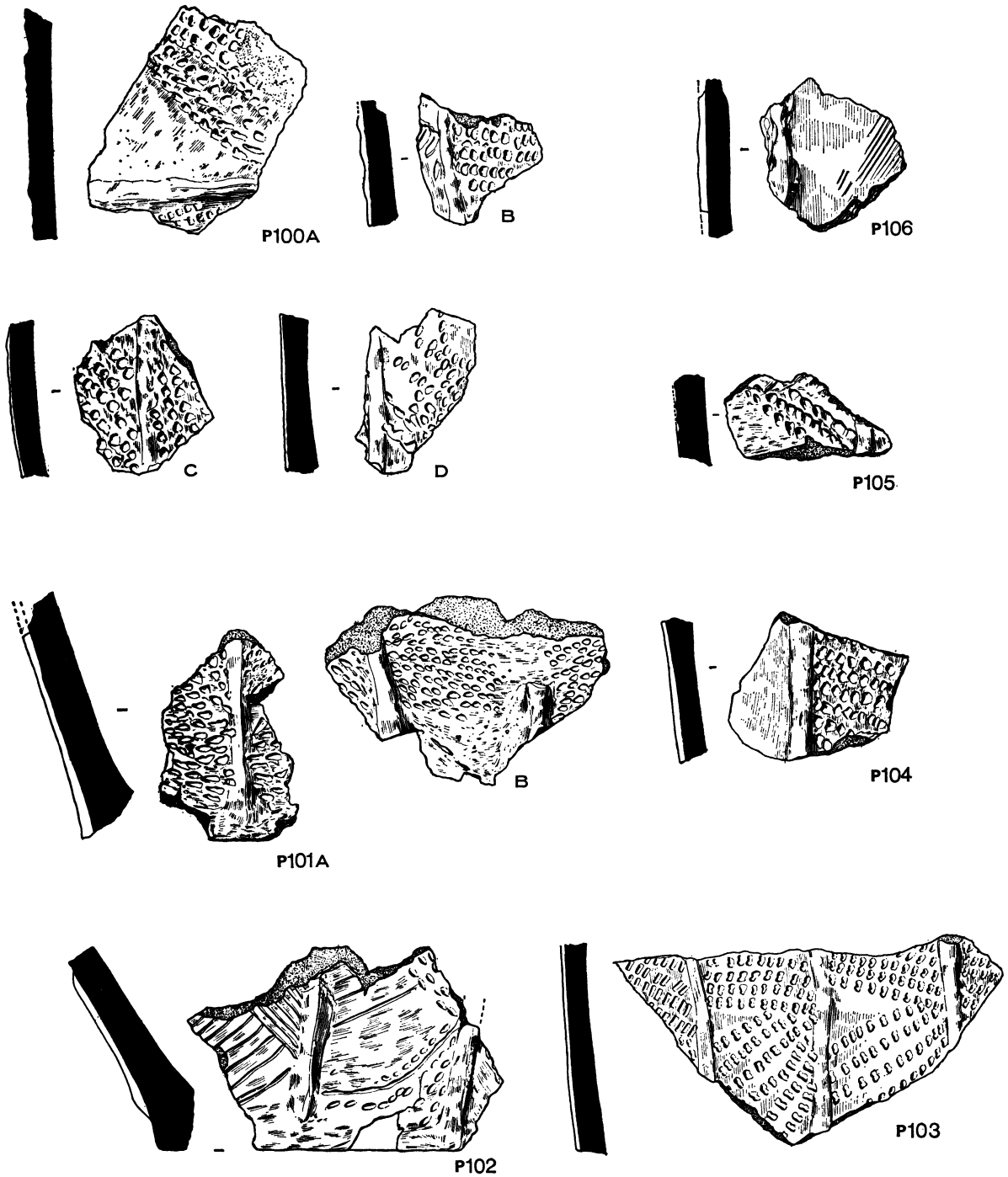


FIG. 39. Grooved Ware ($\frac{1}{3}$)

- P97 Wall sherd of fairly compact sandy paste tempered with grit. Brown both faces with dark grey core.
Decoration: diagonal incised lines and opposed groups of diagonal twisted cord lines above plain horizontal cordon. From this descend two vertical cordons enclosing diagonal grooved lines and separating panels of grooved diagonal lines and filled triangles.
Midden.
- P98 Wall sherd of compact paste tempered with grog. Brown to grey both faces.
Decoration: opposed twisted cord lines, perhaps part of a filled triangle pattern, above horizontal plain cordon. From this descends a vertical cordon decorated with a wide shallow groove separating panels of diagonal twisted cord lines. The junction of the horizontal and vertical cordons marked by a finger-tip impression.
Southern ditch, layer 5-6B.
- P99 Base angle of compact paste tempered with grit. Brown externally, dark grey to reddish brown internally with dark grey core.
Decoration: vertical plain applied cordons enclose diagonal twisted cord lines.
Southern ditch, layer 5-6B.
- P100 Fifteen wall sherds from a vessel of fairly compact paste tempered with grit. Light brown to grey a-d both faces with dark grey core.
Decoration: appears to consist of remains of jabbed impressions above plain cordon. From this appear to descend vertical cordons separating diagonal lines of jabbed impressions made with a blunt instrument.
Surface of platform.
- P101 Two wall sherds from near base, of flaky paste tempered with grit including grog. Greyish brown a-b externally, darker internally with dark grey core.
Decoration: vertical plain cordons separate panels of jabbed impressions.
Iron Age palisade and post-hole 47.
- P102 Two sherds from the lower part of a vessel including the base angle, of flaky paste tempered with grit. Reddish brown to grey externally, dark grey internally.
Decoration: vertical applied cordons separating panels of incised opposed lines and irregular incised diagonal lines combined with jabbed impressions.
Post-hole 47.
- P103 Wall sherd of compact paste tempered with grog. Patchy grey to light brown externally, light brown internally with dark grey core.
Decoration: vertical plain cordons separate panels of horizontal and diagonal bird bone impressions.
Pipe-trench old land surface.
- P104 Wall sherd of compact paste tempered with some grit. Brown internally, grey to brown externally.
Decoration: vertical cordon adjoining diagonal lines of oval impressions made with a blunt implement.
Post-hole 45.
- P105 Wall sherd of compact paste tempered with grit. Grey to brown externally, brown internally with dark grey core.
Decoration: diagonal lines of oval impressions, made with a blunt implement impressed at an angle into the clay, adjoin remains of vertical plain cordon.
Post-hole 22.
- P106 Wall sherd of compact paste tempered with flint. Greyish brown externally, brown internally, with dark grey core.
Decoration: applied vertical cordon and remains of lightly incised diagonal lines.
Post-hole 44.

FIG. 40. Grooved Ware ($\frac{1}{3}$)

- P107 Wall sherd of fairly compact paste tempered with much fine shell. Patchy light brown to grey externally, light brown to orange internally with dark grey core.
 Decoration: remains of double vertical cordon separating panels of incised diagonal lines and finger-nail rustication.
 Pipe-trench old land surface.
- P108 Wall sherd of compact paste. Light brown both faces with dark grey core.
 Decoration: two vertical applied cordons separate panels of diagonal grooved lines.
 Post-hole 67.
- P109 Wall sherd of crumbly paste tempered with grit and shell. Grey externally, light brown internally.
 Decoration: remains of plain cordon and oval impressions.
 Surface of platform.
- P110 Wall sherd of flaky paste tempered with grit including ?grog. Brown externally, reddish brown internally with dark grey core.
 Decoration: applied vertical cordons separate panels of finger-pinching.
 Southern ditch terminal, layer 5.
- P111 Wall sherd of compact paste tempered with a little fine grit including grog. Patchy light brown to grey internally, dark grey externally.
 Decoration: vertical plain cordon separates panels of finger-pinched rustication.
 Pipe-trench old land surface.
- P112 Wall sherd of flaky paste tempered with grit. Light brown both faces with dark grey core.
 Decoration: two plain horizontal cordons from which descend vertical applied cordons separating panels of finger-pinching.
 Post-hole 76.
- P113 Wall sherd of soft flaky paste tempered with grit and shell. Light brown externally, brown internally with grey core.
 Decoration: remains of vertical and diagonal plain cordons and finger-pinched decoration.
 Post-hole 45.
- P114 Wall sherd of flaky paste tempered with some grit. Brown both faces with grey core.
 Decoration: converging plain cordons enclosing finger-pinched rustication.
 Southern ditch, layer 5-6B.
- P115 Wall sherd of soft flaky paste tempered with shell and grog. Light brown both faces with light grey core.
 Decoration: vertical plain cordon and light finger pinching.
 Post-hole 41.
- P116 Two wall sherds of fairly compact paste. Light brown externally, grey internally.
 a-b Decoration: remains of vertical cordon decorated with light impressions separate panels filled with finger-pinched decoration.
 Post-hole 71.
- P117 Wall sherd of fairly compact paste. Light brown both faces with dark grey core. Weathered.
 Decoration: finger-nail rustication and remains of decorated vertical cordons.
 Pipe-trench old land surface.
- P118 Wall sherd of compact paste. Brown both faces with dark grey core.
 Decoration: vertical cordon perhaps with finger-tip impressed decoration and finger-nail rustication.
 Pipe-trench old land surface.
- P119 Wall sherd of compact paste tempered with fine shell. Light brown both faces with dark grey core.
 Decoration: three vertical cordons, each decorated with transverse strokes.
 Surface of platform.

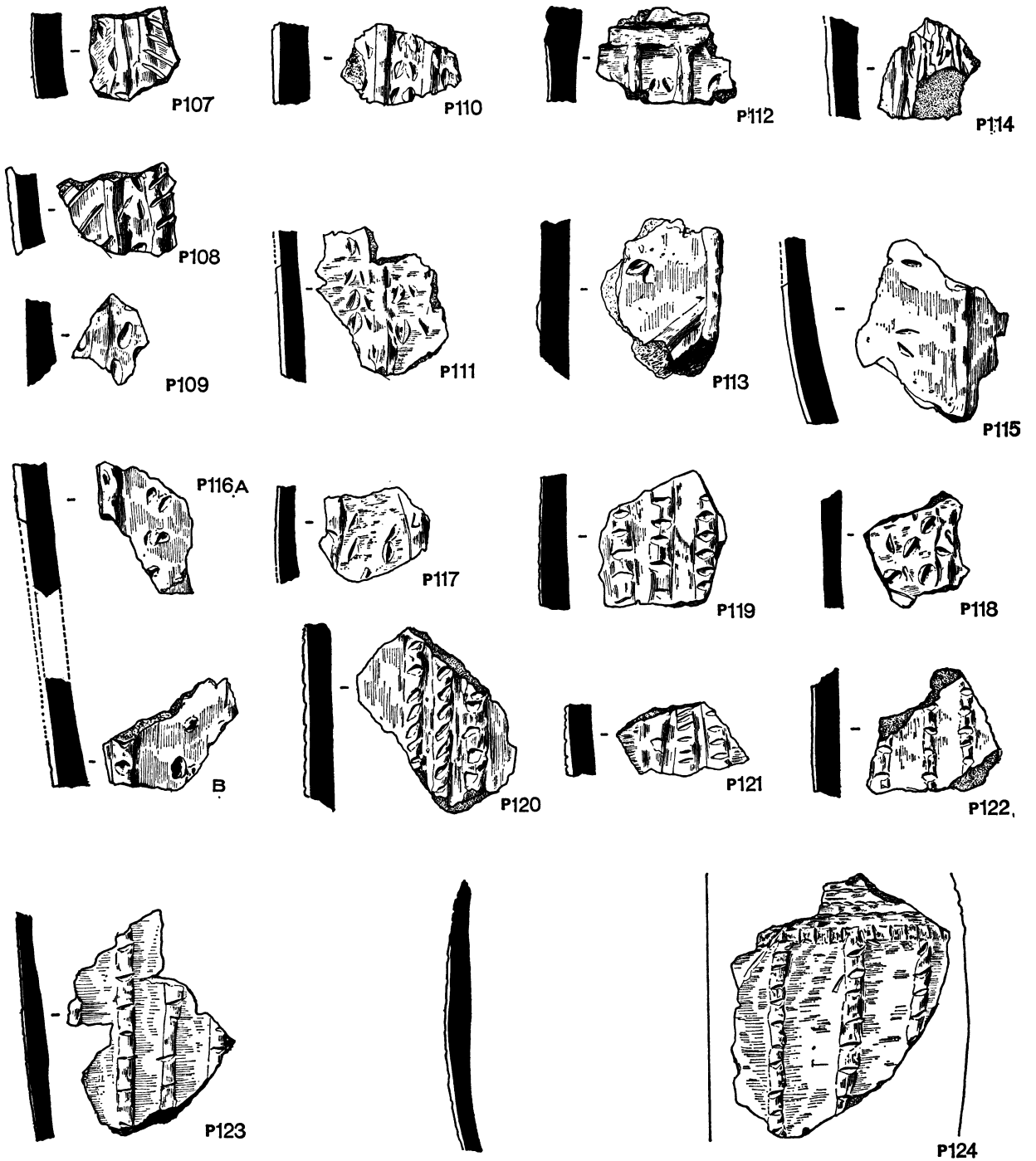


FIG. 41. Grooved Ware ($\frac{1}{3}$)

- P120 Wall sherd of compact paste tempered with shell. Brown externally, grey to reddish brown internally.
 Decoration: three applied vertical cordons with diagonal stroke decoration.
 Post-hole 137.
- P121 Wall sherd of compact paste tempered with shell. Brown externally, darker brown internally with grey core.
 Decoration: triple vertical cordon decorated with transverse strokes.
 Post-hole 23.
- P122 Wall sherd of compact paste tempered with some shell. Patchy brown both faces with dark grey core.
 Decoration: remains of vertical cordons decorated with transverse impressions.
 Post-hole 86.
- P123 Wall sherd of compact paste tempered with grog and a little grit. Reddish brown both faces with dark grey core.
 Decoration: vertical cordons decorated with transverse finger-nail impressions.
 Post-hole 70.
- P124 Four wall sherds of compact paste tempered with grit. Brown both faces with grey core.
 Decoration: twisted cord horizontal lines above slight horizontal cordon decorated with vertical finger-nail impressions. From this descend vertical cordons decorated with transverse finger-nail impressions.
 Midden.
- P125 Two sherds including rim of vessel of hard compact paste tempered with some grit including shell. Brown both faces with grey core.
 Decoration: beneath the rim, vertical and diagonal cordons, themselves decorated with transverse finger-nail impressions, with horizontal cordon beneath.
 Midden.
- P126 Wall sherd of compact paste tempered with grit and shell. Light brown externally, brown internally with dark grey core.
 Decoration: remains of horizontal and diagonal applied cordons with transverse impressions, and diagonal row of strokes.
 Midden.
- P127 Wall sherd of compact paste tempered with grit. Light brown externally, dark grey internally.
 Decoration: two vertical cordons decorated with jabbed impressions.
 Post-hole 45.
- P128 Wall sherd of compact sandy paste tempered with grit including shell. Brown both faces with dark grey core.
 Decoration: vertical cordon with jabbed impressions.
 Post-hole 138.
- P129 Wall sherd of flaky paste tempered with grit. Brown both faces with grey core.
 Decoration: vertical cordons decorated with transverse impressions separate panels of opposed incised lines.
 Post-hole 86.
- P130 Wall sherd of crumbly paste tempered with grit. Light brown both faces with dark grey core.
 Decoration: applied vertical cordons decorated with finger-tip impressions, linked by diagonal applied cordons.
 Iron Age palisade.
- P131 Wall sherd of sandy paste tempered with shell. Brown both faces with grey core.
 Decoration: remains of two applied cordons with transverse stroke ornament.
 Post-hole 66.

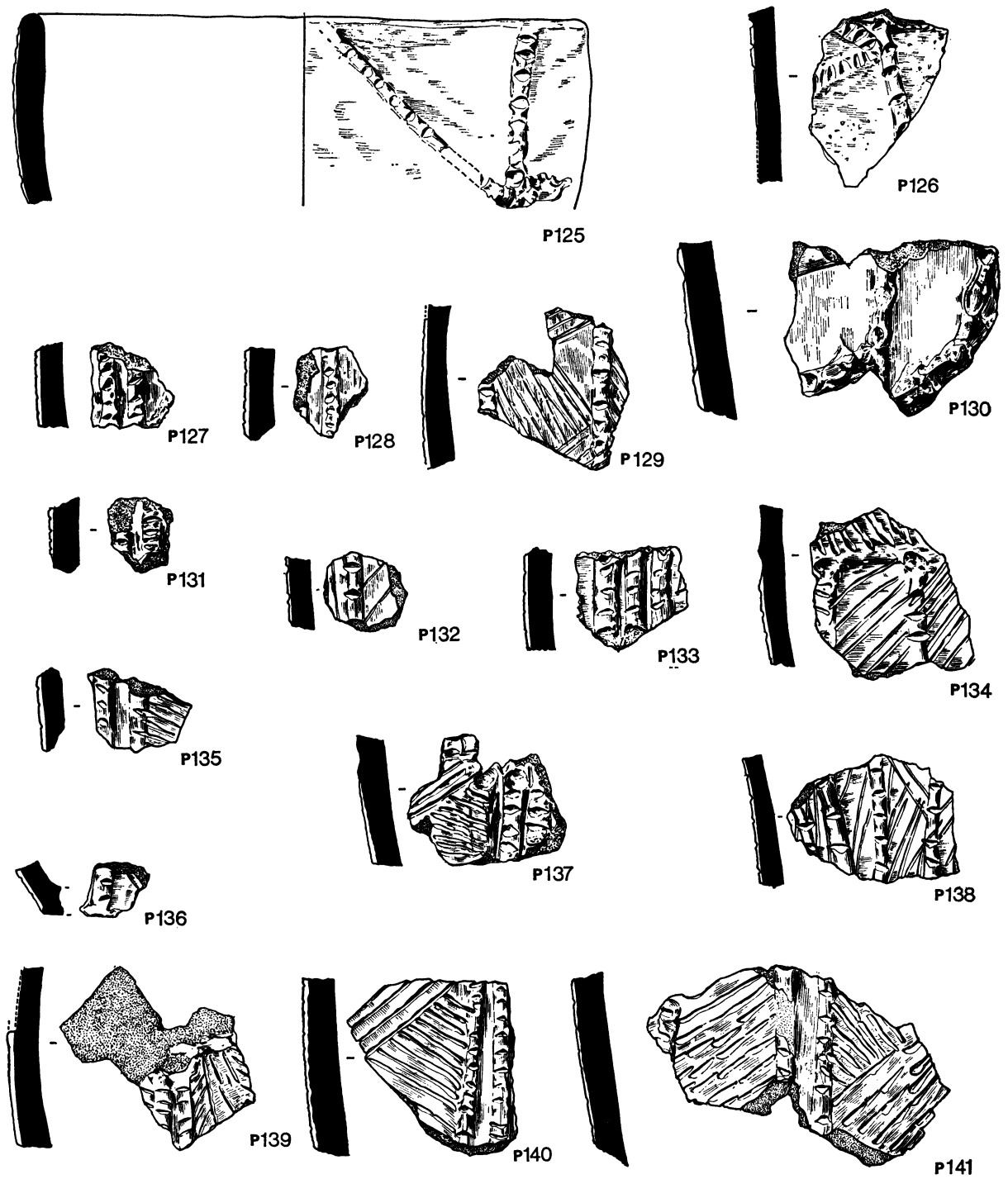


FIG. 42. Grooved Ware ($\frac{1}{3}$)

- P132 Wall sherd of fairly compact paste tempered with grit. Light brown externally, dark grey internally with encrustation.
Decoration: vertical cordon decorated with finger-tip impressions separates vertical and diagonal incised lines.
Surface of platform.
- P133 Wall sherd of compact paste tempered with a little grog and shell. Light brown externally, grey to brown internally.
Decoration: triple vertical cordon decorated with finger-nail impressions.
Post-hole 45.
- P134 Wall sherd of compact paste tempered with some grit. Grey to brown externally, brown internally.
Decoration: diagonal stab-and-drag lines above plain horizontal cordon. From this descend vertical cordons decorated with transverse strokes separating panels of diagonal grooved lines. Junction of vertical and horizontal cordons marked with finger-tip impressions.
Midden.
- P135 Wall sherd of compact paste. Brown both faces with dark grey core.
Decoration: two vertical applied cordons decorated with impressions adjoining diagonal incised lines.
Structure A.
- P136 Base angle of fairly compact paste. Brown externally, dark grey internally.
Decoration: remains of vertical applied cordon decorated with transverse impressions, and incised decoration.
Surface of platform.
- P137 Wall sherd of compact sandy paste tempered with grit and shell. Brown both faces with dark grey core.
Decoration: three applied vertical cordons. Two terminate in finger-tip impressions, two decorated with transverse impressions, while grooved opposed line decoration runs onto the third.
Post-hole 65.
- P138 Two sherds of compact paste tempered with some shell. Brown both faces with dark grey core.
Decoration: vertical cordons decorated with transverse strokes separating diagonal incised lines and incised filled triangles.
Midden.
- P139 Wall sherd of compact paste tempered with large quantity of shell. Brown to dark grey both faces. External surface largely eroded.
Decoration: remains of horizontal cordon from which descend two vertical cordons with transverse stroke ornament with incised decoration to the side.
Post-hole 19.
- P140 Wall sherd of compact paste tempered with grit. Brown both faces with grey core.
Decoration: two vertical cordons decorated with transverse strokes, and grooved opposed line motif.
Post-hole 91.
- P141 Wall sherd of compact paste tempered with some grit including flint. Light brown both faces with dark grey core.
Decoration: pairs of applied vertical cordons with transverse stroke decoration divide the vessel into vertical panels filled with diagonal stab-and-drag and filled triangle patterns.
Post-hole 99.

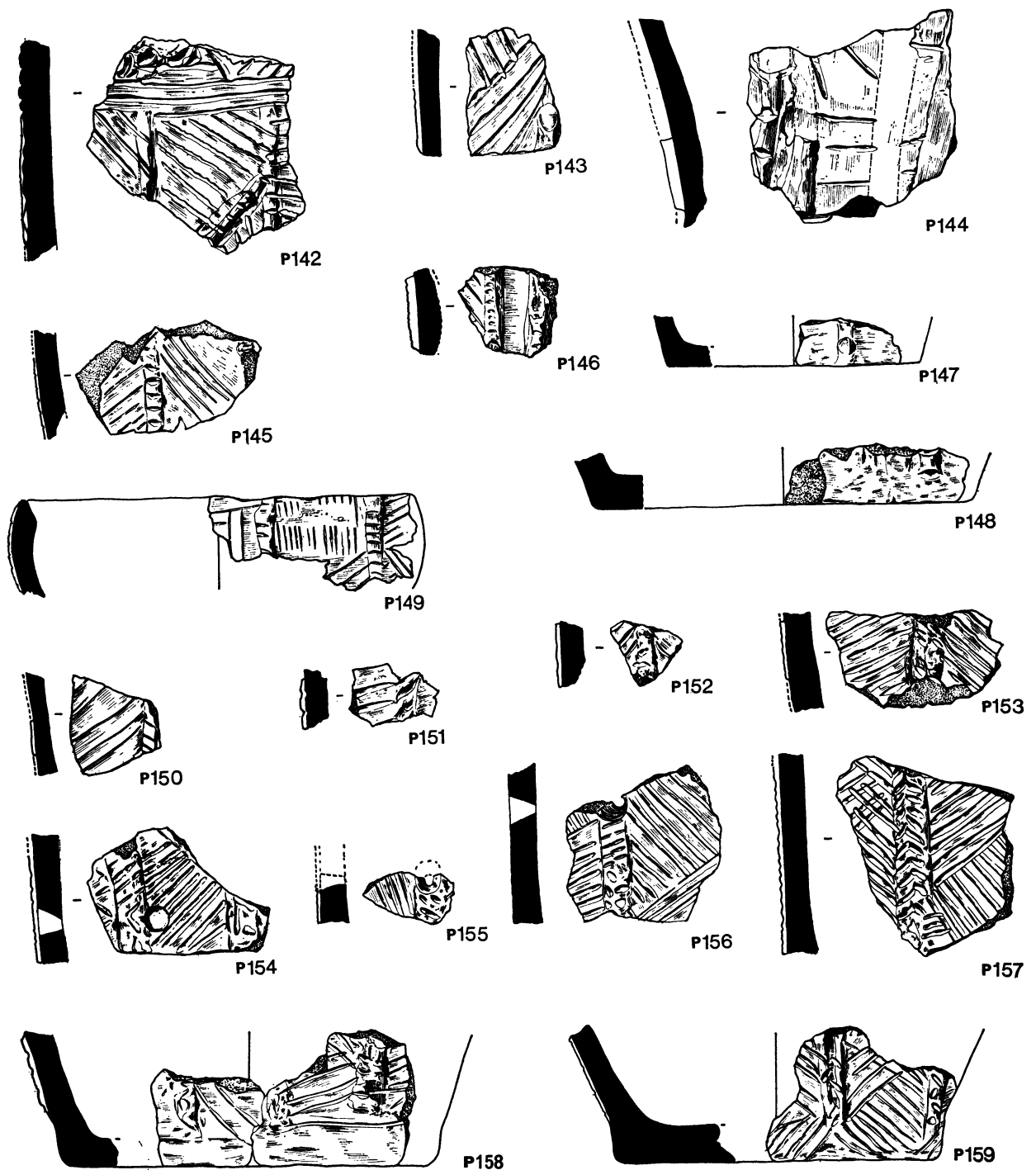


FIG. 43. Grooved Ware ($\frac{1}{3}$)

- P142 Wall sherd of compact paste tempered with some grit. Grey externally, brown internally.
 Decoration: remains of rusticated and grooved decoration above three horizontal grooves from which descend vertical cordons separating panels of diagonal grooved lines. One panel further subdivided by diagonal applied cordon.
 Post-hole 71.
- P143 Wall sherd of compact paste, red to dark grey both faces.
 Decoration: vertical cordon decorated with impressions, and grooved opposed line motif.
 Post-hole 42.
- P144 Wall sherd of soft flaky paste tempered with grog and some grit. Light brown both faces with grey core.
 Decoration: remains of pairs of applied vertical cordons, the surviving strips carrying finger-tip decoration, separate panels of widely spaced horizontal and diagonal grooved lines.
 Post-hole 50.
- P145 Wall sherd of fairly compact paste tempered with some grit. Grey to brown externally, dark grey internally.
 Decoration: vertical cordons decorated with finger-tip impressions separate groups of diagonal incised lines.
 Surface of platform.
- P146 Wall sherd of soft flaky paste tempered with grog. Light brown throughout. Internal surface lost.
 Decoration: two vertical cordons, themselves carrying impressions, and remains of incised diagonal lines.
 Post-hole 50.
- P147 Base angle of sandy paste tempered with a little grit. Brown externally, darker brown internally with grey core.
 Decoration: remains of a vertical cordon.
 Southern ditch, layer 5-6B.
- P148 Base angle of flaky paste tempered with some grit including shell. Patchy light brown to grey externally, brown to dark grey internally with encrustation.
 Decoration: remains of vertical applied cordon with transverse impressions.
 Surface of platform.
- P149 Two sherds including rim of flaky paste tempered with some grit. Brown to dark grey internally, grey externally.
 Decoration: partially obscured by encrustation. Vertical applied cordons, transversely slashed, separate groups of incised lines, some vertical, others diagonal.
 Surface of platform.
- P150 Wall sherd of compact sandy paste tempered with a little grit and shell. Light brown externally, brown internally with grey core.
 Decoration: vertical applied cordon decorated with diagonal incised strokes, adjoining diagonal incised lines.
 Southern ditch, unstratified.
- P151 Wall sherd of compact paste tempered with grit. Brown both faces with dark grey core.
 Decoration: cordon crossed by short diagonal strokes, adjoining diagonal grooves.
 Old land surface below platform.
- P152 Wall sherd of flaky paste tempered with ?grog. Brown externally, grey internally.
 Decoration: rusticated cordon separates panels of diagonal grooved lines.
 Post-hole 43.
- P153 Wall sherd of flaky paste tempered with shell. Brown both faces with grey core.

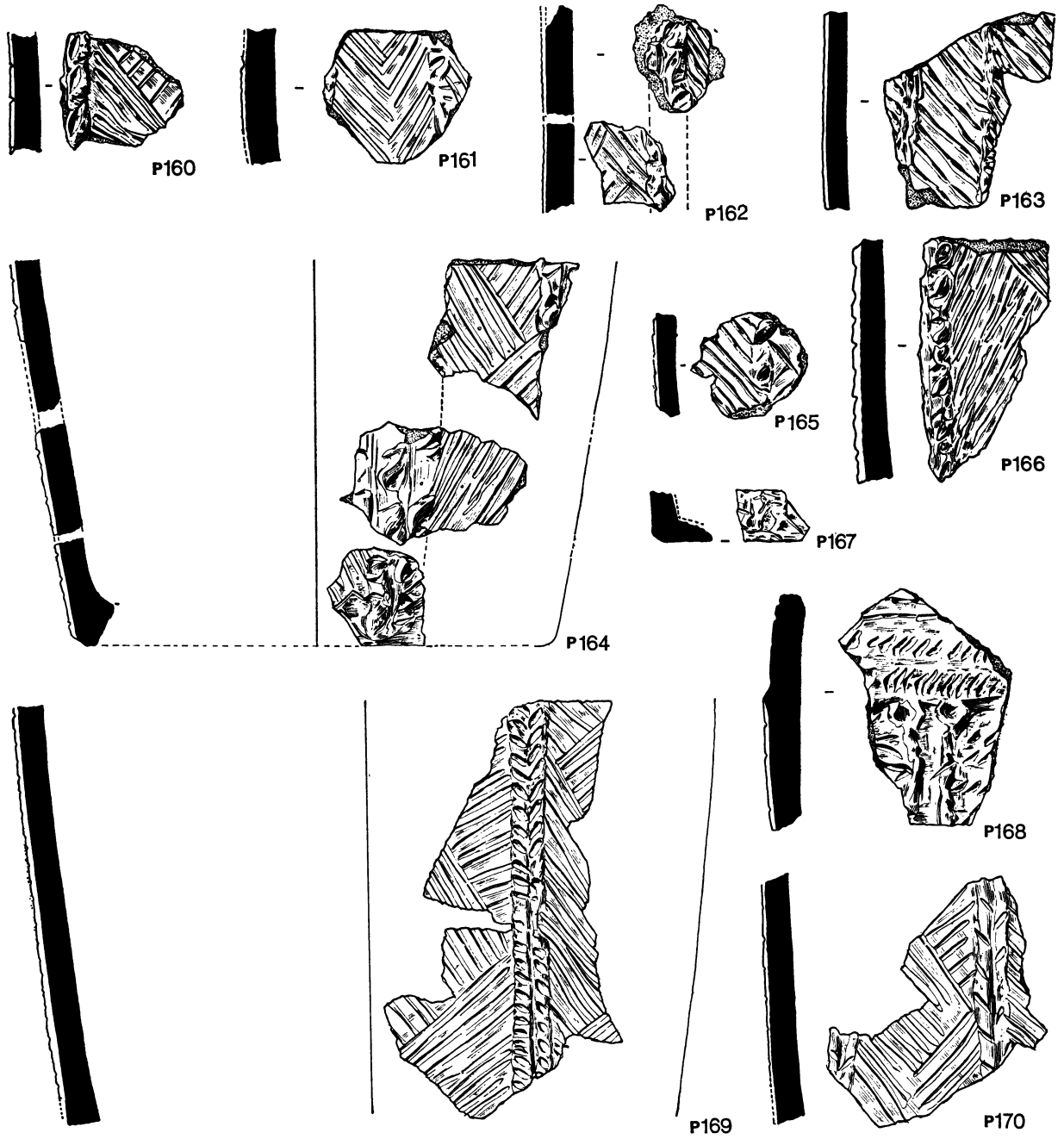


FIG. 44. Grooved Ware (3)

- Decoration: double vertical cordon decorated with diagonal strokes separates panels of diagonal grooved lines.
Post-hole 85.
- P154 Sherd of similar paste, probably from same vessel as 157. Carries binding hole.
Surface of platform.
- P155 Wall sherd of fairly compact paste tempered with grit. Light brown externally, grey internally.
Decoration: remains of vertical cordon decorated with strokes separates panels of grooved lines. Two-thirds of binding hole survive.
Surface of platform.
- P156 Wall sherd of fairly compact paste. Grey to brown externally, brown internally with dark grey core.
Decoration: vertical cordon decorated with strokes separates panels of grooved filled triangles. Two-thirds of binding hole survive.
Surface of platform.
- P157 Wall sherd of fairly compact paste tempered with grit including shell. Brown both faces with dark grey core.
Decoration: vertical cordon decorated with herringbone strokes separates panels of grooved filled triangles.
Surface of platform.
- P158 Base angle of compact paste tempered with some grit. Light brown to grey externally, brown internally with grey core.
Decoration: vertical applied rusticated cordons enclosing and separating panels of incised lines.
Surface of platform.
- P159 Two base sherds of compact paste tempered with grit including shell. Brown externally, brown to grey internally with dark grey core.
Decoration: vertical grooved applied cordons decorated with opposed diagonal strokes separate panels of incised filled triangles.
Surface of platform.
- P160 Wall sherd of fairly compact paste tempered with some grit. Brown externally, brown to grey internally.
Decoration: rusticated vertical cordon borders opposed grooved lines.
Post-hole 45.
- P161 Wall sherd of compact paste tempered with a little grit. Brown both faces with dark grey core.
Decoration: vertical rusticated cordons separate panels of vertical grooved herringbone.
Post-hole 23.
- P162 Two wall sherds of flaky paste tempered with shell and some grit. Light brown externally, dark grey internally.
Decoration: rusticated vertical cordon adjoining diagonal and opposed diagonal incised lines.
Post-hole 45.
- P163 Wall sherd of compact paste tempered with shell. Greyish brown externally, brown internally with dark grey core.
Decoration: vertical cordons separate panels of diagonal grooved lines.
Post-hole 21.
- P164 Nine sherds including base angles of vessel of sandy paste tempered with grit. Light brown to brown externally, dark grey internally.
Decoration: vertical double applied rusticated cordons separate panels of grooved line decoration.
Post-holes 21 and 22.

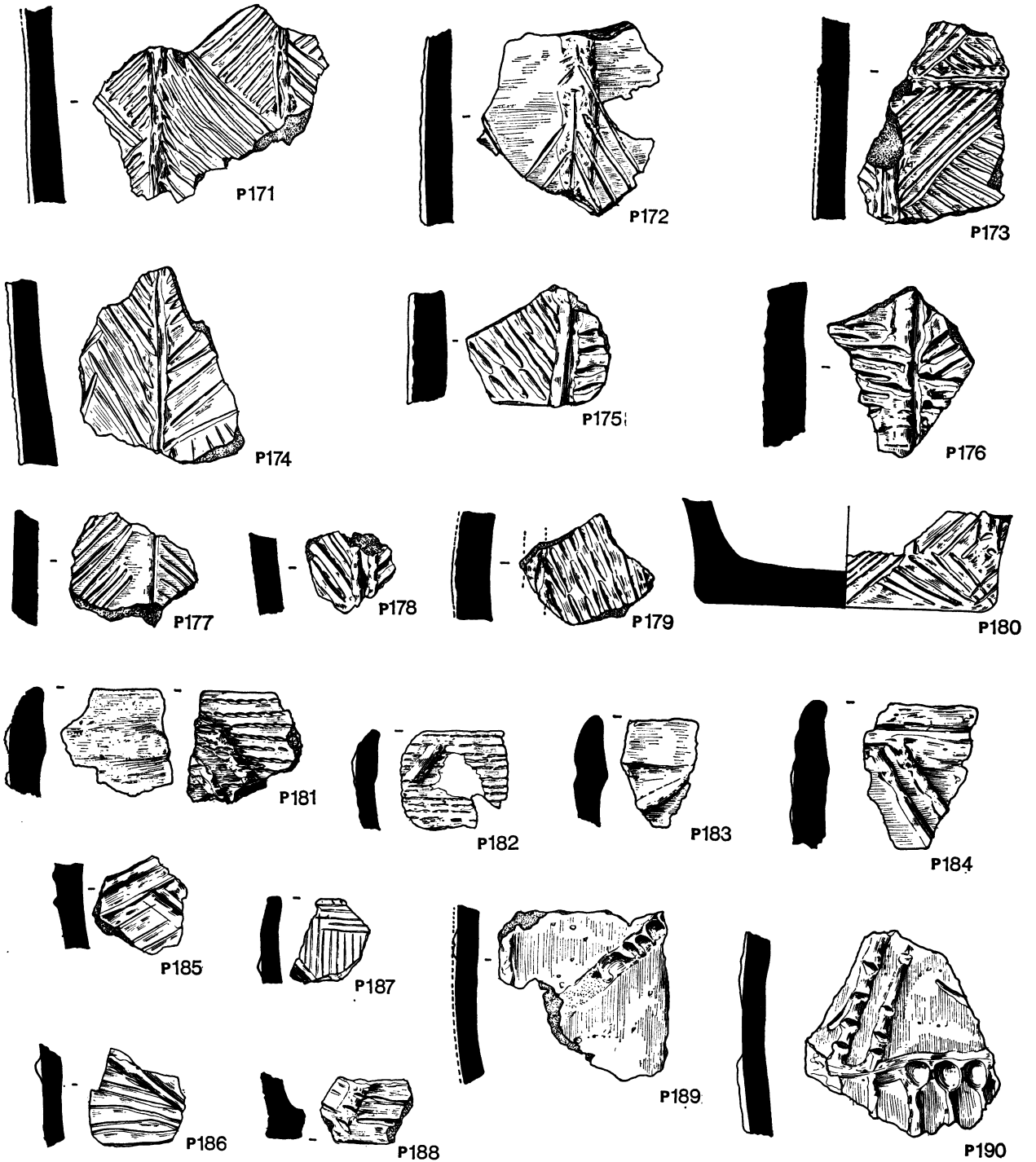


FIG. 45. Grooved Ware ($\frac{1}{3}$)

- P165 Wall sherd of flaky paste tempered with large quantity of shell. Grey externally, brown to grey internally.
Decoration: vertical applied cordon with diagonal finger print decoration separates groups of diagonal grooved lines.
Post-hole 27.
- P166 Wall sherd of fairly compact paste tempered with grits. Brown both faces with dark grey core.
Decoration: vertical finger pinched rusticated cordon with roughly executed opposed line motif.
Post-hole 85.
- P167 Base of sandy paste tempered with some grit. Brown externally, internal surface lost, grey core.
Decoration: applied double vertical rusticated cordon and diagonal incised lines.
Post-hole 22.
- P168 Wall sherd of fairly compact paste tempered with some grit. Grey to brown externally, light brown internally with dark grey core.
Decoration: horizontal grooved lines above two horizontal rows of short diagonal strokes, all above a plain cordon. From this descend two rusticated vertical cordons ending in small fingertip discs at the junction with the plain cordon. These appear to separate panels of short diagonal strokes and incised line decoration.
Pipe-trench old land surface.
- P169 Wall sherd of fairly compact paste tempered with some grit. Grey to light brown both faces with grey core.
Decoration: vertical cordon decorated with impressions, first in herringbone giving way to central groove and short diagonal impressions, separates panels of grooved filled triangles.
Surface of platform.
- P170 Wall sherd of fairly compact paste tempered with grit. Light brown externally, grey to brown internally with dark grey core.
Decoration: vertical grooved cordons decorated with opposed slashes enclose and separate grooved filled triangle patterns.
Surface of platform.
- P171 Wall sherd, probably from same vessel as P173. Brown externally, dark brown internally with dark grey core.
Decoration: grooved vertical cordons separate panels of grooved filled triangles.
Southern ditch, layer 8.
- P172 Wall sherd of soft flaky paste. Light brown externally, brown to grey internally.
Decoration: vertical cordon decorated with central groove separates groups of diagonal grooved lines.
Post-hole 45.
- P173 Wall sherd of crumbly paste tempered with some grit including chalk. Grey externally, dark brown internally with dark grey core.
Decoration: grooved filled triangles above horizontal grooved cordon from which descends vertical grooved cordon separating panels of grooved filled triangles.
Southern ditch, layer 8.
- P174 Wall sherd of compact paste tempered with some grit. Light brown both faces with dark grey core.
Decoration: vertical cordon decorated with central groove separates grooved diagonal lines and probable filled triangle pattern.
Surface of platform.
- P175 Wall sherd of compact sandy paste. Light brown externally, brown to grey internally.
Decoration: vertical grooved cordon separates deep diagonal grooved lines.
Surface of platform.

- P176 Wall sherd of compact sandy paste. Brown to grey externally, brown internally with dark grey core.
 Decoration: grooved vertical cordon separates panels of grooved lines.
 Post-hole 51.
- P177 Wall sherd of very sandy paste tempered with shell and some grit. Reddish brown both faces with grey core.
 Decoration: slight vertical cordon bordered by vertical incised line separates panels of diagonal grooves.
 Post-hole 70.
- P178 Wall sherd of compact paste. Brown both faces with dark grey core.
 Decoration: grooved cordon separates panels of diagonal grooved lines.
 Post-hole 62.
- P179 Wall sherd of fairly compact paste tempered with grit. Dark grey internally, light brown externally.
 Decoration: a vertical grooved cordon with deep diagonal grooves to one side.
 Surface of platform.
- P180 Base angle of compact paste tempered with some grit. Light brown externally, brown internally with dark grey core.
 Decoration: vertical cordons and remains of opposed grooved line decoration.
 Post-hole 23.
- P181 Rim sherd of flaky paste. Grey externally, brown internally with dark grey core. Surface smoothed.
 Decoration: horizontal twisted cord lines running onto two diagonal applied cordons.
 Surface of platform.
- P182 Rim sherd of coarse paste tempered with a large quantity of grit including quartz. Grey externally, dark grey internally.
 Decoration: remains of applied diagonal cordon flanked by discontinuous horizontal incised lines.
 Surface of platform.
- P183 Rim sherd of very coarse paste including pebbles and grog. Reddish brown externally, brown internally with dark grey core.
 Decoration: remains of a diagonal plain cordon.
 Old land surface.
- P184 Rim sherd of coarse paste tempered with coarse grits. Light brown both faces with dark grey core.
 Decoration: broad horizontal groove above a pair of diagonal plain cordons.
 Post-hole 71.
- P185 Wall sherd of fairly compact paste tempered with a little grit. Reddish brown internally, grey externally with black encrustation.
 Decoration: pairs of thin plain cordons with remains of grooved decoration in the angle.
 Southern ditch, layer 5-6B.
- P186 Wall sherd of compact sandy paste tempered with some grit. Grey externally, reddish brown internally.
 Decoration: plain cordon and diagonal grooved lines.
 Post-hole 86.
- P187 Rim sherd of compact paste. Light yellowish brown both faces with dark grey core.
 Decoration: incised horizontal and vertical lines with the remains of a diagonal plain cordon.
 Post-hole 15.

- P188 Base angle of flaky paste tempered with grit including shell. Reddish brown to grey externally, dark grey internally.
Decoration: applied diagonal cordon crossed by transverse strokes, adjoining horizontal grooved lines.
Pipe-trench old land surface.
- P189 Wall sherd of compact paste tempered with large quantity of shell. Reddish brown both faces with grey core.
Decoration: remains of vertical and diagonal cordons, the latter decorated with transverse impressions.
Post-hole 86.
- P190 Wall sherd of compact paste tempered with much shell. Yellowish brown both faces with light grey core.
Decoration: diagonal applied cordons decorated with transverse strokes and remains of diagonal grooved line motif above horizontal plain cordon, from which descend vertical applied cordons, three of which terminate at the cordon in finger-tip impressions.
Post-hole 51.
- P191 Rim sherd of compact paste. Grey to brown externally, brown internally.
Decoration: two rows of short vertical impressions above a decoration combining undecorated applied cordons, the areas between being filled with incised lines, some forming lattice pattern.
Old land surface.
- P192 Rim sherd of soft paste tempered with grit including crushed flint and shell. Reddish brown throughout.
Decoration: on top of the rim a row of round-based impressions. Externally, triangular area enclosed by cordons, themselves decorated with finger-tip impressions, is filled with diagonal incised lines. Outside the cordon on one side are the remains of round impressions.
Post-hole 49.
- P193 Rim sherd of compact paste tempered with some grit. Patchy brown to grey both faces with dark grey core.
Decoration: rows of impressions made with the end of a bone above and below a cordon, from which descends a vertical applied cordon.
Southern ditch, layer 5-6B.
- P194 Rim sherd of flaky paste tempered with shell and small grit. Black throughout.
Decoration: rows of vertical to diagonal finger-nail impressions above and below a diagonal cordon, itself decorated with finger-nail impressions.
Post-hole 44.
- P195 Rim sherd of coarse paste tempered with some shell. Grey to brown externally, light brown internally.
Decoration: internally, a row of vertical impressions on the internal edge of the rim and a second row on the edge of the rim bevel. Externally, a curvilinear applied cordon decorated with transverse impressions separates groups of lenticular impressions made with a blunt instrument.
Southern ditch, layer 6B-7.
- P196 Wall sherd of fairly compact paste tempered with shell. Patchy brown externally, grey internally with grey core.
Decoration: stab-and-drag impressions and diagonal grooved lines above and below cordon with single finger-tip decoration.
Southern ditch, layer 6B-7.

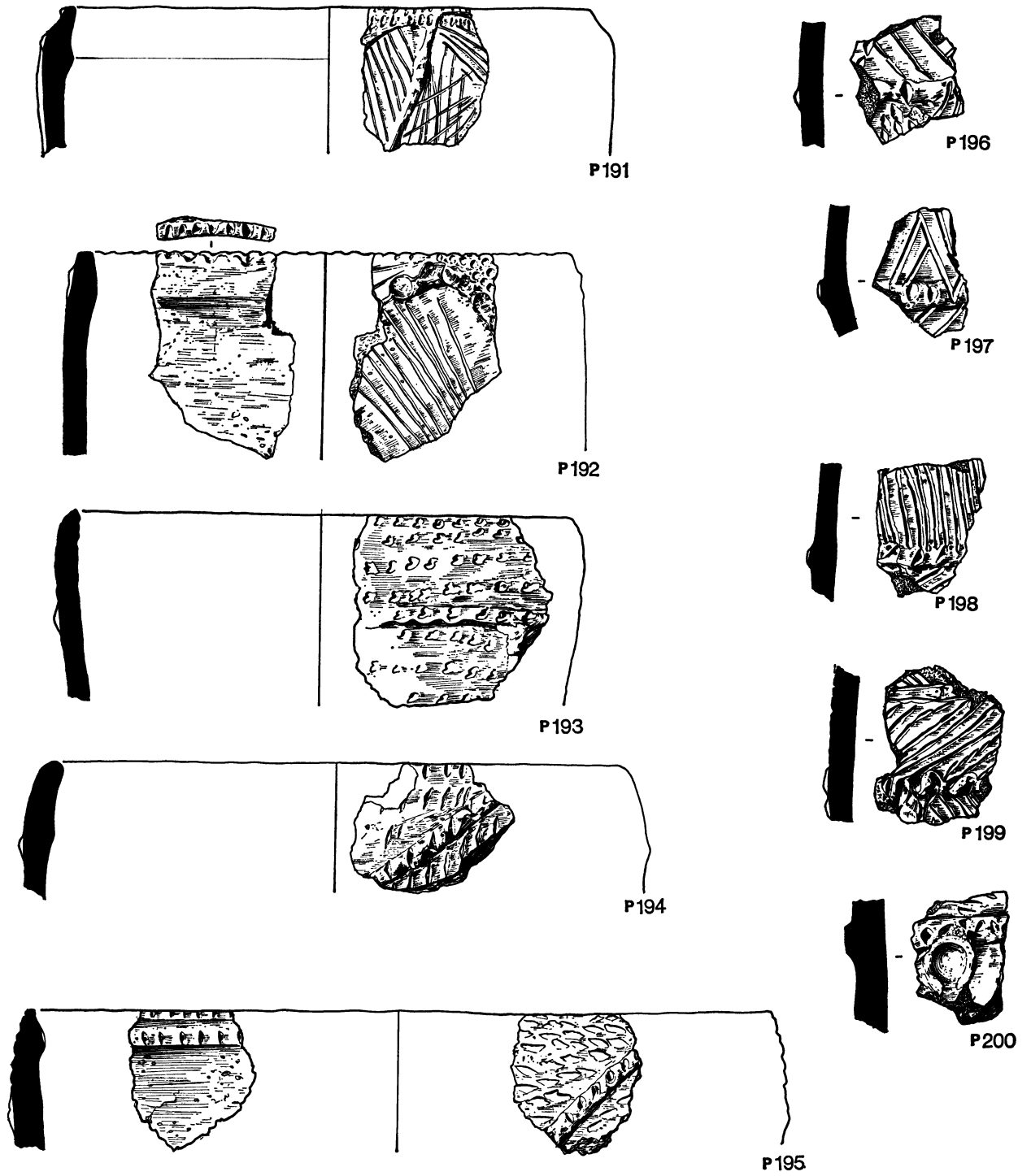


FIG. 46. Grooved Ware ($\frac{1}{3}$)

- P197 Wall sherd of flaky paste tempered with grit including shell. Grey to brown both faces.
Decoration: cordon with vertical impressions separates areas decorated with shallow grooved lines.
Post-hole 22.
- P198 Wall sherd of compact paste tempered with grit. Brown both faces with dark grey core.
Decoration: diagonal roughly executed grooved lines above horizontal cordon decorated with triangular shaped impressions. Remains of diagonal grooved lines beneath.
Midden.
- P199 Wall sherd of flaky paste tempered with grit. Grey throughout.
Decoration: a pair of grooved horizontal lines separate a group of diagonal lines above rusticated horizontal cordon from which descends a vertical cordon apparently separating further panels of incised decoration.
Post-hole 45.
- P200 Wall sherd of crumbly paste tempered with large quantity of shell. Light brown both faces with dark grey core.
Decoration: horizontal cordon decorated with impressions, beneath which is a finger-tip disc.
Post-hole 44.
- P201 Rim sherd of compact paste tempered with crushed shell. Light brown both faces with light grey core.
Decoration: grooved herringbone across applied horizontal cordon.
Midden.
- P202 Wall sherd of flaky paste tempered with fine shell. Brown externally, grey internally with grey core.
Decoration: applied plain cordon.
Pipe-trench old land surface.
- P203 Wall sherd of flaky paste tempered with large quantity of shell. Orange throughout.
Decoration: plain horizontal cordon.
Post-hole 33.
- P204 Wall sherd of fairly compact paste tempered with some shell. Brown to grey both faces.
Decoration: remains of horizontal plain cordon and opposed groups of shallow grooved lines.
Post-hole 22.
- P205 Wall sherd of compact sandy paste tempered with shell. Brown both faces with dark grey core.
Decoration: remains of horizontal and vertical applied cordons decorated with transverse strokes.
Post-hole 66.
- P206 Rim sherd of compact paste tempered with some grit. Patchy grey to brown both faces.
Decoration: irregular horizontal lines made with short horizontal impressions above panelled decoration formed by vertical and diagonal incised lines crossed by a vertical series of horizontal strokes.
Midden.
- P207 Five sherds including rim of vessel of compact paste tempered with grit including shell. Brown both faces with dark grey core.
Decoration: horizontal zones of incised filled triangles enclosed and separated by pairs, or single, horizontal incised lines, the pattern broken by vertical panels of incised filled triangles, themselves enclosed by vertical incised lines. Remains of lug scar.
Post-hole 91.
- P208 Rim sherd of compact sandy paste. Light yellowy-brown throughout.

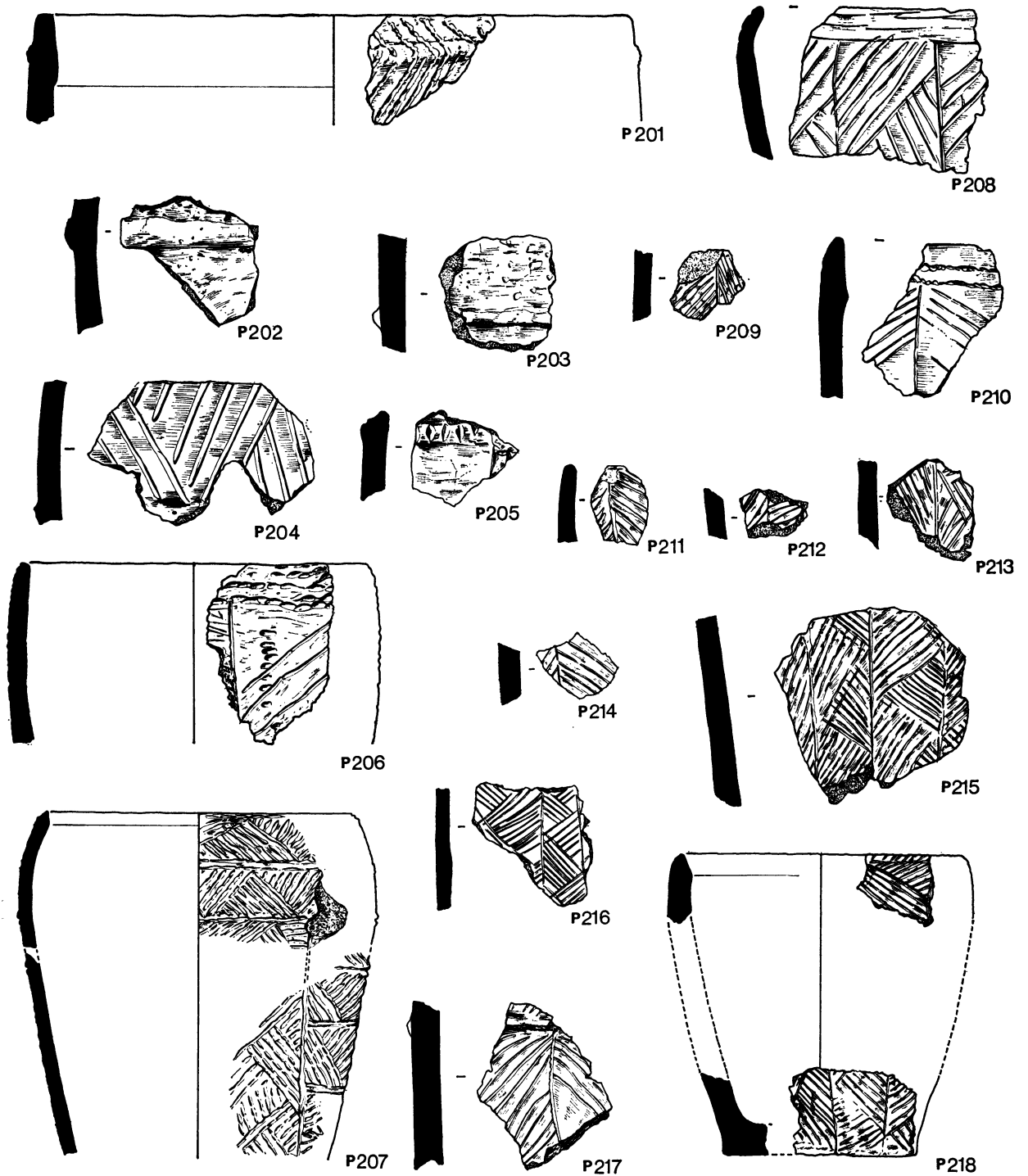


FIG. 47. Grooved Ware (1/3)

- Decoration: incised horizontal lines above panels of grooved filled triangles separated by single vertical lines.
Southern ditch, layer 5-6B.
- P209 Wall sherd of compact paste. Dark grey externally, brown internally.
Decoration: a single incised line separates groups of diagonal incised lines.
Post-hole 50.
- P210 Rim sherd of compact paste. Grey externally, patchy brown to grey internally.
Decoration: two horizontal twisted cord lines above panelled decoration formed by diagonal incised lines separated by single vertical incised line.
Southern ditch, layer 5-6B.
- P211 Wall sherd of compact paste tempered with a little shell. Reddish brown externally, greyish brown internally.
Decoration: an incised vertical line separates groups of opposed diagonal incised lines.
Post-hole 76.
- P212 Wall sherd of compact paste. Brown both faces with grey core.
Decoration: lightly incised vertical line separates diagonal lines.
Post-hole 42.
- P213 Wall sherd of flaky paste. Brown to grey externally, grey internally.
Decoration: incised opposed groups of lines probably forming panels of filled triangles separated by single vertical incised line.
Surface of platform.
- P214 Wall sherd of compact paste. Patchy grey to brown externally, grey internally with grey core.
Decoration: finely incised vertical line separating panels of diagonal lines.
Southern ditch, layer 4-5.
- P215 Wall sherd of sandy paste tempered with some grit. Brown externally, light brown internally with dark grey core. Internal surface weathered.
Decoration: vertical incised lines divide the surface into panels filled with incised filled triangles.
Old land surface below chalk packing, Circle E.
- P216 Wall sherd of compact paste tempered with grit. Light brown externally, grey to brown internally.
Decoration: finely incised filled triangle panels separated and enclosed by vertical incised lines.
Midden.
- P217 Wall sherd of flaky paste tempered with grit including grog. Brown both faces with dark grey core.
Decoration: remains of incised pattern above horizontal cordon. Beneath this, opposed incised line pattern divided by vertical incised line.
Post-hole 51.
- P218 Three sherds including rim and base angle of compact paste tempered with a little grit. Reddish brown both faces.
Decoration: short diagonal incised lines on outside edge of rim with horizontal incised line beneath, above an incised filled triangle pattern broken into panels by vertical incised lines.
Post-hole 95.
- P219 Seven sherds representing rim and upper part of vessel of compact sandy paste. Patchy grey to brown both faces.
Decoration: immediately beneath the rim finely incised horizontal lines. Beneath these, groups of opposed diagonal lines above a horizontal cordon, at one point perforated horizontally. From this descends a vertical cordon running through a continuation of the finely incised decoration.
Surface of platform.

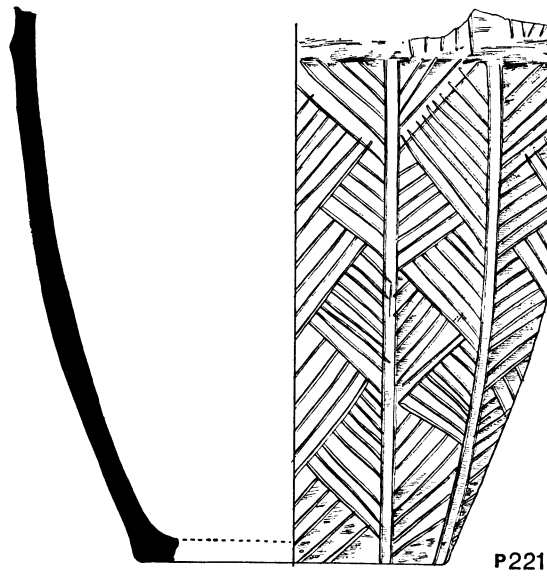
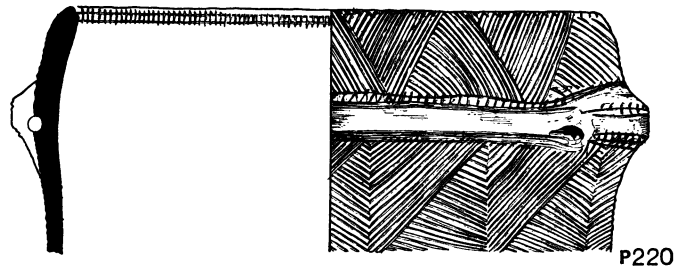
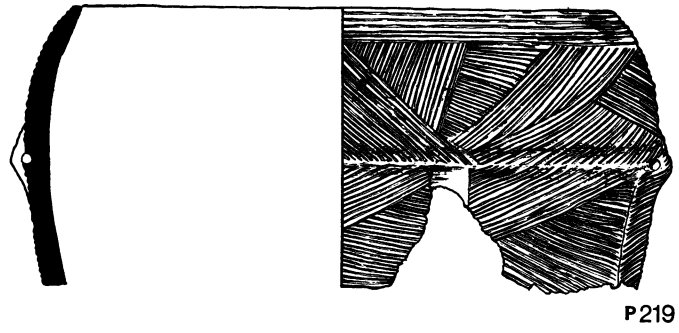


FIG. 48. Grooved Ware ($\frac{1}{3}$)

- P220 Eight sherds representing the upper part of a vessel including the rim, of compact paste. Brown both faces with dark grey core.
 Decoration: on the internal bevel short vertical strokes crossed by horizontal incised lines. Externally, immediately beneath the rim, short diagonal incised strokes above an upper zone comprising finely incised filled triangles. This terminates in horizontal incised lines crossed by short diagonal strokes. A reserved zone separates the upper decorated zone from a lower comprising a similar finely incised filled triangle and vertical herringbone pattern bordered above by horizontal incised lines. A horizontally perforated lug set at the level of the reserved zone carries incised lines crossed by short diagonal incised strokes on its upper and lower edge.
 Surface of platform.
- P221 Twenty-six sherds from the lower parts of a vessel of compact paste tempered with grit including grog. Reddish brown both faces with dark grey core.
 Decoration: remains of incised panel decoration above horizontal cordon. Body decorated with vertical panels of incised filled triangles separated and enclosed by double vertical incised lines.
 Midden.
- P222 Eighteen sherds from rim, body and base of vessel of sandy paste. Brown externally to dark grey-brown internally with dark grey core.
 Decoration: confined to zone immediately beneath the rim of roughly horizontal incised lines with fringe of diagonal stabbed impressions beneath.
 Post-hole 91.
- P223 Two rim sherds of compact paste. Patchy grey to brown externally, brown to black internally with dark grey core.
 Decoration: three incised horizontal lines above groups of opposed diagonal incised lines and multiple incised lozenge pattern, separated from a second zone of similar groups of opposed incised lines by a single horizontal incised line.
 Post-holes 42 and 65.
- P224 Two sherds including rim of compact paste tempered with shell. Light yellowish brown throughout.
 Decoration: incised pendant filled triangles beneath the rim. A second sherd shows opposed incised groups of lines and remains of plain cordon.
 Post-hole 44.
- P225 Rim sherd of compact paste tempered with some grit. Brown throughout.
 Decoration: externally, diagonally incised lines.
 Post-hole 70.
- P226 Four sherds including rim of sandy paste. Black to brown externally, dark brown to black internally.
 Decoration: on the external rim bevel, short diagonal incised lines. On the external wall surface, diagonal incised lines, in part made by stab-and-drag technique, above two horizontal lines in stab-and-drag with beginnings of diagonal lines beneath.
 Post-holes 22 and 85.
- P227 Rim sherd of compact paste. Light brown both faces with light grey core. Very heavily weathered.
 Decoration: horizontal lines externally, internally diagonal incised lines. Encrustation of decoration ? fortuitous.
 Midden.
- P228 Two sherds of flaky paste tempered with grit including shell. Brown to black externally, brown internally with dark grey core. On the surface black encrustation.
 Decoration: on the rim a row of jabbed impressions. Beneath the rim externally, horizontal and diagonal incised lines.
 Post-holes 22 and 23.

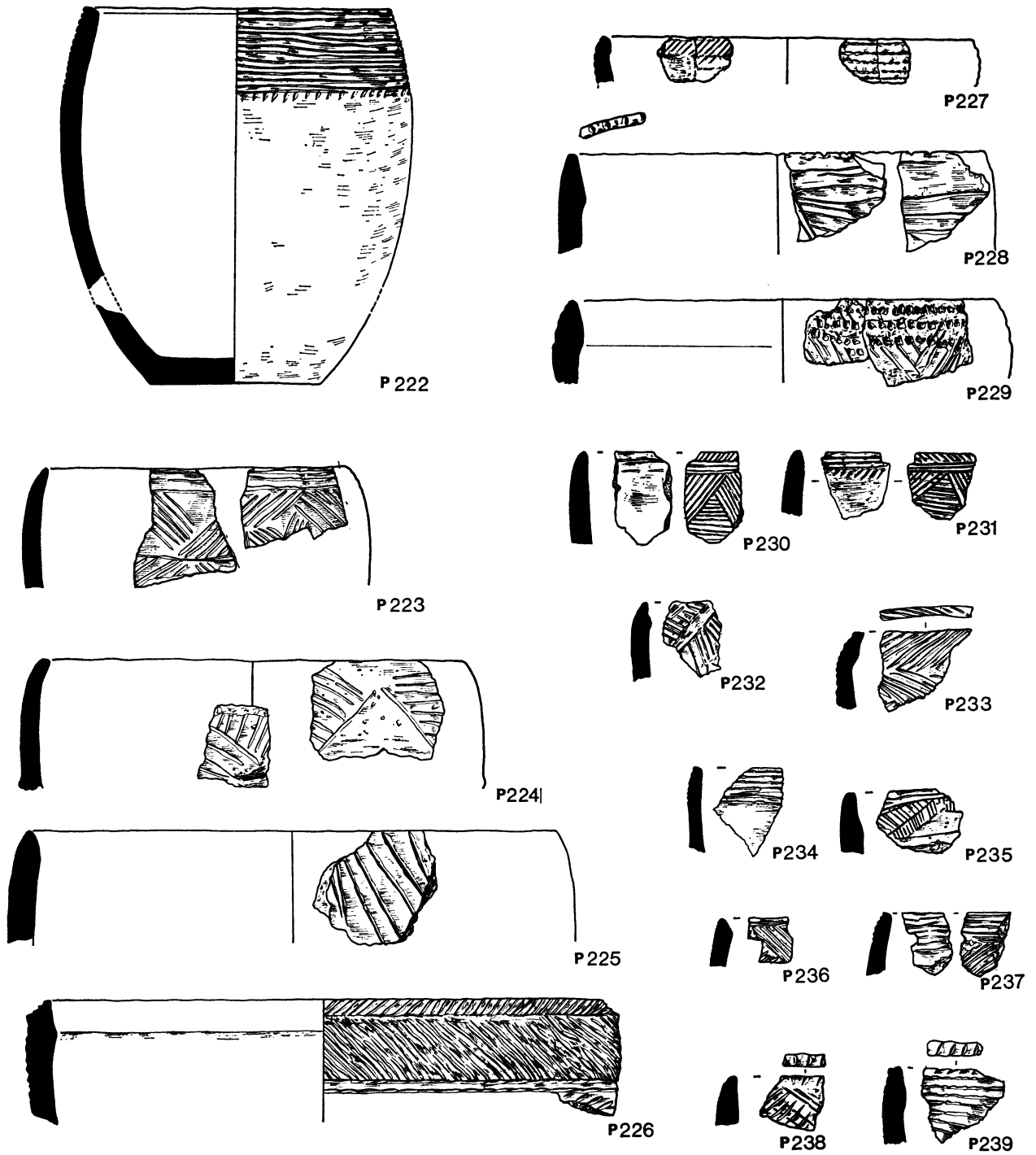


FIG. 49. Grooved Ware ($\frac{1}{8}$)

- P229 Rim sherd of hard compact sandy paste. Light brown both faces with dark grey core.
Decoration: three horizontal lines made with the end of a bone or twig, above incised opposed groups of lines.
Midden.
- P230 Rim sherd of compact sandy paste. Greyish brown externally, grey internally.
Decoration: short diagonal incised lines above horizontal incised lines with incised filled triangles beneath. Internally, discontinuous horizontal incised lines.
Structure A.
- P231 Rim sherd of compact sandy paste tempered with a little grit. Patchy grey to brown both faces with grey core.
Decoration: internally, horizontal incised lines above short diagonal incised lines. Externally, short incised diagonal lines above horizontal lines with incised filled triangles beneath.
Structure A.
- P232 Rim sherd of compact sandy paste. Dark grey externally to grey brown internally.
Decoration: a complex incised pattern includes a diagonal incised ladder pattern separated from diagonal incised lines by diagonal reserved band.
Southern ditch, layer 6B-7.
- P233 Rim sherd of compact paste tempered with some shell. Grey to brown externally, grey internally.
Decoration: incised herringbone.
Southern ditch, layer 5-6B.
- P234 Rim sherd of compact sandy paste. Light brown externally to brown internally with grey core.
Decoration: horizontal incised lines immediately beneath the rim.
Southern ditch terminal, layer 5.
- P235 Rim sherd of compact paste tempered with much fine grit. Patchy greyish brown both faces with grey core.
Decoration: finely incised triangular pattern filled with incised split herringbone between incised horizontal lines.
Post-hole 50.
- P236 Rim sherd of compact sandy paste. Light brown both faces with dark grey core.
Decoration: incised horizontal lines above filled triangle pattern.
Surface of platform.
- P237 Rim sherd of sandy paste. Dark grey externally, reddish brown internally with dark grey core.
Decoration: externally a zone of horizontal incised lines above diagonal incised lines. Internally a zone of horizontal incised lines.
Post-hole 42.
- P238 Rim sherd of compact paste. Brown externally, grey internally.
Decoration: a row of jabbed impressions on top of the rim above incised filled triangles.
Surface of platform.
- P239 Rim sherd of compact paste tempered with some grit. Dark grey throughout.
Decoration: on top of the rim, short diagonal strokes. On the external surface diagonal incised lines.
Surface of platform.
- P240 Rim sherd of sandy paste tempered with grit. Grey throughout.
Decoration: remains of short diagonal incised stroke on the rim. Externally, remains of incised horizontal and diagonal lines probably part of a filled triangle decoration.
Surface of platform.
- P241 Rim sherd of flaky paste. Brown externally, yellow internally with dark grey core.
Decoration: diagonal incised lines.
Post-hole 45.



FIG. 50. Grooved Ware (1/3)

- P242 Rim sherd of compact sandy paste. Grey externally, brown internally.
 Decoration: remains of incised filled triangle pattern.
 Surface of platform.
- P243 Rim sherd of compact paste tempered with some grit. Light brown throughout.
 Decoration: lightly incised diagonal lines.
 Surface of platform.
- P244 Rim sherd of flaky paste tempered with some large grits. Grey throughout.
 Decoration: diagonal incised lines.
 Old land surface.
- P245 Rim sherd of sandy paste. Grey throughout.
 Decoration: incised herringbone.
 Surface of platform.
- P246 Rim sherd of crumbly paste tempered with shell. Patchy greyish brown externally, light brown internally with grey core.
 Decoration: immediately beneath the rim a single horizontal incised line, with remains of diagonal line and incised triangular pattern beneath.
 Post-hole 50.
- P247 Rim sherd of flaky paste tempered with a little grit including grog. Brown externally, reddish brown internally.
 Decoration: rather faint. Groups of diagonal incised lines.
 Midden.
- P248 Rim sherd of compact paste. Light brown both faces with dark grey core. Surface smoothed.
 Decoration: on the rim short diagonal strokes. Externally a series of parallel diagonal incised lines.
 Post-hole 23.
- P249 Two rim sherds of compact sandy paste. Grey externally, brown internally with dark grey core.
 Decoration: incised horizontal lines above filled triangle pattern.
 Old land surface.
- P250 Rim sherd of soft flaky paste tempered with a little grit. Yellow throughout.
 Decoration: remains of diagonal above vertical incised lines.
 Midden.
- P251 Rim sherd of compact sandy paste. Brown externally, grey internally.
 Decoration: on the internal surface two grooved horizontal lines. Externally incised horizontal line above opposed diagonal incised lines.
 Northern circle.
- P252 Rim sherd of compact paste tempered with grit. Brown throughout.
 Decoration: short diagonal incised strokes.
 Surface of platform.
- P253 Rim sherd of soft flaky paste tempered with some grit. Grey throughout.
 Decoration: remains of incised horizontal lines above diagonal incised line.
 Post-hole 50.
- P254 Rim sherd of flaky paste. Reddish brown.
 Decoration: externally, remains of incised lines.
 Post-hole 47.
- P255 Rim sherd. Grey throughout.
 Decoration: remains of diagonal incised lines.
 Surface of platform.

- P256 Rim sherd of compact paste. Grey throughout.
 Decoration: two incised lines beneath the rim internally.
 Midden.
- P257 Rim sherd of compact paste. Grey to brown both faces with grey core. Much of external surface lost.
 Decoration: horizontal incised line just beneath the rim.
 Post-hole 23.
- P258 Rim sherd of compact paste. Dark grey externally, grey brown internally with dark grey core.
 Decoration: a zone of horizontal incised lines above the beginnings of diagonal opposed incised lines.
 Post-hole 42.
- P259 Rim sherd of compact paste. Dark grey externally, brown internally with dark grey core.
 Decoration: deeply incised discontinuous horizontal lines above remains of chevron pattern in the same technique.
 (Probably same vessel as No. 260.)
 Post-hole 70.
- P260 Rim sherd of sandy paste. Grey to brown externally, brown internally with dark grey core.
 Decoration: zone of roughly horizontal, discontinuous, deeply incised lines beneath the rim above lightly incised diagonal lines.
 Post-hole 50.
- P261 Rim sherd of coarse paste tempered with some grit. Grey throughout.
 Decoration: incised horizontal lines.
 Surface of platform.
- P262 Rim sherd of flaky paste tempered with a little grog. Grey throughout. Much of internal surface lost.
 Decoration: irregular horizontal incised strokes.
 Southern ditch, layer 5-6B.
- P263 Rim sherd of compact paste. Brown both faces with dark grey core.
 Decoration: a row of short vertical incised lines at the rim with the beginnings of incised horizontal lines $1\frac{1}{4}$ in. beneath the rim.
 Post-hole 42.
- P264 Rim sherd of soft sandy paste. Orange throughout.
 Decoration: a single horizontal line on the internal surface beneath the rim, and externally the remains of a single oval impression.
 Post-hole 16.
- P265 Rim sherd of compact paste. Reddish brown internally, grey externally with grey core.
 Decoration: internally, a single horizontal incised line, externally, two horizontal incised lines.
 Surface of platform.
- P266 Rim sherd of compact sandy paste. Light brown both faces with dark grey core.
 Decoration: remains of incised horizontal lines.
 Occupation earth.
- P267 Rim sherd of flaky paste. Grey throughout.
 Decoration: remains of incised diagonal lines.
 Surface of platform.
- P268 Rim sherd of compact paste tempered with shell. Light brown both faces with grey core.
 Decoration: roughly horizontal incised lines.
 Post-hole 86.

- P269 Rim sherd of compact sandy paste. Grey externally, reddish brown internally.
Decoration: remains of diagonal grooved lines beneath opposed diagonal incised line.
Surface of platform.
- P270 Rim sherd of sandy paste. Brown externally, dark grey internally with dark grey core.
Decoration: short diagonal incised lines enclosed between horizontal lines.
Surface of platform.
- P271 Rim sherd of compact sandy paste. Grey throughout.
Decoration: a row of short diagonal incised strokes enclosed above by one, beneath by two horizontal lines above a plain zone. Below this a row of incised diagonal strokes beneath a single horizontal line.
Surface of platform.
- P272 Rim sherd of compact sandy paste. Grey externally, brown internally with grey core.
Decoration: remains of horizontal incised lines.
Surface of platform.
- P273 Rim sherd of compact paste. Brown both faces with dark grey core.
Decoration: horizontal incised lines.
Occupation earth.
- P274 Rim sherd of flaky paste. Reddish brown throughout.
Decoration: externally, faint traces of horizontal lines.
Midden.
- P275 Rim sherd of flaky paste tempered with some shell. Brown both faces with dark grey core.
Decoration: externally, incised horizontal lines.
Post-hole 50.
- P276 Rim sherd of hard compact grey paste.
Decoration: rough horizontal scored lines.
Post-hole 40.
- P277 Wall sherd of flaky paste tempered with shell. Reddish brown externally, light brown internally with grey core.
Decoration: remains of lightly incised opposed lines.
Post-hole 71.
- P278 Wall sherd of fairly compact paste. Grey externally, light brown internally.
Decoration: incised horizontal lines above a row of finger-tip rustication.
Old land surface beneath bank.
- P279 Wall sherd of compact paste tempered with a little grit. Reddish brown externally, grey internally.
Decoration: incised filled lozenge pattern.
Post-hole 90.
- P280 Wall sherd of compact paste tempered with grit and grog. Light brown externally, grey internally with dark grey core.
Decoration: opposed incised lines.
Post-hole 26.
- P281 Wall sherd of fairly compact paste tempered with some grit. Light brown externally, grey internally.
Decoration: two vertical incised lines separate panels of irregular vertical and diagonal incised lines.
Southern ditch, layer 5-6B.
- P282 Wall sherd of fairly compact paste tempered with grit including grog. Reddish brown to grey externally, reddish brown internally.

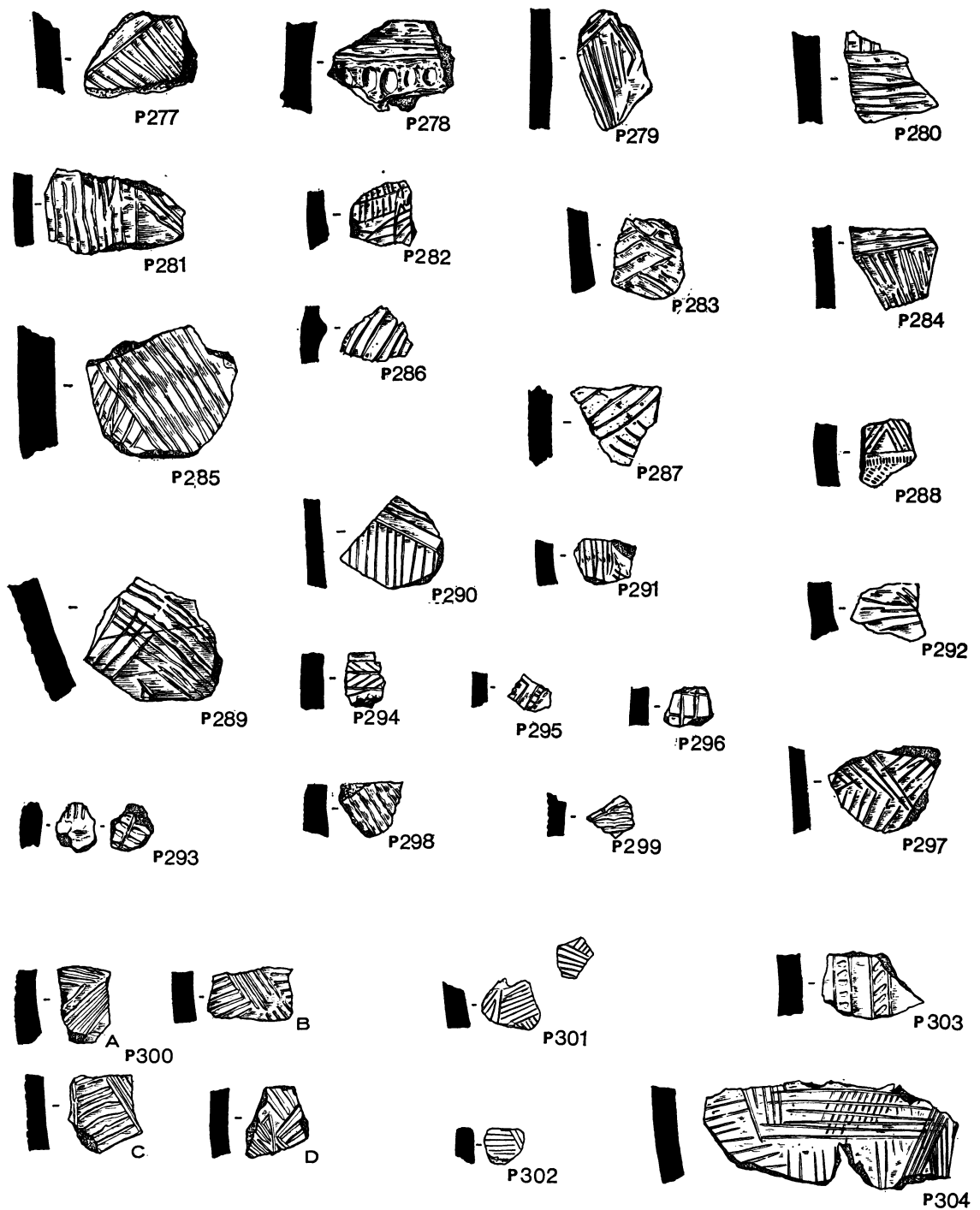


FIG. 51. Grooved Ware (1/3)

- Decoration: finely incised irregularly placed diagonal lines filled with short transverse incised lines.
Surface of platform.
- P283 Wall sherd of sandy paste, reddish brown externally, brown internally with grey core. Surface weathered.
Decoration: remains of incised filled triangle pattern.
Post-hole 92.
- P284 Wall sherd of compact paste tempered with some grit. Grey to brown externally, brown internally.
Decoration: opposed diagonal incised lines.
Surface of platform.
- P285 Wall sherd of compact paste tempered with some grit. Brown externally, light brown internally with dark grey core.
Decoration: groups of incised opposed lines.
Post-hole 141.
- P286 Fragmentary rim sherd of flaky paste. Grey externally, brown internally.
Decoration: diagonal incised lines.
Surface of platform.
- P287 Wall sherd of crumbly paste tempered with a little grit. Brown both faces with dark grey core.
Decoration: opposed groups of diagonal incised lines.
Structure A.
- P288 Two wall sherds of compact sandy paste. Reddish brown to brown both faces with dark grey core.
Decoration: multiple incised triangles above horizontal incised line with short incised strokes beneath.
Surface of platform.
- P289 Wall sherd of flaky paste tempered with grog. Patchy brown to grey both faces with dark grey core.
Decoration: irregular opposed diagonal incised lines.
Post-hole 50.
- P290 Wall sherd of compact paste tempered with grit. Brown both faces with dark grey core.
Decoration: opposed diagonal incised lines.
Surface of platform.
- P291 Wall sherd of compact paste tempered with some grit. Reddish brown both faces with dark grey core.
Decoration: finely incised lines.
Surface of platform.
- P292 Wall sherd of compact paste, light orangey-brown both faces with grey core.
Decoration: lightly incised opposed line motif.
Post-hole 85.
- P293 Fragment of rim of compact sandy paste. Grey throughout.
Decoration: internally, short diagonal incised lines. Externally, diagonal incised line separates diagonal impressions.
Structure A.
- P294 Wall sherd of fairly compact paste tempered with shell. Brown externally, light brown internally with dark grey core.
Decoration: horizontal incised lines enclosing short opposed diagonal incised lines.
Post-hole 50.

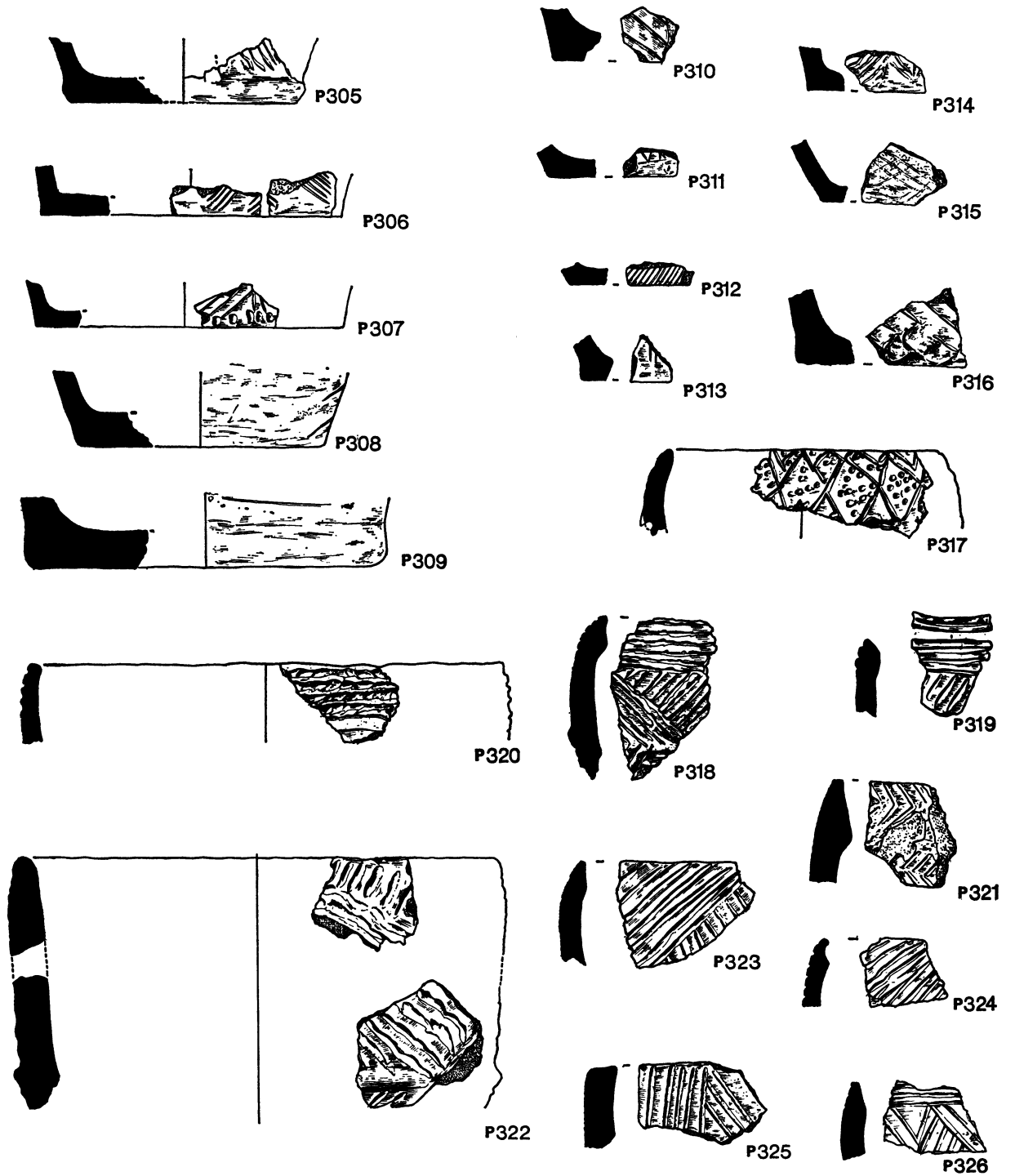


FIG. 52. Grooved Ware ($\frac{1}{8}$)

- P295 Small fragment of wall of compact paste tempered with grit. Brown both faces with grey core. Decoration: finely incised chevron pattern, the space between one pair being filled with short transverse strokes.
Post-hole 50.
- P296 Wall sherd of compact paste. Reddish brown throughout. Decoration: opposed incised lines.
Structure A.
- P297 Wall sherd of compact paste tempered with grit. Brown externally, brown to grey internally. Decoration: opposed incised lines.
Surface of platform.
- P298 Wall sherd of sandy paste. Grey both faces. Decoration: incised lines.
Post-hole 95.
- P299 Wall sherd of compact paste. Reddish brown throughout. Decoration: appears to be the remains of an incised filled triangle pattern.
Structure A.
- P300 a-d Four wall sherds of fairly compact paste tempered with a little grit. Brown both faces with grey core. Decoration: opposed groups of incised lines apparently forming panels separated by single vertical incised lines.
Surface of platform.
- P301 Two wall sherds, possibly from the same pot, of compact sandy paste tempered with a little grit. Very weathered. Orange both faces with light grey core. Decoration: remains of opposed groups of lightly incised lines.
Surface of platform.
- P302 Small wall sherd of compact sandy paste. Orange throughout. Weathered. Decoration: groups of finely incised opposed lines.
Surface of platform.
- P303 Wall sherd of fairly compact paste. Greyish brown externally, dark grey internally. Decoration: vertical incised lines, alternate pairs filled with horizontal and diagonal strokes.
Surface of platform.
- P304 Wall sherd of compact paste tempered with large quantity of fine grit including grog. Grey to brown internally, light brown externally. Decoration: groups of opposed fine incised lines, some to form a chevron pattern.
Southern ditch, layer 5-6B.
- P305 Base angle of flaky paste. Light brown to grey externally, grey internally. Remains of diagonal incised lines. Possible grain impression.
Southern ditch, layer 5-6B.
- P306 Two fragments of base angle of compact paste. Light brown externally, dark grey internally with encrustation. Surface well smoothed. Decoration: remains of finely incised diagonal lines.
Post-hole 45.
- P307 Base angle of compact paste tempered with a little grit. Grey externally, brown internally. Decoration: remains of fine diagonal and vertical incised lines above a row of jabbed impressions just above the base angle.
Pipe-trench old land surface.
- P308 Base angle of flaky paste. Brown externally, brown to dark grey internally with encrustation. Remains of diagonal incised lines.
Surface of platform.

- P309 Base angle of compact paste tempered with some grit. Light brown both faces with grey core. Remains of incised decoration.
Southern ditch, layer 6B-7.
- P310 Base angle of compact sandy paste with some grits. Reddish brown externally, grey internally. Remains of diagonal incised decoration.
Surface of platform.
- P311 Base angle of compact sandy paste tempered with fine grit. Grey externally, reddish brown internally with grey core. Remains of incised decoration.
Occupation earth.
- P312 Base angle of compact paste tempered with a little grit. Light brown both faces with grey core. Decoration: finely incised diagonal lines.
Post-hole 70.
- P313 Base angle of compact sandy paste. Brown externally, grey internally with encrustation. Remains of incised decoration.
Surface of platform.
- P314 Base angle of sandy paste tempered with much grit. Brown externally, internal surface weathered. Grey core.
Decoration: opposed groups of incised lines.
Midden.
- P315 Base angle of compact sandy paste, light brown externally, dark grey internally with encrustation. Surface weathered. Remains of incised decoration.
Surface of platform.
- P316 Two fragments of base angle of fairly compact paste tempered with grit including shell. Brown externally, grey to reddish brown internally.
Decoration: remains of diagonal incised lines with a row of jabbed impressions on the base angle.
Post-hole 21.
- P317 Rim sherd of compact paste. Reddish brown to grey externally, grey internally. Surface smoothed.
Decoration: immediately beneath the rim, a roughly grooved chevron pattern above a lozenge pattern, the enclosed spaces filled with dots. Remains of horizontal perforation through the wall.
Southern ditch, layer 5-6B.
- P318 Rim sherd of compact paste. Grey to brown both faces with dark grey core.
Decoration: a zone of incised horizontal lines above incised filled triangles is separated from further incised decoration by a horizontal cordon.
Surface of platform.
- P319 Rim sherd of compact sandy paste. Orange throughout.
Decoration: a single horizontal groove on the top of the rim, and externally three horizontal grooves above diagonal grooved lines.
Post-hole 42.
- P320 Rim sherd of compact paste tempered with some grit. Grey to brown both faces with grey core. Decoration: on the rim, short transverse incised strokes. Externally, horizontal grooved lines.
Midden.
- P321 Rim sherd of sandy paste. Reddish brown externally, light brown internally with dark grey core. Heavily weathered.
Decoration: externally, remains of grooved herringbone pattern.
Post-hole 23.
- P322 Five sherds including rim of compact sandy paste tempered with some grog. Dark grey externally, brown internally with dark grey core.

- Decoration: coarse grooved opposed diagonal lines, combined in one sherd with a plain horizontal cordon.
Post-hole 68.
- P323 Rim sherd of coarse paste tempered with some grit. Grey externally, brown to grey internally.
Decoration: grooved filled triangles.
Surface of platform.
- P324 Rim sherd of crumbly paste. Greyish brown externally, brown internally with dark grey core.
Decoration: diagonal grooved lines.
Surface of platform.
- P325 Rim sherd of compact paste tempered with small quantity of very fine shell. Dark grey externally, light brown internally.
Decoration: opposed diagonal grooved lines.
Old land surface beneath platform.
- P326 Rim sherd of compact sandy paste tempered with some large grits. Grey externally, grey to reddish brown internally with grey core.
Decoration: horizontal grooved lines above a filled triangle pattern.
Surface of platform.
- P327 Rim sherd of compact paste tempered with some grit. Light brown both faces with light grey core.
Decoration: externally, horizontal grooves above a row of deep jabbed impressions.
Midden.
- P328 Rim sherd of compact coarse paste tempered with grog. Dark grey to brown externally, brown internally with dark grey core.
Decoration: externally, remains of horizontal grooved lines, internally, impressions immediately beneath the rim.
Midden.
- P329 Rim sherd of flaky paste tempered with grit including shell. Dark grey to red externally, yellow internally with grey core.
Decoration: externally weathered. Appears to be horizontal grooved line above beginnings of ?chevron. Internally, four horizontal grooved lines.
Midden.
- P330 Rim sherd of compact paste tempered with a little grit. Grey to brown both faces with grey core.
Decoration: internally, a single grooved line, externally, widely spaced vertical finger-nail impressions above horizontal grooved lines.
Post-hole 50.
- P331 Rim sherd of crumbly paste tempered with some grit. Grey to brown externally, internal surface eroded.
Decoration: externally, diagonal grooved lines.
Surface of platform.
- P332 Rim sherd of fairly compact paste tempered with grog. Light brown externally, brown internally with dark grey core.
Decoration: remains of horizontal grooved lines externally. Internally, surface weathered but appears to have had a row of impressions probably made with the end of a stick or bone.
Midden.
- P333 Rim sherd of compact sandy paste. Grey throughout. External surface eroded.
Decoration: remains of horizontal grooved lines externally, crossed by impressions.
Iron Age palisade.



FIG. 53. Grooved Ware (1/3)

- P334 Rim sherd of compact sandy paste tempered with a little grit. Yellow both faces with light grey core.
Decoration: internally, irregular horizontal grooved lines, externally, horizontal grooved lines.
Midden.
- P335 Rim sherd of flaky paste. Grey externally, brown internally.
Decoration: remains of opposed diagonal grooved lines.
Southern ditch, layer 5-6B.
- P336 Rim sherd of sandy paste. Grey externally, brown internally with grey core.
Decoration: remains of horizontal grooved lines.
Surface of platform.
- P337 Rim sherd of flaky paste. Yellowy-orange throughout.
Decoration: remains of diagonal grooved lines externally.
Post-hole 139.
- P338 Rim sherd of compact paste. Light brown both faces with dark grey core.
Decoration: externally and internally, horizontal grooved lines.
Post-hole 77.
- P339 Two rim sherds of fairly compact paste tempered with fine grit. Brown both faces with grey core.
Decoration: a row of impressions made with the end of a bone above grooved horizontal lines with remains of diagonal lines beneath.
Surface of platform.
- P340 Rim sherd of flaky paste. Brown externally, grey internally.
Decoration: a row of short vertical impressions above horizontal grooved lines.
Surface of platform.
- P341 Rim sherd of coarse paste. Grey externally, brown internally.
Decoration: remains of grooved lines externally.
Surface of platform.
- P342 Rim sherd tempered with a little grit. Grey throughout.
Decoration: remains of two horizontal grooved lines on the external surface.
Surface of platform.
- P343 Rim sherd of compact paste. Light brown both faces with dark grey core.
Decoration: internally, two horizontal grooved lines. Externally, surface mainly lost, but remains of applied decoration.
Post-hole 58.
- P344 Rim sherd of sandy paste. Brown externally, dark brown internally with grey core.
Decoration: remains of incised/grooved filled triangles.
Surface of platform.
- P345 Rim sherd of compact paste tempered with some large grits including flint. Grey externally, brown internally with dark grey core.
Decoration: horizontal above diagonal grooves.
Iron Age palisade.
- P346 Rim sherd of compact sandy paste. Grey externally, brown internally.
Decoration: remains of opposed diagonal grooved lines probably part of a filled triangle pattern.
Surface of platform.
- P347 Rim sherd of sandy paste. Grey externally, brown internally with dark grey core.
Decoration: remains of diagonal grooved lines.
Surface of platform.
- P348 Rim sherd of fairly compact paste tempered with some grit. Grey both faces with reddish brown core.

- Decoration: diagonal grooved lines.
Southern ditch, layer 8.
- P349 Rim sherd of compact sandy paste. Grey throughout.
Decoration: internally, horizontal grooved lines. Externally, horizontal to diagonal incised lines.
Surface of platform.
- P350 Rim sherd of flaky paste. Grey throughout.
Decoration: irregular diagonal grooved lines.
Southern ditch, unstratified.
- P351 Rim sherd of compact sandy paste. Grey externally, brown internally.
Decoration: two grooved lines beneath the rim.
Surface of platform.
- P352 Rim sherd of compact sandy paste. Brown externally, brown to grey internally, with grey core.
Decoration: internally, remains of two horizontal grooved lines crossed by short diagonal incised lines, externally, remains of horizontal grooved lines.
Surface of platform.
- P353 Rim sherd of flaky paste. Brown to grey externally, dark grey internally.
Decoration: horizontal above diagonal grooves.
Southern ditch, layer 5-6B.
- P354 Rim sherd of sandy paste. Light brown both faces with dark grey core.
Decoration: heavily eroded. Remains of horizontal grooved lines externally and internally.
Surface of platform.
- P355 Rim sherd of compact sandy paste. Brown both faces with dark grey core.
Decoration: on the internal surface three horizontal grooved lines.
Post-hole 51.
- P356 Rim sherd of compact paste tempered with some grit. Light brown throughout.
Decoration: on top of the rim and on external surface, horizontal grooves.
Post-hole 50.
- P357 Rim sherd of compact paste. Dark grey throughout.
Decoration: remains of two grooved lines on external surface.
Surface of platform.
- P358 Rim sherd of compact sandy paste tempered with some grit. Grey throughout.
Decoration: a row of diagonal impressions enclosed above by one and beneath by two horizontal lines.
Surface of platform.
- P359 Rim sherd of light brown paste tempered with grog.
Decoration: two grooved lines on internal rim bevel. Remains of horizontal grooved lines on the external surface.
Southern ditch, layer 6B-7.
- P360 Rim sherd of sandy paste. Reddish brown both faces with grey core.
Decoration: externally, a series of horizontal grooved lines.
Post-hole 51.
- P361 Rim sherd of compact paste tempered with a little grit. Light brown throughout. Heavily weathered.
Decoration: largely eroded. Appears to be horizontal grooved lines externally, short horizontal strokes internally.
Surface of platform.

- P362 Rim sherd of compact sandy paste. Greyish brown externally, brown internally with dark grey core.
Decoration: remains of diagonal grooved herringbone.
Surface of platform.
- P363 Rim sherd of coarse paste tempered with some grog. Grey to brown externally, brown internally.
Remains of impressed decoration above beginnings of grooved line externally.
Surface of platform.
- P364 Rim sherd of compact sandy paste. Brown both faces with grey core.
Decoration: remains of horizontal grooved lines on internal and external surface.
Surface of platform.
- P365 Wall sherd of flaky paste tempered with some shell. Grey externally, brown internally.
Decoration: grooved herringbone.
Old land surface beneath platform.
- P366 Wall sherd of coarse but compact paste. Grey internally, brown externally.
Decoration: grooved opposed short diagonal lines.
Post-hole 22.
- P367 Wall sherd of flaky paste, light brown to grey externally, grey internally.
Decoration: incised herringbone above light finger-pinched rustication.
Southern ditch, layer 6B-7.
- P368 Wall sherd of compact sandy paste, brown externally, greyish brown internally with dark grey core.
Decoration: opposed grooved lines.
Post-hole 20.
- P369 Wall sherd of fairly compact paste tempered with a little grit, orange throughout.
Decoration: externally, grooved horizontal lines above beginnings of grooved vertical lines.
Old land surface beneath northern bank.
- P370 Six small fragments of wall of crumbly paste, reddish brown externally, dark grey internally.
Decoration: remains of grooved lines.
Old land surface beneath northern bank.
- P371 Wall sherd of fairly compact paste tempered with grit including grog. Grey externally, light brown internally.
Decoration: horizontal grooves above a row of stabbed impressions.
Midden.
- P372 Base angle of sandy paste with some grit. Brown externally, grey core, internal surface lost.
Remains of horizontal grooved lines.
Southern ditch, layer 8.
- P373 Wall sherd of compact paste, brown externally, grey internally.
Decoration: remains of whipped cord lines.
Post-hole 56.
- P374 Rim sherd of flaky paste tempered with shell. Light brown both faces with dark grey core.
Decoration: single horizontal twisted cord line.
Midden.
- P375 Rim sherd of compact sandy paste tempered with large grits. Brown throughout. Surface smoothed.
Decoration: on the rim, short transverse strokes. Internally, short vertical strokes. Externally, two horizontal twisted cord lines above short diagonal strokes cutting into finely incised filled triangle pattern.
Surface of platform.

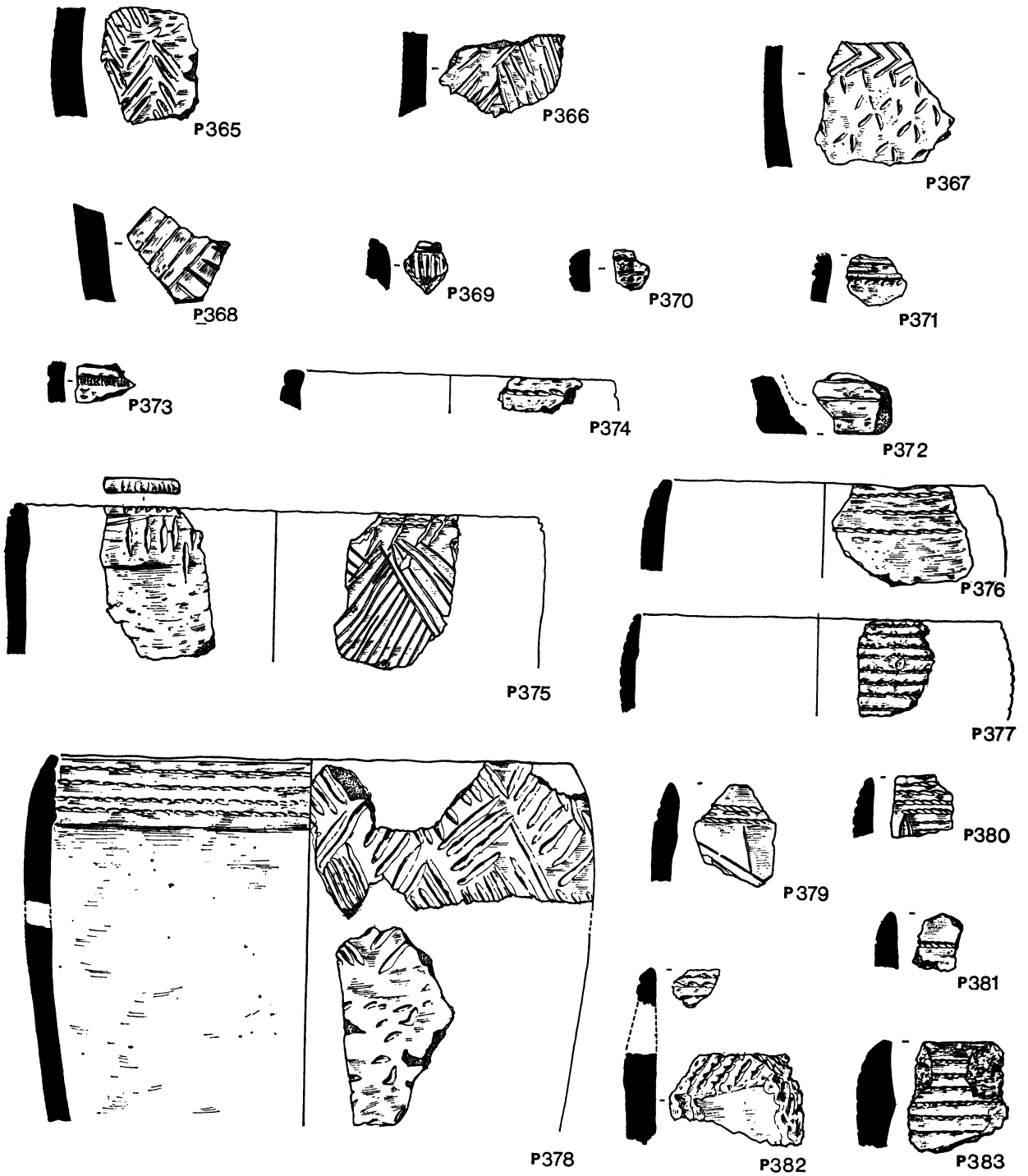


FIG. 54. Grooved Ware ($\frac{1}{3}$)

- P376 Rim sherd of compact paste. Brown externally, black internally.
Decoration: below the rim, three horizontal twisted cord lines.
Post-hole 90.
- P377 Rim sherd of flaky paste tempered with grit including grog. Reddish brown to grey externally, reddish brown internally with dark grey core.
Decoration: horizontal twisted cord lines.
Midden.
- P378 Two sherds including rim of a vessel of coarse paste tempered with a little grit. Patchy red and grey both faces with dark grey core. Surface smoothed.
Decoration: on the internal bevel of the rim, four horizontal twisted cord lines. Beneath the rim a roughly applied grooved filled lozenge pattern gives way lower down the wall to finger-pinched decoration.
Pipe-trench old land surface.
- P379 Rim sherd of flaky paste tempered with grit. Dark grey to brown internally, grey externally.
Decoration: two to three horizontal twisted cord lines above vertical and diagonal incised lines.
Southern ditch, layer 5-6B.
- P380 Rim sherd of compact paste. Greyish brown both faces.
Decoration: horizontal twisted cord lines above and against the beginnings of an incised triangular pattern.
Post-hole 23.
- P381 Rim sherd of sandy paste tempered with some grit. Grey externally, brown internally with grey core.
Decoration: remains of twisted cord lines.
Southern ditch, layer 5-6B.
- P382 Three sherds including rim of compact paste tempered with some grog. Light brown externally, light brown to grey internally with dark grey core.
Decoration: beneath the rim remains of horizontal twisted cord lines. On wall remains of twisted cord filled triangle pattern above remains of ?applied vertical cordons.
Post-hole 100.
- P383 Rim sherd of compact paste tempered with some grit. Grey externally, light brown internally.
Decoration: horizontal twisted cord lines.
Southern ditch, layer 5-6B.
- P384 Rim sherd of compact paste tempered with shell. Patchy brown both faces.
Decoration: internally, a zone of roughly horizontal twisted cord lines. Externally, horizontal plain applied cordons.
Midden.
- P385 Fragment of rim of fairly compact paste. Brown internally with grey core.
Decoration: on top of the rim, remains of diagonal incised lines. Internally, horizontal twisted cord lines.
Post-hole 23.
- P386 Rim sherd of compact paste. Grey throughout.
Decoration: remains of two twisted cord lines on the internal surface.
Southern ditch, layer 5-6B.
- P387 Two sherds including rim of soft flaky paste. Brown both faces with dark grey core.
a-b Decoration: externally, twisted cord impressions.
Post-hole 61.
- P388 Rim sherd of sandy paste tempered with crushed shell. Reddish brown externally, red to grey internally.

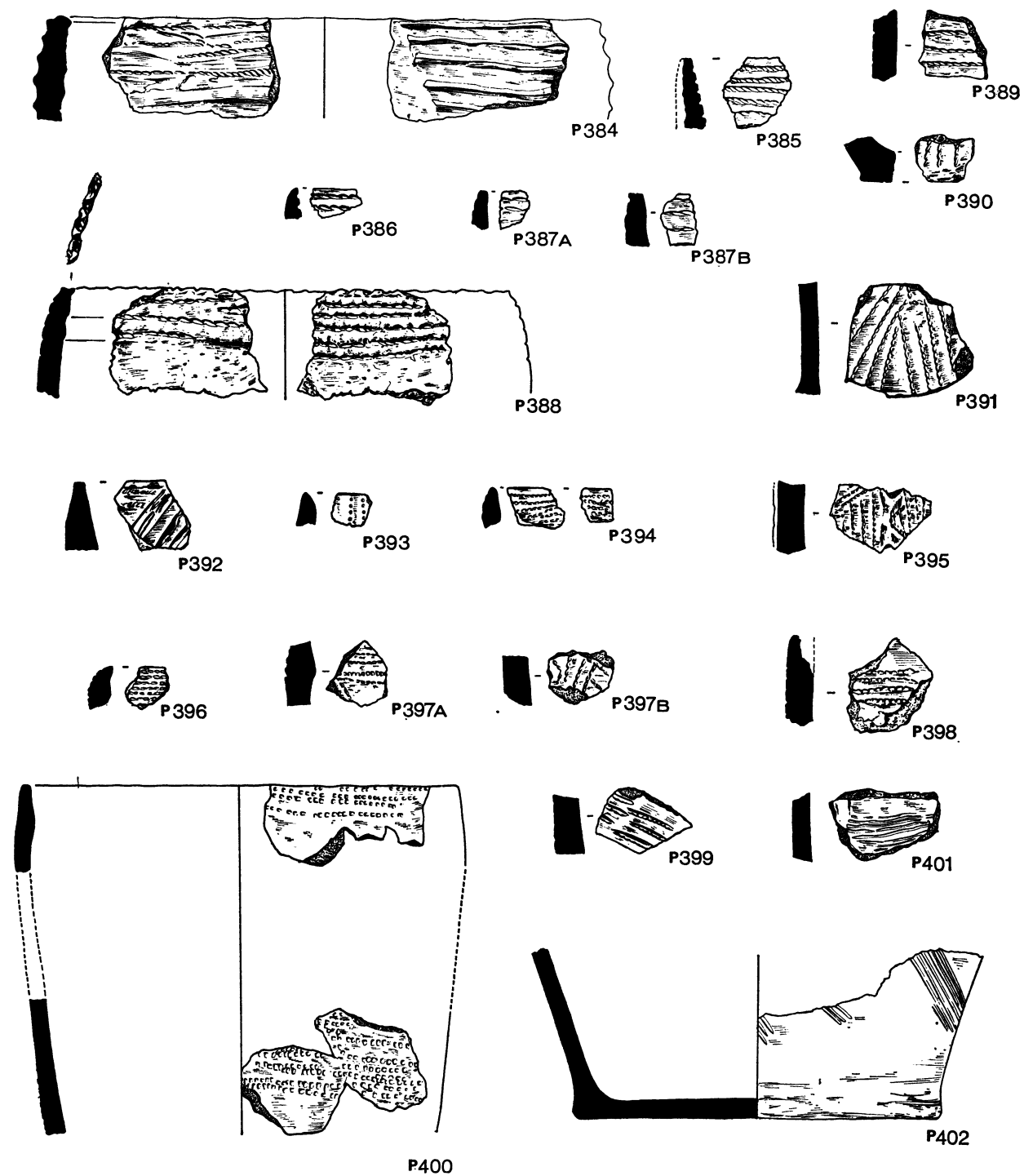


FIG. 55. Grooved Ware (1/3)

Decoration: on top of the rim, diagonal impressions. Externally, beneath the rim six horizontal twisted cord lines. Internally, three horizontal twisted cord lines.

Midden.

- P389 Wall sherd of flaky paste tempered with grit including crushed burnt flint. Grey to brown externally, light brown internally.

Decoration: twisted cord lines.

Post-hole 38.

- P390 Base angle of sandy paste tempered with grit. Brown externally, dark grey internally with encrustation.

Decoration: remains of vertical twisted cord lines.

Post-hole 47.

- P391 Wall sherd of sandy paste tempered with large quantity of shell. Patchy grey to brown externally, brown internally with grey core.

Decoration: opposed diagonal twisted cord lines above remains of cordon.

Midden.

- P392 Rim sherd of compact paste tempered with some flint. Brown both faces with dark grey core.

Decoration: diagonal grooved lines roughly executed, opposed to blurred horizontal lines of ?toothed impressions.

Post-hole 22.

- P393 Rim sherd of flaky paste. Brown both faces with dark grey core.

Decoration: vertical lines of impressions made with a round-toothed comb.

Post-hole 48.

- P394 Two rim sherds of crumbly paste. Grey throughout.

Decoration: horizontal to diagonal lines made with a ?toothed comb.

Post-hole 84.

- P395 Wall sherd of fairly compact paste tempered with a little grit. Orange both faces with dark grey core.

Decoration: cordon separates areas decorated with lines made with a rectangular toothed comb.

Post-hole 23.

- P396 Rim sherd of flaky paste. Grey externally, brown internally.

Decoration: remains of horizontal point-toothed comb lines.

Surface of platform.

- P397 Two wall sherds probably from same vessel of crumbly paste tempered with some grit. Brown a-b both faces with dark grey core.

Decoration: remains of rectangular toothed comb lines.

Surface of platform.

- P398 Wall sherd of flaky paste. Orange throughout.

Decoration: lines made with a coarse toothed comb.

Post-hole 44.

- P399 Wall sherd of compact paste. Grey externally, brown internally.

Decoration: short lines made with a rectangular toothed comb.

Surface of platform.

- P400 Eleven sherds including rim of vessel of compact paste. Grey to brown externally, orange to brown internally with dark grey core.

Decoration: beneath the rim, horizontal lines made with a blunt round-toothed comb and further horizontal lines in the same technique on the body.

Midden.

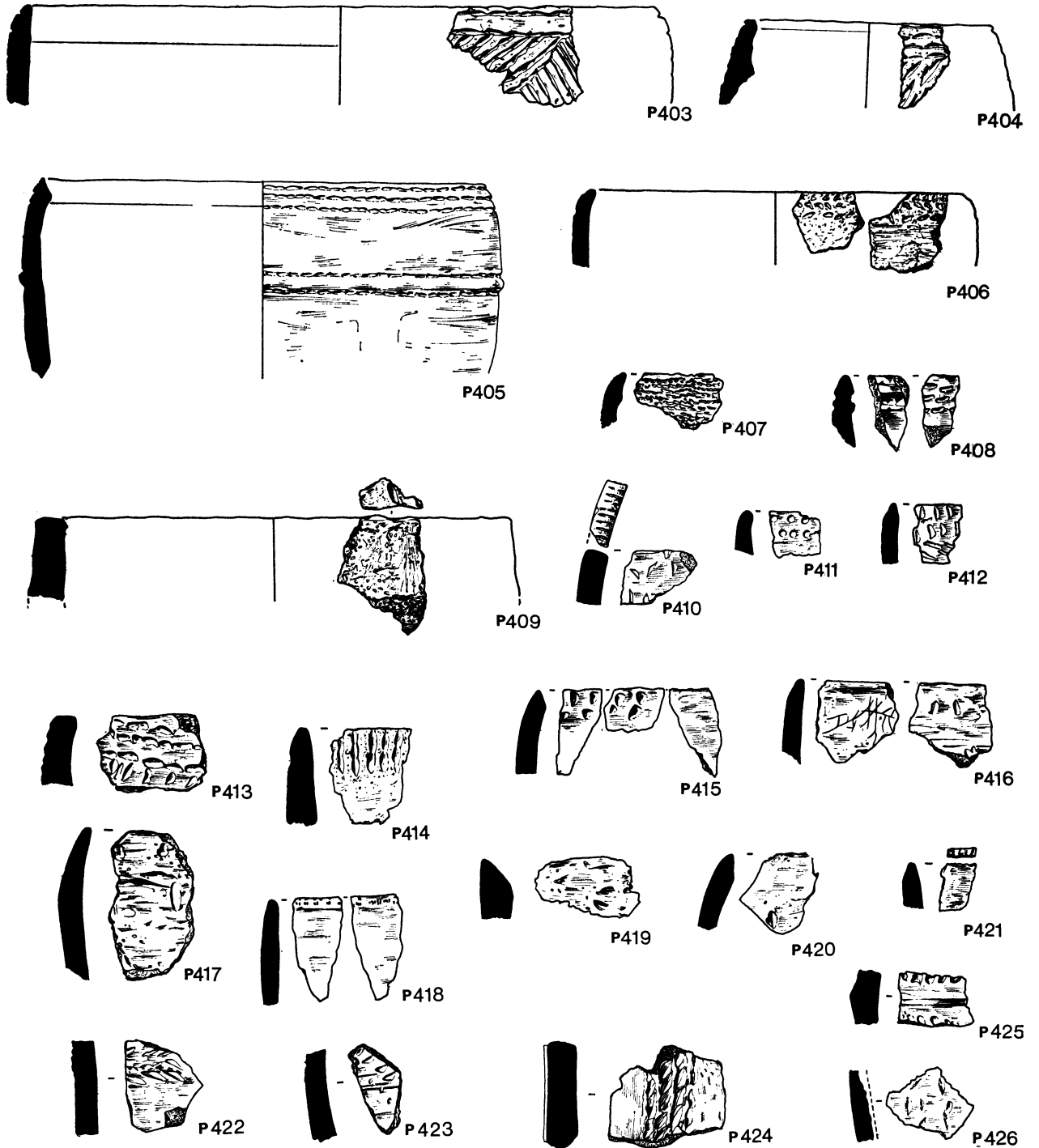


FIG. 56. Grooved Ware (3)

- P401 Wall sherd of compact paste tempered with grit. Orange both faces. Surface smoothed.
Decoration: remains of groups of slightly curved lines probably made with a comb.
Post-hole 22.
- P402 Three sherds comprising lower part and base of vessel of compact paste tempered with grits.
Light brown throughout. Surface smoothed.
Decoration: apparently by a comb, consists of groups of parallel incised lines.
Post-hole 45 and Midden.
- P403 Two rim sherds of compact paste tempered with crushed shell. Brown both faces with dark grey core.
Decoration: two stab-and-drag lines above remains of filled triangle pattern in same technique.
Midden.
- P404 Rim sherd of compact paste. Dark grey to brown both faces.
Decoration: four lines of short horizontal impressions above diagonal lines of similar impressions.
Post-hole 139.
- P405 Three rim sherds of flaky paste. Dark grey to black throughout.
Decoration: immediately beneath the rim, three to four horizontal stab-and-drag lines. Single horizontal stab-and-drag lines enclose a plain horizontal cordon 2 in. beneath the rim.
Post-holes 71 and 90.
- P406 Two rim sherds of compact paste tempered with grog and a little grit. Reddish brown to grey both faces with dark grey core.
Decoration: three rows of jabbed impressions just beneath the rim.
Midden.
- P407 Two rim sherds of compact sandy paste. Grey throughout.
Decoration: appears to have been made with a pointed implement to form irregular horizontal to diagonal stab-and-drag lines.
Surface of platform.
- P408 Rim sherd of coarse paste tempered with grit. Grey to brown both faces with grey core.
Decoration: internally, single grooved line between slight raised cordons: externally, rows of impressions, probably made with the end of a bone.
Post-hole 90.
- P409 Rim sherd of compact paste tempered with much fine crushed shell. Light brown both faces with dark grey core.
Decoration: on top of the rim, one finger-tip impression survives.
Midden.
- P410 Rim sherd of compact sandy paste. Brown externally, light brown internally with dark grey core.
Decoration: on top of the rim and externally, finger-nail impressions.
Post-hole 44.
- P411 Rim sherd of hard compact paste. Grey throughout.
Decoration: two rows of end-of-bone/stick impressions.
Post-hole 76.
- P412 Two rim sherds of flaky paste tempered with a little grit. Grey to brown externally, grey internally.
Decoration: two rows of vertical impressions above diagonal impressions made probably with the end of a bone.
Surface of platform.
- P413 Three sherds including rim of flaky paste tempered with grit including shell. Brown both faces with dark grey core.

- Decoration: three roughly horizontal lines of end to end impressions made with a blunt tool above the beginnings of diagonal lines made with the same implement.
Post-hole 27.
- P414 Rim sherd of flaky paste tempered with shell. Patchy brown externally, brown internally with grey core.
Decoration: eroded. Externally a row of short vertical impressions.
Surface of platform.
- P415 Two rim sherds of sandy paste. Dark grey throughout.
Decoration: on the internal edge of the rim, two rows of jabbed impressions.
Post-hole 41.
- P416 Rim sherd of hard compact paste tempered with shell. Brown externally to grey-brown internally with dark grey core. Surface smoothed.
Decoration: two widely spaced impressions.
Post-hole 79.
- P417 Rim sherd of flaky paste tempered with crushed shell. Brown externally, light brown internally with dark grey core.
Decoration: a row of stick- or bone-end impressions above a row of coarse scorings.
Post-hole 51.
- P418 Rim sherd of hard compact sandy paste. Orange throughout.
Decoration: on each side of the lip a row of blurred impressions made with a bone.
Post-hole 50.
- P419 Rim sherd of flaky paste tempered with a considerable quantity of shell and other grit. Grey throughout.
Decoration: remains of impressions on the external surface.
Pipe-trench old land surface.
- P420 Rim sherd of sandy paste tempered with grit including grog. Reddish brown both faces with dark grey core.
Decoration: finger-tip impression.
Post-hole 80.
- P421 Rim sherd of flaky paste. Grey throughout.
Decoration: impressions on the rim.
Post-hole 71.
- P422 Wall sherd of compact paste tempered with shell. Reddish brown externally, reddish brown to grey internally.
Decoration: a row of diagonal stabbed impressions with remains of further impressions above.
Surface of platform.
- P423 Wall sherd of compact paste tempered with some grit including shell. Brown both faces with dark grey core.
Decoration: row of horizontal impressions above and adjoining incised diagonal lines, themselves crossed by a vertical row of jabs.
Midden.
- P424 Wall sherd of compact paste tempered with some grit including grog. Light brown both faces with grey core.
Decoration: four vertical ridges created by finger-nail impressions.
Post-hole 50.
- P425 Wall sherd of compact paste tempered with grit. Greyish brown externally, brown internally with grey core.

- Decoration: remains of plain cordon and rows of jabbed decoration.
Post-hole 45.
- P426 Wall sherd of sandy paste tempered with grog. Reddish brown. Internal surface lost.
Decoration: finger-nail impressions.
Post-hole 95.
- P427 Wall sherd of compact paste tempered with some grit. Brown internally, reddish brown externally.
Decoration: opposed lines of oval impressions, made with a blunt implement.
Post-hole 45.
- P428 Wall sherd of compact paste tempered with a little grit including grog. Brown internally, grey to brown externally with dark grey core.
Decoration: lines of oval impressions, made with a blunt implement.
Post-hole 22.
- P429 Wall sherd of crumbly paste tempered with shell. Brown externally, dark grey internally.
Decoration: all over impressions made with ?end of bone.
Surface of platform.
- P430 Wall sherd of flaky paste tempered with shell. Brown externally, dark grey internally.
Decoration: small jabbed impressions.
Post-hole 5.
- P431 Wall sherd of flaky paste tempered with some shell. Brown both faces with grey core.
Decoration: irregularly placed jabbed impressions.
Post-hole 38.
- P432 Wall sherd of compact sandy paste. Light brown both faces with grey core.
Decoration: three rows of impressions made with the end of a stick or bone, above irregular incised lines.
Post-hole 80.
- P433 Wall sherd of sandy paste. Brown both faces with dark grey core.
Decoration: opposed lines in stab-and-drag.
Post-hole 51.
- P434 Wall sherd of fairly compact paste tempered with large quantity of grog and some grit. Reddish brown both faces with dark grey core. Much of internal surface lost.
Decoration: groups of diagonal opposed stab-and-drag impressions.
Midden.
- P435 Wall sherd of flaky paste tempered with grit. Reddish brown externally, grey to brown internally with dark grey core.
Decoration: remains of a horizontal row of impressions and a vertical row of diagonal strokes.
Midden.
- P436 Base angle of compact paste. Light to darker brown externally, dark grey to reddish brown internally. Remains of impressed decoration.
Surface of platform.
- P437 Two sherds of base angle of sandy paste. Brown both faces with dark grey core.
Decoration: remains of impressed ornament.
Post-hole 84.
- P438 Four sherds from the lower half of a vessel of sandy paste tempered with some grit. Patchy grey to brown externally, dark grey internally.
Decoration: appears to consist of short impressions some made with a finger-nail, others with a

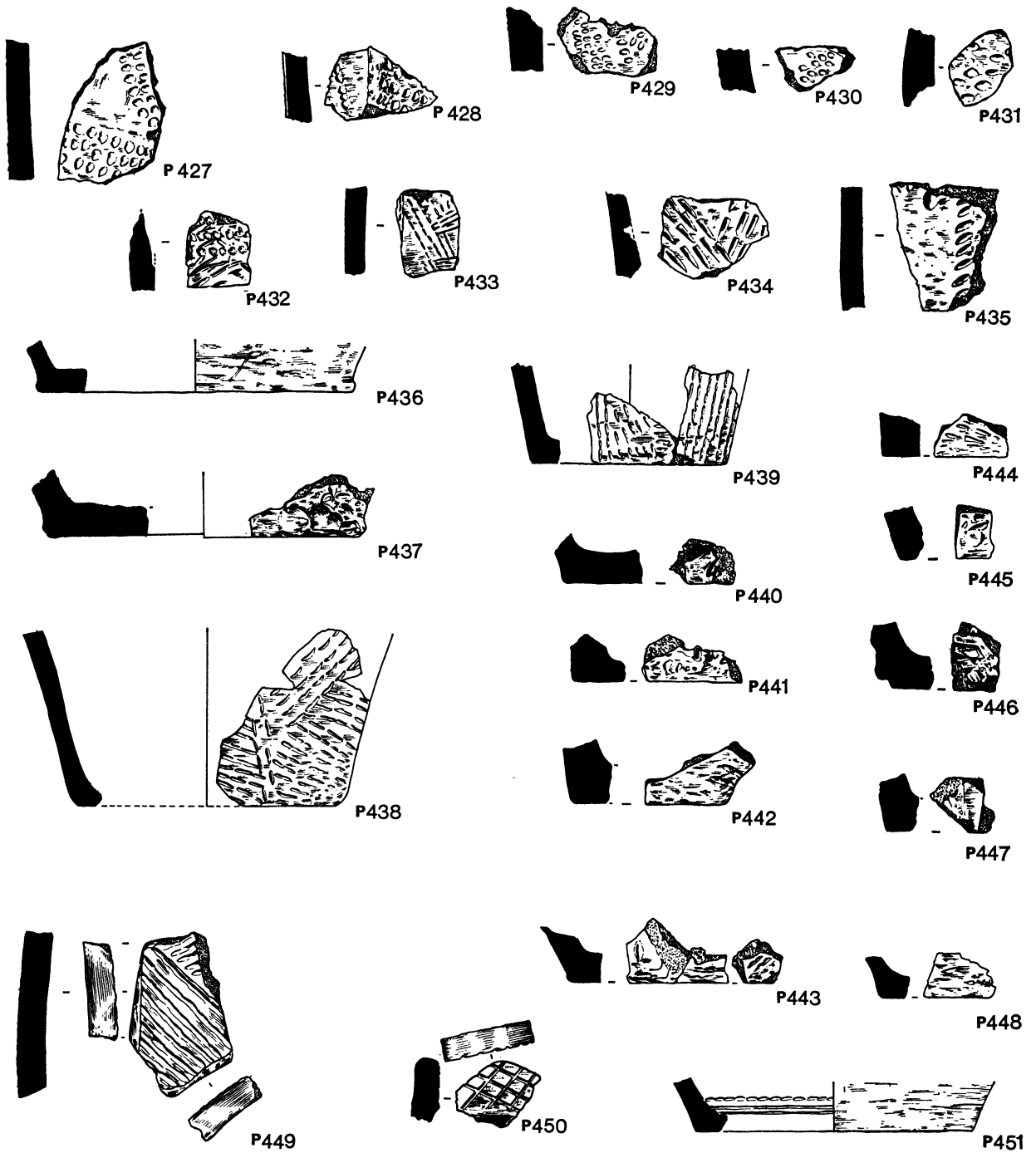


FIG. 57. Grooved Ware ($\frac{1}{3}$)

blunt instrument to form a panelled decoration of opposed diagonal lines split by vertical lines of impressions.

Surface of platform.

- P439 Five sherds including base angle of compact sandy paste tempered with some grit including flint. Brown both faces with grey core.
Decoration: groups of diagonal stab-and-drag lines made with a pointed implement, separated by a vertical row of short horizontal strokes made with the same implement.
Post-hole 51.
- P440 Base angle of flaky paste. Grey to brown externally, dark grey to brown internally. Remains of impressed decoration.
Surface of platform.
- P441 Base angle of compact paste tempered with grit. Brown to grey externally, grey core. Internal surface lost. Remains of impressed decoration.
Southern ditch, layer 6B-7.
- P442 Base angle of fairly compact paste tempered with some grit and grog. Light brown throughout. Remains of impressed decoration.
Post-hole 23.
- P443 Two base angles of compact paste tempered with grit including shell. Light brown externally, grey internally. Remains of impressed decoration externally.
Post-hole 21.
- P444 Base angle of sandy paste. Brown to grey externally, dark grey internally. Remains of impressed decoration.
Surface of platform.
- P445 Base angle of compact paste, brown externally, dark grey internally.
Remains of indefinite decoration.
Surface of platform.
- P446 Base angle of sandy paste tempered with some grit. Light brown externally, grey internally with dark grey core.
Decoration: remains of impressed decoration.
Post-hole 21.
- P447 Base angle of compact paste. Brown externally, dark grey internally. Remains of impressed decoration.
Surface of platform.
- P448 Base angle of flaky paste tempered with grit. Light brown externally, dark grey core, internal surface lost. Remains of impressed decoration.
Surface of platform.
- P449 Wall sherd, two edges carefully rubbed smooth. Of compact paste tempered with some grit. Greyish brown externally, light brown internally, grey core.
Decoration: opposed grooved lines.
Surface of platform.
- P450 Wall sherd of fairly compact paste tempered with some grit and grog, orange both faces with dark grey core.
Decoration: externally, a plain horizontal cordon with grooved lattice above and beginnings of grooved decoration again beneath. The upper edge of the sherd has been worn smooth.
Old land surface beneath northern bank.
- P451 Base angle of compact sandy paste tempered with a little grit. Brown both faces with dark grey core.

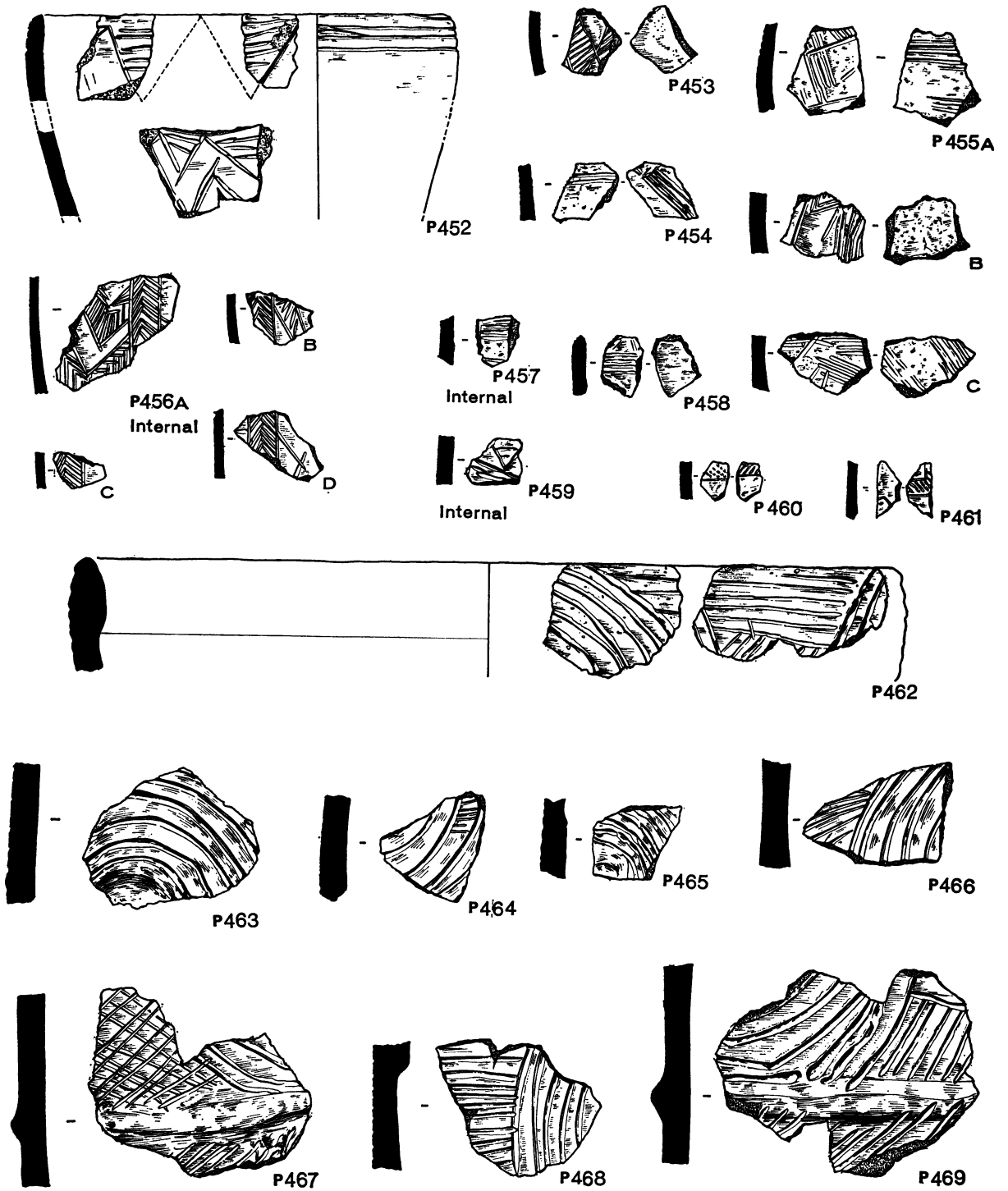


FIG. 58. Grooved Ware ($\frac{1}{3}$)

- Decoration: on the internal surface, a stab-and-drag line above two horizontal grooved lines.
Post-hole 51.
- P452 Seven sherds including rim of hard compact sandy paste tempered with grog. Brown externally to reddish brown internally.
Decoration: externally a narrow zone of horizontal incised lines beneath the rim. Internally a pattern including incised pendant filled triangles and reserved bar chevrons.
Post-holes 20 and 47.
- P453 Wall sherd of fine paste. Brown both faces with dark grey core.
Decoration: internal surface only. Finely executed with incised lines. Decoration appears to be filled and reserved lozenges.
Post-hole 50.
- P454 Wall sherd of slightly porous paste tempered with some shell. Orange throughout.
Decoration: groups of incised lines on both faces, those on the internal face lightly applied.
Post-hole 89.
- P455 a-c Eight wall sherds probably from the same vessel, of compact but slightly porous paste tempered with shell. Orange to light brown throughout.
Decoration: groups of incised lines on both faces.
Post-hole 85.
- P456 a-d Four sherds of vessel of fine paste. Brown to grey both faces.
Decoration: on internal surface only. Complex pattern executed in fine incision comprises bands of herringbone decoration and band of alternate reserved and filled chevrons.
Southern ditch, layers 5 and 5-6B.
- P457 Wall sherd of compact, slightly porous paste tempered with some grit. Orange throughout.
Decoration: internally, group of shallow incised lines.
Post-hole 73.
- P458 Wall sherd of compact, slightly porous paste tempered with shell. Orange throughout.
Decoration: internally, shallow incised opposed diagonal lines above horizontal incised lines.
Post-hole 86.
- P459 Wall sherd of sandy paste. Brown externally, grey to brown internally.
Decoration: on the internal surface remains of filled triangle and diagonal incised lines.
Southern ditch terminal, layer 5.
- P460 Wall sherd of compact paste. Grey to brown externally, brown internally.
Decoration: on both faces finely incised lines border short diagonal lines.
Surface of platform.
- P461 Wall sherd of fine paste. Brown both faces with dark grey core.
Decoration: externally, incised chevron. Internally, incised right-angled band filled with short diagonal strokes.
Post-hole 23.
- P462 Three rim sherds of compact sandy paste tempered with some grit. Patchy grey to brown both faces with dark grey core.
Decoration: a complex pattern including horizontal, diagonal and curvilinear grooved lines.
Southern ditch, layer 6B-7.
- P463 Wall sherd of compact paste tempered with grit. Patchy brown to grey both faces.
Decoration: concentric grooved lines around slightly raised curvilinear cordon.
Southern ditch, layer 6B-7.
- P464 Wall sherd of compact paste tempered with grit including grog. Brown both faces with dark grey core.

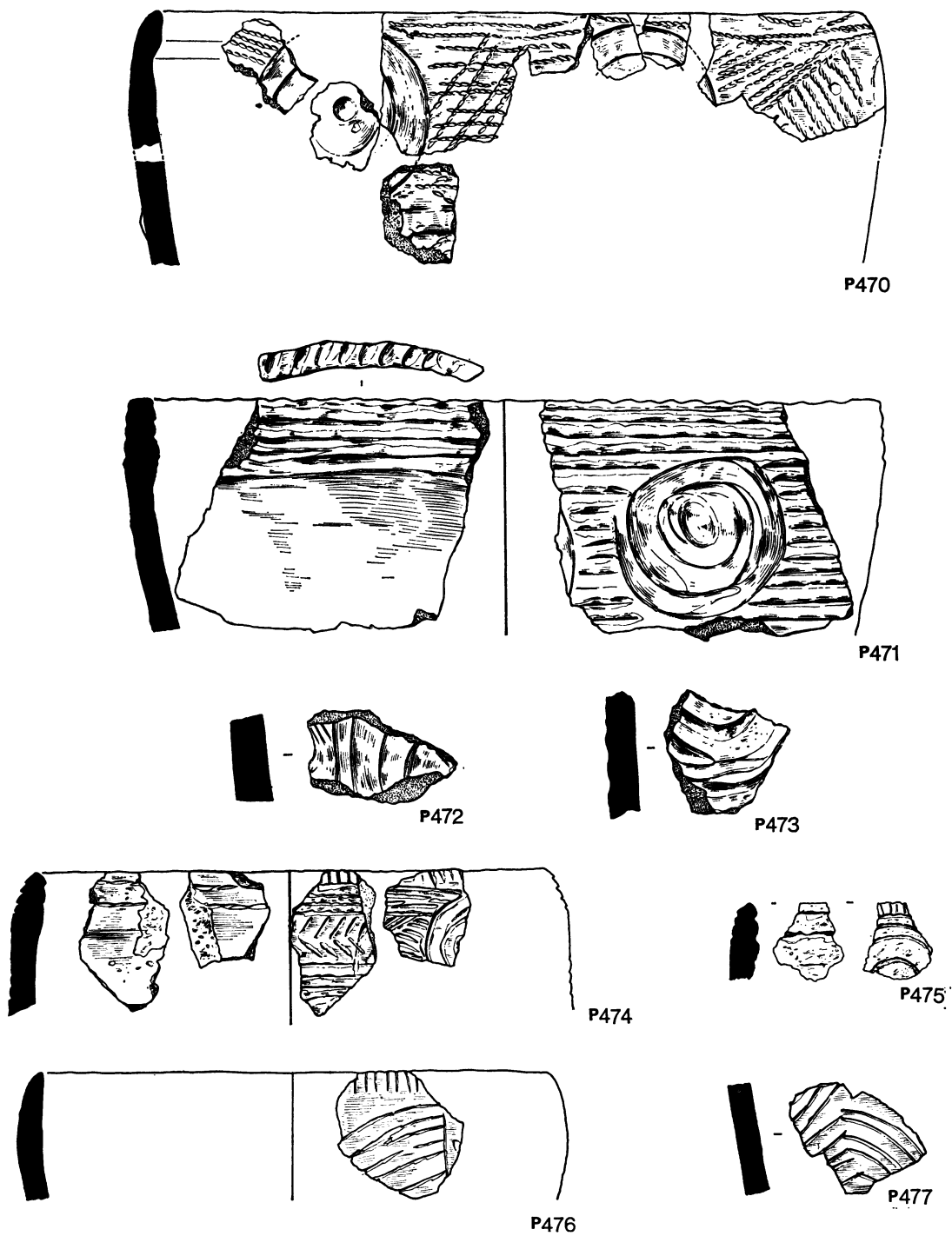


FIG. 59. Grooved Ware ($\frac{1}{3}$)

- Decoration: curvilinear grooved lines. In one place the space between two of the grooved lines filled by short diagonal incised strokes.
Southern ditch, layer 6B-7.
- P465 Wall sherd of compact sandy paste. Light brown both faces with dark grey core.
Decoration: remains of concentric curvilinear grooves with central depression.
Surface of platform.
- P466 Wall sherd of compact paste tempered with some grit. Grey to brown externally, brown internally with dark grey core.
Decoration: grooved concentric lines met at an angle by diagonal grooved lines.
Southern ditch, layer 6B-7.
- P467 Wall sherd of compact paste tempered with some shell. Patchy brown externally light brown internally with dark grey core.
Decoration: incised lattice pattern and beginnings of grooved curvilinear design above plain cordon. Beneath, beginnings of diagonal incised lines.
Southern ditch, layer 8.
- P468 Wall sherd of compact sandy paste tempered with some shell. Grey externally, brown internally with dark grey core.
Decoration: grooved concentric lines adjoin horizontal grooved lines.
Southern ditch, layer 8.
- P469 Wall sherd of sandy paste tempered with grit including flint. Grey externally, brown internally with dark grey core.
Decoration: above the plain horizontal cordon curvilinear grooved lines give way to opposed diagonal grooved lines. Beneath the cordon diagonal grooved lines.
Southern ditch, layer 6B-7.
- P470 Thirteen sherds including rim of sandy paste tempered with grit including flint. Patchy light yellowish brown to dark brown externally, brown internally with dark grey core. Surface smoothed.
Decoration: a twisted cord filled triangle pattern beneath horizontal twisted cord lines broken by a finger-tip concentric circle or spiral pattern with central finger-tip impression. Five wall sherds show twisted cord decoration combined with applied plain cordons.
Post-holes 22 and 23.
- P471 Four sherds including rim of compact paste tempered with grit including grog. Light yellowish brown both faces with dark grey core. Surface roughly smoothed.
Decoration: on top of the rim, a row of diagonal grooved strokes. On the internal surface, a series of horizontal grooves, on the external surface a series of horizontal grooves enclosing a finger-tip spiral pattern.
Post-hole 70.
- P472 Wall sherd of fairly compact paste tempered with grit. Grey to brown externally, brown internally with dark grey core.
Decoration: remains of curvilinear grooved decoration adjoining diagonal incised lines.
Surface of platform.
- P473 Wall sherd of crumbly paste tempered with some grit. Grey externally, reddish brown internally with grey core.
Decoration: curvilinear shallow finger-tip grooves.
Post-hole 85.
- P474 Five sherds including rim of compact sandy paste tempered with shell. Dark grey to reddish brown both faces with dark grey core.

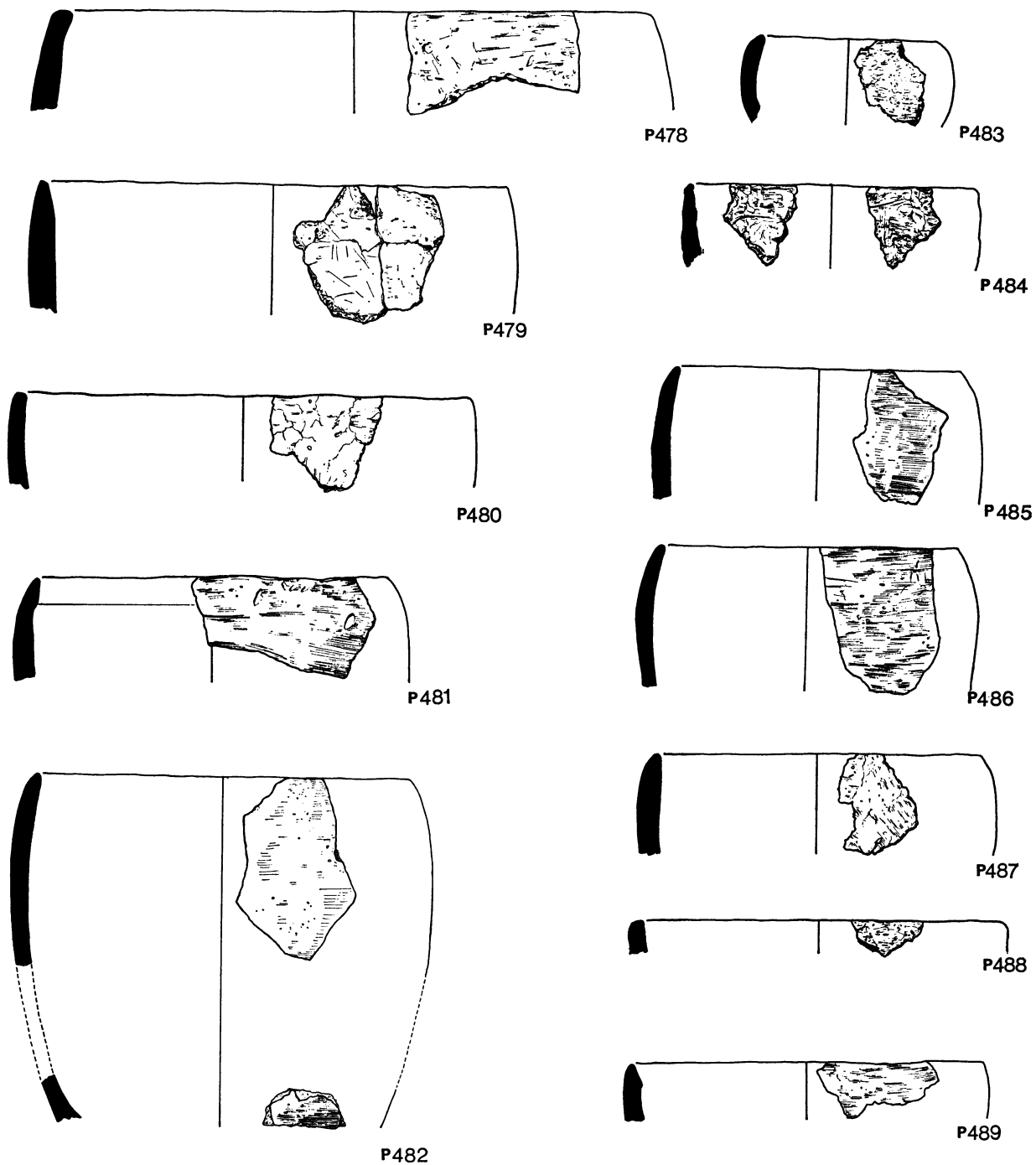


FIG. 60. Grooved Ware ($\frac{1}{3}$)

Decoration: internally, two horizontal stab-and-drag lines, externally one row of short incised vertical strokes above four horizontal grooved lines interrupted in one place by a concentric or spiral grooved pattern. Elsewhere the pattern appears to consist of grooved herringbone or filled triangles with a further zone of horizontal lines beneath.

Post-hole 45.

- P475 Rim sherd of coarse paste tempered with a little shell. Grey externally, grey to brown internally. Decoration: internally, remains of two horizontal grooves, externally a series of vertical impressions above curvilinear grooves.

Surface of platform.

- P476 Rim sherd of compact paste tempered with some grit. Grey to brown externally, grey internally with grey core.

Decoration: a row of short incised vertical lines above incised lines forming arcs of concentric circles broken by a vertical incised line, to the right of which are remains of impressions. Possibly same as P263.

Post-hole 50.

- P477 Wall sherd of fairly compact paste tempered with some grog. Patchy brown externally, grey internally.

Decoration: diagonal incised lines above and joining curvilinear pattern.

Post-hole 71.

- P478 Undecorated rim sherd of coarse paste tempered with grit including much crushed shell. Brown both faces with dark grey core.

Post-hole 51.

- P479 Undecorated rim sherd of compact sandy paste tempered with some grit. Patchy grey to brown externally, generally darker internally. Surface roughly smoothed.

Southern ditch, layer 5-6B.

- P480 Undecorated rim sherd of compact paste tempered with grog. Patchy brown both faces with dark grey core.

Midden.

- P481 Undecorated rim sherd of compact sandy paste. Brown externally, brown to grey internally with grey core. Surface rough.

Post-hole 67.

- P482 Six undecorated sherds including rim of hard compact sandy paste tempered with some grit. Reddish brown externally to brown internally with grey core. Surface smoothed.

Post-hole 91.

- P483 Undecorated rim sherd of crumbly paste tempered with grog. Brown externally, dark grey internally with dark grey core.

Midden.

- P484 Undecorated rim sherd of compact paste tempered with some shell. Reddish brown throughout. Midden.

- P485 Undecorated rim sherd of compact sandy paste. Patchy brown both faces with grey core.

Post-hole 22.

- P486 Two undecorated sherds including rim, of compact paste tempered with grit. Brown externally, reddish brown internally with grey core. Surface roughly smoothed.

Post-hole 71.

- P487 Four undecorated rim sherds of compact paste tempered with some grit. Grey to brown externally, grey internally.

Surface of platform.

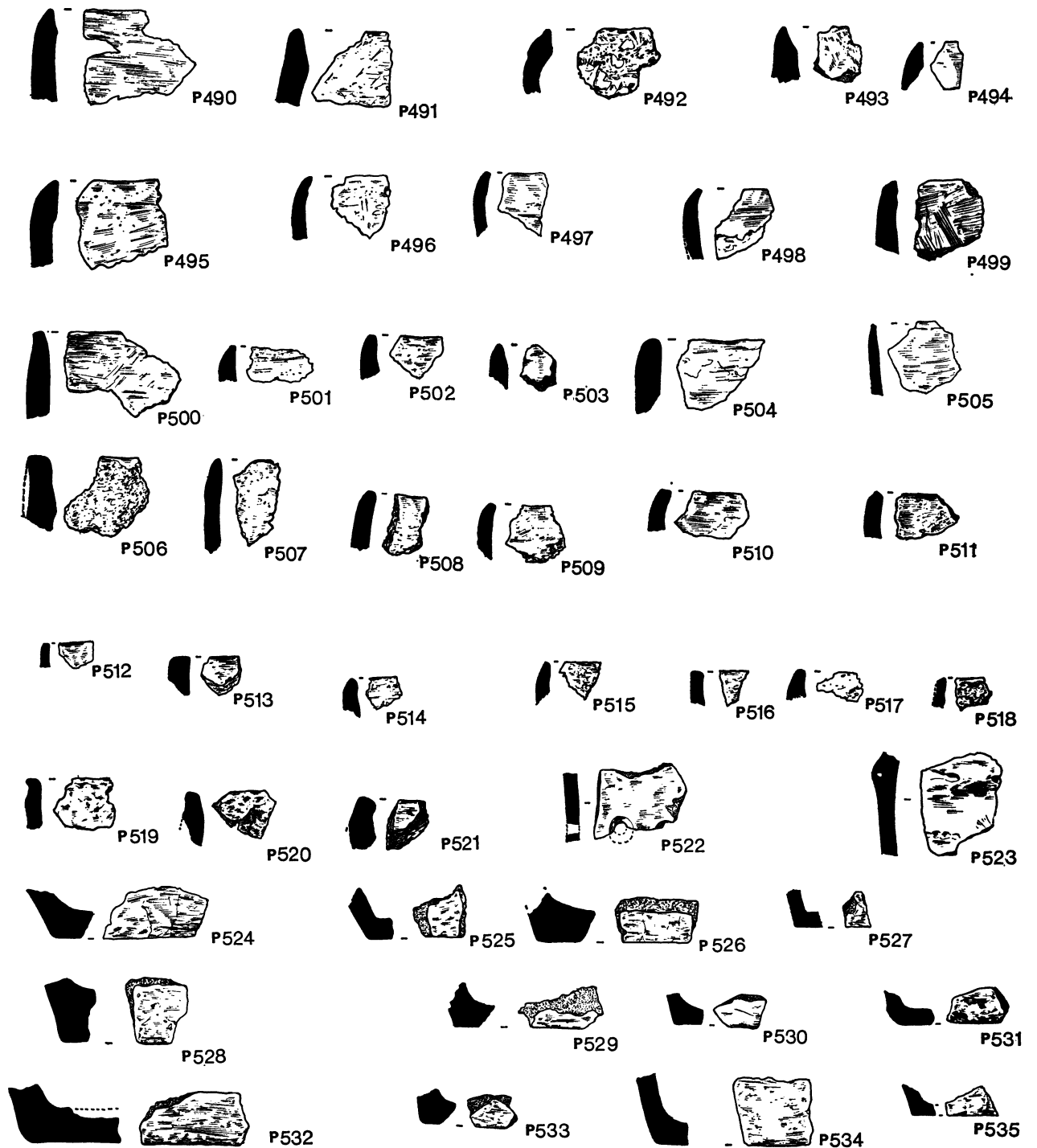


FIG. 61. Grooved Ware ($\frac{1}{3}$)

- P488 Undecorated rim sherd of flaky paste tempered with a little grit. Brown both faces with dark grey core.
Midden.
- P489 Undecorated rim sherd of soft flaky paste. Dark greyish brown externally, dark grey internally.
Post-hole 22.
- P490 Undecorated rim sherd of hard compact sandy paste. Dark grey to brown externally, dark grey internally.
Post-hole 47.
- P491 Undecorated rim sherd of crumbly paste. Yellowish throughout.
Surface of platform.
- P492 Rim sherd of coarse paste tempered with large grits including shell. Reddish brown throughout.
External surface eroded.
Post-hole 49.
- P493 Undecorated rim sherd of flaky paste. Grey externally, brown internally.
Surface of platform.
- P494 Undecorated rim sherd of compact paste tempered with some flint. Light orange throughout.
Post-hole 21.
- P495 Undecorated rim sherd of soft paste tempered with grog. Orange throughout.
Post-hole 50.
- P496 Undecorated rim sherd of compact paste tempered with grit. Light yellowish brown externally to light brown internally with dark grey core.
Post-hole 49.
- P497 Two undecorated sherds including rim of hard compact sandy paste. Light brown both faces with dark grey core.
Post-hole 68.
- P498 Undecorated rim sherd of sandy paste. Grey externally, grey to brown internally.
Post-hole 85.
- P499 Rim sherd of flaky paste. Brown externally, grey brown internally. Surface shows ?intentional burnishing.
Southern ditch, layer 5-6B.
- P500 Four undecorated rim sherds of compact sandy paste. Patchy grey to brown externally, more generally grey internally. Surface smoothed.
Southern ditch, layer 5-6B.
- P501 Undecorated rim sherd of flaky paste tempered with some grit including shell. Grey to brown externally, grey internally.
Southern ditch, layer 5-6B.
- P502 Undecorated rim sherd of compact paste. Black throughout.
Post-hole 67.
- P503 Undecorated rim sherd of sandy paste. Grey externally, brown internally with grey core.
Surface of platform.
- P504 Undecorated rim sherd of sandy paste. Light brown externally, internal surface eroded. Grey core.
Post-hole 71.
- P505 Undecorated rim sherd of compact paste. Brown both faces with grey core.
Surface of platform.
- P506 Fragment of rim of compact paste. Brown internally, external surface lost. Dark grey core.
Occupation earth.

- P507 Undecorated rim sherd of compact sandy paste. Patchy grey to brown externally, brown internally. Surface roughly smoothed.
Southern ditch, layer 5-6B.
- P508 Undecorated rim sherd of compact paste. Reddish brown to grey both faces with grey core.
Post-hole 97.
- P509 Undecorated rim sherd of compact paste. Brown throughout. Surface roughly smoothed.
Iron Age ditch.
- P510 Undecorated rim sherd of soft flaky paste tempered with some grit. Brown throughout.
Post-hole 22.
- P511 Undecorated rim sherd of compact sandy paste. Grey throughout.
Surface of platform.
- P512 Undecorated rim sherd of flaky paste tempered with some grit. Grey throughout.
Midden.
- P513 Undecorated rim sherd of hard compact greyish paste tempered with some grit.
Post-hole 41.
- P514 Undecorated rim sherd of crumbly paste tempered with some grit. Greyish brown externally, reddish brown internally with grey core.
Surface of platform.
- P515 Undecorated rim sherd of soft paste tempered with ?shell. Brown externally, grey internally with grey core.
Post-hole 95.
- P516 Undecorated rim sherd of compact paste. Brown externally, reddish brown internally with dark grey core.
Midden.
- P517 Undecorated rim fragment of compact paste tempered with a little grit. Brown both faces with dark grey core.
Northern Circle.
- P518 Rim sherd of compact grey paste. Internal surface only surviving.
Surface of platform.
- P519 ?Undecorated rim sherd of flaky paste. Dark grey throughout. External surface heavily weathered.
Midden.
- P520 Rim sherd of fairly compact paste tempered with grit including shell. External surface largely eroded. Reddish brown internally.
Midden.
- P521 Undecorated rim sherd of compact grey paste.
Post-hole 22.
- P522 Undecorated wall sherd of fairly compact paste tempered with grit. Brown externally, grey internally. Remains of binding hole.
Surface of platform.
- P523 Undecorated wall sherd with horizontally perforated lug. Of compact paste tempered with a little grit. Light brown externally, grey internally.
Southern ditch, layer 5-6B.
- P524 Three undecorated sherds of base angle of coarse paste including shell. Brown externally, reddish brown internally. Surface smoothed.
Post-hole 33.
- P525 Undecorated base angle of sandy paste. Brown externally, dark grey internally with encrustation.
Surface of platform.

- P526 Undecorated base angle of sandy paste tempered with fine grit. Light to darker brown externally, dark grey internally.
Surface of platform.
- P527 Base angle of flaky paste tempered with some grit. Reddish brown externally, dark grey internally, surface eroded.
Midden.
- P528 Undecorated base angle of sandy paste tempered with a little grit and grog. Light brown externally, dark grey internally.
Southern ditch, layer 4-5.
- P529 Undecorated base angle of flaky paste. Brown externally, grey to brown internally with reddish brown core.
Surface of platform.
- P530 Undecorated base angle of compact paste. Brown both faces with dark grey core. Surface well smoothed.
Surface of platform.
- P531 Three undecorated sherds of base angle of fairly compact paste tempered with grog. Light brown externally, reddish brown internally with grey core.
Post-hole 22.
- P532 Undecorated base angle of fairly compact paste tempered with grit. Light brown externally, brown internally. Surface smoothed.
Surface of platform.
- P533 Undecorated base angle of sandy paste. Brown externally, grey internally with dark grey core.
Northern Circle.
- P534 Three undecorated fragments of base angle of compact sandy paste. Light brown externally, brown internally with dark grey core. Surface smoothed.
Southern ditch, layer 5-6B.
- P535 Undecorated base angle of sandy paste. Brown externally, grey internally.
Post-hole 89.
- P536 Five undecorated sherds including base angle of vessel of fairly compact paste tempered with some grit. Brown externally, dark grey internally with encrustation.
Post-holes 44 and 50.
- P537 Two undecorated sherds of base angle of sandy paste tempered with fine grog. Brown to grey externally, grey internally.
Midden.
- P538 Undecorated base angle of compact paste tempered with grit and grog. Brown both faces with dark grey core.
Post-hole 68.
- P539 Two undecorated sherds representing base and base angle of a vessel of compact paste tempered with grit including shell. Light brown both faces with grey core.
Post-hole 50.
- P540 Two undecorated base sherds including angle of compact paste tempered with a little grit. Reddish brown to grey externally, brown internally with grey core.
Post-hole 71.
- P541 Two undecorated sherds of base angle of compact paste tempered with a little grog. Light brown externally, grey to brown internally.
Post-hole 22.

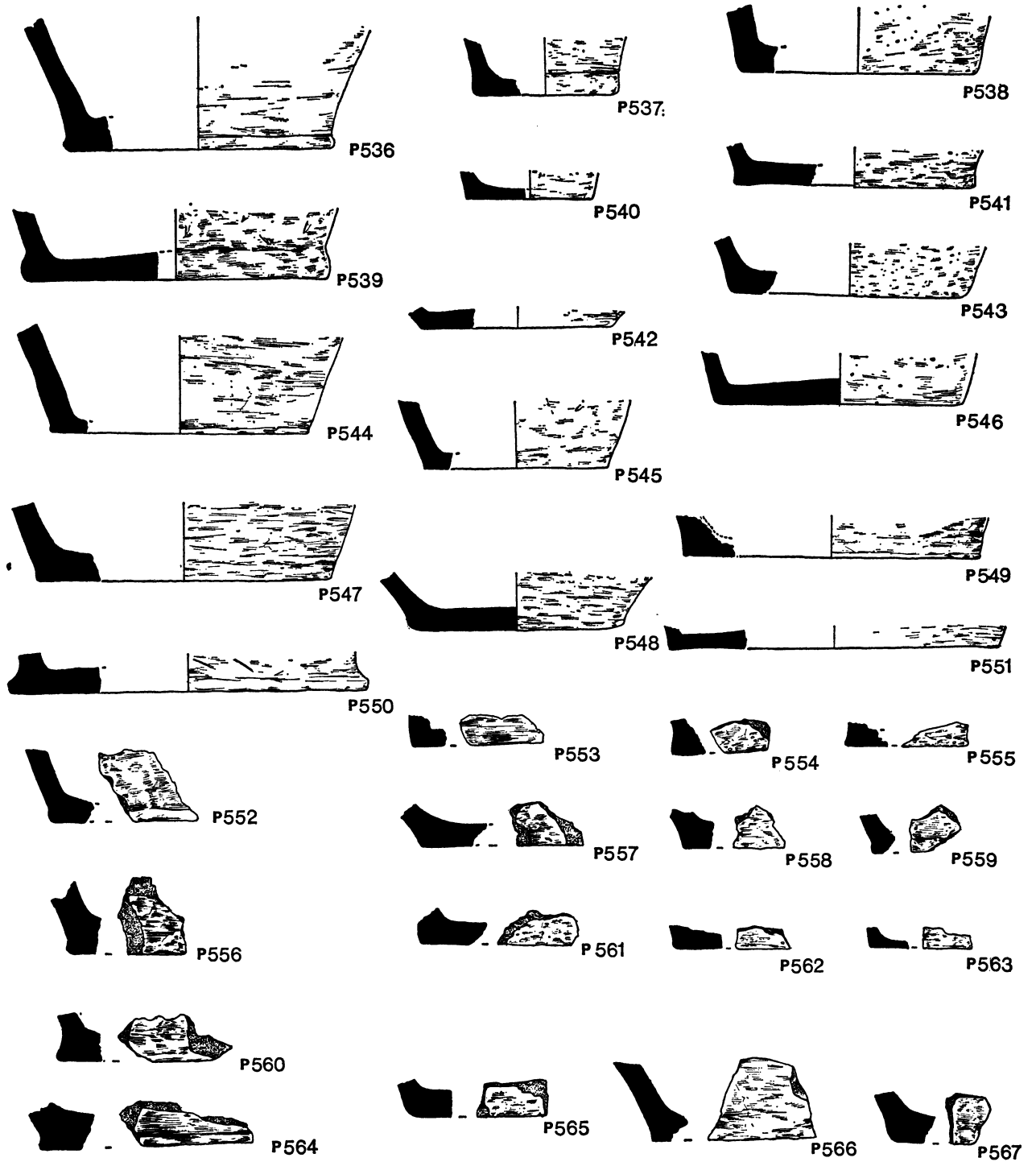


FIG. 62. Grooved Ware ($\frac{1}{3}$)

- P542 Undecorated base angle of compact paste. Greyish brown externally, light brown internally with grey core.
Midden.
- P543 Undecorated base angle of compact paste tempered with grit and shell. Light brown throughout.
Post-hole 85.
- P544 Undecorated base angle of compact paste tempered with grit including grog. Light brown externally, brown to grey internally. Surface smoothed.
Post-hole 85.
- P545 Undecorated base angle of compact paste. Grey externally, grey to brown internally with reddish brown core.
Southern ditch, layer 6B-7.
- P546 Seven undecorated fragments from the base of a vessel of compact paste tempered with a large quantity of grit including shell. Patchy light to darker brown externally, reddish brown to grey internally with grey core. Surface smoothed.
Southern ditch, layer 5-6B.
- P547 Two undecorated sherds of base angle of sandy paste tempered with grit. Light brown both faces with dark grey core.
Post-hole 51.
- P548 Undecorated base angle of compact sandy paste tempered with some grit. Patchy grey to brown externally, grey internally with reddish brown core.
Southern ditch, layer 5-6B.
- P549 Undecorated base angle of compact paste tempered with some grit. Light brown externally, internal surface lost. Dark grey core. Surface roughly smoothed.
Midden.
- P550 Undecorated base angle of compact sandy paste tempered with grit including shell. Brown both faces with grey core.
Southern ditch, layer 4-5.
- P551 Undecorated base angle of compact paste tempered with grog. Grey to brown both faces with grey core.
Midden.
- P552 Undecorated base angle of compact sandy paste. Brown externally, dark grey internally.
Post-hole 23.
- P553 Undecorated base angle of sandy paste tempered with fine grit. Dark brown to grey externally, grey internally.
Post-hole 84.
- P554 Undecorated base angle of flaky paste tempered with much grit. Light brown externally, internal surface lost, grey core.
Post-hole 50.
- P555 Undecorated base angle of compact paste. Light brown to grey externally, brown internally with dark grey core.
Post-hole 23.
- P556 Undecorated base angle of flaky paste tempered with fine grit. Brown externally, dark reddish brown to grey internally.
Post-hole 22.
- P557 Two undecorated fragments of base angle of compact paste. Light brown to grey externally, brown internally with grey core.
Post-hole 90.

- P558 Undecorated base angle of sandy paste. Brown externally, dark grey internally.
Surface of platform.
- P559 Undecorated base angle of flaky paste tempered with grit. Reddish brown both faces with dark grey core.
Post-hole 56.
- P560 Two undecorated fragments of base angle of fairly compact paste tempered with a little grit.
Light brown externally, dark grey internally with encrustation.
Post-hole 44.
- P561 Base angle of coarse paste tempered with grit including shell and flint. Brown throughout.
Surfaces eroded.
Surface of platform.
- P562 Undecorated base angle of flaky paste. Brown to grey externally, internal surface lost.
Surface of platform.
- P563 Undecorated base angle of compact paste tempered with a little grit. Brown to grey externally, internal surface lost.
Surface of platform.
- P564 Three undecorated sherds of base angle of compact sandy paste. Patchy grey to brown externally, grey internally with dark grey core.
Post-hole 71.
- P565 Base angle of soft sandy paste tempered with shell. Patchy brown externally, dark grey internally with encrustation. Surface eroded.
Pipe-trench old land surface.
- P566 Undecorated base angle of compact paste. Light brown externally, grey internally.
Midden.
- P567 Undecorated base angle of compact paste. Light brown externally, grey internally with encrustation.
Post-hole 32.
- P568 Rim sherd of compact paste. Brown both faces with grey core.
Decoration: remains of twisted cord horizontal lines.
Surface of platform.
- P569 Rim sherd of compact paste. Light brown both faces with dark grey core.
Decoration: horizontal twisted cord lines.
Surface of platform.
- P570 Rim sherd of compact paste tempered with a little grit. Reddish brown both faces with dark grey core. Surface smoothed.
Decoration: horizontal lines above remains probably of filled triangles, all made with a fine toothed comb.
Midden.
- P571 Rim sherd of compact sandy paste tempered with some grog. Greyish brown externally, grey to light brown internally with dark grey core. Surface smoothed.
Decoration: immediately below the rim, a zone of very fine toothed comb horizontal lines above a zone of alternate reserved and filled triangles. On the inside of the rim, three toothed comb lines.
Northern Circle.
- P572 Rim sherd of compact paste. Light brown both faces with grey core. Heavily weathered.
Decoration: remains of comb impressed lines.
Midden.

- P573 Rim sherd of fairly coarse paste. Light yellowish brown both faces with grey core.
Decoration: irregular horizontal rows of rectangular toothed comb impressions.
Midden.
- P574 Two rim sherds of compact sandy paste tempered with some fine grit. Patchy grey externally, dark grey to brown internally.
Decoration: on the rim, short transverse impressions. On the internal rim bevel, short vertical impressions, with two horizontal incised lines beneath. Externally, three horizontal incised lines fringed above and below by short vertical impressions.
Post-hole 22.
- P575 Wall sherd of compact paste. Dark brown to grey externally, grey internally.
Decoration: horizontal lines made with a fine toothed comb.
Surface of platform.
- P576 Wall sherd of compact coarse paste tempered with some grit. Patchy light brown to grey externally, greyish brown internally. Surface smoothed.
Decoration: horizontal zones of finger-pinched impressions bordered by double horizontal lines made with an implement giving a rectangular impression.
Midden.
- P577 Base angle of compact paste tempered with fine grog. Reddish brown externally, grey internally.
Surface smoothed.
Decoration: remains of horizontal toothed comb lines.
Midden.
- P578 Two wall sherds of compact paste. Light brown both faces with grey core. Surface smoothed.
Decoration: narrow horizontal zones of short vertical lines, horizontal lines and ermine pattern made with a rectangular toothed comb stamp.
Midden.
- P579 Wall sherd of sandy paste. Reddish brown externally, grey brown internally with grey core.
Decoration: herringbone made with a rectangular toothed comb.
Midden.
- P580 Wall sherd of compact paste tempered with some grit. Brown externally, dark grey internally.
Surface smoothed.
Decoration: herringbone made with a rectangular toothed comb, beneath horizontal toothed comb lines.
Midden.
- P581 Small wall sherd of compact paste. Light brown both faces with grey core.
Surface smoothed.
Decoration: rectangular toothed comb lines.
Midden.
- P582 Small wall sherd of compact paste. Light brown both faces with dark grey core. Surface weathered.
Decoration: remains of toothed comb filled triangle pattern.
Midden.
- P583 Small wall sherd of sandy paste tempered with a little grog. Brown externally, orange internally with dark grey core.
Decoration: rectangular toothed comb lines.
Surface of platform.
- P584 Wall sherd of sandy paste. Light brown both faces with dark grey core.
Decoration: remains of rectangular toothed comb lines.
Surface of platform.

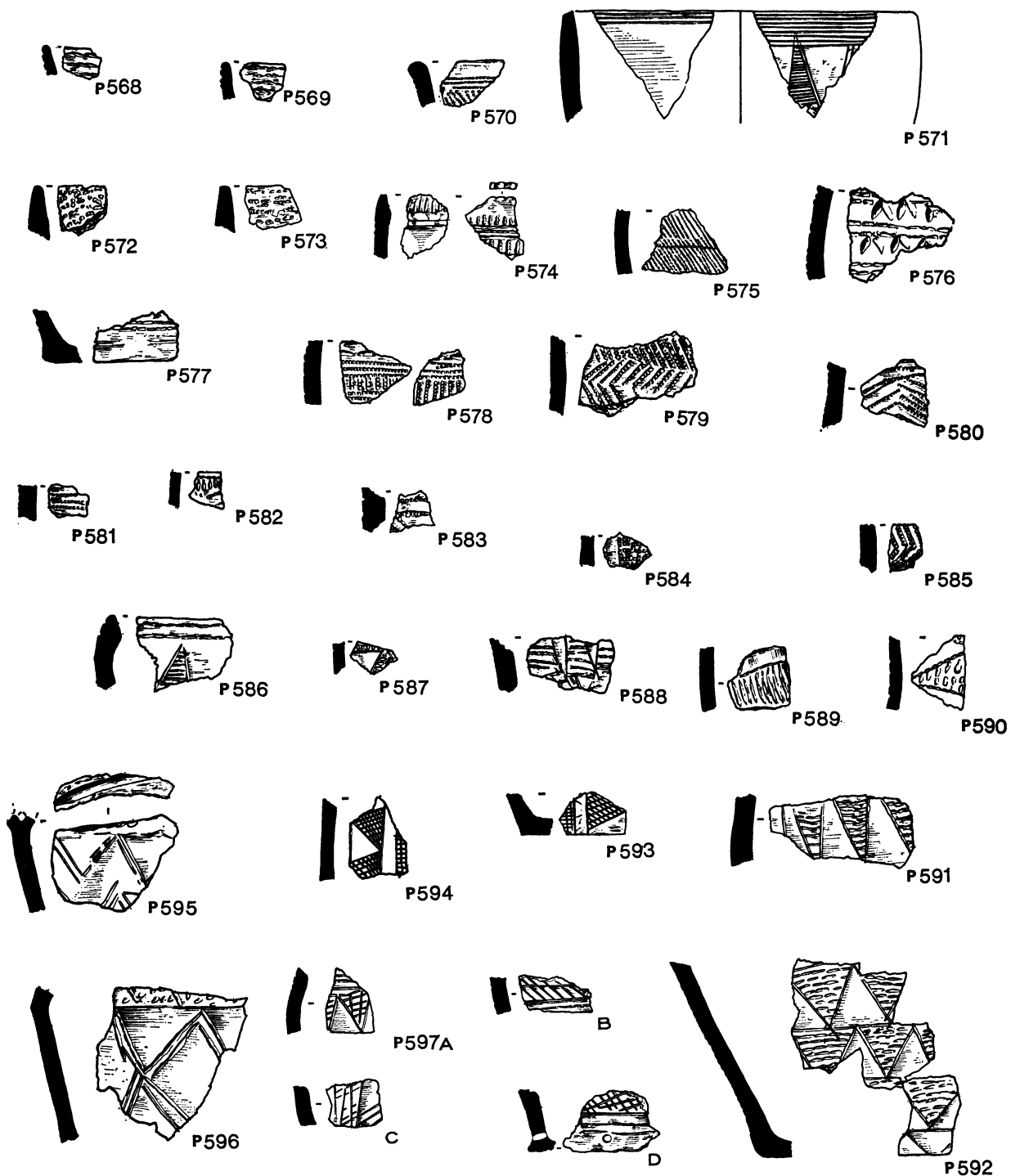


FIG. 63. Beaker ($\frac{1}{3}$)

- P585 Small wall sherd of compact paste. Red externally, grey internally.
 Decoration: herringbone made with a rectangular toothed comb.
 Plough soil above platform.
- P586 Rim sherd of compact paste. Light brown both faces with dark grey core.
 Surface smoothed.
 Decoration: below the rim, two coarsely incised horizontal lines above an incised filled triangle.
 Midden.
- P587 Small wall sherd of compact paste. Brown externally, dark grey internally. Surface smoothed.
 Decoration: incised reserved triangle surrounded by beginnings of impressed pattern.
 Post-hole 74.
- P588 Wall sherd of compact sandy paste. Light brown externally, dark grey to brown internally with dark grey core. Surface smoothed.
 Decoration: zone of reserved and filled roughly incised triangles.
 Post-hole 23.
- P589 Wall sherd of compact paste. Light brown externally, grey internally. Surface smoothed.
 Decoration: remains of incised filled triangle and reserved bar chevron decoration.
 Old land surface below platform.
- P590 Wall sherd of compact paste. Brown both faces with dark grey core. Surface smoothed.
 Decoration: triangle made with a coarse toothed comb, filled with impressions made with a bone.
 Midden.
- P591 Wall sherd of paste similar to P588 but of much thicker wall.
 Decoration: zone of alternate reserved and filled incised triangles.
 Post-hole 139.
- P592 Two sherds representing wall and base angle of vessel of flaky paste tempered with a little grit.
 Brown externally, dark brown internally with dark grey core. Surface smoothed.
 Decoration: horizontal zones of alternate reserved and filled triangles, outlined and separated by incised lines. In the final zone at the base the triangles appear to be unfilled.
 Post-hole 139.
- P593 Base angle of compact paste tempered with coarse grits. Reddish brown to grey externally, red internally with dark grey core. Surface smoothed.
 Decoration: finely incised filled triangle pattern separated by vertical reserved band.
 Post-hole 50.
- P594 Wall sherd of compact paste tempered with a little fine grit. Brown throughout. Surface smoothed.
 Decoration: vertical panels of alternately reserved and filled incised triangles separated by a vertical reserved band.
 Midden.
- P595 Wall sherd of compact sandy paste. Light brown both faces with dark grey core.
 Decoration: below the shoulder two rows of incised double chevrons. Remains of horizontal perforation through the shoulder.
 Southern ditch, unstratified.
- P596 Wall sherd of compact sandy paste. Light brown both faces with dark grey core.
 Decoration: above the shoulder the beginnings of an incised pattern filled with dots. Below the shoulder a series of incised double lozenges.
 Southern ditch, layer 4-5.
- P597 a-d Four sherds including base angle, probably from the same vessel, of compact paste tempered with a little fine grit. Reddish brown both faces with grey core. Surface smoothed.

Decoration: remains of zoned, incised, patterns including alternate reserved and filled triangles, short diagonal lines, and lattice separated by incised horizontal lines.

Post-hole 71.

- P598 Twelve sherds of compact sandy paste tempered with grog, brown both faces.
 Decoration: externally rows of vertical finger-nail impressions applied in such a way as to push an upcast of clay sideways.
 Hearth 5, northern ditch, layer 5-6.
- P599 Wall sherd of compact paste tempered with some fine grog. Reddish brown externally, dark brown internally with dark grey core.
 Decoration: finger-nail rustication.
 Midden.
- P600 Sherd of compact sandy paste. Reddish brown both faces with dark grey core.
 Decoration: finger-nail rustication.
 Midden.
- P601 Six sherds including base angle of fairly compact paste tempered with a little grit and grog, light brown throughout.
 Decoration: externally, short diagonal incised strokes split into zones by horizontal incised lines.
 Hearth 5, northern ditch, layer 5-6.

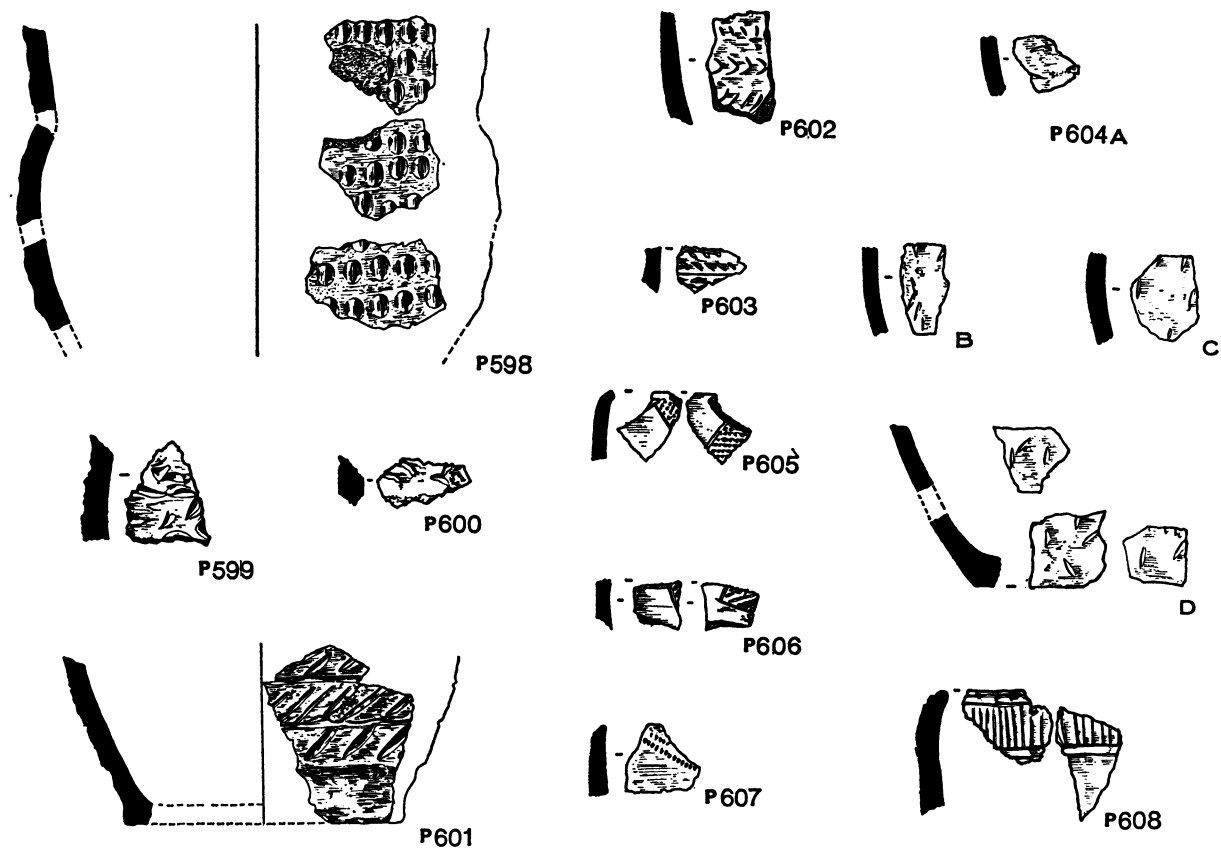


FIG. 64. Beaker and related wares ($\frac{1}{3}$)

- P602 Wall sherd of compact sandy paste. Brown throughout. Surface smoothed.
Decoration: three rows of lightly incised strokes, the outer rows set diagonally, the central forming herringbone. Surface smoothed after decoration.
Post-hole 95.
- P603 Small wall sherd of compact paste tempered with grog. Red both faces with dark grey core. Surface smoothed.
Decoration: short diagonal incised opposed strokes separated by horizontal incised line.
Post-hole 102.
- P604 Six sherds including base angle of compact paste tempered with a little grit including crushed
a-d flint. Reddish brown throughout. Surface smoothed.
Decoration: light finger-nail impressions.
Midden.
- P605 Rim sherd of compact paste. Dark reddish grey both faces. Surface smoothed.
Decoration: internally, remains of incised triangle pattern filled with toothed comb impressions.
Externally, remains probably of similar pattern.
Surface of platform.
- P606 Small wall sherd of compact fine paste. Red both faces with dark grey core. Surface smoothed.
Decoration: externally remains of an incised triangle filled with lines made with a pointed
implement. Internally remains of converging incised lines.
Post-hole 83.
- P607 Wall sherd of compact paste tempered with some grit. Brown externally, dark grey internally.
Surface smoothed.
Decoration: remains of point-toothed comb lines.
Midden.
- P608 Two sherds including rim of coarse paste. Brown both faces with grey core. Surface smoothed.
Decoration: horizontal zones of short vertical incised lines bordered by pairs of horizontal
incised lines.
Midden.

IV. THE FINDS: STONE AND BONE

IN the following section the finds of stone and bone from the 1966–8 excavations are described. Detailed comment has been reserved for Chapter VI where the finds are evaluated in their broader context. The finds from the 1950–1 pipe-trench and the 1952 excavations were described in detail by Professor Piggott¹ and that account is not repeated here. The finds are arranged by categories according to the material of which they were made.

FLINT (figs. 65–78)

Some 12,000 struck flints were recorded in the course of the 1966–7 excavations. These do not include any flints from the ploughsoil on account of the techniques employed in removing the latter. For the purposes of description they fall naturally into five groups:

- (a) From the top of the old land surface under the bank in its northern sector obtained during the 1966 excavations.
 - (b) From the top of the old land surface under the enclosure bank, from the ditch and from the Southern Circle and Midden, obtained during the 1967 excavations.²
 - (c) From the Northern Circle.
 - (d) From Structure A.
 - (e) From Structure B.
- (a) From the old land surface under the bank in its northern sector

The area was excavated in 1966 and the pottery from it has been described in Chapter III by Dr Longworth. A total of 806 flints were recorded from the surface of the ancient soil, in association with pottery of Middle Neolithic type comparable with that from the lower silts of the Windmill Hill causewayed camp. The flints, pottery and associated animal bones were recorded from a restricted area some 9.1 m. × 4.5 m. and apart from a few sherds of Late Neolithic pottery the assemblage was uncontaminated by material of later date. A radiocarbon determination of 2450 ± 150 B.C. (NPL-191) was obtained for charcoal recorded in association with the remains. The flints are heavily patinated and had clearly been exposed for a considerable period prior to the building of the bank of the henge. This weathering is confirmation of a time interval between the Middle Neolithic occupation and the building of the enclosure bank.

<i>Implements:</i>	Polished axe	1
	Leaf-shaped arrowhead	1
	Chopping tool	1
	Scrapers	4
	Blade with edge retouch	1
	Utilized flakes	3

¹ Stone, Piggott and Booth, 1954.

² In 1966, a total of 11 waste flakes with no implements

were recorded from the enclosure ditch in its north sector.

They were distributed in layers 3, 4, 5 and 6B.

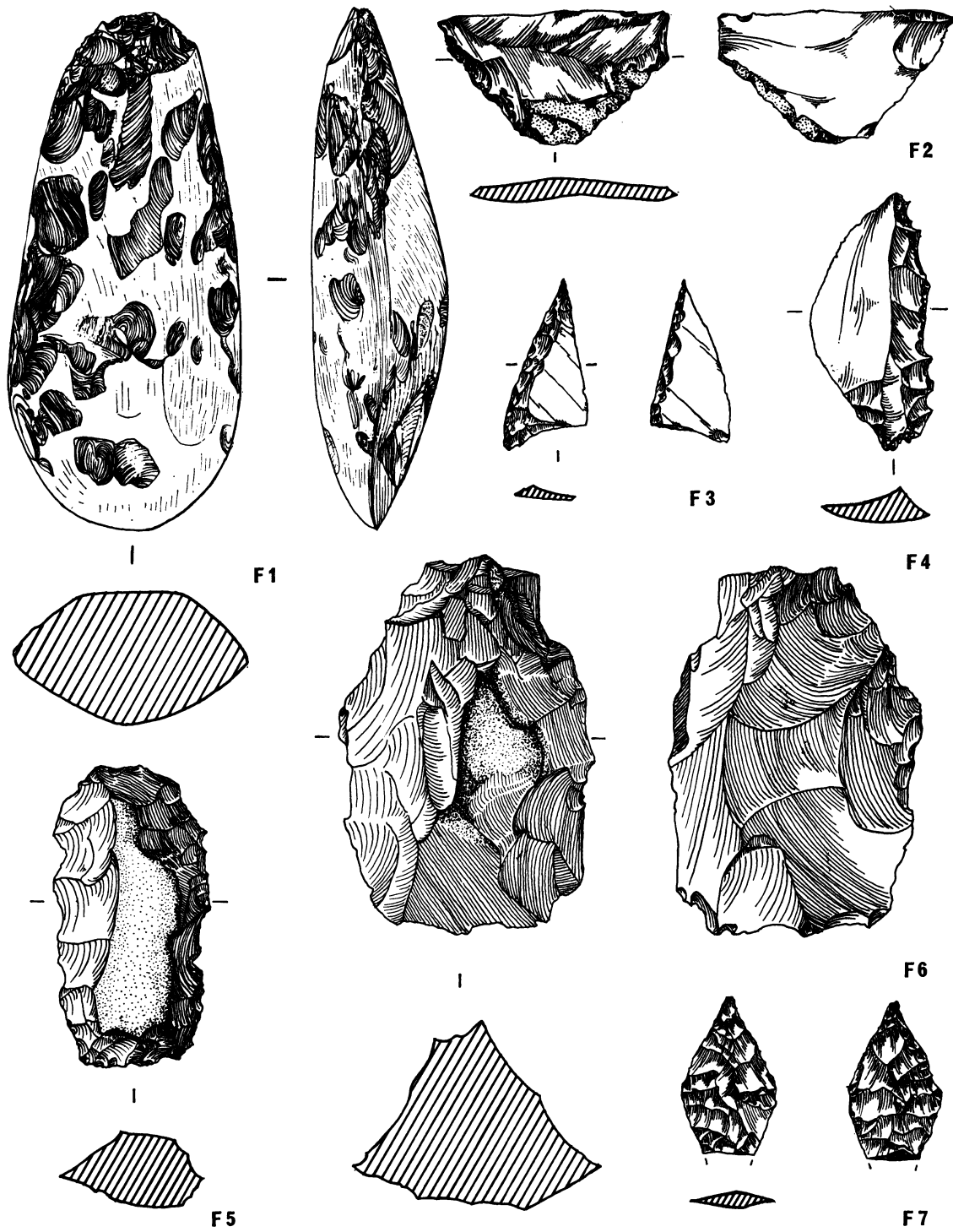


FIG. 65. Old land surface under the enclosure bank ($\frac{2}{3}$)

<i>By-products:</i>	Cores	8
	Irregular workshop waste	787
	Total	806

Of the total number of artifacts only 11 or 1.3% are recognizable implements: this is a very low proportion and is probably due to the removal of the implements for use elsewhere. A total of 290 waste flakes were selected from the assemblage and measured for length and breadth and length : breadth ratio, according to a system used previously by Bohmers¹ and Smith.² The results which Dr Smith obtained for flakes from the primary levels at Windmill Hill and from the West Kennet Avenue were then compared with those from Durrington Walls (fig. 67). The sample from Durrington is smaller than from the sites selected for comparison but it is of interest to note that the shapes of the flakes from Durrington correspond with those from Windmill Hill rather than with those from the later industry at West Kennet which are broad and squat. The tendency in later Neolithic times for flakes to assume the broad squat outline is noticeable even by cursory examination but it is satisfactory to have this process confirmed objectively. Of the flakes measured, 35% are blade-like in that their breadth-length ratio is not more than 2 : 5. The actual total of blades in the assemblage is probably more if one includes the fragmentary specimens that were discarded as being unsuitable for measurement.

Of the eight cores recorded, three are multi-directional and five are single-platform types (F85). Three of the latter had been utilized as scrapers. The few implements are types entirely consistent with a Middle Neolithic attribution. The polished axe (F1) is complete and of nodular flint whilst a second diagnostic type is a fragment of a leaf-shaped arrowhead. A less common implement is a chopping tool made from a flat flint nodule, which is bifacially worked with one broad surface retaining a large area of cortex (F8). The broad cutting edge shows signs of utilization. Four scrapers were recorded in addition to the core scrapers mentioned above. Three of these are on flakes whilst the fourth is made from a small flint nodule and is therefore technically a core scraper. The working edges of the scrapers are very abraded.

(b) From the old land surface under the bank, from the ditch and the Southern Circle

As a group these localities produced the largest number of flints which were distributed as in Table X.

From these totals it can be seen that the largest number of flints were recorded from the Southern Circle (59%), followed by the flints from the top of the old land surface under the enclosure bank in its south sector which comprise 27% of the total. The overall proportion of implements to other artifacts is 3%, which is normal for an assemblage of this type.

The frequency of artifacts from the constituent parts of the Southern Circle are as in Table XI.

These totals indicate that nearly half the flints were recorded from the surface of the platform with lesser numbers from post-holes and from the land surface surrounding the post-holes.

¹ Bohmers, 1956, 1-5.

² Smith, 1965, fig. 38.

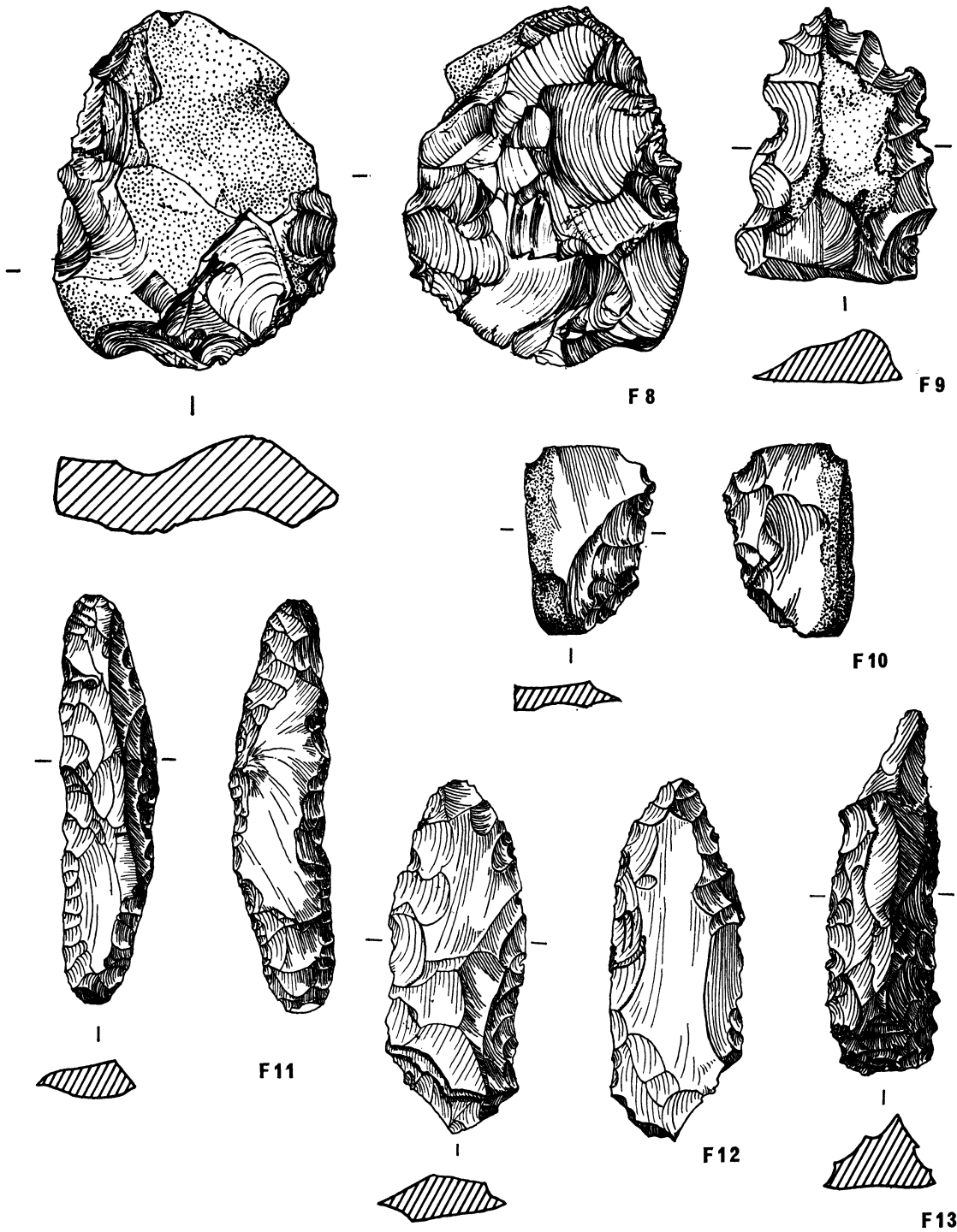


FIG. 66. Old land surface under the enclosure bank ($\frac{2}{3}$)

DURRINGTON WALLS: EXCAVATIONS 1966-8

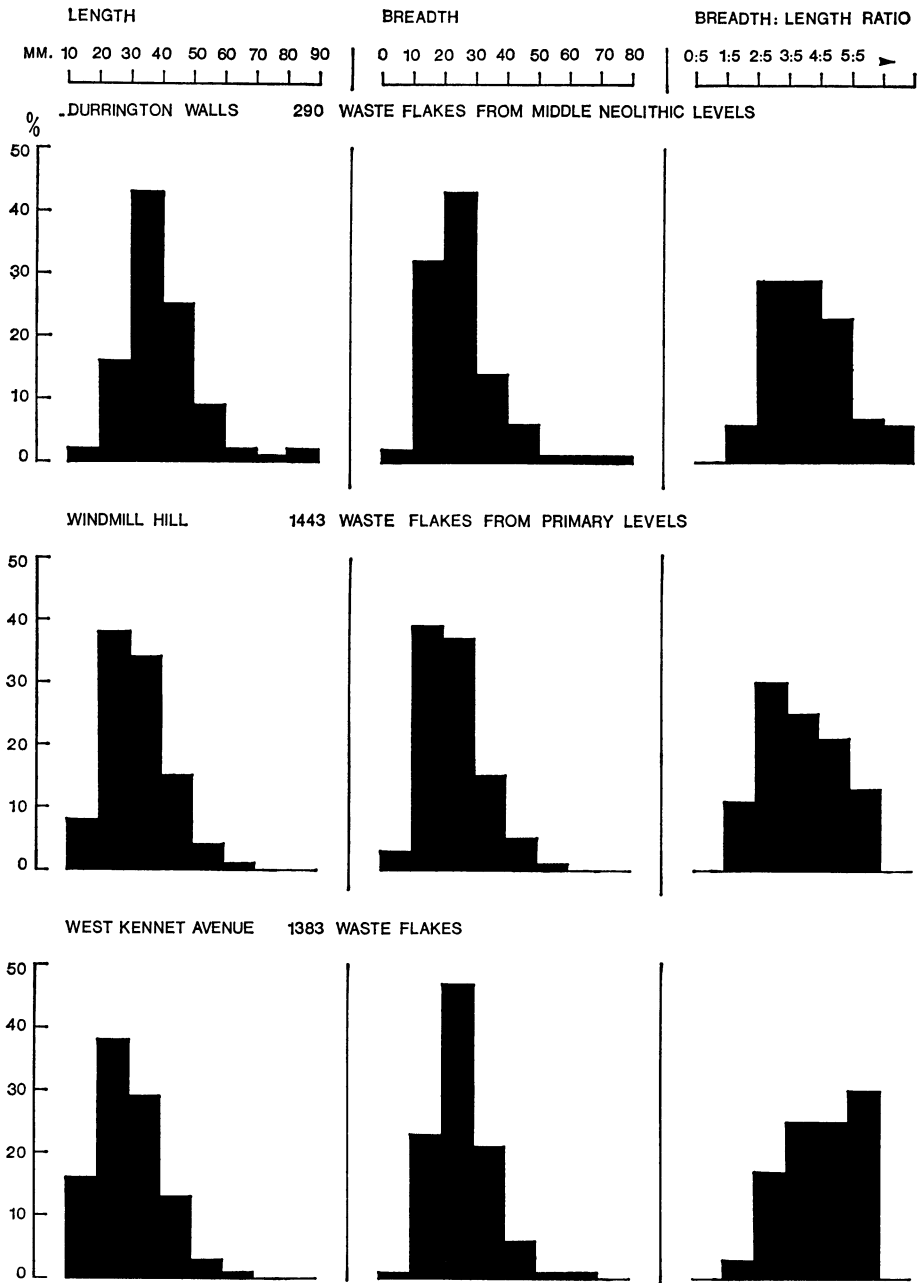


FIG. 67. Diagram illustrating the dimensions and breadth : length ratios of flakes in the Middle Neolithic industries from Durrington Walls and Windmill Hill and in the Late Neolithic industry from the West Kennet Avenue

TABLE X

<i>Provenance</i>	<i>Flakes</i>	<i>Implements</i>	<i>Cores</i>	<i>Totals</i>	<i>%</i>
Southern Circle	6525	199	29	6753	59
Ditch†	788	63	6	857	7
Bank: old land surface	3018	35	5	3058	27
Midden	227	14	2	243	2
Platform: old land surface	103	—	1	104	1
Top of bank tail	118	—	1	119	1
Palisade trench	303	22	13	338	3
Totals	11,082	333	57	11,472	100

† Implements and by-products were collected from the primary silts and implements only from the slow and upper silts.

TABLE XI

<i>Southern Circle</i>	<i>Flakes</i>	<i>Implements</i>	<i>Cores</i>	<i>Totals</i>	<i>%</i>
Platform	3066	94	13	3173	47
Post-holes	2324	61	12	2397	36
Occupation earth‡	1135	44	4	1183	17
Totals	6525	199	29	6753	100

‡ This term refers to the surface of the natural chalk within the Southern Circle.

Artifacts were found in a uniform scatter on top of the old land surface under the bank, but in five instances concentrations of flakes with occasional implements were found and these have been interpreted as chipping floors (fig. 3). In addition, a pipe-trench dug through the bank in November 1967 cut through a rich occupation floor on the same horizon under the bank.¹ The artifacts were distributed as follows:

TABLE XII

<i>Old land surface</i>	<i>Flakes</i>	<i>Implements</i>	<i>Cores</i>	<i>Totals</i>	<i>%</i>
General	783	16	2	801	26
Chipping floor 1	214	—	1	215	7
Chipping floor 2	520	—	—	520	17
Chipping floor 3	155	1	—	156	5
Chipping floor 4	1222	8	—	1230	41
Chipping floor 5	124	—	2	126	4
Pipe-trench	—	10	—	10	—
Total	3018	35	5	3058	100

¹ Owing to the conditions prevailing at the time only implements were collected and the waste flakes were discarded on the site.

The artifacts from the primary silts of the ditch (fig. 6, layers 5-8) were in a fresh, mint condition and contrast markedly with those from the palisade trench which were rolled and abraded in a completely re-sorted deposit, as were those from layers 12 and 13 in the enclosure ditch. Small groups of flints were recorded from a buried soil under the platform of the Southern Circle and from the top of the bank tail, but did not include any implements.

The raw material used was a nodular flint of fair quality — probably derived in part from the flint seams exposed in the digging of the ditch and also possibly from the flint mines to the east of the Stonehenge Inn. An insignificant number of flints were burnt but there was a surprisingly low percentage of cores to flakes — 0.5% as opposed to 3% at the earlier Neolithic site of Hurst Fen for example.¹ An explanation for this may be that the actual knapping was done away from the site but this is unsatisfactory as the percentage of flakes to implements is quite average whereas one would expect a much higher percentage of completed implements if this were the case.

A random sample of 1650 flakes was selected from the Southern Circle and measured for length and breadth and for length : breadth ratios in the same way as for the flints from the old land surface under the bank in its northern sector. The results were compared with those obtained by Dr Smith from Windmill Hill and from the Late Neolithic occupation floor on the line of the West Kennet Avenue.² Amongst the Durrington sample only 11% are true blades in that their breadth-length ratio does not exceed 2 : 5 (fig. 68). This compares with 41% from Windmill Hill and 20% from the West Kennet Avenue. Moreover, 21% of the flakes from Durrington have breadth-length ratios in excess of 5 : 5 as compared with insignificant numbers in this range from Windmill Hill and the West Kennet Avenue. The flakes are therefore much broader than those from the Middle Neolithic levels at Windmill Hill and compare more closely with those of the West Kennet Late Neolithic group — although even broader and squatter than the latter. The measurements confirm the tendency of waste flakes in Late Neolithic groups to become broader in relation to their length.

The cores have been classified according to the method employed in the Hurst Fen report.³

Class A	1 platform	
	1. Flakes removed all round	2
	2. Flakes removed part of way round	34
Class B	2 platforms	
	1. Parallel platforms	1
	2. One platform at oblique angle	5
	3. Platforms at right angles	6
Class D	Keeled: flakes struck from two directions	6
Class E	Keeled: but with one or more platforms	3
Total		57

This analysis reveals that 62% of the cores are of the single platform variety. The remainder are of types common amongst other prehistoric flint assemblages and 32% of the whole had

¹ Clark, Higgs and Longworth, 1960, 214.

² Smith, 1965, fig. 38.

³ Clark, Higgs and Longworth, 1960, 216.

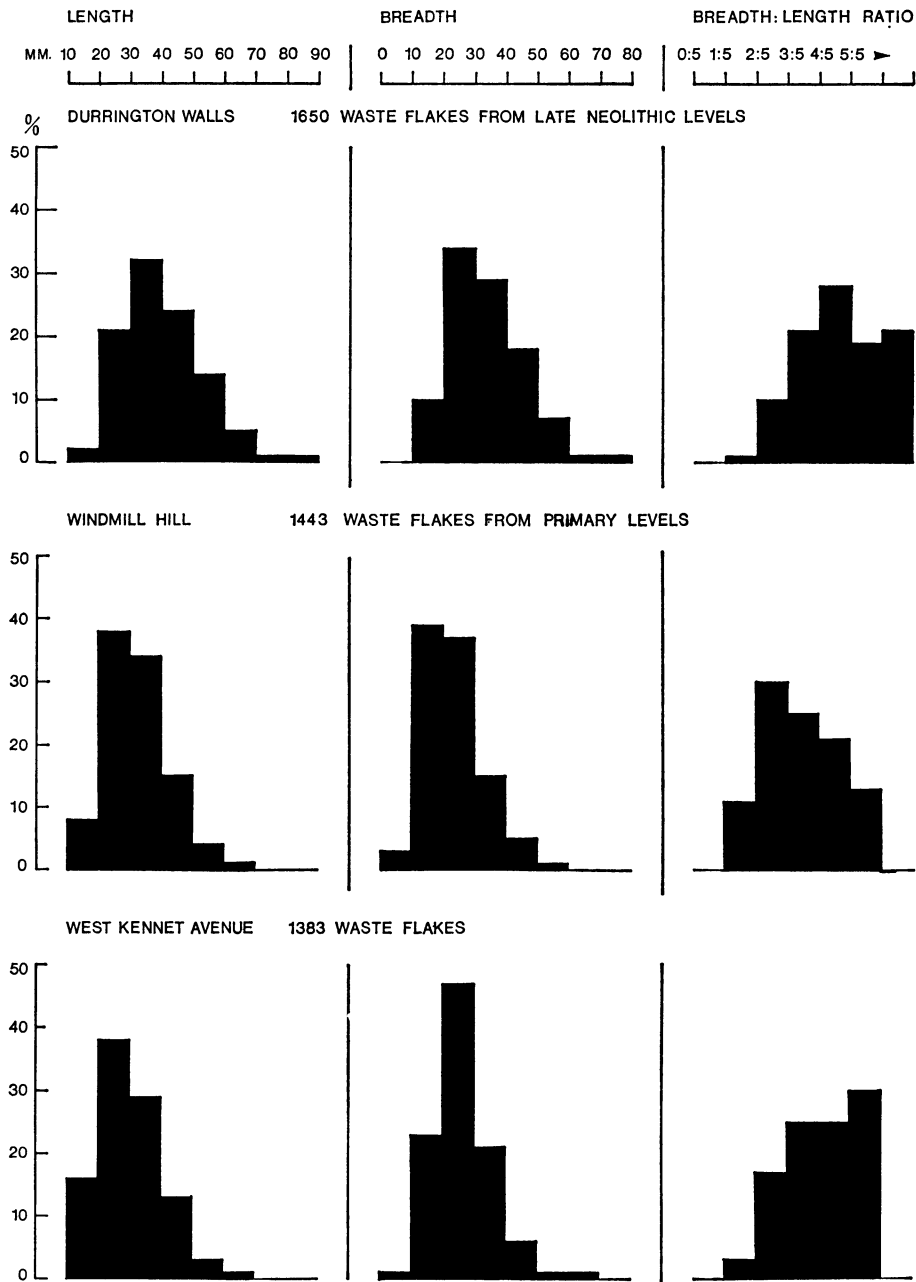


FIG. 68. Diagram illustrating the dimensions and breadth : length ratios of flakes in the Late Neolithic industries from Durrington Walls and the West Kennet Avenue and in the Middle Neolithic industry from Windmill Hill

been converted into core scrapers. The low ratio of cores to flakes has already received comment.

The percentage of implements in the total assemblage is 3% and they are represented by the following types:

Scrapers	207	(62%)
Transverse arrowheads	58	(17%)
Knives	14	(3%)
Retouched flakes	21	(5%)
Piercers	10	(2%)
Denticulated flakes	5	(1.5%)
Fabricators	5	(1.5%)
Adzes	3	(1%)
Axes	2	(1%)
Barbed and tanged arrowheads	2	(1%)
Tanged blades	2	(1%)
Choppers	1	(1%)
Curved sickle blades	1	(1%)
Leaf-shaped arrowheads	1	(1%)
Projectile head	1	(1%)
Total	333	(100%)

In terms of provenance 59% of the implement total were recorded from the Southern Circle, 14% from layers 5-8 in the ditch, 10% from the top of the old land surface under the bank and 4% from the Midden.

Scrapers (F14-31). Scrapers are the most common implement type and comprise 62% of the total tool complement. This figure does not include the scrapers on cores noted above.

Class A	End scrapers	(i) Long ¹ (F18)	26	} 133
		(ii) Short (F14-17, 19-22, 28)	107	
Class B	Double-ended	(i) Long (F26)	1	} 2
		(ii) Short	1	
Class C	Disc (F23-25)		12	
Class D	Side ²	(i) Long (F27, 29)	18	} 48
		(ii) Short (F30)	30	
Class E	On broken flakes		8	
Class F	Hollow scrapers (F31)		4	
Total			207	

The most common types of scraper are those on the ends of fairly short flakes. This may be due to frequent resharpening of the implements but is more likely to reflect the average flake size in Late Neolithic flint industries, a similar phenomenon having been noted in the

¹ i.e. the length is more than 1.5 times the breadth.

² Side-scrapers are those on which the scraping edge has been carried across the long axis.

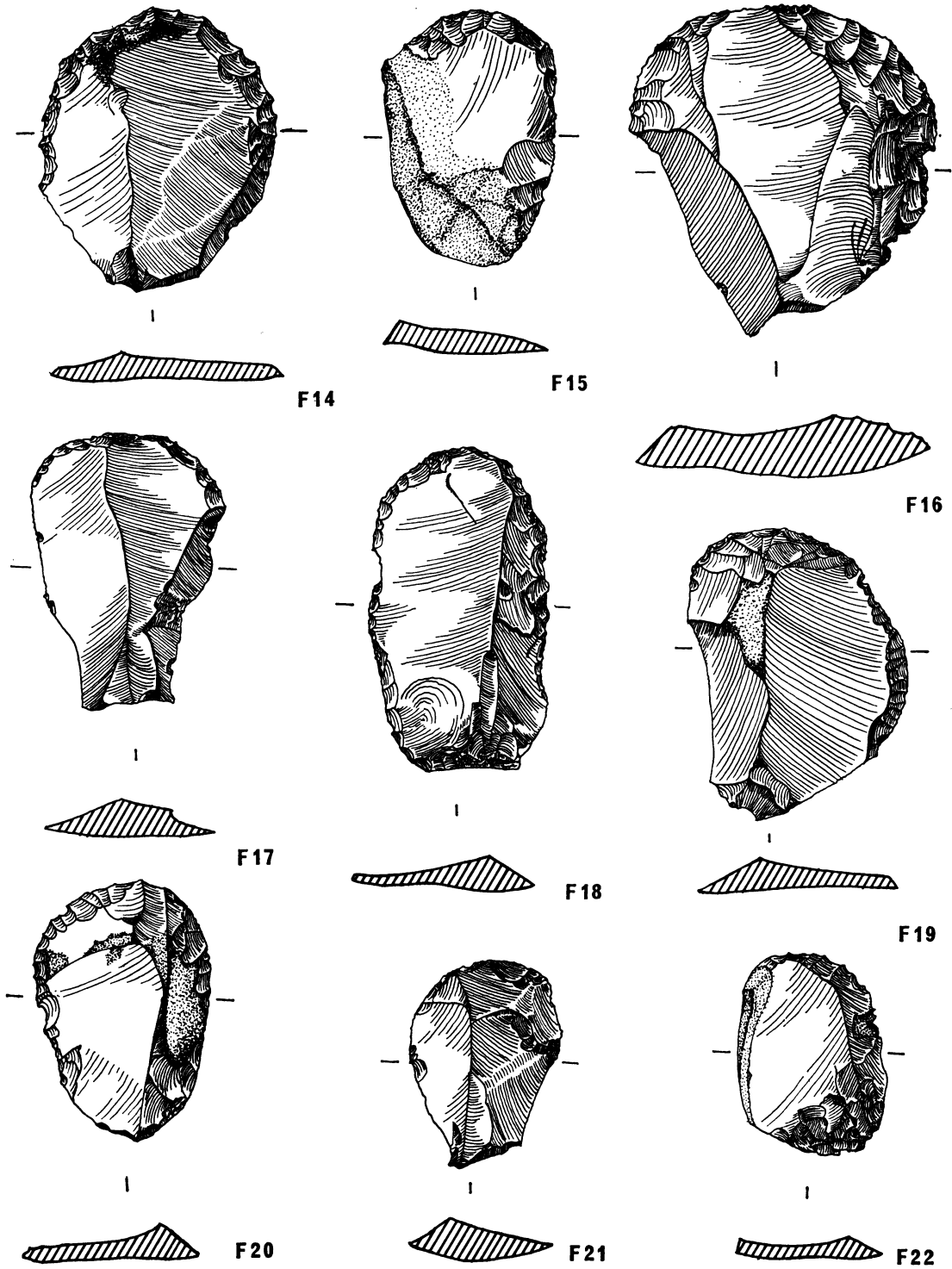


FIG. 69. F14-F20: Ditch 5-6B; F21: S. Circle (platform); F22: Midden (3)

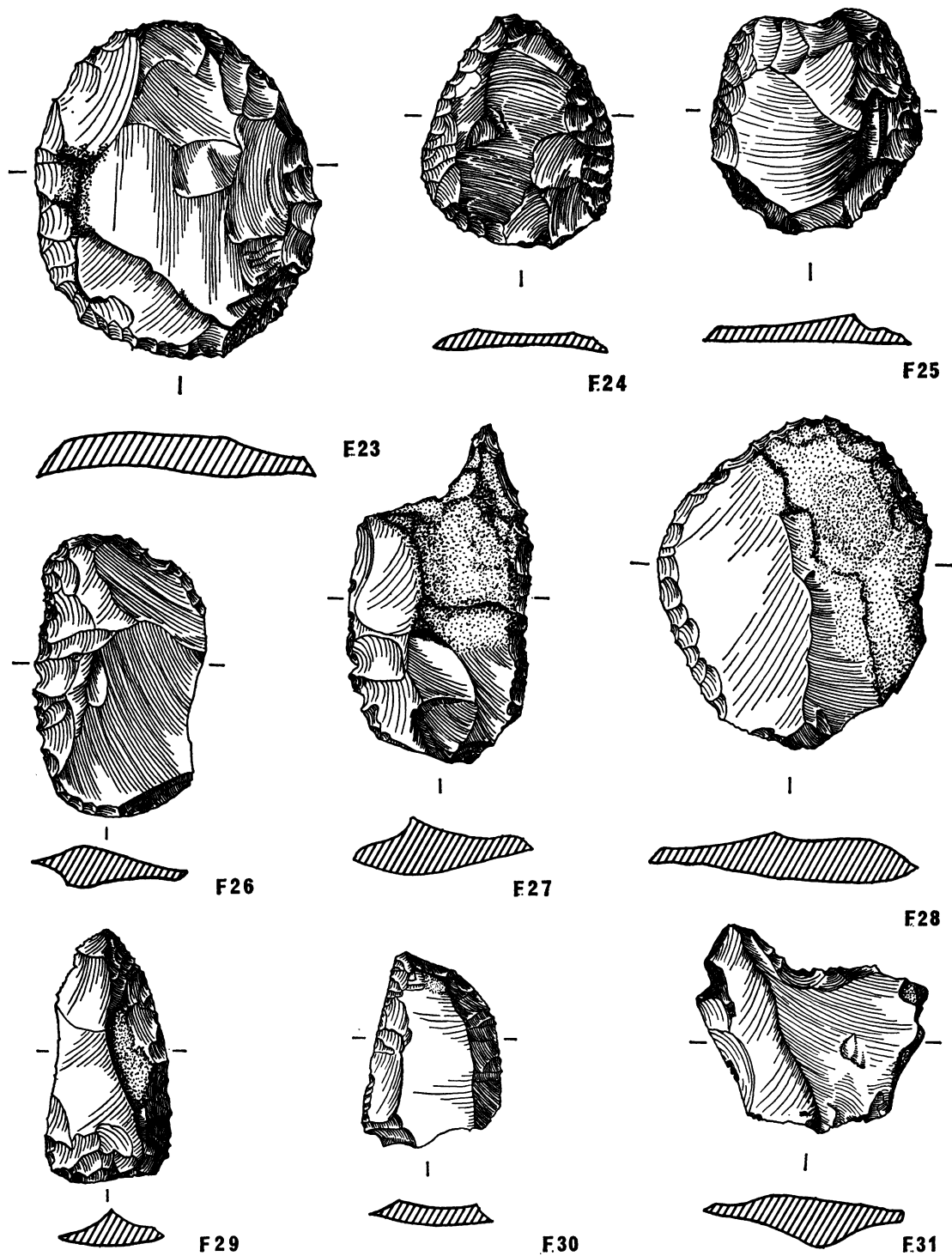


FIG. 70. F23: Midden; F24, F26, F28, F29: Ditch 5-6B; F25: S. Circle (p.h. 194); F27, F30: S. Circle (occupation earth); F31: S. Circle (platform) ($\frac{2}{3}$)

scraper complement from the occupation floor on the West Kennet Avenue.¹ A simple metrical analysis was undertaken of the scrapers similar to those performed on the Hurst Fen, Windmill Hill and West Kennet assemblages, in order to establish objectively the preferred size of the scrapers used at Durrington Walls. A total of 200 scrapers were measured for length,² breadth³ and thickness⁴ and the results are presented in figs. 71 and 72. The preferred length of the Durrington scrapers was between 40 and 50 mm. and 30% of the scrapers fall into this category. This was also the preferred scraper length at the West Kennet

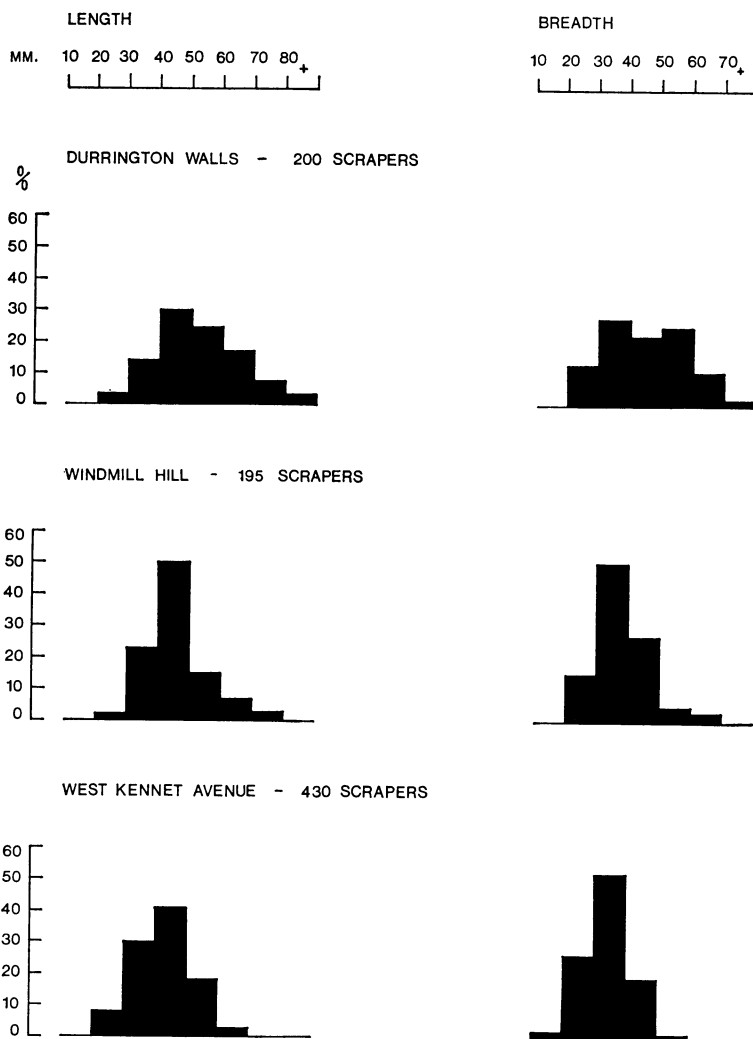


FIG. 71. Diagram illustrating the dimensions of scrapers in the Late Neolithic industries from Durrington Walls and the West Kennet Avenue and in the Middle Neolithic industry from Windmill Hill

¹ Smith, 1965, 239f.

² Measured along the bulbar axis.

³ Maximum breadth at right angles to the bulbar axis.

⁴ The maximum thickness of the scraper.

DURRINGTON WALLS: EXCAVATIONS 1966-8

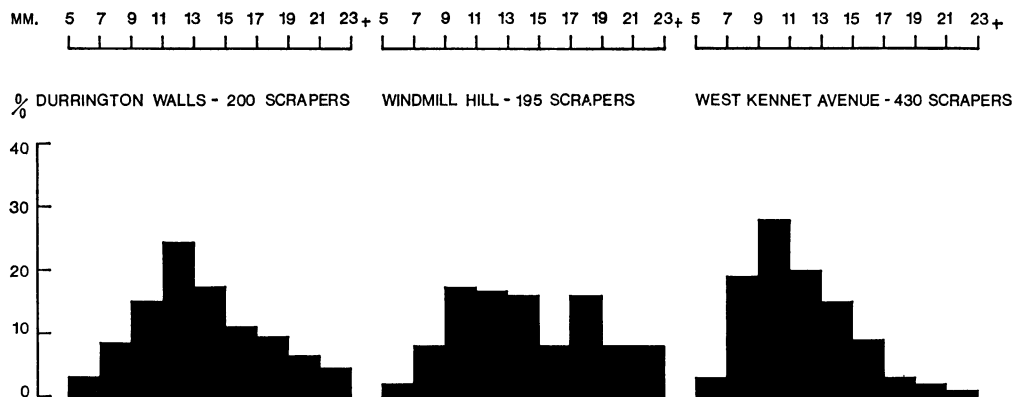


FIG. 72. Diagram to illustrate the relative thickness of scrapers in the Late Neolithic industries from Durrington Walls and the West Kennet Avenue and in the Middle Neolithic industry from Windmill Hill

Avenue (41%) and Windmill Hill (50%),¹ whilst at Hurst Fen 55% of the scrapers were between 35 and 50 mm long.² However, in the Durrington complement 54% were larger than 50 mm. as opposed to 25% from Windmill Hill and 21% from the West Kennet Avenue. The preferred breadth of the Durrington scrapers was between 30-40 mm. and 28% fall into this category as compared with 50% from Windmill Hill, 52% from the West Kennet Avenue and 50% between 25-40 mm. from Hurst Fen. Therefore, although the preferred breadth and length of the scrapers from Durrington is the same as for the other sites this preference is much less marked. Moreover, in the Durrington assemblage 60% were broader than 40 mm. as opposed to 35% from Windmill Hill and 20% from the West Kennet Avenue.

Therefore, the Durrington scrapers are on the whole much larger than those from the three sites with which they have been compared. This may not, however, be a culturally diagnostic feature and is possibly related to the quality of the raw material available.

Measurements of thickness, however, appear to reveal a differentiation between the cultural groupings represented by Windmill Hill on the one hand, and Durrington Walls and the West Kennet Avenue on the other (fig. 72). At Windmill Hill, 31% of the scrapers are 17 mm. thick or more as opposed to only 7% from the West Kennet Avenue and 20% from Durrington Walls. The thin cross-sections of the Late Neolithic scrapers are even more marked when one considers that the Durrington scrapers are larger and broader than those with which they are being compared for thickness. This characteristic is emphasized by the greater incidence of scrapers from 9-13 mm. thick from Durrington (40%) and the West Kennet Avenue (48%) than from Windmill Hill (34%). Dr Smith³ has suggested that the higher proportion of thick scrapers from Windmill Hill as compared with the West Kennet Avenue may have been due to the more elaborate preparation of the cores at the latter site as revealed by the percentages of faceted butts (11% as compared with 40%). A similar explanation may be sought for the Durrington scrapers as some 30% possess faceted striking platforms which suggest pre-treatment of the cores.

¹ Smith, 1965, fig. 41.

² Clark, Higgs and Longworth, 1960, fig. 12.

³ Smith, 1965, 95.

Finally, 16% of the scrapers from Durrington Walls have their working edges retouched at angles of from 80°–90°, as opposed to 14% from the West Kennet Avenue and 23% from Windmill Hill. These differences are small but may prove to be significant when larger samples have been measured.

A table demonstrating the provenance of the scraper classes (Table XIII) indicates that just under 50% of the scrapers came from the Southern Circle (platform, occupation earth and post-holes). Within this group the post-holes produced 29% of the total but the majority were recorded from the surface of the platform. Two scrapers were recorded from post-holes 128 and 194 of Phase 1. The fine group of scrapers from the enclosure ditch (layer 5–6B) were obtained from near the terminal and are in a fresh, unpatinated condition. Those implements from the palisade trench are rolled as are those from layer 13 in the enclosure ditch, and could include some of Iron Age date.

TABLE XIII

Provenance	Class									Totals
	A(i)	A(ii)	B(i)	B(ii)	C	D(i)	D(ii)	E	F	
Southern Circle: p.h. nos.										
2	—	—	—	—	—	—	—	1	—	1
21	—	1	—	—	—	—	—	—	—	1
22	—	2	—	—	—	1	—	—	1	4
23	1	3	—	—	—	1	—	—	—	5
35	1	2	—	—	—	—	—	—	1	4
38	2	—	—	—	—	—	1	—	—	3
40	—	—	—	—	—	1	—	—	—	1
42	—	2	—	—	—	—	—	—	—	2
44	1	—	—	—	—	—	—	—	—	1
51	1	—	—	—	—	—	—	—	—	1
71	—	2	—	—	—	—	—	—	—	2
79	—	1	—	—	—	—	—	—	—	1
90	1	—	—	—	—	—	—	—	—	1
91	—	—	—	—	—	—	—	1	—	1
128	—	1	—	—	—	—	—	—	—	1
194	—	—	—	—	1	—	—	—	—	1
Platform	10	23	—	—	2	4	8	1	1	49
Occupation earth	2	10	—	1	1	5	6	1	—	26
Midden	—	3	—	—	2	2	—	1	1	9
Palisade trench (13)	—	—	—	—	—	—	1	—	—	1
Palisade trench (14)	1	12	—	—	2	—	5	—	—	20
O.L.S. (Gen.)	1	—	—	—	—	1	1	2	—	5
O.L.S. (C.F.4)	—	1	—	—	—	—	—	—	—	1
O.L.S. (pipe-trench)	1	7	—	—	—	—	—	—	—	8
Ditch (2)	—	1	—	—	—	—	—	—	—	1
Ditch (13)	—	6	—	—	1	1	3	—	—	11
Ditch (5–6B)	3	28	1	—	2	2	5	1	—	42
Ditch (8)	1	2	—	—	1	—	—	—	—	4
Totals	26	107	1	1	12	18	30	8	4	207

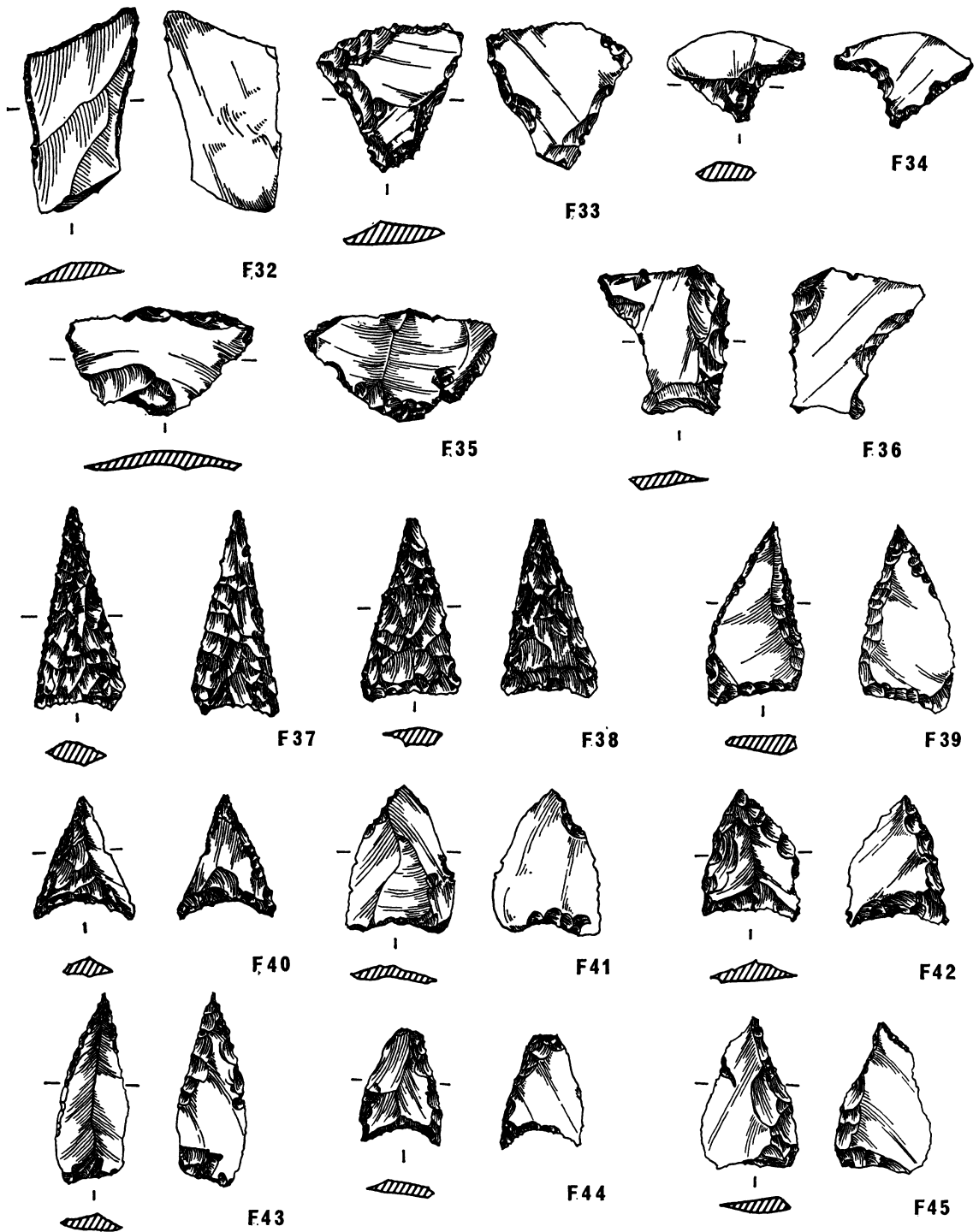


FIG. 73. F32: S. Circle (p.h. 45); F33: Ditch (13); F34, F35, F40-F45: S. Circle (platform); F36: S. Circle (occupation earth); F37: S. Circle (p.h. 90); F38, F39: Midden ($\frac{2}{3}$)

Transverse arrowheads (F2-3, 32-70). These arrowheads have been classified according to the paper published by Professor J. G. D. Clark in 1934. It was possible to assign 58 specimens (or 16% of the total implement assemblage) to these categories, but three examples were fragmentary and could not be typed. This is a fairly large collection and compares with 28 classifiable arrowheads from the Late Neolithic levels at Windmill Hill¹ and 81 from the West Kennet Avenue.²

TABLE XIV

Provenance	Class								Totals
	A	C1	C2	D	F	G	H	Misc.	
Southern Circle p.h. nos.									
12	—	—	—	—	—	1	—	—	1
22	—	—	—	—	—	—	1	—	1
24	—	—	—	—	—	1	3	—	4
38	—	—	—	—	—	1	—	—	1
43	—	—	—	—	—	—	1	—	1
45	1	—	—	—	—	—	—	—	1
47	—	—	—	—	—	—	2	—	2
66	—	—	—	—	—	1	—	—	1
74	—	—	—	—	—	—	1	—	1
77	—	—	—	—	—	—	2	—	2
83	—	—	—	—	—	—	1	—	1
90	—	—	—	—	—	1	—	—	1
Platform	—	—	1	—	1	12	8	2	24
Occupation earth	—	—	—	1	—	2	1	—	4
Midden	—	—	—	—	—	2	1	—	3
O.L.S. (Gen.)	—	—	1	—	—	1	2	1	5
O.L.S. (C.F.4)	—	—	—	—	—	2	—	—	2
Ditch (13)	—	1	—	—	—	1	—	—	2
Ditch (8)	—	—	—	—	—	1	—	—	1
Totals	1	1	2	1	1	26	23	3	58

Of these arrowheads 81% were recorded from the Southern Circle — 42% from the surface of the platform and 32% from post-holes. In the case of the latter it is worth remarking on the four fine specimens found in post-hole 24 — an example possibly of a deliberate deposit at the foot of the post. No arrowheads were recorded from Phase 1 of this structure but seven were found on top of the old land surface under the bank thus confirming the evidence of the Late Neolithic pottery, whilst one unpatinated example of Class G was recorded from the rapid silt of the enclosure ditch.

The types of arrowhead are remarkably restricted and 84% of the total is represented by Class G (45%) and Class H (39%). In general terms the former is characterized by a symmetrical basal concavity (F37-45, 61-8) and the latter by a markedly asymmetric basal concavity (F3, 46-60). In both cases the edge retouch has spread onto the flat surfaces and

¹ Smith, 1965, 104.

² Smith, 1965, 241.

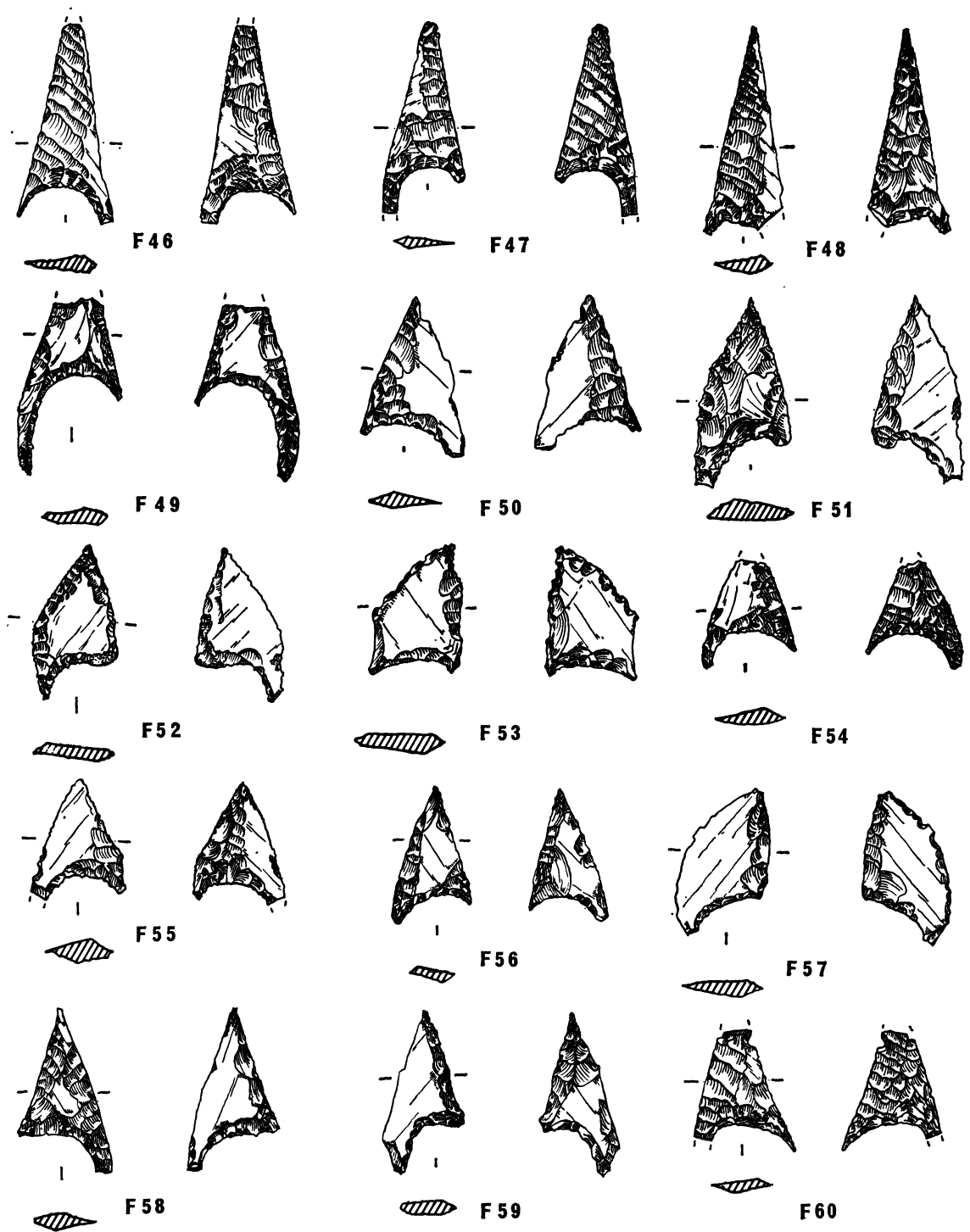


FIG. 74. S. Circle. F46, F47: p.h. 24; F48: p.h. 77; F49: p.h. 22; F51-F55: platform; F56-F57: p.h. 47; F58: p.h. 43; F59: p.h. 74; F60: p.h. 83 ($\frac{2}{3}$)

stylistically they are regarded as being fairly advanced in the typological scheme which Professor Clark has evolved.¹ The simpler forms are represented by single specimens, or in the case of Class C2 by two examples (F32: Class A; F33: Class C1; F2, 35: Class C2; F36: Class D; F34: Class F).

Leaf-shaped arrowheads (F7). A single example of a leaf-shaped arrowhead was recorded from the surface of the ancient soil under the bank in its southern sector. The implement was heavily patinated and represents additional evidence for a Middle Neolithic occupation in the neighbourhood prior to the building of the bank and ditch.

Barbed and tanged arrowheads (F69-70). Two small examples of barbed and tanged arrowheads were recorded from the surface of the platform fronting the Southern Circle in direct association with other flint artifacts and the pottery. Both implements are patinated white and have one barb missing.

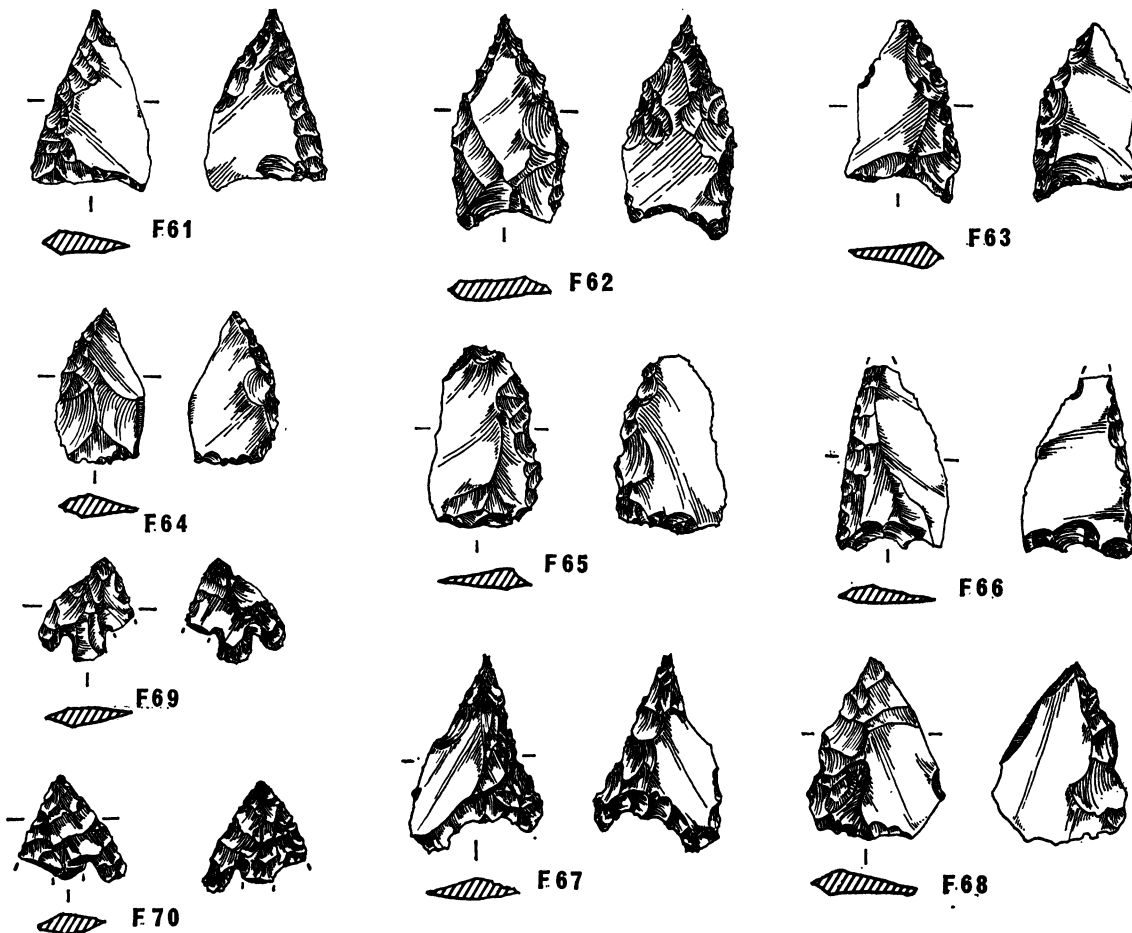


FIG. 75. F61: S. Circle (p.h. 66); F62: Ditch 8; F63: N. Circle (p.h. 43); F64, F65: S. Circle (occupation earth); F66-F70: S. Circle (platform) (§)

¹ Clark, 1934.

Knives (F4, 10-12, 71-6, 86). This category comprises a varied assortment of 14 implements, if one omits the unretouched blades which had clearly been used for a similar purpose. On typological grounds they can be divided into four main groups of which the most numerous are blades with flat edge-retouch which can be either bifacial or unifacial. There are only two fragmentary examples of true plano-convex knives — both of them from the surface of the platform.

(i) *Knives with flat edge-retouch* (F11-12, 71-2, 86):

The eight specimens in this category are characterized by flat edge retouch which is occasionally bifacial but does not extend over the whole flake surface. Three knives of this type were recorded from the old land surface under the bank and five from the Southern Circle (three from the surface of the platform and one each from post-holes nos. 15 and 92).

(ii) *Knives with blunted back* (F4, 73):

Two examples on broad blade-flakes with steep retouch down one edge (bank old land surface and post-hole no. 76 of the Southern Circle).

(iii) *Flake-knives* (F10, 74):

Two specimens on short, flat flakes which retain cortex down one edge and possess flat, bifacial retouch along the cutting edge (old land surface under the bank; Southern Circle: surface of platform.)

(iv) *Plano-convex knives* (F75-6):

Two fragmentary plano-convex knives with flat retouch covering their upper surface were recorded from the surface of the platform fronting the Southern Circle.

Sickle blade (F80). Possibly the tip of a curved flint sickle blade which is beginning to broaden and curve at the point of fracture. A similar implement was recorded from Hurst Fen.¹ The Durrington specimen was recorded from the chalk surface within the Southern Circle.

Tanged blades (F79, 84). Two bifacially worked blades which have been broken in antiquity above an angular shoulder. It has not been possible to find close parallels for these implements which were recorded from the surface of the platform and the old land surface beneath the bank.

Piercers (F78, 81). Ten examples of piercers were recorded — all of them from the Southern Circle (surface of the platform (3); occupation earth (4); post-hole nos. 86, 123, 144). No examples of the true rotating awl were recorded² and all the implements were made on simple flakes with secondary working at the tip. Two specimens were recorded from post-holes of Phase 1 of the Southern Circle.

¹ Clark, Higgs and Longworth, 1960, fig. 15, F55.

² Clark, Higgs and Longworth, 1960, 223.

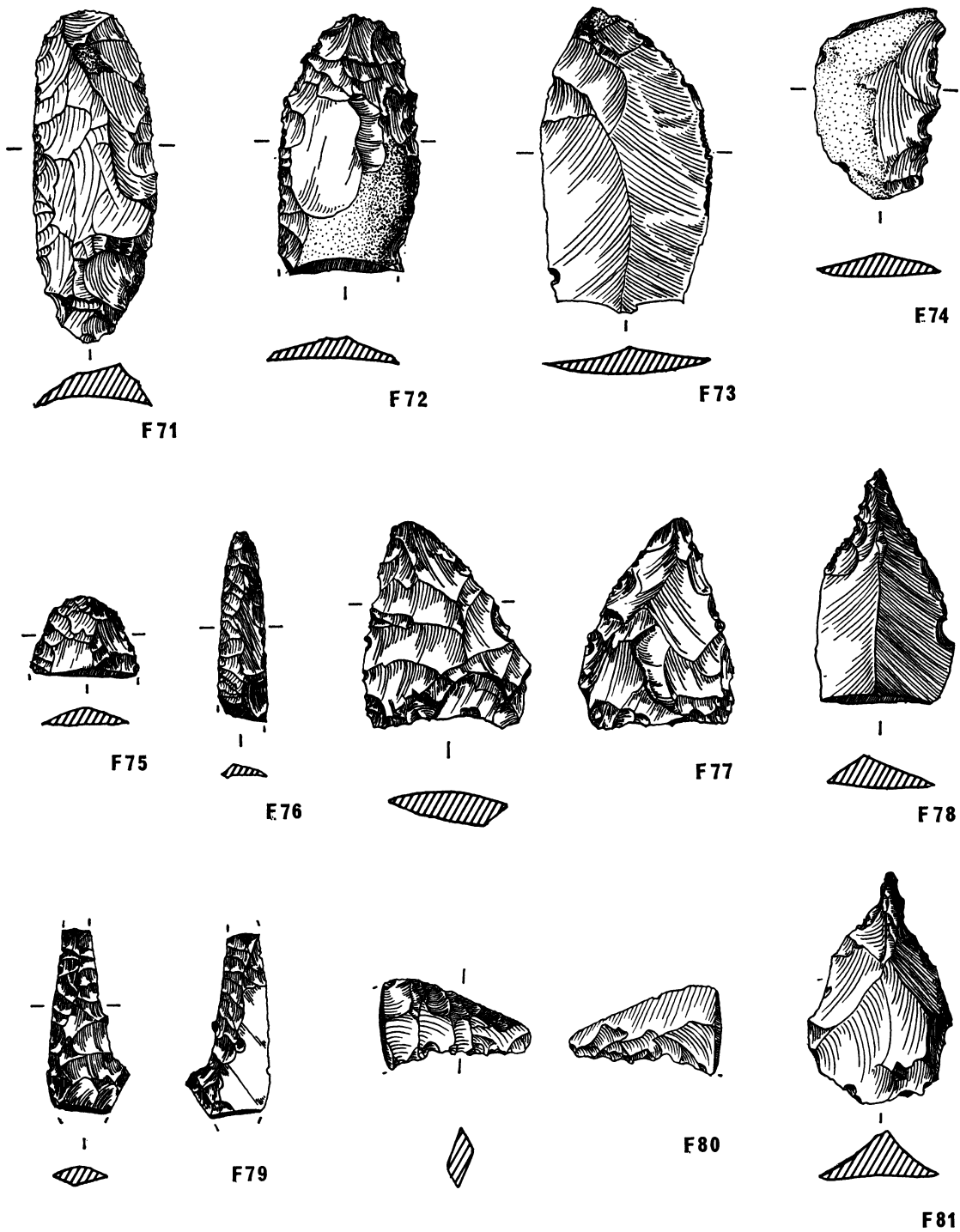


FIG. 76. S. Circle. F71, F74-F79: platform; F72: p.h. 92; F73: p.h. 76; F80, F81: occupation earth ($\frac{2}{3}$)

Denticulated flakes (F9). Implements in this group are made on keeled flakes and are characterized by markedly indented or notched edges. Presumably they performed the function of hollow scrapers or spokeshaves. Of the five specimens, four came from the Southern Circle (surface of platform (2), occupation earth (2)) and one from the old land surface under the enclosure bank.

Fabricators (F13, 82-3). Five examples of this well-known implement type were found, four of which came from the Southern Circle (surface of platform (2); occupation earth; palisade trench) and one from the old land surface beneath the enclosure bank.

Projectile head (F77). A heavy triangular point from the surface of the platform fronting the Southern Circle. It is thick in section and formed by bifacial retouch; some attempt has been made to thin the broad butt and its likely function is that of a spear or projectile head.

Adzes (F5, 6, 89). Chipped flint adzes of the type found at Durrington are not commonly recorded in Neolithic contexts in Britain. Three examples were found, two from the old land surface under the enclosure bank (1967 pipe-trench section) and one from the Southern Circle (surface of the platform).

1. Made on a thick flake retaining an area of cortex on its upper surface. Steep flaking along both edges and flat flaking on its under surface has produced a triangular cross-section. The butt is steeply trimmed and the cutting edge produced by flat retouch (F5).
2. Larger than the specimen described above with a thick, keeled section and more extensive flaking on the flat under surface (F6).
3. Similar to the implements described above with a markedly keeled section (F89).

Three small adze-like core tools were recorded in a Late Neolithic assemblage which was stratified beneath a round barrow on Arreton Down in the Isle of Wight,¹ associated with pottery of Peterborough type, a little Beaker material, transverse arrowheads and a barbed and tanged arrowhead. A similar implement was recorded from the stone implement factory of probable Late Neolithic date on Mynydd Rhiw in Caernarvonshire.² They are clearly connected with the working of wood and their occurrence at Durrington is of interest in view of the timber structures found within the enclosure.

Axes (F87). Two broken axes of flint were recorded in the 1967 excavations. The only specimen demonstrably in a Late Neolithic context is the broken tip of a chipped axe in mint condition from the enclosure ditch (layer 5-6B). The second example came from the old land surface beneath the enclosure bank and is the tip of a crudely worked bifacial implement, not certainly from an axe, which is patinated white and which may belong to the earlier Middle Neolithic occupation.

Chopper (F88). One example of a chopping tool was recorded from the enclosure ditch (layer 5-6B). It was manufactured from a large lightly patinated flake, retaining an area

¹ Alexander and Ozanne, 1960, 291, fig. 10, F37, F39, F40. ² Houlder, 1961, fig. 14, 6.

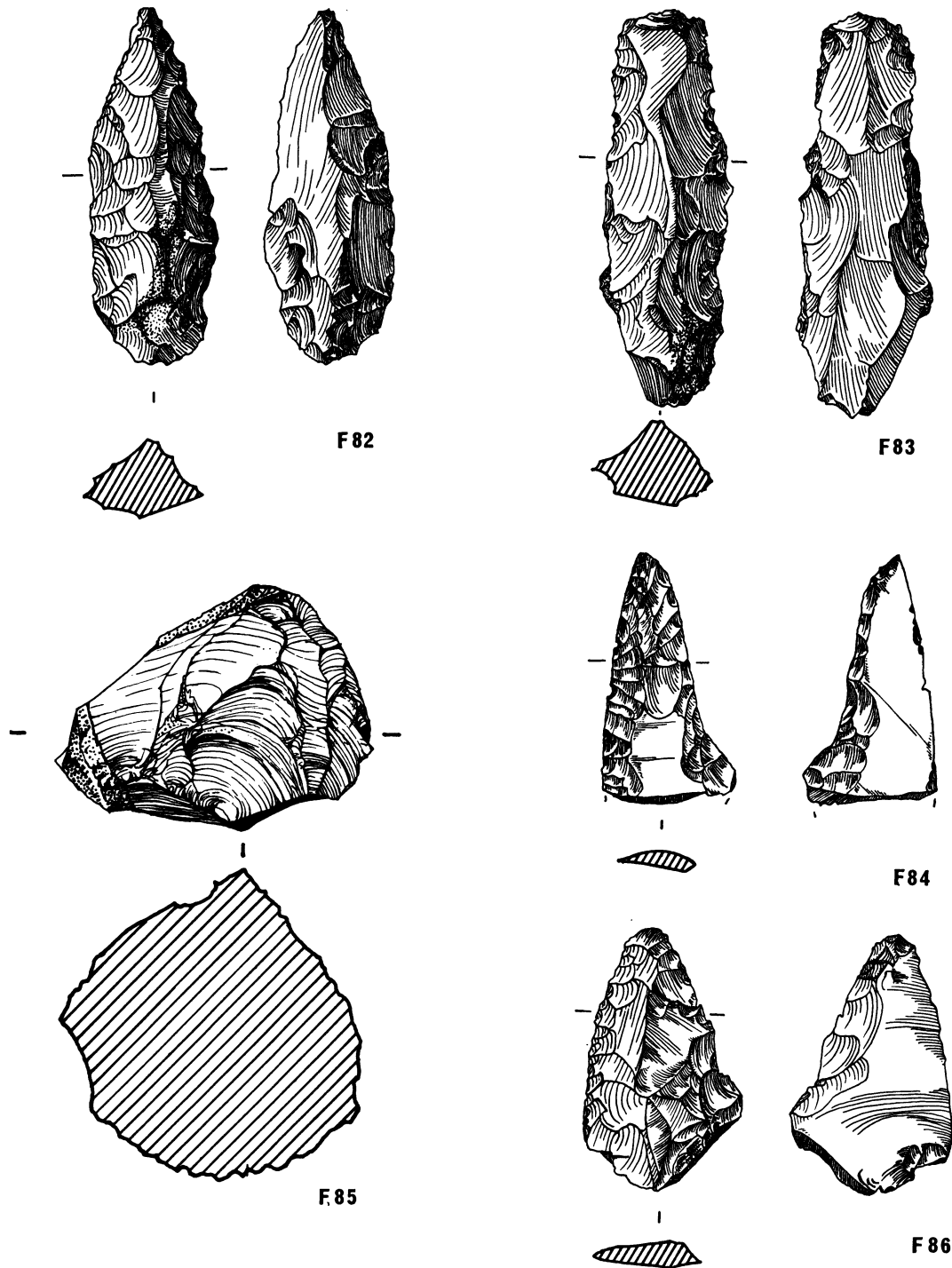


FIG. 77. F82, F83: S. Circle (platform); F84-F86: old land surface under the enclosure bank ($\frac{2}{3}$)

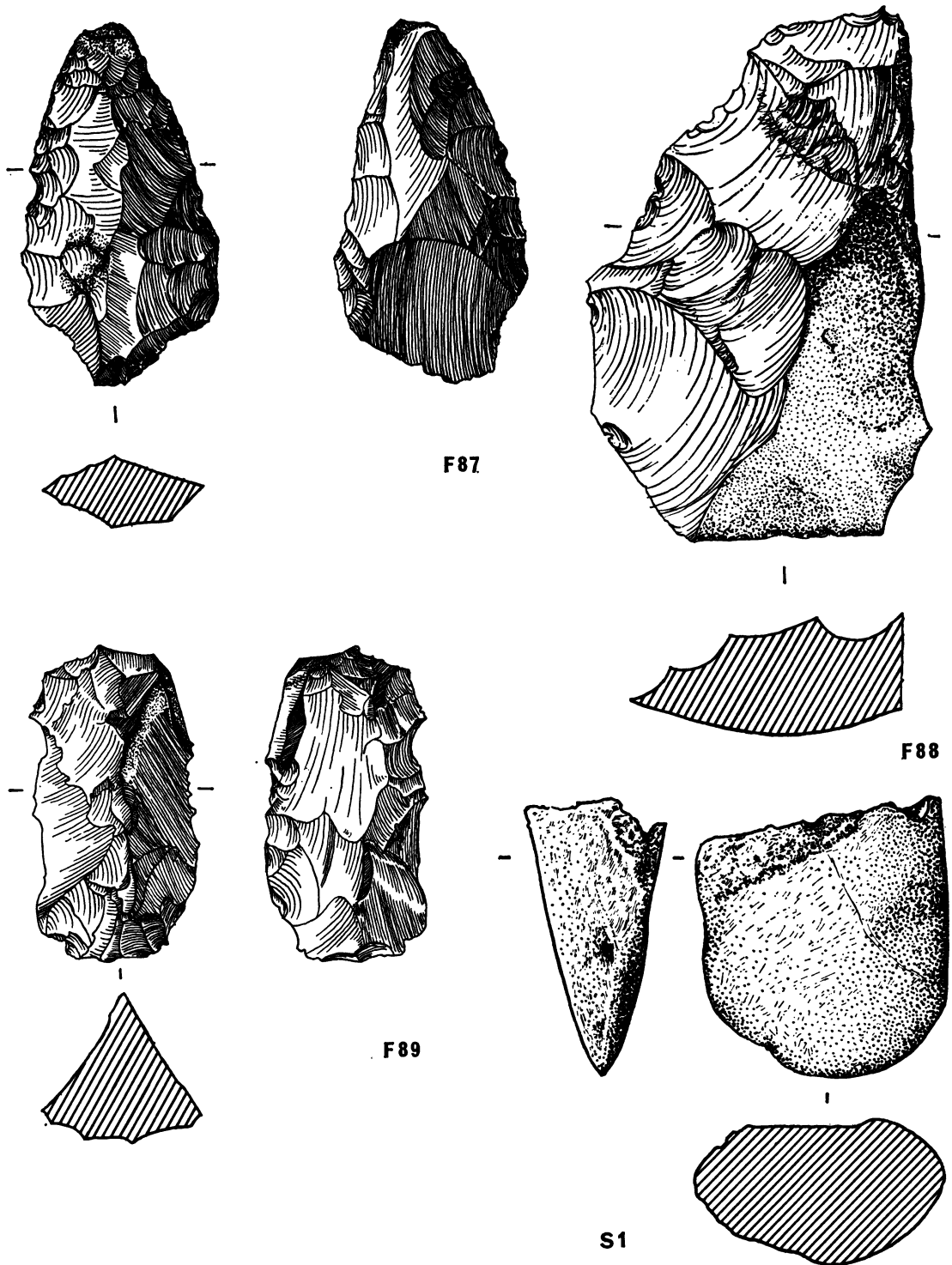


FIG. 78. F87, F88: Ditch 5-6B; F89: S. Circle (platform); S1: S. Circle (p.h. 87) (2/3)

of cortex on its upper surface. The chopping edge is unifacial and produced by the removal of large flakes along one edge.

Retouched flakes. Those flakes possessing secondary retouch but which cannot be placed in any formal implement category total 21. Of these, 17 came from the Southern Circle, 2 from the Midden and 2 from the old land surface under the enclosure bank.

General comments

A discussion of the detailed affinities of the implement types described above has been reserved for a separate section. However, a few points of general interest may be made here.

A total of 51 flint artifacts were recorded from post-holes of Phase 1 of the Southern Circle. This represents 1% of the total number of flints recorded from that structure. They were distributed as follows:

TABLE XV

<i>Post-hole no.</i>	<i>Flakes</i>	<i>Scrapers</i>	<i>Piercers</i>
123	1	—	1
124	1	—	—
128	3	1	—
129	10	—	—
131	4	—	—
144	—	—	1
153	12	—	—
188	1	—	—
194	15	1	—
Totals	47	2	2

The two scrapers and piercers are not culturally diagnostic types and the assemblage is otherwise devoid of interest (F25).

The almost total lack of true axes is noteworthy in view of the timber structures found within the enclosure. One fragmentary example from the enclosure ditch and three adzes, together with one half of an axe of igneous rock, are the only wood-working tools found indisputably in a Late Neolithic context. The absence of such tools must mean that the timber posts for the internal structures were prepared away from the site before they were brought to the enclosure. In view of the weight reduction that such pre-treatment would entail this would be the commonsense method of dealing with the problem. Nevertheless it is strange that there is so little evidence in the tool complement for wood-working as one might suppose that some carpentry would have been required when the timbers had been erected.

With the exception of the localized group of flints associated with pottery of Middle Neolithic type under the enclosure bank in its northern sector the only implement of demonstrably Middle Neolithic type from the 1967 excavations is a leaf-shaped arrowhead (F7). The remainder can be assigned to Late Neolithic activities on the site.

(c) The Northern Circle

Erosion of the chalk through ploughing had been very heavy in the vicinity of the Northern Circle so that the original Neolithic land surface had been destroyed. As a result, all the flint artifacts were found in the surviving parts of the post-holes, as were the pot-sherds and animal bones. The distribution of the artifacts was as follows (*vide* fig. 17 for post-hole nos.):

TABLE XVI

<i>Provenance</i>	<i>Flakes</i>	<i>Implements</i>	<i>Cores</i>	<i>Totals</i>
12	2	—	—	2
30	1	—	—	1
38	2	—	—	2
40	3	1	—	4
43	230	12	1	243
45	8	—	1	9
Totals	246	13	2	261

These figures indicate that 93% of the artifacts were recorded from post-hole 43. Of the two cores, one specimen is a single platform type of Class A₁ and the other a double platform type of Class B₃. The implement types are simple and consist of scrapers, a knife, a retouched blade and one transverse arrowhead.

Scrapers. The scrapers can be classified as follows:

Class A	End scrapers (ii) short	5
Class C	Disc scrapers	1
Class D	Side scrapers (ii) short	2
Class E	On broken flakes	2
Total		10

Transverse arrowheads (F63). One transverse arrowhead of Class G was recorded from post-hole 43.

Knives. One knife with flat edge retouch was recorded from post-hole 43.

Retouched blades. One blade with intermittent edge retouch was recorded from post-hole 43.

General conclusions

Little can be said concerning this small assemblage other than that the arrowhead confirms the Late Neolithic associations deduced from the pottery.

(d) Structure A

A total of 29 flakes and one single platform core, all heavily patinated, were recorded from the pits or post-holes of Structure A (*vide* fig. 18 for post-hole nos.):

TABLE XVII

<i>Provenance</i>	<i>Flakes</i>	<i>Implements</i>	<i>Cores</i>	<i>Totals</i>
1	1	—	—	1
2	2	—	—	2
3	8	—	—	8
4	17	—	—	17
12	1	—	1	2
Totals	29	—	1	30

(e) Structure B

A total of 27 unretouched flint flakes were recorded from the upper fill of the ditch comprising Structure B.

BONE OBJECTS

(figs. 79–80)

The artifacts of bone from the excavations number 40 and are divided into two implement types — pins and awls.

Pins (B1–11)

The pins are made from bone splinters and have their articular end removed and the shaft ground and polished so as to remove most of the medullary cavity. Frequently the butt is neatly squared and the shaft circular in section above the point. The average length is 7.5 cm., although a large specimen is 12 cm. long. No bulbed pins were recorded. Pins of this type are common in Neolithic contexts and are distinct from the 'skewer pins' found with certain Late Neolithic associations. The latter were first defined as a separate group by Professor Atkinson¹ and are larger with a circular section throughout.

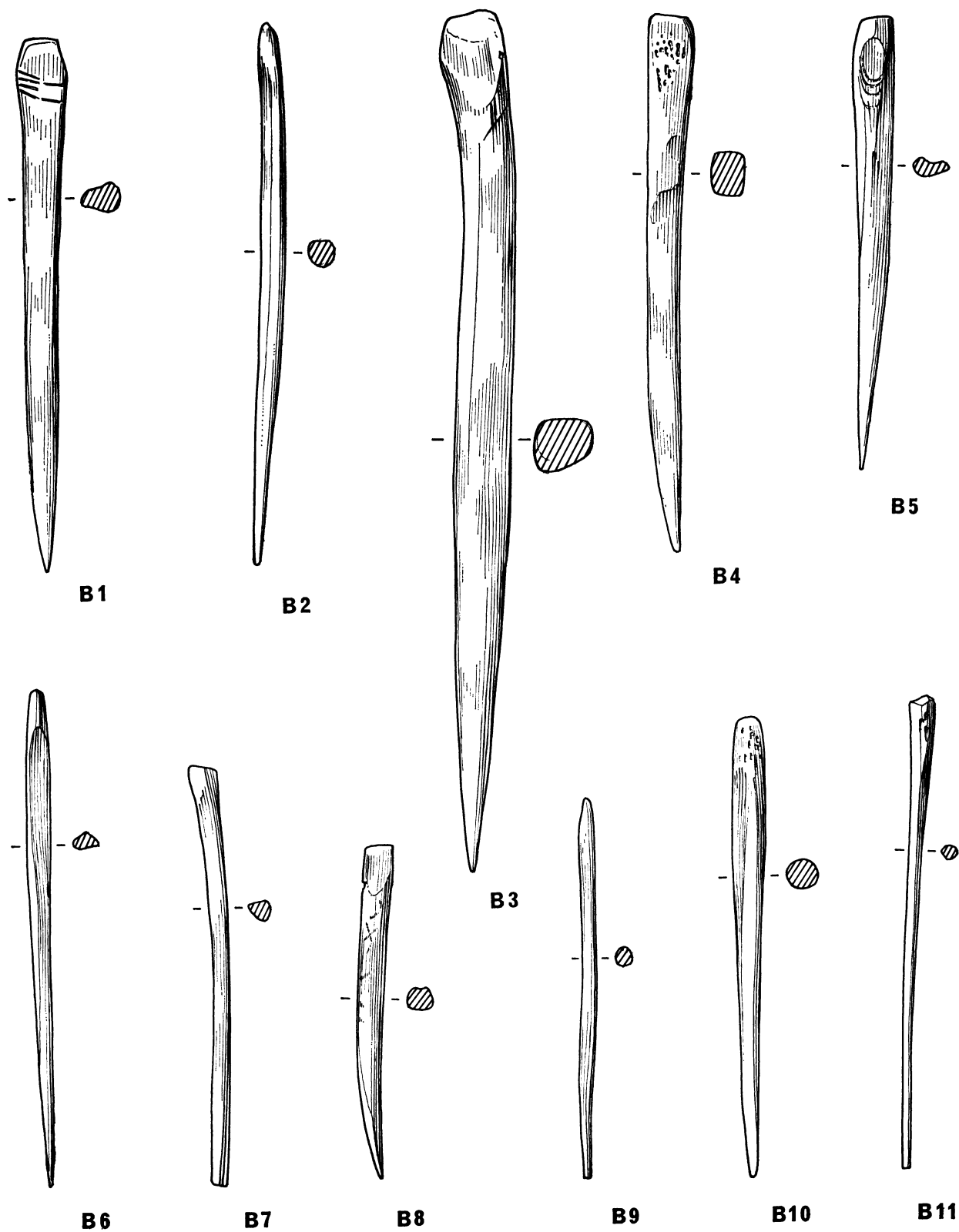
Awls (B12–20)

The awls are distinguished from the pins by the retention of the articular end which is split longitudinally near the butt; the broken surfaces are sometimes smoothed, but polishing and grinding so as to obliterate the medullary cavity takes place only at the point.

In addition, a group of broken polished shafts were found which cannot be assigned to either the awl or pin category with absolute certainty. The artifacts were distributed as in Table XVIII.

From these figures it will be seen that 67% of the bone artifacts came from the Southern Circle, 20% from the Midden and 13% from the enclosure ditch. Of the recognizable artifacts pins are the most common as they comprise 37% of the total as against 23% for awls. The remaining 40% is represented by broken shafts.

¹ Atkinson, Piggott and Sandars, 1951, 72.



B1 **B2** **B3** **B4** **B5**
B6 **B7** **B8** **B9** **B10** **B11**

FIG. 79. B1-B4, B7, B10, B11: S. Circle (p.h. 67, 91, 70, 44, 12, 68 and 26); B5, B6: Ditch 5-6B; B8, B9: Midden ($\frac{1}{2}$)

TABLE XVIII

<i>Provenance</i>	<i>Pins</i>	<i>Awls</i>	<i>Broken</i>	<i>Totals</i>
Platform	1	2	3	6
Southern Circle: p.h. nos.				
23	—	2	—	2
26	1	1	1	3
35	—	1	—	1
44	1	—	1	2
49	—	—	1	1
62	—	—	1	1
67	1	—	—	1
68	1	1	—	2
70	1	—	—	1
82	—	—	1	1
89	—	—	1	1
91	2	1	—	3
95	—	—	1	1
97	—	1	—	1
Midden	4	—	4	8
Ditch (5-6B)	2	—	2	4
Ditch (8)	1	—	—	1
Totals	15	9	16	40

STONE

(fig. 78)

Only one implement of a stone other than flint was recorded from Neolithic contexts — a fragmentary axehead of ophitic greenstone from post-hole 87 of the Southern Circle (S1). The stone is presumably of West Country origin but it was not possible to assign it to any recognized group (*vide* Appendix IV for petrological report). Stone of West Country origin was utilized from earliest Neolithic times and axes of Group I have also been found in Late Neolithic contexts as at Woodhenge, Lion Point, Clacton and Stonehenge II.¹ In addition, a fragment of a Graig Lwyd axe was recorded from pit 2 at Woodlands near Amesbury in association with Grooved Ware.²

Apart from the fragmentary axe the majority of stones foreign to the site occur in post-hole packing material and consist entirely of sarsen stones from the Marlborough region further north. A total weight of 55 lb. 5 oz. of this stone was recorded, but 80% of this weight is represented by three lumps from post-holes of the Southern Circle (*vide* Table XIX). Of the remainder, six fragments were recorded from the surface of the platform (3 lb. 2 oz.), small fragments came from the old land surface under the bank and two small fragments from the Midden. A representative series of the stones were examined by the Implement Petrology Survey of the South-west and the results are presented in Appendix IV. The provenance of the stones and their identifications and weights are given below.

¹ Evens, Grinsell, Piggott and Wallis, 1962, 234 and 236.² Stone and Young, 1948.

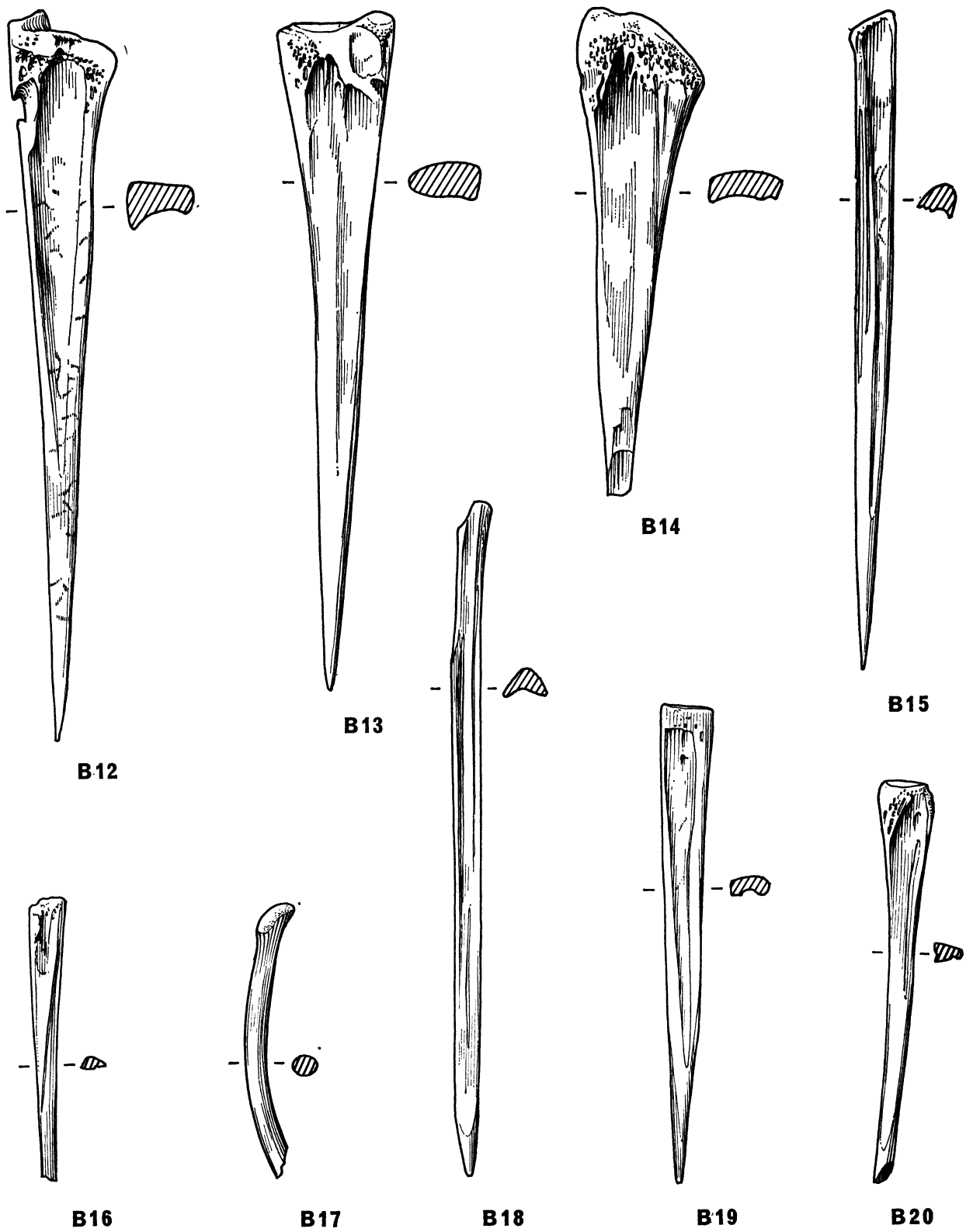


FIG. 80. B12-B17, B19, B20: S. Circle (p.h. 35, 23, 23, 68, 91, 26, 97 and platform); B18: Ditch 5-6B ($\frac{1}{2}$)

In addition, fragments of igneous rock from the surface of the ploughed field near the centre of the enclosure were submitted to the Petrology Survey for examination. They proved to be an olivine diorite from the Clee Hill — a material which is extensively used as roadstone (Wilt. 347.1355; Wilt. 348.1356). Finally a fragment of rock which was thought to be igneous when examined on the site proved on microscopic examination to be a rubbly chalk (Wilt. 352.1381).

TABLE XIX

<i>Provenance</i>	<i>Weight†</i>	<i>Material</i>	<i>Serial no.</i>
Platform	3/2	Sarsen	—
Occupation earth	0/4	Quartzite	Wilt. 356.1386
Southern Circle: p.h. nos.			
23	2/5	Quartzite prob. sarsen	Wilt. 357.1387
26	0/10	Sarsen	—
32	0/1	Sarsen	—
48	12/3	Sarsen	—
50	0/1	Sarsen	—
68	1/1	Sarsen	—
70	0/1	Sarsen	—
90	0/2	Quartzite prob. sarsen	Wilt. 359.1389
95	0/10	Sarsen	—
96	24/8	Sarsen	—
96	8/8	Sarsen	—
96	0/2	Conglomerate	Wilt. 358.1388
Midden	0/2	Quartzite	Wilt. 354.1384
Midden	0/2	Quartzite	Wilt. 355.1385
Ditch (13)	0/1	Sarsen	—
Ditch (4)	0/5	Sarsen	—
Ditch (5-6B)	1/0	? Sarsen	Wilt. 351.1380
Old land surface (pipe-trench)	0/1	Sarsen	—
Old land surface (general)	0/1	Quartzite	Wilt. 349.1357
Total	55/6		

† Weight in lb/oz.

ANTLER

(fig. 81)

The only implement types of antler recorded from the excavations were the picks which had been employed in the digging of the enclosure ditch and post-holes. A total of 440 picks were identified amongst the antler fragments, all of them with worn or fragmentary tines and a small percentage showing signs of battering behind the burr. Practical experiment has shown that antler picks are best used as picks — swinging and striking with the tine.¹ A study of the animal bones by Mr R. Harcourt (*vide* Appendix II) showed that only five red deer were represented by bones, indicating that these animals had been killed and their bodies brought to the site. Furthermore, only 29 antlers out of a total of 316 sufficiently complete for study were from slaughtered or dead animals — the remainder had all been

¹ Jewell, 1963, 51-52.

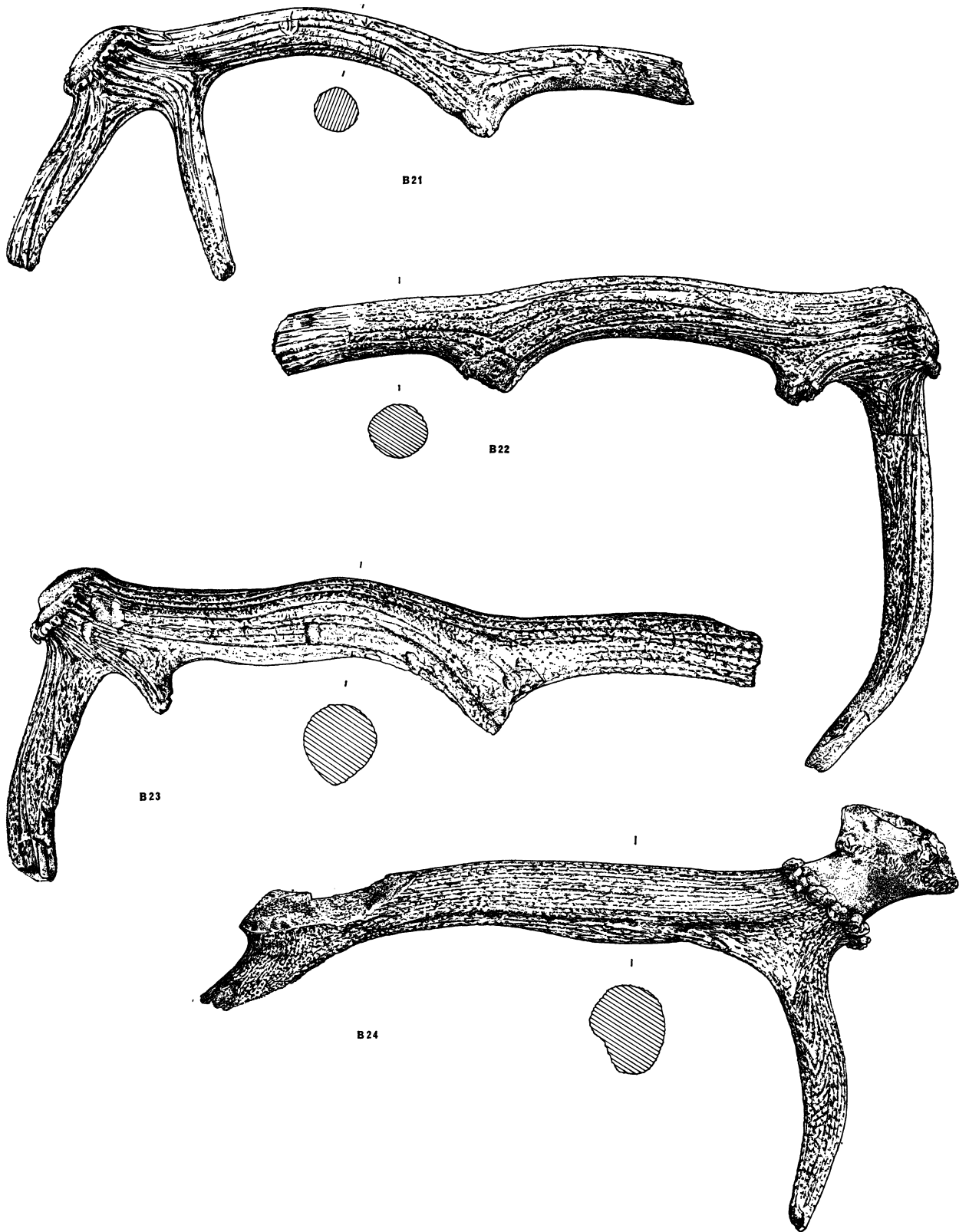


FIG. 81. B21, B23, B24: Ditch (8); B22: S. Circle (p.h. 96) ($\frac{1}{4}$)

shed. This indicates not only that venison was rarely consumed on the site but also that the antler picks, indispensable for the digging of ditches and post-holes, were collected in the spring when they could either have been used straight away or, as Mr Harcourt suggests, stored until they were required. All sizes of antler were included but mature specimens were understandably much more numerous.

A total of 74 antler picks were recorded from the 34.1 m. length of ditch excavated in 1967 at the east entrance and three from the 1966 ditch cutting. They were all recorded from the primary silts, but at a point near the mid-line of the ditch and 18.2 m. from the terminal a pile of 57 antler picks was found on the rock floor (fig. 9). These picks had undoubtedly been employed in Late Neolithic times to excavate the ditch — their tines were worn in many instances and some were broken. Presumably when the work on the east terminal had been completed the picks had been thrown into a heap on the ditch floor. It is not necessary to assign a ceremonial character to this act which may well have resulted from a feeling of relief that this part of the work had been completed. This pile of picks makes it impossible to calculate the average number of implements to be found in the main enclosure ditch as similar dumps might occur at any point along the ditch circuit.

Very few picks were found on the old land surface beneath the enclosure bank (2) or from the Midden (5) and the great proportion of these implements (354) were recorded from the Southern Circle. Within this structure, seven were recorded from the surface of the platform and 18 from the surface of the chalk between the post-holes, the remainder being obtained entirely from the latter. The picks from this structure comprise 80% of the total and must have been used to excavate the post-holes and ramps into the chalk. Unlike the remainder of the artifacts and animal bones the antler picks were found not only in the silt of the weathering cones but had also been rammed into the post-hole filling to give extra stability to the posts. This is particularly apparent in post-holes 23, 44, 84 and 85, which produced 91 antler picks between them (Table XX).

By contrast the Northern Circle produced only two antler picks — from post-hole 42. This structure is much smaller and correspondingly less effort and man-power would have gone into its construction.

The numbers of picks recovered are far in excess of those recorded from comparable sites. At Avebury, 40 antler picks were recorded from the ditch,¹ but at the Sanctuary antlers were not very numerous² and only 28 were recorded from the whole of Woodhenge.³ At Windmill Hill, despite the extensive excavations, only three complete picks were found.⁴ It seems likely, therefore, that the picks were removed from the sites at the Sanctuary, Woodhenge and Windmill Hill, probably to be re-used elsewhere, but that they were discarded at Durrington when the work had been completed and the majority thrown into the post-holes to supplement the packing material. One could theorize that the picks had become sanctified as a result of their having been used in the construction of sacred structures and therefore could not be used for any other task. If so, then the same tradition did not operate at Woodhenge and the Sanctuary where the tools of construction were removed, but some explanation must be sought for the unprecedented numbers of antler picks found within the Southern Circle and in the enclosure ditch.

¹ Smith, 1965, 218.

² Cunnington, 1931, 330-2.

³ Cunnington, 1929, 76-7.

⁴ Smith, 1965, 125.

TABLE XX

<i>Post-hole no.</i>	<i>Total</i>	<i>Post-hole no.</i>	<i>Total</i>	<i>Post-hole no.</i>	<i>Total</i>
134	2	48	1	80	1
141	1	49	9	81	6
152	2	51	1	82	2
187	1	53	1	84	23
188	1	55	3	85	23
194	2	56	1	86	1
14	1	57	3	89	6
22	4	58	3	90	10
23	21	61	1	91	10
25	1	62	3	92	8
26	3	64	7	93	3
27	1	65	5	94	5
33	4	66	10	95	7
36	1	67	11	96	8
38	1	70	2	97	1
40	2	72	1	100	1
41	5	73	1	101	1
42	7	74	4	102	11
43	18	75	3	103	1
44	24	76	5	105	1
45	7	77	3	—	—
46	2	78	5	—	—
47	2	79	4	—	—

BAKED CLAY

(fig. 82)

The only object of baked clay recorded from the excavations is a fragmentary spindle-whorl of biconical form which retains the outline of an hour-glass perforation in its fractured surface. The fabric of the spindle-whorl is hard with a black core and orange exterior and it was recorded from post-hole 95 of the Southern Circle. This is the first artifact to suggest knowledge of weaving amongst Neolithic communities in Britain.

THE ANIMAL BONES

The animal bones have been reported on in detail by Mr R. A. Harcourt and his report is given in Appendix II. A total of 8500 specimens, representing a minimum number of 320 animals, were obtained from Neolithic levels — 50% from the Southern Circle and its environs, 45% from the primary silts of the ditch (layers 5-8), 3% from the Midden, 1% from the old land surface under the bank and 1% from the Northern Circle. No differences were apparent in the percentages of species from each of these localities and the collection has therefore been treated as one group. In addition, 630 specimens were found

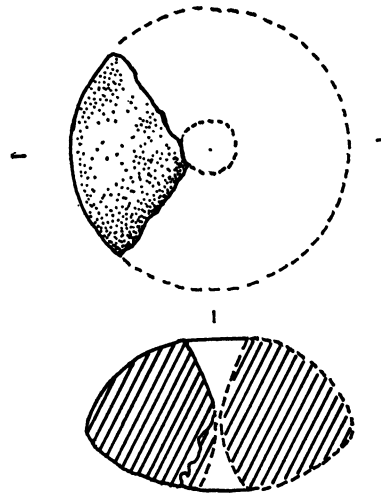


FIG. 82. Baked clay spindle-whorl: S. Circle (p.h. 95) ($\frac{2}{3}$)

in the 1952 excavations, all from the old land surface under the bank. A minimum number of 44 animals are represented in this collection (pig — 30, cattle — 12, sheep — 2) and this material has been taken into account.

The minimum numbers of animals of each species represented are as follows:

Pig 228	Horse 3	Roe deer 2	Pine marten 1
Cattle 97	Aurochs 3	Dog 4	Fox 2
Sheep 7	Red deer 14	Badger 1	Beaver 1
Goat 1			

The animal most frequently represented in the collection is the pig, which comprises 63% of the total. All age-groups are represented by the bones of this animal but immature beasts are in the majority. Remains of cattle comprise 26% of the total and amongst this species there is a preponderance of mature animals, which indicates that the cattle were brought through the winters. Measurements of the length-breadth indices of the metapodials may indicate that castration was practised — a conclusion which was made by Professor D. M. S. Watson with regard to the cattle bones from Skara Brae.¹ It seems unlikely that the few specimens of aurochs were required for meat; the bulls stood up to 2 m. high at the shoulder and it may be that they were hunted for sport. Sheep are poorly represented by six animals or 2% of the total and only one metacarpal is definitely from a goat. The range of domesticated animals is completed by four dogs and three horses, although the latter were probably not domesticated. The evidence of the bones of red deer indicates five animals and together with the antlers a total of 14 or 15. The animal therefore appears to have been little hunted and the antlers required for digging purposes must have been collected in the spring and probably stored until they were required.

The skulls of pigs and cattle are poorly represented and the evidence as it stands suggests that animals were not slaughtered on the site but were brought as carcasses or joints of meat. It seems likely, in view of this evidence and the ceremonial nature of the site, that the animal

¹ Childe, 1931, 198-204.

bones represent the remains of feasts or offerings. This being so, it is by no means certain that the proportions of animals represented reflect the pastoral economy of these Late Neolithic peoples, as selected animals may have been brought for these purposes. Unfortunately, there are no substantial contemporary collections of faunal material against which the possibility may be checked. The faunal remains from Windmill Hill provided specimens from Early, Middle and Late Neolithic or Early Bronze Age contexts. In the Early and Middle Neolithic levels cattle were the predominant animals, with sheep/goat and pig next in importance. A small sample from Late Neolithic or Early Bronze Age contexts suggested that cattle were still predominant but showed a rise in the number of pigs from 10.2% to 18.5%. However, the sample was obtained from a 1.50 m. wide cutting and is not significant for comparative purposes.¹

Bones of domestic animals were abundant at Skara Brae but only a sample was examined.² Of these, cattle and sheep were the most numerous whilst pig was very rare and not even certainly domesticated. These proportions may, however, be due to the different environmental conditions prevailing in the far north. The Class I henge at Gorsey Bigbury in the Mendips also produced a quantity of animal bones, the only other ceremonial site apart from Durrington Walls to have done so, but no detailed report on them has appeared and in any case the remains are subject to the same strictures as the Durrington Walls bones. However, the available report indicates that ox and pig comprise by far the greater part of the bones examined and that sheep occurs in much smaller quantities along with red deer, roe deer and dog.³ The pottery found on the site consists almost entirely of long-necked Beakers and the faunal evidence, such as it is, confirms that of Durrington Walls. The most closely comparable structures — the Sanctuary on Overton Hill and Woodhenge — produced few animal bones but those at the latter site include ox, pig and scanty remains of sheep, goat and dog, as well as the normal complement of wild animals.⁴ However, the remains too are few to be of any value for comparative purposes.

Recently, Miss J. Murray has drawn attention to the division of the European Neolithic communities into three animal breeding groups specializing in cattle, ovicaprids and pigs respectively.⁵ Initially, the Linear pottery culture, specializing in the breeding of cattle, brought knowledge of agriculture to Europe from Holland to Denmark and a large number of subsequent cultures followed this tradition of cattle breeding. Amongst these must be included the Early and Middle Neolithic cultures in Britain, as cattle predominate in fauna assemblages from such sites as Windmill Hill,⁶ the Trundle⁷ and Whitehawk Camp.⁸ The small group of cultures which bred more pigs than cattle are not connected in any other way except by this one economic factor. However, these people were followed during the Late Neolithic by cultures in which ovicaprids became the main domestic animals and which were connected with the trade in gold and copper over Europe between 4200 and 2100 B.C.

If, therefore, the evidence from Durrington be taken to indicate the existence of an economy which in its pastoral aspects was based primarily on pig-breeding, there are few contemporary analogies either in Britain or in the broader European context. Moreover,

¹ Smith, 1965, 144-5.

² Childe, 1931, 198-204.

³ Tetley, 1938, 53.

⁴ Cunnington, 1929, 61-9.

⁵ Murray, 1968.

⁶ Smith, 1965, 142-4.

⁷ Curwen, 1931, 148.

⁸ Williamson, 1930, 81-2.

it has been stressed that the faunal evidence from this ceremonial site may provide a misleading picture of domestic economy of the time, owing to selection of the animals before they were brought to the site. Certainly, the taboos against eating pork which exist amongst some people today as well as in certain social strata in ancient Egypt did not exist at Durrington Walls. The pig is almost more valuable than any other large mammal as it is comparatively long-lived, mature within a year, capable of producing two litters annually and is an abundant supplier of meat and fat for the kitchen. However, as Professor Zeuner has indicated, the pig is valuable to the settled farmer only, and not to nomads, as the animal is notoriously difficult to drive.¹ It is clear, therefore, that the Late Neolithic people who frequented Durrington Walls lived in settled farmsteads and are unlikely to have led a predominantly nomadic existence, yet these settlements have still to be located.

Finally, it should be stressed that although the nature of Durrington Walls and the evidence of the bones render the deliberate selection of animals a likely proposition, comparisons with the Dark Age site of Dinas Powys in Glamorgan lead one to temper this judgement with caution. Dinas Powys is undoubtedly a domestic site of the fifth to seventh centuries A.D., and is unique among sites of this period in that 61% of the animal bones are of pig. The excavator suggested that this very high percentage implies the existence of widespread forests in the area to provide pannage in autumn and winter.² Similar considerations may apply at Durrington Walls, although until we have a substantial collection of fauna from a domestic site of this period it will not be possible to resolve the problem.

THE HUMAN BONES

Although no formal burials were recorded, their presence elsewhere within the enclosure cannot be ruled out. Human remains were found in post-hole 79 of the Southern Circle (Appendix III) and consist of three fragments of a skull. In addition, the right tibia of an adult male was found at the bottom of the enclosure ditch near the east entrance terminal. It is not possible to be certain whether these human bones were brought to the site deliberately, but it is worth noting the evidence for bone-robbing at the West Kennet long barrow where the skulls and long-bones were deliberately selected³ and the occurrence of fragments of human skulls and long bones in the early and later silts of the ditches of the Windmill Hill causewayed camp.⁴ In the light of this evidence the few human bones from Durrington Walls may have had a special significance. Comparable evidence has been obtained from the Sanctuary, where in addition to the formal male burial with a Beaker, three pieces of a lower jaw were scattered in stone-hole 16 of the Stone and Post ring.⁵ Similarly at Woodhenge, part of a human radius was found on the bottom of the ditch east of the entrance and fragments of a human skull and several teeth were recorded from post-hole 13 of the C ring.

¹ Zeuner, 1963, 260.

² Alcock, 1963, 36-7.

³ Piggott, 1962, 68.

⁴ Smith, 1965, 136-7.

⁵ Cunnington, 1931, 314.

V. DISCUSSION

THE PRE-ENCLOSURE SETTLEMENT

THE environmental evidence, based on an investigation of the soil profile preserved beneath the bank of the enclosure and on an analysis of land-snails and pollen from the soils, demonstrates a distinct phase of prehistoric woodland clearance and possible cultivation prior to the Late Neolithic occupation.¹ However, it is uncertain whether this can be ascribed to the Middle Neolithic settlement. During the 1966 excavation of the bank in its north sector it was noted that the Middle Neolithic debris lay directly over a disturbed soil profile and that the mull humus horizon noted in the 1967 excavations was absent. This should indicate that the Middle Neolithic occupation and the woodland clearance phase were contemporary. If so, it is surprising that the human debris of this phase was not incorporated into the soil by worm action in the 500 years or so which intervened before the building of the enclosure bank. Dr Evans has suggested that the dumping of large quantities of organic material could have produced conditions inimical to plant and animal life, thus initiating the process of soil fossilization and preventing the formation of a turf-line. The alteration of the environment from one of forest cover dominated by hazel with a scattering of birch, pine, oak, lime and elm, whose root-holes could be seen penetrating the chalk at the base of the soil, to one of open country with a disturbance of the soil accompanied by an alteration of the snail fauna, can probably be attributed to human activity in the area in the middle of the third millennium B.C. It is possible that the woodland clearance was associated with cultivation and Dr Evans has quoted several instances of similar cultivation at this time from Berkshire and Wiltshire.

Fairly extensive archaeological evidence has been obtained for a settlement of the area in the middle of the third millennium B.C., some 500 years before the building of the enclosure bank. This occupation is represented by a group of flints and sherds recorded in 1966 below the bank in its northern sector and by a thin scatter of similar artifacts from below the bank in its southern sector. Stylistically the types represented are distinct from those associated with the Late Neolithic enclosure as they include plain round-bottomed bowls, a polished flint axe and leaf arrowheads. In addition it has been shown that the flakes associated with these artifacts are the products of a Middle rather than a Late Neolithic technology. It has not been possible to establish the nature of this earlier occupation or to relate it to any structures. It is tempting to speculate on the possibility of timber structures of third millennium date existing in the valley and its environs but these possibilities must await further excavation.

Three radiocarbon determinations have been obtained which relate to the pre-enclosure occupation. Two of these: 2635 ± 70 B.C. (Gro 901) and 2625 ± 40 B.C. (Gro 901a), were obtained from charcoal found underneath the bank in its southern sector in the 1952 excavations.² The third determination of 2450 ± 150 B.C. (NPL-191) was obtained from charcoal

¹ The evidence for these conclusions has been presented by Dr J. G. Evans in Appendix I.

² Stone, Figgott and Booth, 1954, fig. 4, cutting III.

on top of the fossil soil beneath the bank in its northern sector in 1966. The charcoal was in direct association with the sherds of Middle Neolithic bowls, a flint axe and leaf arrowhead.¹ This determination (NPL-191) is in good agreement with that of 2570 ± 150 B.C. (BM-74) obtained from the early infill of the ditches of the Windmill Hill causewayed enclosure and there are also resemblances between the pottery from these two localities.

Prior to the 1966 excavations the two Groningen determinations presented some interpretative problems. These originated from Farrer's investigations in 1917 when he recorded one sherd from the old land surface under the bank in a drain cutting. This sherd was identified as part of a Beaker by Mrs Cunnington and Dr Blackmore. Subsequently, the 1952 excavations produced a quantity of domestic debris both from the buried soil under the bank and from on top of the bank talus. Only Grooved Ware was obtained from under the bank but in addition two small scraps of Beaker pottery were recorded from on top of the bank talus. The charcoal submitted for radiocarbon dating was from under the enclosure bank and the dates were published by Professor Piggott,² who described them as 'archaeologically unacceptable', on account of the scraps of Beaker which could hardly be as early as the radiocarbon dates suggested.

However, no Beaker pottery was recorded from under the enclosure bank either in the 1952 excavations or in the extensive 1966 and 1967 excavations and it is absent from the primary silting of the enclosure ditch. In view of the evidence for a Middle Neolithic occupation in the area before the bank was built it seems possible that Gro 901 and 901a refer to the earlier settlement and not to the Late Neolithic material which immediately precedes the enclosure. This solution is not altogether satisfactory as one would have expected the sample charcoal to have become comminuted over a period of some 500 years, but it is the explanation which best fits the facts.

THE ENCLOSURE

Amongst prehistoric ceremonial circles Durrington Walls is uniquely sited as its bank surrounds a dry valley which probably formed during the Last (Weichselian) Glaciation between about 30,000 and 50,000 B.C. From the bank, which would have been about 3 m. high, it would have been possible to look across the deep enclosure ditch and into the valley containing the timber structures. One may visualize the bank as providing a grandstand view of ceremonies in progress within the valley and even possibly that the siting of the enclosure was chosen with this end in view. Durrington is unique in possessing this siting amongst the thousands of ceremonial circles of varied types which were constructed in the third and second millennia B.C.

An unusual feature in the plan of the bank and ditch is the bulge which occurs in their alignments to the west of the old road in the north sector (fig. 3). A similar feature in the alignment of the ditch occurs to the west of the east entrance. One interpretation of these anomalies is that they represent the sites of pre-existing structures which the ditch and bank were planned to avoid. However, partial excavation of the northern anomaly in 1966 did not reveal any such structure. A similar feature occurred at the single-entrance henge

¹ Wainwright, 1967, pl. xxviii.

² Piggott, 1959.

monument known as the Stripple Stones on the south-east slope of Hawks Tor in Blisland Parish, Cornwall, where a bank with an internal ditch surrounds a circle of 28 monoliths. The bank encloses a circular area 68.2 m. in diameter and bulges at three points into semi-circular extensions which were referred to by St George Gray as 'demi-lunes'.¹ The circle was excavated by St George Gray in 1905 who found no structures within these 'demi-lunes'. The only finds from the excavation were three flint flakes, the radius of an ox and several pieces of oak wood in the silting of the ditch. A similar anomaly was noted in the ditch of Barrow G61 near Amesbury,² which bulges outwards in its northern circuit. The barrow covered a stake circle and produced a Bell Beaker as its primary burial. The slender evidence suggests that anomalies of this type in the bank and ditch of Durrington Walls, The Stripple Stones and Barrow G61 may have had a significance to their builders which now escapes us.

Following the phase of clearance possibly attributable to the Middle Neolithic settlement the site reverted to grassland maintained by grazing. However, immediately prior to the building of the enclosure bank the evidence of the pollens suggests that this grassland environment gave way to one of bracken. There is no suggestion that the original surface of the soil was truncated when the bank was built and a large number of mollusca were found in the relatively stone-free turf line. This fauna is dominated by open-country species and closely related to those from certain Bronze Age sites nearby which indicate a 'dry and completely open short-turfed grassland' (Appendix I). Although the pollen counts were very low and therefore not statistically significant, the reduction in tree pollen through the profile is in keeping with the molluscan evidence in suggesting some opening up of the landscape and the development of a grassland environment. During this time the mull humus horizon or turf-line some 7 cm. thick was formed. Unfortunately it is not possible to assess the length of time represented by this turf-line and therefore estimate the chronological relationship between the clearance phase and the Late Neolithic occupation, owing to the number of variables involved. It seems probable, however, that the re-establishment of a forest cover was inhibited by the grazing of animals in Late Neolithic times rather than by any climatic cause. The final stages of the pollen sequence show a habitat dominated by bracken and ferns rather than by grasses and this succession to bracken may have been the result of the cessation of grazing. Whether this cessation was due to the enclosure of the valley it is not possible to ascertain with certainty, but it seems likely that the two events were connected.

At the time this text was prepared five radiocarbon determinations were available from the ditch sediments and are as follows:

BM-398. 1977 ± 90 B.C. from charcoal (*Coryllus avellana*, *Crataegus* sp., *Quercus robur*) from layer 7 at the base of the main enclosure ditch in its southern sector (fig. 6).

BM-399. 2015 ± 90 B.C. from bone in layer 7 as above.

BM-400. 2050 ± 90 B.C. from antler in layer 7 as above.

BM-285. 1610 ± 120 B.C. from charcoal obtained in 1966 from hearth 5 in layer 5 of the enclosure ditch in its north sector (fig. 4).

BM-286. 1680 ± 110 B.C. from charcoal obtained in 1966 from hearth 3 at the top of layer 5 of the enclosure ditch in its north sector (fig. 4).

¹ Gray, 1909, 5.

² Ashbee, 1960, fig. 21.

It is clear from a study of the section (fig. 6) that BM-398-400 date the early use of the enclosure ditch (Appendix X). However, it is worthy of note that BM-285 occurred at a height of 0.91 m. above the rock floor of the ditch in its north sector and has produced a date appreciably later than BM-398-400, which have an average mean of 2017 B.C. It is of interest that such a shallow depth of silt had accumulated in the centre of a ditch 10.2 m. wide, 4.8 m. deep and with a flat base 5.3 m. wide. In the case of the much smaller Windmill Hill ditches, Dr Smith has suggested that they were one-third full of silt by the end of the first decade and this view is supported by the preliminary observations on the experimental earthwork on Overton Down.¹ Clearly, a much larger ditch such as that at Durrington with a wide flat base would not be filled with frost-weathered material to a great depth in its centre. BM-286 is at a higher level in the silting profile than BM-285 even though its central date is 70 years earlier than that determination. The dates are not statistically different but hearth 5 and its associated rusticated Beaker possibly belong to the beginning of the seventeenth century rather than its end. It may be concluded on the basis of these radiocarbon dates that the ditch was half full of silt by the seventeenth century B.C. but that only the artifacts from the frost-weathered material at its base (layers 6B-8) may be regarded as contemporary with this early usage.

Excluding those of Middle Neolithic date from under the bank in its north sector, 3058 flints or 27% of the total were recorded from the old land surface under the bank in its south sector and can be regarded as contemporary with the Late Neolithic pottery which was also found in that context. Of the flint artifacts, 35 or 10% of the total are implements. They include seven transverse arrowheads (Class C2 (1); Class G (3); Class H (2) and miscellaneous (1)), scrapers, a fabricator, knives, one fragmentary axe and two adzes. In addition, one leaf arrowhead was recorded which is patinated a matt white and can be attributed to the earlier settlement in the third millennium B.C. In addition to the animal bones two antler picks were found. No radiocarbon determination has been obtained from material in direct association with the Late Neolithic artifacts but the date of the construction of the bank is presumably the same as that established by BM-398 for the digging of the enclosure ditch.

The ditch sediments produced 857 flints (7% of the total) from the basal deposits and of these 63 (18%) were implements. The majority of the latter are scrapers, but a transverse arrowhead (Class G) was obtained from layer 8 and a fragmentary chipped axe from layer 5-6B. In addition, one bone pin and 77 antler picks were recorded, the latter including a pile of 57 picks near the east entrance terminal.

That users of Grooved Ware were responsible for the construction of the main enclosure is well demonstrated by the extensive collection of Grooved Ware recovered from the primary silts of the ditch in its southern sector in 1967 and from beneath the enclosure bank in 1952 and 1967. The only Beaker sherds recovered from the enclosure ditch belong to a late phase in the history of the silting and are themselves typologically late. The stratified sherd, P596, belongs to a Biconical Beaker form representing the latest development of the Southern British tradition and its position at the junction of layers 4 and 5 is entirely consistent with this interpretation. This is likely to belong to a slightly later date than the rusticated and

¹ Smith, 1965, 11.

stroke-and-ridge decorated Beaker from hearth 5 at the base of layer 5 in the northern sector of the ditch, associated with a radiocarbon date of 1610 ± 120 B.C. (BM-285).

It is perhaps unwise to place too much significance on the presence or absence of specific features in the Grooved Ware from the earlier silts of the ditch, but it may be worth noting that in the southern sector, where Grooved Ware was recovered in some quantity, curvilinear grooved decoration is represented in the basal silts (layers 8 and 6B-7), twisted cord decoration appears only from layers 5-6B and 5, and vessels showing panelled decoration formed by vertical incised lines appear first in layer 5-6B. Whether these represent true changes in style occurring during the 300-400 years represented by the earlier silting of the enclosure ditch, remains to be tested by future discovery.

It is clear that the profiles of the ditch as excavated differ from the original profiles when the ditch was dug in Late Neolithic times. All the basal silts must have been derived from the sides of the ditch in view of the great width of the berm and therefore only the lowest part of the excavated ditch profile may be used as a guide to the original inclination of the sides. On the other hand, natural weathering and denudation of the chalk may amount to 0.50 m. since Late Neolithic times,¹ and the original depth of the ditch has to be calculated to allow for this factor. As the known expansion factor for chalk derived from the sides of a ditch is 2.0 it is possible to reconstruct approximately the original profile.

In the case of the ditch in its north sector where the width of the weathering cone at its top was 12.8 m. it seems likely that the original dimensions of the ditch were 10.2 m. wide at its lip and 4.8 m. deep, with a flat base 5.3 m. wide, if one allows 45 cm. for erosion. In the case of the ditch in its south sector it is again possible to reconstruct the original profile approximately, as being 9.4 m. wide and 5.9 m. deep, with a flat base 6.7 m. wide, if one allows 0.30 m. for erosion.²

On the basis of these profiles it is possible to reconstruct the original height of the bank, given that the mean observed angle of rest for piled chalk rubble is 35° and that when chalk rubble is dumped its expansion factor contracts to 1.45 owing to the breakdown of the particle size caused by this process.³ Other factors which it is necessary to take into account are the average cross-sectional area of the ditch, which in this case is 455 sq. ft., the total length of the bank, which is 4600 ft., and the length of the ditch, which is 3850 ft. The average cross-sectional area of the bank would then have been:

$$455 \times 1.45 \times \frac{3850}{4600} = 552 \text{ sq. ft.}$$

Given a base 30.4 m. wide the bank would have been 3.3 m. high. In practice, however, the top would be rounded so that a maximum height of 3 m. would be about right.

One may therefore reconstruct an average profile of the enclosure earthworks as being represented by an external bank 30.4 m. wide and 3 m. high, separated by a berm 20.7 m. wide from a ditch 9.8 m. wide and 5.4 m. deep, with a flat base 6 m. wide.

The construction of such an enclosure would have involved the excavation of 1,751,750 cu. ft. of chalk rubble,⁴ with antler picks, baskets and ropes; the removal of the rubble from

¹ Atkinson, 1957, 229.

² Grateful thanks are due to Professor R. J. C. Atkinson for his assistance in calculating these profiles.

³ Jewell, 1963, 24, 28.

⁴ Cross-sectional area of the ditch \times its length.

the ditch;¹ the transportation of this material across the berm, which could be as wide as 42 m. but was never less than 6 m. and the dumping of the baskets on the bank, which was usually uphill from the ditch and which, when near completion, would have been 3–3.3 m. high.

Professor R. J. C. Atkinson has evolved the empirical formula $H = V(120 + 8L + 2F)/1000$ for calculating the human effort involved in these undertakings.² In this formula H = the total man-hours involved, V = the volume of solid chalk excavated in cubic feet and L and F respectively the vertical and horizontal distances in feet between the centroids (the centres of gravity) of the cross-sections of the bank and ditch as originally constructed. Assuming a ditch with a cross-sectional area of 455 sq. ft. which was 32 ft. wide at the top, 20 ft. wide at the bottom and 17.5 ft. deep, its centroid will occur at a depth of 8.1 ft. Similarly, a bank 100 ft. wide and 10 ft. high will have its centroid at 3.7 ft. On flat ground the total lift would be 11.8 ft., but around the greater part of the perimeter of the earthwork the ground slopes from bank to ditch so that the average lift is nearer 15 ft. Therefore, employing the formula $H = V(120 + 8L + 2F)/1000$ where $L = 15$ ft. and $F = 133$ ft.:

$$H = 1750 \times 506 = 885,500.$$

However, it would be unwise in view of the many unverifiable estimates and approximations involved to say more than that the estimated man-hours amount to about 900,000.³

It is instructive to compare these dimensions for the Durrington bank and ditch and calculations as to the man-hours worked with those obtained for Avebury.⁴ The internal diameter of the Avebury ditch is 347.4 m. and sections of it obtained by St George Gray between 1908 and 1922 show that as excavated it is some 21.3 m. wide with a flat bottom 2.4–5.1 m. wide which is between 7 m. and 10 m. below the present surface. The bank has a diameter of 426 m. and is from 22.8–30.4 m. wide whilst still standing 4.2–5.4 m. above ground level. A berm 3.6 m. wide was present in the south-east sector, whereas a narrower berm or none at all was present elsewhere. Professor Atkinson has suggested that this enclosure ditch and bank were built in 1,560,000 man-hours, or alternatively by 100 men in three years and three months.⁵ This is more than 50% higher than the man-power estimated for the Durrington enclosure and can be explained by the fact that whereas the perimeter of the Avebury ditch is smaller, the ditch itself is much deeper, so that the lift is substantially larger than at Durrington. Since the multiplying factor for lift in the man-power formula is four times that for the fetch, the difference in lift between the two earthworks has a large effect.

Nevertheless, the expenditure at Durrington of 900,000 man-hours on the enclosure bank and ditch — to which one must add the task of erecting the timber structures within — implies a society sufficiently stable and prosperous to be able to deflect such resources from the necessities of food production to the creation of structures which appear to have been devoted to ritualistic practices. A society capable of such corporate efforts must have had a more prosperous base than our scanty knowledge of their domestic settlements would have us believe.

¹ The weight per cubic foot of moist chalk is 1 cwt.

² Atkinson, 1961, 295.

³ Professor R. J. C. Atkinson provided advice and assistance in arriving at this conclusion.

⁴ Smith, 1965, 193f.

⁵ Atkinson, 1961.

COMPARABLE ENCLOSURES AND THEIR ORIGINS

The main points of interest with regard to the Durrington Walls enclosure are its overall plan, the internal structures revealed by excavation, and its siting. The large size of the enclosure has already been discussed in terms of the labour which may have been expended on its construction. Its dimensions from the midline of the bank are 487 m. from north-west to south-east and 472 m. from north-east to south-west, whilst the enclosure was approached by two opposed entrances. The siting around the small dry valley opening onto the River Avon is unique amongst other ceremonial circles, but had the effect of preserving the post-holes of a large timber structure (the Southern Circle), some 30 m. inside the south-east entrance. A second timber structure (the Northern Circle) was recorded in the excavations, but on the northern crest of the valley where its post-holes had been badly eroded by ploughing. There was no indication that stone settings had ever existed within the enclosure.

A survey of comparable earthworks indicates that there are three enclosures which in terms of their overall plans appear to be similar to Durrington Walls. All are located in Wessex and are Avebury (SU 130700), Marden in the Vale of Pewsey (SU 090580) and Mount Pleasant in the outskirts of Dorchester (SY 710899). It may be, however, that more enclosures of this type remain to be discovered as a result of aerial photography, particularly in the river valleys. In each case the earthworks enclose an area in excess of 300 m. diameter and the bank is sited outside the ditch. Avebury has long been recognized as a site of outstanding importance and the preservation of the enclosure bank and ditch is generally good, but in the case of Durrington Walls, Marden and Mount Pleasant the earthworks have been virtually obliterated by ploughing over the centuries, so that they have not featured largely in the history of archaeological research. Indeed, in the case of these three enclosures it has been necessary to begin any work on them by preparing accurate plans which had hitherto been lacking. These plans have been drawn to the same scale and incorporated on one diagram for purposes of comparison (fig. 83).¹ Since reference was first made to the superficial similarities of these enclosures,² excavations have been carried out at Marden³ and it is intended to commence work at Mount Pleasant in the summer of 1970.

Of the four enclosures under discussion, Avebury is the only site where the broad pattern of the internal structures is known. This is due, not to extensive excavation in the interior, but to the fact that the internal structures are of stone and have therefore been available for description and comment. In 1965 Dr Smith published a re-appraisal of the evidence concerning the Avebury enclosure, at which time it appeared to be unique in possessing four entrances. As a result of a survey carried out in 1969 it has since been shown that the Mount Pleasant enclosure is similar in this respect. The bank at Avebury encloses an area with an average diameter of 426 m. and the internal ditch encloses an area 347 m. in diameter (28.5 acres). Within the ditch is an outer circle of sarsen stones which surrounds two inner

¹ During the planning of these earthworks valuable assistance was provided by Mr A. J. Clark of the Ancient Monuments Laboratory who worked for several months in the field and in the laboratory to provide geophysical aids,

where in many cases the line of a ditch or position of an entrance was uncertain.

² Wainwright, 1969.

³ Wainwright, 1970.

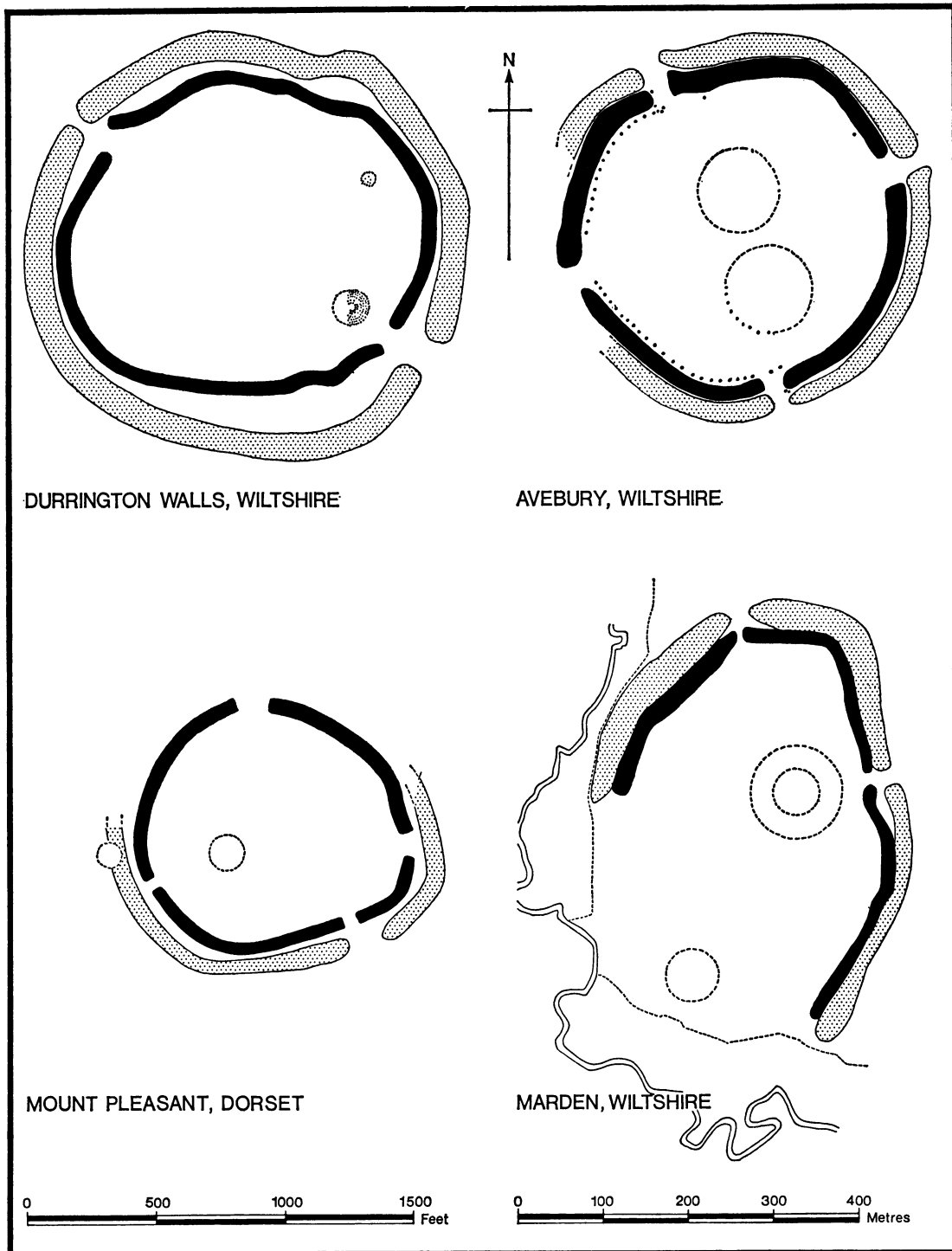


FIG. 83. Comparative plans of Late Neolithic enclosures in Wessex

circles — a southern and a northern, which in turn enclose internal settings. Sherds of a Long-Necked Beaker have been recorded from the secondary silts of the ditch and sherds of Peterborough and Grooved Ware from the old land surface under the bank. However, Dr Smith suggested that the enclosure was kept deliberately clean as only one sherd has come from the surface of the interior and there is an absence of contemporary pottery from the primary silts of the ditch, which only produced small quantities of animal bones.

However, no such stone structures are visible within the Durrington Walls, Marden or Mount Pleasant enclosures and as they are unlikely to have been obliterated without any record it is a fair assumption that they never existed. Excavation and a geophysical survey have shown that the Durrington Walls enclosure contained structures of timber rather than stone and it therefore seemed probable that similar timber structures were to be found within the Marden and Mount Pleasant enclosures.

Excavations to test this hypothesis were carried out in 1969 at Marden, but beforehand a survey was made of the very eroded earthworks. This established that the bank and ditch did not form a complete enclosure but terminated on the floodplain of the River Avon, which in the second millennium B.C. may have flowed much closer to the site than it does today. The southern flank of the enclosure is therefore formed by this river and the internal dimensions of 518 m. by 315 m. (35 acres) make it the largest of the Durrington-Avebury-Mount Pleasant group. The two entrances in the north and east were not opposed as in the Class II henge category and in this respect the site is unique amongst neolithic earthworks in Britain. A geophysical survey re-located the site of the Hatfield Barrow which was described in 1807 as being 147 m. in diameter and 6-7 m. high and a second barrow or enclosure was visible near the flood-plain. The excavations¹ recorded the post-holes of a circular timber structure 10.5 m. in diameter, sited 15 m. within the north entrance. The wall of the structure was defined by a single ring of post-holes and the roof had been supported on a group of three posts. Grooved Ware and flint artifacts were recorded from the post-holes, which were very eroded as a result of ploughing, and a quantity of Grooved Ware from the primary silts of the ditch at the terminals of the north entrance. The excavations at Marden therefore confirmed the hypothesis that timber structures were to be found within the enclosure and pottery similar to that from Durrington Walls was found with the structure and in the enclosure ditch.

The fourth enclosure on Mount Pleasant hill to the east of Dorchester was surveyed in the autumn of 1969. The bank and internal ditch asymmetrically surround a low hill and enclose an area 300 m. by 260 m. Only two entrances could be seen on the ground as this site has been virtually obliterated by ploughing, but the geophysical survey recorded two additional causeways across the ditch so that the enclosure possesses four entrances in the Avebury fashion. Within the enclosure an aerial photograph provided by Dr J. K. S. St Joseph has revealed the ditch of a circular enclosure and this has also been located in the geophysical survey.²

It is therefore possible to isolate these four enclosures on the grounds of their large size and

¹ Wainwright, 1970.

² Whilst this report was in proof, excavations at Mount Pleasant have revealed the post-holes of a multi-ring structure associated with pottery of Grooved Ware type within

the circular enclosure. The primary silts of the main enclosure ditch also produced Grooved Ware (*vide* Wainwright, *Current Archaeol.*, 23, 320-4).

certain details in their plan. Partial excavations at three sites have shown that Grooved Ware is associated with the enclosures themselves and in two cases with timber structures within the enclosures. At Marden the pottery was exclusively of Grooved Ware type, at Durrington Walls it was in the majority and at Avebury, where finds in any case are few, some Grooved Ware sherds were recorded from beneath the bank. At Durrington Walls and Marden the remains of circular timber structures have been recorded in excavations and there seems to be some consistency in their siting within the enclosure. As yet only stone circles have been recorded within the Avebury enclosure but extensive area excavations may yet show that these were preceded by structures of wood. Apart from the large size of the earthworks there is little consistency in plan: Mount Pleasant and Avebury have four entrances and Durrington Walls has two opposed entrances, whilst Marden is not a complete enclosure but backs onto the floodplain of the Avon with two entrances in the north and east. Therefore, although Mount Pleasant has yet to be investigated by excavation,¹ it seems probable that these enclosures were of considerable importance in the early part of the second millennium B.C., that in every case they are associated with Grooved Ware and that in two instances the remains of timber structures have been recorded within them. With the exception of Avebury, where the known structures are of stone, the enclosures have produced considerable quantities of sherds, stone tools and animal bones which also serve to set them apart from the normally unproductive ceremonial circles of the second millennium B.C. The significance of this material is discussed below and it is sufficient to emphasize at this point that Durrington Walls and Marden have been only partially excavated and that their potential in terms of the material remains still to be obtained from them cannot be over-estimated.

Outside Wessex a comparable enclosure may exist at Waulud's Bank, Leagrave in Bedfordshire,² where a single bank and external ditch surround the north, east and south sides of an oval enclosure 18 acres in extent, the west side of which is formed by the River Lea. This plan resembles that of the Marden enclosure and comparisons can also be made with Durrington Walls in that the bank and ditch surround a natural depression. There are no indications of an entrance into the enclosure but it may have been on the north side. In 1953 two sections were excavated across the bank and ditch and three sherds of Grooved Ware, together with many sherds of 'coarse khaki-coloured ware of Neolithic character', were obtained from the primary silts of the latter.

At the present time the evidence seems to indicate that the origins of these large enclosures lie in the third millennium B.C., amongst the enclosures surrounded by interrupted banks and ditches which are known as causewayed camps. The latter have internal banks and consist of one to four rings, or incomplete rings, of ditch segments of variable length and although on multiple ring sites the earthworks are frequently widely spaced, no such site has yet produced evidence for a constructional sequence. Normally they are sited on hill-tops although aerial photography has now recorded a number of sites on river gravels. Apart from the site at Staines in Middlesex,³ little excavation has been undertaken within these enclosures and their function has been a subject for much discussion. The current view appears to be that the function of the enclosures was a non-utilitarian one and therefore in some sense ritual in character.⁴

¹ See footnote 2 on p. 200.

² Dyer, 1964.

³ Robertson-Mackay, 1965.

⁴ Smith, 1967, 474.

Certain aspects of causewayed camps appear to relate them to the later enclosures such as Durrington Walls. There are comparisons in terms of size, for the overall diameter of the Maiden Castle and Windmill Hill causewayed enclosures is around 365 m. (21 acres), whilst the outer ditch of the Trundle encloses 18 acres and that at Whitehawk 11.5 acres. However, these are the largest enclosures in terms of acreage and the majority of causewayed camps have diameters within the range 230-290 m., whilst Combe Hill and Staines are less than 200 m. in diameter. Nevertheless, the sites quoted are sufficient to illustrate that the practice of enclosing areas in excess of 20 acres for a non-utilitarian purpose had begun by the middle of the third millennium B.C. In matters of detail one can point to a bulge in the outer earthwork of Robin Hood's Ball in its west sector,¹ which compares with the 'demilunes' in the enclosure ditch at Durrington Walls.

There are also some indications of similarities in function, for like the Late Neolithic enclosures, causewayed camps are characterized by the large quantities of pottery, animal bones, worked flints and other refuse in the fill of the ditches. The presence of articulated animal bones and of quite large fragments of unweathered pottery is particularly remarkable. At Windmill Hill the animal bones occurred in dumps,² whilst at Staines separate piles of pottery and animal bones occurred in the ditches and had clearly been deliberately placed.³ Dr Smith has suggested that the banks of certain enclosures were deliberately pushed back into the ditches soon after they had been constructed, presumably for the purpose of concealing the objects put in the ditches.⁴ From the care with which the refuse had been placed and then concealed one can deduce that it presents the remains of meals or offerings of a special character. This evidence in respect of the causewayed enclosures can be compared with that from Durrington Walls or Marden where sherds, flints and animal bones occur commonly in the enclosure ditch and in association with the timber structures. This refuse has been interpreted (see below) as the remains of offerings, particularly in respect of the Midden outside the Southern Circle, and if this is correct one can point to comparable functions in the causewayed camps.

It is of interest to note that very little refuse has been obtained from Avebury which is located just over one mile to the south-east of Windmill Hill. However, the evidence from the latter site is that it continued to attract visitors even after the ditches had been filled in. Quantities of Beaker sherds and other Late Neolithic wares were obtained from the upper silting of the ditches, but the most remarkable aspect is undoubtedly the number and variety of imported stone implements which were brought to the site at that time. One may speculate, therefore, as to the role which Windmill Hill played in relation to Avebury in the first half of the second millennium B.C. and one conclusion is that the deposition of food, sherds and stone tools, which is a feature of both causewayed camps and of the Late Neolithic enclosures under discussion, persisted at Windmill Hill to the exclusion of Avebury from such practices.

At Windmill Hill therefore, one has evidence for the persistence of the causewayed camp as a place of assembly from the middle of the third millennium (2570 ± 150 B.C. — BM-74) to the middle of the second millennium (1540 ± 150 B.C. — BM-75); thus it was frequented

¹ Thomas, 1964, fig. 2.

² Smith, 1965, 20.

³ Robertson-Mackay, 1965.

⁴ Smith, 1967, 473.

at a time when the Late Neolithic enclosures under discussion were being constructed. The evidence for a continuity of tradition in this particular instance is well attested, but it is less strong with regard to the other causewayed enclosures. Abingdon has produced a few sherds of Grooved Ware in an uncertain stratigraphical position,¹ and Maiden Castle has yielded Grooved Ware from a pit and from the top of the ditches of the Long Mound.²

Dr Smith, when suggesting links between causewayed camps and henge monuments as a whole, has drawn attention to certain objects which indicate some continuity of tradition between the third and second millennia B.C.³ In general terms Dr Smith has demonstrated a continuity of ceramic traditions over a period of more than 1000 years from Windmill Hill ware to Mortlake style to Fengate style down to about 1600 B.C. Furthermore, cult objects such as phalli and balls occur in contexts of both the early third millennium as in the Windmill Hill pre-enclosure phase (2960 ± 150 — BM-73), as well as in the primary and later silts of the ditches of that enclosure. Further occurrences in early second millennium B.C. contexts are at Maumbury Rings in Dorset, Avebury and the Sanctuary on Overton Hill in Wiltshire and Rinyo in Orkney. However, depictions of phalli accompany manifestations of human culture at many levels and in all ages so that too much reliance cannot be placed on this evidence.

However, probably the strongest argument for a continuity of tradition between causewayed camps and enclosures of the Durrington Walls type is that propounded by Dr Smith,⁴ in which she points out that it is doubtful whether two independent traditions of constructing non-utilitarian enclosures would have arisen at this time. In this case the ultimate derivation of one from the other seems very probable. The available radiocarbon determinations are few,⁵ but leave a hiatus in the second half of the third millennium when no large enclosures were being constructed. However, it is unwise to regard this hiatus as real until more radiocarbon determinations are available.

Finally, although the main concern in this discussion are the large enclosures of Durrington Walls type it should be noted that the tradition of constructing embanked ceremonial circles of 'henge' type may well be interwoven with the causewayed enclosure complex to a far greater degree than has previously been supposed. Radiocarbon determinations of 2490 ± 150 (BM-129) for Arminghall in Norfolk and 2416 ± 64 (Birm-7) for Barford in Warwickshire suggest that the 'henge' tradition may well extend back to the middle of the third millennium B.C.⁶ Furthermore, the causewayed ditches, the internal banks and small size of some of these early henge monuments can all be matched in the causewayed enclosure group. It may well be, therefore, that the large enclosures of the Durrington-Avebury-Marden-Mount Pleasant group are part of a tradition of constructing embanked enclosures for communal or ceremonial purposes, which can be traced back to the first half of the third millennium B.C.

¹ Case, 1956, 20, 23.

² Wheeler, 1943, 23, 143.

³ Smith, 1967, 474.

⁴ Smith, 1967, 474.

⁵ Hambleton Hill 2790 ± 90 B.C. (NPL-76); Knap Hill 2760 ± 115 B.C. (BM-205); Windmill Hill 2570 ± 150 B.C.

(BM-74); Durrington Walls 1977 ± 90 B.C. (BM-398), 2015 ± 90 B.C. (BM-399), 2050 ± 90 B.C. (BM-400): average mean 2017 B.C.; Marden 1988 ± 48 B.C. (BM-557).

⁶ See now Llandegai (Caerns.), 2790 ± 150 B.C. (NPL-220) for a single-entrance henge.

THE SOUTHERN CIRCLE

Any discussion of the timber structures found within the Durrington Walls enclosure must begin with a review of the conclusions arrived at by Mr C. R. Musson concerning the possible building forms that the remains represent (Appendix VII). The basic problem is whether or not the post-holes represent the remains of roofed buildings. Deliberately confining himself to the evidence of the post-holes alone, Mr Musson concludes that on strictly architectural grounds the structures could have been roofed, although the evidence allows for other interpretations. However, if one concedes that it was practicable to roof such structures, it is possible to draw on evidence for similar though later structures which were undeniably roofed, as well as on ethnographic parallels for similar buildings. These will be discussed below and for the moment it is sufficient to draw attention to Mr Musson's conclusions in this respect, which are based solely on the architectural implications of the excavated features. The alternatives to the roofed building hypothesis are discussed by Mr Musson in Appendix VII, but are not considered in detail in this section as it would be repetitious to do so and it is considered that when the evidence is viewed as a whole, the arguments in favour of the structures being roofed buildings outweigh the other alternatives. Nevertheless, Mr Musson's detailed analysis and professional approach are essential in a situation which requires a critical assessment in order to counter-balance a potential over-readiness to accept the building hypothesis.

With these reservations it is clear that, on the evidence of the surviving post-holes, Phase 1 of the Southern Circle was built of such light timbers that its interpretation as a fully roofed structure is doubtful, although it is not architecturally impossible. A more acceptable interpretation is that of a circular structure 23 m. in diameter, with a narrow lean-to roof supported on rings 1B and 1C and an entrance nearly 6 m. wide facing south-east (fig. 11). This roof may have sloped inwards rather than outwards so that the more frequent posts of Circle 1B would have supported the higher wall. This roofed area surrounded an open central court occupied by a central feature (Circle 1D), which was itself covered by a canopy or flanked by four free-standing posts, some of which had been renewed. Circle 1D at the centre is only 2.25 m. in diameter and has very shallow post-holes, so that it is difficult to see it as a structural element supporting the roof, as in this case the posts would have been nearly 9 m. long with basal diameters of around 15 cm. More probably the ring represents a circle of free-standing timber uprights, or even the supports for a platform or table as the focus of the building. At this remove it is not possible to establish which of these alternatives is correct, but in view of the occurrence of a ring of free-standing uprights at the centre of the Southern Circle Phase 2 this interpretation is favoured. Similarly, although a fully roofed interpretation cannot be ruled out on strictly architectural grounds, the hypothetical central open courts in Phase 2 and at Woodhenge make this the more likely interpretation for Phase 1 also.

Phase 2 of the Southern Circle must have followed soon after Phase 1 on account of the similarities of layout between the two structures. The patterns of the massive posts in the second phase are more complete and the potential rafter and beam spans quite acceptable in relation to them so that there is no doubt that the structure could have been roofed.

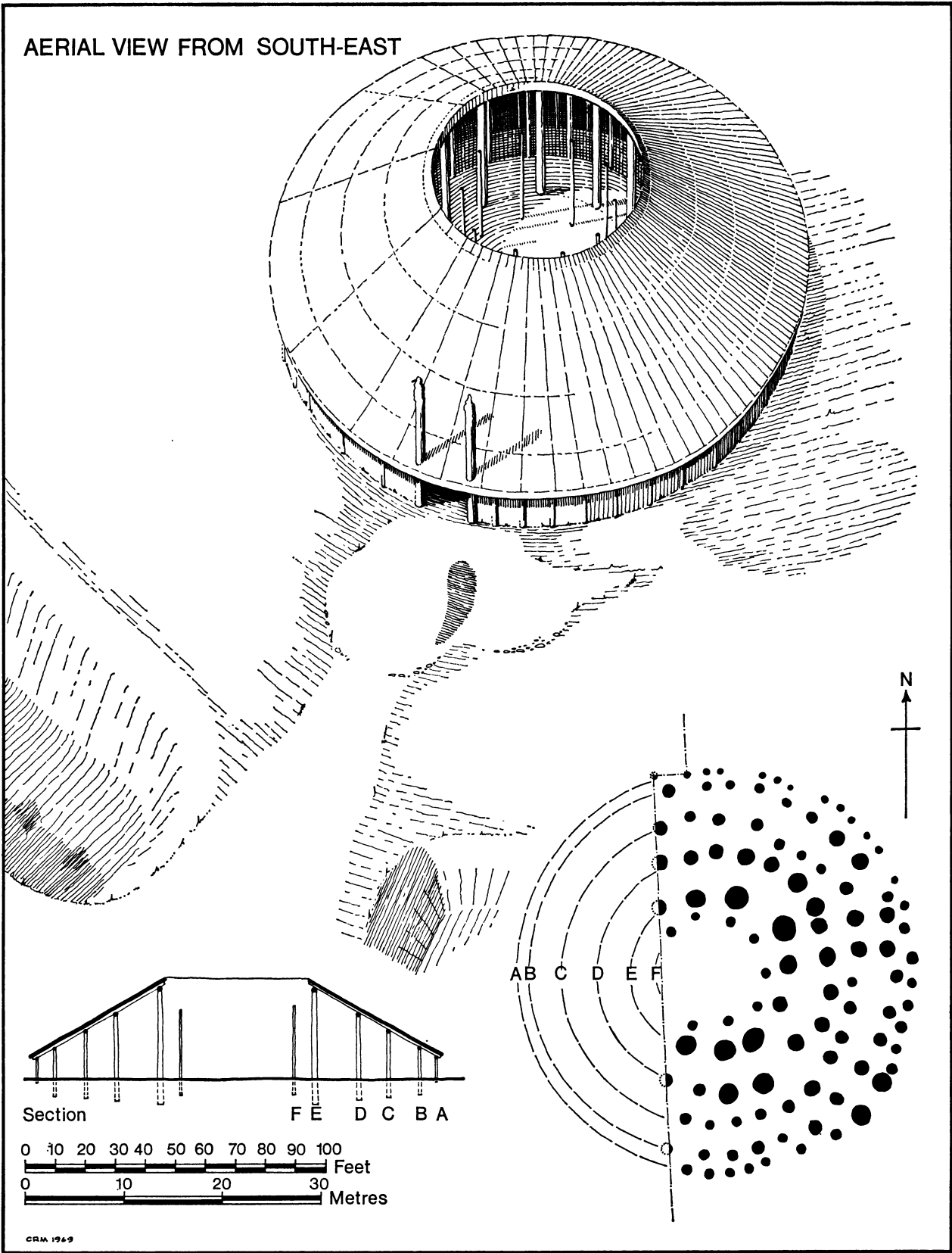


FIG. 84. Reconstruction of the Southern Circle, Phase 2

The excavated remains consist of six rings of post-holes which have radii of 19.46 m., 17.86 m., 14.67 m., 11.46 m., 7.60 m. and 5.37 m. In general, the post-pits and the timber uprights they supported increase in size and depth towards the centre (an exception being Circle 2C), so that the average diameters of the timbers from the outer to the inner rings are: 30 cm., 51 cm., 48 cm., 57 cm., 64 cm. and 24 cm. The innermost ring (2F) has deeply set but relatively slender posts. The outer ring (2A) is broken by an entrance which faces south-east towards the causeway over the main enclosure ditch. It is 3.8 m. wide and was flanked by two posts 1.06 m. and 91 cm. in diameter, the largest timbers that were employed in the structure. Outside the entrance was an irregular platform of chalk blocks and flint gravel on which a series of fires had been ignited.

The only building form appropriate to this pattern is an outward sloping roof with an outside wall probably at Circle 2A and a high ridge at Circle 2E surrounding an open central court. The posts of Circle 2F are best interpreted as a free-standing circle representing the focus of the building (fig. 84). Assuming a roof-pitch of 25° such a building would have a height of 10.5 m. at Circle 2E, if there was an eaves height of about 3 m. at the outer wall.

Three radiocarbon determinations are available for Phase 2 of the Southern Circle:

BM-395: 1950 ± 90 B.C. from antler from the packing of post-hole 92.

BM-396: 2000 ± 90 B.C. from charcoal (*Quercus robur*) from the base of post-hole 92.

BM-397: 1900 ± 90 B.C. from animal bones obtained from the packing material (layer 8) of post-hole 92.

Post-hole 92 is a pit 2.07 m. in diameter and 2.89 m. deep which houses an oak post with a diameter of 0.76 m. The charcoal for BM-396 was obtained from the base of the post-pipe, where it presumably represents the residue from charring the butt of the post, whereas the antler and animal bone for BM-395 and 397 were obtained from the packing material of the post (layer 8). In an oak post of 76 cm. diameter there will be a substantial variation in the age of a charcoal sample dated by C14, dependent on whether that sample is taken from the sap-wood or the heart-wood. Correspondence with Dr J. Fletcher of the Commonwealth Forestry Institute, University of Oxford, has established that in an oak post of this diameter the probable variation is about 175 years, dependent on whether the sample was central heart-wood or sap-wood. It was not possible to establish this point in the case of the sample from post-hole 92 and therefore BM-396 has an additional variable, which may have contributed to the discrepancy between it and BM-395 and 397. The animal bones and antler from the packing of the post are likely to provide a more accurate guide to the date of the construction of the building, which is therefore likely to have occurred within the range 1925 ± 90 B.C.

The Phase 1 features of the Southern Circle produced 50 flint artifacts, or 1% of the total found in the excavations as a whole. The implements include two scrapers and two piercers. In addition, nine antler picks were found but no bone implements and only a few splinters of animal bone.

In its second phase the Southern Circle produced 59% (6753) of the flint artifacts from the site as a whole. Of these, 47% were obtained from the platform in front of the entrance, 36% from the post-holes and 17% from the chalk surface within the structure. The implements include 87% of the arrowheads from the excavation — mostly of the transverse variety although two barbed and tanged specimens were also found — and 49% of the scrapers. In

addition, 67% of the pins and awls were recorded from this structure and 354 antler picks. Only one broken greenstone axe was found.

It is clear from Dr Longworth's report on the pottery (Chapter III) that the Southern Circle was built and frequented by the users of Grooved Ware. Although the users of Beaker pottery were concerned with the structure at some stage during its life their numerical presence must have been slight. Though Beaker sherds were recovered from one of the post-holes of the first phase (P139), they occurred in such a context that it is impossible to say with real certainty that Beaker users were already present during this initial phase of the structure's history. The presence of Beaker sherds in no fewer than nine post-holes of the second phase, however, indicates that Beaker users were certainly active during this phase. Both the platform and the Midden also yielded large quantities of Grooved Ware together with Beaker sherds. Discounting the heavily weathered sherd of a Middle Neolithic bowl (P20), and the small sherd of Beaker (P589), the stratigraphical position of which is uncertain, the presence of probable sherds of All Over Cord Beaker from the surface of the platform suggests that this feature was already in existence at an early stage of the structure's history. This is supported by the presence of a sherd (P465) from the same or near identical vessel to one represented in layers 6B-7 and 8 in the enclosure ditch (P462-4 and 466-9).

The three unweathered sherds of a Middle Neolithic bowl from the Midden might indicate an early beginning for this feature — a view which is supported by the radiocarbon determination of 2320 ± 125 B.C. (NPL-192) from charcoal incorporated in this deposit. No stratigraphic separation could be observed between the Middle Neolithic sherds and the Grooved Ware but this need not imply contemporaneity for no distinction was observed between this pottery and the sherd of Beaker (P594) which must belong to a final stage of the Southern British Tradition and one unlikely to date before 1550 B.C. Though the Midden clearly had a long life, it seems likely that it incorporates material from the earlier Middle Neolithic occupation of the site, unrelated to its main use during the life of the Southern Circle.

A survey of Neolithic structures which are comparable with the Southern Circle must begin with Woodhenge, which is sited 60 m. south of the Durrington Walls enclosure. Originally known as the 'Dough Cover', this earthwork was listed by the Rev. E. H. Goddard as a disc barrow under 'Durrington 65b',¹ until aerial observation by Squadron Leader Insall in 1925 revealed a series of concentric rings of dark spots in the wheat within the surrounding earthwork. The area within the ditch was totally excavated by Mrs Cunnington between 1926 and 1928 and the name 'Woodhenge' given to the timber structure.² The enclosing bank was much ploughed out and occurred only in patches as a few inches of coarse rubble resting on a fossil soil on top of which was found great quantities of Grooved Ware. It was sited outside the ditch with external diameters of 85.3 m. east-west and 88.3 m. north-east-south-west and was crossed by a single causeway about 9.1 m. wide facing north-east towards the Durrington Walls enclosure (figs. 2 and 85). Sherds of Grooved Ware were found in the primary chalk rubble of the ditch which was 1.8-2.1 m. deep with a broad flat bottom 3.6-4.8 m. wide.

The timber structure enclosed by the ditch comprised six concentric oval or egg-shaped

¹ Goddard, 1913, 248.

² Cunnington, 1929.

PLAN OF WOODHENGE

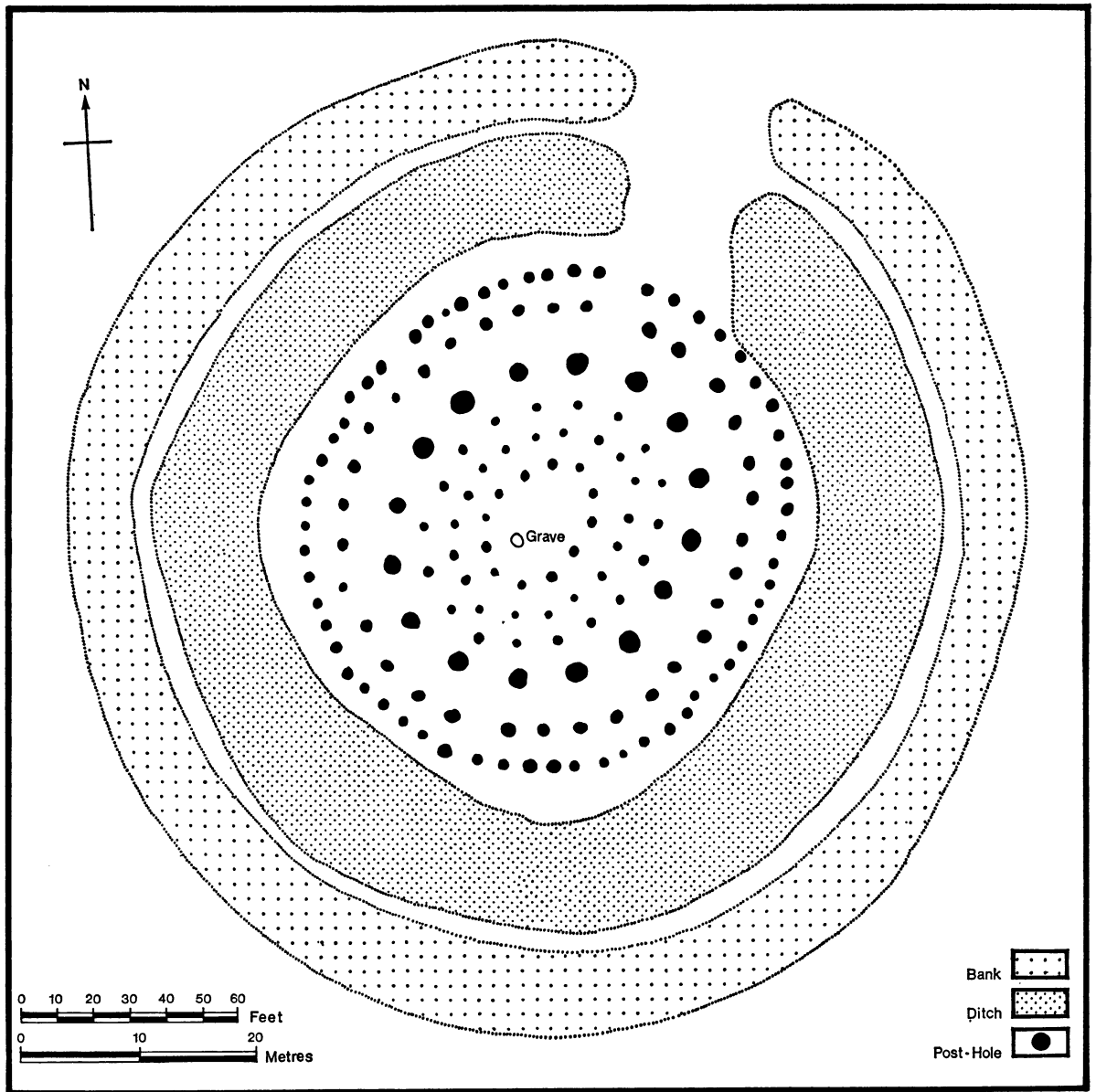


FIG. 85

rings of post-holes, which were lettered A-F from the outer circle by Mrs Cunnington. Details of these circles and of their post-holes are provided in Table XXI with details of the second phase of the Southern Circle in parenthesis.

In one important respect Woodhenge closely resembles Phase 2 of the Southern Circle at Durrington in that both structures consist of six concentric rings of posts and were therefore

TABLE XXI

Details of the Woodhenge Rings

Ring	Diameter		No. of posts	Average post-hole diameter	Average post-hole depth	Average post diameter
	NE-SW	NW-SE				
A	44.1 m.	39.6 (38.92)	60 (50)	0.94 (0.76)	0.60 (0.42)	0.38 (0.30)
B	38.1 m.	34.1 (35.72)	32 (36)	0.97 (1.1)	1.1 (1.6)	0.45 (0.51)
C	29.4 m.	25.2 (29.34)	16 (34)	1.4 (1.1)	1.7 (1.7)	0.82 (0.48)
D	22.5 m.	18.8 (22.92)	18 (24)	0.73 (1.4)	0.85 (2.1)	0.36 (0.57)
E	17.3 m.	14.0 (15.20)	18 (12)	0.76 (1.8)	1.0 (2.3)	0.27 (0.64)
F	11.8 m.	8.5 (10.74)	12 (10)	0.70 (0.85)	1.0 (1.5)	0.33 (0.24)

built to the same basic plan. However, the similarities end there, for Woodhenge is not only a larger monument overall, with a maximum diameter of 44.1 m. as opposed to the 38.9 m. of the Southern Circle, but the rings of the former are egg-shaped and not circular in plan. Furthermore, at Woodhenge the largest posts occur in Circle C and not in Circle E, which suggests that it may have been a different type of structure altogether. Finally, there is no formal entrance into the Woodhenge structure, as in the Southern Circle and the Sanctuary on Overton Hill, although there is a gap in the two outer rings of post-holes. One cannot be certain that no formal grave occurs within the Southern Circle as within Woodhenge, but there seems little doubt that the latter is not a purely sepulchral monument and that the burial within it is of dedicatory type. It comprised the crouched skeleton of a three-year-old child with a cleft skull in a small pit. In addition, the crouched skeleton of a young man was found in a grave dug into the floor of the ditch in its eastern sector which was covered by the primary silts of the latter, and cremated human bones were found down one side of the upper part of the post-pipe in post-hole 14 of the C Ring. This cremation had probably been placed at the foot of the post and slipped down as the latter decayed.

In minor structural points such as the provision of ramps and the charring of the butts of the posts, Woodhenge and the Southern Circle are very similar. Moreover, the charcoals obtained as a result of this last process are principally of oak, although out of 21 identifications 15 are of oak and 6 are of birch. As at Durrington, only one fragment of a polished greenstone axe was recorded from one post-hole, although an axe of similar stone was recorded from the upper silts of the ditch near the entrance. This confirms that the dressing of the timbers was undertaken away from the site and the importance of the axe to these people is emphasized by the recording of two model axes of chalk in post-holes of the A and B rings.

In respect of material remains Woodhenge and the Southern Circle are closely similar in that the former also produced a large quantity of Grooved Ware from the old land surface under the bank, from the post-holes and from the bottom of the ditch, together with a few scraps of Beaker from the post-holes and ditch. The flint industry is also closely comparable, whilst antler picks, marine shells, lumps of sarsen and animal bones were found. This material is placed in its cultural context in Chapter VI and it is sufficient to state at this point that the structures of Woodhenge and the Southern Circle are basically similar although they differ in matters of detail which have been outlined above.

Professor Thom has recently published a survey of Woodhenge based on the concrete posts which were placed in the post-holes after the excavation.¹ He concludes that the structure consists of a series of egg-shaped rings with common centres for the arcs at the large and small ends. Thom lists ten sites with these egg-shaped rings,² which he divides into two types, both of which are based on a pythagorean or near pythagorean triangle. Leaving aside the suggestion that Neolithic man was able to conceive of such an abstract diagram there are methodological difficulties involved in using the concrete blocks as true indicators of the previous positions of the timber uprights and these same modern markers diverge frequently from Professor Thom's idealized rings. An alternative to the suggestion that the posts were laid out in such a sophisticated fashion is that proposed by Professor Piggott in 1940,³ who interpreted Woodhenge as a roofed building of one period which was probably open in the centre, the roof sloping both inwards and outwards from a high central ridge (the C ring).

Mr Musson has made an alternative suggestion (Appendix VII, fig. 115) that Woodhenge represents two separate buildings, each with an outward sloping annular roof and with a central court (fig. 115, reconstruction C). The post-holes of the initial and smaller phase (rings D, E, F) were built without ramps and might be compared with Phase 1 of the Southern Circle, whilst the second phase, incorporating the massive ramped post-holes of the outer three rings might be grouped with Phase 2. There is no stratigraphical evidence to establish which of the two possible interpretations is correct. However, a roof draining both outwards and inwards (fig. 115, reconstruction A) is not only unique, as no other comparable structures can take a similar roof form, but inconvenient, as an appreciable amount of rain water would be drained into the central court.

The status of Woodhenge in respect of the timber structures within the Durrington Walls enclosure cannot now be established. It is sited outside the main enclosure, to the south of the edge of the valley, within its own bank and ditch. The structure may therefore be of different date to those within the main enclosure or it may have had a different function. In the present state of knowledge it is not possible to choose between these alternatives although a radio-carbon determination from Woodhenge would help to illuminate the problem. However, the siting of the structure does emphasize that post-hole settings in more exposed situations and without a protective bank may well have been destroyed in the past or await accidental discovery.

The second timber structure of comparable type to the Southern Circle was also excavated by Mrs Cunnington and is known as the Sanctuary. It is sited on a small level platform on Overton Hill in North Wiltshire and unlike Woodhenge was re-built on several occasions, the final reconstruction being in stone.⁴ The complex history of the monument was initially elucidated by Professor Piggott,⁵ and has been discussed in some detail by Mr Musson in Appendix VII. Unlike the Woodhenge and Durrington structures the Sanctuary was not surrounded by a bank and ditch, but like them it consists of six concentric rings of post-holes which are based on true circles as at Durrington and not on egg-shaped rings as at Woodhenge. The details of the circles, which are lettered from the outside, and the post-holes, as

¹ Thom, 1967, 73-7.

² Thom, 1967, 29.

³ Piggott, 1940, 207-12, figs. 7-9.

⁴ Cunnington, 1931.

⁵ Piggott, 1940, 196-207, figs. 1-4, 6.

far as can be deduced from Mrs Cunnington's report are as follows:

TABLE XXII
Details of the Sanctuary Rings

<i>Ring</i>	<i>Diameter</i>	<i>No. of posts</i>	<i>Average post-hole diameter</i>	<i>Average post-hole depth</i>	<i>Average post diameter</i>
A (stone)	40.2 m.	42 stones	in the circle		
B	20.1 m.	34	?	0.54	?
C (stone)	13.7 m.	16 stones	in the circle		
C (post)	13.7 m.	16	?	1.3	?0.36
D	11.5 m.	12	?	1.5	0.33
E	6.4 m.	8	?	1.5	?
F	4.5 m.	8	?	0.76	?
G	3.9 m.	6	?	1.5	0.30

Based on the analysis of the structures by Professor Piggott and Mr Musson the structural history of the monument would appear to be as follows:

Phase 1. A circular hut 4.5 m. in diameter with a conical roof (F ring and central post-hole) which is associated by Dr Smith with the earliest pottery on the site, namely Windmill Hill ware and Ebbsfleet.¹ If this is so the small hut is unlikely to have been built later than 2000 B.C.

Phase 2. A larger hut 11.5 m. in diameter employing Circles E and D which followed closely on Phase 1.

Phase 3. The earlier structures were replaced by a circular building 20.1 m. in external diameter with an entrance facing north-west. It seems unlikely that the posts and the stones of the C Ring were contemporary as this would prevent access to the interior of the structure and it seems probable that the stone ring belongs to Phase 4. Pottery of Mortlake, Grooved Ware and Beaker types was found in post-holes of this phase.

Phase 4. An outer stone circle (the A ring), 40.2 m. in diameter, was constructed and connected with the West Kennet Avenue by two stones set radially on its circumference. The C ring of spaced stones may also have been erected at this time. The crouched burial of a young man intersected stone-hole 12 of the C ring with which it is thought to be contemporary. The skeleton was associated with a Beaker decorated with 'barbed wire' ornament for which dates of around 1600 B.C. have been obtained on the continent.

In general, the timber structures of the Sanctuary resemble those of the Southern Circle

¹ Smith, 1965, 245f.

in that they are circular, they are of more than one period and the outer wall of Phase 3 possesses an entrance flanked by two large post-holes. Moreover of 27 specimens of charcoal from different post-holes, all are of oak,¹ and the Durrington, Woodhenge and Sanctuary structures have produced Grooved Ware. However, the final timber structure at the Sanctuary was only 20.1 m. in diameter as opposed to the 38.9 m. of the Southern Circle and the 44.1 m. by 39.6 m. of Woodhenge. It was a much smaller building and this seems to be reflected in the diameters of the timbers employed, as far as these can be established. The absence of an encircling bank and ditch at the Sanctuary has already been referred to, but the outer stone circle may have been substituted for these, and in this use of stone the Sanctuary differs from both Durrington Walls and Woodhenge. Natural stone is abundant in the neighbourhood and it is interesting that timber should have originally been preferred, for this implies that a roofed building was specifically required.

The occupation debris from the Sanctuary is not so common as at Woodhenge and Durrington Walls. The pottery has been studied by Dr Smith who has shown that it contains a range of types from Windmill Hill and Ebbsfleet to Mortlake-Fengate, Grooved Ware and Bell and Long-Necked Beakers.² The flint industry is not numerous but it includes transverse arrowheads and one barbed and tanged arrowhead, whilst the collection of stones includes 20 small fragments of Niedermendig Lava. Animal bones are not very numerous but Professor Piggott has suggested that the sherds, flints and animal bones represent the remains of offerings or ritual meals³ and this suggestion will be returned to when discussing the functions of the structures.

In 1969, excavations within the Marden enclosure recorded the post-holes of a small circular timber structure within the north entrance through the earthwork. The enclosure itself has already been described and comparisons made between it and similar enclosures at Durrington Walls, Avebury and Mount Pleasant. The post-holes of this structure were located 15 m. inside the north entrance in the same relative position as the Southern Circle at Durrington Walls. It was 10.5 m. in diameter and defined by a single ring of post-holes with a group of three post-holes at the centre which held the roof supports.⁴ Sherds of Grooved Ware and flint artifacts were recorded from the post-holes. This structure can be compared with the earlier phases of the Sanctuary and on account of its context and associated finds can be regarded as a member of the Durrington-Woodhenge-Sanctuary class of roofed buildings.

The structures from these four sites represent the range of roofed circular buildings of Late Neolithic date as known at present. However, the number of structures is likely to increase in the next few years and in addition there are two sites where such structures may have existed but where detailed proof is lacking. At Stonehenge, Colonel Hawley found a large number of post-holes in the central area some of which may be ancient and some of recent date.⁵ Unfortunately, the greater part of the centre of the monument remains unexcavated although Professor Atkinson considers it probable that a timber building existed in the centre of the enclosure in Phase 1.⁶ Secondly, Mr J. G. Scott has drawn the author's attention to a site known as Knappers, 7 miles north-west of Glasgow in Dunbarton-

¹ Cunnington, 1931A.

² Smith, 1965, 245f.

³ Piggott, 1962, 73.

⁴ Wainwright, 1970.

⁵ Atkinson, 1956, 50-1.

⁶ Atkinson, 1956, 169.

shire, which was excavated by Ludowig MacLellan Mann in 1937. Unfortunately no proper excavation report was ever published because excavations were suspended in 1939 and interest in the site had waned by 1945.¹ The site consisted of a collection of stone cists, which appear to have been in association with a structure represented by concentric circles of holes which had originally held timber uprights. This structure had a diameter of 39.3 m. and at its centre was a small stone cist, but no suitable plan of the structure is available. The pottery found on the site ranges from round-based Neolithic bowls to Bronze Age vessels but a local find of Grooved Ware was not associated.

A timber structure of rather different type was discovered from the air by Wing Commander Insall in 1929 at Arminghall in Norfolk. Excavations of the site by Professor J. G. D. Clark,² revealed that two concentric ditches with a bank between them enclosed a circular area some 27.1 m. in diameter, which was occupied by a penannular setting of eight post-holes opening towards the single entrance in the inner ditch. Each post-hole was approached by a ramp from its south side and the two examples fully excavated were 2.20 m. and 2.28 m. deep respectively. In both cases the posts had rotted *in situ* and the original diameters of the timbers could be established as 0.91 m. and 1.06 m. respectively. Both posts were of oak and, when they decayed, weathering cones had formed in the upper parts of the post-holes, in the same way as in the Phase 2 post-holes of the Southern Circle at Durrington Walls.³

The evidence for date consists of sixteen sherds of rusticated ware from a seam of charcoal on the floor of the inner ditch. A subsequent radiocarbon determination of 2490 ± 190 B.C. (BM-129) was obtained for oak charcoal from the base of post-hole no. 7. If the death of the sample in this case is relevant to the erection of the timber uprights this date is rather earlier than one would have expected from the evidence of the pottery alone.

Arminghall clearly represents a structure of different type to those at Woodhenge, Durrington Walls, the Sanctuary and Marden, which were roofed buildings. A diameter of 14 m. with no internal supports and the lack of any human refuse inside the inner ditch, renders it unlikely that the Arminghall structure was roofed; alternatively it may have been lintelled or the posts may have been free-standing and carved with figures and symbols.

A basic distinction has been made between structures of Arminghall type and those rings of post or stake-holes associated with burials, and the relationship between timber circles of sepulchral and non-sepulchral type has been a matter for discussion for many years. In brief the discussion revolves around circles of stakes which are occasionally found around or under round barrows and which have been compared with post-circles of Durrington type. In his report on Arminghall, Professor Clark compared that structure with the so-called palisade barrows, whilst drawing attention to the fundamental difference in function between the 'temples' and the sepulchral enclosures.⁴ In 1938 Dr A. E. van Giffen suggested that the sepulchral timber circles may have been ancestral to the 'temples' of timber and stone,⁵ but these arguments were not pursued until Dr W. Glasbergen in 1954⁶ and Mr P. Ashbee in 1960,⁷ classified and mapped the occurrence of timber circles under barrows and described their associations for the Netherlands and Britain respectively.

¹ Mann, 1937; 1939.

² Clark, 1936.

³ Clark, 1936, figs. 3 and 4.

⁴ Clark, 1936, 31.

⁵ Giffen, 1938.

⁶ Glasbergen, 1954.

⁷ Ashbee, 1960.

Glasbergen could refer to over 200 sepulchral timber circles which he divided into nine types,¹ of which types 6-8 comprising the double, triple and quadruple concentric circles of closely set stakes are most relevant to the 'temples' under discussion. However, circles of these types are attributable mainly to the Middle Bronze Age in the Netherlands and can hardly be ancestral to the British structures. Glasbergen would see the origins of these multiple circles in the single stake circles found under barrows and associated with Beakers, which may frequently have a non-sepulchral function.

The British evidence is much less extensive and Mr Ashbee has divided the stake-circles into three main categories which fall broadly into single circles, single circles in a palisade trench and concentric circles. They are considered most likely to have been mortuary huts or houses which were demolished before the barrow was erected.² In 1960 it was ascertained that concentric circles first occurred in association with a Long-Necked Beaker, although three examples were found with food vessels, one with Wessex Culture associations and two with cinerary urns. On the other hand, the earliest associations with single stake-circles are Bell Beakers. Discoveries since that time have not altered the pattern of these associations,³ but more detailed chronological data has been obtained as a result of the excavation of a multi-phase barrow, Amesbury G71 in Wiltshire, where charcoal from the floor of a deep grave pit, containing a contracted inhumation and surrounded by three concentric stake circles, gave a radiocarbon determination of 2010 ± 110 (NPL-77).⁴

This determination confirms that sepulchral stake circles date at least from the beginning of the second millennium B.C. and the evidence quoted by Mr Ashbee indicates that their earliest known associations are with Bell Beaker pottery. The evidence for the non-sepulchral timber structures of Durrington type is less clear, but Phase 1 at the Sanctuary is associated by Dr Smith with the sherds of Windmill Hill and Ebbsfleet pottery found scattered on the site. If so, the primary circular hut can hardly be later than 2000 B.C. Similarly, if Stonehenge I did possess a roofed timber structure at its centre as Professor Atkinson has suggested, then it is unlikely to have been later than 2000 B.C. on the basis of the two radiocarbon determinations for Stonehenge I of 2180 ± 105 B.C. (I-2328) and 1848 ± 275 B.C. (C-602). One may conclude that the practice of erecting circular roofed structures for sepulchral and non-sepulchral purposes, probably originated some time before 2000 B.C. The cultural background to these origins is not clear, but the evidence from the Sanctuary suggests that it is to be found amongst the indigenous 'bowl' cultures of Wessex. If so, the practice was soon adopted by the intrusive Beaker peoples as part of their funerary rite and persisted throughout the Bronze Age. The non-sepulchral timber structures, of which the earliest manifestations may be seen at the Sanctuary and possibly Stonehenge and Marden, underwent a transformation from the simple circular hut to the large circular or oval buildings of Durrington, Woodhenge and the Sanctuary Phase 3. These structures were planned as concentric rings of large oak timbers, which may have had a pale reflection in the concentric stake circles of the funerary rituals. One cannot directly compare these large buildings and the sepulchral stake circles; the differences of scale and function are too great. Nevertheless they must be separate manifestations of the same tradition adapted for their different func-

¹ Glasbergen, 1954, 17.

² Ashbee, 1960, 65.

³ The distribution map (fig. 86) includes all sepulchral timber circles known up to the autumn of 1969.

⁴ Christie, 1967.

DISTRIBUTION MAP OF STONE AND TIMBER CIRCLES IN BRITAIN.

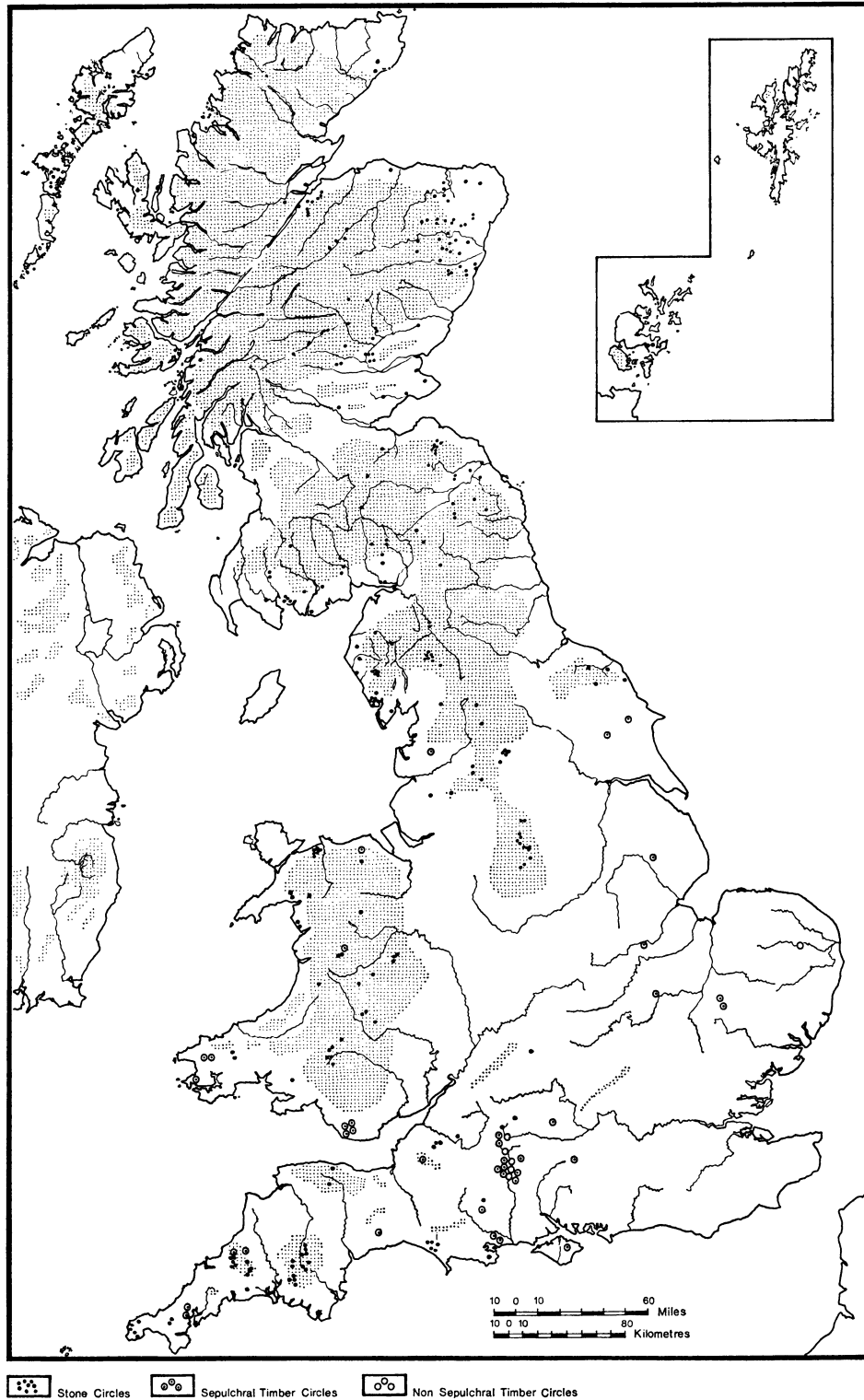


FIG. 86

tions. On the basis of the radiocarbon determinations from Phase 2 of the Southern Circle at Durrington Walls (BM-395-397), it would appear that the large buildings were being constructed by 1930 ± 90 B.C.

In England not sufficient is known of these structures to be able to establish the date after which they were no longer constructed. However, in Ireland there is a little evidence to suggest that similar structures were being built in the first millennium B.C. Unpublished excavations still in progress at Navan near Armagh¹ have revealed four phases of occupation of which Phase 3 was a circular timber structure 39.6 m. in diameter consisting of five concentric rings of posts with a large central upright. Inside the structure was a patchy clay floor and the excavator has no doubt that the remains are those of a roofed building. In Phase 4 a cairn was built up within the building when the uprights were still standing, and the outer wall of the structure was then deliberately fired. Finally the cairn was enveloped in sods to produce a mound 45.7 m. in diameter and 4.5-5.1 m. high. Charcoal from the burnt debris produced a radiocarbon determination with a mean of 275 B.C. Mr Waterman considers that the Navan building was not used for ordinary domestic purposes and that the final mound was intended to stand as a monument to it. A related structure with at least three phases may have been excavated at Lugg, Co. Dublin, associated with pottery of Early Iron Age or ultimate Bronze Age character,² and it may be that such structures, although much later in date than those under discussion, are part of the same tradition of constructing large circular buildings for purposes which were other than purely domestic.

In the first millennium A.D. there is evidence for the construction of buildings of comparable dimensions which do appear to have had a purely domestic function. At Ballacagen in the Isle of Man, Dr Bersu considered that a flat circular area, 36.5 m. in diameter and surrounded by a low bank, had been entirely roofed on the basis of concentric settings of post-holes around a central hearth and the remains of a wooden floor over the entire area.³ The finds were few but suggested a date in the first three centuries A.D. A rath at Lissue in Co. Antrim, also investigated by Dr Bersu, apparently produced evidence for a roofed building with a diameter of 41.1 m., the roof being supported on seven concentric rings of posts surrounding a central hearth. The definitive account of this excavation has not yet been published but the finds suggest a date between 800-1000 A.D.⁴ These structures do appear to have had a purely domestic function and although the disparity in age between them and the Neolithic buildings under consideration is too great to allow for any cultural connections, they do serve to demonstrate that buildings of such great size were a practical proposition in architectural terms.

A feature of Phase 2 of the Southern Circle at Durrington Walls is the irregular platform which was constructed outside the entrance to the building. An extensive area of burning occurred on the platform, around which were scattered quantities of flints, sherds and animal bones. One interpretation of this feature is that it represents a focal point outside the building proper where offerings were made and rituals performed prior to entering the

¹ The author is indebted to Mr D. M. Waterman for detailed information concerning this excavation in advance of his own publication.

² Kilbride-Jones, 1950.

³ Bersu, 1946.

⁴ Bersu, 1947; 1948.

structure itself. Such platforms have not been found with any other timber structure, but they have been recorded with chambered tombs as at Bryn-yr-hen-Bobl in Anglesey¹ and Cashtal yn Ard in the Isle of Man.² These platforms are not closely comparable with the structure under discussion as they are associated with funerary monuments and were not littered with sherds, flints and animal bones. Nevertheless they are connected with certain rituals attendant upon the burial of the dead, in the same way as the platform outside the Southern Circle was associated with the use of that structure.

Sited outside the north-east perimeter of the Southern Circle was a shallow oval hollow which was filled with a quantity of animal bones, sherds and stone tools and which has been interpreted as a midden. It is difficult to visualize the stake-settings around the northern and southern sectors of the Midden as being contemporary with Phase 2 of the Southern Circle because their alignments intersect. However, there can be little doubt that the two structures are contemporary for sherds of the same pot occur both in the Midden and in post-hole 45. On account of the Beaker pottery it seems unlikely that NPL-192 (2320 ± 125 B.C.) refers to the terminal use of the Midden. However, there are three unweathered sherds of Middle Neolithic bowl from the Midden to which this date could refer. It is argued below that this mixture of ceramic styles and the siting and character of the deposit argues for the Midden being a special repository, in which was placed refuse from ceremonies performed within the enclosure in part to do with the Southern Circle itself.

The Midden is partially surrounded to the north and to the south by two arcs of stake-holes and initially it was considered that the structure represented the remains of a hut, until the problems of roofing such a structure rendered this theory untenable. Furthermore, the quantity of debris within the hollow suggested a midden rather than a hut floor. It must be emphasized that domestic parallels for this hollow and its stake-holes are not hard to find. In particular, settlements of the Beaker period on Easton Down, Winterslow, Wiltshire, which were excavated by Dr J. F. S. Stone, included a number of irregular hollows amongst which the majority were surrounded by stake-holes. These hollows have been interpreted as huts but there are no indications of roof supports.³ Similarly, on Boscombe Down East, two conjoined pits were recorded with possible stake-holes around their edges, which contained a very few Beaker sherds and flints.⁴ These examples are sufficient to indicate that hollows with peripheral stake-holes do occur in undoubted domestic contexts, leaving aside the problem as to whether they represent the remains of roofed structures or temporary 'working-hollows'. Nevertheless, in view of the context of the Midden at Durrington Walls and the great quantity of debris it contained, it is suggested that this structure was associated in some way with the function of the adjacent building and probably with other ceremonies within the main enclosure.

The nature of this association is of some interest and is clearly to do with the ceremonial breaking of pottery vessels, the deposition of flint artifacts and offerings of meat. The deliberate breaking of pottery vessels in and around stone circles is well documented and has been recognized, for example, at the Grange Stone Circle⁵ and the recumbent stone circle at Drombeg, Co. Cork.⁶ Similarly it is a commonly recognized phenomenon associated with

¹ Hemp, 1935.

² Fleure and Neeley, 1936.

³ Stone, 1931; 1933; 1935.

⁴ Stone, 1936, 474-5, 487.

⁵ O'Riordain, 1951, 73-4.

⁶ Fahy, 1959, 17-18.

burials under round barrows,¹ represented by lenses of sherds, charcoal, bones and flints in the mounds of barrows which otherwise consist of clean soil thrown up from the ditch. In the nineteenth century, Canon Greenwell thought it advisable to draw attention to the large quantities of bones, flints and sherds found scattered throughout burial mounds and suggested that they had been deliberately deposited when the mound was being built.² He dismissed the possibility that they were incorporated accidentally from a scatter on the pre-existing land surface on account of their abundance and the fact that they occurred in the clean rubble of the mounds where no surface soil was found. However, he noted that only a small part of any one vessel ever occurred and usually a large number of vessels were represented by very few sherds. The evidence from the Southern Circle, the Midden and the enclosure ditch at Durrington walls also suggests the deliberate breaking and distribution of sherds from vessels as only parts of individual pots were found.

This practice extends also to the chambered tombs as at Audleystown, Co. Down, where complete but broken pots were deposited in the chamber,³ and the evidence most apposite to the significance of the Midden and its relationship with the Southern Circle is that obtained from the deliberate infilling of the chambers and galleries of certain chambered tombs. In particular, the structures at Tinkinswood in Glamorgan consist of a roughly rectangular chamber recessed within the eastern end of a rectangular cairn.⁴ Sherds of round-bottomed bowls with everted or simple rims were found embedded in the floor of the approach to the chamber and are presumably contemporary with its primary use.⁵ However the deliberate infilling of the chamber contained deposits of animal bones and sherds of Beaker pottery which could be the remains of offerings.

This interpretation was favoured by Professor Piggott to explain the nature of the deliberate infilling of the burial chambers and passage of the West Kennet Long Barrow. This blocking material consisted of chalk rubble with seams of earth which contained sherds, flints, beads, bone tools and broken animal bones. This filling was a single act and a discussion of comparable occurrences in the British Isles led Piggott to suggest that the deliberate infilling of chambered tombs was not an unusual phenomenon.⁶ The pottery assemblage was dominated by Peterborough Ware but included all styles from Ebbsfleet to Fengate as well as Grooved Ware and Bell and Long-Necked Beakers. The sherds in the main were unweathered with freshly broken edges and there was a mixture of all types from the top to the bottom of the filling. The mixture of ceramic styles presented a problem of interpretation to the excavator for it was not possible to accept their contemporaneity. Professor Piggott therefore suggested that the material consisted of a re-deposited series of ritual offerings, which had originally been made elsewhere in temporary storage places or an 'offering-house', where the sherds, flints and bones would accumulate until their fragments were included in the filling of the tomb. It is possible that individual sherds or bones would have been abstracted from these depositories of sanctified rubbish for ritualistic practices elsewhere. In this context one recalls Canon Greenwell's observation that many pots ceremonially broken and incorporated in barrow mounds were represented by one sherd only.

Professor Piggott suggested an analogous situation at the Sanctuary to explain the sherds,

¹ Grinsell, 1961; Ashbee, 1960, 55.

² Greenwell, 1877, 10-12.

³ Collins, 1964, 17.

⁴ Ward, 1915.

⁵ Grimes, 1951, 33.

⁶ Piggott, 1962, 68-71.

flints and animal bones from the stone and post-holes which he considered to be the remains of offerings and ritual meals.¹ Similarly at the single-entrance henge of Gorsey Bigbury in the Mendips, concentrated deposits of charcoal, pot-sherds, flints and animal bones were found in the primary silts of the ditch.² The material included some 4000 flints and about 100 Long-Necked Beakers and as there were no signs of internal structures, domestic otherwise, it should presumably be interpreted as the remains of ritual practices.

Clearly the Midden at Durrington Walls is likely to have been a temporary storage place or 'offering-house' such as was postulated by Professor Piggott. The rituals connected with the Southern Circle, involving the breakage of pots and the deposition of stone tools and meat, appear to have occurred principally on the platform outside the entrance to that structure. Token sherds, meat-joints and flints would then have been placed around the bases of the timber uprights within the building and sherds of at least one pot were deposited in the Midden as well as around the post standing in post-hole 45. Sherds of the same pot from the bases of different posts within the building also testify to this process. The deposits in the Midden would have been allowed to accumulate over a period, which may well account for the range of ceramic styles in the Midden outside the Southern Circle, although clearly the earlier material in the former is unlikely to have come from that building. It is from a structure of this type, within the precincts of a building devoted to communal practices, that one might expect a sample of the deposit to be abstracted and incorporated in the blocking of a tomb like that of West Kennet.

A second possible storage place has been published by Dr I. H. Longworth from Brackmont Mill sand-pit, Fife, where a pit contained 51 sherds representing at least 20 vessels, all of which have a Late Neolithic attribution.³ At least 31 sherds were rim fragments and the fractures were sharp and unweathered. Longworth rejects the interpretation that the material was unwanted rubbish because of the large number of rims, which suggested to him that some selection process had been employed and that 'the pit was deliberately filled with sherds whose significance lay in the function that they had last served'.

Clearly the radiocarbon determination of 2320 ± 125 B.C. (NPL-192) does not apply to the later Neolithic material nor to the life of the Southern Circle. There are however, a few unweathered sherds of a Middle Neolithic bowl amongst the Midden refuse and it is possible that these were introduced deliberately along with the charcoal which produced the radiocarbon date. In view of the special character of the Midden this seems a likely solution and lends strength to the possibility that timber structures of the third millennium B.C. are to be found in the vicinity.

The origins of the practice of depositing collections of refuse in such a fashion as to suggest that they are the remains of ritual feasts or offerings can be traced back to the causewayed enclosures of the mid third millennium B.C. in Britain. The nature of this practice and the evidence it provides for regarding the causewayed enclosures as ancestral to the large enclosures of Durrington type have been discussed earlier in this chapter. Similarly in Denmark the practice of depositing offerings in 'cult houses' can be traced back as far as the middle of the third millennium B.C. at Tustrup and Ferslev in Jutland.⁴ Since the original

¹ Piggott, 1962, 75.

² ApSimon, 1949.

³ Longworth, 1968, 67-75, figs. 4 and 5.

⁴ Kjaerum, 1955; Marseen, 1960.

excavation reports these buildings have been interpreted as mortuary houses¹ but it is nevertheless clear that offerings were made in them by the builders of the adjacent Passage Graves.

A factor which has contributed much to our understanding of the Southern Circle is its siting in the floor of the small dry valley which opens onto the River Avon. In this position it had been sealed by soil washed down from the sides of the valley and had not been subjected to ploughing or to the normal processes of erosion. As a result the post-holes and associated structures were so well preserved that the original dimensions of the former could be established with a fair degree of certainty. Furthermore, the timber uprights had decayed *in situ* so that in a majority of cases it was possible to establish the diameters of the posts which had been placed in the holes. By planning these post-'pipes' it was possible to establish the original ground plan of the timber uprights (fig. 14) and it was on the basis of this plan that Mr Musson was able to reconstruct the possible building forms. In addition, however, it is possible to obtain information concerning the timbers themselves, the quantity of timber which would have been required and to make some estimate of the length of life of the building.

A number of posts had their butts charred before they were inserted into the post-holes and Mr G. C. Morgan examined the sixteen samples of charcoal from these situations (Appendix V). In 13 cases the charcoals were of oak (*Quercus robur*) from large timbers, two samples were of ash (*Fraxinus excelsior*) and one of hawthorn (*Crataegus* sp.). From the preponderance of charcoals of relatively large oaks in the post-holes, Mr Morgan considers that oak was used for structural purposes. The diameters of these structural timbers can be estimated from the post-pipes and the length of timbers from the reconstructions provided by Mr Musson, in which a roof-pitch of about 25° has been assumed throughout. However, Mr Musson has emphasized that the angle of the roof may have been greater so that the estimates which follow are minimum quantities only. The amounts of timber estimated for rafters, ring-beams and trimmer beams are inevitably very conjectural and these need not have been of oak. In addition, an unknown quantity of smaller timbers would have been required for cross-bracing and for the sub-structure of the thatch.

The bases for these calculations are the factors discussed above concerning the use of oak for the main structural components, the reconstructions provided by Mr Musson (to which have been added the depths that the posts were inserted in the ground), and the diameters of the uprights. On the basis that green oak weighs 67 lb. per cu. ft. one can employ the formulae $\pi r^2 h$ or $0.7854 d^2 h$ to calculate the volume of the posts, multiplied by 67 to establish the average weight of an individual post. This is then multiplied by the number of posts in the relevant structural component. The latter have been treated as units save in the case of Circle 2A where the entrance posts 22 and 23 are anomalous and are therefore estimated separately. The figures are subject to the reservations already outlined and should be regarded as minimum estimates.

From Table XXIII it will be seen that over 260 tons of timber would have been required for Phase 2 of the Southern Circle. The largest units in the structure were undoubtedly the entrance posts 22 and 23 which weighed over 5 tons and 3.5 tons respectively. The weight of post 22 can be compared with that of the largest foreign stone at Stonehenge.² This is the

¹ Kjaerum, 1967.

² Atkinson, 1956, 105.

TABLE XXIII

Southern Circle: Phase 2. Estimates of Timber Weights

<i>Structural component</i>	<i>Average post/timber diameter</i>	<i>Estimated post/timber length</i>	<i>Weight of average post/timber (tons)</i>	<i>Total weight of timber in component (tons)</i>
Circle 2A	0.30 m.	3.4 m.	0.26	12.85
Post no. 22	1.06 m.	5.4 m.	5.17	5.17
Post no. 23	0.91 m.	4.9 m.	3.44	3.44
Circle 2B	0.51 m.	5.4 m.	1.22	43.99
Circle 2C	0.48 m.	7.0 m.	1.38	47.23
Circle 2D	0.57 m.	8.9 m.	2.48	59.63
Circle 2E	0.64 m.	11.2 m.	3.81	45.74
Circle 2F	0.24 m.	7.6 m.	0.37	3.78
Purlins/ring beams	0.30 m.	457.0 m.	—	35.23
Rafters	0.09-0.15 m.	1066.0 m.	—	7.39
Total	—	—	—	264.45

TABLE XXIV

Southern Circle: Phase 2. Estimates of Lengths of Timber Required

<i>Structural component</i>	<i>Average diameter</i>	<i>Estimated post height/timber length</i>	<i>No. of posts</i>	<i>Total length of timber required</i>
Circle 2A	0.30 m.	3.4 m.	48	166.7 m.
Post no. 22	1.06 m.	5.4 m.	1	5.4 m.
Post no. 23	0.91 m.	4.9 m.	1	4.9 m.
Circle 2B	0.51 m.	5.4 m.	36	197.5 m.
Circle 2C	0.48 m.	7.0 m.	34	239.3 m.
Circle 2D	0.57 m.	8.9 m.	24	214.3 m.
Circle 2E	0.64 m.	11.2 m.	12	134.5 m.
Circle 2F	0.24 m.	7.6 m.	10	76.8 m.
Purlins/ring beams	0.30 m.	457.0 m.	—	457.0 m.
Rafters	0.09-0.15 m.	1066.0 m.	—	1066.0 m.

Altar Stone, transported from the Coshston Beds in south Pembrokeshire, which when dressed weighs 6.25 tons and before dressing probably 7 tons. The problems of transporting logs, however large, would of course have been fewer than those of transporting large stones.

Table XXIV indicates that in excess of 1036 m. of timbers of varying diameters would have been required for the upright posts in the structure together with lengths totalling 1524 m. for purlins, ring-beams and rafters. This compares with a total of 659 m. of standing timber required for the palisade around the Fussell's Lodge long barrow.¹ At Fussell's

¹ Ashbee, 1966, 34.

Lodge, the massive timbers from the proximal end of the barrow were 0.60-0.91 m. in diameter, with an estimated length of 3.9 m. and a calculated weight of 2.3 tons apiece. The largest structural timbers at Durrington were in the D and E rings where they would have been 8.8 m. and 10.9 m. long respectively at a minimum estimate, and 0.57 m. and 0.64 m. in average diameter.

The selection, felling, trimming, preparation and transportation of such quantities of timber would have required advance planning, co-ordination and technical skill of a high order. Practical experiment has shown that flint axes can fell a large tree in under an hour and that a pine tree can be cut down in 7 minutes.¹ That the carpentry was of a sufficiently high standard can be assumed in a society where wood must have represented the major raw material for houses, utensils and tools and the use of the mortice and tenon joint, which must have been a vital component in the structures with which we are concerned, is confirmed by the recording of a beam with a morticed peg off the Essex coast, which was probably contemporary with the Late Neolithic land surface.² Chipped and polished axes of flint and stone would have been indispensable for the felling, trimming and preparation of the logs, but very few were found at Durrington Walls.

Two fragmentary axes of flint were recorded from the enclosure ditch and the old land surface under the bank respectively and one fragmentary axe of greenstone from post-hole 87. In addition, a chopper was recorded from the ditch, two adzes from the old land surface under the enclosure bank and one adze from the surface of the platform outside the Southern Circle. The adzes are more likely to be carpentry tools than to have been involved in the initial hewing of the timbers. At Woodhenge one greenstone axe was recorded from the ditch and a chip of a second from post-hole C11, in addition to the butt of a chipped flint axe and one adze. No axes have been recorded from the Sanctuary or from Marden. However, Woodhenge has produced two miniature axes of chalk, non-functional items which emphasize the importance such implements had in the tool complement and which make the absence of axes on the sites of these timber buildings even more noteworthy. Commonsense dictates that the hewing of the trees, the trimming of the branches and as much pre-treatment as possible would have been undertaken away from the building sites, so as to make the logs easier to transport, and it may be that the tools involved in this process would not have found their way to Durrington Walls, Woodhenge, the Sanctuary and Marden. Nevertheless one feels that some carpentry would have been necessary on the building site, but that for reasons which are now obscure the implements involved in this work were then removed. This may have been so that they could be used again or they may have been collected for ceremonial disposal in a place which awaits discovery.

The source of such a large quantity of oak timbers is a problem which merits some consideration, for as a result of human activity the natural vegetation of the original ecosystem in many areas has quite disappeared with no opportunity to return. The total forested area in Wiltshire at the time of the Domesday survey was 149,369 acres, and of this 29,040 acres were attributed to manorial woodlands around Amesbury which is now an all but tree-less region.³ Of the great forests which at one time covered a large part of the British Isles only fragments remain, and most of these have been very much modified, directly or indirectly, by human activity.

¹ Klindt-Jessen, 1957, 39.

² Warren *et al.*, 1936, pl. xxxvmb.

³ Grundy, 1939.

The two native British species of oak *Quercus robur* and *Quercus petraea* are the most abundant of forest-forming British trees. *Quercus robur* is the dominant oak on moist clays and loams and a sandy, non-calcareous soil (e.g. Greensand) will bear a climax vegetation of dry oakwood. Under favourable conditions the tree will make a long straight bole and may reach a height of over 30 m. but a common height for mature well-grown oak in close canopy is 21–24 m.¹ The chalk soil proper in the Durrington Walls region, however, is of the thin rendzina type where the natural ‘climax’ vegetation is beechwood and ash. To obtain suitable oak timbers for the structures at Durrington Walls it would have been necessary to exploit the soft alluvial soils of the river valleys (presumably the River Avon), or venture north into the Vale of Pewsey where the Greensand and alluvium would have provided a suitable environment for mixed oak forest. The exploitation of these areas would have provided a convenient method of transporting the logs, by floating them down the River Avon. It cannot be coincidental that one flank of the Marden enclosure in the Vale of Pewsey is formed by the River Avon, or that 10 miles further downstream the south-east entrance of the Durrington Walls enclosure opens onto a dry valley leading into that same river. The suitable logs must have been felled in this river valley or in the Vale of Pewsey, and in the case of Durrington, floated down the river and dragged up the valley. Two or three centuries later, this was probably the route followed by the bluestones on their way from Pembrokeshire to Stonehenge. It appears likely that these stones were beached somewhere near Amesbury and then dragged along the route of the Avenue to the place of their erection (fig. 2). If so, they must have passed the south-east entrance of Durrington Walls which would still have been frequented. Clearly the route followed by the Bluestones was well prospected before it was used for that purpose, and the siting of both Marden and Durrington Walls may have been governed by the presence of the Avon, which played an important part in the transportation of the raw materials for the timber buildings.

In a naturally developed climax wood, the dominant trees compete with one another for light, soil and water. The weaker are killed or ‘suppressed’ so that in a mature wood only from 60–100 trees remain to the acre (150–250 to the hectare).² One can relate these figures more exactly to the problems facing Neolithic man by employing Jessen’s calculations in respect of the resources of oak timber required to build the great Viking houses at Trelleborg.³ Jessen has calculated that under natural conditions of temperate deciduous forest, oak trees with trunks 1.0–1.5 m. in diameter occur at a rate of 7 to the hectare, and with trunks 0.5–0.75 m. in diameter at 30 to the hectare. A calculation based on the average diameters of the timbers in Phase 2 of the Southern Circle, indicates that sufficient timber for this structure would be found in 3.5 hectares (8.75 acres) of natural deciduous oak forest. These calculations refer to this one structure and similar figures must apply to the remainder of the Durrington Walls complex, to the Sanctuary and to Marden, so that the destruction of forest cover in southern Britain was clearly given considerable impetus at the beginning of the second millennium B.C. During the Bronze Age, this process rapidly gathered momentum under the impact of the cultivation of crops and the grazing of sheep and cattle.⁴

The length of the boles of *Quercus robur* in natural oak forest has been given as between 21–24 m. and Mr Ashbee has referred to an oak trunk 20.4 m. long without branching,

¹ Tansley, 1939, 246–7.

² Tansley, 1939, 277.

³ Jessen, 1948, 173–9.

⁴ Cornwall, 1953; Dimbleby, 1954.

found near Ely in 1961, which has been given a radiocarbon determination of 2535 ± 120 B.C. (Q-589).¹ That logs of such length were utilized in the first half of the second millennium B.C. is shown by reference to the dug-out canoes, which are invariably of oak, some of which have been published by Sir Cyril Fox.² The range in the length of these craft is from 2.36 m. to 14.7 m. and an Irish example over 16.7 m. in length is known from Lough Erne. A canoe 14.0 m. long was found in Deeping Fen, Lincs in 1839.³ The tree from which it was cut must have been straight-stemmed for at least 14.0 m. and had a diameter of 1.8 m. or more near the ground. It is now known that such canoes were used in the middle of the second millennium B.C.,⁴ and it is clear that the provision of logs 12.1 m. long and 1.06 m. in diameter for building purposes would have presented no problems.

It is now necessary to examine the evidence on which to base calculations for the length of life of buildings such as have been described. For building purposes *Quercus robur* is considered to be more durable than other types of oakwood.⁵ However, one should perhaps qualify this by stating that although the heartwood is very durable, the thin outer zone of sap-wood perishes rapidly.⁶ Field tests have been carried out by the Forest Products Research Laboratory to establish the natural durability of various timbers and have been in progress for some 35 years.⁷ These consist of inserting specimens of standard size in the ground and recording the time taken for them to decay. However, there are many variables to be taken into account, for the various causes of deterioration in timber are mechanical wear, decomposition by physical agencies, chemical decomposition, insect attack and fungal decay. Furthermore, conditions vary according to whether a timber is incorporated in a roofed building or whether it is standing in the open. In a building, the temperature is more constant, fluctuations in humidity are less violent and the movement of air around the timber is often restricted.⁸ However, any post which is partly embedded in the ground is liable to rot because it remains in a more or less permanently damp condition and the soil acts as a constant source of infection. Decay normally starts at or about ground level as the timbers are normally too dry to permit fungal growth above ground and too wet below ground. Decay is more rapid in light porous soils and it is claimed that chalky soils promote decay much more than do soils on gravel.

In effect, durability depends to a large extent on the environment of the particular locality in respect of climate, soil properties and the fungal flora. As a result, the resistance of the majority of timbers to fungal decay is not at all constant but varies considerably even between samples cut from the same log. Of the five grades of the durability classification established by the Forest Products Research Laboratory, varying from perishable to very durable, *Quercus robur* is described as 'durable', with 2×2 in. stakes taking an average of 15-25 years to decay when in direct contact with the ground.

Investigations begun by the Forest Products Research Laboratory in 1951 indicate that, in contact with the ground, the life of the timber is directly proportional to its diameter and not to its cross-sectional area as has been suggested in the past.⁹ This entails that the length of

¹ Ashbee, 1966, 35.

² Fox, 1926.

³ Fox, 1926, 136.

⁴ 1500 ± 150 B.C. (BM-213) for a dug-out canoe from Chapel Flat Dyke, Rotherham, Yorks.

⁵ Chalk and Rendle, 1929, 30.

⁶ Edlin, 1956, 174.

⁷ Smith, 1959.

⁸ Cartwright and Findlay, 1958, 203.

⁹ Smith, 1959, 5-8.

life of an oak post increases in direct proportion to the thickness of the wood. From the data given in a preliminary report, an oak heart-wood post 9 in. in diameter should last for 100 years or more.¹ However, in practice posts are likely to contain a proportion of perishable sap-wood and so their life will be shorter than this.

Correspondence with Mr R. Cockcroft of the Forest Products Research Laboratory has established that as a rough estimate one can calculate that oak posts of large diameter, such as those used in the Southern Circle, would have a life of about 15 years for each 1 in. radius of heart-wood. Mr Cockcroft considers that oak posts of the Durrington diameters would decay at about this rate, as they would be preponderantly heartwood. However, as the timbers were incorporated in a roofed building and their bases would therefore be protected from the rain by the roof (this would also include the outer wall as the eaves are likely to have projected beyond this line), these figures are likely to be minimum estimates for the Southern Circle.

Bearing this reservation in mind and employing the factor of 15 years for every 2 in. of post diameter, it can be calculated that Phase 1 of the Southern Circle will have had a minimum life of 60 years. Phase 2 of the Southern Circle with its five rings of structural posts is an altogether more robust structure and the estimated length of life for the timbers in these rings is as follows: Circle 2A: 90 years; Circle 2B: 150 years; Circle 2C: 135 years; Circle 2D: 165 years and Circle 2E: 195 years. Once a timber structure is established the components work together and if a post decays the load tends to be spread. In this way the building will stand until a key timber falls.² On this basis, Phase 2 of the Southern Circle will have had a minimum life of 100 years, and more probably survived for the best part of 200 years. It will be recalled that these are minimum estimates based on calculations by the Forest Products Research Laboratory for timbers standing in the open. If one takes these factors into account it seems likely that this structure could have been in use for 200 years. It is of interest to note that posts 22 and 23, at the entrance to the building, have potential survival values of 315 years and 270 years respectively. However, as they were not key structural posts this factor need not be relevant to the actual longevity of the building.

Finally, if the building survived for 200 years and was in use for that period, it is clear that pottery and flints could have been deposited within it at any time within these two centuries. If one considers the building to have been constructed within the period 1930 \pm 90 B.C. then the time-span during which debris could have been deposited is 1930–1730 \pm 90 B.C. One might therefore expect to have several ceramic and lithic traditions represented within a building in use for so long, at a period when Beaker pottery was evolving in southern England.

THE NORTHERN CIRCLE

The general question of post and stake circles in Neolithic and Bronze Age contexts has been discussed with reference to the Southern Circle and there is no necessity to repeat the arguments in this section. The post-holes of the Northern Circle have been tentatively

¹ Purslow, 1962.

² The author is grateful to Mr C. R. Musson for discussions on this point.

allocated to two separate phases (fig. 17). Phase 1 is too vestigial for structural interpretation, but Mr Musson (Appendix VII) considers that Phase 2 could undoubtedly represent the remains of a roofed building about 14.5 m. in diameter, the four central posts perhaps supporting a 'lantern' raised above the line of a conical thatched roof (fig. 87). This building was approached up an incline from the south by means of an irregular avenue of timber uprights through a façade of closely set posts.

It is possible to arrive at an estimate of the quantity of timber which would have been required for such a structure and to make a calculation for the probable length of life of the

TABLE XXV

Northern Circle. Estimates of Timber Weights

<i>Structural component</i>	<i>Average post/timber diameter</i>	<i>Estimated post/timber length</i>	<i>Weight of average post/timber (tons)</i>	<i>Total weight of timber in component (tons)</i>
Wall posts	0.36 m.	3.3 m.	0.37	7.44
Centre posts	0.57 m.	8.1 m.	2.27	9.09
Trimmer beams	0.24-0.30 m.	24.3 m.	—	1.20
Rafters	0.91-1.5 m.	304.8 m.	—	2.11

TABLE XXVI

Northern Circle. Estimates of Lengths of Timber Required

<i>Structural component</i>	<i>Average diameter</i>	<i>Estimated post/timber length</i>	<i>No. of posts</i>	<i>Total length of timber required</i>
Wall posts	0.36 m.	3.3 m.	20	67.0 m.
Centre posts	0.57 m.	8.1 m.	4	32.6 m.
Trimmer beams	0.24-0.30 m.	24.3 m.	—	24.3 m.
Rafters	0.91-1.5 m.	304.8 m.	—	304.8 m.

building. Unlike the larger structure to the south, the charcoals were not sufficiently well preserved to enable any timber identifications to be made, but despite the erosion of the chalk surface that had taken place it was possible to obtain average post-diameters for the two rings. These data, together with Mr Musson's reconstruction of the building, enabled the following calculations to be made.

From the tables it can be estimated that a total of 19.84 tons of oak timber would have been required for the Northern Circle, without including the façade and avenue. A total

AERIAL VIEW FROM SOUTH

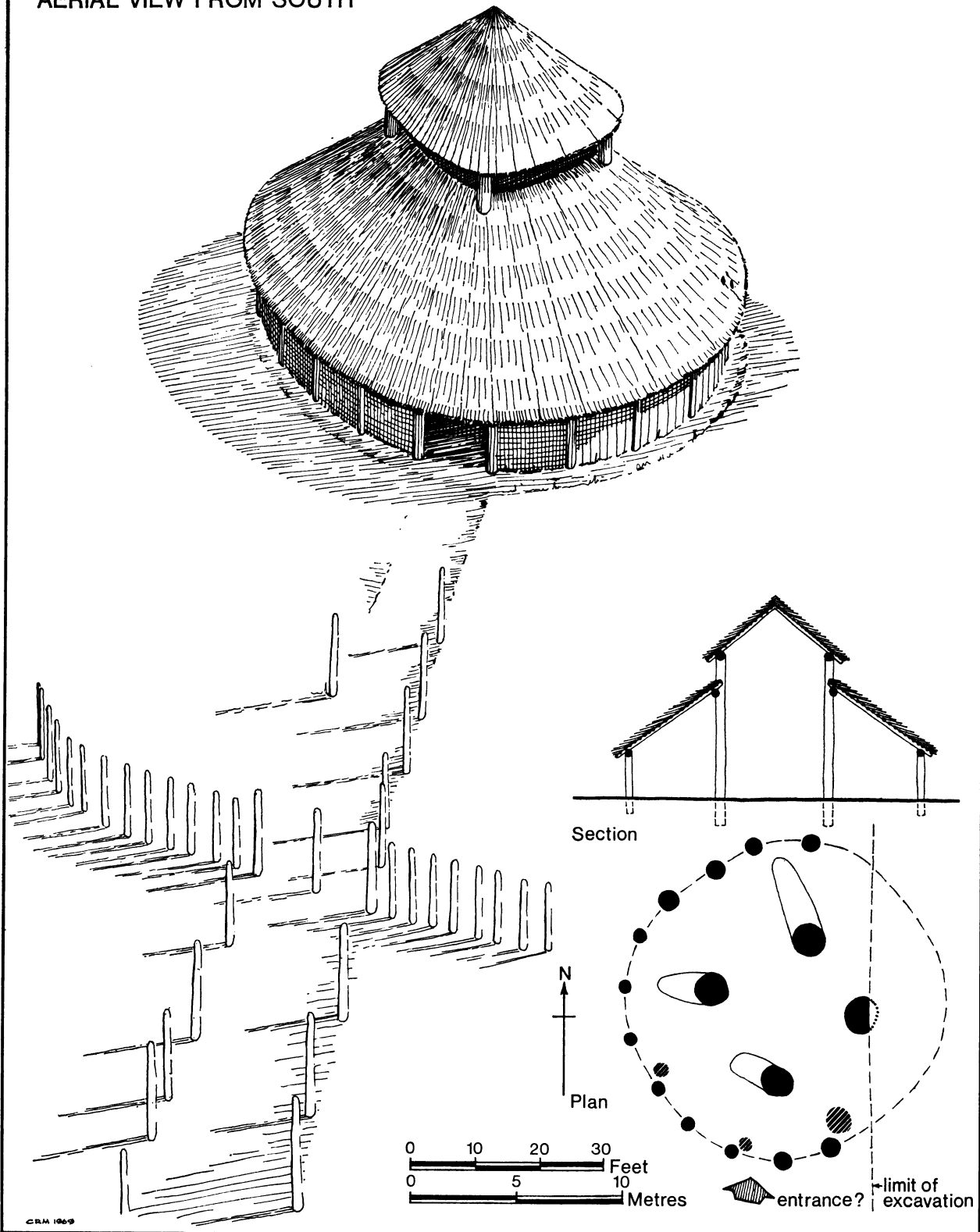


FIG. 87. Reconstruction of the Northern Circle

length of 99.6 m. of timber would have been required for the uprights and 329 m. of timber for the trimmer beams and rafters. In addition, a quantity of 2 in. timbers would have been required for thatch. This compares with an estimated 260 tons of timber for the Southern Circle Phase 2 and a total length of 1039 m. for the uprights of that structure. The key structural posts for the Northern Circle would have weighed an average of 2.27 tons each, as compared with 3.81 tons for the main structural posts of the Southern Circle Phase 2.

Employing similar calculations to those applied in the case of the Southern Circle, it can be estimated that the minimum length of life for the wall-posts is 105 years and for the centre posts 165 years. As the length of life of the structure is governed by the key structural posts and decay could have been retarded to some extent by the roof of the building, these figures can be regarded as minimum values and the building was probably in use for at least the 165 years calculated on the basis of the centre posts.

The Northern Circle differs from the Southern in that it was approached by a crudely defined avenue of timber uprights from the south, through a façade of closely set posts. This avenue was aligned in the general direction of the Southern Circle and Woodhenge and was presumably intended to provide a formal access to the building.

Several such avenues of timber have been recorded in Britain, normally in association with timber circles under barrows, and their distribution has been plotted in fig. 88. The earliest recorded association for such a structure is that recorded from Kemp Howe, Yorkshire, where the façade of a long barrow was approached for a distance of at least 39.6 m. by a double line of deep post-holes 2.7-3.6 m. apart. In the packing of these was a saddle quern and Windmill Hill derived pottery.¹ In at least four instances these avenues were not associated with burials. On Canford Heath in Dorset, Mr Ashbee excavated a barrow which covered a circle of closely set stakes approached from the south-east by a short but well-defined avenue. No trace of a burial was found under the mound.² Under the Six Wells 267' barrow in Glamorgan was an irregular circle of stake-holes which was approached by a short avenue from the north-west. The barrow consisted entirely of turf with no ditch and no burial was found beneath it.³ At Barford in Warwickshire a ring ditch 13.4 m. in diameter with a single entrance was approached by an irregular avenue of stake-holes.⁴ A few fragments of Late Neolithic and Beaker pottery were recorded from the top of the ditch fill and circles of stake-holes within the ditch were interpreted as revetment for a mound, but no burial was found. Finally, Barrow 4 at Swarkeston in Derbyshire sealed an occupation layer which produced Western Neolithic pottery, quantities of Long-Necked Beaker sherds, stake-holes and post-holes.⁵ A number of the stake-holes could be arranged into avenues but it is likely that their purpose was domestic and not ritual.

Timber avenues with sepulchral associations have been recorded with bell-barrows near Poole in Dorset⁶ and Basingstoke in Hampshire⁷ and a similar structure associated with a burial mound has been excavated by Dr A. E. Van Giffen under Tumulus 75, Zeijen near Drenthe.⁸ This barrow consisted of a mound of turves surrounded by a post-circle 12 m. in diameter, within which was an incomplete circle or arc of eight large post-holes. An avenue,

¹ *M.P.B.W. Archaeological Excavations*, 1968, 13.

² Ashbee, 1956.

³ Fox, 1941, 118-22.

⁴ Oswald (ed.), 1969, 27-33.

⁵ Greenfield, 1960.

⁶ Case, 1952, fig. 2.

⁷ *M.P.B.W. Archaeological Excavations*, 1964, 7.

⁸ Glasbergen, 1954, 35-6, 153-4, fig. 69.

DISTRIBUTION MAP OF STONE AND TIMBER AVENUES IN BRITAIN.

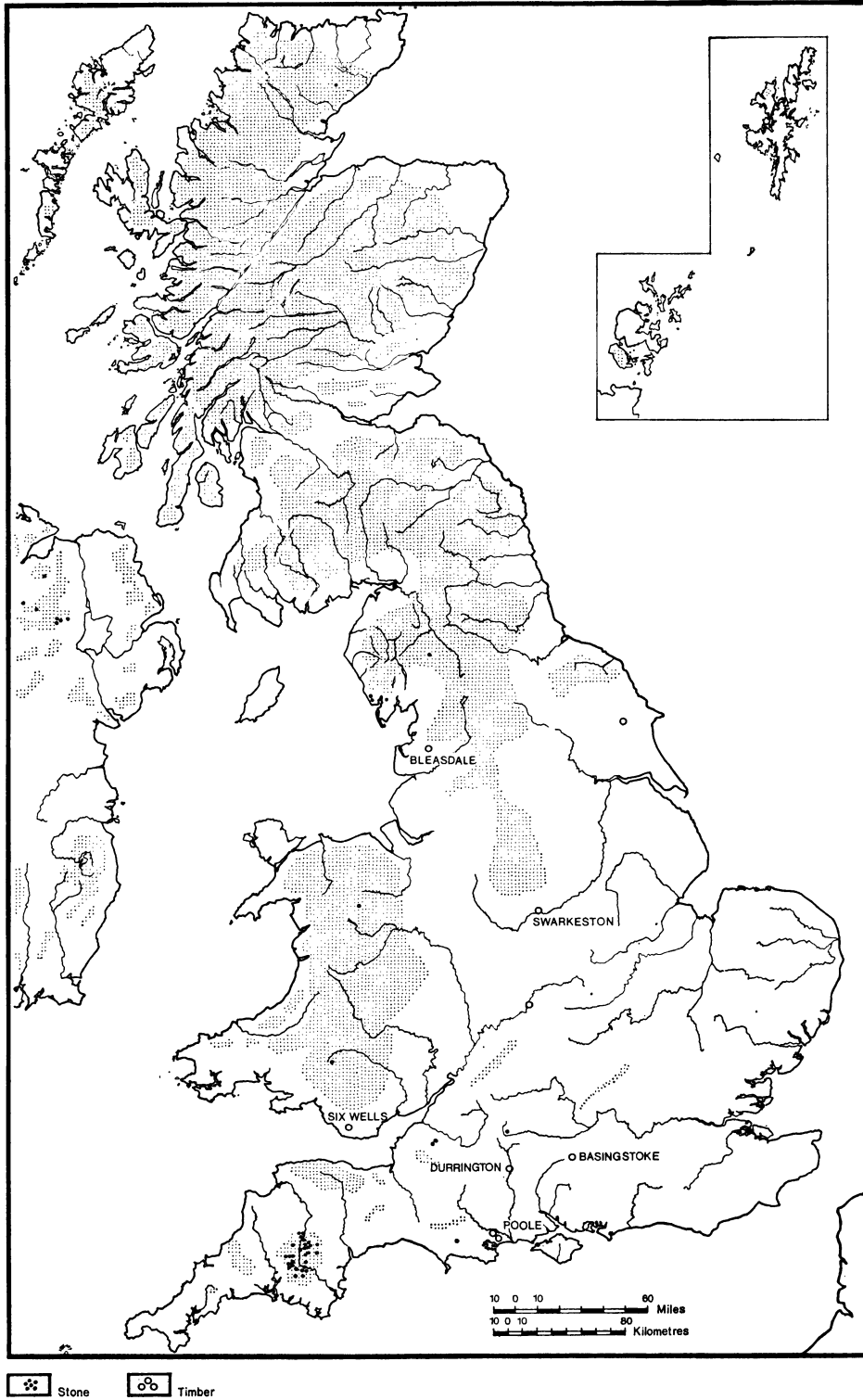


FIG. 88

some 35 m. long, linked up with the outer circle in its south-east sector and beneath the mound were four graves which could be dated to the Early Bronze Age.

The Northern Circle at Durrington is therefore the only recorded example of a free-standing timber structure with no funerary associations in the form of burials or barrows, which was approached by an avenue, although the timber circles at Poole and Zeijen may have originally been free-standing. Nevertheless, the practice of providing a ceremonial way to a sacred area, whether the latter contained burials or a building seems to be well established by Early Bronze Age times.

Although the evidence for structures of this type in timber is scanty, knowledge of related monuments in stone is more extensive because of the properties of the building materials employed. A distribution map of stone avenues in Britain (fig. 88), excluding single, triple or multiple alignments, shows a marked concentration on Dartmoor where they have been studied in detail by R. Hansford Worth.¹ About 30 such structures are known of which 57% lead to cairns, whilst 22% end in blocking stones and 21% in stone circles. Finds from the cairns include a Long-Necked Beaker and a 'horn button' from the Fernworthy group.² Elsewhere in Britain stone avenues are less common, the best known being the West Kennet Avenue which links Avebury with the final stone structure on Overton Hill and the avenues associated with the Stanton Drew circles.³ Avenues at Kirkby Moor in Lancashire,⁴ Shap in Westmorland,⁵ Lacra in Cumberland⁶ and in Wales⁷ are associated with stone and other ceremonial circles, whilst avenues in Northern Ireland are associated with both circles and cairns as in the complex at Beaghmore, Co. Tyrone.⁸ In Scotland, true avenues, as opposed to fanlike patterns of stone alignments, are comparatively rare. However, one avenue is associated with the double-entrance henge at Broomend of Crichtie in Aberdeenshire.⁹

It seems probable that avenues of stone and timber are directly related, the only difference between them being in the choice of raw materials which was dictated by the resources most readily available. The monuments associated with them appear to be principally sepulchral although a significant minority do lead to ceremonial enclosures such as Avebury and Broomend of Crichtie, to stone circles such as Shap and Stanton Drew and at Durrington Walls to the site of a timber building. It is certain that many more avenues of timber remain to be recorded and equally certain that a large number have been totally destroyed as they have left no trace of their former presence on the modern land surface.

The finds from the Northern Circle are not numerous when compared with those from the Southern Circle and the Enclosure Ditch. Of the 67 sherds, all save one (P571) are of Grooved Ware type, whilst the 274 flint artifacts include 13 implements, of which one is a Class G type transverse arrowhead. When considering the comparative paucity of finds one must recall the heavy erosion which removed the upper parts of the post-holes. As these weathering cones produced the majority of finds in the Southern Circle one must assume that a great deal of the evidence has been dispersed.

¹ Worth, 1953, 202f.

² Fox, 1964, 64.

³ Grinsell, 1956.

⁴ Thomas, 1960, 150.

⁵ R.C.H.M. Westmorland, 206.

⁶ Dixon and Fell, 1949.

⁷ Grimes, 1963, 120-2, 138-9.

⁸ May, 1953.

⁹ Richie, 1920.

THE FUNCTION OF THE TIMBER STRUCTURES

A problem of some importance concerns the functions of these roofed structures and the uses to which they were put. Ultimately this problem resolves itself into attempts to establish whether they were domestic buildings, or structures intended for ceremonial or communal functions. There is a lack of domestic structures attributable to the first half of the second millennium B.C. in Britain. In a lecture at Leicester in December 1969, Dr D. D. A. Simpson could describe less than a dozen domestic settlements which ranged from the rectangular huts at Lough Gur Site D and the circular huts at Downpatrick, to the oval houses at Gwithian Site XV and Northton in the Hebrides. As a result there has perhaps been a desire to regard the Durrington Walls structures as domestic, in order to fill the gaps in our knowledge of this aspect of the period.

However, the Durrington Walls structures and those from Woodhenge and Marden, are sited within earthworks which are not defensive and which can be interpreted as boundaries 'between the sacred and the secular, or the initiated and the profane.'¹ If this is so, then it seems unlikely that they would have been purely domestic structures, although they may have housed the functionaries of the ceremonials performed within them. Although formal burials were found at both Woodhenge and the Sanctuary (probably contemporary with the stone circles at the latter), the primary purpose of these buildings was not sepulchral. The nature of the Woodhenge and Sanctuary burials makes it likely that they were dedicatory, although this does not necessarily rule out a domestic use for the buildings as a similar foundation burial occurred, for example, at Skara Brae.

The architectural reconstructions of the Southern Circle and Woodhenge in particular seem to preclude a domestic purpose for these buildings. In both structures the only tenable interpretations involve an open court in the centre of the building and in the case of the Southern Circle this unroofed area was occupied by a free-standing ring of timber uprights. One would not expect these features to occur in a domestic structure but they do have ceremonial or ritualistic connotations. Similarly, the Northern Circle at Durrington Walls, although totally roofed, was approached by an avenue of timber uprights through a protective façade of closely set posts, which one would not expect to occur in a domestic context. In the case of the Sanctuary, the initial three phases were progressively larger timber buildings and there is no independent evidence to suggest that they were not domestic structures. However, the final building was replaced in Phase 4 by concentric stone circles of a presumably ritualistic nature linked to the Avebury enclosure by the West Kennet Avenue, which suggests that the earlier timber structures were also of a special character. In the case of the Marden structure, which is of a very simple type, there is no evidence to suggest that it was not a domestic building other than its siting within an entrance to an enclosure of Durrington Walls type.

The structural history of these buildings, certain architectural features, and various aspects of their siting therefore suggest that they had a function which was not purely domestic. However, one aspect of these structures has not yet been touched upon, namely the great

¹ Atkinson, 1956, 169, when referring to the earthwork around Stonehenge.

quantity of refuse which is normally associated with them and with the surrounding earthworks. A characteristic of henge monuments in general is the absence of such refuse but at Durrington Walls, Woodhenge, Marden, and to a lesser degree at the Sanctuary, great quantities of sherds, stone tools, antler picks and animal bones were found and the association of timber buildings and large quantities of refuse seems proven.

At Durrington Walls, where the excavations have been most extensive, this refuse is distributed mainly in the terminal of the enclosure ditch at the south-east entrance and in association with the Southern Circle and its attendant structures. In the case of the Southern Circle the bulk of the material was obtained from a platform outside the entrance to the building and from a midden to the north of it. Within the structure the finds were concentrated around the post-holes. By taking joining sherds or sherds from vessels of distinctive fabric and decoration it is possible to show that fragments of individual pots were placed against more than one post. In the case of posts 21 and 22, 22 and 23, 46 and 47 these are adjacent, but in other instances, for example, 44 and 50, 22 and 85, 42 and 65, 20 and 47 and 71 and 90, the posts are widely separated. In one instance a portion of a vessel can be shown to have been deposited against post 45 and another fragment placed on the Midden. This evidence suggests the deliberate breaking and distribution of sherds from vessels, for on no occasion is a whole vessel represented in the sherd collection from a single or adjacent post-holes. Similarly, the lower levels of the terminal of the enclosure ditch yielded large quantities of pottery and the absence of entire vessels suggests that only sherds from them were thrown into the ditch.

Unfortunately, it is not possible on purely arbitrary grounds to distinguish between refuse from a domestic occupation and debris resulting from ceremonial practices, but the cumulative evidence suggests the latter. In this case offerings of food, broken pots and stone tools would have been made on the platform outside the entrance to the Southern Circle, some of the debris was placed around the bases of the timber uprights within the building and a quantity in a midden or repository to the north of it. The debris in the enclosure ditch at the entrance may well have resulted from the deposition of similar offerings as people entered or left the enclosure.

It is difficult to provide conclusive evidence for this interpretation, but one's understanding of the possible functions of such structures is enhanced by certain ethnographic parallels. In particular, the excavation between 1937 and 1940 of the Irene Mound Site on a western bluff of the Savannah River in Georgia (U.S.A.) revealed the plan of a council house or 'rotunda' of the Creek Indians, of a type which was described by eye-witnesses amongst the Creeks and Cherokees in the eighteenth century. The excavations conducted by the University of Georgia¹ revealed a pattern of six concentric circles of palisade trenches and post-pipes in the sandy sub-soil, which represented the remains of a circular building 36.5 m. in diameter with a single entrance and a central hearth. A number of square or rectangular domestic houses were excavated in the same complex.

It is known from eye-witness accounts by W. Bartram and others, that the council chamber of the historic Indians was a large circular building used for various councils and ceremonies and was an important feature of the public grounds of the Creek Indians. Bartram com-

¹ Caldwell and McCann, 1941.

mented that 'the great council house or rotunda . . . is a vast conical building or circular dome, capable of accommodating many hundred people'.¹ At Irene, within the outer wall (set in a palisade trench 36.5 m. in diameter), were five concentric circles of palisade trenches representing a series of internal walls containing roof-supports. Bartram commented ' . . . they first fix in the ground a circular range of posts or trunks of trees, about 6 ft. high, at equal distances, which are notched at top, to receive into them, from one to another, a range of beams or wall plates; within this is another circular order of very large and strong pillars, about 12 ft. high, notched in like manner at top, to receive another range of wall plates; . . .'.²

No archaeological data was found at Irene concerning the nature of the roof of the building but from statements made by Bartram it seems probable that the roof supports were joined by rafters which were strengthened and bound together by cross-beams and laths. This framework supported the roofing material which was of thatch. Because of the absence of large roof supports in the centre it was assumed that this portion of the building was unroofed to act as a smoke-hole. The single entrance found in the excavations is also confirmed by Bartram.³ 'There is but one large door, which serves at the same time to admit light from without and the smoke to escape when the fire is kindled . . .'.³

Immediately adjacent to the wall of the rotunda was a midden containing only large fragments of pottery vessels which were contemporary with the building (A.D. 1550-1600). To the excavators this midden suggested some ceremonial, for Bartram reports that Cassine drinking was one of the chief activities carried out in the council chambers of the Creeks and since this drink is sacred it is possible that the vessels used were also sacred. The vessels from which the Cassine had been drunk were broken, either intentionally or accidentally, and deliberately placed in this midden.

The remarkable similarities between the eye-witness accounts and excavated remains of the Creek council chambers and certain timber buildings of the early second millennium B.C. in southern England are very clear. Structures in both groups are closely comparable in overall diameter, their roofs were supported on six concentric rings of timber uprights, they had a hypothetical open court in the centre and possessed one entrance. Furthermore, the midden outside the wall of the rotunda at Irene parallels in a remarkable way the Midden or repository outside the Southern Circle at Durrington Walls. The temptation to transfer the known function of the Indian structures to those in Britain must however be resisted on account of the disparities in cultural background, geography and time between the two groups. Nevertheless, Bartram's descriptions of the Creek council chambers in the eighteenth century could be transferred to the 'Woodhenge' structures with no anomalies regarding the latter. The combination of excavation and documentary evidence at Irene does demonstrate one area in which the function of the British structures may be sought, as well as providing an ethnographic parallel for the breakage of pots and their deposition in a special repository outside the building. The evidence tends to confirm the special nature of these structures and to deny a purely domestic function.

Without more excavation of well-preserved buildings it is doubtful whether one can get closer to an interpretation of the function of the structures of Woodhenge type, whether they be temples or communal buildings serving a more secular purpose or, most probably, a

¹ Bartram, 1791, 450.

² Bartram, 1791, 368.

³ Bartram, 1791, 451.

combination of the religious and the secular. Many more timber structures were built within the Durrington Walls enclosure, and also presumably within the Marden earthwork, and until extensive excavations are carried out on these sites we shall not know whether or not the excavated structures at Durrington Walls in particular are the public buildings of a basically domestic settlement, or form part of a complex of large buildings of similar type to which visits were made from domestic settlements as yet undiscovered. The character of these settlements is as yet unknown, yet they must have existed in order to provide labour for the construction of these large earthworks and the timber structures within and around them. In the absence of any indication of such settlements from elsewhere, the search for them must surely begin within the enclosures of the Durrington-Marden-Mount Pleasant group which have been regarded as part of the ceremonial circle tradition, but which may also provide a base on which to begin the study of domestic settlement in the first half of the second millennium B.C.

VI. THE RINYO-CLACTON CULTURE RECONSIDERED

By G. J. WAINWRIGHT AND I. H. LONGWORTH

GROOVED WARE was first isolated and defined as a separate tradition within the Late Neolithic pottery of the British Isles by Professor Stuart Piggott in 1936.¹ The occasion was a review of the pottery from the Essex Coast at Clacton in which the new 'Grooved Ware' appeared as an important component. In this paper Piggott not only defined the outlines of the new tradition with its absence of corded techniques and distinctive grooved and plastic elements, but listed the comparable pottery which had come to light by that date. In comparing the various sites, Piggott had already noted major differences between the collections from Clacton and Woodhenge and had suggested that the pottery from Skara Brae should be embraced within the newly defined tradition.

The Scottish evidence was quickly increased by three papers. In 1939 Childe and Grant² brought out their first report on the settlement at Rinyo acknowledging the connection between the Grooved Ware of the far north and southern England as put forward by Piggott. In 1948 Robert Stevenson³ published further sherds from Dingieshowe, Evie, Glenluce and Hedderwick, demonstrating that the tradition was to be found more generally over Scotland than had hitherto been supposed. The site list grew with the publication by Sir Lindsay Scott of Unival in 1950⁴ and of sherds from Knappers Farm near Glasgow and Townhead, Rothesay, by Robertson-Mackay in 1952.⁵

In England the publications in 1948⁶ and 1949⁷ of the remarkable pottery from the pits at Woodlands near Amesbury together with the hitherto unpublished sherds from Honington, added new features to the Grooved Ware tradition of the South.

A major synthesis of all the new evidence was published in 1954 by Piggott in his major work *Neolithic Cultures of the British Isles*. In this Piggott suggested that the term Grooved Ware be dropped, arguing that elements of a Rinyo-Clacton Culture were now emerging, represented by house plans, and ritual structures as well as pottery sherds and bone types.⁸

Though there still seemed to be a definite geographical separation between his northern and southern provinces, none the less the pottery, he felt, belonged to one recognizable tradition. At the same time he was at pains to re-emphasize that the pottery from Woodhenge was sufficiently different to warrant further explanation. The one selected was that it represented an amalgamation of Rusticated Ware and Rinyo I traditions.

Two years later Dr Isobel Smith in her dissertation, *The Decorative Art of Neolithic Ceramics in South-eastern England and its Relations*, gave the first clear definitions of the Clacton and Woodhenge styles and added a third, the Woodlands. For Smith, the features which defined the Clacton style⁹ were grooving and incision, use of impressions, arrangement of patterns in

¹ Piggott in Warren *et al.*, 1936, 191.

² Childe and Grant, 1939, 6ff.

³ Stevenson, 1948, 142-3.

⁴ Scott, 1950, 1ff.

⁵ Robertson-Mackay, 1952.

⁶ Stone and Young, 1948, 287ff.

⁷ Stone, 1949.

⁸ *Op. cit.*, 322.

⁹ *Op. cit.*, 192ff.

horizontal bands, use of concentric lozenges, multiple chevrons, dot filling, comb impressions, internal relief ornament and the occasional use of ladder pattern on the internal rim bevel. Smith's Woodlands style¹ comprised small vessels with very thin walls, sometimes with small horizontally perforated lugs, and the use of pellets or thin rolls of clay straddling the rim in twos or threes and low cordons encircling or converging on the surface of the vessel. Piggott had stressed the use of finger nail and rusticated decoration for the Woodhenge style.² Smith now added the use of simple rounded or flattened rims, deep vertical collars, panelled decoration sometimes defined by vertical grooves or cordons and circular elements in relief. Smith stressed that 'Vertical panelling, particularly when defined by cordons, is perhaps the most reliable criterion by which the Woodhenge style may be distinguished'.³

More recently Dr David Clarke has challenged the concept that Grooved Ware represents a unified tradition.⁴ For Clarke, Piggott's two provinces represent independent and non-synchronous development. The pottery of the Northern Province he would see developing from the local Beacharra-Unstan traditions drawing on both Boyne Art and Beaker influences, some two or three hundred years before that of the Southern Province, developing perhaps from a regional specialization of the Fengate tradition under strong Developed Southern Beaker influence. With this challenge in mind, the time seems ripe to review the question of the unity of the Grooved Ware tradition and the concept of a Rinyo-Clacton Culture.

THE GROOVED WARE TRADITION AND ITS SUB-STYLES

The main cumulative effect of discoveries since 1956 and exploration of major sites like Lawford, Durrington Walls and Marden⁵ has been to confirm Smith's triple division of Grooved Ware in southern Britain while permitting some further comment and refinement in the definition of these ceramic sub-styles. Little fresh evidence has been forthcoming from northern Britain though the publication of the Glenluce material by Miss Isla McInnes in 1966⁶ has helped to emphasize that the Grooved Ware sites of southern Scotland owe more to the southern sub-styles than to the far north. For reasons which, it is hoped, will become obvious in the ensuing analysis, it is argued that Piggott was right to stress that the material culture of the occupants of Skara Brae and Rinyo belonged to the same general cultural background as that of the builders of Woodhenge and the other Grooved Ware users of the south, but that the concept of a Rinyo-Clacton Culture was an overstatement of the evidence and in retrospect perhaps rather misleading. In what follows we shall return to the term Grooved Ware, as first put forward by Piggott,⁷ as a general term for the whole ceramic tradition and, following the work of Piggott and Smith, we shall define four sub-styles within this overall tradition.

The Clacton Style

With the full publication of the Grooved Ware from Lion Point⁸ it is now possible to offer

¹ *Op. cit.*, 196ff.

² Piggott, 1954, 341.

³ Smith, 1956, 199.

⁴ Clarke, 1970, 268.

⁵ Lawford and Marden are unpublished. For further information see Gazetteer Nos. 21 and 69.

⁶ McInnes, 1966, 47ff.

⁷ Piggott in Warren *et al.*, 1936, 191.

⁸ Longworth, Wainwright and Wilson, 1970.

some refinement to the main outlines of the Clacton Style as established by Piggott and Smith. The characteristic vessel forms remain vertical- to splay-sided, squat tub-shaped pots varying in size from as little as 5 to over 13 in. in diameter. At Lion Point itself, simple rounded rims of form R₁¹ represent some 50% of the rims recovered and most frequently this rim form is associated with internal horizontal grooved decoration, the number of lines varying from one to three. Highly characteristic, though of relatively rare occurrence, are rims carrying internal complex plastic decoration (R₁₂₋₁₆).² Decoration on top of the rim is entirely absent at Lion Point and simple internally bevelled rims are rare. Ladder pattern occurs on three of the rims and again on vessels in the Clacton Style from sites like Pishobury³ and Creeting St Mary.⁴ Externally, horizontal grooved lines covering large areas of the surface or set in horizontal zones are recurrent,⁵ and incised and impressed techniques are extensively employed along with finger pinched and zoned rustication.⁶ In contrast applied decoration is absolutely rare,⁷ and both twisted cord and whipped cord are totally absent. Highly characteristic is the use of zoned decoration,⁸ dot filled lozenges and triangles,⁹ staggered or evenly arranged oval impressions¹⁰ and multiple chevrons.¹¹ The use of dot filling sometimes gives rise to the use of reserved decoration,¹² and multiple triangle and lozenge patterns are used to create opposed chevron 'flag pattern' junctions.¹³

Not all the features listed above are equally useful in the definition of the style as many, like the use of simple horizontal grooved or incised lines, appear common to a major part of the tradition. Even the use of ladder pattern to decorate the internal rim bevel, occurring as it does on a number of vessels in the Clacton style, is equally found on vessels carrying features otherwise confined to the Woodlands style.¹⁴ Such shared traits are to be expected in sub-styles belonging to a single tradition. To define the style, therefore, six features have been chosen which appear to be confined solely to the Clacton style or are absolutely rare in other contexts. These are:

1. Simple rounded rims of form R₁ with horizontal grooved decoration internally.
2. Complex plastic decoration on the internal rim bevel.
3. Dot-filled grooved or incised triangles, lozenges or rectangles.
4. Multiple grooved or incised chevrons.
5. Opposed grooved or incised chevrons.
6. Staggered or evenly arranged oval impressions.

Figure 89 lists the sites known to the authors on which pottery carrying one or more of these six features occurs.

¹ Longworth, Wainwright and Wilson, 1971, fig. 2.

² Ibid.

³ Piggott, 1954, fig. 57, No. 2.

⁴ Unpublished, Ipswich Museum.

⁵ Longworth, Wainwright and Wilson, 1971, e.g. pl. xxxiii, P2; pl. xxxv, P10 and P42 and pl. xxxvii, P72-4.

⁶ E.g. *ibid.*, pl. xxxvii, P89-93.

⁷ *Ibid.*, pl. xxxv, P36, pl. xxxviii, P117-20. It is worth noting that P117, P119 and P120 were all found in a single cooking-hole, No. 16, and that P118 came from area 4 but with no precise location. It is possible therefore that these rather distinctive sherds which belong in fact to the

Durrington Walls style, represent a separate cultural context on the site.

⁸ E.g. *ibid.*, pls. xxxiii, xxxiv.

⁹ E.g. *ibid.*, pl. xxxiii, P1, pl. xxxiv, P3 and 4 and pl. xxxvi, P47.

¹⁰ E.g. *ibid.*, pl. xxxviii, P98-102, P106-8.

¹¹ E.g. *ibid.*, pl. xxxiii, P2 and pl. xxxiv, P9.

¹² E.g. *ibid.*, pl. xxxiii, P1 and pl. xxxvi, P47.

¹³ E.g. *ibid.*, pl. xxxv, P17 and pl. xxxvii, P83.

¹⁴ E.g. Sutton Courtenay: Warren *et al.*, 1936, fig. 7, no. 2; Cassington, *ibid.*, fig. 7, no. 3.

DURRINGTON WALLS: EXCAVATIONS 1966-8

NR. CAMBRIDGE		●				
NR. ELY				●		
TOR BRYAN			●			
CLACTON	●	●	●	●	●	●
NEWPORT		●				
ROUNDWOOD			●			
PISHOBURY			●			
ORTON LONGUEVILLE						●
WALNEY ISLAND				●		
EDINGTHORPE	●		●			
WEST RUNTON				●	●	
PETERBOROUGH Fengate				●		
PETERBOROUGH Tebbs Pit				●		
DORCHESTER 1			●			
SOUTH CADBURY			●	●		
CREETING St. MARY			●			●
HONINGTON	●					
IPSWICH			●			
DURRINGTON	●		●			
WEST KENNET L.B.			●			
WINDMILL HILL	●		●			●
WOODHENGE			●	●		
CALLIS WOLD		●				
TOWNHEAD	●			●	●	
TENTSMUIR	●			●	●	
UNIVAL	●		●		●	
SKARA BRAE			●			
RINYO			●		●	

FIG. 89. Sites producing sherds in Clacton sub-style

The Woodlands Style

In 1956¹ Dr Isobel Smith was able to establish and define a Woodlands Style distinct from those of Clacton and Woodhenge already suggested by Piggott. A feature of this style was small open bowls or tub-shaped pots sometimes with extremely thin walls and occasionally possessing small imperforate or horizontally perforated lugs. Simple,² internally bevelled³ and T-rim⁴ forms are found, the bevelled rims being often decorated with grooved ladder

¹ Smith, 1956, 196ff.² E.g. Stone, 1949, fig. 2, no. 2.³ E.g. *ibid.*, fig. 1a.⁴ E.g. *ibid.*, fig. 2, no. 1.




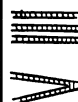

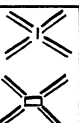
						
PUDDLEHILL Pits 1-3				●		
SUTTON COURTENAY Pit P			●		●	
SUTTON COURTENAY Pit T			●	●		
MAUMBURY RINGS			(●)			
BISHOP'S WALTHAM			●			
CROSBY WARREN			●			●
CASSINGTON			●	●		
CASSINGTON Pit 1		●				
STANTON HARCOURT					●	
HONINGTON	●	●	●			
ICKLINGHAM			●			
DURRINGTON WALLS			●			
WINDMILL HILL					●	
WOODHENGES					●	
WOODHENGES C3				●		
WOODLANDS	●	●	●	●		●
BROADWAY					●	
WYKEHAM		●			●	
KNAPPERS FARM				●		●
TENTSMUIR			●			
RINYO				(●)		
GLENLUCE				●		

FIG. 90. Sites producing sherds in Woodlands sub-style

pattern. Highly characteristic is the use of incised herringbone¹ and plastic ornament in the form of strips of clay applied to the top of the rim in groups.² Internal decoration beneath the rim does not occur.

Externally, plain or slashed, applied or pinched-out low cordons are favoured, set horizontally or in converging patterns,³ and applied lugs or 'knots' are sometimes set at their intersections.⁴ Ladder pattern in grooved or incised technique is also used on the external surface.⁵ Corded techniques are entirely absent from the style as is rustication. The style is perhaps most usefully defined by the following six recurrent features:

1. Plain horizontal or converging cordons applied to or pinched up from the external surface.
2. Slashed horizontal or converging cordons applied to or pinched up from the external surface.
3. Ladder pattern on the external surface.

¹ E.g. Stone, 1949, fig. 1a and fig. 2, no. 1.

² *ibid.*, fig. 1a and fig. 2, no. 2.

³ E.g. *ibid.*, fig. 1a and fig. 2, nos. 1 and 2.

⁴ E.g. *ibid.*, fig. 1a.

⁵ E.g. Warren *et al.*, 1936, fig. 7, nos. 2, 6, 7 and 8.

4. Plastic ornament in the form of groups of strips of clay applied across the rim.
5. Incised herringbone on the rim.
6. Applied or grooved 'knots' at intersections of converging cordons.

Figure 90 lists the sites known to the authors on which pottery carrying one or more of the features occurs.

The Durrington Walls Style

The wealth of material recovered during the Durrington Walls excavations allows the definition of a third style which, we suggest, might replace and extend the concept of a Woodhenge style. The Durrington Walls pottery is characterized by a range of forms but in particular by deep bucket-shaped vessels often with closed mouths. The rims themselves show considerable variety but excluding simple forms, internally bevelled and internally moulded forms are especially noteworthy and account for some 36%.¹ Decoration on top of the rim occurs occasionally² and complex incised internal decoration, though rare, is a distinctive feature.³ Typical of the external decoration is the use of a horizontal cordon to divide the surface into two unequal parts.⁴ The body is often sub-divided by vertical plain or decorated cordons or by single or double incised vertical lines to achieve the same effect.⁵ The panels so created are sometimes left plain but characteristically are filled with groups of incised, grooved, twisted cord or combed opposed lines or filled triangles. Impressions⁶ or finger-pinching⁷ are also sometimes used as filling agents. The use of twisted cord and whipped cord is confined to this style.

The external surface between rim and cordon shows a more varied repertoire of design. Vertical, diagonal and angled cordons are sometimes used⁸ and, in contrast to the slight cordons of the Woodlands style, these are usually massive. Again in contrast to the Woodlands style the cordons are usually coupled with incised, grooved or impressed designs. Of particular interest are the grooved concentric circle and spiral designs found at Durrington Walls,⁹ Lawford, Ipswich and Skara Brae.¹⁰ Rusticated ornament, especially in the form of finger-pinching, is recurrent in the style. Collars, stressed by Piggott and Smith in the definition of the Woodhenge style, do not appear to be represented at either Lawford or Marden and by only one example, P28, at Durrington Walls. Elsewhere collar elements are associated with traits not typical of the Durrington Walls style,¹¹ so these have been discarded as a criterion in the general definition of the style. A number of other features seem confined to individual sites. The circular elements in relief at Woodhenge have no obvious close parallels;¹² the rectangular whipped cord ornament at Marden is at present unique and

¹ See fig. 21.

² See fig. 23 and Table VIII.

³ I.e. P452-61.

⁴ E.g. P25 and P28.

⁵ See e.g. P25, 28-9, 206-21.

⁶ E.g. P100-5.

⁷ E.g. P107-18.

⁸ E.g. P28, P125, P181-4, P191-2 and P194-5.

⁹ Fig. 29.

¹⁰ Childe, 1931, pl. XLV.

¹¹ E.g. at Roundwood, Hants., associated with dot-filled decoration in the Clacton style: Crawford, 1922, pl. II, no. 2 (the illustration is upside down); at West Runton, Norfolk, associated with opposed chevrons in the Clacton style: Gell, 1949.

¹² E.g. Cunnington, 1929, pl. 26, nos. 2 and 4. An unpublished sherd in Ipswich Museum from Ipswich carries a broken boss, but this does not seem closely comparable.









	 TYPE 13	 INTERNAL						
PUDDLEHILL Pits 4-5		●		●				
CHIPPENHAM				●				
MAIDEN CASTLE						●		
LAWFORD	●	●	●	●	●	●	●	●
ROUNDWOOD				●		●		
RISBY WARREN					●	●		
SALMONBY				●		●		
STANTON HARCOURT	●			●				
BEN BRIDGE				●				
IPSWICH			●	●				
PAKENHAM				●				
WEST STOW	●			●				
AVEBURY G55				●				
DURRINGTON WALLS	●	●	●	●	●	●	●	●
DURRINGTON WALLS St.A				●		●		
MARDEN	●			●	●	●	●	●
SANCTUARY	●	●						
WEST KENNET L.B.					●			
WEST OVERTON G6B				●				
WILSFORD G51				●		●		
WOODHENGE				●	●	●		
WOODHENGE C1				●				
WOODHENGE C2		●						
GULLANE					●		●	
SKARA BRAE			(●)					
GLENLUCE	●			●		●	●	

FIG. 91. Sites producing sherds in Durrington Walls sub-style

many of the zoned impressed patterns at Lawford seem hard to match elsewhere in the tradition. It is perhaps a measure then of the wealth of material recovered from these sites that the variety of individual features represented is greater in this than in the other styles of Grooved Ware and offers hope for further refinement, perhaps even on a site-style basis, in the future.

No sub-division of the style on a chronological basis has been attempted, for it seems unwise to place too much reliance on the presence or absence of specific features in the Grooved Ware from the earlier silts of the Durrington Walls ditch — the best stratigraphical sequence at present available. It is perhaps worth noting, however, that in its southern sector, where Grooved Ware was recovered in some quantity, sherds carrying vertical decorated and undecorated cordons, grooved filled triangles and curvilinear decoration are all represented in the basal silt, layer 8; in layer 6B-7, rim form 13 and finger-pinched decoration are

present; and twisted cord decoration first appears in layer 5-6B along with body panels formed by vertical incised lines, a sherd decorated in the Clacton style, P317,¹ and internal incised ornament reminiscent of Aldbourne Cup motifs, P456. In general, there seems also to be a move from grooved towards incised decoration in this level. Whether these represent true changes in style occurring during the 300-400 years represented by the earlier silting of the enclosure ditch remains to be tested by future discovery.

For the present, eight features can be chosen which are confined to the Durrington Walls style or are absolutely rare elsewhere and which have a currency beyond that of individual sites:

1. Rims with internal moulding of type 13 or vertical bevel, type 24.
2. Internal incised decoration beneath the rim.
3. Grooved spirals or concentric circles.
4. Vertical plain or decorated cordons to divide the body surface into panels.
5. Vertical single or multiple incised lines to divide the body surface into panels.
6. Incised or grooved filled triangles.
7. Twisted cord.
8. Whipped cord.

Figure 91 lists the sites known to the authors on which pottery carrying one or more of these features occurs.

The Rinyo Style

In contrast to the wealth of material from the Southern British sites, the Rinyo style is but poorly represented. The forms are still only imprecisely known but appear to comprise flat-bottomed, trunco-conic and tub-shaped vessels, some certainly being of considerable size. The most characteristic rim form has an internal step bevel² but simple pointed,³ rounded⁴ and internally bevelled⁵ forms are also present and a form similar to the Durrington Walls type 13a is also represented.⁶ At least one sherd carries internal plastic decoration,⁷ but unlike the Clacton style, this is set some way beneath the rim. Scalloped rims are a feature of the style.⁸

While grooved and incised techniques are employed, it is in the extensive use of plastic decoration to form quite complex patterns that the main distinctive elements of the style lie. Applied pellets of clay,⁹ roundels,¹⁰ and complex geometric designs including concentric lozenges¹¹ are especially noteworthy. Applied cordons decorated with impressions appear to

¹ Cf. however Woodhenge where a sherd decorated in Clacton style was found at the bottom of the ditch (*ibid.*, pl. 38, no. 92).

² The published rim profiles are not particularly accurate. The step bevel is, however, well exemplified by B.M. Reg. nos. 1938, 1-1, 116, 119, 120 and 123, all from Skara Brae.

³ E.g. Skara Brae, B.M. Reg. no. 1938, 1-1, 110.

⁴ E.g. Skara Brae, B.M. Reg. no. 1938, 1-1, 101 and 103.

⁵ E.g. Childe and Grant, 1939, fig. 3, nos. 2 and 3; B.M. Reg. no. 1938, 1-1, 111, from Skara Brae.

⁶ E.g. Skara Brae, B.M. Reg. no. 1938, 1-1, 117 and 121; cf. also Childe, 1931, fig. 15, no. 9.

⁷ From Skara Brae, B.M. Reg. no. 1938, 1-1, 106.

⁸ E.g. Childe and Grant, 1949, pl. x, nos. 1 and 2.

⁹ E.g. Childe and Grant, 1939, pl. xx, nos. 5-7.

¹⁰ E.g. Childe, 1931, pl. XLVIII.

¹¹ E.g. *ibid.*, pls. XLVI and XLVII, 4.

be favoured,¹ and grooved cordons are especially prominent.² The style is at present well represented only at Skara Brae and Rinyo but comparable individual sherds have been recovered from Freswick, Evie, Glenluce, Hedderwick and Tentsmuir.³ The following seven features have been selected to typify the style (fig. 92):

1. Rim with internal step bevel.
2. Continuous scalloped rim.
3. Applied pellets.
4. Applied roundels.
5. Applied complex geometric patterns, e.g., concentric lozenges, split triangles etc.
6. Grooved cordons other than horizontal and vertical.
7. Cordons carrying round impressions other than horizontal and vertical.








							
FRESWICK			●				
HEDDERWICK	●						
CLACTON			(●)				
TENTSMUIR							●
EVIE			●				
SKARA BRAE	●	●	●	●	●	●	●
RINYO	●	●	●		●	●	●
GLENLUCE			●				

FIG. 92. Sites producing sherds in Rinyo sub-style

DISTRIBUTION AND THE UNITY OF THE GROOVED WARE TRADITION

With the exception of the Rinyo style, none of the Grooved Ware sub-styles show any marked territorial separation (fig. 97). The Clacton, Woodlands and Durrington Walls styles are essentially spatially interlocking and their penetration into southern Scotland makes the simple division of the material into northern and southern provinces, as originally suggested by Piggott in 1954,⁴ inappropriate. For this same reason Dr David Clarke's criticism must be confined specifically to the Rinyo style and to whether this really forms part of the Grooved Ware tradition or is merely a product, as he suggests, of independent parallel development under comparable stimuli. The question must revolve around whether the sum of individual and general features shared in common makes parallel development a more or less likely assumption than common tradition.

¹ E.g. *ibid.*, pl. XLIX, 2 and 3.

² E.g. *ibid.*, pl. XLVII 1 and XLIX 1-3.

³ For references to these sites see Gazetteer nos. 102, 111, 116, 107 and 108.

⁴ Piggott, 1954, 321ff.

General conclusions must favour the concept of a common tradition. Though grooving as a technique is found on late Beakers, applied decoration is entirely alien to all Beaker groups and to all other Late Neolithic ceramic traditions in Britain. Its adoption by two Late Neolithic groups at virtually the same time, if these are not basically related, seems surprising. Conversely, if strong formative influences were being exerted by Beaker traditions it is strange that comb impressed decoration in the Beaker manner only appears to be adopted, and then as a minor element, in the Durrington Walls style. Though the forms of the Rinyo style are still imperfectly known, it seems clear that no characteristic Beaker shapes are represented. There is little indeed in form or technique of decoration to suggest much in the way of the postulated Beaker influence. Some decorative features in the southern British Grooved Ware styles seem, not surprisingly, to be Beaker-inspired, and this will be discussed below when the origins of the individual styles are reviewed, but few are likely to belong to an initial phase of the tradition.

In contrast several specific features emphasize the common heritage. In fig. 93 a series of these features are presented common to the Rinyo style on the one hand and the remaining Grooved Ware styles on the other. With the exception of opposed chevrons which could be a late Beaker trait, and perhaps the rounded, pointed and simple internally bevelled rim forms, the remaining features are not ones easily derived from Beaker influence. The fact that a sub-style treats features common to the repertoire of the tradition in differing ways seems reasonable enough, and the cumulative effect of the evidence seems to suggest that it is easier to accept the Rinyo style as part of a unified Grooved Ware tradition than to suggest that these traits were adopted through contact with similar but unknown influences.

ORIGINS AND RELATIONSHIPS OF THE GROOVED WARE STYLES

Attempts in the past to see an origin for Grooved Ware in the Late Neolithic pottery of south-western, western or northern Europe have failed to provide satisfactory prototypes for the main elements of the ceramic tradition. Apart from a general hopefulness that the basic bucket and tub-shapes might in some way be found to relate to a S.O.M.-Horgen-Chenon-Kummerkeramik background, specific common attributes have been singularly hard to find. The problem is now more complex for, with the firm chronology provided by the Durrington Walls C14 dates, it is clear that the Durrington Walls style at least was fully formed by 2000 B.C. It is at this point that it is worth asking whether the sub-styles have any chronological significance and can be placed in any sequence.

The total absence of necked bowl forms in the Durrington Walls style marks a sharp break with earlier and contemporary native Late Neolithic styles within the area of its distribution. The marginal use of whipped cord at Durrington Walls, Marden and Lawford and sporadic use of herringbone suggest some contact with contemporary Peterborough traditions, but the general decorative schemes, with the exception of Lawford, suggest a minimal contribution from this source. The existence of the style, fully formed by 2000 B.C., is equally embarrassing for the Beaker cause. This date is perilously early for any Beaker group in Britain other than All Over Cord and perhaps the earliest of the European immigrants. The pottery recovered from Durrington Walls in fact reflects this situation. Some absorption

DECORATIVE COMPONENT	
RINYO STYLE	SITES IN SOUTHERN BRITAIN
	 1-4 DURRINGTON WALLS, 5 CLACTON
	 CLACTON
	 WOODLANDS
	 CLACTON
	 DURRINGTON WALLS
	 CLACTON
	 CLACTON
	 DURRINGTON WALLS
	 CASSINGTON

FIG. 93. Decorative components of the Rinyo sub-style compared with those represented in the other sub-styles from sites in Southern England

of All Over Cord tradition is suggested by the use of twisted cord as a minor decorative technique, and confirmed by the distinctive use of multiple horizontal twisted cord lines inside the rim of several vessels.¹ This feature, having been adopted, appears to have been quickly translated into the more usual incised and grooved techniques of the tradition.² Externally twisted cord is used mainly to create horizontal lines in an abbreviated form of the All Over Cord style³ or, more rarely, is used as an alternative technique to create panel

¹ I.e. P378, P385-6 and P388. Also Stone, Piggott and Booth, 1954, 172 and fig. 8, nos. 23 and 26.

² E.g. P329, P355. Also Stone, Piggott and Booth, 1954, fig. 7, no. 1.

³ E.g. P376-7, P383 and P388.

'filling' elsewhere executed in grooving or incision.¹ The process appears to be again one of adoption and rapid adaptation. The rare use of rectangular toothed comb stamp unambiguously demonstrates some absorption of Beaker influence but again its use as a filling agent on P395 reflects the ability of the Durrington Walls potters to utilize an alien decorative technique for a more traditional usage. The use of a comb drawn across the surface of a pot to create groups of lightly incised lines, e.g. P401-2, illustrates a further departure from traditional Beaker comb usage.

If some features can be so ascribed to absorption of Beaker and Peterborough tradition, it is equally clear that many of the essential features of the style, viz. form, principal decorative techniques and patterns, cannot be so explained. The presence of applied decoration and extensive use of cordons is basic to this problem for there is no satisfactory antecedent for these features in the known Middle Neolithic pottery of the British Isles. It seems inevitable to conclude that the Durrington Walls style is (a) a product native to the British Isles and (b) that the major elements of its style are innovations drawing heavily, as both Piggott and Smith have already argued, on skeuomorphic translation of basketry effects. The general scheme of the typical Durrington Walls vessel with transverse cordon and descending multiple vertical cordons with 'filled' panels is essentially that of wicker basketry.

A further contribution to the tradition, but one for which the mechanics are far less obvious to demonstrate, is that of Boyne Art. The grooved concentric circle and spiral ornament on four of the vessels from Durrington Walls and those from Ipswich and Lawford must suggest comparison with the art of the Boyne tombs,² the Folkton Drums,³ the more highly decorated stone balls of north-east Britain⁴ and the antler macehead from Garboldisham in Norfolk.⁵ The appearance of the sherd P471 and the decoration of the stone basin from Knowth⁶ is particularly striking, but if these occurrences are related and embraced within a single art style, the life of that style cannot be short. The recent dates of 2465 ± 40 B.C. and 2550 ± 45 B.C. from New Grange,⁷ unless these prove to belong to an unrelated pre-tomb occupation, give some indication of the chronological range required. How far the Durrington Walls style can be extended back in time is at present uncertain. The authors have chosen to assume that the C14 dates for material sealed beneath the bank of the enclosure at Durrington Walls⁸ and from the Midden⁹ relate to the Middle Neolithic bowl pottery associated, though Grooved Ware was present in both contexts and the two could not be separated stratigraphically from each other. If further carbon dates bridge the gap between these dates and those for the Grooved Ware in the primary silts of the Stonehenge¹⁰ and Durrington Walls ditches then the acceptance of a much earlier Middle Neolithic origin for the style may be inescapable.

The origins of the Rinyo style provide similar, if still more exotic problems. The heavy emphasis on applied decoration from the beginning of the sequence at both Skara Brae and Rinyo suggests comparison with the Durrington Walls style and the glorious spiral lozenge sherd¹¹ from Skara Brae incorporating elements elsewhere typical of the Durrington Walls

¹ I.e. P95-9.

² Cf. for example at Knowth, Eogan, 1968, fig. 22, nos. 2c and 5a.

³ B.M. Guide, 1953, pl. ix.

⁴ Piggott, 1962, pl. 3.

⁵ Edwardson, 1965, pl. xxxii.

⁶ Eogan, 1969, pl. II.

⁷ O'Kelly, 1969, 140.

⁸ See below p. 192

⁹ See below p. 207

¹⁰ I.e. 2180 ± 105 B.C.

¹¹ Childe, 1931, pl. XLV.

and Clacton styles, but so impressively matched in the Boyne Art style, suggest further absorption of decorative features from that source.

Smith has already drawn attention to a number of other similarities between the more complex applied patterns of the Rinyo pottery and the grooved stonework of the Boyne Art style emphasizing this connection. The role of Unstan ware in contrast remains conjectural and few features can be shown to derive unambiguously from this source. The only direct chronological indicator remains the Northern British Phase 3 Beaker¹ found in the latest Grooved Ware phase at Rinyo² which, following Dr David Clarke's chronology, could hardly be earlier than 1650 B.C.

Of the four sub-styles, the Clacton appears to show the greatest absorption of Beaker traditions, but not all appear to have been accepted at the same time or from the same source. It is tempting to see in the use of external horizontal grooved lines, often used to cover large areas of the vessels' surface, some reflection of All Over Cord traditions executed in a Grooved Ware technique. This is supported again by the use of multiple grooved lines internally just beneath the rim, but since twisted cord is never found in this style, nor indeed toothed comb ornament in the Beaker manner, the borrowing is confined at most to the motif and its deployment. Unlike the other sub-styles, the Clacton shows a marked preference for zoned decoration and many of the motifs produced, including opposed and multiple chevrons, lozenges, reserved and filled triangles and bands of rustication, do suggest, as Clarke has recently emphasized,³ comparison with Developed Southern Beakers. It is, however, worth pointing out that many of these geometric motifs are equally at home in Boyne Art and dot-filling more so, for this is more easily seen as a response to a desire to render 'pecked' stonework in clay than anything derivable from the Beaker repertoire. A relatively early date for the style's inception is in fact demonstrated by the stratigraphy at Unival where a bowl decorated in Clacton style⁴ occurred in an earlier context than an undecorated Beaker of European type.⁵ If zoned ornament and many of the geometric motifs are to be derived from a Developed Southern Beaker source then this process would have to occur at a much later date.⁶

No direct dating evidence is at present available for the Woodlands style, and this must largely be inferred from its relationship to the other sub-styles. Though the heavy reliance on skeuomorphism, first noted by Piggott⁷ and stressed by subsequent commentators, is real enough, some features can be found which are common to one or more of the other styles. Attention has already been drawn to the use of grooved ladder pattern for example, when used on an internally bevelled rim, as a feature shared with the Clacton style. The use of slashed cordons and rim scallop, though used in different ways, are also features of the Rinyo style. In addition, sherds carrying the typical multiple horizontal low cordons of the style have been found at Durrington,⁸ confirming that the style is in existence during the lifetime of the Durrington Walls site, and a sherd carrying the typical internal grooved decoration of the Clacton style was associated with sherds of the Woodlands style at Honington in Suffolk.⁹ The date of the inception of the style, however, remains obscure.

¹ Clarke, 1970, no. 1734.

² Childe and Grant, 1939, 26.

³ *Op. cit.*, 268ff.

⁴ Scott, 1950, 17, pot 51.

⁵ Clarke, 1970, no. 1671.

⁶ On Clarke's chronology this could not be placed much before 1550 B.C.

⁷ Piggott, 1954, 340.

⁸ E.g. P384.

⁹ Stone, 1949, fig. 2, no. 5.

Despite the uncertainties which still surround the Grooved Ware tradition and its origins, it seems clear enough that the four sub-styles are contemporary for much of their lives and that some if not all have their origins around or before 2000 B.C. Their life-span appears to make them contemporary with almost the entire range of Beaker pottery and most of the late Peterborough tradition. The recurrent association of sherds of Grooved Ware with Peterborough and Beaker pottery is testimony to this fact.¹ It is for this reason that apparently anomalous situations, in which Grooved Ware has sometimes appeared to be earlier and sometimes later than these wares, have been found to occur.²

To what date the tradition survives is still not clear³ but some fresh evidence is provided by the ditch stratigraphy at Durrington. Activity represented by the deposition of Grooved Ware sherds in the southern sector of the enclosure ditch is all but over by the time a sherd of late biconical Beaker, P596, was incorporated at the junction of layers 4 and 5. This is likely to belong to a slightly later date than the Rusticated and stroke-and-ridge decorated Beaker from hearth 5 at the junction of layers 5 and 6b in the northern sector of the ditch, which yielded a C14 date of 1610 \pm 120 B.C.⁴ This of course is a statement true for only one Grooved Ware site yielding predominantly one style of pottery, but as has already been seen, a similar date is also suggested by a late Northern British Beaker associated with the terminal deposits at Rinyo.

Certainly by 1600 B.C. new developments in the ceramic traditions of the British Isles are well advanced and with the now substantial sample of Durrington Walls style pottery available it is clear that a revision of the contribution made by the various Grooved Ware styles to these developments is now warranted. Previous commentators have rightly stressed the resemblance of the Clacton style to Aldbourne Cup decoration and the finely incised, thin-walled, sherds from Durrington, P456, suggest a further possible contribution.

The curious sherd from Ford, Northumberland,⁵ appears to show a rather different survival of the Clacton style in the north of England. As long ago as 1940⁶ the suggestion was put forward that Encrusted Urns must owe much at least in terms of decoration to the Rinyo pottery. But it is the thesis first suggested by Butler and Smith,⁷ and subsequently abandoned, that the urns of southern Britain incorporating relief decoration owed a major part of their origins to the Grooved Ware tradition, that now deserves a second and more exhaustive look.

¹ E.g. An association of Grooved Ware with Mortlake Ware occurs in a pit at Edingthorpe, Norfolk (Gazetteer No. 36) and a similar association of Clacton style pottery with Mortlake Ware occurs at Orton Longueville, Huntingdonshire (ibid., No. 29). At Honington, Suffolk (ibid., No. 50) the Woodlands style pottery is later than Peterborough Ware. At Dorchester I, Oxon. (ibid., No. 43) the Grooved Ware appears to be earlier than Ebbsfleet. Grooved Ware sherds appear to be contemporary with a variety of Beaker sherds at Plantation Farm, Cambs. (ibid., No. 12). At the Kennet Avenue site (ibid., No. 60) Grooved Ware was found with Peterborough and Beaker, and at Cherhill (ibid., No. 63) Grooved Ware in a deposit associated with Ebbsfleet, Mortlake and Beaker was earlier than a second feature yielding further sherds of Mortlake

Ware. At Maiden Castle (ibid., No. 16) Grooved Ware was contemporary with, or later than, sherds of Southern British Beaker.

² Clarke, 1970, 268. There seems no reason now to believe that Grooved Ware does not span the entire life of Wessex-Middle Rhine Beakers.

³ The authors give no weight to the occurrence of a sherd of Grooved Ware found with a secondary cremation beneath the Chippenham II barrow, Cambs. (Gazetteer No. 10).

⁴ BM-285.

⁵ Longworth, 1970, vessel 5.

⁶ Childe, 1940, 149-50.

⁷ Butler and Smith, 1956, 43ff.

OCCURRENCE

General

The 116 sites known to the authors which have produced Grooved Ware have been analysed on the basis of their mode of occurrence (fig. 96). As a result it has been established that 54% are of domestic type, although this percentage could be increased by the addition of a number of localities now listed under 'stray finds', if more information was available concerning a number of the latter. At present, 33% of the sites have been assigned to the 'stray find' category although a number may well be from domestic contexts. Within the domestic category, 62% of the finds were made from pits, which were presumably for the disposal of domestic rubbish, although a ceremonial interpretation might apply to some, and 25% from the mounds and ditches of burial mounds where they were presumably incorporated accidentally from a domestic site on the pre-existing land surface. Two caves have produced evidence for domestic occupation and other localities are the village sites of Rinyo and Skara Brae, an enclosure at Waulud's Bank, doubtful timber buildings in Bute, a single hearth and a flint mine in Sussex.

The domestic associations of Grooved Ware therefore seem well established, though no recognizable buildings have been found south of Orkney, but 8% of the occurrences are from ritualistic contexts. Of these, seven are henge monuments and include the important centres at Stonehenge, Durrington Walls, Woodhenge, Avebury, Marden and Maumbury Rings; from which one may conclude that ceremonial practices were of great importance to the users of Grooved Ware. In addition, Grooved Ware has been found in quantity with the large circular timber buildings which were constructed in Wessex at the beginning of the second millennium B.C. and which have a presumed ceremonial or communal purpose. The Grooved Ware occurs in such quantity on the sites of these structures that one is inclined to ask whether the pottery was made specifically for ceremonies connected with them. However, the wide distribution of the pottery and its occurrence in undoubted domestic contexts elsewhere makes this an unlikely possibility. Nevertheless, these large timber buildings were important structures which presumably served a communal purpose and one might therefore hope to record the more truly domestic structures of these people in their vicinity.

However, the available evidence does not reveal any sepulchral practices associated with Grooved Ware. The pottery has been found in megalithic tombs, but in each case it is doubtful whether the association is with the actual interment of the dead. Similarly, Grooved Ware sherds have been found with cremations in pits on two occasions, but not apparently as funerary offerings.

The evidence as a whole, therefore, is concerned with the domestic occurrences of Grooved Ware; it demonstrates the importance of ceremonial and communal practices to its users and indicates avenues of research where stronger evidence of domestic settlement might be found. However, the evidence is not informative about burial rites and one must assume that it was not the practice to place Grooved Ware with the dead. If it were otherwise it would have been reflected in the evidence which we already possess.

Stray finds

This category includes 38 or 33% of the occurrences of Grooved Ware and covers a variety of locations. These include surface collections from ploughed fields or sand dunes, the late fills of Neolithic ditches which are normally conflated and contain a variety of Late Neolithic and Bronze Age ceramics, buried surfaces beneath burial mounds, occasional sherds found during the excavation of later structures, sherds from old collections where the context was not accurately recorded and sherds from more recent excavations which are not yet published and the details of which are not known to the authors. Such a broad category necessarily includes some sites which are undoubtedly domestic but whose precise character is unknown (Lawford and West Stow) and the precise relationship between the Grooved Ware and the two causewayed camps where it occurs (Abingdon and Windmill Hill) is also conjectural. Where there has been any doubt about the status of a particular find then it has been placed in this category of stray finds and with such a stringent screening process it is perhaps surprising that this group does not comprise a higher percentage of the whole than it actually does.

Domestic

Sites of domestic type account for 63 or 54% of the 116 occurrences of Grooved Ware. They have been divided into the following categories.

Pits. Occurrences in pits number 39 or 33% of the whole. The pits are small compared with their counterparts in Iron Age contexts and normally do not exceed 1 m. diameter and 2 m. deep. Amongst the 39 localities, 20 or 51% are single pits and most of these have been recorded by chance as a result of gravel-working or road building. Occasionally, the pits form part of a larger domestic settlement as at Puddlehill in Bedfordshire where three pits and a post-hole occurred in a restricted area together with a layer of charcoal and domestic refuse close to a spring nearby. Similarly, at Honington in Suffolk, large grey patches, oval or circular in plan and averaging 3 m. in diameter, were associated with seven pits on a low hillock near a river. The hollows were rich in implements and sherds but no associated post-holes were found. The pits frequently produce a great quantity of domestic debris and were certainly used for the deliberate disposal of the latter. Occasionally this may have been in the course of ritual observances but the extent of this practice cannot yet be determined and a mainly domestic use seems the more likely explanation.

Barrow mounds or ditches. Occurrences in barrow mounds or ditches number 16 or 14% of the whole. These have been included under domestic sites because the most likely explanation of the material is that it has been scraped up from a domestic site on the pre-existing land surface. This is the explanation favoured by the excavator for the Grooved Ware incorporated in the barrow mounds at Snail Down, where the earlier occupation site is represented by a mass of stake-holes in the solid chalk. However, it has been suggested on several occasions that the material in the barrow mounds might be a deliberate admixture. This has been claimed for the material in the mound of a bell-barrow at Bishops Waltham and also for a group of sherds in the mound above the primary burial of Barrow 1, Hurn, near Christchurch.

Caves. Grooved Ware has been recorded from caves on two occasions. At Torbryan in Devon a single unstratified sherd, possibly associated with a laterally bulbed bone pin, was found in the Three Holes Cave. At Cockles Wood near Nettlebridge in Somerset, the Downside Archaeological Society excavated a cave which produced animal and human bones together with sherds of Grooved Ware.

Village settlements. Two village settlements have been excavated in Orkney and can be regarded as unique products of an environment where timber for building was scarce but good quality stone abundant.

- (i) Rinyo, Rousay: the size of this settlement is still undetermined although it was fairly large. The standard house is similar to that from Skara Brae with clay ovens frequently built on a slab against the central hearth. There was much rebuilding and structural alteration of the individual houses which were built of the local flagstone.
- (ii) Skara Brae, Orkney: the houses and many of the fittings of this settlement were again constructed of the local flagstone. Eight houses survive of the main building period of which the standard examples are internally square with rounded corners and a central hearth. To the left and to the right of the single entrance were slab-framed beds and opposite the door was a dresser of slab shelves. Keeping places were built into the walls and slab-lined boxes into the floors, under which drains were sometimes found. The houses were surrounded by midden material and eventually the settlement became virtually subterranean, with the houses connected by narrow roofed passages.

Enclosure. At Waulud's Bank, Leagrave in Bedfordshire a much denuded bank and ditch surrounds the north, east and south sides of an oval enclosure some 18 acres in extent. The west side of the enclosure is formed by the River Lea which rises inside the earthwork and a single entrance may have existed in the north side. Grooved Ware was obtained from the primary silt of the external ditch and there is no evidence as to whether the enclosure was domestic or more comparable to the large enclosures of Marden type.

Timber buildings. Possible remains of timber buildings in the form of slots in the exposed gravel surface have been recorded from Townhead, Rothesay in Bute together with hearths, a polished stone axe-head and a saddle quern with a rubbing stone. However, most of the pottery is Rothesay Ware and it is with this material that the structures are probably to be associated.

Hearth. Sherds of Grooved Ware have been found in association with a single hearth beneath the bank of the hill-fort at Poundbury in Dorset.

Flint Mine. Sherds of Grooved Ware have been found in a shaft of the Church Hill flint mines near Findon in Sussex.

Ritual

Grooved Ware has been found at nine localities which can be considered to have ritualistic associations; of these, seven belong to the category of earthworks known as henge monuments,

one is a timber building later converted into stone settings and one an avenue of spaced standing stones.

Henge monuments. Of the seven henge monuments, three belong to the single entrance category, three are large enclosures of Durrington Walls type and one is a doubtful henge (fig. 94). Brief details of the sites are as follows:

Maumbury: a circle of shafts 54.8 m. in diameter with an external bank. A large sherd of Grooved Ware was obtained from Shaft VI.

Dorchester Site I: a continuous oval ring ditch surrounding a penannular ring of 13 pits.

Avebury: from the old land surface below the bank of a large enclosure with four entrances which surrounded circles of spaced standing stones.

Durrington Walls: from the ditch and from the old land surface under the bank of a large enclosure and from the post-holes of two circular timber structures within that enclosure.

Marden: from the ditch of a 35-acre enclosure and from the post-holes of a circular timber structure within it.

Stonehenge I: from the ditch of an enclosure 115 m. in diameter with a single entrance. Inside the bank is a circle of 56 holes and a timber structure may have existed in the centre of the enclosure.

Woodhenge: a circular enclosure 67 m. in diameter with a single entrance. The enclosure contained six concentric rings of post-holes which have been interpreted as supports for the roof of a large building.

It is clear from these associations that the users of Grooved Ware had a close association with henge monuments, in particular the large enclosures of Durrington-Avebury-Marden type and with the timber structures which occur within two of these enclosures as well as at Woodhenge and Stonehenge. At Durrington Walls, Marden and Woodhenge the Grooved Ware occurs in such quantity as to make it certain that its users alone were concerned with the construction of these monuments and it is the only ceramic style which occurs at Maumbury and Stonehenge I.

Circular timber buildings. Grooved Ware has been found associated with the remains of six large circular buildings, which have been interpreted in the present report as being for ceremonial or communal purposes. Such buildings have been described in detail in Chapter V and it is unnecessary to repeat that discussion here. The buildings at Durrington Walls, Marden, Woodhenge and possibly Stonehenge have already been listed under henge monuments as they occur within enclosures of that type. The Sanctuary on Overton Hill is a comparable structure with three main building periods, which was finally converted into two concentric circles of standing stones. At Durrington Walls, Marden and Woodhenge, Grooved Ware is found in such abundance as to make it clear that these buildings were constructed and used primarily by the makers of this ceramic style. At the Sanctuary, Grooved Ware is present, but in association with other Late Neolithic ceramics.

Avenues. One sherd of Grooved Ware has been recorded from stone-hole 15b of the West Kennet Avenue. However, Windmill Hill and Peterborough Ware have been recorded from other stone-holes and so the association is not an exclusive one.

DISTRIBUTION MAP OF HENGE MONUMENTS IN THE BRITISH ISLES.

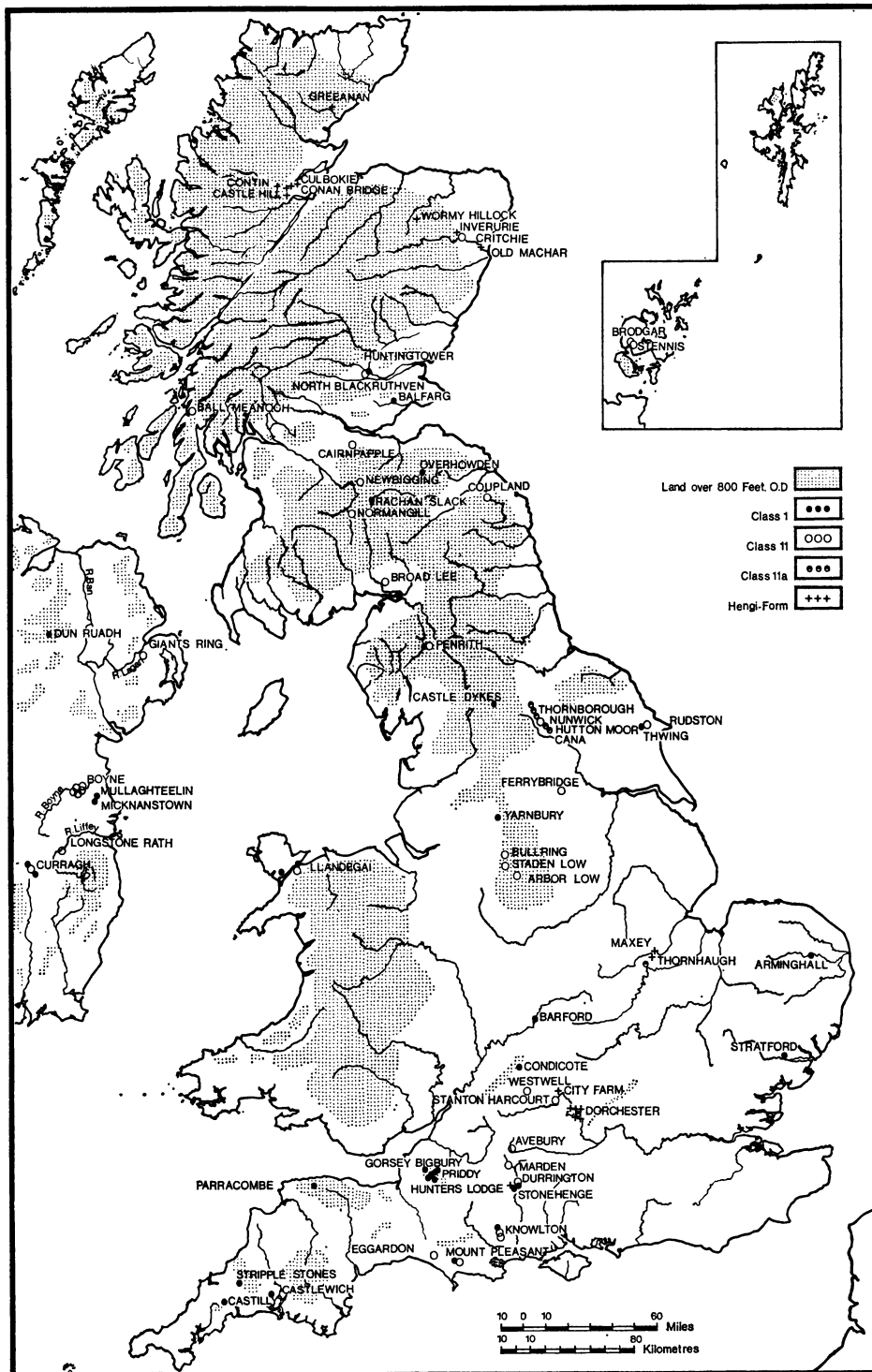


FIG. 94

Sepulchral

Associations of Grooved Ware in sepulchral contexts total 6 or 5% of the whole, of which 4 are in chambered tombs and two in pits accompanying cremations. Unfortunately, it is not always possible to establish whether the associations with the megalithic tombs are primary or secondary. In the West Kennet long barrow the Grooved Ware was obtained from the blocking of the passage and chambers, along with other Late Neolithic ceramics, and cannot therefore be regarded as a funerary deposit but rather as part of the tomb-blocking ceremony, after which no more bodies were to be inserted. Similarly, at Ord North, Unival and Tormore it is not possible to establish with certainty that the Grooved Ware is primary and was deposited with the bodies and it is therefore doubtful whether the pottery was used in this way. The two associations with cremations at Chippenham Barrow No. 2 and Tebbs Pits, Peterborough respectively seem valid, but it is uncertain whether the sherds represent a deliberate deposition.

THE NON-CERAMIC ASSOCIATIONS

Of the 116 occurrences of Grooved Ware, only 34 or 30% produced meaningful associations. In order to avoid the possibility of contamination by the associations of other pottery styles, only those assemblages have been employed which were recorded in contact solely with Grooved Ware in conditions where such contamination was unlikely. Exceptions to this rule are those sites where other ceramic styles are present in negligible quantities as at Woodhenge and Durrington Walls, or large collections of artefacts such as that from West Stow where the association with Grooved Ware is likely but not proved. The best associations are those in pits and 68% of these localities with valid associations fall into this category. These requirements entail that several extensive assemblages have been left out of account, notably the majority of the lithic material from the occupation site on the West Kennet Avenue and from the conflated upper silts of the ditches of the Windmill Hill causewayed enclosure, but there is reason to believe that these groups are not related primarily to the small quantities of Grooved Ware recorded with them. It is possible that this method has omitted certain artefacts which do belong in a Grooved Ware context, but if so they are not immediately apparent and the benefits of securely recorded associations outweigh this contingency. The localities with good associations have been listed in Table XXVII together with an indication of the artefacts represented.

Flint

Thirty localities out of 34 (88%) produced flint artefacts in association with Grooved Ware (Table XXVIII); of the remaining sites, three have not been published in full (Poundbury 2, King Barrow Wood and Seamer Moor), whilst the associations within the deposits of the Torbryan Cave are not certain. It would appear, therefore, that flint artefacts occur regularly in association with Grooved Ware. Flakes and cores occurred at 26 (87%) and 18 (60%) localities respectively and the range of implement types can be divided into 19 categories. Taking the frequency of occurrence of these categories as a guide, scrapers (22 occurrences or 73%) are the most common implement type, followed by transverse

TABLE XXVII

Artefacts associated with Grooved Ware in securely stratified contexts

<i>Locality</i>	<i>Grooved Ware</i>	<i>Flint</i>	<i>Stone</i>	<i>Chalk</i>	<i>Lignite</i>	<i>Jet</i>	<i>Bone</i>	<i>Ivory</i>	<i>Antler</i>	<i>Baked clay</i>	<i>Human bones</i>	<i>Animal bones</i>	<i>Marine shells</i>
Puddlehill	×	×	×									×	
Sutton Courtenay	×	×	×				×			×		×	
Cambridge	×	×										×	
Cherry Hinton	×	×											
Torbryan	×						×						
Maumbury Rings	×	×		×					×			×	
Poundbury 1	×	×											
Poundbury 2	×		×										
Clacton, Lion Point	×	×	×										
Lawford	×	×											
Newport	×	×	×										
Pishobury	×	×					×						
East Malling	×	×											
Stanton Harcourt	×	×										×	
Ben Bridge	×	×											
Creeting St Mary	×	×											
Honington	×	×											
Ipswich, Dales Rd.	×	×											
West Stow	×	×											
Kennet Avenue	×	×	×				×					×	
Amesbury, Woodlands	×	×	×				×		×			×	×
Durrington Walls	×	×	×				×		×	×	×	×	×
Durrington, Str. A.	×	×										×	
King Barrow Wood	×			×					×			×	
Marden	×	×							×		×	×	
Ratfyn	×	×	×						×			×	×
Stonehenge I	×	×	×	×			×		×			×	
Woodhenge	×	×	×	×			×		×		×	×	×
Seamer Moor	×					×							
Wykeham	×	×											
Tormore	×	×	×										
Knappers	×	×	×		×								
Rinyo	×	×	×				×			×		×	
Skara Brae	×	×	×				×	×	×		×	×	×

arrowheads (16 occurrences or 53%), serrated flakes (12 occurrences or 40%), knives (10 occurrences or 34%), awls (9 occurrences or 30%), fabricators and polished axe fragments (8 occurrences or 27%), and denticulated flakes and implements with polished edges (6 occurrences or 20%). Of less frequent occurrence are projectile heads (13%), barbed and tanged and leaf arrowheads, burins, flaked axes, choppers and adzes (10%) and a polished discoidal knife, a fragmentary sickle blade and tanged blades (one occurrence each respec-

TABLE XXVIII

Analysis of the flint artefacts securely stratified with Grooved Ware

<i>Locality</i>	<i>Flakes</i>	<i>Cores</i>	<i>Scrapers</i>	<i>Transverse arrowheads</i>	<i>Barbed and tanged</i>	<i>Leaf arrowheads</i>	<i>Knives</i>	<i>Saws</i>	<i>Polished axe frags.</i>	<i>Discoidal knives</i>	<i>Fabricators</i>	<i>Atols</i>	<i>Burns</i>	<i>Denticulated flakes</i>	<i>Implements with polished edges</i>	<i>Flaked axes</i>	<i>Choppers</i>	<i>Adzes</i>	<i>Sickle blades</i>	<i>Tanged blades</i>	<i>Projectile points</i>
Puddlehill	x		x	x				x	x												
Sutton Courtenay	x	x	x	x				x													
Cambridge	x																				
Cherry Hinton	x	x	x																		
Maumbury Rings	x		x	x			x							x							x
Poundbury 1	x	x	x	x																	
Clacton, Lion Point	x	x	x	x			x	x	x			x				x					
Lawford	x	x	x	x			x	x	x	x		x		x	x						
Newport	x	x	x	x				x	x					x			x				
Pishobury			x	x				x													
East Malling					x																
Stanton Harcourt	x																				
Ben Bridge	x		x																		
Creting St Mary	x	x	x	x				x			x	x			x						
Honington	x	x	x	x		x		x	x		x	x			x						
Ipswich, Dales Rd.	x	x																			
West Stow	x	x	x	x			x	x	x			x		x			x	x			x
Kennet Avenue	x	x	x	x				x	x				x								
Amesbury, Woodlands	x	x	x	x			x	x	x		x										
Durrington Walls	x	x	x	x	x	x	x			x	x			x		x	x	x	x	x	x
Durrington, Str. A.	x	x	x																		
Marden	x	x	x	x			x				x	x									
Ratfyn	x	x		x				x													
Stonehenge																					
Woodhenge	x	x	x	x	x	x	x				x			x		x					x
Wykeham	x																				
Tormore							x														
Knappers	x		x									x									
Rinyo	x	x	x				x								x						
Skara Brae	x	x	x						x						x						

tively). No one site has produced the full range of nineteen implement categories together with flakes and cores. Durrington Walls has produced 16 categories inclusive of the flakes and cores, Woodhenge and West Stow 13 categories apiece and Lawford and Honington 12 and 10 respectively. Apart from these sites which have produced a large variety of implement types, the Lion Point site at Clacton produced 9 categories, Creting St Mary, Rinyo and the Woodlands pits near Amesbury 8 apiece, and Newport and Marden 7 categories each. By comparing the general occurrences of implement categories with the extensive assemblages from Durrington Walls, Woodhenge, West Stow and Lawford one can therefore confirm that the lithic associations of Grooved Ware is as stated in Table XXVIII (which

also takes into account the more fragmentary evidence). It is also possible to establish that no regional or stylistic groupings are apparent, although environmental factors no doubt played a part in restricting the range of implement types from Skara Brae and Rinyo.

A more detailed analysis reveals that, apart from the technological differences in flake dimensions between flint assemblages of Middle and Late Neolithic type, artefacts such as transverse arrowheads, plano-convex knives and polished discoidal knives occur only in the later industries. The transverse arrowheads in particular are the second most common implement type found in association with Grooved Ware but there does not appear to be comparable continental material, nor in the present state of knowledge does this artefact have a history of development in the third millennium B.C. before it becomes a type artefact of Grooved Ware sites. It was not introduced by the Beaker people who used the barbed and tanged variant, and for the moment one must attribute our lack of knowledge concerning the development of the transverse arrowhead to our general ignorance about the second half of the third millennium B.C. as a whole in Britain. There are a few indications that the transverse arrowhead may be an insular type for single specimens have been found in Middle Neolithic contexts at Staines in Middlesex,¹ from Whitehawk² and from Hurst Fen.³ These arrowheads are in mint condition and their associations seem valid, in which case the form can be regarded as an insular type which replaced the leaf arrowhead towards the end of the third millennium B.C. for reasons which are not clear at the present time. A similar source can be deduced for the plano-convex knife, for at Staines one such artefact was recorded from a deep pit in association with Neolithic plain wares.⁴ Similarly, the technique of edge-polishing implements was developed in the third millennium B.C. from which the polished discoidal knife may well have developed.

One may conclude, therefore, that the nineteen implement categories clearly associated with Grooved Ware have their origins amongst the earlier lithic assemblages of the third millennium B.C., but that owing to our ignorance of developments during the second half of that period the details of the appearance of new forms such as the transverse arrowhead and the plano-convex knife are still obscure. Finally, it is shown below that certain variants of the transverse arrowhead occur particularly commonly in Grooved Ware contexts and that the percentages of these forms differ from those found with other Late Neolithic ceramics.

Scrapers. Scrapers are the most common implement type and have been found at 22 out of the 30 sites (73%). They also form a high percentage of the tool complement at individual sites — 62% at Durrington Walls for example. End-scrapers on short flakes are the most common form, whilst side, disc and hollow scrapers are also found in varying proportions and, rarely, the implements may have a polished working edge.

Transverse arrowheads. Transverse arrowheads have been recorded from 16 localities and are the second most common implement type, although the number of arrowheads found exceeds 13 on only five sites. When classified according to the system outlined by Professor Clark in 1934 the most common variants are Classes G and H in which the flat retouch extends onto the flat surfaces of the arrowhead which has a flat or concave base (fig. 95). In the case of

¹ Robertson-Mackay, 1965.

² Piggott, 1954, 78.

³ Clark, Higgs and Longworth, 1960, F48.

⁴ Robertson-Mackay, 1965.









PROVENANCE	A 	B 	C 	D 	E 	F 	G 	H 	UNCLASSIFIABLE	TOTALS
PUDDLEHILL								1		1
SUTTON COURTENAY				1						1
POUNDBURY I						1				1
LION POINT					2	1				3
LAWFORD							2	4	11	17
NEWPORT								1		1
PISHOBURY				1						1
CREETING ST. MARY					1		1			2
HONINGTON			4	7					3	14
WEST STOW		1	10	4			3	9	21	48
KENNET AVENUE			2	1						3
WOODLANDS	1			6						7
DURRINGTON	1		3	1		1	27	23	3	59
MARDEN							1			
RATFYN				2						2
WOODHENGE				3	1	6	5	8	3	26
TOTALS	2	1	19	26	4	9	39	46	41	187

FIG. 95. Analysis of the transverse arrowheads associated with Grooved Ware

Class H the base has a marked asymmetry so that the arrowheads become lop-sided. These common forms are followed by Class D in which a sub-triangular arrowhead has a marked concavity in one edge and by Class C which does not possess this concavity. Possibly because of the small numbers involved, no groupings can be distinguished between the sites on the basis of the proportions of these variant forms. The arrowheads from Durrington Walls are virtually all of Classes G and H, whilst those from West Stow have a higher proportion of Class C. However, the West Stow material was collected from the surface of a ploughed field

and a few sherds of a Mortlake bowl came from nearby. It is of interest to compare these proportions with those obtained for transverse arrowheads from the occupation floor on the West Kennet Avenue and from the upper silts of the ditches of the Windmill Hill causewayed enclosure.

<i>Site</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E/F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>Misc.</i>	<i>Totals</i>
W. K. Avenue	4	15	24	33	4	1	—	—	8	89
Windmill Hill	5	3	9	6	1	3	1	—	12	40

At both these localities Grooved Ware is very much a minor constituent of the ceramic styles represented, amongst which are Mortlake, Fengate, Beaker and Collared Urns. The proportions of arrowhead variants appear to reflect the presence of these ceramic styles, as the simpler chisel-ended arrowheads (Classes A–D) are predominant and the more evolved hollow-based or asymmetrically-barbed variants, such as are common in Grooved Ware contexts, are sparsely represented. One may conclude that the proportions of transverse arrowhead variants in association with Grooved Ware as shown in fig. 95 are valid and that these proportions vary in accordance with the presence or absence of other Late Neolithic ceramics.

Barbed and tanged arrowheads. Barbed and tanged arrowheads occur at three localities in association with Grooved Ware (East Malling, Durrington Walls and Woodhenge). However, at Woodhenge the arrowhead was unstratified and may be connected with the small quantity of Beaker pottery from the site. A similar explanation may account for the two specimens from the surface of the platform outside the Southern Circle within the Durrington Walls enclosure. The only secure association with Grooved Ware is in a pit at East Malling in Kent and is probably a reflection of the fact that Grooved Ware is in part contemporary with Beaker ceramics.

Leaf arrowheads. Leaf arrowheads occur at three localities in association with Grooved Ware (Honington, Durrington Walls and Woodhenge). At both Durrington Walls and Woodhenge a quantity of plain bowl pottery is present and the arrowheads may therefore belong to this earlier occupation. At Honington, however, the association is in a pit with no earlier ceramics represented so that this association may be valid although other instances are required to confirm it.

Knives. Knives on blades or blade-flakes occur at 10 localities and are the fourth most common implement type. Stylistically they can be divided into five categories.

Plano-convex: knives with flat retouch covering a domed upper surface occur at five localities (Maumbury, Lion Point, Durrington Walls, Woodhenge and Tormore). At Durrington Walls and Woodhenge a small amount of Beaker pottery is present and Tormore is suspect because it is a chambered tomb, but the associations at Maumbury (Shaft XXI) and Lion Point (Pit 10) seem valid.

With flat edge retouch: knives with flat edge retouch which is occasionally bifacial but which does not extend over the whole flake surface (Lion Point, West Stow, Woodlands, Durrington Walls, Marden, Woodhenge and Rinyo). This is the most common knife form and occurs at seven localities.

Bifacially worked: knives with bifacial retouch covering both flake surfaces occur at two sites (Maumbury and Lion Point).

Blunted back: knives on broad flakes with steep retouch down one edge occur on two sites (Lawford and Durrington Walls).

Flake knives: knives on short flat flakes which retain cortex down one edge and possess flat bifacial retouch along the cutting edge (Durrington Walls).

Saws. Serrated flakes or blades are very commonly associated with Grooved Ware and are the third most common implement type after scrapers and transverse arrowheads. They occur at 12 or 40% of the localities and occasionally possess a narrow band of lustre along the serrated edge, which was presumably produced by cutting a silica-rich material. Surprisingly, they do not occur amongst the Durrington Walls and Woodhenge assemblages.

Polished axe fragments. Fragments of polished flint axes occur at 8 or 27% of the localities. Only at Rinyo, Skara Brae and Woodlands have complete or nearly complete axes been recorded; elsewhere they are represented only by chips and fragments. At Lion Point in particular small chips of polished axes were recorded from seven pits but in no case could the form of the parent axe be determined.

Polished discoidal knives. Only one association of a polished discoidal knife with Grooved Ware has been recorded which comes from Lawford in Essex. From the same site has come a roughout for a similar knife.

Fabricators. Fabricators frequently accompany flint industries of Mesolithic, Neolithic and Bronze Age type and occur at eight localities in association with Grooved Ware.

Awls. Awls or borers occur at nine localities in association with Grooved Ware and are the fifth most common implement type.

Burins. Burins occur very rarely in association with Grooved Ware and single samples have been recorded from Lawford, West Stow and the West Kennet Avenue.

Denticulated flakes. Flakes with irregular notches worked in their edges occur at six localities in association with Grooved Ware.

Implements with polished edges. Flakes, blades, scrapers and knives with their edges polished either through accident or design occur at six localities or 20% of the whole.

Flaked axes. Axes which have been flaked but not polished occur at three localities.

Choppers. Core tools which have been bifacially worked with a broad cleaver-like cutting edge occur at three localities.

Adzes. Adzes occur at three localities and can be regarded as carpentry tools rather than felling and lopping implements. They possess the characteristic asymmetric section and their surface is chipped but not polished.

Sickle blades. A possible tip of a curved flint sickle-blade was recorded from Durrington Walls.

Tanged blades. Two bifacially worked blades, broken above an angular shoulder were recorded from Durrington Walls.

Projectile points. Bifacially worked triangular points on thick flakes with occasional thinning at the butt were recorded from four sites. They are best interpreted as the stone heads for arrows or spears.

Stone

Stone artefacts have been recorded from 15 localities in sole association with Grooved Ware.

Axes. Ground axes of stone, or fragments of the same, have been recorded from ten localities; of these, three are of Group I (Poundbury 2, Lion Point pit 10 and Woodhenge) and additional axes from Durrington Walls (Southern Circle post-hole 87) and Knappers are of Greenstone which is presumably of West Country origin. In addition, two axes are of Group VII (West Kennet Avenue hole 1, Woodlands pit 2) and one is of Group VI (Sutton Courtenay pit P). Axes from Rinyo and Skara Brae are of local stone and some of the specimens of camptonite from the latter site are barely 60 cm. long. These compare in size with the miniature chalk axes from Woodhenge described below. These stone axes in association with Grooved Ware indicate that the Cornish, Graig Lwyd and Great Langdale axe factories were operating at the beginning of the second millennium B.C.

Maceheads. Four examples of maceheads have been recorded in association with Grooved Ware and have been described by Mrs Roe.¹ From Rinyo has come an Ovoid B macehead in the doorway of Chamber G (?Rinyo II) and from Skara Brae a pestle macehead of ?Thames type, both of which were found before formal excavations began. An Ovoid B macehead has also been recorded with a cremation from Stonehenge 1 and an Ovoid C macehead from the north chamber of a Clyde-Carlingford tomb at Tormore in Arran. In addition, an Ovoid B macehead of Group VII stone was recorded from the upper levels of the inner ditch at Windmill Hill. The association here is not proven but it is possible. However, Mrs Roe has shown that the associations of these maceheads are not solely with Grooved Ware and that they are associated with Fengate Ware in at least two instances.

Axe-hammer. An axe-hammer of Mrs Roe's Stage 1 of dark, olive green, close-grained quartzite has been found in association with Grooved Ware at Ratfyn.²

¹ Roe, 1968, 153-5.

² Roe, 1966, 268.

Grinder. A sandstone pebble with a hollow central depression worn to a glassy smoothness and possibly used as an axe-sharpening stone, was recorded from Pit 1 at Puddlehill.

Hammerstone. A quartzite hammerstone has been recorded from Newport.

In addition to the types listed above there are those from Rinyo and Skara Brae which are unique to these sites — largely owing to the environmental conditions prevailing in the region of these settlements—and which include carved and plain balls, mortars, clubs, pot-lids, shaft-smoothers, knives, lamps, pendants, anvils, rubbers and beads.

Chalk

Objects of chalk have been recorded from four localities and are described separately from the general category of stone artefacts. A number of the worked pieces consist of chalk lumps which are grooved, scraped or perforated and such blocks have been found at Maumbury Rings, Stonehenge I and Woodhenge. Recently, two unique carved plaques have been recorded from a pit in the King Barrow Wood and have been described as follows:¹

- (i) 5.6 cm. square and averaging 1.3 cm. thick 'decorated with a lozenge design between two rows of chevrons, with a double border at the edges on all four sides which itself contains a triple lined chevron motif. On the reverse side there are shallow parallel channels which may be part of the preparation of the chalk block'.
- (ii) 7.0-7.25 cm. square and 1.1 cm. thick with a more complex design 'consisting of an opposing "Greek key" or stepped pattern on two halves of the same face, one half of the pattern being larger than the other. Pricked dots or hatching between the double lines of the design help to define and accentuate certain parts. On the reverse side there are two finely incised lozenges, with other lines'.

No comparable objects have yet been found in Britain although similar motifs occur on the walls and roofs of the houses at Skara Brae.

Clearly defined objects are confined to cups and two miniature axes from Woodhenge and a large phallus from Maumbury Rings. The axes emphasize the importance of this implement even though so few have been found in the vicinity of the timber structures at Woodhenge, Durrington Walls, the Sanctuary and Marden. The phallus, 23 cm. long and with a maximum diameter of 6 cm., is part of a concern for fertility which is apparent in a succession of prehistoric cultures.

Lignite

The only object of lignite recorded in association with Grooved Ware sherds is a small disc from Knappers Farm near Glasgow.

Jet

A small, flat disc bead of jet with a lop-sided profile and central perforation has been recorded from a pit or irregular scoop in association with Grooved Ware sherds on Seamer Moor in Yorkshire.

¹ Vatcher, 1969.

Bone

Bone artefacts have been found at ten localities in association with Grooved Ware.

Simple pins: with the articular end removed and manufactured from a long-bone splinter which retains the medullary cavity (West Kennet Avenue, Woodlands, Durrington Walls, Woodhenge, Rinyo and Skara Brae).

Skewer pins: of cylindrical section with domed or slightly cylindrical heads (Stonehenge I and Skara Brae).

Laterally bulbed pins: a pin 5.7 cm. long with a slightly domed and expanded head and a perforated lateral bulb was excavated from the Torbryan Cave by J. L. Widger in the nineteenth century and later recognized by Dr A. Rosenfeld as a pin of Piggott's type (ii) when it was examined in the British Museum collections. A single sherd of Grooved Ware was recorded from the cave, but the association of this sherd with the pin has not been confirmed stratigraphically. Similar ivory pins have been recorded from Skara Brae and are described below, together with other parallels for the type.

Awls: bone points which retain the articular end and medullary cavity have been recorded from Sutton Courtenay pit P, Pishobury, Woodlands, Durrington Walls and Skara Brae.

In addition to the types listed above, there are a series of objects from Skara Brae which are unique to that site owing to the environmental conditions prevailing there. These include needles, knives, shovels, paint-pots, bowls, beads and an adze.

Ivory

Eleven ivory pins were recorded from Skara Brae and have been classified by Professor Piggott into three groups.¹

Type (i): of cylindrical section with domed or slightly conical heads similar to bone examples from Stonehenge.

Type (ii): pins with a lateral bulb worked on the shaft which may be perforated. Such pins have been regarded as predominantly a northern type in Britain but two specimens of bone have been recognized amongst the British Museum collections from Torbryan Cave in Devon and from the River Thames at Wandsworth.² The latter is truncated half-way along its shank but it has a perforated lateral bulb and is undoubtedly a type (ii) pin. Similar pins have been recorded from Crosby Garrett in Westmorland with an inhumation under a round barrow, a boar's tusk blade and an antler mace-head; from Howe Hill, Duggleby in Yorkshire with a secondary cremation in a composite barrow³ and from the top of the inner ditch at Windmill Hill where its relationship with the Grooved Ware from the site is uncertain.⁴

Type (iii): giant pins up to 24 cm. long with spatulate heads, comparable to types which occur in the Boyne Passage Graves.

Antler

Antler picks have been recorded from seven localities. In addition, an antler object has

¹ Piggott, 1954, 334.

³ Piggott, 1954, 355-6.

² The author is indebted to Dr A. Rosenfeld and I. H. Longworth for information concerning these pins.

⁴ Smith, 1965, 129, fig. 55.

been recorded from Skara Brae which has been variously interpreted as a sleeve for a stone axe or a mace.

Baked clay

Objects of baked clay have been recorded from three localities. At Sutton Courtenay they are unidentifiable and at Rinyo they are small balls the size of modern marbles. At Durrington Walls, a fragmentary biconical spindle-whorl was recorded from post-hole 95 of the Southern Circle and represents the only evidence for weaving amongst the artefacts associated with Grooved Ware.

Human bones

Grooved Ware has not been recorded as a funerary deposit with an inhumation. Scattered bones have been recorded as chance associations at Durrington Walls, Marden and Woodhenge. The fact that these sites have ritualistic connotations may be significant in this context when one recalls the practice of the removal of human bones from chambered tombs, possibly as talismans. At Skara Brae and Woodhenge foundation burials were deposited beneath the buildings — elderly females in Orkney and a child of approximately three years with a cleft skull in Wiltshire.

Animal bones

Of the 34 localities with secure associations, 14 have produced animal bones, either in small quantities as at Cambridge, Maumbury Rings and Stanton Harcourt, or in larger groups as at Durrington Walls and Skara Brae. The publication of this fauna has been variable but the species represented at the 14 sites have been tabulated in Table XXIX. In terms of occurrence it will be noted that cattle, pig, ovicaprids and red deer are the most common but when a large collection from Durrington Walls was examined it was established that pig represented 63% of the total with cattle comprising 26% and sheep 2%. Unfortunately there is no large faunal assemblage from an undoubted domestic site to compare with the Durrington Walls data which contrast with the evidence from Skara Brae, where sheep and cattle were most numerous whilst pig was rare and not even certainly domesticated. The recent evidence from Marden is not very helpful as the sample is not large and cattle and pig are equal in importance. It would seem probable, however, that the difference in the importance of the species between Wessex and Orkney is due to environmental factors. This is emphasized by the occurrence of fish, sea-fowl, whale and crab at Rinyo and Skara Brae, which confirm that the economy of the northern settlements had a very different basis from that in the south. Of the animals which occur less frequently, the horse, aurochs, deer and fish were presumably hunted, whilst the dog assisted in the control of the domestic herds. The presence of bones of the badger, pine-marten, fox, beaver, bird, cat and weasel is presumably coincidental as is that of the single bone of a brown bear from Ratfyn. The general picture is one of a pastoral economy with a little hunting which was supplemented by strandlooping and fishing on the northern maritime coasts. It is noteworthy that not one certain grain impression has been recorded on any Grooved Ware sherds, nor is there any other evidence for the cultivation of cereals.

TABLE XXIX

Analysis of animal bones recorded in association with Grooved Ware

<i>Locality</i>	<i>Cattle</i>	<i>Pig</i>	<i>Ovicaprids</i>	<i>Horse</i>	<i>Aurochs</i>	<i>Red deer</i>	<i>Roe deer</i>	<i>Dog</i>	<i>Badger</i>	<i>Pine marten</i>	<i>Fox</i>	<i>Beaver</i>	<i>Bird</i>	<i>Fish</i>	<i>Brown bear</i>	<i>Cat</i>	<i>Weasel</i>	<i>Whale</i>	<i>Crab</i>
Puddlehill	×	×	×			×					×		×						
Cambridge	×		×																
Maumbury Rings	×	×																	
Stanton Harcourt		×																	
Kennet Avenue	×	×				×	×												
Woodlands	×	×	×					×						×					
Durrington Walls	×	×	×	×	×	×	×	×	×	×	×	×							
Durrington Str. A.	×	×																	
King Barrow Wood									VARIOUS										
Marden	×	×	×	×		×													
Ratfyn	×	×	×			×									×				
Woodhenge	×	×	×			×		×			×					×	×		
Rinyo						×												×	
Skara Brae	×	×	×			×						×	×					×	×

Marine shells

The presence of marine shells at four localities in Wessex (Woodlands, Durrington Walls, Ratfyn and Woodhenge) and at Skara Brae indicates that in part at least the diet was supplemented by shell-fish. In Orkney these were mainly limpets but in Wessex oysters and mussels were collected in small quantities. The shells were occasionally employed to grit the pottery, but it is not known whether this was the principle motive for their collection.

Art

Engraved, pecked and incised symbols were recorded on the soft flagstones of the huts and passages at Skara Brae. The motifs include lozenges, chevrons and triangles but no curvilinear designs. To these must now be added the two decorated chalk plaques from King Barrow Wood in Wiltshire.

RADIOCARBON CHRONOLOGY

Radiocarbon dates from samples in secure association with Grooved Ware have been obtained from Durrington Walls and Stonehenge.

Durrington Walls

BM-395: 1950 B.C. \pm 90. Antler from the packing material of post-hole 92.

BM-396: 2000 B.C. \pm 90. Charcoal (*Quercus robur*) from the packing material of post-hole 92 in the Southern Circle Phase 2.

BM-397: 1900 B.C. \pm 90. Animal bone from the packing of post-hole 92.

BM-398: 1977 B.C. \pm 90. Charcoal (*Coryllus avellana*, *Crataegus* sp., *Quercus robur*) from the base of the enclosure ditch in its southern sector (layer 7).

BM-399: 2015 B.C. \pm 90. Bone from layer 7 as above.

BM-400: 2050 B.C. \pm 90. Antler from layer 7 as above.

NPL-192: 2320 B.C. \pm 125. Charcoal from the Midden which produced sherds of Middle Neolithic bowls and Beakers of late type as well as Grooved Ware.

These dates have been discussed elsewhere, when it was concluded that NPL-192 was suspect in that the Midden was interpreted as a special repository which contains material of various dates. Because of this the association of the sample with the Grooved Ware is uncertain.

Stonehenge I

C-602: 1848 B.C. \pm 275. Charcoal from a cremation in a secondary disturbance of the primary filling of Aubrey Hole 32.

I-2328: 2180 B.C. \pm 105. Antler pick in the primary silt of the enclosure ditch.

These determinations suggest that the Grooved Ware style had appeared by 2000 B.C. or perhaps a century or two earlier than this on the basis of NPL-192 and I-2328. Unfortunately there are no determinations which are relevant to its development. Other dates which may have been relevant in this context are 1540 B.C. \pm 150 (BM-75), from a humic layer sealing an enclosure ditch of the Windmill Hill causewayed enclosure, and 2120 B.C. \pm 100 (GaK-1714) from a hearth at Townhead, Rothesay in Bute. However, the deposit at Windmill Hill is conflated and contains other Late Neolithic ceramics and Early Bronze Age pottery in addition to the sherds of Grooved Ware and the hearth from Townhead produced sherds of Rothesay Ware. It is clearly necessary to obtain more determinations from securely stratified contexts before one can determine the chronological limits of the Grooved Ware tradition, but the available evidence suggests an origin in the second half of the third millennium B.C.

CONCLUSIONS

Grooved Ware represents a single ceramic tradition which can be divided into four sub-styles, none of which can be defined in territorial terms with the possible exception of the Rinyo style. It occurs most frequently in domestic contexts (pits, burial mounds, caves, settlements and a flint mine), but 8% of the occurrences are from ritualistic or communal contexts which include henge enclosures and large circular buildings of Woodhenge type. However, there is no clear evidence for the disposal of Grooved Ware with the dead. The associated artefacts include flint, bone and stone types, none of which occurs exclusively with any of the ceramic sub-styles. Economically the evidence suggests pastoralism and strand-looping, with no certain evidence for the cultivation of cereals, for not one grain impression has been identified with certainty on any sherd of Grooved Ware.

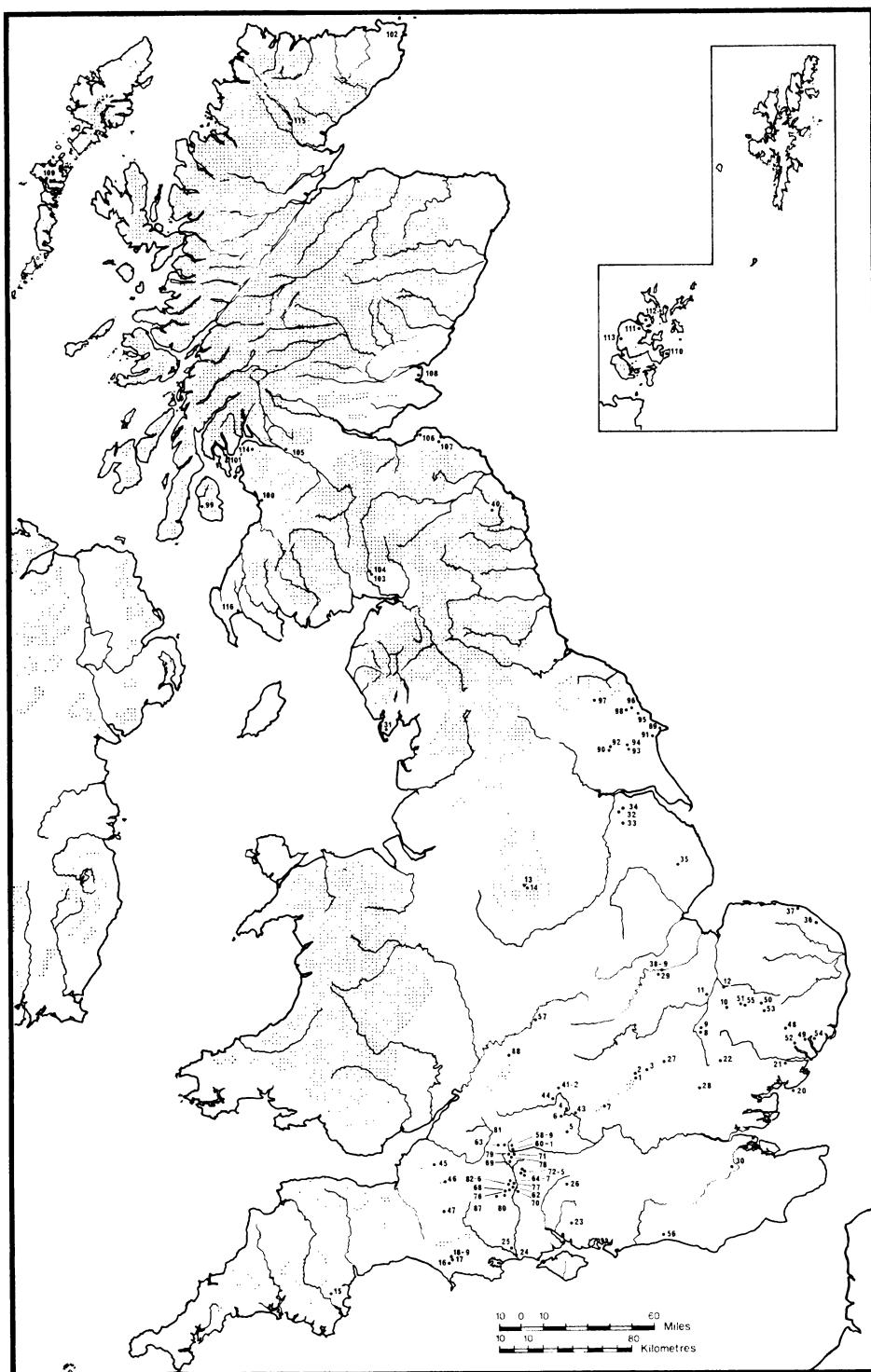


FIG. 96. Distribution of Grooved Ware sites in Britain

Because of the lack of territorial definition in relation to the ceramic substyles and the absence of any burial tradition it no longer seems appropriate to refer to the complex as the Rinyo-Clacton culture. Moreover, neither Rinyo nor Clacton can be regarded as typical of the whole ceramic tradition and hence the authors would prefer to return to the only element common to all styles, namely grooving, and refer to the general ceramic tradition as Grooved Ware.

To replace the Rinyo-Clacton culture we would employ the term sub-culture¹ to describe a stratum of the population bound together by a common mode of pottery manufacture and a strong tradition of ritual practice. That part of the population who manufactured Grooved Ware forms one strand of a complex society, whose other manifestations include users of Peterborough ceramics and Beaker groups, the inter-relationships of which have been well expressed recently by Dr D. L. Clarke as 'a complex pattern of mosaic and multilinear development and interaction'. The users of Grooved Ware should be regarded as a purely Neolithic phenomenon in that metal is not associated with their pottery, in that they continue and develop the ceremonial traditions begun by the bowl cultures in the third millennium and in that their non-ceramic associations largely originate amongst those same cultures, a view which is entirely consonant with the chronology now established by radiocarbon dates. Finally, despite the absence of clearly defined domestic settlements in southern Britain their society required communal centres and was sufficiently organized to undertake the construction of such major public works as Marden, the Sanctuary, Woodhenge and Durrington Walls.

GAZETTEER OF SITES²

England

BEDFORDSHIRE

I DUNSTABLE, FIVE KNOLLS, BARROW 2

1. N.G.R. TL 006209
2. Publications
C. D. Forde (1927) *Man*, No. 12
I. F. Smith (1956) 186, fig. 108

3. Nature of site
Barrow mound.

4. Collection: Luton Museum.

5. Finds: a. Ceramic

Two sherds of Grooved Ware from the mound. Western Neolithic, Ebbsfleet, Beaker and Collared Urn sherds also recovered from the mound.

b. Non-ceramic

No certain associations.

¹ The term sub-, part- or variant-culture is normally employed to describe a part of the total culture of a society which is distinctive of a segment of that society, e.g. an ethnic group, a social class group or a regional group.

² The sites of North Stoke, Oxon.; Whalley Cave, Derbs.; Mockbeggar, Sussex, and Quoyness, Sanday, have been excluded from this list on the grounds that the pottery from these sites is not indisputably Grooved Ware.



FIG. 97. Distribution of the Grooved Ware sub-styles in Britain

2 PUDDLEHILL

1. N.G.R. TL 009238
2. Publications
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 360-7. Information on unpublished material kindly supplied by Dr I. F. Smith.
3. Nature of site
Three pits and a post-hole within an area 3.6 m. × 9.1 m. A layer of charcoal containing material similar to that from the pits was recorded near a spring at a distance of 60.9 m.
4. Collection: Luton Museum.
5. Finds: a. Ceramic
Twenty sherds of Grooved Ware.
b. Non-ceramic
Flint: flakes and implements including a transverse arrowhead, scrapers, saws and an axe.
Stone: sandstone axe grinder.
Animal bones: pig, cow, sheep, deer, fox, bird.

3 WAULUD'S BANK, LEAGRAVE

1. N.G.R. TL 092247
2. Publications
J. F. Dyer (1955) *The Bedfordshire Archaeologist*, 1, No. 1, 9-16
I. F. Smith (1956) 186, fig. 109
J. F. Dyer (1964) *Beds. A. J.*, II, 1-15.
3. Nature of site
A univallate enclosure with internal bank some 18 acres in extent. The west side is formed by the River Lea.
4. Collection: Luton Museum.
5. Finds: a. Ceramic
Four decorated and thirteen undecorated sherds of Grooved Ware, from the ditch and old land surface beneath the bank of Site 1.
b. Non-ceramic
No certain associations.

BERKSHIRE

4 ABINGDON

1. N.G.R. SU 512982
2. Publications
E. T. Leeds (1928) *Ant. J.*, VIII, 475, pl. LXXIV, fig. 2h.
R. J. C. Atkinson, C. M. Piggott and N. K. Sandars (1951) *Excavations at Dorchester, Oxon.*, 67
I. F. Smith (1956) 186
3. Nature of site
?Upper ditch filling of causewayed enclosure.

4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Two sherds of Grooved Ware from the ditch, precise position not recorded.
- b. Non-ceramic
No certain associations.

5 CHURN PLAIN

1. N.G.R. SU 523826
2. Publications
H. J. E. Peake *et al.* (1936) *Tr. Newbury F. C.*, vii, 160-74
S. H. Warren *et al.* (1936) *P.P.S.*, ii, 193
I. F. Smith (1956) 186, fig. 110
3. Nature of site
Barrow mound.
4. Collection: Newbury Museum.
5. Finds: a. Ceramic
Eight sherds of Grooved Ware from the mound. Western Neolithic, Peterborough, Beaker and Food Vessel also recovered from the mound.
- b. Non-ceramic
No certain associations.

6 SUTTON COURTENAY

1. N.G.R. SU 488940
2. Publications
E. T. Leeds (1923) *Archaeologia*, lxxiii, 147-92
E. T. Leeds (1934) *Ant. J.*, xiv, 264-6
S. H. Warren *et al.* (1936) *P.P.S.*, ii, 193
I. F. Smith (1956) 186
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
Two pits.
4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Pit P produced sherds of two Grooved Ware vessels.
Pit T one Grooved Ware sherd.
- b. Non-ceramic
Pit P:
Flint: cores, flakes, hammerstones, scrapers, saws, transverse arrowhead.
Stone: Group VI axe.
Bone: point or awl.
Pit T:
Flint: scrapers and saws.
Baked clay: fragments of baked clay.

THE RINYO-CLACTON CULTURE RECONSIDERED
BUCKINGHAMSHIRE

271

7 LODGE HILL, SAUNDERTON,

1. N.G.R. SP 7800
2. Publications
J. F. Head (1955) *Early Man in South Buckinghamshire*, 52
3. Nature of site
Barrow mound.
4. Collection: Aylesbury Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware from the mound.
Sherds of Beaker and ?Rusticated Beaker also recovered from the mound.
b. Non-ceramic
No certain associations.

CAMBRIDGESHIRE

8 NEAR CAMBRIDGE

1. N.G.R. TL 473544
2. Publications
D. H. S. Frere (1943) *Ant. J.*, xxiii, 34-41
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 186
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
Pit.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Nine sherds of Grooved Ware.
b. Non-ceramic
Flint: flakes.
Animal bones: ox and sheep.

9 CHERRY HINTON

1. N.G.R. TL 4857
2. Publications
I. F. Smith (1956) 186, fig. 111
3. Nature of site
Pit.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Three sherds of Grooved Ware from pit beneath barrow and two plain sherds from primary silt of ditch. Weathered Southern British and Rusticated Beaker sherds were recovered from the upper silting of the ditch.
b. Non-ceramic
Flint: flakes, scraper and core.

10 CHIPPENHAM

1. N.G.R. TL 662711
2. Publications
C. S. Leaf (1936) *P.C.A.S.*, xxxvi, 134-56
I. F. Smith (1956) 186
3. Nature of site
Sherd accompanying a cremation deposit in a pit regarded by the excavator as the first secondary burial within a bowl barrow.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Single sherd of Grooved Ware found with secondary cremation.
b. Non-ceramic
No certain associations.

11 NEAR ELY

1. N.G.R. TL 5380
2. Publications
V.C.H. (1938), I, 295
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 186, fig. 113.
3. Nature of site
Stray find.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Two sherds of Grooved Ware, not necessarily found in association.
b. Non-ceramic
No certain associations.

12 SHIPPEA HILL, PLANTATION FARM

1. N.G.R. TL 644856
2. Publications
J. G. D. Clark (1933) *Ant. J.*, xiii, 266-96
I. F. Smith (1956) 186
3. Nature of site
Surface collection.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Three sherds of Grooved Ware. The site yielded also sherds of Beakers of European, Finger-Pinched, Barbed Wire and Southern British tradition as well as proto-Food-Vessel and Primary Collared Urn.
b. Non-ceramic
No certain associations.

DERBYSHIRE

13 ELTON

1. N.G.R. SK 2159
2. Publications
J. Radley and L. Cooper (1968) *D.A.J.*, LXXXVIII, 37-46
3. Nature of site
Surface collection.
4. Collection: in the possession of the excavators.
5. Finds: a. Ceramic
Single sherd of ?Grooved Ware.
b. Non-ceramic
No certain associations.

14 GREENLOW

1. N.G.R. SK 232580
2. Publications
T. G. Manby (1965) *D.A.J.*, LXXXV, 1-24
3. Nature of site
Cairn of single chambered megalithic structure approached by a short passage.
4. Collection: Derby Museum.
5. Finds: a. Ceramic
Four sherds of Grooved Ware from the cairn. Sherds of Beaker were also recovered from the cairn material.
b. Non-ceramic
No certain associations.

DEVON

15 TORBRYAN, THREE HOLES CAVE

1. N.G.R. SX 814675
2. Publications
A. Rosenfeld (1964) *Devon A.E.S.*, No. 22, 3-26
3. Nature of site
Cave.
4. Collection: Torquay and British Museum.
5. Finds: a. Ceramic
Sherd of Grooved Ware. Unstratified.
b. Non-ceramic
Bone: bulbed bone pin possibly associated.

DORSET

16 MAIDEN CASTLE

1. N.G.R. SY 670884
2. Publications
R. E. M. Wheeler (1943) *Maiden Castle, Dorset*. Soc. Ant. Lond. Reports of Research Committee, XII, 143

S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C

3. Nature of site
Pit and surface find.
4. Collection: Dorchester Museum.
5. Finds: a. Ceramic
Five sherds of Grooved Ware from the upper filling of a pit yielding also 'A Beaker'.
The lower filling of the pit yielded 'A Beaker and Neolithic B'.
Single sherds of Grooved Ware came from the turf line sealing the ditch and the uppermost filling of the ditch itself.
- b. Non-ceramic
No certain associations.

17 MAUMBURY RINGS

1. N.G.R. SY 691900
2. Publications
S. H. Warren *et al.* (1936) *P.P.S.*, II, 200
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
Henge monument comprising a ring of shafts 54.8 m. in diameter with external bank 84 m. diameter.
4. Collection: Dorchester Museum.
5. Finds: a. Ceramic
Single Grooved Ware sherd from shaft VI.
- b. Non-ceramic
Flint: flakes, scrapers, plano-convex knife, bifacially flaked knife, denticulated flake, projectile point.
Chalk: carved blocks, phallus, balls.
Antler: picks and rakes.
Animal bones: pig and ox.

18 POUNDBURY I

1. N.G.R. SY 682912
2. Publications
K. M. Richardson (1940) *Ant. J.*, xx, 432
R. A. H. Farrar and I. H. Longworth (1965) *P.D.N.H. & A.S.*, 86, 106-7
3. Nature of site
Hearth.
4. Collection: Dorchester Museum.
5. Finds: a. Ceramic
Single Grooved Ware sherd from hearth beneath turf line sealed by the outer bank.
Single Grooved Ware sherd from ditch sealed beneath old turf line beneath the inner rampart.
- b. Non-ceramic
Flint: flakes, transverse arrowhead, scraper.

19 POUNDBURY 2

1. N.G.R. SY 685911
2. Publications
F. Roe (1968), 158
Info. from C. Green
3. Nature of site
Pits.
4. Collection: in possession of excavator.
5. Finds: a. Ceramic
Grooved Ware, no data.
b. Non-ceramic
Largely unpublished save for reference above to a stone axe of Group I in association with the Grooved Ware.

ESSEX

20 CLACTON, LION POINT

1. N.G.R. TM 142127
2. Publications
S. H. Warren *et al.* (1936) *P.P.S.*, II, 191-3
I. F. Smith (1956) 186
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
I. H. Longworth, G. J. Wainwright and K. E. Wilson (1971) *B.M.Q.*, xxxv, 93-124
3. Nature of site
Pits or 'cooking-holes'.
4. Collection: British Museum.
5. Finds: a. Ceramic
133 sherds of Grooved Ware were recovered from the 'cooking-holes' and a further 173 were recovered from Area 4. Eighteen sherds of Grooved Ware recovered from Area 3.
b. Non-ceramic
Flint: flakes, cores, scrapers, polished axe fragments, transverse arrowheads, knives, saws, borers, flaked axe.
Stone: fragment of Group I axe.

21 LAWFORD

1. N.G.R. TM 088308
2. Publications
Unpublished (information kindly supplied by Dr. I. F. Smith).
3. Nature of site
Probably from an old land surface beneath a barrow mound which was surrounded by a timber palisade.
4. Collection: Colchester Museum.
5. Finds: a. Ceramic
Grooved Ware.
A small quantity of Windmill Hill sherds also recovered from the site.

b. Non-ceramic

Flint: flakes, cores, transverse arrowheads, awls, borers, polished discoidal knife, knives, burins, saws, denticulated flakes, flakes from polished axes, flakes with rubbed edges, scrapers.

22 NEWPORT

1. N.G.R. TL 523327

2. Publications

S. H. Warren *et al.* (1936) *P.P.S.*, II, 193S. H. Warren (1945) *Essex Naturalist*, xxvii, 276N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379

I. F. Smith (1956) 186

3. Nature of site

Pit.

4. Collection: British Museum.

5. Finds: a. Ceramic

Twenty plus sherds and fragments of heavily-weathered Grooved Ware.

b. Non-ceramic

Flint: cores, flakes, scrapers, saws, denticulated flake, chopper, transverse arrowhead.*Stone*: quartzite hammerstone.

HAMPSHIRE

23 BISHOP'S WALTHAM

1. N.G.R. SU 556174

2. Publications

P. Ashbee (1957) *P.P.S.*, xxiii, 137-66

3. Nature of site

Barrow mound.

4. Collection: Winchester Museum.

5. Finds: a. Ceramic

Sherds of Grooved Ware and Western Neolithic from the body of the mound.

b. Non-ceramic

No certain associations.

24 CHRISTCHURCH, LATCH FARM

1. N.G.R. SZ 1692

2. Publications

J. B. Calkin (1951), *P.D.N.H.A.S.*, 73, 61S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C

I. F. Smith (1956) 186 and fig. 115

N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379

3. Nature of site

Pit.

4. Collection: Red House Museum, Christchurch.

5. Finds: a. Ceramic
Thirteen sherds of Grooved Ware together with sherds of Rusticated Beaker.
- b. Non-ceramic
No certain associations.

25 HURN

1. N.G.R. SZ 1198
2. Publications
C. M. Piggott (1943) *Proc. Hants., F.C.*, xv, 248-62
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 186
3. Nature of site
Barrow mound.
4. Collection: Red House Museum, Christchurch.
5. Finds: a. Ceramic
Eight sherds of Grooved Ware found together in a small area in the barrow mound.
- b. Non-ceramic
No certain associations.

26 ROUNDWOOD

1. N.G.R. SU 507444
2. Publications
O. G. S. Crawford (1922) *Proc. Hants., F.C.*, ix, 189-206
S. H. Warren *et al.* (1936) *P.P.S.*, II, 193
I. F. Smith (1956) 186
3. Nature of site
Barrow mound.
4. Collection: Winchester Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware from the body of the mound. Sherds of Beaker including Wessex/Middle Rhine type also recovered from the mound.
- b. Non-ceramic
No certain associations.

HERTFORDSHIRE

27 LETCHWORTH, BLACKHORSE ROAD

1. N.G.R. TL 2132
2. Publications
Unpublished
3. Nature of site
Pit and post-hole.
4. Collection: Letchworth Museum.

5. Finds: a. Ceramic
 - Pit 12 produced 20 sherds of a single Grooved Ware vessel.
 - Post-hole 88 produced sherds of a single Grooved Ware vessel.
- b. Non-ceramic
 - No known associations.

28 PISHOBURY

1. N.G.R. TL 4713
2. Publications
 - S. H. Warren *et al.* (1936) *P.P.S.*, II, 193
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, fig. 57, 2 and 3
 - I. F. Smith (1956) 186
 - N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
 - Pits.
4. Collection: Hertford Museum.
5. Finds: a. Ceramic
 - Sherds of three Grooved Ware vessels.
- b. Non-ceramic
 - Flint*: scrapers, saws and transverse arrowhead.
 - Bone*: points or awls.

HUNTINGDONSHIRE

29 ORTON LONGUEVILLE

1. N.G.R. TL 1796
2. Publications
 - S. Piggott (1931) *Arch. J.*, LXXXVIII, 151
 - S. H. Warren *et al.* (1936) *P.P.S.*, II, 193
 - I. F. Smith (1956) 186
3. Nature of site
 - Pit.
4. Collection: G. Wyman Abbott Collection.
5. Finds: a. Ceramic
 - Sherds of Grooved Ware associated with sherds of Mortlake Ware.
- b. Non-ceramic
 - None.

KENT

30 EAST MALLING, SNODLAND

1. N.G.R. TQ 703570
2. Publications
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
 - I. F. Smith (1956) 186
 - N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379

3. Nature of site
Pit.
4. Collection: Maidstone Museum.
5. Finds: a. Ceramic
Sherds from a single Grooved Ware vessel.
- b. Non-ceramic
Flint: barbed and tanged arrowhead.

LANCASHIRE

31 WALNEY ISLAND

1. N.G.R. SD 1771
2. Publications
F. Barnes (1956) *T.C. & W.A. & A.S.*, LV, 1-16
3. Nature of site
Stray find.
4. Collection: Barrow.
5. Finds: a. Ceramic
Sherds of Grooved Ware recovered from Site VI.
- b. Non-ceramic
No certain associations.

LINCOLNSHIRE

32 CROSBY WARREN

1. N.G.R. SE 9012
2. Publications
D. N. Riley (1957) *P.P.S.*, xxiii, 48, fig. 6, 34
3. Nature of site
Surface collection.
4. Collection: Scunthorpe Museum.
5. Finds: a. Ceramic
Sherd of Grooved Ware. Same area has yielded sherds of Finger-Pinched, Finger-nail and All Over Cord Beaker.
- b. Non-ceramic
No certain associations.

33 MANTON WARREN

1. N.G.R. SE 9304
2. Publications
D. N. Riley (1957) *P.P.S.*, xxiii, 46, fig. 3.13
3. Nature of Site
Surface collection.
4. Collection: Scunthorpe Museum.

5. Finds: a. Ceramic
Sherds of Grooved Ware recovered from a restricted area.
- b. Non-ceramic
No certain associations.

34 RISBY WARREN

1. N.G.R. SE 921132
2. Publications
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
D. N. Riley (1957) *P.P.S.*, xxiii, 48, fig. 3, 14 and fig. 4, 1
3. Nature of site
Surface collection.
4. Collection: Scunthorpe and British Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware.
- b. Non-ceramic
No certain associations.

35 SALMONBY

1. N.G.R. TF 322747
2. Publications
Unpublished (information from the excavator, Mr G. V. Taylor).
3. Nature of site.
Pits.
4. Collection: in the possession of the excavator.
5. Finds: a. Ceramic
Grooved Ware.
- b. Non-ceramic
No known associations.

NORFOLK

36 EDINGTHORPE

1. N.G.R. TG 3132
2. Publications
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 187, fig. 117
3. Nature of site
Pit.
4. Collection: Norwich Castle Museum.
5. Finds: a. Ceramic
Stray finds of Grooved Ware, but one sherd from pit also containing Peterborough Ware.
- b. Non-ceramic
No certain associations.

37 WEST RUNTON

1. N.G.R. TG 185432
2. Publications
 - A. S. R. Gell (1949) *Ant. J.*, xxix, 81
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
 - I. F. Smith (1956) 187
3. Nature of site
 - Pit.
4. Collection: Norwich Castle Museum.
5. Finds: a. Ceramic
 - Sherds of a single Grooved Ware vessel.
 - b. Non-ceramic
 - No certain associations.

NORTHAMPTONSHIRE

38 PETERBOROUGH, FENGATE

1. N.G.R. TL 2098
2. Publications
 - E. T. Leeds (1922) *Ant. J.*, II, 226-7
 - I. F. Smith (1956) 187, fig. 118
 - N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
 - Pits.
4. Collection: Wyman Abbott Collection, Institute of Archaeology, London.
5. Finds: a. Ceramic
 - Six sherds of Grooved Ware.
 - b. Non-ceramic
 - No certain associations.

39 PETERBOROUGH, TEBBS PITS

1. N.G.R. TL 1999
2. Publications
 - I. F. Smith (1956) 187, fig. 119
3. Nature of site
 - A single pit with a cremation.
4. Collection: Wyman Abbott Collection, Institute of Archaeology, London.
5. Finds: a. Ceramic
 - Sherds of a single Grooved Ware vessel.
 - b. Non-ceramic
 - No certain associations.

NORTHUMBERLAND

40 OLD YEAVING, WOOLER

1. N.G.R. NT 9928

2. Publications
R. J. C. Atkinson in S. Piggott (1962) *The Prehistoric Peoples of Scotland*, 36
3. Nature of site
Stray find.
4. Collection: in the possession of the excavator.
5. Finds: a. Ceramic
Sherds of Grooved Ware, no data.
b. Non-ceramic
None.

OXFORDSHIRE

41 CASSINGTON, TOLLEY'S PIT

1. N.G.R. SP 453103
2. Publications
S. H. Warren *et al.* (1936) *P.P.S.*, II, 194
E. T. Leeds (1940) *Oxoniensia*, V, 5-6
I. F. Smith (1956) 187
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
Pit.
4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Sherds of two Grooved Ware vessels.
b. Non-ceramic
None.

42 CASSINGTON, Pit 1

1. N.G.R. SP 4510
2. Publications
I. F. Smith (1956) 187
3. Nature of site
Pit.
4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Three sherds of Grooved Ware.
b. Non-ceramic
None.

43 DORCHESTER, SITE 1

1. N.G.R. SU 569956
2. Publications
R. J. C. Atkinson, C. M. Piggott and N. Sandars (1951) *Excavations at Dorchester, Oxon.*, 110
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 187
3. Nature of site
A ring ditch with internal bank surrounding a penannular setting of 13 pits.

4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Two sherds of Grooved Ware: one from the construction phase, sealed beneath the bank, on the old turf line apparently contemporary with Abingdon Ware; second sherd from depth of 1.2 m. in the ditch fill.
- b. Non-ceramic
No certain associations.

44 STANTON HARCOURT, PARTRIDGE'S PIT

1. N.G.R. SP 401056
2. Publications
N. Thomas (1955) *Oxoniensia*, xx, 4
I. F. Smith (1956) 187
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
Two pits.
4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
Pit A: sherds from a single Grooved Ware vessel
Pit B: two sherds of Grooved Ware.
- b. Non-ceramic
Pit A:
Flint: flakes
Pit B:
Flint: flake
Animal bone: pig.

SOMERSET

45 BEN BRIDGE, COMPTON MARTIN

1. N.G.R. ST 555591
2. Publications
Unpublished (information kindly supplied by P. A. Rahtz and A. M. ApSimon).
3. Nature of site
Pit.
4. Collection: Bristol Museum.
5. Finds: a. Ceramic
Sherds of a single Grooved Ware vessel.
- b. Non-ceramic
Flint: flakes and scraper.

46 COCKLES WOOD, NETTLEBRIDGE

1. N.G.R. ST 641475
2. Publications
H. N. Savory (1949) *A.N.L.*, Feb., No. 10, 9
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C

3. Nature of site
Cave.
4. Collection: unknown.
5. Finds: a. Ceramic
Grooved Ware, no data.
b. Non-ceramic
No certain associations.

47 SOUTH CADBURY CAMP

1. N.G.R. ST 628252
2. Publications
Unpublished.
3. Nature of site
Stray find.
4. Collection: in the possession of the excavator.
5. Finds: a. Ceramic
Single Grooved Ware vessel.
b. Non-ceramic
No certain associations.

SUFFOLK

48 CREETING ST. MARY

1. N.G.R. TM 094560
2. Publications
G. Maynard (1951) *P.S.I.A.N.H.*, xxv, 209-10
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 187
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
Pits or 'holes'.
4. Collection: Ipswich Museum.
5. Finds: a. Ceramic
Hole 1. 22 sherds of Grooved Ware.
2. 4 sherds of Grooved Ware plus one shouldered sherd
? Peterborough or Rusticated Beaker.
3. 4 weathered fragments of Grooved Ware.
4. 40 sherds of Grooved Ware.
5. One restorable vessel plus 20 other sherds of Grooved Ware.
6. 20 sherds of Grooved Ware.
b. Non-ceramic
Hole 1. Cores, flakes, awl and a polished edge flint knife.
2. Core, flakes, saws and a scraper.
3. Flakes and a scraper.
4. Flakes, cores, scrapers, fabricators, awl, saw and a transverse arrowhead.
5. Cores, flakes, scrapers, saws, awl and a transverse arrowhead.
6. Cores, flakes, scrapers, awls and saws.

49 GREAT BEALINGS

1. N.G.R. TM 2348
2. Publications
I. F. Smith (1956) 187
3. Nature of site
Unknown.
4. Collection: Ipswich Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware, context uncertain.
Large number of Beaker and other wares from the same site.
b. Non-ceramic
None.

50 HONINGTON

1. N.G.R. TL 915748
2. Publications
J. F. S. Stone (1949) *P.P.S.*, xv, 122-7
C. I. Fell (1951) *P.C.A.S.*, xlv, 34-40
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. F. Smith (1956) 187
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
A number of dark patches, oval or circular in plan and averaging 3 m. in diameter, together with seven pits.
4. Collection: Museum of Archaeology and Ethnology, Cambridge.
5. Finds: a. Ceramic
Sherds of Grooved Ware stratified above Peterborough Ware.
b. Non-ceramic
Flint: flakes, transverse arrowheads, awls, fabricator, polished flint knife, leaf arrowhead, fragment of polished flint axe, scrapers and saws.

51 ICKLINGHAM

1. N.G.R. TL 7772
2. Publications
S. Piggott (1931) *Arch. J.*, lxxxviii, 124-6
I. F. Smith (1956) 187
3. Nature of site
Unknown.
4. Collection: British Museum.
5. Finds: a. Ceramics
Two sherds of Grooved Ware associated with Peterborough Ware.
b. Non-ceramic
None.

52 IPSWICH, DALES ROAD, BRICKFIELD

1. N.G.R. TM 15564658
2. Publications
I. F. Smith (1956) 187, figs. 124-5
3. Nature of site
Two pits.
4. Collection: Ipswich Museum.
5. Finds: a. Ceramic
 1. Sherds of Grooved Ware recovered from the area in 1940.
 2. Sherds of a further three Grooved Ware vessels recovered from the area in 1960.
 b. Non-ceramic
 1. Flakes and cores.
 2. Flake.

53 PAKENHAM, GRIMSTONE END

1. N.G.R. TL 93546900
2. Publications
I. F. Smith (1956) 187, fig. 126
3. Nature of site
Old land surface beneath a barrow.
4. Collection: Ipswich Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware.
b. Non-ceramic
No certain associations.

54 SUTTON HOO

1. N.G.R. TM 287487
2. Publications
Unpublished
3. Nature of site
Remains of pit and unstratified.
4. Collection: British Museum.
5. Finds: a. Ceramic
Eleven sherds of Grooved Ware.
b. Non-ceramic
No certain associations.

55 WEST STOW

1. N.G.R. TL 798717
2. Publications
Unpublished.
3. Nature of site
Surface collection over an area of some 5 acres after ploughing.
4. Collection: in the possession of Mr Moss.

5. Finds: a. Ceramic
Seven sherds of Grooved Ware.
Two sherds of Peterborough Ware from the same area.
- b. Non-ceramic
Associations with Grooved Ware are not certain but seem likely.
Flint: flakes, cores, transverse arrowheads, axes, adzes, cleaver, burin, awls, knives, saws, scrapers, denticulated flakes and projectile point.

SUSSEX

56 FINDON, CHURCH HILL FLINT MINES

1. N.G.R. TQ 111082
2. Publications
I. F. Smith (1956) 187
3. Nature of site
Filling of shaft of flint mine.
4. Collection: Worthing Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware
- b. Non-ceramic
None.

WARWICKSHIRE

57 BARFORD, SITE B

1. N.G.R. SP 289624
2. Publications
I. F. Smith (1969) *Trans. Birmingham Arch. Soc.*, 83, 36
3. Nature of site
Surface find.
4. Collection: Warwick County Museum.
5. Finds: a. Ceramic
Two undecorated sherds of ?Grooved Ware.
- b. Non-ceramic
None.

WILTSHIRE

58 AVEBURY

1. N.G.R. SU 103700
2. Publications
I. F. Smith (1965) *Windmill Hill and Avebury*, 224
3. Nature of site
From the old land surface under the bank of an enclosure surrounding stone circles.
4. Collection: Devizes Museum.

5. Finds: a. Ceramic
 Nine sherds of Grooved Ware found on the old ground surface beneath the bank in its south-west sector.
 Sherds of Windmill Hill and Peterborough Ware were found in the same context.
- b. Non-ceramic
 No certain associations.
- 59 AVEBURY, G55
1. N.G.R. SU 10246788
 2. Publications
 I. F. Smith (1965) *W.A.M.*, LX, 24-46
 3. Nature of site
 Derived from the old land surface beneath a barrow.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
 Eight sherds of Grooved Ware from the ploughsoil derived from pre-barrow occupation.
 - b. Non-ceramic
 No certain associations.
- 60 AVEBURY, WEST KENNET AVENUE
1. N.G.R. SU 112684
 2. Publications
P.P.S., I (1935), 134
 S. H. Warren *et al.* (1936) *P.P.S.*, II, 194
 I. F. Smith (1965) *Windmill Hill and Avebury*, 200-16 and 234
 3. Nature of site
 Pits and holes.
 4. Collection: Avebury Museum.
 5. Finds: a. Ceramic
 Sherds of Grooved Ware were recovered from the area of occupation together with a few sherds of Windmill Hill Ware, Beaker and a much larger quantity of Peterborough Ware. Grooved Ware sherds were found in Pit 1, together with a sherd of Peterborough Ware at a lower level than a Beaker sherd, and in holes 1 and 9.
 - b. Non-ceramic
 Association with Grooved Ware not certain except in Hole 1.
 Pit 1:
Flint: flakes, cores, transverse arrowhead, scrapers and burin.
Bone: tip of pin.
Animal bones: ox, pig, red deer, roe deer.
 - Hole 1:
Flint: flakes, core, scrapers, saw.
Stone: fragment of Group VII axe.
 - Hole 9:
Flint: flakes, cores, transverse arrowheads and saw.
Animal bone: ox.

61 AVEBURY, WEST KENNET AVENUE

1. N.G.R. SU 109690
2. Publications
P.P.S., I (1935), 134
S. H. Warren *et al.* (1936) *P.P.S.*, II, 194
I. F. Smith (1965) *Windmill Hill and Avebury*, 232, fig. 79, P.367
3. Nature of site
Stone Avenue connecting Avebury with The Sanctuary on Overton Hill.
4. Collection: Avebury Museum.
5. Finds: a. Ceramic
A sherd of Grooved Ware was found in stone-hole 15b.
b. Non-ceramic
No certain associations.

62 AMESBURY, WOODLANDS

1. N.G.R. SU 151431
2. Publications
J. F. S. Stone and W. E. V. Young (1948) *W.A.M.*, LII, 287-306
J. F. S. Stone (1949) *P.P.S.*, XV, 122-7
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, XXX, 379
3. Nature of site
Four pits.
4. Collection: Salisbury Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware recovered from all four pits.
b. Non-ceramic
Flint: flakes, cores, scrapers, transverse arrowheads, saws, fabricator, knife and axe.
Stone: Group VII axe.
Bone: pins and awl.
Antler: picks.
Animal bones: ox, pig, sheep, dog, fox and fish.
Marine shells: scallop, mussel and oyster.

63 CHERHILL

1. N.G.R. SU 03117005
2. Publications
W.A.M. (1968), 63, 107
3. Nature of site
In the upper silt of a continuous linear hollow of irregular shape and depth.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware associated with sherds of Ebbsfleet, Mortlake and Beaker lay in the upper silt of the hollow above Windmill Hill Ware in the primary silt. The hollow was later intersected by two ditches with Mortlake Ware in primary position.
b. Non-ceramic
No certain associations.

- 64 DURRINGTON WALLS (ENCLOSURE, SOUTHERN CIRCLE AND NORTHERN CIRCLE)
1. N.G.R. SU 150437
 2. Publications
This report.
- 65 DURRINGTON WALLS, STRUCTURE A
1. N.G.R. SU 152435
 2. Publications
This report.
- 66 DURRINGTON WALLS, STRUCTURE B
1. N.G.R. SU 152435
 2. Publications
This report.
- 67 DURRINGTON WALLS, PACKWAY ENCLOSURE
1. N.G.R. SU 152441
 2. Publications
This report.
- 68 KING BARROW WOOD
1. N.G.R. SU 13124206
 2. Publications
F. de M. Vatcher (1969) *Antiquity*, XLIII, 310-11
 3. Nature of site
Pit.
 4. Collection: Avebury Museum.
 5. Finds: a. Ceramic
Sherds of Grooved Ware.
b. Non-ceramic
Chalk: small chalk lumps marked with grooves and two incised chalk plaques.
Antler: pick.
Animal bones: various.
- 69 MARDEN
1. N.G.R. SU 090580
 2. Publications
Wainwright, *Current Archaeology* (1969) Vol. II, No. 6, 152-5
Wainwright, *Ant.* (1970) XLIV, 56-7
 3. Nature of site
From the ditch of a 35 acre enclosure with an external bank and from the post-holes of a circular timber structure 10.5 m. in diameter within the north entrance to the enclosure.
 4. Collection: in the possession of the excavator.

5. Finds: a. Ceramic
Sherds of Grooved Ware from ditch terminals, post-holes of the circular timber structure and a pit.
- b. Non-ceramic
Flint: flakes, cores, scrapers, transverse arrowheads, fabricator, borer and knife.
Antler: picks and rakes.
Human bones: the upper half of a skeleton from the ditch.
Animal bones: cattle, pig, sheep, horse and red deer.

70 RATFYN, NEAR AMESBURY

1. N.G.R. SU 15954205
2. Publications
Sir L. Weaver (1921) *Ant. J.*, I, 125-30
J. F. S. Stone (1935) *W.A.M.*, XLVII, 55-67
S. H. Warren *et al.* (1936) *P.P.S.*, II, 196
N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 379
3. Nature of site
A group of five pits.
4. Collection: Salisbury Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware were recovered from the 1920 excavations and from Pit 5.
- b. Non-ceramic
Flints: flakes, cores, pot-boilers, saws, transverse arrowheads.
Stone: an axe-hammer.
Animal bones: ox, pig, red deer, sheep, brown bear.
Marine shells: large scallop shell.

71 THE SANCTUARY, OVERTON HILL

1. N.G.R. SU 11926802
2. Publications
M. E. Cunnington (1931) *W.A.M.*, XLV, 300-35
S. Piggott (1940) *Arch. J.*, xcvi, 193-222
S. Piggott (1946) *W.A.M.*, LI, 470-1
I. F. Smith (1965) *Windmill Hill and Avebury*, 244-7
3. Nature of site
A multi-period timber structure with a final phase of stone. The earlier structures have been interpreted as the remains of roofed buildings.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware. Windmill Hill, Ebbsfleet, Mortlake/Fengate and Beaker sherds including All Over Cord also recovered from the site.
A Barbed Wire Beaker with a crouched burial was found in a grave intersecting Stone-hole 12 of the C Ring.
- b. Non-ceramic
No certain associations.

72 SNAIL DOWN III

1. N.G.R. SU 21685205
2. Publications
N. Thomas and C. Thomas (1956) *W.A.M.*, LVI, 137-9
P.P.S., xxiv (1958), 214
3. Nature of site
Barrow mound.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Single sherd of Grooved Ware in material derived from pre-barrow occupation. In same context sherds of European and All Over Cord Beaker.
b. Non-ceramic
No certain associations.

73 SNAIL DOWN VIII

1. N.G.R. SU 21785211
2. Publications
N. Thomas and C. Thomas (1956) *W.A.M.*, LVI, 142
P.P.S., xxiv (1958), 214
3. Nature of site
Barrow mound.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Single sherd of Grooved Ware derived from pre-barrow occupation.
b. Non-ceramic
No certain associations.

74 SNAIL DOWN X

1. N.G.R. SU 217521
2. Publications
P.P.S., xxiv (1958), 214
3. Nature of site
Barrow mound.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Single sherd of Grooved Ware derived from pre-barrow occupation material.
Sherd of Southern British 2 and domestic Beaker from the same context.
b. Non-ceramic
No certain associations.

75 SNAIL DOWN XV

1. N.G.R. SU 22045207
2. Publications
N. Thomas and C. Thomas (1956) *W.A.M.*, LVI, 143-6

3. Nature of site
Barrow mound.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Four sherds of Grooved Ware from the material of the mound derived from pre-barrow occupation. Sherds of Beaker and Rusticated Beaker from the same context.
- b. Non-ceramic
No certain associations.

76 STONEHENGE

1. N.G.R. SU 123422
2. Publications
S. Piggott (1936) *Ant.*, x, 221-2
S. H. Warren (1936) *P.P.S.*, II, 196
R. J. C. Atkinson (1956) *Stonehenge*, 80
3. Nature of site
A circular bank with an external ditch 115 m. in diameter which is approached by a single entrance. Inside the bank is the circle of 56 Aubrey Holes 87 m. in diameter and a timber structure may have existed in the centre of the enclosure.
4. Collection: Salisbury Museum.
5. Finds: a. Ceramic
Five sherds of Grooved Ware found in the primary silt of the ditch.
- b. Non-ceramic
Flint: fabricators.
Stone: one macehead.
Chalk: carved chalk block.
Bone: pins.
Antler: pick.

77 TOTTERDOWN, NEAR AMESBURY

1. N.G.R. SU 152430
2. Publications
M. E. Cunnington (1935) *W.A.M.*, XLVII, 267
S. H. Warren *et al.* (1936) *P.P.S.*, II, 196
3. Nature of site
Recorded in soil thrown out of a pit which contained a crouched skeleton.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
Four undecorated sherds of Grooved Ware.
- b. Non-ceramic
None.

78 WEST KENNET LONG BARROW

1. N.G.R. SU 10496774
2. Publications
S. Piggott (1962) *The West Kennet Long Barrow*, 34, 42-4

3. Nature of site
From the blocking material of the chambers and passage of a Cotswold-Severn chambered tomb.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Sherds of Grooved Ware from the secondary filling of the burial chambers. From the same context Ebbsfleet, Mortlake and Fengate Ware, sherds of Beaker including All Over Cord, European and Finger Nail.
 - b. Non-ceramic
No certain associations.
- 79 WEST OVERTON, G6B
1. N.G.R. SU 11966835
 2. Publications
I. F. Smith and D. D. A. Simpson (1966) *P.P.S.*, xxxii, 122-55
 3. Nature of site
Barrow mound.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Sherds from 24 Grooved Ware vessels recovered from the pre-barrow occupation. Sherds of Windmill Hill, Ebbsfleet, Mortlake and Fengate Ware and Beaker.
 - b. Non-ceramic
No certain associations.
- 80 WILSFORD, G51
1. N.G.R. SU 11494047
 2. Publications
F. K. Annable and D. D. A. Simpson (1964) *Guide Catalogue of the Neolithic and Bronze Age Collections in Devizes Museum*, 36, No. 10
 3. Nature of site
Ditch of bowl barrow.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Sherds of Grooved Ware vessel.
 - b. Non-ceramic
None.
- 81 WINDMILL HILL
1. N.G.R. SU 087714
 2. Publications
S. H. Warren *et al.* (1936) *P.P.S.*, ii, 194
I. F. Smith (1965) *Windmill Hill and Avebury*, 78-80
 3. Nature of site
From the late silts of the ditches of a causewayed enclosure.
 4. Collection: Avebury Museum.

5. Finds: a. Ceramic
 Sherds of Grooved Ware mainly from the outer ditch, layer 2. This layer contained sherds of Beaker, evolved Peterborough Ware and Primary Collared Urn. C14 date (BM-75) 1540 ± 150 B.C.
- b. Non-ceramic
 No certain associations but part of a bone pin with a lateral loop may well belong with the Grooved Ware. The abundant flint and stone artifacts found in the same level could equally well be associated with the other Late Neolithic and Early Bronze Age ceramics.

82 WOODHENGE

1. N.G.R. SU 15064338
2. Publications
 M. E. Cunnington (1929) *Woodhenge*
 S. H. Warren *et al.* (1936) *P.P.S.*, II, 196
 N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 380
3. Nature of site
 A circular enclosure 67 m. in diameter surrounded by a ditch with an external bank and one entrance. The enclosure contained six concentric rings of post-holes which have been interpreted as supports for the roof of a large building.
4. Collection: Devizes Museum.
5. Finds: a. Ceramic
 Sherds of Grooved Ware found on the bottom of the ditch, in the old turf line under the bank and in some of the post-holes. Windmill Hill Ware found beneath the bank. Beaker sherds recovered from three of the post-holes. Sherds of Wessex/Middle Rhine and European Beaker found just beneath the lowest old turf line in the ditch.
- b. Non-ceramic
Flint: flakes, cores, transverse, leaf and barbed and tanged arrowheads, fabricators, awls, knives, projectile points, denticulated flakes, scrapers, an adze and the butt of a chipped flint axe.
Stone: axes of Group I.
Chalk: miniature axes, cups, grooved, perforated and scraped blocks.
Bone: awls and pins.
Antler: picks.
Human bones: random specimens from ditch and two post-holes.
Animal bones: ox, pig, sheep, dog, deer, fox, cat, weasel.
Marine shell: mussel shell.

83 WOODHENGE, CIRCLE 1

1. N.G.R. SU 15134323
2. Publications
 M. E. Cunnington (1929) *Woodhenge*, 42-5
 N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 380
3. Nature of site
 Pits and primary silt of barrow ditch.

4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Two sherds of Grooved Ware were recovered from the primary silt of the inner ditch and further sherds were recovered from Holes 1, 2 and 4.
 - b. Non-ceramic
No certain associations.
- 84 WOODHENGE, CIRCLE 2
1. N.G.R. SU 15134326
 2. Publications
M. E. Cunnington (1929) *Woodhenge*, 45-7
 3. Nature of site
Pits beneath a round barrow, one of which contained a cremation.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Sherds of Grooved Ware recovered from Pits 29 and 30.
 - b. Non-ceramic
None.
- 85 WOODHENGE, CIRCLE 3
1. N.G.R. SU 15114328
 2. Publications
M. E. Cunnington (1929) *Woodhenge*, 47
 3. Nature of site
Old land surface beneath a barrow and bottom of the ditch of the latter.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Grooved Ware recovered from the old turf line and bottom of the ditch.
 - b. Non-ceramic
None.
- 86 WOODHENGE, CIRCLE 4
1. N.G.R. SU 15104330
 2. Publications
M. E. Cunnington (1929) *Woodhenge*, 48
 3. Nature of site
Ditch of a round barrow.
 4. Collection: Devizes Museum.
 5. Finds: a. Ceramic
Grooved Ware recovered from the old turf line and beneath it.
 - b. Non-ceramic
No certain associations.
- 87 WYLYE, B2
1. N.G.R. SU 01493939

2. Publications
 - A. D. Passmore (1940) *W.A.M.*, XLIX, 117-9
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site

Barrow mound.
4. Collection: Ashmolean Museum.
5. Finds: a. Ceramic
 - Two sherds of Grooved Ware from the body of the mound.
 - Sherds of Peterborough Ware and Beaker in same context.
- b. Non-ceramic

No certain associations.

WORCESTERSHIRE

88 BROADWAY

1. N.G.R. SP 1037
2. Publications
 - S. H. Warren *et al.* (1936) *P.P.S.*, II, 196
 - N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 380
3. Nature of site

Pit.
4. Collection: private hands (1957).
5. Finds: a. Ceramic
 - Three sherds of Grooved Ware.
- b. Non-ceramic

No recorded associations.

YORKSHIRE

89 BEACON HILL, FLAMBOROUGH

1. N.G.R. TA 226693
2. Publications
 - T. G. Manby (1964) *Y.A.J.*, 41, 199
3. Nature of site

Scatter of occupation debris.
4. Collection: Scarborough Museum.
5. Finds: a. Ceramic
 - Single sherd of Grooved Ware found above Beaker horizon.
- b. Non-ceramic

No certain associations.

90 CALLIS WOLD C70

1. N.G.R. SE 82125676
2. Publications
 - T. G. Manby (1958) *Ant. J.*, xxxviii, 234, fig. 8

3. Nature of site
Barrow mound.
4. Collection: Hull Museum.
5. Finds: a. Ceramic
Single sherd of Grooved Ware. Position in the barrow unknown.
b. Non-ceramic
No certain associations.

91 CARNABY TEMPLE

1. N.G.R. TA 1465
2. Publications
Unpublished.
3. Nature of site
Unknown.
4. Collection: Messrs C. and E. Grantham's Museum, Driffield.
5. Finds: a. Ceramic
Grooved Ware.
b. Non-ceramic
Unknown.

92 COT NAB, GARROWBY HILL

1. N.G.R. SE 824570
2. Publications
M.P.B.W. Excavations: Annual Report (1966), 8
3. Nature of site
From old land surface under barrow.
4. Collection: in the possession of the excavator.
5. Finds: a. Ceramic
Grooved Ware, no data.
b. Non-ceramic
No certain associations.

93 CRAIKE HILL, GARTON SLACK

1. N.G.R. SE 972576
2. Publications
T. G. Manby (1958) *Ant. J.*, xxxviii, 223-36
3. Nature of site
Surface find.
4. Collection: Messrs C. and E. Grantham's Museum, Driffield.
5. Finds: a. Ceramic
Single sherd of Grooved Ware. Sherds of Grimston Ware, Mortlake and European Beaker from same context.
b. Non-ceramic
None.

94 GARTON SLACK

1. N.G.R. SE 960596
2. Publications
M.P.B.W. Excavations: Annual Report (1968), 13
3. Nature of site
Pits.
4. Collection: in the possession of the excavator, Mr T. C. M. Brewster.
5. Finds: a. Ceramic
Grooved Ware, no data.
b. Non-ceramic
No known associations.

95 SEAMER, MANHAM HILL

1. N.G.R. TA 038818
2. Publications
T. G. Manby (1958) *Ant. J.*, xxxviii, 234
3. Nature of site
Stray find.
4. Collection: Scarborough Museum.
5. Finds: a. Ceramic
Sherds of Grooved Ware, Peterborough Ware and Rusticated Beaker.
b. Non-ceramic
No certain associations.

96 SEAMER MOOR

1. N.G.R. TA 000861
2. Publications
Unpublished (information from the excavator Mr D. D. A. Simpson).
3. Nature of site
Pit or irregular scoop.
4. Collection: in the possession of the excavator.
5. Finds: a. Ceramic
Sherds of Grooved Ware, no data.
b. Non-ceramic
Jet: a small disc bead with a central perforation.

97 SPAUNTON

1. N.G.R. SE 725910
2. Publications
R. H. Hayes (1964) *Y.A.J.*, 41, 174
3. Nature of site
Stray find.
4. Collection: Ryedale.
5. Finds: a. Ceramic
Two sherds of Grooved Ware.
b. Non-ceramic
No certain associations.

98 WYKEHAM

1. N.G.R. SE 967838
2. Publications
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
 - J. W. Moore and T. G. Manby (1962) *Y.A.J.*, XL, 619-21
 - N. H. Field, C. L. Matthews and I. F. Smith (1964) *P.P.S.*, xxx, 380
3. Nature of site
 - Pit.
4. Collection: Scarborough Museum.
5. Finds: a. Ceramic
 - Six sherds of a single Grooved Ware vessel.
 b. Non-ceramic
 - Flint*: flakes and pot-boilers.

Scotland¹

ARRAN

99 TORMORE

1. N.G.R. NR 903310
2. Publications
 - T. H. Bryan (1901-2) *P.S.A.S.*, xxxvi, 100-2
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
 - The north chamber of a Clyde-Carlingford tomb.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
 - Sherds of a single Grooved Ware vessel.
 b. Non-ceramic
 - Flint*: knives.
 - Stone*: macehead.

AYRSHIRE

100 SHEWALTON

1. N.G.R. NS 332367
2. Publications
 - Discovery and Excavation, Scotland* (1965), 14
3. Nature of site
 - Stray find.
4. Collection: private hands.
5. Finds: a. Ceramic
 - Sherds of Grooved Ware.
 b. Non-ceramic
 - None.

¹ The authors wish to thank Mrs Fiona Roe for her help in compiling the site list for Scotland.

BUTESHIRE

101 TOWNHEAD, ROTHEsay

1. N.G.R. NS 088648
2. Publications
 - J. N. Marshall (1930) *Tr. Buteshire, N.H.S.*, 50-4
 - R. R. Mackay (1949-50) *P.S.A.S.*, LXXXIV, 183
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
 - J. G. Scott (1966) *South West Scotland*, 23-5
 - J. G. Scott (1968) *Antiquity*, XLII, No. 168, 296-7
3. Nature of site
 - Possible remains of wooden buildings in the form of slots in the exposed gravel surface.
4. Collection: Rothesay Museum.
5. Finds: a. Ceramic
 - Sherds of two Grooved Ware vessels.
 - Sherds of Rothesay Ware also recovered from the site.
 - Hearth containing Rothesay Ware dated to 2120 ± 100 B.C.
- b. Non-ceramic
 - No certain associations.

CAITHNESS

102 FRESWICK SANDS

1. N.G.R. ND 3867
2. Publications
 - Sir Lindsay Scott (1951) *P.P.S.*, xvii, 73
 - R. J. C. Atkinson in S. Piggott (1962) *The Prehistoric Peoples of Scotland*, 36
3. Nature of site
 - Surface collection.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
 - Sherds of Grooved Ware.
- b. Non-ceramic
 - No certain associations.

DUMFRIESSHIRE

103 BECKTON, LOCKERBIE

1. N.G.R. NY 130822
2. Publications
 - W. F. Cormack (1964) *Tr. Dumfriesshire and Galloway N.H. & A.S.*, xli, 111-5
3. Nature of site
 - Pit.
4. Collection: Burgh Museum, Dumfries.
5. Finds: a. Ceramic
 - Sherds of a single Grooved Ware vessel.
- b. Non-ceramic
 - None.

104 KIRKBURN, LOCKERBIE

1. N.G.R. NY 130832
2. Publications
W. F. Cormack (1962-3) *P.S.A.S.*, xcvi, 107-35, fig. 6
3. Nature of site
Pit or hollow.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
Two sherds of Grooved Ware from Depression 51. ?Western Neolithic, All Over Cord, Finger-Nail and other Beaker wares came from the same feature.
b. Non-ceramic
No certain associations.

DUNBARTONSHIRE

105 KNAPPERS FARM, NEAR GLASGOW

1. N.G.R. NS 505713
2. Publications
J. M. Davidson (1934-5) *P.S.A.S.*, lxi, 362, Site No. 15
R. R. Mackay (1949-50) *P.S.A.S.*, lxxxiv, 180-3
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
A probable pit (Site No. 15).
4. Collection: Kelvingrove, Glasgow.
5. Finds: a. Ceramic
Sherds of two Grooved Ware vessels.
b. Non-ceramic
Flint: flakes and scrapers.
Stone: ?axe-chips of greenstone.
Lignite: a disc.

EAST LoTHIAN

106 GULLANE

1. N.G.R. NT 4782
2. Publications
A. O. Curle (1907-8) *P.S.A.S.*, xlii, 312-15
S. H. Warren *et al.* (1936) *P.P.S.*, ii, 200
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
Surface collection.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
Sherds of Grooved Ware.
Sherds of Beaker from the same area.
b. Non-ceramic
No certain associations.

107 HEDDERWICK

1. N.G.R. NT 6377
2. Publications
J. G. Callander (1928-9) *P.S.A.S.*, LXIII, 67-72
R. B. K. Stevenson (1946) *P.S.A.S.*, LXXX, 143
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
Surface collection.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
Sherd of Grooved Ware.
Sherds of Beaker and Late Neolithic pottery from the same area.
b. Non-ceramic
No certain associations.

FIFE

108 TENTSMUIR

1. N.G.R. NO 4824
2. Publications
R. J. C. Atkinson in S. Piggott (1962) *The Prehistoric Peoples of Scotland*, 36
I. H. Longworth *et al.* (1966-7) *P.S.A.S.*, xcix, 75-8
3. Nature of site
Surface collection.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
Nine sherds of Grooved Ware.
b. Non-ceramic
No certain associations.

INVERNESS-SHIRE

109 UNIVAL, N. UIST

1. N.G.R. NF 800669
2. Publications
P.S.A.S., iv, 337
L. Scott (1947-8) *P.S.A.S.*, LXXXII, 1-49
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
Chambered tomb.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
Single Grooved Ware vessel stratified beneath undecorated Bell Beaker.
b. Non-ceramic
No certain associations.

ORKNEY

110 DINGIES HOWE, NEAR DEERNESS

1. N.G.R. HY 5706
2. Publications
 - R. B. K. Stevenson (1946) *P.S.A.S.*, LXXX, 142
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
 - Stray finds.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
 - Three sherds of Grooved Ware.
 - b. Non-ceramic
 - None.

111 EVIE

1. N.G.R. HY 3826
2. Publications
 - R. B. K. Stevenson (1946) *P.S.A.S.*, LXXX, 143
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
3. Nature of site
 - Surface collection.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
 - Sherds perhaps from a single Grooved Ware vessel.
 - b. Non-ceramic
 - No certain associations.

112 RINYO, ROUSAY

1. N.G.R. HY 440321
2. Publications
 - V. G. Childe and W. G. Grant (1938-9) *P.S.A.S.*, LXXIII, 6-31
 - V. G. Childe and W. G. Grant (1947) *P.S.A.S.*, LXXXI, 16-42
 - S. Piggott (1954) *Neolithic Cultures of the British Isles*, 321ff & App. C
3. Nature of site
 - A large settlement of stone-built houses similar to Skara Brae. A clay oven was found in many houses which had undergone much re-building and structural alteration.
4. Collection: National Museum, Edinburgh.
5. Finds: a. Ceramic
 - Two main phases were recognized on the site, Unstan Ware being earlier than or contemporary with the first:
 - Skara Brae B and C Classes = Rinyo I
 - Skara Brae A and plain wares = Rinyo II
 - A late Northern British (phase 3) Beaker came from the latest phase of occupation.

b. Non-ceramic

Flint: flakes, cores, polished axes, scrapers, knives, awls and fabricator.

Stone: axes, balls, mortars, clubs, pot-lids, shaft-smoothers, knives, lamp, pendant, anvils and rubber.

Bone: pin and fabricator.

Baked clay: balls.

Animal bones: deer and whale.

113 SKARA BRAE

1. N.G.R. HY 230187

2. Publications

V. G. Childe (1931) *Skara Brae*

S. H. Warren *et al.* (1936) *P.P.S.*, II, 201

S. Piggott (1954) *Neolithic Cultures of the British Isles*, 321ff. & App. C

3. Nature of site

Settlement of houses built of the local flagstone which were virtually square with a central hearth, slab-framed beds and shelves. The settlement was built at least four times in part and eventually became virtually covered by midden material, the houses being connected by narrow roofed passages. Eight houses survive of the main building period.

4. Collection: National Museum, Edinburgh and British Museum.

5. Finds: a. Ceramic

Three classes of Grooved Ware recognized:

A. decorated with applied stamps or pellets.

B. decorated with jabbed or slashed cordons.

C. grooved.

Classes B and C were confined to the first two periods on the site while A was found throughout.

b. Non-ceramic

Flint: flakes, cores, scrapers, knife and axe.

Stone: axes, balls, clubs, macehead, knives, paint-pots, mortars, beads.

Bone: pins, awls, needles, knives, adze, shovels, paint-pots, bowls, beads.

Ivory: pins and beads.

Antler: macehead or axe-shaft.

Human bones: two foundation burials of elderly females.

Animal bones: sheep, cattle, deer, pig, sea-fowl, whale, crab, cod and coal fish.

Marine shells: limpets.

Art: in addition to the stone balls carved with knobs, bosses or patterns, engraved, pecked and incised symbols were recorded on the soft flagstones of the huts and passages. The motifs include lozenges, chevrons and triangles.

RENFREWSHIRE

114 GRYFE RESERVOIR

1. N.G.R. NS 267718

2. Publications

Discovery and Excavation, Scotland (1965), 34

3. Nature of site
Stray find
4. Collection: unknown
5. Finds: a. Ceramic
Sherd of Grooved Ware.
Sherds of Beaker from the same site.
- b. Non-ceramic
None.

SUTHERLAND

115 ORD NORTH, LAIRG

1. N.G.R. NC 573056
2. Publications
Current Archaeology, No. 5 (1967), 112-3
3. Nature of site
Passage Grave of Orkney-Cromarty type.
4. Collection: in possession of the excavator.
5. Finds: a. Ceramic
Sherd of Grooved Ware, no data.
- b. Non-ceramic
No certain associations.

WIGTOWNSHIRE

116 GLENLUCE

1. N.G.R. NX 1756
2. Publications
J. G. Callander (1929) *P.S.A.S.*, LXIII, 29-98
R. B. K. Stevenson (1946) *P.S.A.S.*, LXXX, 141-3
S. Piggott (1954) *Neolithic Cultures of the British Isles*, App. C
I. J. McInnes (1963-4) *P.S.A.S.*, xcvi, 40-81
3. Nature of site
Surface collection.
4. Collection: National Museum, Edinburgh; Kelvingrove, Glasgow; Dumfries and Stranraer County Library.
5. Finds: a. Ceramic
Sherds of Grooved Ware. At Burnt Dune, sherds of Grooved Ware and Western Neolithic were recovered from the same occupation layer.
At Pin Dune A, Grooved Ware and sherds of Food Vessel were stratified above Western Neolithic.
- b. Non-ceramic
No certain associations.

VII. THE LATER SETTLEMENT

THE PACKWAY ENCLOSURE

(figs. 98–100)

IN February 1968 the route of the new road was under construction some 137 m. north of the Neolithic enclosure on the north side of the Packway road leading to Larkhill Camp (fig. 2). The work involved the removal of 1.2–1.5 m. of chalk over the width of the road to create a horizontal surface and a roundabout at the junction of the new road with the Packway. When the work of chalk removal had been completed the representative of the Wiltshire County Council on the site saw pockets of soil in the surviving bed-rock which produced the occasional fragment of bone, whereupon he notified the author immediately. Upon inspection it was clear that the route of the proposed road had cut across a previously unsuspected enclosure defined by a ditch. Work on this section of road was suspended while excavations were carried out on the surviving parts of the enclosure and on the adjacent areas of untouched ground with a view to obtaining a plan, sections of the ditch and dating evidence if possible. These excavations were carried out by permission of the Wiltshire County Council, under the immediate supervision of Mr Peter Donaldson, in February and March of 1968.

Siting

This enclosure, which has been named the Packway Enclosure, is sited between the 344 ft. and 356 ft. contours on the east brow of a poorly defined promontory which overlooks the Avon valley to the east and the Neolithic enclosure to the south (SU 152441). Its existence in the north-west angle of the cross-roads formed by the junction of the Packway with the old A345 was unsuspected from aerial photography or surface observation and its discovery under these circumstances leads one to question the completeness of our knowledge of prehistoric earthworks in Wessex.

Excavation

Unfortunately, the basal chalk had been removed along the route of the road to depths of between 60 cm.–1.5 m. (fig. 98). In this area, therefore, it was only possible to excavate the bottom silts of the ditches and to obtain a plan of what features had survived. However, along the verges of the road the chalk had not been removed and it was possible in these areas to obtain full sections of the ditches. The plan of the ditches as actually found is shown in fig. 98 and a reconstruction of the enclosure in fig. 99. It was possible to complete the plan of the enclosure on a day of favourable weather conditions (a drying wind over ground recently damp from thawed out frost), when the enclosure ditch was clearly visible in the field to the west as a damp strip in the drying earth.¹ The west half of the enclosure is not threatened with immediate destruction and was not excavated.

¹ The surviving portion of the enclosure can be seen on an aerial photograph taken in 1969 (pl. XII*b*).

General description

The Packway Enclosure is kite-shaped in plan, possessing four straight sides of unequal length with a simple entrance midway along its south side. Measured along the inner edges of the ditch the length of the sides are north, 70.1 m.; west, 64.6 m.; south, 42.6 m.; and east, 64.0 m. Diagonal measurements across the enclosure are south-west to north-east, 93.2 m. and north-west to south-east, 74.3 m. The entrance gap appears to have been undefended, although the removal of the chalk would have destroyed any post-holes of a gate structure, and has a maximum width of 5.4 m. The only internal features surviving the removal of the chalk are two pits (A and B) which were preserved to depths of 0.91 m. and 0.68 m. respectively.

The Enclosure ditch

The average width of the ditch at its lip is now 3.6 m. although originally it may have been as narrow as 1.2 m. It is now 2.1 m. deep from the surface of the chalk and has a V-shaped profile with the sides plunging steeply as they near the bottom to a narrow flat base some 2.4 m. wide (fig. 100). This profile with a narrow flat base and steep walls suggested initially that the ditch may have held a palisade of vertical timbers — either spaced or contiguous. The ditch silts were therefore specifically studied in an attempt to find traces of any such timbers, both in a horizontal plane and vertically in the silting profiles, but no such traces were recorded. The ditch silts conform to a normal silting profile with small chalk lumps and dirty soil at the base (sections I and II, layer 8), followed by large clean chalk lumps with no soil and frequent air-spaces (layer 7) which were probably weathered from the sides of the ditch by frost action, succeeded by small chalk lumps with progressively more silty soil (layers 2-6) representing the slower silting of the ditch.

No finds were recorded from the primary silts of the ditch (layer 8) except for one spindle-whorl, and only a few weathered sherds came from layer 7. The bulk of the finds were made in the slower silts (layers 3-6) or in Pits A and B. Owing to its narrow profile the bottom of the ditch would have silted up very quickly and this may explain the almost total lack of finds.

The Enclosure bank

The presumed bank of the enclosure had been completely ploughed away — even the unweathered lump in the natural chalk which would have indicated its position had been destroyed. One assumes, however, that the bank would have been internal, have followed the line of the ditch and may have supported a light palisade on its crest.

The internal features

The removal of the chalk preparatory to building the road destroyed all internal structures with the exception of two pits. One cannot say, therefore, whether any such structures existed, and if so, whether they survived the ploughing which had destroyed the bank. The upper parts of the two surviving pits had been destroyed (fig. 100).

Pit A: still preserved to a depth of 0.91 m. and was 1.9 m. wide with vertical walls. Fragments of three rotary querns were found in a brown earthy deposit on the floor of the

DURRINGTON WALLS PACKWAY ENCLOSURE EXCAVATION PLAN

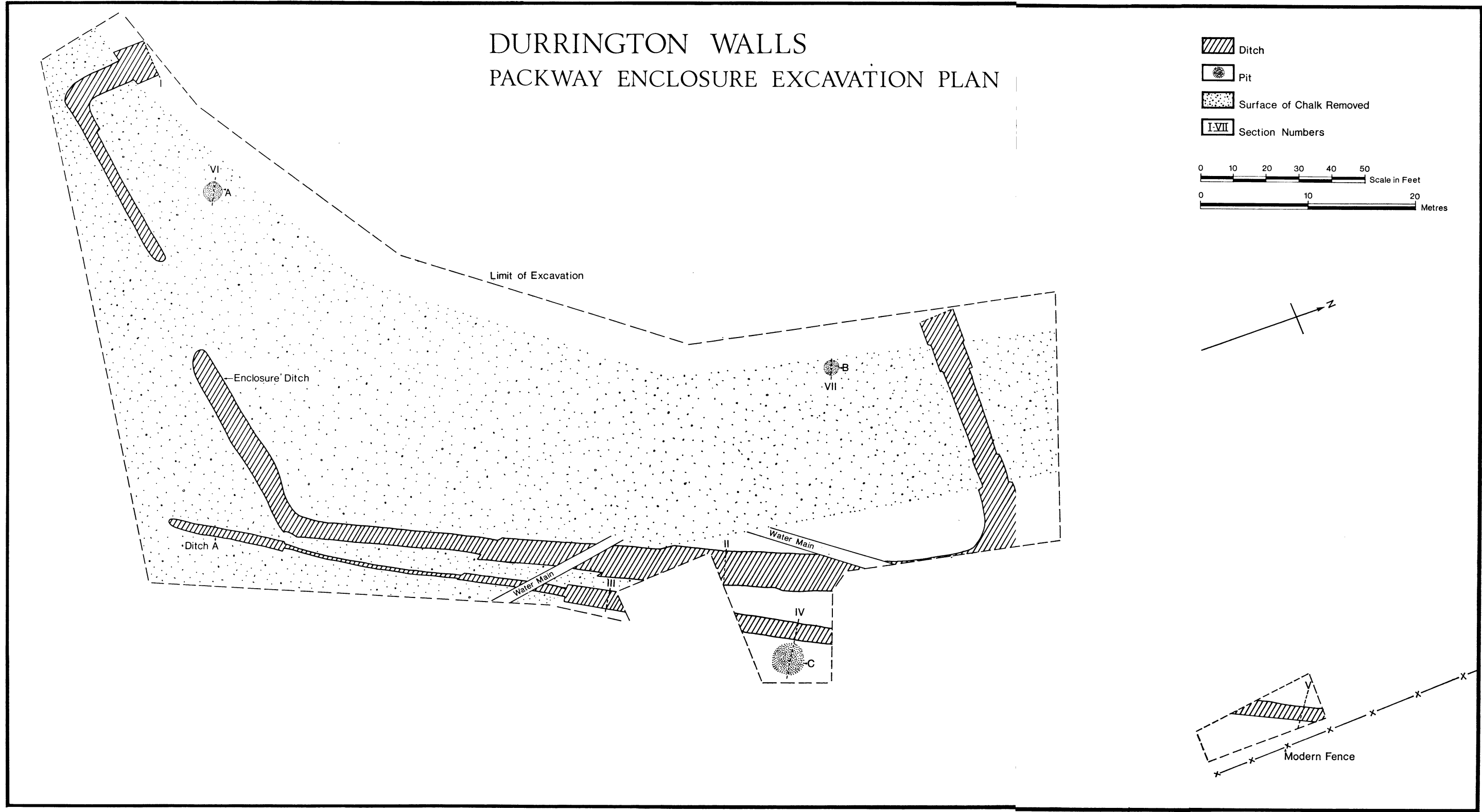
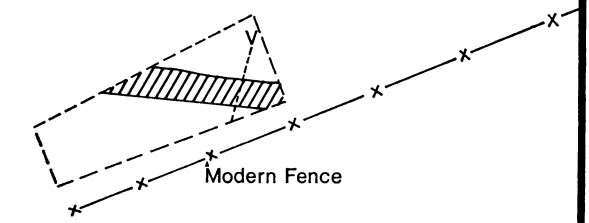
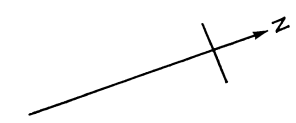
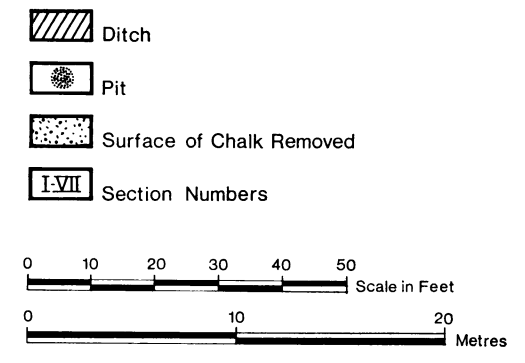


FIG. 98



DURRINGTON WALLS: GENERAL PLAN OF THE PACKWAY ENCLOSURE

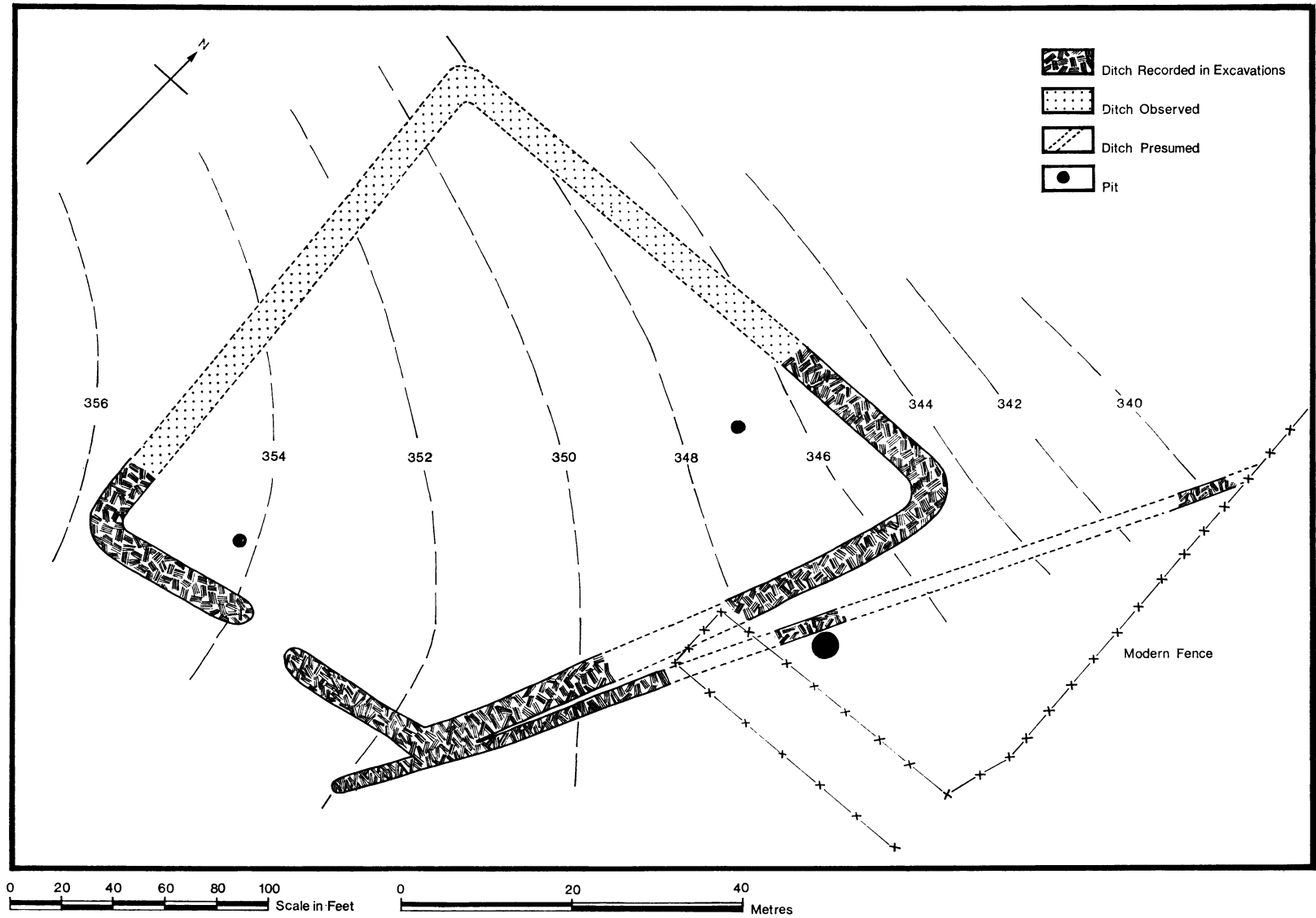


FIG. 99

pit (layer 9, section VI), together with body sherds of Iron Age pottery, a stone spindle-whorl and four flint flakes.

Pit B: still preserved to a depth of 0.68 m. and was 1.4 m. wide. The only finds from this pit are an iron strip, a small fragment of bronze and nine flint flakes which were found in a charcoal layer intervening between layers 4 and 6 (section VII).

Ditch A

A linear ditch was recorded to the east of the Packway Enclosure and converged with the east side of the latter which it met at its south-east corner. Unfortunately, the relationship between the two ditches could not be ascertained owing to the removal of the bed-rock by the road contractors at this point (fig. 98). Beyond the intersection, some 10.3 m. to the south, ditch A terminated in a neatly finished butt end. A recommencement of the ditch was searched for but was not found. From this terminal ditch A runs north-east in a straight line and was traced for a distance of 115 m. before it disappeared under the route of the old A345 road. There was no sign of a bank on either side of the ditch and it is clearly not contemporary with the Packway Enclosure although the relative age of the two structures could not be established on a stratigraphical basis.

The ditch was between 1.5 m. and 0.91 m. wide at its lip and 0.60-0.91 m. deep. It was V-shaped in section with the sides plunging almost vertically near the bottom to a flat base 21-24 cm. wide. The fill of this small ditch is usually that of a normal silting profile, with chalk lumps at the base which were presumably weathered from the ditch sides, followed by more earthy deposits (*vide* section V). However, at one point in the ditch length (section III), a dark silt on the ditch bottom (layer 7) is followed by an abrupt change in the silting profile between the west and east sides of the ditch. The west half was composed of chalk lumps (layer 3), not particularly compacted and mixed with a little soil, which terminated in what appears to be an artificially abrupt vertical edge. This section provides the only evidence we have that Ditch A may have held vertical timbers but it is not repeated elsewhere. A similar deposit of chalk lumps (layer 3) in section IV, for example, spread across the width of the ditch with no trace of any vertical obstruction.

Pottery of Late Neolithic and Middle to Late Bronze Age character was found scattered from the bottom to the top of the ditch deposits and Iron Age pottery was recorded in the upper levels. In addition, two bone points were recorded from the primary silts (*vide* Section V, layer 6). The Bronze Age material is considered to indicate the date of the ditch as a base sherd of this fabric was recorded from the primary silts.

Pit C

This feature is a hollow 2.2 m. in diameter and with a maximum depth of 0.76 m. which was located to the east of Ditch A. The sides of the hollow slope steeply to a floor which is markedly uneven. This structure is presumably one of the so-called 'working-hollows' which are so common in Bronze and Iron Age contexts and two horizontal seams of charcoal (fig. 100, section IV) may represent the remains of hearths. No pottery was recorded from the hollow but a spindle-whorl and nine flint flakes were found in layer 5 resting directly on the rock floor.

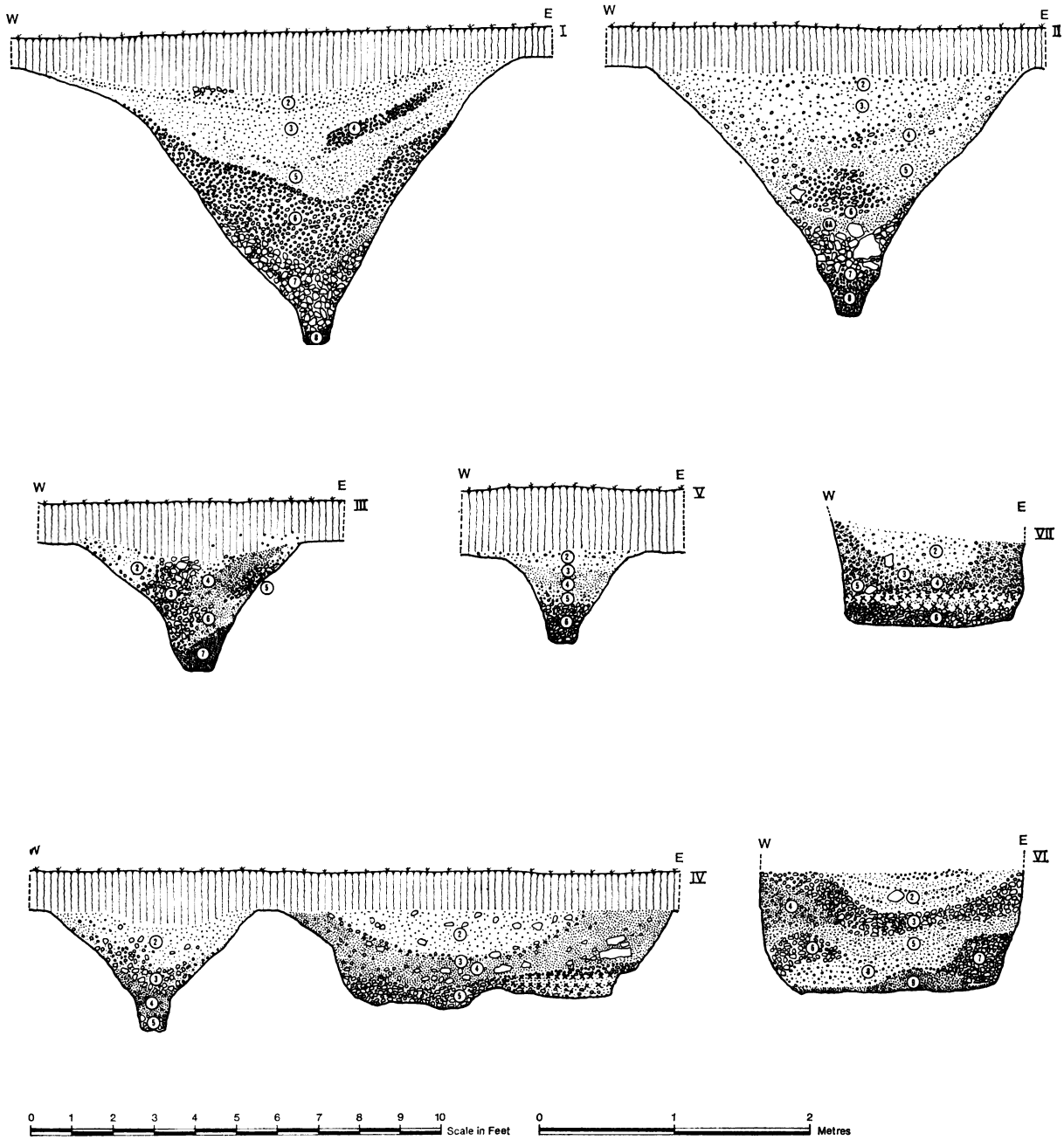


FIG. 100. Sections of ditches and pits of the Packway Enclosure

THE SOUTHERN CIRCLE: PALISADE TRENCH

(fig. 9 and pl. XIb)

The south half of the Southern Circle was traversed by a linear ditch which cut through some post-holes and ramps of the Neolithic structure (fig. 9). It was traced for a distance of 40.2 m. across the excavation from east to west and continues for an unknown distance on either side. The course of the ditch is aligned south-east from the west edge of the excavation for a distance of 21.3 m. and cuts through post-holes and ramps before terminating in a neatly cut butt end. However, it resumes its course after a gap of only 0.30 m. for a distance of 9.7 m. before swinging north, after which it could be traced for 9.1 m. before disappearing into the east edge of the excavation.

In profile the ditch possesses a flaring mouth which is rarely more than 1.2 m. wide at its lip, below which the walls descend almost vertically to a flat base 0.30-0.36 m. wide (*vide* sections of post-hole nos. 68, 69, 88, 96, 154). The ditch varies in depth from 0.60-0.82 m. and the fill normally consisted of alternating, nearly horizontal, layers of fine silt (layer 13) and gravel (layer 14). The flaring mouth can be attributed to weathering and it seems probable that originally the ditch was only some 0.60 m. wide at its lip.

These dimensions are particularly narrow for a boundary ditch and a more likely explanation on the grounds of its profile and the absence of a bank is that this linear feature was in fact a palisade trench which originally supported vertical timbers. However, there was no indication in the filling of the ditch to support this conclusion as the strata consisted invariably of alternating, nearly horizontal, layers of fine silt and gravel. It was to be expected that a quantity of Late Neolithic material from the timber circle was found in the ditch, along with pottery and other objects of Iron Age date to which period the ditch presumably belongs, and it was apparent that the flint artifacts in particular were very abraded as if they had been subjected to prolonged rolling in a stream of water. Moreover, the ground level slopes from west to east in this area and the east sector of the ditch was much confused by small ravines filled with flint gravel which had clearly formed as a result of fluvial action. It is suggested, therefore, that the alternating layers of silt and small gravel in the ditch were deposited by flood waters which would have removed the original filling and hence destroyed any trace of vertical timbers it may have held. In 1967 the excavators had an opportunity to witness such a process in action during a violent thunderstorm towards the end of the excavation, when streams of water rushed down the excavated ditch and over the exposed chalk to the south and east of it, leaving small gullies filled with silt and gravel. A similar process would presumably have resulted in the formation of the gully in the main enclosure ditch at the east entrance (fig. 6, layers 12 and 13), which was also filled with alternating deposits of fine silt and small gravel.

As the ditch cut through post-holes of the timber circle, pottery and flints of the Late Neolithic period were found in its filling. These objects have been isolated and are described in the sections on Late Neolithic finds. In addition pottery and a brooch of the Late Pre-Roman Iron Age were found in the ditch deposits and although this material can hardly be *in situ* its date has been transferred to the ditch in default of any evidence to the contrary.

THE IRON AGE SETTLEMENT NORTH OF THE NORTHERN CIRCLE

(fig. 101)

A group of five pits and four post-holes crossed by a linear ditch were recorded to the north of the Northern Circle. In this area the plough had eroded deeply into the basal chalk which was covered by only 0.07–0.15 m. of plough soil. Two of the pits produced pottery and other objects which could be attributed to the Late Pre-Roman Iron Age.

The ditch

The ditch could be traced for a distance of 34.1 m. across the width of the excavation from south-west to north-east and continues for an unknown distance on either side. Erosion by ploughing was such that only the very base of this ditch had survived to a depth of 0.30 m. It appears to have been V-shaped in profile, unlike that which cut across the Southern Circle, and was probably a boundary ditch. It is not possible to comment on its original dimensions as the amount of chalk eroded by the plough cannot be estimated. The latter, however, is likely to have been considerable on this exposed piece of flat ground on the crest of the combe. The only find recorded from this ditch was a small weathered, unidentifiable body sherd.

Pit 1

A pit which is bell-shaped in profile — 0.91 m. in diameter at its lip, 2.1 m. in diameter at its base and 2.1 m. deep. It was filled with lenses of chalk lumps and earth with chalk and produced the remains of seven pots from layer 7 near its base, together with two triangular loom-weights (fig. 136).

Pit 2

The base of a shallow pit surviving to a depth of only 0.24 m. No finds were recorded (fig. 136).

Pit 3

The base of a cylindrical pit 1.5 m. in diameter and 0.70 m. deep. The remains of 15 pots were recorded from layer 5 near its base along with a bronze ring (fig. 136).

Pit 8

The base of a shallow pit surviving to a depth of 0.19 m. No finds were recorded (fig. 136).

Pit 9

The base of a shallow pit surviving to a depth of 0.09 m. No finds were recorded (fig. 136).

The dimensions of pits 2, 8 and 9 demonstrate the intensity of the erosion of the chalk in this area. Indeed, there is no certainty that these features are pits and not post-holes, but the former interpretation seems the more likely. Such pits are common on domestic sites of the Iron Age in southern England and were used for a variety of purposes. To judge by the refuse in pits 1 and 3 their terminal use was for the disposal of rubbish.

DURRINGTON WALLS IRON AGE SETTLEMENT

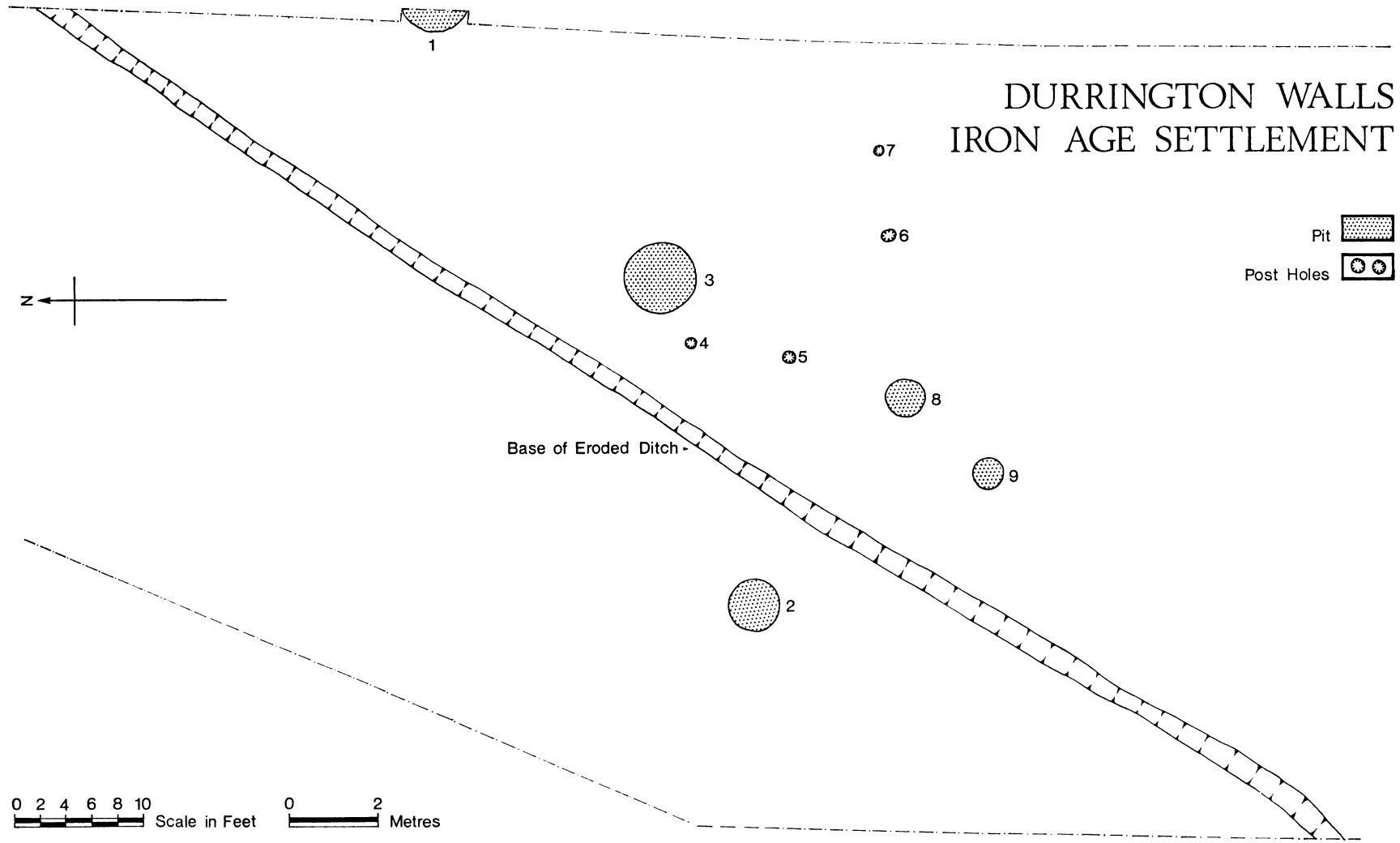


FIG. 101

In addition to the pits, four post-holes were recorded but form no significant pattern. One must bear in mind, however, that an unknown number of post-holes may have been destroyed by erosion. No finds were recorded from these post-holes (fig. 136).

The pottery from the pits has been assigned to the Late Pre-Roman Iron Age on the grounds of the common occurrence of fabrics of this date and the presence of true bead-rims in Pit 1 (see below).

THE FINDS

In the following section the finds from the later prehistoric structures are described. The Bronze and Iron Age finds from the 1966 excavations of the main enclosure ditch have been omitted as they have been described and illustrated in a previous paper.¹

The pottery (figs. 102–104)

The Iron Age pottery from the later prehistoric structures has been treated as one group for the purpose of identifying the different fabrics. The identification was done initially by the writer who then submitted samples of each fabric to Mr P. Fowler of the University of Bristol in view of his experience of such work on the collections from Overton Down. His descriptions form the basis for the following account and have been supplemented by the writer where it was considered advisable to do so.

Ware A: a brick-red, sandy fabric which is thickly and evenly filled with oolites. Checks on the distribution of oolitic Iron Age pottery are currently being made but it would seem that the red colour is unusual. It is very rare at Overton Down but does occur sparsely in the Salisbury area and at All Cannings Cross. It is found in profusion at Marnhull in Dorset where it is assigned to the Early Pre-Roman Iron Age.

Ware B: a coarse fabric with granular flint (1–2 mm.) inclusions which is the typical Early Pre-Roman Iron Age fabric in Wessex and frequent at Overton Down. It is not so very different, as a fabric, from some Middle or Late Bronze Age wares.

Ware C: a black, sandy, vertically striated fabric with fine quartz and mica inclusions and burnished outer face. Such fabrics do not occur at Overton Down and are unlikely to be early in the Iron Age sequence.

Ware D: a thin, smooth, black fabric with quartz dust, burnished externally. This fabric occurs at Little Woodbury and in early contexts at Overton Down.

Ware E: a thickish, well levigated fabric with even distribution of fine quartz grains and occasional flint grits. This fabric is commonly found in the Early Pre-Roman Iron Age of Wessex as at Overton Down and All Cannings Cross.

¹ Wainwright, 1967, 181.

Ware F: this fabric is very similar to Ware E although it is presumably deliberately fired to give an orange-brown exterior. It is the most common fabric at Overton Down and typical of the Wessex Early Pre-Roman Iron Age.

Ware G: a fine, hard, black sandy fabric similar to that found in Early Pre-Roman Iron Age contexts on Overton Down.

Ware H: a smooth, light grey ware with sparse inclusions of flint quartz and possibly grog with a few oolites. This fabric is absent from Overton Down and is typical of the Late Pre-Roman Iron Age.

Ware J: a hard, thick, black fabric with coarse flint grits attributable to the Late Pre-Roman Iron Age.

Ware K: a coarse fabric with large (c. 3 mm.) flint inclusions and brownish red in colour which is typical of the Early Pre-Roman Iron Age in Wessex. It is not significantly different from Ware B.

The Packway Enclosure (fig. 102)

1. Base and body sherds of black, crumbly, flint-gritted fabric with orange exterior. The 19 sherds are rather weathered and can be attributed to the Late Neolithic period on the grounds of fabric (ditch, layer 2).
2. Four body sherds of Ware A (ditch, layer 2).
3. Eight body sherds of Ware B (ditch, layer 2).
4. The rim and wall of a slack-shouldered jar of Ware C with an upright everted rim rolled over and beaded at the lip. It is decorated above the shoulder by a horizontal zone of vertical lines bordered by two horizontal lines — all burnished into the surface of the fabric with a blunt instrument (ditch, layer 3, fig. 102, 1).
5. The rim and wall of a bead-rim bowl of Ware D (ditch, layer 3, fig. 102, 7).
6. One base angle and six body sherds of Ware B (ditch, layer 3).
7. Two body sherds of Ware A (ditch, layer 3).
8. One small featureless rim and seven body sherds of Ware E (ditch, layer 3).
9. Two body sherds of Ware F (ditch, layer 5).
10. Six body sherds of Ware F (ditch, layer 6).
11. A simple upright rim of Ware B with three horizontal burnished grooves below the lip. Thirty-six base and body sherds of this pot were also found (ditch, layer 6, fig. 102, 2).
12. Rim and upper part of wall of Ware A from a straight-sided bowl with upright incipiently beaded rim (ditch, layer 6, fig. 102, 5).
13. Two body sherds of Ware G decorated externally with incised lines flanked by paired dots arranged in a chevron motif (ditch, layer 6, fig. 102, 3).
14. Two body sherds of Ware B — much weathered (ditch, layer 7).
15. Six body sherds of Ware D (Pit A, layer 9).
16. Two body sherds of Ware B (Pit A, layer 9).

The pottery from the ditch of the Packway Enclosure is not culturally diagnostic and the great majority of it was recorded from the slower silts (layers 2-6). However, the narrow profile of the ditch suggests that it would have filled up with debris within a short time of it having been dug and

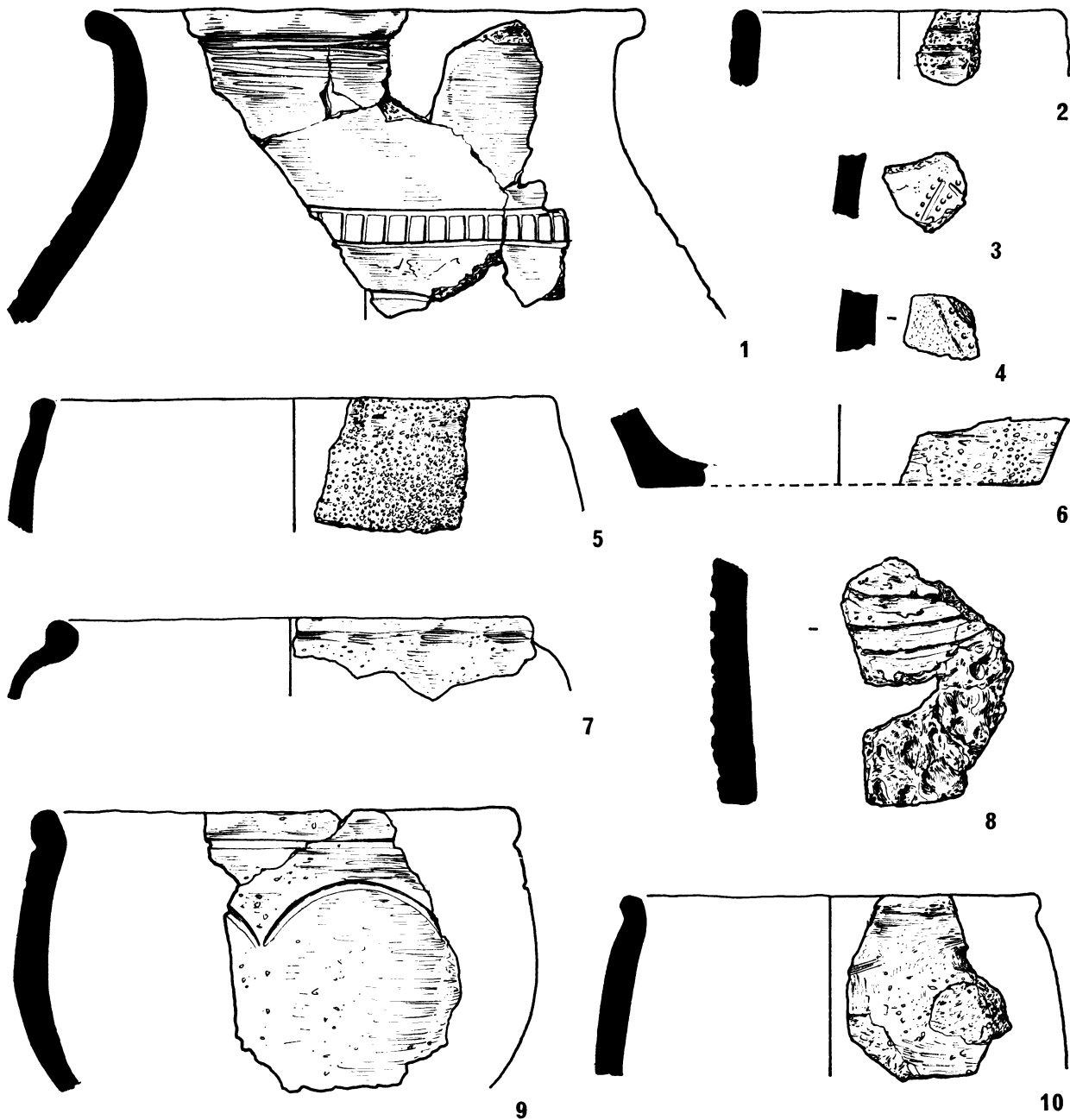


FIG. 102. 1-3, 5, 7: Packway Enclosure; 4, 9, 10: Palisade Trench; 6, 8: Ditch A ($\frac{1}{2}$)

therefore, the pottery from layer 6 in particular may be regarded as broadly contemporary with the enclosure. Having regard to the paucity of diagnostic rim profiles, attention may be turned to the fabrics from layer 6 — all of which are common in Early Pre-Roman Iron Age contexts (Wares A, B, F and G). However, our knowledge of the distribution and chronology of these fabrics is not extensive and their survival into a Late Pre-Roman Iron Age context is a possibility. In connection with this

argument it is necessary to draw attention to the fragments of rotary querns from Pit A within the enclosure which are of Late Pre-Roman Iron Age date. This dating has been accepted for the enclosure as a whole with the proviso that the pit could be later than the enclosure ditch.

Ditch A (fig. 102)

1. A body sherd of thick, black, coarse, crumbly fabric of Late Neolithic type. It is decorated externally with four broad concentric grooves, forming part of a curvilinear motif which passes into rusticated decoration formed by bold finger-nail impressions which have raised the surface of the pot (layer 6, Section V, fig. 102, 8).
2. One body sherd of thick, black, crumbly fabric with orange exterior. This sherd is undecorated, but the fabric is of Late Neolithic type as are nos. 3-5 below (layer 2).
3. Four small weathered body sherds of Late Neolithic fabric (layer 3, section V).
4. Four weathered body sherds of Late Neolithic fabric (layer 5, section V).
5. A base angle of hard buff-orange fabric with a black exterior which has been smoothed. It is unweathered and sprinkled liberally with small flint grits. This fabric is akin to the bucket urns of Middle to Late Bronze Age date which have been discussed by J. B. Calkin.¹ Sherd nos. 6 and 7 below are of similar fabric (layer 6, section V, fig. 102, 6).
6. A body sherd of similar fabric to no. 5 but with an orange exterior. It is also rather more weathered as the numerous flint grits stand proud in the fabric (layer 5, section V).
7. A body sherd of similar fabric to no. 5 (layer 4, section IV).
8. A small body sherd of Ware G (layer 2, section IV).
9. A small body sherd of Ware G (layer 2, section V).

Sherds of Late Neolithic type occur throughout the silts of this ditch but the significant sherd for the cultural attribution of the feature is the base angle of Middle to Late Bronze Age date (fig. 102, 6). The intensity of the Late Neolithic occupation of the area is, however, demonstrated by the relative profusion of pottery of this date.

The Southern Circle: palisade trench (fig. 102)

1. The rim and body of a bead-rim bowl of Ware C, which is decorated below the rim by a single zone of semi-circles deeply incised into the wall of the pot with a blunt instrument (layer 13, fig. 102, 9).
2. A bead-rim bowl of Ware H (layer 13, fig. 102, 10).
3. Five body sherds of Ware E, one decorated externally by a curved row of four dots (layer 13, fig. 102, 4).
4. Six body sherds of Ware F (layer 13).
5. A bead-rim bowl of Ware C (layer 14).
6. A bead-rim bowl of Ware J (layer 14).
7. Four sherds of Ware F, including one small base angle (layer 14).

The occurrence of Wares H and J, together with the predominance of bead-rim bowls, suggest a date late in the Iron Age for this feature.

The Iron Age settlement north of the Northern Circle (figs. 103-4)

Pit 1:

1. Rim and wall sherds of Ware J from a thick-walled straight-sided bowl with a simple rim (layer 7, fig. 103, 1).

¹ Calkin, 1964, 29, 43.

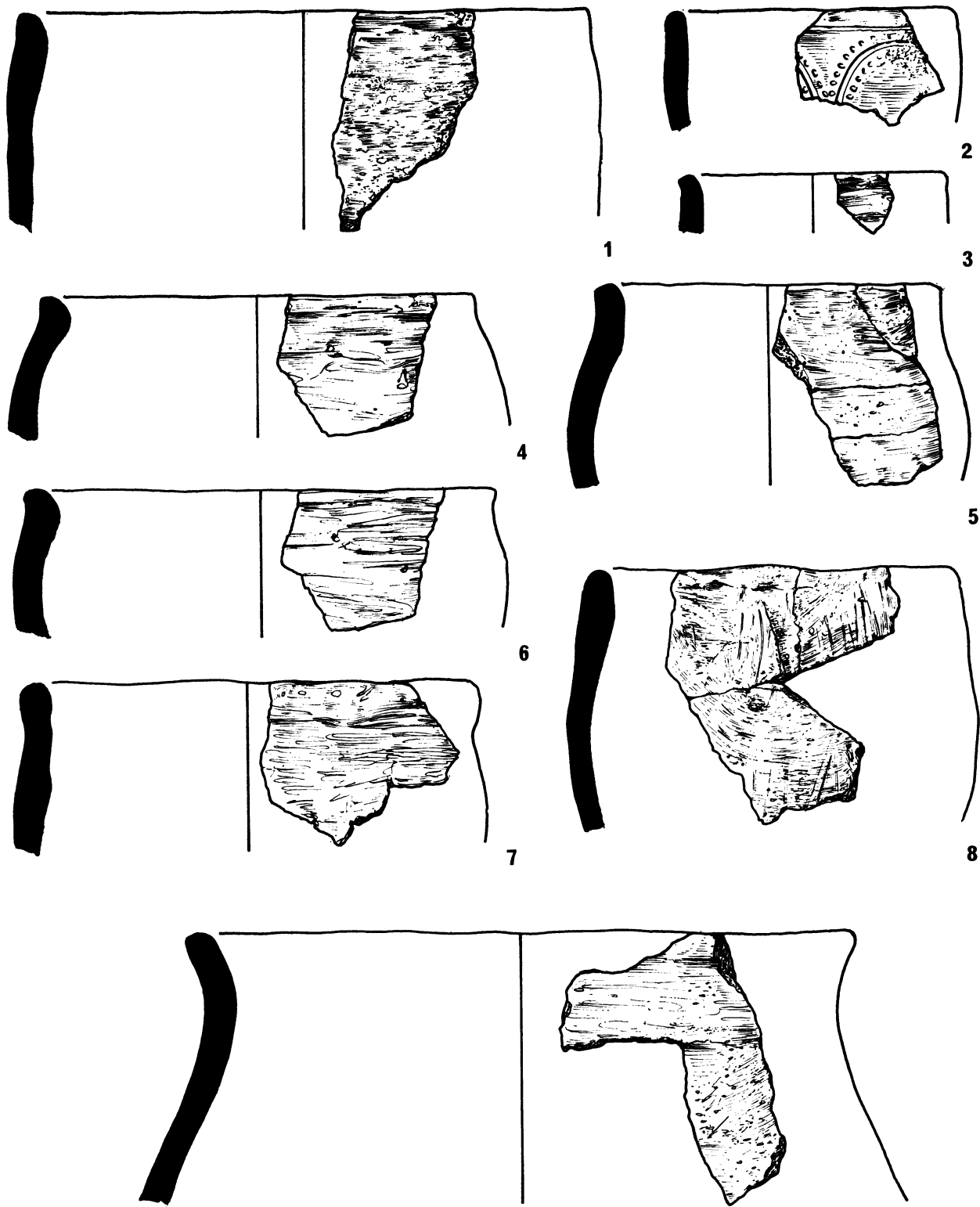


FIG. 103. Iron Age settlement north of the Northern Circle ($\frac{1}{2}$)

2. A rim-sherd of Ware J from a bowl with an everted rim (layer 7).
3. Rim and body sherds of Ware C with a good external burnish. The rim is from a small bowl and is thickened and slightly everted (layer 7, fig. 103, 4).
4. Rim, body and base sherds of Ware C from which the dark burnished surface has been eroded. The sherds are from a small bowl with a simple everted rim (layer 7, fig. 103, 5).
5. Rim and body sherds from a small bead-rim bowl of Ware G (layer 7, fig. 103, 3).
6. Rim and body sherds from a small bead-rim bowl of Ware C (layer 7, fig. 104, 5).
7. A rim and body sherd from a small bowl of Ware J with thickened, slightly everted rim (layer 7).

Pit 3:

8. A small, straight-sided bowl of Ware C with a slightly everted and internally thickened rim (layer 5, fig. 103, 6).
9. Sherds from a jar of Ware C with a markedly everted rim. It is decorated externally below the rim with a curvilinear motif of two rows of dots (layer 5, fig. 104, 9).
10. Sherds of Ware C from a bowl with incipient beaded rim defined by a single burnished line below which is a continuous eye-brow motif produced by a burnished line flanked by rows of dots (layer 5, fig. 103, 2).
11. Sherds of Ware C from a small, straight-sided bowl with a plain, slightly everted rim (layer 5, fig. 104, 3).
12. Fragmentary rim sherds of Ware E from a slack-shouldered jar (layer 5, fig. 104, 7).
13. Rim and body sherds of Ware E from a slack-shouldered jar with everted rim (layer 5, fig. 103, 9).
14. Rim and body sherds of Ware E from a straight-sided jar with a thickened rim (layer 5, fig. 104, 6).
15. Rim and body sherds of Ware J from a shallow, straight-sided jar with simple, internally thickened rim, which undulates as a result of finger-tip moulding (layer 5, fig. 103, 8).
16. A rim sherd of Ware J which is similar to no. 15 except that the rim is slightly everted (layer 5, fig. 103, 7).
17. Rim, wall and base sherds of Ware J from a bowl with a beaded rim (layer 5, fig. 104, 4).
18. Rim and body sherds of Ware J from a bowl with a beaded rim (layer 5, fig. 104, 8).
19. Rim, wall and base sherds from a squat jar of Ware J. The rim is thickened and from a constricted neck the wall descends in a shallow curve to a flat base. The external wall is lightly burnished (layer 5, fig. 104, 1).
20. Rim, wall and base sherds from a small jar of Ware K. The jar has a rounded shoulder and its rim is thickened and everted (layer 5, fig. 104, 2).
21. Body and base-angle sherds of Ware J from a large jar not represented by a rim (layer 5).
22. One shoulder-sherd of Ware J from an angular bowl, burnished externally (layer 5).

The Ditch:

23. A very weathered body sherd 2 cm. in diameter, of a sandy, brown to black fabric (layer 2).

The common occurrence of Ware J and the presence of bead-rims in Pit 1 suggest that this pottery is to be assigned to a late phase in the Pre-Roman Iron Age.

The flints

Very few flint artifacts were recorded from the later prehistoric structures and none at all from the Iron Age settlement north of the Northern Circle and ditch A. Those from the



FIG. 104. Iron Age settlement north of the Northern Circle ($\frac{1}{2}$)

palisade trench which traversed the Southern Circle have been included in the description of Late Neolithic artifacts.

The Packway Enclosure

Twenty-five flint artifacts were recorded from the ditch of this enclosure of which 16 came from the primary silts. The only implement was one scraper on a flake. In addition, four flakes were recorded from Pit A (layer 9) and nine flakes from Pit C (layer 6).

Stone (figs. 105-6)

The Packway Enclosure (figs. 105-6)

1. Eight fragments from the upper stone of a sarsen rotary quern with a central perforation. One fragment features the remains of a shallow hole into which the handle was inserted (pit A, layer 9, fig. 106, 3).
2. Two fragments from the bottom stone of a large rotary quern of a coarse silicified conglomerate identified as Corallian Limestone from Wiltshire (pit A, layer 9).
3. Six small fragments of ferruginous sandstone, probably from the bottom stone of a rotary quern (pit A, layer 9).
4. A spindle-whorl made from a small pebble of fine-grained sandstone with a cylindrical perforation (pit A, layer 9, fig. 105, 6).
5. A spindle-whorl made from a lump of chalk with a slightly waisted perforation (pit C, layer 5).
6. A spindle-whorl made from a lump of chalk with an hour-glass perforation (ditch, layer 7, fig. 105, 8).

The Iron Age settlement north of the Northern Circle (fig. 106)

1. A triangular loom- or roof-weight of chalk (pit 1, layer 7, fig. 106, 1).
2. A triangular loom- or roof-weight of chalk which is grooved at its perforated end (pit 1, layer 7, fig. 106, 2).

Bone (fig. 105)

Ditch A

1. A long-bone fragment ground to a chisel end at one extremity and probably used as a chisel or gouge as the under surface shows signs of wear (layer 6, section V, fig. 105, 1).
2. A bone point worked onto the end of a long-bone fragment (layer 6, section V, fig. 105, 3).

Iron (fig. 105)

The Packway Enclosure

1. A flat curved strip of iron which tapers towards one end (pit B, layer 6, fig. 105, 7).

The Southern Circle: palisade trench

1. Possibly an iron knife with an open socket and fragmentary curved blade. However, it is very corroded and may be the remains of a binding strip (layer 13, fig. 105, 5).

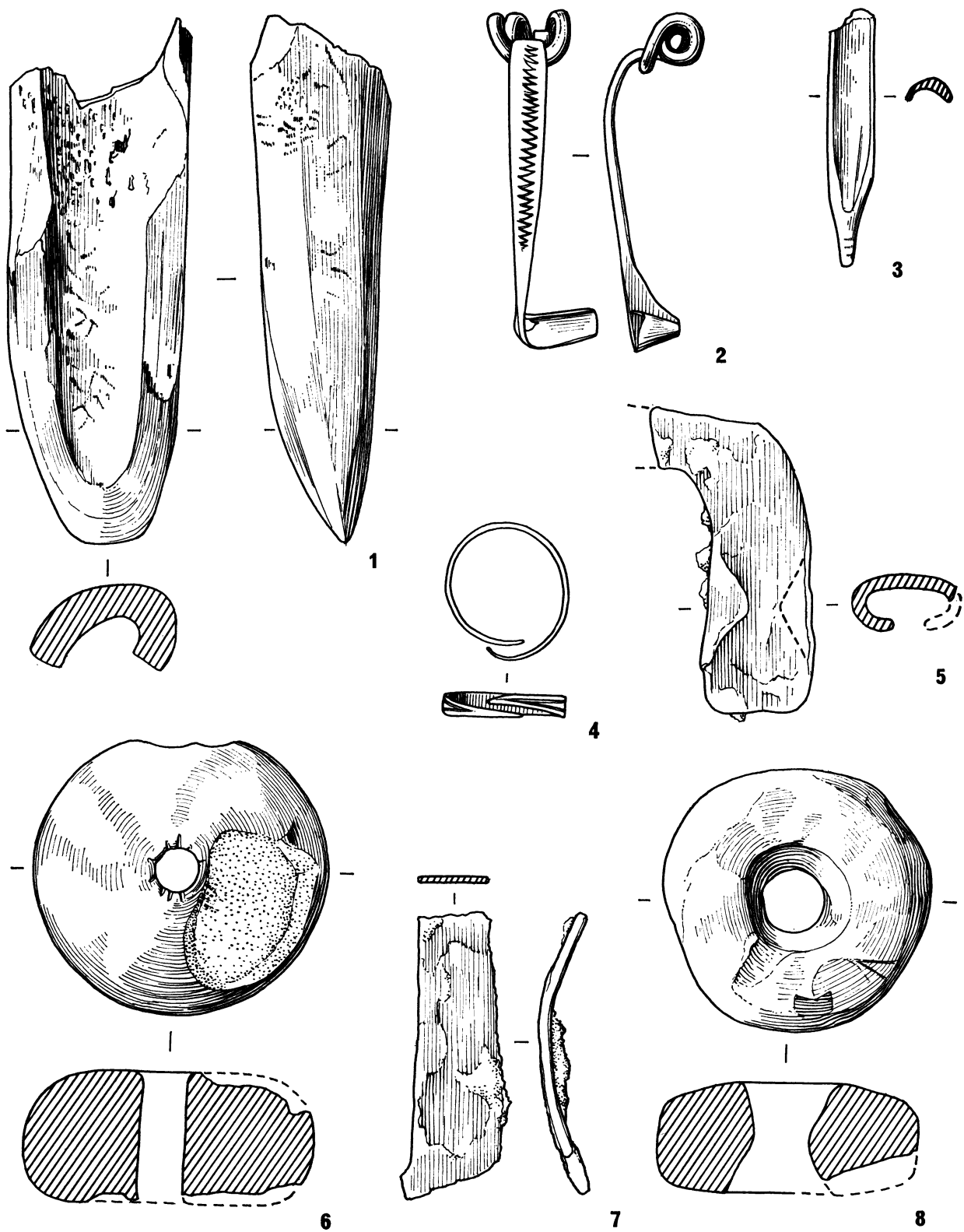


FIG. 105. 1, 3: Ditch A; 2, 5: Palisade Trench; 4: Iron Age settlement north of the Northern Circle; 6-8; Packway Enclosure ($\frac{1}{2}$)

Bronze (fig. 105)

The Packway Enclosure

1. A thin, flat bronze fragment 1 cm. in diameter.

The Southern Circle: palisade trench

1. A bronze brooch in fair condition apart from its bent catch-plate and missing pin. The bow is flat and decorated with lightly incised 'rock and tracer' incisions on its upper surface. The spring is of four-coil type with an internal cord and the catch-plate is not perforated. This is the simple 'Nauheim' form of the one-piece La Tène III brooch which is difficult to date owing to its extreme simplicity. According to Mrs. Fowler this type belongs generally to the first half of the first century A.D., but it does continue into Roman times¹ (layer 13, fig. 105, 2).

The Iron Age settlement north of the Northern Circle

1. A simple bronze ring with pointed, overlapping terminals. The ring is much corroded but traces of simple incised decoration can be seen on the bow (pit 3, layer 5, fig. 105, 4).

THE GENERAL DISCUSSION

Ditch A

This ditch is the only structure amongst those under discussion which can be assigned with any degree of confidence to the Bronze Age. The unweathered base-herd of hard, flint gritted fabric (fig. 102, 6) from the bottom of the ditch was part of a bucket urn, which Mr Calkin has suggested originated as a ceramic type in Middle Bronze 2 or 3 at the latest and which continued into the Late Bronze Age.² Although Late Neolithic pottery was recorded from a similar stratigraphical position one must regard this material as pre-dating the ditch by a considerable margin despite the unweathered appearance of the largest sherd.

It was not possible to resolve satisfactorily the question as to whether the ditch originally supported a palisade of upright timbers. At one point (section III) the evidence suggested that this was the case, but similar evidence was not forthcoming from elsewhere and on balance one is inclined to doubt whether such a continuous palisade existed. Indeed, the affinities of this linear ditch lie with similar structures which have been recorded elsewhere in Wessex and which have been interpreted as boundaries for sheep or cattle pastures. Such ditches have been the subject of studies by Grinsell³ and Stone,⁴ whilst a preliminary list of linear ditches of varied antiquity has been published in the Victoria County History for Wiltshire (Volume I, 249-60).

Ditch A may be part of a more extensive complex as is shown by the existence of a similar ditch near Woodhenge. This ditch was traced for a distance of 45.7 m. by Mrs Cunnington⁵ and was joined to the 'egg-shaped enclosure' of Late Bronze Age date by an extension. The dimensions of the ditch are similar to those of Ditch A with nearly vertical lower walls. Further afield in Cranbourne Chase a similar linear ditch with a bank on one side was traced for 1676 m. and Late Bronze Age pottery found on its base.⁶

¹ Fowler, 1953, 100.

² Calkin, 1964, 29 and 43.

³ Grinsell, 1958, 124.

⁴ Stone, 1958, 132.

⁵ Cunnington, 1929, 49-50, pls. 45, 46.

⁶ Pitt-Rivers, 1898, 190, pl. 307.

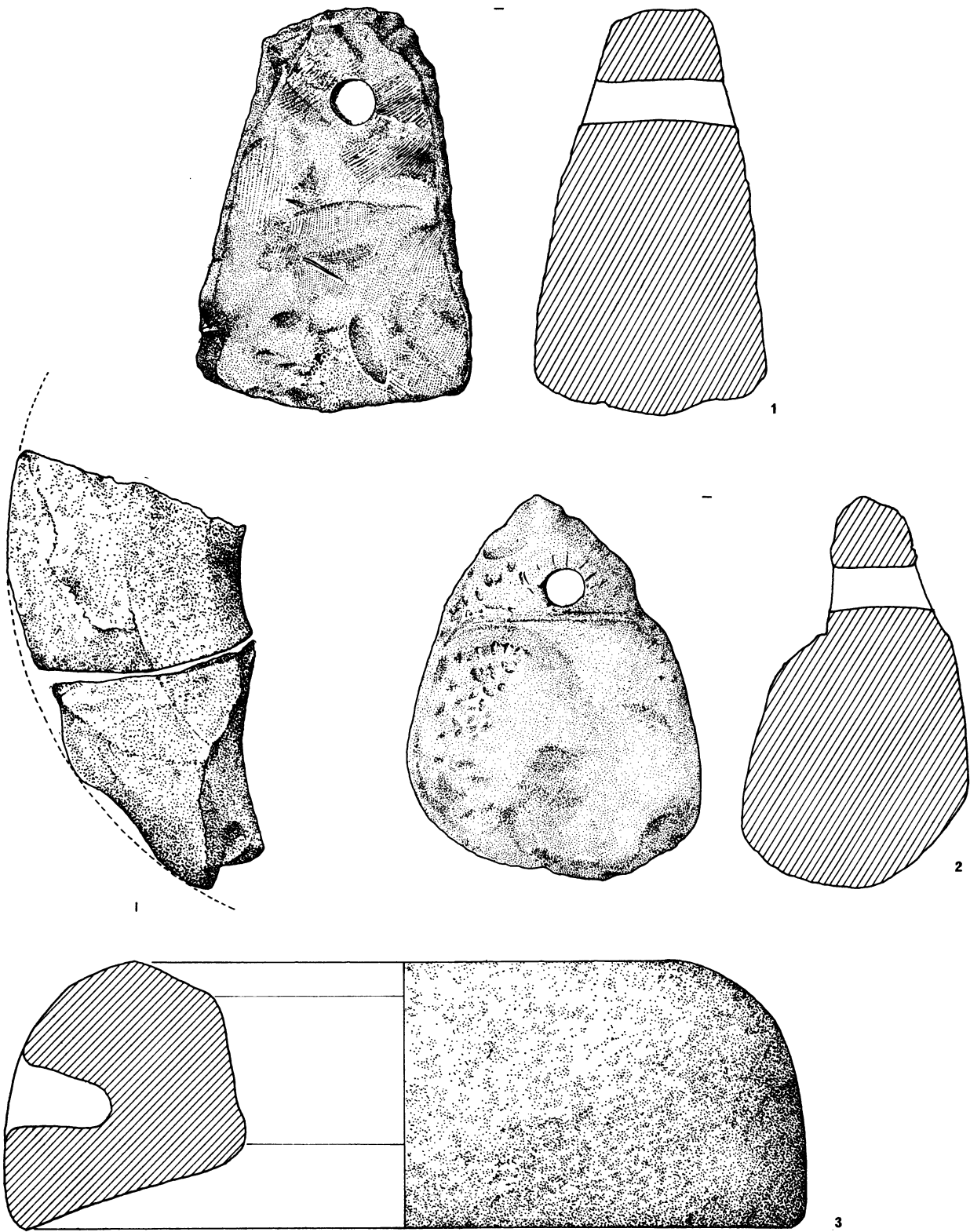


FIG. 106. 1-2: Iron Age settlement north of the Northern Circle: 3: Packway Enclosure (3)

In Hampshire, an interlocking network of such ditches was found to underlie the hill-fort on Quarley Hill,¹ where they were interpreted as boundaries between 'ranches' into which the downs were divided by Late Bronze Age peoples for pastoral purposes. The profiles and sections of these ditches are very similar to Ditch A and one of them terminates in much the same way as did the latter.² Some estimate of the extent of such systems can be made from the fact that Ditch 1 on Quarley Hill can be traced south for a distance of 7.2 km. where it was sectioned by Stone³ on Roche Court Down, and north for a distance of 3.62 km.⁴ As known at the present time such ditches are concentrated in the Boscombe Down-Easton Down area and they probably delineated property boundaries or divisions between pastoral and arable land.

Finally, it is perhaps worthwhile to emphasize the distinction between these boundary ditches and the much larger 'travelling ditches' such as those investigated by the Curwens in Sussex⁵ or by Dr Clay in south Wiltshire.⁶ These ditches are much broader and are considered to have been primarily cattle-walks. They have been dated to the Late Bronze Age, but similar ditches at Winterbourne Dauntsey, Wiltshire⁷ and Portsdown Hill in Hampshire⁸ which were flanked by stockades of posts have been assigned to the Early Iron Age.

The Iron Age structures

Despite the pottery found in the ditches and pits of what are considered to be Iron Age structures, remarkably little of it was found stratified in primary positions. It has been indicated above, that as the deposits in the palisade trench which cuts through the Southern Circle are colluvial, then the Iron Age pottery found in them must be secondary in a stratigraphical sense. Nevertheless, the balance of probability suggests that the Iron Age material does in fact date the palisade trench, which on the basis of the La Tène III brooch is assigned to the first half of the first century A.D. Similarly, no significant pottery was found stratified in the eroded ditch which traversed the small group of pits to the north of the Northern Circle. However, as the pits themselves contained Late Pre-Roman Iron Age pottery then the ditch itself is also assigned to the Late Pre-Roman Iron Age in default of more conclusive evidence. The significant finds from the ditch of the Packway Enclosure were recorded from the slower silts and are therefore not in a primary context. However, the narrow profile of the ditch probably resulted in its base becoming choked with chalk debris within a very short space of time and therefore the pottery from these slower silts could indicate an Early Pre-Roman Iron Age date for the enclosure. However, the rotary querns from Pit A within the enclosure are of the Late Pre-Roman Iron Age and this dating has been adopted in view of the inconclusive nature of the pottery evidence, with the reservation that the pit may not be of the same age as the enclosure.

The linear ditches which cut across the Southern Circle and north of the Northern Circle are probably boundary ditches which represent the continuation of a Bronze Age tradition exemplified by ditch A. Iron Age parallels for such ditches are not hard to find and occur

¹ Hawkes, 1940.

² Hawkes, 1940, 167, pl. VIII.

³ Stone, 1932.

⁴ Hawkes, 1940, fig. 1.

⁵ Curwen, E. and E. C., 1918, 62.

⁶ Clay, 1927.

⁷ Stone, 1934.

⁸ Bradley, 1967.

for example at Stanton Harcourt in Oxfordshire.¹ The ditch excavated by Mrs Williams supported a timber palisade and was uncovered for 59.4 m. of its length. On account of their siting it seems likely that the ditches at Durrington are boundary indicators and not defensive features such as those palisade trenches which preceded the hill-forts of Quarley Hill,² Hollingbury Camp³ and Blewburton Hill,⁴ or that which enclosed the settlement on Park Brow.⁵ If so, they may be part of a system related to the Packway Enclosure on the crest of the slope to the north.

There is no indication that the Iron Age structures within the Neolithic enclosure form part of a ceremonial monument. Although one circular earthwork of Hallstatt date on the continent is considered to have analogies with the British henge monuments,⁶ there is no suggestion of the continuation of a ceremonial function in Britain. Any evidence of Iron Age structures within henge monuments can normally be attributed to domestic settlement as at Llandegai in Caernarvonshire⁷ and there is no reason to place any other interpretation on the structures from Durrington.

Although the profile of the ditch of the Packway Enclosure suggested that it may have held a timber palisade no sign of such vertical timbers were seen in the ditch silts. In this respect the ditch resembles that of the Little Woodbury enclosure,⁸ of similar dimensions and profile. One must assume, therefore, that the material from the Packway Enclosure ditch was heaped inwards to form a bank. This bank may have been crowned with a palisade or fence but as it had been completely eroded away it is not possible to draw any conclusions in this respect.

The trapezoid plan of the enclosure finds its best parallels in the Iron Age cultures of Wessex. A comparable, though rather larger enclosure, was excavated by the author in 1965 on Berwick Down in Cranbourne Chase.⁹ This kite-shaped enclosure, of which the bank had been ploughed away, surrounded a single circular hut with its attendant pits and granaries and was dated to the period immediately prior to the Roman conquest on the basis of the abundant pottery and some brooches. An enclosure of similar size and shape was recorded nearby at Woodcuts¹⁰ where, however, it was assigned to the fourth century A.D. A third enclosure of closely similar plan has been excavated at Down Barn West, Winterbourne Gunner.¹¹ This settlement, like that on Berwick Down, was entered by means of a gap in one corner and the internal diagonal measurements of 73.1 m. compare well with those for the Packway Enclosure. The dating evidence consisted of Early Iron Age pottery stratified in the ditch and in a pit within the enclosure. Finally, a rounded univallate enclosure on Mancombe Down near Warminster,¹² is of the same general character with internal measurements of 76.2 × 83.8 m. and with the entrance represented by a plain gap 4.5 m. wide in the middle of one side. The surface collection of pottery from the site suggests a date in the Pre-Roman Iron Age.

Of these enclosures only Berwick Down has been extensively excavated and the Packway Enclosure adds nothing to our knowledge in respect of the internal structures owing to the

¹ Williams, 1951, 14–15, fig. 7; Hamlin, 1966, 11.

² Hawkes, 1940, 169.

³ Curwen, 1932, pl. 1.

⁴ Collins, 1947, 25.

⁵ Wolseley, Smith and Hawley, 1927, 36–7.

⁶ Röder, 1948.

⁷ Houlder, 1968.

⁸ Bersu, 1940, 35, figs. 2, 3.

⁹ Wainwright, 1968 B.

¹⁰ Hawkes, 1947, fig. 6.

¹¹ Fowler, Musty and Taylor, 1965, 56–61.

¹² Fowler, Musty and Taylor, 1965, 52–6.

removal of the top of the chalk before the excavation began. It seems likely, however, that they all belong to a category of one-family homesteads which present a contrast in siting, size and strength with the contemporary hill-forts on which more archaeological effort has been expended.

Such small embanked homesteads are not solely an Iron Age phenomenon and their immediate origins may be found in enclosures of the Middle and Late Bronze Age in Wessex, which have been listed by Grinsell.¹ They are generally less than one acre in internal area and consist of a roughly quadrilateral, oval or rather shapeless enclosure, bounded by a bank and a ditch and having one or more entrances. Indeed, a settlement with a plan closely resembling that of the Packway Enclosure was excavated by Pitt-Rivers at South Lodge on the Rushmore Estate.² This 'kite-shaped' enclosure had internal diagonal measurements of 70.1 m, and 56.3 m. and is therefore a little smaller than the Packway Enclosure. However, the ditch profile is closely similar and the simple entrance was set midway along one side. Conclusive dating evidence in the form of a Class 1 razor, an awl or tracer and fragments of a barrel urn were recorded from the bottom of the ditch and confirm that such enclosures with trapezoid plans were being constructed from the Bronze Age at South Lodge itself, through to the end of the Roman occupation as at Woodcuts. Small enclosures of variable plan not so closely comparable with the Packway Enclosure, such as Thorny Down, Winterbourne Gunner,³ Boscombe Down East⁴ and those on Ogbourne Down⁵, were also built at the same time and represent a similar social pattern of small family units.

It may be concluded, therefore, that the Packway Enclosure compares in plan with similar homesteads both of Bronze Age and Iron Age date. The finds from the Packway Enclosure do not provide conclusive dating evidence. Virtually no pottery was found in primary positions in the ditch and there is a lack of diagnostic forms amongst the pottery as a whole. However, there is an absence of fabrics which can be attributed to the Late Pre-Roman Iron Age and a lack of true bead-rims so that on this basis a date in the Early Pre-Roman Iron Age seems the more probable. On the other hand, fragments of three rotary querns were recorded from pit A within the enclosure which, if these two features are contemporary, suggest a date in the Late Pre-Roman Iron Age and this is the dating which has been adopted, with the reservations outlined above.

The economy of the farmstead appears to have been based on the cultivation of cereals (represented by the rotary querns) and pastoralism. Evidence for the latter consists of 75 animal bones (Appendix II), amongst which cattle predominate, followed by horse, sheep, pig and red deer. A nearly complete skeleton of a dog was found at the bottom of the ditch. However, a discussion of the character of the settlement is not possible because of the almost total lack of any internal structures.

¹ Grinsell, 1958, 122-33.

² Pitt-Rivers, 1898, 3-41.

³ Stone, 1937; 1941.

⁴ Stone, 1936.

⁵ Piggott, 1942.

APPENDICES

I. DURRINGTON WALLS: THE PRE-HENGE ENVIRONMENT

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The sequence of environmental change which took place prior to the building of the henge monument has been worked out through an investigation of the soil profile preserved beneath the bank of the henge, and by analysis of land snails and pollen from the soil.¹

The site is located at the head of a small coombe immediately above the River Avon. The geological solid is Upper Chalk, here mantled with a drift cover of coombe rock. This has given rise to the development of a soil type characteristic of the chalk lands of Wessex known as a rendsina.

Excavation has shown the presence of two distinct phases of prehistoric activity prior to the building of the henge.² From beneath the northern bank, Middle Neolithic sherds and occupation debris were recovered, resting on the old soil surface. This horizon is dated both archaeologically and by radiocarbon to about the middle of the third millennium B.C. A second phase of occupation is represented by Late Neolithic Grooved Ware which seems unlikely to be much earlier than 2000 B.C. and may be as late as 1500 B.C. This too is stratified beneath the henge bank. Environmental evidence demonstrates a distinct phase of prehistoric woodland clearance and possible cultivation prior to the Late Neolithic occupation. Whether this can be ascribed to the Middle Neolithic period, however, is uncertain.

The soil profiles

Two profiles, DW I and DW II, through the rendsina soil beneath the henge bank were investigated (see site plan for location of these).

Profile DW I

Profile DW I was located in the east side of the main 1967 cutting. Sealed beneath the modern plough soil and the henge bank it showed the following stratigraphy (pl. Va; fig. 107):

Depth below
buried soil
surface (cm.)

- | | |
|------|--|
| 0-6 | Turf-line or mull humus horizon. Virtually stone-free, dark brown to dark yellowish-brown (10 YR 4/3-4/4) chalky loam; columnar structure; the interstices filled with redeposited calcium carbonate (pseudomycelium). |
| 6-20 | Chalky, dark brown loam with numerous chalk lumps and flints; becoming paler and greyer with depth. |
| 20+ | Irregular hollows penetrating the subsoil to 35 cm.; filled with greyish-brown (10 YR 5/2) compact, gritty chalk loam. |

¹ The work was done with the aid of a grant from the National Environmental Research Council.

² Wainwright, 1967.

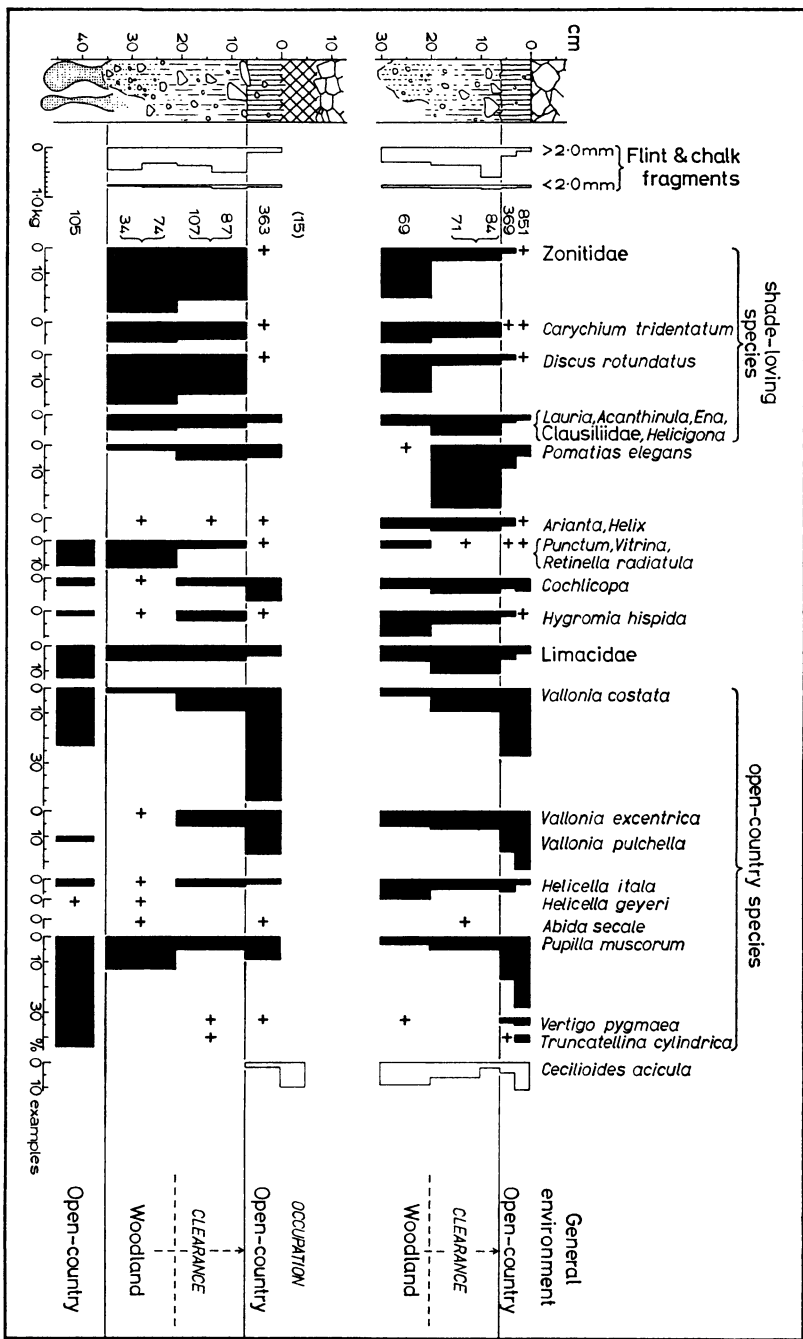


Fig. 107. Molluscan histogram. Profile DW I, upper; Profile DW II, lower

The subsoil is coombe rock — a mass of unstratified, angular chalk fragments in a matrix of finer chalky material. This is the product of intense physical weathering (frost-shattering) and slope movement (solifluxion) during a period of cold climate during the Last Glaciation.¹

A series of five samples was cut from this profile and analysed for land snails (fig. 107; Table XXX).² The results have been presented as a histogram showing relative abundance (fig. 107) and, to clarify the picture, a number of ecologically related species have been grouped. In general, species characteristic of shaded habitats have been placed on the left of the diagram (shade-loving species), and those which are restricted to more open environments (open-country species) on the right. In the central part of the diagram are a number of species of rather variable habitat preferences, but which tend rather towards the shaded aspects of the environment. On the far right is a single species, *Cecilioides acicula*, whose examples are most probably modern as this snail is subterranean, often burrowing to great depths; accordingly its numbers have been plotted in terms of absolute abundance and as an open histogram.

The interpretation of the soil profile and the pattern of change in the molluscan fauna (fig. 107) is one of a woodland environment which has been artificially cleared, possibly cultivated, and then abandoned. Thus in the hollows at the base of the soil (20–30 cm.) the fauna is dominated by shade-loving species and probably reflects a woodland environment. The hollows are thought to be rootholes of ancient trees which have become infilled; they are a frequent feature at the base of chalk soils and almost invariably contain a rich fauna of shade-loving species.

Above this level (6–20 cm.) the fauna is of distinctly more open aspect. There is a marked drop of Zonitidae, *Carychium tridentatum*, and *Discus rotundatus* and an overall increase of open-country species, changes which are taken to reflect a phase of woodland clearance. This section of the profile is also characterized by an abundance of chalk fragments and has all the appearances of being disturbed, possibly by cultivation. *Pomatias elegans* comes in strongly here, and as this species is fond of broken ground, the case for interference with the soil is strengthened.

Above 6 cm. a relatively stone-free turf-line or mull humus horizon is present. This is so marked a feature of the profile and of such uniform extent and thickness that its surface is taken to be the original surface of the soil when the henge was built, i.e. there is no evidence of truncation. This is also borne out by the large number of Mollusca in the layer. The formation of a stone-free zone in chalk soils is discussed by Atkinson³ and is ascribed almost entirely to the sorting action of surface-casting earthworms under conditions of stable grassland. The reality of this layer is to be seen in pl. Va and fig. 107 where the weight of stones (per kg. dry weight of soil) above 2.0 mm. and between 0.5 and 2.0 mm. have been plotted through the soil profile: the concentration of stones greater than 2.0 mm. at the base of the turf contrasted with their paucity in the turf itself is well brought out. The snail fauna in this layer is quite distinct from that below. Shade-loving species are virtually absent and the fauna is now dominated by the open-country species, *Vallonia costata*, *V. excentrica* and *Pupilla muscorum*. The rare xerophile, *Truncatellina cylindrica*, is also present. This fauna is closely similar to others described by Kerney from two Bronze Age sites on Earl's Farm Down nearby⁴ and by Kennard and Woodward from Boscombe Down.⁵ All these faunas point to '... dry and completely open short-turfed grassland ...' though the presence of *Truncatellina cylindrica* might suggest some broken ground as this species '... occurs exclusively in arid, wind-swept places, favouring screes, sandhills and maritime turf'.⁶

¹ Evans, 1968.

² Vide Sparks, 1961 and Kerney, Brown and Chandler, 1964, for the environmental interpretation of mollusca.

³ Atkinson, 1957.

⁴ Christie, 1964, 1967. At Amesbury G.71 pre-barrow

plough marks were discovered and a radiocarbon determination of 2010 ± 110 B.C. (NPL-77) gave a *terminus ante quem* for these.

⁵ Newall, 1931.

⁶ Christie, 1967.

Profile DW II

This profile was located in a pipe-trench excavated in the autumn of 1967 and cut through the bank close to the south-east causeway. Its more low-lying situation is reflected in certain differences of detail in the profile and molluscan faunas as compared with DW I (Table XXX, fig. 107). Thus in the first place the profile is marginally deeper to the extent of 6 cm. or so. Second, at its base is a series of involutions penetrating the underlying coombe rock to a depth of 40 cm. and filled with a buff, silty material of fine quartzes and abundant chalk pellets. These involutions are thought to have been produced by differential freezing and thawing of the ground during a period when the climate was subarctic in character, probably towards the end of the Last Glaciation. The presence in them of a restricted and characteristic open-country land snail fauna, dominated by *Pupilla muscorum* and with the now-extinct *Helicella geyeri*, supports this.¹

The pattern of change in the molluscan fauna from the Post-glacial section of the profile is closely similar to that in DW I. Thus we have at the base a woodland environment followed by a phase of clearance and finally a stable, non-arable period supporting a snail fauna of open-country type. This latter differs from that of DW I in being virtually dominated by *Vallonia costata*; the more truly xerophile species, *Vallonia excentrica*, *Pupilla muscorum* and *Truncatellina cylindrica*, are in lesser abundance, most probably a reflection of the more low-lying and thus damper aspect of this profile. The broader environmental interpretation is however the same.

An upper incisor of the common shrew, *Sorex araneus* Linné, and two molars of the short-tailed vole, *Microtus agrestis* (Linné), were recovered from this profile between 14 and 28 cm. The latter is a characteristic species of open ground and has been recorded from two nearby prehistoric sites.²

Intercalated between the surface of this profile and the overlying chalk bank is a Late Neolithic occupation horizon consisting largely of a mass of charcoal, flint and bone debris and potsherds with little mineral or humic material. Land snails are virtually absent from it and those present, most probably derived.

Pollen analysis of DW II³

A series of seven samples taken through profile DW II was analysed by Professor G. W. Dimbleby for pollen. The counts were exceedingly low and cannot be treated statistically but the results are nevertheless of some interest (Table XXXI). In general the flora between 6 and 18 cm. (below the turf-line) was of shaded aspect, dominated by hazel (*Corylus*) with a smattering of birch (*Betula*), pine (*Pinus*), oak (*Quercus*), lime (*Tilia*) and elm (*Ulmus*); ferns (*Dryopteris*-type), bracken (*Pteridium*), grasses (*Gramineae*) and Liguliflorae occurred sporadically. In the turf-line (0-6 cm.) there was a decline of hazel, the other forest trees were of less constant occurrence, while bracken and ferns showed a marked increase; grasses were still poorly represented. Thus the reduction in tree pollen through the profile is in keeping with the evidence from the mollusca in suggesting some opening-up of the landscape.

The composition of the pollen spectrum in the turf-line, however, is curious in the low count for grasses, and the high count for bracken and ferns. This would appear to suggest a fern/bracken-dominated vegetation which is at variance with the evidence from the molluscan fauna. It may be that we are dealing here with the effects of differential preservation of bracken and fern spores, but in view of the low count of Liguliflorae which are also resistant to decomposition, this is not thought to be so. A more likely suggestion is that the pollen and mollusc assemblages from this level are not contemporary and that the pollen reflects a later stage in the ecological succession of the site. Nevertheless, there is no evidence in the pollen sequence of a grass phase between the woodland and bracken facies.

¹ Kerney, 1963.

² Christie, 1964; also from Greenland Farm round barrow (vide Christie, 1965) and Winterbourne Stoke round barrow

(SU 09894410 in *Wiltshire Archaeol. Natural Hist. Mag.*, 60, 134, unpublished).

³ I am grateful to Professor G. W. Dimbleby for doing the analysis and discussing the significance of the results.

TABLE XXX
Durrington Walls, Land Molluscs

Profile	DW I					DW II						Occu- pation
	20-30 2.16	10-20 1.45	6-10 0.55	3-6 0.80	0-3 1.05	Invo- lution 37-47 2.00	28-35 1.20	21-28 1.15	14-21 1.40	7-14 1.00	0-7 1.00	
<i>Pomatias elegans</i> (Müller)	1	18	21	34	30	—	+	3	7	6	16	5
<i>Carychium tridentatum</i> (Risso)	6	7	1	5	2	—	2	8	9	6	5	—
<i>Cochlicopa lubricella</i> (Porro)	1	1	—	2	12	1	—	—	1	—	4	—
<i>Cochlicopa</i> spp.	2	4	4	13	29	2	—	1	3	2	29	2
<i>Truncatellina cylindrica</i> (Férussac)	—	—	—	2	23	—	—	—	—	1	—	—
<i>Vertigo pygmaea</i> (Draparnaud)	1	—	—	9	23	—	—	—	—	+	2	1
<i>Pupilla muscorum</i> (Linné)	2	4	3	63	230	46	8	2	6	5	33	—
<i>Lauria cylindracea</i> (da Costa)	1	—	—	—	—	—	—	—	—	—	—	—
<i>Abida secale</i> (Draparnaud)	—	—	+	—	—	—	—	+	—	—	+	+
<i>Acanthinula aculeata</i> (Müller)	—	—	—	—	1	—	1	2	3	2	2	—
<i>Vallonia costata</i> (Müller)	2	1	14	101	222	24	—	3	4	13	157	1
<i>Vallonia pulchella</i> (Müller)	—	—	—	—	—	2	—	—	—	—	—	—
<i>Vallonia excentrica</i> Sterki	4	2	8	60	195	—	—	1	4	8	62	1
<i>Ena montana</i> (Draparnaud)	—	—	1	4	2	—	—	—	+	1	—	—
<i>Ena obscura</i> (Müller)	—	—	—	—	—	—	—	—	1	—	—	—
<i>Marpessa laminata</i> (Montagu)	—	—	1	1	2	—	—	—	—	—	3	—
<i>Clausilia bidentata</i> (Ström)	1	3	6	6	14	—	1	2	2	—	6	—
<i>Balea perversa</i> (Linné)	1	—	—	—	—	—	—	—	1	—	—	—
<i>Ceciloides acicula</i> (Müller)	9	6	2	4	11	—	—	—	—	—	2	10
<i>Helicigona lapicida</i> (Linné)	—	1	1	+	+	—	—	—	—	—	+	—
<i>Arianta arbustorum</i> (Linné)	—	—	—	—	+	—	—	—	—	—	—	—
<i>Helix hortensis</i> Müller	—	—	+	+	—	—	—	—	—	—	—	—
<i>Helix nemoralis</i> Linné	—	+	—	+	+	—	—	—	—	+	—	—
<i>Helix</i> (<i>Cepaea</i>) spp.	3	3	5	11	9	—	—	2	+	1	4	1
<i>Hygromia hispida</i> (Linné)	7	3	5	5	5	2	—	2	+	7	5	1
<i>Helicella geyeri</i> (Soós)	—	—	—	—	—	1	+	—	—	—	—	—
<i>Helicella itala</i> (Linné)	6	4	2	19	19	3	1	—	2	3	7	—
<i>Punctum pygmaeum</i> (Draparnaud)	1	1	—	2	2	4	4	—	1	—	2	—
<i>Discus rotundatus</i> (Müller)	11	5	1	5	2	—	7	14	24	10	4	—
<i>Vitrea contracta</i> (Westerlund)	4	+	+	—	—	—	5	6	13	9	1	—
<i>Oxychilus cellarius</i> (Müller)	9	1	3	—	1	—	2	9	7	4	3	—
<i>Retinella radiatula</i> (Alder)	—	—	1	1	2	1	1	2	2	1	1	—
<i>Retinella pura</i> (Alder)	—	—	—	4	—	—	—	5	4	—	—	—
<i>Retinella nitidula</i> (Draparnaud)	1	3	—	3	—	—	—	4	3	4	—	—
<i>Vitrina pellucida</i> (Müller)	1	—	—	—	—	5	1	1	2	—	1	—
Limacidae	4	10	7	19	26	14	1	7	8	4	16	3

+ = shell fragments only

TABLE XXXI

Durrington Walls, Pollen Count from Profile DW II

cm.	15-18	12-15	9-12	6-9	3-6	0-3
<i>Alnus</i>	—	—	—	—	—	1
<i>Betula</i>	2	1	1	1	—	—
<i>Pinus</i>	1	—	—	1	1	—
<i>Quercus</i>	3	2	—	1	—	1
<i>Tilia</i>	—	2	—	—	—	—
<i>Ulmus</i>	1	—	—	—	—	—
<i>Corylus</i>	14	11	14	7	4	6
<i>Salix</i>	—	1	—	—	—	—
Gramineae	—	—	1	1	—	2
Compositae Liguliflorae	—	1	3	2	3	1
<i>Linum catharticum</i>	1	—	—	—	—	—
<i>Plantago lanceolata</i>	—	—	—	—	—	2
Ranunculaceae	—	—	—	—	—	1
Varia	—	—	2	1	—	3
<i>Dryopteris</i> -type	—	3	—	6	7	9
<i>Polypodium</i>	—	—	+	—	—	1
<i>Pteridium</i>	—	1	1	3	7	3

+ = present in sample but not recorded in count.

Discussion and conclusions

The two profiles described here, between them reflect a wide range of environmental conditions, and cover a time span extending back from the Late Neolithic into the Last Glaciation.

The earliest deposit on the site is a layer of coombe rock. This formed under climatic conditions of extreme cold, but yet moist enough to cause solifluxion. By analogy with deposits of this type elsewhere in southern England,¹ it is likely to derive from a part of the Last (Weichselian) Glaciation between about 30,000 and 50,000 B.C. It was probably during this period that the coombe, now enclosed by Durrington Walls, was hollowed out.

A later period of frost-weathering, but of lesser intensity, brought about the formation of a series of involutions. These contain a snail fauna characteristic of the Late Weichselian period in Southern England and the presence of three relatively thermophilous species, viz. *Hygromia hispida*, *Helicella itala* and *Helicella geyeri*, would indicate that we are perhaps dealing with Zone III of this period, that is between 8800 and 8300 B.C.² An open-country tundra environment is to be envisaged at this stage.

The period of Flandrian (Post-glacial) climatic amelioration is reflected initially by a rich fauna, dominated by shade-loving species, which, together with the presence of ancient tree root-holes penetrating the coombe rock, suggests the spread of a forest cover over the chalk at this time. Similar faunas indicative of a shaded environment have been recovered from several sites in North Wiltshire.³

At some later stage the soil was disturbed to a depth of 20 to 25 cm., resulting in a rather

¹ Kerney, 1965.

² Kerney, 1963.

³ Evans, 1968A.

stony profile. This process caused an alteration of the snail fauna indicative of an opening up of the environment and it would seem here that we are dealing with the effects of woodland clearance. We cannot of course demonstrate on the evidence available how this process took place or for what purpose. Cultivation may well have been involved, but other possibilities such as the creation of open spaces for corralling cattle or of grassland for grazing cannot be discounted. Unfortunately too there is little evidence to date this phase, but one presumes it is of Neolithic origin, and it may well relate to the period of Middle Neolithic occupation recognized elsewhere on the site. Thus during the 1966 excavations in the northern sector it was noticed that the stone-free, mull humus horizon of the soil profile was virtually absent and that Middle Neolithic occupation debris lay directly over a disturbed soil profile.¹ This would indicate virtual contemporaneity of the two horizons. It would also imply that Neolithic forest clearance in the area was under way by the middle of the third millennium B.C. A radiocarbon determination of wood-charcoal from this layer gave a date of 2450 ± 150 B.C. (NPL-191)² and two other determinations which may also relate to the Middle Neolithic occupation gave values of 2625 ± 40 (Gro-901a) and 2635 ± 70 B.C. (Gro-901).³

A similar stony soil profile with an open-country mollusc fauna was recorded from beneath Wayland's Smithy II in Berkshire and here too cultivation was postulated.⁴ A radiocarbon date from the surface of this soil gave a value of 2820 ± 130 B.C. (I-1468).⁵ At South Street in North Wiltshire forest clearance and cultivation were associated with a phase of cross-ploughing.⁶ Here a radiocarbon date of 2810 ± 130 B.C. (BM-356) was obtained.

The stratification of the Middle Neolithic occupation material is curious in view of its age relative to that of the henge. On both radiocarbon and archaeological grounds the occupation horizon is somewhere around the middle of the third millennium B.C. while the henge is put at about 500 years later. One would expect occupation debris to be incorporated into the soil by worm action, and charcoal to be comminuted, at any rate over such a long period of time. What may have occurred however is that the dumping of large quantities of organic material – charcoal, putrefying flesh and bone and other organic matter long since decomposed – in concentration over the surface of the ground produced conditions inimical to plant and animal life. (This is suggested for instance by the virtual absence of mollusca from the Late Neolithic occupation debris in profile DW II.) The soil fauna including the earth-worm population may have been destroyed and the process of soil fossilization begun. This may not be the total story but clearly it would go some way to explaining the anomaly in the radiocarbon dates and the absence of a mull humus, worm-sorted zone in the soil profile where it is overlain by Middle Neolithic occupation debris.⁷

After the phase of clearance (and cultivation?) the site seems to have been abandoned, at any rate for cultivation, and an environment of grassland developed. During this time a stone-free mull humus horizon or turf-line some 7 cm. thick was formed. The length of time represented by this turf-line is important if we are to make any reliable estimate of the chronological relationship between the clearance phase and the Late Neolithic occupation.

¹ Information from the excavator.

² This publication.

³ Piggott, 1959; Vries, Barendsen and Waterbolk, 1958.

⁴ Information from M. P. Kerney.

⁵ Atkinson, 1965.

⁶ Fowler and Evans, 1967.

⁷ See Piggott, 1959 and Wainwright, 1967, for further discussion of this question.

Unfortunately, however, a number of variables are involved whose value it is difficult to assess. First, the degree of compression undergone by turf after burial is unknown. The figure for the shrinkage of the turf-stack of the Overton Down Experimental Earthwork is 36% in four years.¹ Dr I. W. Cornwall suspects that the compression of the turf of a rendsina soil may be as much as 65%. Professor G. W. Dimbleby suggests something in the order of 50%.² This would imply a possible original thickness of the turf-line at Durrington Walls of as much as 20 cm. Second, the rate of formation of a stone-free zone is directly related to the size of the soil earth-worm population. If this be optimal for lowland meadow soils of rich base status then on the basis of the figure quoted by Darwin³ of 2 in. (5 cm.) per 10 years, a minimal period of about 40 years would be required for the formation of a turf-line 20 cm. thick. However, as 20 cm. is close to the maximum thickness for the worm-sorted zone of a rendsina soil, a longer period may well be involved.

The composition of the molluscan fauna during this time suggests a dry, treeless landscape with an immediate environment of short-turfed grassland. Similar faunas have been described from Bronze Age sites nearby.⁴ That a grassland environment should have persisted for upwards of 40 years (and possibly much longer if we equate the clearance phase with Middle Neolithic occupation) and for woodland or even scrub regeneration not to have taken place is curious. It may be noted, however, that in suitable local habitats a mollusc fauna suggesting a more shaded environment sometimes reappears – e.g. from the ditch of Woodhenge where a relatively rich fauna was recorded⁵ — suggesting the presence of refuges on the downs of uncleared areas. Similar patterns of clearance, followed by cultivation and then abandonment to stable grassland, but with refuges for shade-loving species persisting into the Bronze Age, have been recorded from North Wiltshire also.⁶

What is not clear, however, is whether regeneration was inhibited by climatic factors, i.e. the postulated continentality of the Sub-Boreal period or by intensive grazing by animals during the Neolithic and Bronze Age periods. To date, evidence of a Sub-Boreal period (Zone VIIb) of uniformly drier climate than the preceding Atlantic period (Zone VIIa) is ambiguous and one feels more inclined to ascribe the absence of regeneration to the grazing associated with Late Neolithic and Bronze Age pastoral farming than to any climatic cause. In support of this we might refer back briefly to the pollen sequence. This, in its final stages, while showing an open vegetation, was dominated by bracken and ferns rather than by grasses suggesting a habitat not likely to be compatible with the molluscan fauna. As was suggested, the pollen may not be contemporary with but later than the mollusc assemblage, and if this is so we have indications that a grassland environment later gave way to one of bracken (but see above, pollen analysis of DW II). In other words, the grassland was being artificially maintained, presumably by grazing, and once this control was relaxed, succession to bracken took place.

The final phase of human activity on the site, prior to the building of the henge was a period of Late Neolithic settlement represented by occupation debris overlying the turf-line of the buried soil.

¹ Jewell and Dimbleby, 1966.

² I am grateful to Professor G. W. Dimbleby and Dr I. W. Cornwall for discussion on this point.

³ Darwin, 1881.

⁴ Christie, 1964; 1967; Newall, 1931.

⁵ Cunnington, 1929.

⁶ Evans, 1968A.

These changes in the local environment on the site of Durrington Walls are summarized in tabular form below.

<i>c.</i> 2000–1500 B.C.	Late Neolithic occupation	Abandoned pasture Grassland
<i>c.</i> 2500 B.C.	Middle Neolithic occupation	Cultivation Woodland clearance
	Post-glacial (Flandrian) Zone VIIa	Woodland
<i>c.</i> 8800–8300 B.C.	Zone III	Open-country (tundra); frost-weathering
<i>c.</i> 30,000–50,000 B.C.	Middle Weichselian	Solifluxion Formation of coombe

II. ANIMAL BONES FROM DURRINGTON WALLS

By R. A. HARCOURT

Introduction and methods

The bones from this site formed three groups. By far the largest, comprising some 8500 identifiable specimens, was made up of the material from the various features of the Neolithic levels, which, as no differences were apparent between them, have been treated as a single entity. Two other groups are of Iron Age date: from the Packway Enclosure (75 specimens) and from the Iron Age settlement north of the Northern Circle (180 specimens). The material is described in chronological order. All measurements are in millimetres. The extremities of long bones were measured across the articular surfaces.

Description of material

I. Neolithic. The bones were in an excellent state of preservation and in particular there was an astonishingly high number of entire, almost perfect, pig bones, many with fully fused epiphyses. As a general rule the remains of this species preserve less well than those of other ungulates. This site however proved a remarkable exception. The species present were pig, cattle, aurochs, sheep, goat, dog, horse, red deer, roe deer, fox, badger, pine marten, beaver, water-vole, birds and oyster.

All members of the skeleton of cattle and pigs were about equally represented with the exception of jaws, teeth and skull. These were very few and in particular was this so with the cattle horn cores — only 4 measurable — and skulls of which there was only one, but much damaged (pl. XIII a).

TABLE XXXII

Minimum Numbers of Each Species

Pig 198 (30)	Goat 1	Red Deer 14	Badger 1
Cattle 85 (12)	Horse 3	Roe Deer 2	Pine marten 1
Sheep 5 (2)	Aurochs 3	Dog 4	Fox 2
			Beaver 1

The figures in brackets are those of minimum numbers in the 1952 excavations. These are derived from Grahame's table of the counts of bone type from each species.¹

Pig (*Sus scrofa*)

This species far exceeded all others in number and, from the absence of any specimens large enough to suggest wild boar, all were probably domesticated. There was one unusually long, curved but relatively slender tusk (pl. XIII b).

¹ Stone, Piggott and Booth, 1954, 175-7.

TABLE XXXIII

*Measurements of Pig Bones**

<i>Humerus</i>												
T.l.	184	191	192	196	198	198	—	—	203†	208	212	—
T.l.h.	162	175	174	177	173	173	181	182	180	186	187	—
m.s.d.	18	20	21	22	21	21	21	20	20	24	20	—
d.w.	29	33	34	34	32	31	31	32	34	32	35	27-35 (122)
<i>Radius</i>												
T.l.	137	148	151	155	156†							
p.w.	27	27	30	32	33							
m.s.d.	18	20	20	22	20							
d.w.	29	28	29	31	32							
<i>Femur</i>												
T.l.	213	218	225	230†								
m.s.d.	20	20	20	20								
d.w.	45	49	48	50								
<i>Tibia</i>												
T.l.‡	180	182	184	186	187	188	188	189	192	194	195	
p.w.	47	50	49	46	51	48	49	—	50	52	48	
m.s.d.	19	22	22	22	23	22	23	23	22	24	22	
d.w.	21	22	22	22	23	21	22	23	23	25	22	
T.l.	196	197	198	198	198	199	200	203	203	204†	208	
p.w.	—	48	—	48	51	—	51	48	51	52	51	
m.s.d.	22	22	22	22	23	26	23	22	23	22	22	
d.w.	22	22	22	23	23	24	23	22	23	23	22	
<i>Calcaneum</i> Total length 72-89 (31)												
<i>Lower Third Molar-M₃</i> Total length 31-8 (25)												

* T.l. = Total length m.s.d. = mid shaft diameter d.w. = distal width T.l.h. = T.l. to head (humerus only)
p.w. = proximal width. Figures in brackets denote number of specimens measured.

† Denotes a length identical to that of Pitt-Rivers' test animal (Pitt-Rivers, 1887, 209 *et seq.*).

‡ The tibial spine is not included in this measurement.

The measurements (Table XXXIII) show that the tallest of the Durrington Walls pigs stood about the same height as Pitt-Rivers' test animal which was 28 in. (71 cm.) at the shoulder.

All age groups were represented, from very young piglets to fully mature adults with all epiphyses fused and the lower third molar heavily worn, but younger immature animals were much in the majority. It is unknown at what ages the various epiphyses of the long bones of prehistoric animals fused. It is likely, however, that the sequence in which fusion occurs has remained unaltered. Accordingly the long bone extremities were grouped into early fusing and late fusing moieties for both pig and cattle. In the early group unfused epiphyses indicate very young animals and in the late group fused epiphyses must be from fully mature or even old animals. For the pig, even in the early fusing group, about half the total number of bones had unfused epiphyses and in the late fusing group the proportion is less than one third (figs. 110 and 111).

Cattle (*Bos taurus*)

The minimum number of animals represented was 85. The measurements (Tables XXXIV and XXXV and fig. 108) show that these cattle were very similar to those described from other Neolithic sites^{1,2} and that their height was 48-56 in. (122-43 cm.).

Although the number of specimens available for the two methods requiring complete metapodials is small, the derived indices (Table XXXV), the histograms and the metapodial length/breadth indices (figs. 108 and 109) all seem to indicate that castration was practised. If a cattle population consists only of entire males and females, as for example at Star Carr, the bone measurements will fall, with only slight overlap, into two groups.³ At Durrington Walls this is not the case. The metapodials of cows are shorter than those of steers but equally slender, while in the bull they are relatively short and thick.⁴

The epiphyseal fusion shows a preponderance of fully mature animals with few unfused epiphyses even in the early fusing group (figs. 110 and 111). A similar finding was reported from the 1952 excavation.⁵

Sex determinations are based on the breadth/length indices.⁶ For calculations of the height⁷ the lengths of the metapodials were multiplied by the following factors — metacarpals, 6.71, 6.40 and 6.31 for bulls, steers and cows respectively. The equivalent factors for the metatarsals are 6.0, 5.71 and 5.63.⁸

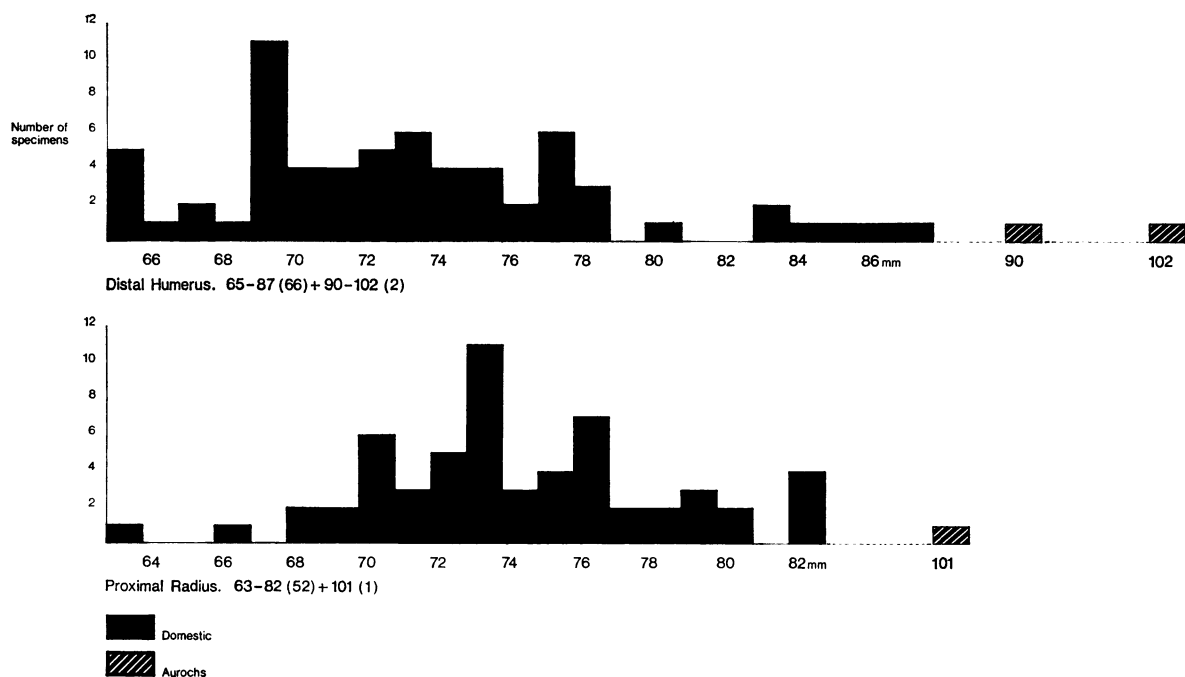


FIG. 108a-b

¹ Grigson, 1966, 63.² Jewell, 1963 A, 80-91.³ Jewell, 1963 A, 80-91.⁴ Howard, 1963, 91-100.⁵ Stone, Piggott and Booth, 1954, 176.⁶ Howard, 1963, 91-100.⁷ Height equals height at the withers.⁸ Boessneck, 1956, 75-90.

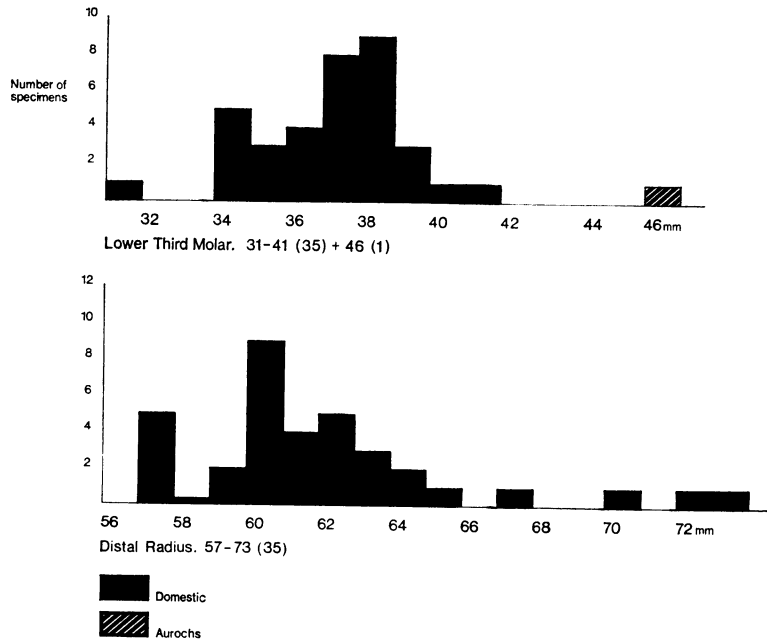


FIG. 108c-d

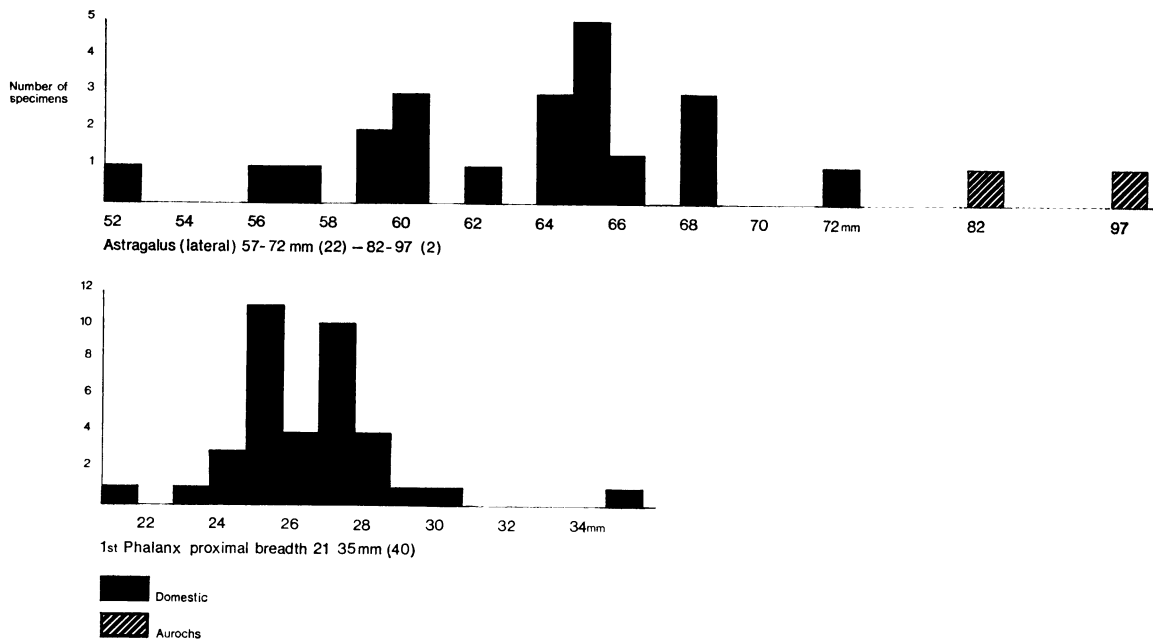


FIG. 108e-f

Figs. 108a-b, c-d, e-f. Frequency diagrams of bone dimensions of domestic cattle and aurochs from the Neolithic levels. Figures in brackets are numbers of specimens

TABLE XXXIV

Measurements of Cattle Bones

	<i>T.l.</i>	<i>p.w.</i>	<i>m.s.d.</i>	<i>d.w.</i>	
<i>Humerus</i>	260 — —	— — —	38 — —	71 65-87 (66) 90-102 (2)	<i>B.t. primigenius</i>
<i>Radius</i>	270 274 — — —	68 71 — 63-82 (52) 101 (1)	41 40 — — —	— 60 57-78 (37) — —	<i>B.t. primigenius</i>
<i>Tibia</i>	318 — —	96 — 108	41 — —	57 43-60 (30) —	
<i>Horn Cores</i>	Basal circumference 150; ¹ 160; 175; 220; 226; 376 (Diameters 127 × 101)				<i>B.t. primigenius</i>

¹ *vide pl. XIII a.*

TABLE XXXV

*Cattle Metapodials**Metacarpals*

<i>T.l.</i>	<i>p.w.</i>	<i>m.s.d.</i>	<i>d.w.</i>	$\frac{m.s.d. 100}{t.l.}$	$\frac{d.w. 100}{t.l.}$	<i>Sex</i>	<i>Ht.</i> <i>in.</i>	<i>Ht.</i> <i>cm.</i>
194	55	31	58	16.0	29.9	Cow	48	122
203	55	31	59	15.3	29.2	Cow	51	129
205	55	34	61	16.6	29.9	Cow	51	129
205	61	38	65	18.6	30.7	Bull	52	131
215	—	35	65	16.3	30.3	Steer	54	138
215	67	38	69	17.7	32.1	Bull/Steer	56	144

Metatarsals

<i>T.l.</i>	<i>p.w.</i>	<i>m.s.d.</i>	<i>d.w.</i>	$\frac{m.s.d. 100}{t.l.}$	$\frac{d.w. 100}{t.l.}$	<i>Sex</i>	<i>Ht.</i> <i>in.</i>	<i>Ht.</i> <i>cm.</i>
214	42	24	47	11.2	21.9	Cow	47	120
217	42	25	52	11.0	24.0	Cow	48	122
219	47	27	54	12.3	24.7	Cow	48	123
227	42	25	53	11.0	23.4	Cow	50	127
233	46	27	54	11.6	23.2	Cow/Steer	52	131

Aurochs (*Bos taurus primigenius*)

Several very large bovine bones were of aurochs (fig. 108) as was the 46 mm. lower third molar.¹ A few of the largest identified as of domestic cattle may well have been aurochs as there is some overlap in the dimensions of the two species.

The most impressive specimen in the whole collection was a huge horn core with the tip missing and of basal circumference 376 mm. It is possible that this came from the same animal as the astragalus of 97 mm. There is only one specimen of this size figured by Grigson² and neither Star Carr nor Windmill Hill produced its equal so it was probably a very large bull.

Sheep (*Ovis aries*)

As seems usual from Neolithic sites this species was poorly represented.³ There were only 75 specimens from 5 individuals and these indicated small slender animals of the type found little altered throughout the archaeological record from the time of their original introduction in the Neolithic right up to the medieval period.

TABLE XXXVI

Measurements of Sheep Bones

<i>Humerus</i>	Distal width	24-28 (8)
<i>Radius</i>	Proximal width	24-28 (5)
<i>Tibia</i>	Distal width	21 (1)
<i>Metatarsal</i>	Distal width	24-25 (2)
<i>Lower third molar</i>	Length	19-23 (6)

Goat (*Capra hircus*)

The only bone definitely considered to be of goat from this collection was one complete metacarpal. Its measurements were:

Total length	105 mm.
Proximal width	22
Midshaft diameter	16
Distal width	25
M.s.d. 100/t.l.	15.2

It is possible that some of the other bones ascribed to sheep may in fact have been of goat but as the total number of specimens from both species is so small this is of little consequence. Goat was found at Windmill Hill⁴ and it was also identified among the material from Whitehawk.⁵

Dog (*Canis familiaris*)

The remains, 18 specimens in all, were very scattered and fragmentary. They represented a minimum of four individuals. The only two complete long bones, both femora, suggest a shoulder height of 14-15 in. (35-8 cm.) and 18-19 in. (45-8 cm.) respectively.

The Easton Down dog stood 39 cm. and the Windmill Hill dog 43 cm. (measured at Salisbury and Avebury Museums).

¹ Degerbol, 1963, 70.

² Grigson, 1969, 277.

³ Clark, 1947.

⁴ Grigson, 1965, pl. x.

⁵ Curwen, 1934, 127-9.

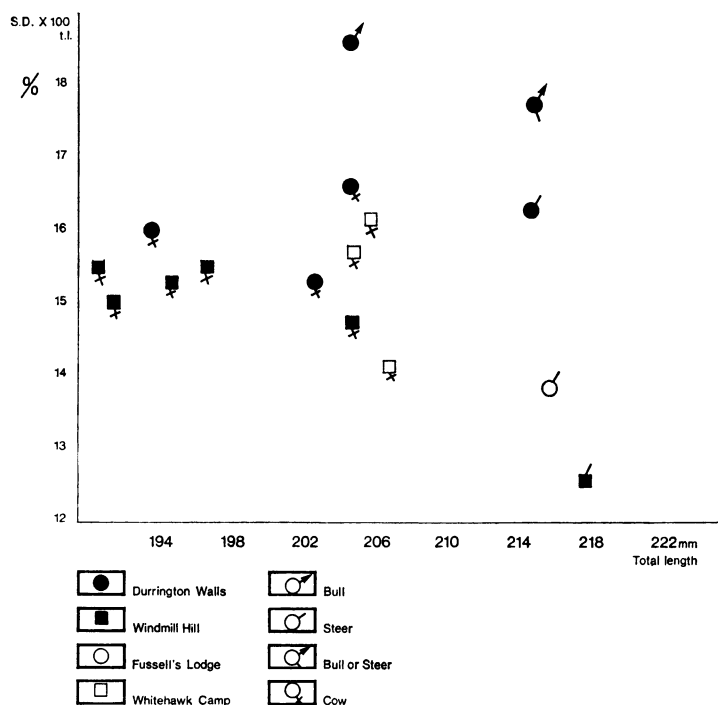


FIG. 109. Bovine metacarpals from four Neolithic sites. Total lengths plotted against midshaft diameter expressed as percentage of total length to show bone proportions of bulls, cows and steers and hence evidence of the practice of castration

TABLE XXXVII

Measurements of Dog Bones

<i>Femur*</i>	122-8 160-13						
<i>M₁ length</i>	20	21	22	22	23	24	24
<i>Tooth row</i>	—	—	74	—	80	82	83

* Total length and mid-shaft diameter.

Horse (*Equus caballus*)

Three animals are represented; their heights were found to vary from 12.3 to 14.2 hands (129-48 cm.). This difference, which may seem large, is no more than could be explained by normal variation within a population. Even at the present day, with control of breeding, many breeds of horse and pony show a similar size variation.¹

¹ Summerhayes, 1964.

TABLE XXXVIII

Measurements of Horse Bones

	<i>T.l.</i>	<i>p.w.</i>	<i>m.s.d.</i>	<i>d.w.</i>	<i>Ht.</i> <i>cm.</i>	<i>Ht.</i> <i>Hands</i>
<i>Radius</i>	319	68	34	58	138	13.3
	—	70-75 (2)	—	—	—	—
	—	—	—	58	—	—
<i>Metacarpal</i>	201	41	28	40	129	12.3
<i>Femur</i>	394	—	37	—	148	14.2
<i>1st Phalanx</i>	85	50	—	—	—	—
	70	—	—	—	—	—
	65	44	—	—	—	—
	64	42	—	—	—	—

Red Deer (Cervus elaphus)

The bone evidence suggests a minimum of five animals. There were great numbers of antlers including many broken tips and other fragments. A total of 287 were from cast and 29 were from killed or dead animals. All sizes were included, from those of first or second year animals right up to the massive specimens of fully mature stags; immature specimens were, however, much less numerous.

TABLE XXXIX

Measurements of Red Deer Bones

<i>Radius</i>	Proximal width	50-57 (4)
	Distal width	47
<i>Humerus</i>	Distal width	46-56 (6)
<i>Tibia</i>	Distal width	41-45 (2)
	Proximal width	72
<i>Metatarsal</i>	Distal width	45
<i>Metacarpal</i>	T.l. 250	p.w. 37
	M.s.d. 22	d.w. 40

Roe Deer (Capreolus capreolus)

There were fewer than 20 specimens including a few cast antlers.

Small wild mammals

This group, with the number of bone specimens from each in brackets, consisted of fox (6), badger (1), pine marten (1), beaver (2) and water vole (3).

Birds

Five different species have been identified although the number of bird bones was only eight. These

DURRINGTON WALLS: EXCAVATIONS 1966-8

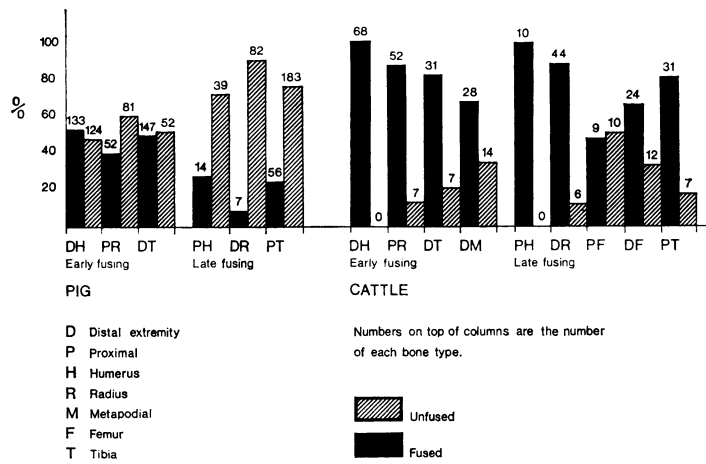


FIG. 110. Frequency diagram of epiphyseal fusion to show age structure of cattle and pig population; the columns show fused and unfused epiphyses of a particular bone expressed as a percentage of the total of the same type

were wild duck, probably mallard, raven, woodcock, cormorant and kite. Even at the present day the cormorant can be seen on rivers quite far inland and in Neolithic times it is evident, not unexpectedly, that it came even further. It is possible however that both it and the oyster were brought by a visitor or returning traveller from the coast. The kite and raven are both scavengers and were probably very common in prehistoric times. The previous earliest record of the kite seems to be from the Iron Age.¹

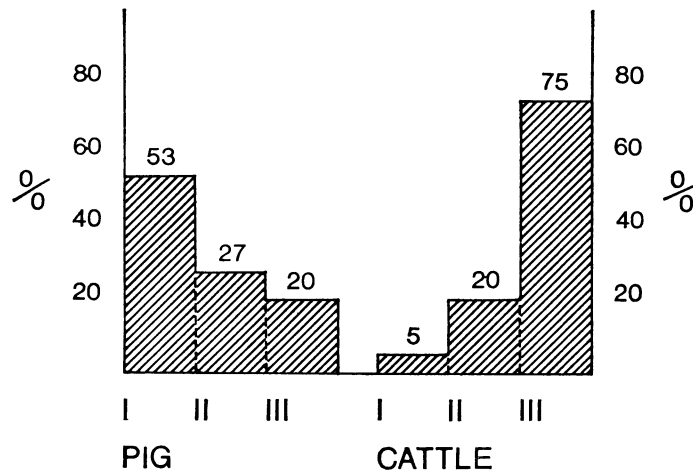


FIG. 111. Data from fig. 110 showing percentages of animals in each of the 3 age-groups at death. The actual percentages are shown on the top of each column. Group I—juvenile; Group II—young adult; Group III—fully mature

¹ Fisher, 1966, 31.

TABLE XL
Measurements of Cattle Bones

<i>Humerus</i>	Distal width	67
<i>Radius</i>	Distal width	62.67
<i>Astragalus</i>	Length	57
<i>1st Phalanx</i>	Proximal width	22-23 (3)
<i>M₃</i>	Length	38.5

Metacarpals

<i>t.l.</i>	<i>p.w.</i>	<i>m.s.d.</i>	<i>d.w.</i>	<i>m.s.d.</i> 100	<i>d.w.</i> 100	<i>Ht.</i> <i>in.</i>	<i>Ht.</i> <i>cm.</i>	<i>Sex</i>
				<i>t.l.</i>	<i>t.l.</i>			
164	48	28	49	17.1	29.9	41	105	Cow
182	—	27	50	14.8	27.5	45	116	Cow

II. Iron Age: the Packway Enclosure. These bones were markedly less well preserved than those from the Neolithic levels. The surfaces were severely pitted and eroded. The animal species present were cattle, horse, sheep, pig, dog and red deer. There was also part of the shaft of a human femur. The total number of bones, 75, was too small to allow of any analysis. Sheep, pig and red deer together provided only nine specimens.

Cattle

It has been shown that cattle became progressively smaller from the Neolithic onwards¹ and, though the group is too small to draw conclusions, the measurements of those from this site reflect this pattern (Table XL).

Horse

The only specimen of note was a substantially complete but damaged mandible. The length of the tooth row was 169 mm.

Dog

At the bottom of the east ditch there was a nearly complete skeleton. Both mandibles were present but no other part of the skull. The bone dimensions suggest an animal about the size of a Labrador, 21-2 in. (53-6 cm.) at the shoulder (Table XLI).

III. Iron Age settlement north of the Northern Circle. The remains of cattle, sheep, horse, pig, dog and red deer were present but the last two species provided only three specimens between them and those of the pig were too few to warrant further mention.

Cattle

Few bones were measurable but some of these were as large as or larger than any recorded for the Iron Age. All three specimens of radius lie within the Neolithic range as shown in fig. 108. The metatarsal

¹ Jewell, 1963 A, 80-91.

TABLE XLI
Measurements of Dog Bones

<i>Humerus</i>	164-12	<i>Femur</i>	176-12
<i>Radius</i>	164-12	<i>Tibia</i>	176-11
<i>Ulna</i>	192-11		
<i>Mandible, greatest length</i>	136		
<i>Mandible tooth row</i>	72		
<i>M₁ length</i>	20.7		

The total length and mid shaft diameter of each long bone is given.

(225 mm.) in particular is noteworthy. The longest recorded by Jackson was 213 mm.,¹ and Cornwall gives a maximum measurement of 218 mm. for the Celtic ox.² However, it should be remarked that while the difference may seem large in a separate bone, in the living animal it would amount to only some 3 cm. difference in height which would scarcely be appreciable (Table XLII).³

TABLE XLII
Measurements of Cattle Bones

<i>Radius</i>	Proximal width	70
<i>Radius</i>	Distal width	56.63
<i>Tibia</i>	Distal width	46
<i>Astragalus</i>	Greatest length	57
<i>Metatarsal</i>	T.l. 225: p.w. 45: m.s.d. 24: ht. 126 cm. 49 in.	

Sheep

Twelve identifiable specimens showed the presence of two adults and three lambs, two of them approximately six months old.

There was one complete metatarsal, (123 t.l., 18 p.w., 14 m.s.d., 21 d.w.).

Horse

One nearly complete mandible was from an 8-year-old stallion and a complete metacarpal indicated the typical Iron Age pony of about 12½ hands (131 cm.) (205 t.l., 45 p.w., 28 m.s.d., 44 d.w.).

Pathology

(a) *Neolithic*

Fig. The tibia of a young animal had a deep cavity on its medial aspect caused by an abscess. The periosteal reaction had extended over the posterior surface. A last thoracic vertebra showed marked osteophytic lipping. As far as could be seen the articular surface was not affected so that this was probably a senile change.

¹ Jackson, 1925, 90.

² Cornwall, 1960, 182.

³ Boessneck, 1956, 75-90.

Red Deer. A fracture in the lower part of the shaft of the tibia had united but with much distortion and shortening. Injuries of this sort are not uncommon among red deer and cause them little inconvenience.

(b) *Iron Age*

Cattle. A first phalanx showed widespread periosteitis but no involvement of the articular surfaces (pl. XIII c). This might have been a sequel to a penetrating wound which subsequently became infected or to the condition known as necrotic pododermatitis. This starts in the interdigital space but if neglected can spread and involve the rest of the foot. It is caused by the soil organism *Fusiformis necrophorus* and is often associated with wet muddy conditions.

Discussion

General. It is likely that the character of a bone collection from a ritual site such as this will be different from that of a contemporary settlement site and it would be an error to assume that the relative proportions of the bones of different domestic species found here necessarily reflect those of Neolithic livestock as a whole. At no other Neolithic site known to the writer has the number of pigs been so much in excess of all other species.

The bones on a settlement site will be a mixture in varying proportions, of those of animals killed for food and of others that died from natural causes. Moreover there is no reason to doubt that these were eaten more often than not.^{1,2}

On a sacred site, however, the bones are more likely to have been those of animals killed for ritual purposes. It is possible that one species might be more highly valued than another in this context which would give a false idea of its importance. This may be the explanation of the preponderance of pig at Durrington Walls although pigs seem to have been numerous in Neolithic times.³

As already noted the skulls of pigs and cattle were poorly represented. For example there were five bovine skulls at Maiden Castle,⁴ and at Windmill Hill, 14 skulls and 64 horn cores.⁵ The amount of bone from Durrington Walls was greater than from either of these sites but there were only one skull and four horn cores which would seem to indicate that animals were mostly killed elsewhere and the dismembered carcasses or portions of them brought on to the site. This, it is tentatively suggested, may perhaps be evidence that the act of slaughtering was not in itself important from a ritual point of view. However, only a small portion of the whole monument has been excavated and there may well be great concentrations of skulls as yet undiscovered.

The age structure of the cattle population (figs. 110 and 111), with a great majority of older beasts, shows that the herdsmen of the time were successful in bringing their beasts through a succession of winters. A similar finding was noted at Windmill Hill and indeed, in the writer's experience, the same relative age structure, with older animals predominant, is seen again and again throughout the archaeological record.

¹ Cranstone, 1969, 247.

² Harcourt, (in prep.).

³ Clark, 1947, 122-36.

⁴ Jackson, 1943, 360.

⁵ Grigson, 1965.

Aurochs. The bones of wild cattle are usually found on Neolithic sites and while meat from these was clearly a part of the diet it does not seem to have provided a large contribution, presumably because that of domestic animals, however large or small a proportion of the total diet meat may have comprised, was sufficient. For this reason it seems almost incredible that the aurochs, as so commonly implied, can ever have been hunted solely for meat at this period.

The bulls stood up to 6 ft. (180 cm.) at the shoulder and were obviously formidable animals. The cows were probably little, if at all, less dangerous and, although early man was quite capable of killing prey as large as these, to have hunted them when easier meat was readily available does not make sense. Among various primitive tribes in different parts of the world the young men were, until recently, expected to prove their manhood in one way or another; by killing an enemy, a large carnivore or other wild animal.¹ The remains of the very large aurochs may perhaps be explained in this way.

Red Deer. That hunting alone was not regarded as a reliable method of obtaining the large number of antler picks required in the construction of the monument is clearly shown by the 10 : 1 ratio of cast to killed antlers. Red deer shed their antlers in the spring, and if, as seems most likely, work was carried out from the late spring to harvest time and then again after the harvest was in, presumably great numbers of antlers were collected and stored till required.

Horse. The remains of horse are usually few from Neolithic sites and the decision whether they are of wild or domesticated animals is not easy:^{2,3} a reduction in size from the wild progenitor is usually associated with domestication but two of the specimens from this site indicated animals bigger than some of those from Last Glaciation sites.⁴ Furthermore, Zeuner states that the domesticated horse did not appear anywhere in Europe before the Bronze Age,⁵ so these animals were therefore probably wild.

Acknowledgements

I am much indebted to D. Bramwell for identification of the bird bones, to R. E. Chaplin and M. L. Ryder for their confirmation of the goat metacarpal and to A. J. Sutcliffe for his advice and assistance with the examination of Pleistocene horse material.

¹ Adamson, 1967, 226.

² Clark, 1947, 122-36.

³ Grigson, 1966, 63.

⁴ Fisherton, Salisbury Museum; Brixham Cave, Devon and Battersea Power Station, British Museum (Natural History).

⁵ Zeuner, 1963, 329.

III. REPORT ON THE HUMAN BONES

By R. POWERS

British Museum (Natural History)

Only two human specimens were received, as follows:

Southern Circle, post-hole 79: *skull*

Only part of the vertex is preserved, in three parts as follows:

- (a) frontal bone, mostly upper half of left side.
- (b) most of the left parietal bone, contacting the above.
- (c) part of the right parietal, contacting the above.

The skull is comparatively thin and even (5 mm. at bregma, and roughly the same all over). The coronal and sagittal sutures were wide open and there is no metopic suture. These observations suggest a young individual, but there are several small arachnoid pits on the inner aspect of the frontal bone suggesting a more advanced age. Thus, the age and sex are indeterminate.

Enclosure ditch, layer 8: *isolated right tibia of an adult male*

The left condyle of the knee joint is missing, probably due to post-mortem breakage. There are two well-defined vascular grooves on the lateral aspect, a coarsening of texture on the medial side of the shaft, and some roughness of the ankle joint, all suggesting slight inflammation. The bone is also somewhat flattened (platycnemic).

Measurements: Maximum anterior-posterior diameter (Ti D₁) = 38 mm.

Transverse diameter (Ti D₂) = 22 mm. (approx.).

Maximum length (Ti L₁) = 380 mm. (approx.).

Stature as calculated by the application of a regression formula, as given in Trotter and Gleser (1958) (*A.J.P.A.*), gives a height of 173.89 cm.; or about 5 ft. 8 or 9 in.

IV. PETROLOGICAL REPORT ON THE STONES

By F. S. WALLIS and E. D. EVENS

Implement Petrology Survey of the South West

Wilt. 347, 1355. A rock fragment from the surface near the centre of the enclosure. A medium grained heavy igneous rock, speckled black and grey. One face with a weathered skin. An olivine dolerite with analcite, probably from Cleve Hill, which is extensively used as roadstone.

Wilt. 348, 1356. A medium grained heavy igneous rock, speckled black and grey. Fresh plagioclase laths are intermixed with grains and small plates of purplish brown augite, also quite fresh. Olivine is present in porphyritic crystals and there is a considerable amount of analcite between the felspar in patches. These are sometimes clear with very weak D.R. and sometimes cloudy. Plates of black iron ore occur and the section is full of slender needles of apatite. An olivine dolerite with analcite probably from Cleve Hill which is extensively used as roadstone.

Wilt. 349, 1357. A flake of rock from the top of the old land surface under the enclosure bank. A medium to fine-grained grey light weight rock. Subangular quartz grains are set in a very abundant chalcedonic cement containing glauconite casts of foraminifera: quartzite, presumably sarsen.

Wilt. 350, 1379. A fragmentary polished axe-head from post-hole 87 of the Southern Circle. A medium grained, dark, heavy, finely mottled, greenish rock with darker ferro-magnesian minerals visible. Bluish-grey on cut surface with darker markings. Composed of very decomposed felspars enclosed optically by augite plates altered to green fibrous hornblende. Grains of leucoxene after ilmenite are scattered over the section and a small amount of brown hornblende also occurs in small grains and plates. An ophitic greenstone.

Wilt. 351, 1380. A rock fragment from the primary silt of the main enclosure ditch. A fine grained pink quartzite, possibly sarsen. Moderately uniformly graded subangular quartz grains are held together with a siliceous cement which is abundant and is composed partly of small quartz grains and partly of chalcedony. The grains are fairly free of inclusions but the cement contains much opaque material which is red by reflected light and is presumably haematite.

Wilt. 352, 1381. Rock fragments found in post-hole 66 of the Southern Circle. A very fine granular mass of calcite slightly tinted brown with white patches. Fossils are present and occasional small grains of quartz. Some of the material was broken up by soaking in water and freezing several times and was then washed by decantation. The residue contained a few foraminifera. Coccoliths were also obtained in the powdered substance. Chalk.

Wilt. 354, 1384. A rock fragment from the Midden. A fine-grained, banded light and darker pink quartzite.

Wilt. 355, 1385. A rock fragment from the Midden. A fine-grained, light grey quartzite. The quartz grains seem to be surrounded by a lighter halo of cement.

Wilt. 356, 1386. A rock fragment from the surface of the chalk within the Southern Circle. A fine grained pink quartzite. The pink and white grains are very rounded and are set in an abundant white to pink cement.

Wilt. 357, 1387. A rock fragment from post-hole 23 of the Southern Circle. A pale grey, fine grained quartzite, probably sarsen.

Wilt. 358, 1388. A rock fragment from post-hole 96 of the Southern Circle. A purplish conglomerate, composed of medium (3 mm.) to small rounded and polished grains of milky quartz set in a purplish cement and full of cavities.

Wilt. 359, 1389. A rock fragment from post-hole 90 of the Southern Circle. A very uniform, fine grained pink quartzite, probably sarsen.

Wilt. 360, 1393. A quern fragment from pit A of the Packway Enclosure. A coarse silicified conglomerate, unstratified, with shells. Identified by Mr T. R. Fry of the University of Bristol as Corallian limestone from Wiltshire which has been silicified.

Wilt. 361, 1394. A polished stone fragment from pit B of the Packway Enclosure. Portion of a pebble, dark red with a coating of white material over part. Rather fine grained. One surface has been ground. Angular to subangular quartz grains of very uneven, medium grain are set in a rather abundant opaque cement, red by reflected light, of haematite. Some of the grains are composite and most are free from strain. They contain many minute dark inclusions. Large cavities are present. A ferruginous sandstone.

V. REPORT ON THE CHARCOALS

By G. C. MORGAN

Ancient Monuments Laboratory, Department of the Environment

<i>Provenance</i>	<i>Identification</i>	<i>Diam. mm.</i>
Bank: old land surface	Oak: <i>Quercus robur</i>	—
	Hawthorn: <i>Crataegus</i> sp.	—
Enclosure ditch (5)	Hazel: <i>Corylus avellana</i>	40
	Oak: <i>Quercus robur</i>	75
	Hawthorn: <i>Crataegus</i> sp.	25
Enclosure ditch (6B)	Oak: <i>Quercus robur</i>	50+
	Hawthorn: <i>Crataegus</i> sp.	25
Enclosure ditch (7)	Hazel: <i>Corylus avellana</i>	75
	Hawthorn: <i>Crataegus</i> sp.	75
	Oak: <i>Quercus robur</i>	75
Enclosure ditch (8)	Oak: <i>Quercus robur</i>	—
	Ash: <i>Fraxinus excelsior</i>	—
	Beech: <i>Fagus sylvatica</i>	50
Midden	Oak: <i>Quercus robur</i>	50
Southern Circle: p.h. nos.: 26	Oak: <i>Quercus robur</i>	100+
	38 Oak: <i>Quercus robur</i>	75+
	50 Oak: <i>Quercus robur</i>	100
	50 Hawthorn: <i>Crataegus</i> sp.	40
	72 Oak: <i>Quercus robur</i>	100++
	74 Oak: <i>Quercus robur</i>	—
	86 Oak: <i>Quercus robur</i>	50
	87 Oak: <i>Quercus robur</i>	75
	89 Oak: <i>Quercus robur</i>	100
	90 Hawthorn: <i>Crataegus</i> sp.	—
	91 Ash: <i>Fraxinus excelsior</i>	50
	91 Oak: <i>Quercus robur</i>	40
	92 Oak: <i>Quercus robur</i>	100+
	95 Oak: <i>Quercus robur</i>	100+
	96 Oak: <i>Quercus robur</i>	50+
	98 Oak: <i>Quercus robur</i>	100+

From the preponderance of relatively large oaks in the Southern Circle post-holes it is reasonable to assume that oak was used for structural purposes. The fragmentary nature of the samples means that some of the diameter measurements may be underestimated.

VI. THE SOUTHERN CIRCLE AT DURRINGTON WALLS — A NUMERICAL INVESTIGATION

By R. J. C. ATKINSON

Professor of Archaeology, University College, Cardiff

The purpose of this enquiry is to answer three questions. First, what are the best estimates of the size of the circles to which the various rings of posts approximate, and where do their centres lie? Second, is there acceptable evidence that some or all of these circles were struck from a common centre or centres? Third, do the dimensions support the hypothesis that the 'megalithic yard' was used here as a unit of measurement?

These problems are of a kind that may well arise on other sites, and for this reason the method of approach is described in some detail, in the hope that it may be found useful in similar investigations in the future.

I. The problem of the best-fitting circle

On many sites arrangements of posts, stones, pits or other features are encountered, which are approximately but not precisely circular in plan. In such cases it can normally be assumed that in the preliminary stage of construction a circle was actually marked out on the ground, or else that the position for each feature was individually marked (e.g. by a peg) at a common radial distance from a fixed centre. The presumption in either case is that the builders *intended* the structure to conform to a circle of predetermined radius and centre.

During construction, however, various causes (such as the difficulty of centering a hole on a marker which must itself be dug away, or of manoeuvring accurately a stone or post of large size and weight) will have led to errors of positioning, so that the plan of the final structure will depart from strict circularity. The archaeologist thus has to infer, or estimate, the intentions of the builders from their imperfectly achieved results. In making this estimate it must be assumed, in the absence of contrary evidence, that the errors made by the builders were 'normally' distributed — that is, that collectively they conformed to the pattern of distribution observed in innumerable cases where a particular value or result is being aimed at, and where a large number of independent causes combine to deflect the actual result from the result intended.

Some of the properties of this 'normal' distribution are that the numbers of positive and negative errors are approximately equal; that their algebraic sum approximates to zero; and that the sum of the squares of the errors, measured from the intended value, will be a minimum — that is, it will be smaller than the sum of the squares of errors measured from any other reference value.

It is this last property which forms the basis of the 'least squares' method normally adopted for fitting a curve to a given set of points, the curve in the present instance being a circle. For the best fit to be obtained, the condition to be satisfied is that the sum of the squares of the residual errors (i.e., the squares of the distances by which each point departs from the curve) shall be a minimum.

When this condition is satisfied, the distribution of the residual errors approximates most closely to the 'normal' distribution. Consequently in the present case the 'best-fitting circle', in the mathematical sense, is also the best estimate we can make of the original *intentions* of the builders.

The calculations involved in fitting a circle to an irregular ring or arc of points are not difficult in themselves, but are undoubtedly laborious. In many cases they can be avoided by the use of an approximate method of solution suggested by Professor Alexander Thom;¹ but unfortunately this approach is unsuitable in the present instance. This short-cut method depends on the averaging of the errors in each of four quadrants; and in the Southern Circle at Durrington Walls all but the innermost of the ten rings of posts are incompletely known, and have a quarter or more of their circumference missing. The method adopted here is a simplification, for the special case of the circle, of a more general method of curve-fitting suggested by Professor Thom.²

The initial procedure is as follows:

- (a) On a tracing of the plan, mark the apparent centre of each feature, and by trial and error draw a circle which is an approximate fit to the resulting ring of points.
- (b) Through the centre of this trial circle, draw any arbitrary axes at right angles.

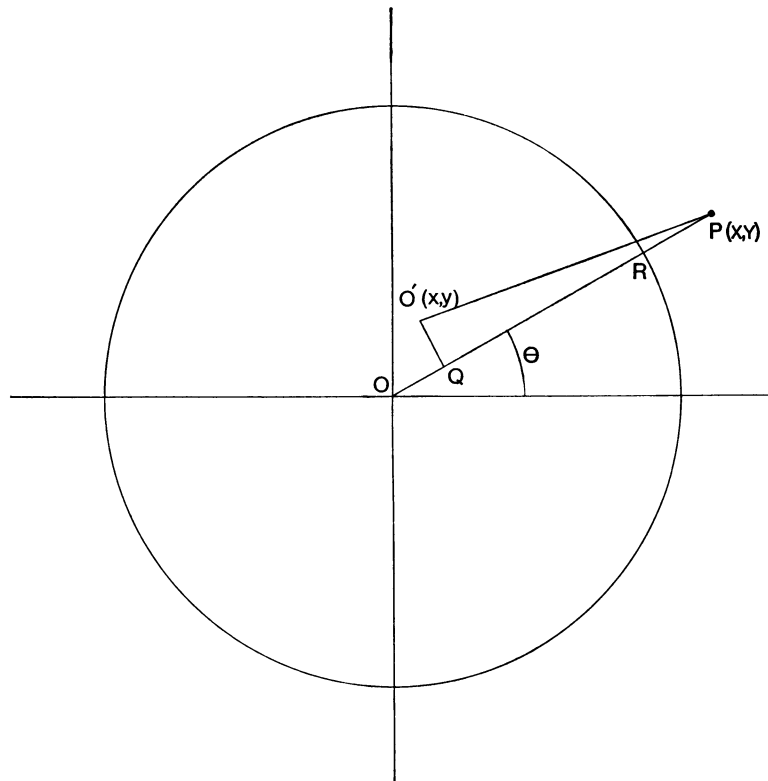


FIG. 112

¹ Thom, 1967, 35.

² Thom, 1955, 290.

- (c) Measure and tabulate for each point its co-ordinates X , Y with respect to these axes, having due regard to algebraic sign; and its radial error d , counting distances outside the trial circle as positive and those inside as negative.

The basis of the ensuing calculations may best be understood by reference to fig. 112, which shows the trial circle with centre O and radius OR , and one point P of the set to which the best circle is to be fitted, with co-ordinates X , Y . The error, positive in this case, is $RP = d$.

The error d can be reduced in two ways:

- (i) by increasing the radius of the trial circle by a small amount r , which diminishes d to $d - r$;
- (ii) by moving the centre of the trial circle from the point O to some other point O' , with co-ordinates x , y . Provided that the distance OO' is small compared with the distance OP , this will reduce the error d by an amount approximately equal to OQ . This can be shown to be equal to $x \cos \theta + y \sin \theta$, where θ is the angle between the line OP and the x -axis. Since $\cos \theta = X/\sqrt{X^2 + Y^2}$ and $\sin \theta = Y/\sqrt{X^2 + Y^2}$, this reduces d to $d - xX/\sqrt{X^2 + Y^2} - yY/\sqrt{X^2 + Y^2}$.

By combining these two ways, we can reduce the error to

$$d' = d - xX/\sqrt{X^2 + Y^2} - yY/\sqrt{X^2 + Y^2} - r,$$

for any one point P ; and it remains to find the values of x , y and r for which the sum of the squares of these residual errors is a minimum — that is, $\Sigma d'^2$, where the symbol Σ means 'the sum of'.

This is achieved by setting the partial derivatives of $\Sigma d'^2$ equal to zero, and solving the resulting simultaneous equations, viz.:

$$\begin{aligned} \Sigma \frac{X}{\sqrt{X^2 + Y^2}} x + \Sigma \frac{Y}{\sqrt{X^2 + Y^2}} y + nr &= \Sigma d \\ \Sigma \frac{X^2}{X^2 + Y^2} x + \Sigma \frac{XY}{X^2 + Y^2} y + \Sigma \frac{X}{\sqrt{X^2 + Y^2}} r &= \Sigma \frac{dX}{\sqrt{X^2 + Y^2}} \\ \Sigma \frac{XY}{X^2 + Y^2} x + \Sigma \frac{Y^2}{X^2 + Y^2} y + \Sigma \frac{Y}{\sqrt{X^2 + Y^2}} r &= \Sigma \frac{dY}{\sqrt{X^2 + Y^2}} \end{aligned}$$

The constants in these equations, which must be calculated from the data, are:

$$\begin{aligned} \Sigma \frac{X}{\sqrt{X^2 + Y^2}}, \Sigma \frac{Y}{\sqrt{X^2 + Y^2}}, \Sigma \frac{dX}{\sqrt{X^2 + Y^2}}, \Sigma \frac{dY}{\sqrt{X^2 + Y^2}}, \\ \Sigma \frac{X^2}{X^2 + Y^2}, \Sigma \frac{Y^2}{X^2 + Y^2}, \Sigma \frac{XY}{X^2 + Y^2}, \Sigma d. \end{aligned}$$

To illustrate this process, Table XLIII gives the relevant values and their sums for the 6 points of ring 1D, with the resulting equations.

The solution of these equations gives $x = +0.07$, $y = +0.07$, $r = -0.11$. The best-fitting circle therefore has its centre at the point $+0.07$, $+0.07$, and a radius equal to $OR + r = 3.80 - 0.11 = 3.69$.

One additional step is necessary, namely to calculate the standard deviation and the standard error of the radius of this best-fitting circle. For this purpose, calculate the distance D of each point P , with co-ordinates X , Y , from the optimum centre O' , with co-ordinates x , y , as $D = \sqrt{(X - x)^2 + (Y - y)^2}$. The relevant values of D and D^2 , and their sums, are given in the last two columns of Table XLIII. Then the standard deviation of the radius is

$$s = \pm \sqrt{\frac{\sum D^2}{n} - \left(\frac{\sum D}{n}\right)^2} = \pm 0.15$$

where n is the number of points P ($=6$ in the present case); and the standard error of the radius is

$$\frac{1}{\sqrt{n-1}} s = \pm 0.07.$$

We have already seen that the least-squares solution arrived at in this way is the best estimate that we can make of the intentions of the original builders. As an estimate, it is obviously subject to some uncertainty; and it is this uncertainty that is measured by the standard error.

A circle, however, is defined by the position of its centre as well as by its radius, so that we can view this uncertainty in two ways: either as the uncertainty in the radius of a circle of fixed centre, or as the uncertainty in the centre of a circle of fixed radius. Where questions of concentricity arise, it is the centres, not the radii, which have to be compared. For this reason it is both legitimate and preferable to view the standard error as a measure of the uncertainty in the position of the centre.

TABLE XLIII
(All measurements in feet)

X	Y	d	$\frac{X}{\sqrt{X^2 + Y^2}}$	$\frac{dX}{\sqrt{X^2 + Y^2}}$	$\frac{Y}{\sqrt{X^2 + Y^2}}$	$\frac{dY}{\sqrt{X^2 + Y^2}}$	$\frac{XY}{X^2 + Y^2}$	$\frac{X^2}{X^2 + Y^2}$	$\frac{Y^2}{X^2 + Y^2}$	D	D^2
-0.20	+3.80	-0.05	-0.0526	+0.0025	+0.9986	-0.0500	-0.0525	0.0028	0.9972	3.74	13.9876
-3.80	+0.45	0	-0.9931	0	+0.1176	0	-0.1168	0.9862	0.0138	3.89	15.1321
-2.55	-2.15	-0.40	-0.7645	+0.3060	-0.6446	+0.2580	+0.4928	0.5845	0.4155	3.43	11.7649
+0.35	-3.65	-0.15	+0.0955	-0.0145	-0.9954	+0.1495	-0.0951	0.0091	0.9909	3.73	13.9129
+3.90	-0.40	+0.10	+0.9948	+0.0995	-0.1020	-0.0100	-0.1015	0.9896	0.0104	3.84	14.7456
+2.95	+2.30	-0.15	+0.7886	-0.1185	+0.6149	-0.0920	+0.4849	0.6219	0.3781	3.64	13.2496
Σ		-0.65	+0.0687	+0.2750	-0.0109	+0.2555	+0.6118	3.1941	2.8059	22.27	82.7927

$$\begin{aligned} 0.0687x - 0.0109y + 6r &= -0.6500 \\ 3.1941x + 0.6118y + 0.0687r &= 0.2750 \\ 0.6118x + 2.8059y - 0.0109r &= 0.2555 \end{aligned}$$

The procedure outlined above was applied successively to the 10 rings of posts in the Southern Circle at Durrington Walls (1A-D, 2A-F). For all of these apart from ring 1D, which is manifestly not concentric with any of the others, the trial circles were struck from a common centre previously estimated by the short-cut quadrant method mentioned above. The plan used had a scale of 1 : 60 (5 ft. to 1 in.), co-ordinates and radial errors being measured to the nearest 0.01 in. on the plan. The centres, radii, standard deviations and standard errors so found are tabulated in Table XLIV and the centres and standard errors plotted to scale in fig. 113, which includes for location purposes the alignment of ring 1D. Each centre is surrounded by a circle of radius equal to one standard error.

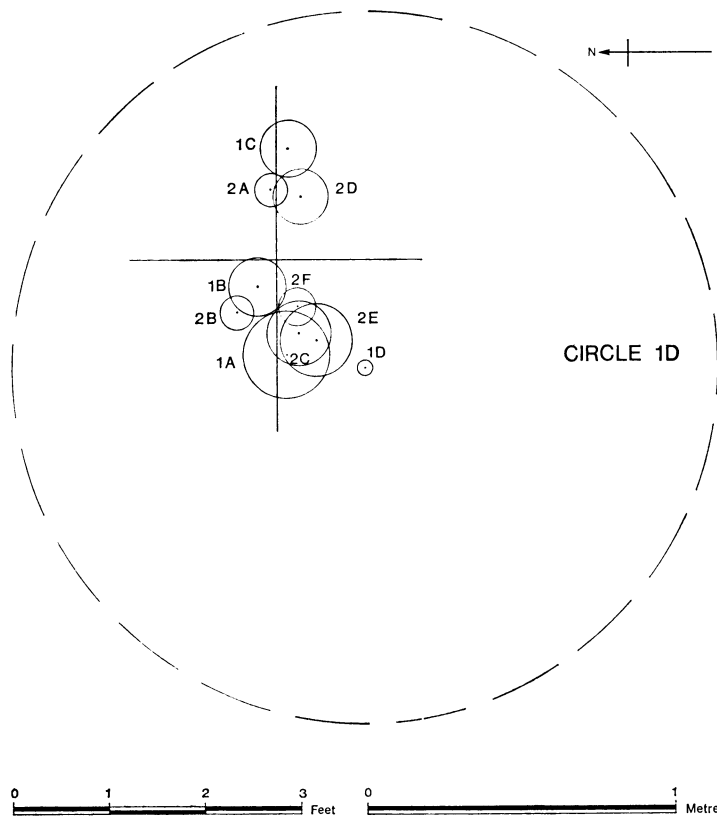


FIG. 113

II. The problem of concentricity

Where a site contains approximately concentric rings of features, it is obviously desirable to find some means of estimating whether more than one of them is likely to have been laid out from a common centre. In general we may expect that if there is more than one period of construction, the centres used on different occasions will not precisely coincide; and a test for concentricity may assume particular importance where there are no other grounds, stratigraphical or otherwise, for establishing a sequence of construction.

This problem does not appear to have been treated specifically so far by statisticians. For the solution given below I have relied gratefully on the advice of Professor Alexander Thom and of my colleagues in the Department of Mathematical Statistics and Operational Research at University College, Cardiff, Professor K. W. Kemp and Mr H. G. Lovell. They are in no way responsible, however, for any errors or deficiencies in the sequel.

In its simplest form, the method adopted here can be outlined as follows. For a ring of points P_a the best-fitting circle has its centre at the point O_a with co-ordinates x_a, y_a and a standard error e_a ; and similarly for another ring of points P_b . The hypothesis to be tested is that, given the uncertainties concerned, both rings could be the result of accidental departures from a pair of intended circles struck from a common centre.

This hypothesis will be acceptable if it can be shown that the distance between the two centres, in the given circumstances, is not significantly different from zero — that is, that it is not so large that it is unlikely to have arisen by chance. The critical level of significance usually adopted in such cases is the 5% level. This means that we regard the result as significantly large if a difference as great as, or greater than, the observed difference could occur by chance alone only once in 20 times, or less often. But if in more than 5% of cases a difference at least as large could occur accidentally, we shall not feel justified in rejecting the hypothesis of concentricity.

In these circumstances, the appropriate test is the t test, for details of which the reader is referred to any manual of elementary statistical method.¹ Here the quantity to be calculated is

$$t = \frac{\text{difference between centres}}{\text{standard error of the difference}}$$

the standard error of the difference being given by

$$\sqrt{\frac{n_a s_a^2 + n_b s_b^2}{n_a + n_b - 2}} \times \sqrt{\frac{1}{n_a} + \frac{1}{n_b}},$$

where n_a, n_b are the numbers of points in rings a and b respectively. The resulting value of t is then referred to a table of this function (e.g. *Cambridge Elementary Statistical Tables*, 1952, table 3) entering the table with $n_a + n_b - 2$ degrees of freedom — that is, the number of values in the data that can be arbitrarily assigned. If a set of n values is characterized by possessing a particular mean, $n - 1$ of them can be varied at will; but the n th must take that value which preserves the given value of the mean of the set. If the calculated value of t is less than the critical value at the 5% level of significance, we accept the hypothesis of concentricity. If it is equal to, or greater than, the critical value, we reject it.

The calculation of t can be illustrated by the data for rings 1A and 1C at Durrington Walls. We have

Ring	x	y	s	n
1A	+0.09	-0.96	1.04	5
1C	+0.10	+1.17	0.94	11

¹ Moroney, 1965, 227.

where x, y are the co-ordinates of the centres, s the standard deviation of the radius, and n the number of points in the ring. The distance between the centres is

$$\sqrt{(x_a - x_b)^2 + (y_a - y_b)^2} = \sqrt{(0.01)^2 + (2.13)^2} = 2.13,$$

and the standard error of the difference is

$$\sqrt{\frac{n_a s_a^2 + n_b s_b^2}{n_a + n_b - 2}} \times \sqrt{\frac{1}{n_a} + \frac{1}{n_b}} = \sqrt{\frac{(5 \times 1.0816) + (11 \times 0.8836)}{5 + 11 - 2}} \times \sqrt{\frac{1}{5} + \frac{1}{11}} = 0.5607.$$

Therefore $t = 2.13/0.5607 = 3.7988$, with 14 degrees of freedom. This is greater than the critical value of t at the 5% level of significance, which is 2.145. Interpolation in the tables of t shows that a difference as great as this or greater could be expected to occur accidentally less than once in 600 times. In this instance, therefore, the hypothesis of concentricity must be rejected.

It is clear that on stratigraphic grounds the ten rings of posts fall into three successive groups: (a) rings 1A-C, which are cut through by the holes and ramps 2C-F; (b) the five rings of ramped holes, 2B-F; (c) the outermost ring, 2A, some of the holes of which cut through the ramps of ring 2B. The innermost ring, 1D, is manifestly neither concentric with any of the others, nor related stratigraphically to them.

The application of the t test to all the possible pairs of rings in groups (a) and (b) respectively shows that at the 5% level of significance the hypothesis of concentricity is tenable only for the cases shown in the following table. The last column, headed P , shows the probability that a difference between the centres, at least as great as that observed, would occur by chance.

Rings		<i>d.f.</i>	5% level of t	P
1A, 1B	1.133	24	2.064	0.19
2B, 2C	1.848	38	2.025	0.07
2B, 2F	2.012	27	2.052	0.05
2C, 2E	0.348	26	2.056	0.74
2C, 2F	0.487	25	2.060	0.64
2E, 2F	0.863	15	2.131	0.41

These results show, therefore, that on the criteria adopted it is not possible to assert that either of the groups of rings 1A-C and 2B-F were set out from a common centre. This does not mean, of course, that this *could not* have been done, but only that it cannot be demonstrated that it is *likely* to have been done.

The one positive conclusion to be drawn from the figures in the table above is that rings 2C, 2E and 2F could well have been struck from a common centre; but it would clearly be unwise to assume, in the absence of other evidence, that these three rings constitute a separate structure of different date from the remainder. There is no acceptable evidence, either, that the remaining rings of later date, 2A, 2B and 2D, constitute a separate concentric group.

III. The problem of the megalithic yard

The case made by Professor Thom for the use of the megalithic yard in the lay-out of the

TABLE XLIV

(All measurements in feet)

<i>Ring</i>	<i>x</i>	<i>y</i>	<i>Radius</i>	<i>Std. devn.</i>	<i>Std. error</i>
1A	+0.09	-0.96	49.30	1.04	0.45
1B	-0.22	-0.26	38.16	1.36	0.30
1C	+0.10	+1.17	24.01	0.94	0.30
1D	+0.90*	-1.10*	3.69	0.15	0.07
2A	-0.08	+0.74	63.84	0.89	0.17
2B	-0.43	-0.53	58.61	0.80	0.18
2C	+0.22	-0.74	48.17	1.42	0.34
2D	+0.23	+0.67	37.61	1.10	0.28
2E	+0.40	-0.81	24.97	1.09	0.38
2F	+0.20	-0.48	17.67	0.50	0.19

* The co-ordinates given here for the centre are referred to the axes of the trial circles used for the remaining 9 rings. They differ, therefore, from the values derived from the data in Table XLIII where a trial circle with a different centre was used.

neighbouring timber circles of Woodhenge¹ clearly demands an investigation of the dimensions of the rings of posts at Durrington Walls.

Two specific questions have to be answered. First, do the mean radii of the rings of posts, as given in Table XLIV, approximate significantly to integral multiples of the megalithic yard of 2.72 ft.? Second, do the circumferences of the best-fitting circles approximate significantly to integral multiples of $2\frac{1}{2}$ megalithic yards (6.80 ft.)?²

The calculations required to answer these questions have already been set out by Professor Thom in detail, with an example,³ so that only a short answer need be given here. To both questions it is decisively in the negative.

¹ Thom, 1967, 73-7.

² Thom, 1967, 45-51, 82-3.

³ Thom, 1967, 6-13.

VII. A STUDY OF POSSIBLE BUILDING FORMS AT DURRINGTON WALLS, WOODHENGE AND THE SANCTUARY

By C. R. MUSSON¹

The aim of this appendix is not to produce definitive reconstructions of the timber structures at Durrington Walls, but rather to investigate the variety of possible building forms and to look at these in relation to a small number of superficially similar timber monuments. It is fair to say that the study produces no conclusive evidence that the Durrington structures, either individually or as a group, were originally roofed buildings; indeed, the few structural or architectural deductions which can be made from the archaeological evidence allow equally convincingly for other interpretations.

Any reconstruction of a timber building from the evidence of post-holes alone must be based on a number of suppositions and inferences. These will include, amongst other things, the purpose or intention of the structure, its actual process of erection and possible subdivisions into phases, and the nature and capacity of its structural elements, both individually and as a completed framework. Where regular architectural or structural practices are known (as, for instance, in classical or gothic stone buildings), a reconstruction based on the ground plan alone may well come close to the designer's original intention. But with primitive timber structures there is no established basis of artistic or structural rules, and hence no guide to the builder's likely reaction to any given structural problem. Nor are there many absolute rules on which one can draw; what could be done at any time in history or pre-history was conditioned largely by what the builder felt ought to be done, on the basis of his own past experience. Where the experience varied, so might the reaction.

In the case of timber circles like those at Durrington Walls, Woodhenge and the Sanctuary, there can be no *a priori* certainty about the intended function and form of the structures; signs have to be sought in the archaeological evidence itself to show whether these were roofed buildings or not. In the absence of clear indications — positively, perhaps, in the form of preserved floor levels, or negatively in the shape of impossibly large rafter-spans — the argument revolves around smaller questions of detail or interpretation, none of which is likely to be conclusive. Thus, an apparently reasonable deduction drawn from one monument may be flatly contradicted by another, so that its value, even for the first example, is thrown into doubt. Moreover, in the sites under consideration, the chronological relationship between the rings of posts is rarely unambiguous; each monument in effect has several possible ground plans, each of which could give rise to several structural interpretations. For the sake of brevity, only the most likely schemes have been outlined in these notes.

¹ The author is a qualified architect, currently engaged on professional rescue excavation and on continuing research into timber buildings in the British Bronze Age and Iron Age. His thanks are due to Dr Wainwright, for much patience in awaiting the delivery of these notes, to Professor

S. Piggott of the Department of Archaeology, University of Edinburgh, and to Mr Leslie Alcock and Professor R. J. C. Atkinson of the Department of Archaeology, University College, Cardiff, for valuable comments upon the early drafts.

There is little practical evidence to suggest the likely capacity and structural detailing of timber buildings of the type under review. The capacity of a building material, and especially of timber, is learned principally by experience and experiment, which may proceed at different paces in different geographical or chronological settings. Present day engineering calculations have to some extent rationalized such experience, but they are based, inevitably, on *current* practice in timber selection and jointing; once other standards are assumed, such calculations are of little value, except in the rare cases where they can be used to show that the number and size of columns is insufficient to support the dead-weight of the roof in a hypothetical reconstruction. There is rarely any archaeological evidence for the jointing and bracing methods used above ground, and it is therefore difficult to make even informed guesses at the capacity of a structure in relation to the radial and lateral stresses imposed by pitched roofs and directional wind-loads. The most realistic guide might come from accurately observed and carefully used ethnographic data, but the amount of information readily available in this country is regrettably small.

Perhaps the greatest difficulty is that 'ritual' structures are also likely to be 'special' structures, and as such, might be expected to show a greater variation in form and interpretation than the more commonly built domestic structures of the same period. This, combined with the small number of examples available for study, may make it more difficult to detect the underlying pattern or patterns, assuming such to exist. For the same reason, details of form or interpretation cannot be so easily drawn together from a number of varying or incomplete examples so as to produce a picture of a generalized type of structure.

These reservations are an essential background to the notes which follow. If they give rise to an air of qualified scepticism this is at least preferable to an assumed certainty which cannot at the moment be justified.

Durrington Walls, Northern Circle

The post-holes of the Northern Circle have been tentatively allocated to two separate phases (fig. 17). Phase 1 is too vestigial for structural interpretation, but Phase 2 could undoubtedly represent the remains of a roofed building about 14.5 m. in diameter, the four central posts perhaps supporting a 'lantern' raised above the general line of a conical thatched roof (fig. 87).¹

The search for clues to confirm or deny this interpretation is, however, inconclusive. The line of the assumed outer wall appears to be slightly flattened opposite each side of the central 'quartet' of posts; this could be a device to reduce the difference in length and slope of rafters inherent in a layout combining an outer circle with an inner square, but the evidence is far from conclusive. None of the beam or rafter-spans seems excessive in relation to the size and spacing of the supporting timbers, but the additional posts (hatched in fig. 87) do not occupy positions of obvious structural significance — for instance under the lines of hypothetical rafters or ring-beams; perhaps they belong to a general scatter of large post-holes in this part

¹ It is possible that the outer wall lay on the line of Post-holes 10-14, tentatively allocated to Phase 1 (fig. 17). If so, the diameter would be increased to about 21.3 m. This is by no means unreasonable for a building using timbers of the sizes suggested by the remaining post-pipes.

For comparison, the second phase of House 1 at Little Woodbury was 14.8 m. in diameter, and the largest of the houses at Scotstarvit Covert, Fife, was up to 19.2 m. across. For Little Woodbury, see Bersu (1940); for Scotstarvit Covert, Bersu (1947-8).

of the site which cannot be clearly related to any particular structure. It is perhaps a little odd, in the case of the 'lantern' interpretation, that a corner rather than a side of the central quartet is aligned on the approach avenue from the south. More significantly, perhaps, the orientation and general character of this central quartet is not unlike that of the central setting in the Southern Circle, Phase 1. In the Southern Circle, however, the central posts are almost certainly too slender to support a fully roofed structure, especially one of the 'lantern' type suggested above. If the apparent similarity is other than coincidental, a significant doubt must be thrown on the roofed interpretation of the Northern Circle.

Durrington Walls, Southern Circle, Phase 1

The structural details of the Southern Circle are more complete (fig. 9). The principal features of Phase 1 may be summarized as follows. Circle 1A, about 30 m. across, contains only five widely scattered posts, and can hardly be treated as a major structural element. Circle 1B, about 23 m. across, has an entrance nearly 6 m. wide at the south-east, and the four flanking posts are set back from the true line of the circle to form an almost straight line. Circle 1C is about 14.5 m. across, and has a single post opposite the entrance, somewhat inset from the general line of the circle; the remaining posts are either paired, with gaps of up to 5.5 m., or irregularly spaced, with gaps of up to 3.3 m. (assuming Phase 1 posts to have existed wherever they might have been obliterated by later post-holes, e.g. between posts 178 and 179). Diameters and depths of the posts in circles 1B and 1C show a considerable variation, but in both circles the average is around 20 cm. in diameter and 1.40 m. in depth. Circle 1D, at the very centre, is only about 2.25 m. across and has post-holes cut only 40 cm. into the chalk; it is difficult to see it as a structural element helping to support a roof — more likely it represents a separate feature with a basically ritual function. Between circles 1C and 1D lies a quartet of four posts forming a rough square with sides of between 4.5 and 6.0 m.; the posts are deeply set in the chalk (up to 1.80 m.), but are no sturdier than those in the outer circles; indeed, two are only 15 cm. in diameter, one 22 cm., and the fourth 38 cm.; the three smaller posts have all been replaced, one of them twice.

If the posts of circles 1B, 1C and the central quartet belong to a single roofed structure, it is difficult to escape an interpretation similar to that advanced for the Northern Circle, with an extra ring of posts bringing the overall diameter to about 23 m. There are, however, several objections to such an interpretation.

Although the number of posts involved — about 70, averaging around 20 cm. in diameter — is nominally sufficient to support the dead-weight of even quite a heavy turf and thatch roof,¹ there must be considerable doubt about the adequacy of their distribution and the capacity of certain individual posts to perform the tasks required of them. Even assuming the

¹ The capacity of columns to carry vertical roof-loads varies with the type and quality of timber and the un-braced length of the columns. For unseasoned English oak of the lengths involved in this structure, the bearing capacity might be in the region of 4–500 lb./sq. in. of cross-section (28–36 kg./sq. cm.). The weight of the roof covering, roof timbers and snow load might lie between 20 and 30 lb./sq. ft. of roof area measured on the slope (100–150 kg./sq. m.), and the total dead-weight of the roof between 150,000 and

200,000 lb. (68,000 and 91,000 kg.). The nominal bearing capacity of 70 columns about 6 in. (15 cm.) diameter — i.e. the likely diameter half-way between the base and head of the columns — might be between 750,000 and 1,000,000 lb. (340,000 and 450,000 kg.), but no allowance has been made in this calculation for the weakening effect of jointing, nor for lateral and radial stresses inherent in a pitched-roof structure or imposed by wind-loads.

lowest likely roof-pitch (about 25°),¹ the posts of the central quartet would be nearly 9 m. long, without allowing for any raised 'lantern' of the type suggested for the Northern Circle.² Such a height seems excessive for posts only 15 cm. diameter at the base (perhaps no more than 10 cm. at the top), especially when they occupy such an important structural position. The renewal of three of them could be seen as proof of their inadequacy; but the replacement posts were themselves no sturdier, and the depth of their bedding into the chalk (almost the same as the posts they replaced) makes it unlikely that they were simply props to support sagging trimmer beams or to work 'in tandem' with the original posts.

The rafter-spans between circle 1C and the central quartet — up to 6 m. or more measured on the slope — are large but not impossible.³ On the other hand, there are some spans among the more heavily loaded members which certainly seem excessive; amongst these are the trimmer-beams on three sides of the central quartet (6 m.), the lintel or wall-plate at the entrance through circle 1B (also 6 m.), and the purlin or ring-beam in the 'paired' interpretation of circle 1C (up to 5.5 m.). These spans are excessive in relation to the size of the posts on which they rest — none of which is more than 17 cm. in diameter, and one only 12 cm. As a general rule, the members of a timber structure remain 'in scale' with one another — a post normally supports a beam no greater than itself in cross-section, and the rafters are usually smaller than the wall-plates or purlins on which they rest; this tends to apply however massive or light the structure may be as a whole. Main trimmer beams and purlins of only 15 cm. scantling seem unacceptably light for spans of up to 6 m., even allowing for the extensive diagonal bracing and bracketing needed to ensure lateral stability in so slender a structure. Such diagonal members, moreover, would introduce their own problems, since even a simple lashed joint usually requires some notching (and hence weakening) of the timbers if it is to retain its stability under load.⁴ For these reasons a fully roofed interpretation for Phase 1 of the Southern Circle seems doubtful, though it would be rash to maintain that it was absolutely impossible.

A more likely scheme, from the purely structural point of view, would take circles 1B and 1C as supports for a narrow lean-to roof, perhaps sloping inwards rather than outwards, so that the more frequent posts of circle 1B would support the higher wall. An annular roofed area would then have surrounded an open court occupied by a central ritual feature (circle 1D), itself protected by a canopy or flanked by four free-standing posts (the central quartet). There is no evidence to confirm or deny such an interpretation, and it must be considered

¹ 25° is an estimated *minimum*. In the drawings accompanying these notes, the pitch has not normally been taken below 30° .

² A pitch of 45° would be nearer current practice in this country. However, roof-pitches are determined by cultural as well as by structural and climatic considerations. In the central plateau of Ethiopia, for instance, roof-pitches vary from below 25° to over 45° in areas which share much the same climate; the lowest pitches are often on the largest houses—possibly because of the difficulty of finding long enough timbers for the internal columns; the thatch on these large houses also tends to be of unusually high quality (information from Mr Mansel Spratling). It is not possible

at this remove to know how often the roof covering might have been refurbished — the steep pitch of present day roofs in this country is at least partly related to the expectation that they should last up to 70 years, with only partial re-surfacing after 30 years or so. More frequent renewal could well result in lower roof-pitches. It should also be remembered that renewal of thatch, or partial renewal, would be a much less costly task in a society in which the skill was not restricted to specialist craftsmen, as it is in Britain today.

³ The spans of rafters and purlins in British Iron Age houses of similar dimensions rarely if ever exceed 4.25 m.

⁴ For a practical illustration see Hansen (1962).

along with other possible schemes in the discussion of overall building patterns at the end of these notes.

Durrington Walls, Southern Circle, Phase 2

The post-pattern of Phase 2 in the Southern Circle is more complete and the intersections of post-holes and ramps give some clue to the sequence of construction (fig. 12). The posts are massive and the potential rafter and beam-spans quite acceptable in relation to them; there is no doubt that the structure could have been roofed. Again, it may be convenient to summarize the evidence as it affects the structural interpretation.

Phase 2, assuming it to have been a single unit, consists of six rings, respectively 19.46 m., 17.86 m., 14.67 m., 11.46 m., 7.60 m., 5.37 m. radii. In general the post-holes increase in size and depth towards the centre. The innermost ring, however, has deeply set but relatively slender posts. There is one anomaly in this pattern: the posts of circle 2C are smaller, less deeply bedded and more widely spaced than might be expected for a gradual progression from circles 2A to 2E; their setting-out is also less regular than that of the other circles. Nevertheless it is difficult to see circle 2C as a completely separate phase of building, or to find other circles which could be combined with it; perhaps it represents an addition or alteration to the plan after the other circles had been set out and some of the posts erected.

The only building form appropriate to this pattern is an annular outward-sloping roof with an outside wall at circles 2A or 2B and a high ridge at circle 2E, surrounding an open central court. The posts of circle 2F might have supported a verandah surrounding this court, but their ramps suggest that they were in fact quite tall, and they might be better interpreted as free-standing posts of ritual or symbolic significance (fig. 84).

Some details of the projected roof structure can be deduced from the layout of the posts, others must remain entirely conjectural. Thus all but the innermost circle of posts must have supported continuous ring-beams or purlins, since the posts do not fall on radial lines and could not, therefore, have provided a direct bearing for the rafters.¹ In a structure using such massive posts, it is slightly odd that there is little evidence for the use of long, relatively straight timbers in these beams. There are, indeed, a few cases where several post-holes seem to form a chord rather than an arc of a circle, but equally often the line is markedly irregular, suggesting that the ring-beam, if it existed, was probably made in short lengths, jointed at the head of each supporting column. Little more can be added about the roof structure as such; radial rafters a metre or so apart might have been crossed by smaller branches laid circumferentially as a basis for reed or straw thatching; alternatively, hurdle-work and turf laid directly on the rafters might have provided an underseal for a rather heavier thatched roof. In the absence of direct archaeological evidence, such details must remain purely hypothetical.

The roof-pitch, likewise, is largely a matter of speculation. A minimum pitch of 25° would give posts about 12 m. long in circle 2E, assuming 1.5 m. below ground and an eaves height of about 3 m. at the outer wall. A pitch of 45° would increase this to nearly 18 m. — probably excessive for oak logs only 60 cm. diameter even in the different forest conditions of the second or third millennium B.C.

¹ This applies also to Woodhenge and the Sanctuary. Where Piggott's reconstructions have been reproduced in this appendix, the drawings have been slightly modified to include these ring-beams.

This discussion must now be related to the reconstructions of Woodhenge and the Sanctuary advanced nearly thirty years ago by Professor Stuart Piggott.¹ It is not intended here to continue the discussion of origins begun in that paper, but simply to see how far these earlier reconstructions can still be accepted.

The Sanctuary, on Overton Hill, near Avebury, Wilts.

By dividing the various stone and timber circles at the Sanctuary into four separate phases Piggott produced a series of perfectly plausible building forms following a reasonable pattern of growth and elaboration. Essentially, Piggott's scheme, which is summarized on the left of fig. 114 was as follows.²

Phase 1 consisted of a 'sacred hut' (circle F) about 4.2 m. in diameter, with a centre-post and a conical thatched roof. In Phase 2A this was surrounded by a larger annular structure (circles D and E) about 14.5 m. in diameter, the original hut standing in an open court or 'impluvium'; in course of time some of the posts of this structure were replaced following their decay as a result of weathering (Phase 2B). Phase 3 was a complete rebuilding, with three rings of posts (B, C and G) supporting a conical roof about 19.5 m. in diameter, possibly with a raised central 'lantern'; between the posts of the second ring (circle C) stood large upright stones, which Piggott argued were earlier than the erection of the timbers. Finally, in Phase 4, an outer ring of standing stones, twice the diameter of the timber building, was added and a link made with the West Kennet Avenue and the great ritual monument at Avebury. But a detailed re-examination suggests that slightly different interpretations, either as roofed buildings or as circles of free-standing posts, are equally possible. The re-interpretation as a series of roofed buildings will be considered first.

Piggott's Phase 1 'sacred hut' is unexceptionable, save that the post-holes are surprisingly deep for so small a building (a point which will be returned to later). On the other hand, the outside wall need not necessarily have fallen on the line of circle F; a separate wattle-and-daub wall a metre or more outside the posts would be quite possible despite the lack of positive evidence for it. Recent studies of Middle and Late Bronze Age houses³ have suggested reconstructions on these lines, and a double-ringed interpretation of the Phase 1 hut at the Sanctuary would give a more consistent pattern of development from Phase 1 to Phase 2.

Piggott's Phase 2 building used the 'double' post-holes of circles D and E, the inner cores in each case being taken as the later. On the whole, however, it seems more likely that the outer cores are the later, and that the replacements represent, not repair during the continued life of the building, but a complete rebuilding *ab initio*. The arguments for this are as follows: every post in circle D has in fact been replaced; the outer parts of the double post-holes are consistently deeper; moreover, where there are only single cores they lie in the outer, not the inner half;⁴ the one circular hole surely represents a case where the later, deeper, post-hole

¹ Piggott, 1940. For the original report on the excavations at the Sanctuary see Cunnington, 1931.

² For the sake of consistency in these notes, arabic rather than roman numerals have been used to denote the various phases of development within each monument, whatever the practice adopted by the original author.

³ Avery and Close-Brooks, 1969, and Musson, 1970.

⁴ The original excavation report is slightly ambiguous. In the general description of Ring D (Cunnington, 1931, 307) it is suggested that all except D5 had 'twin uprights'. In the table giving the dimensions of the holes (*ibid.*, 328) post-holes D1, D8 and D12 are shown to have had single cores only, all in the outer halves. The latter should probably be accepted as authoritative.

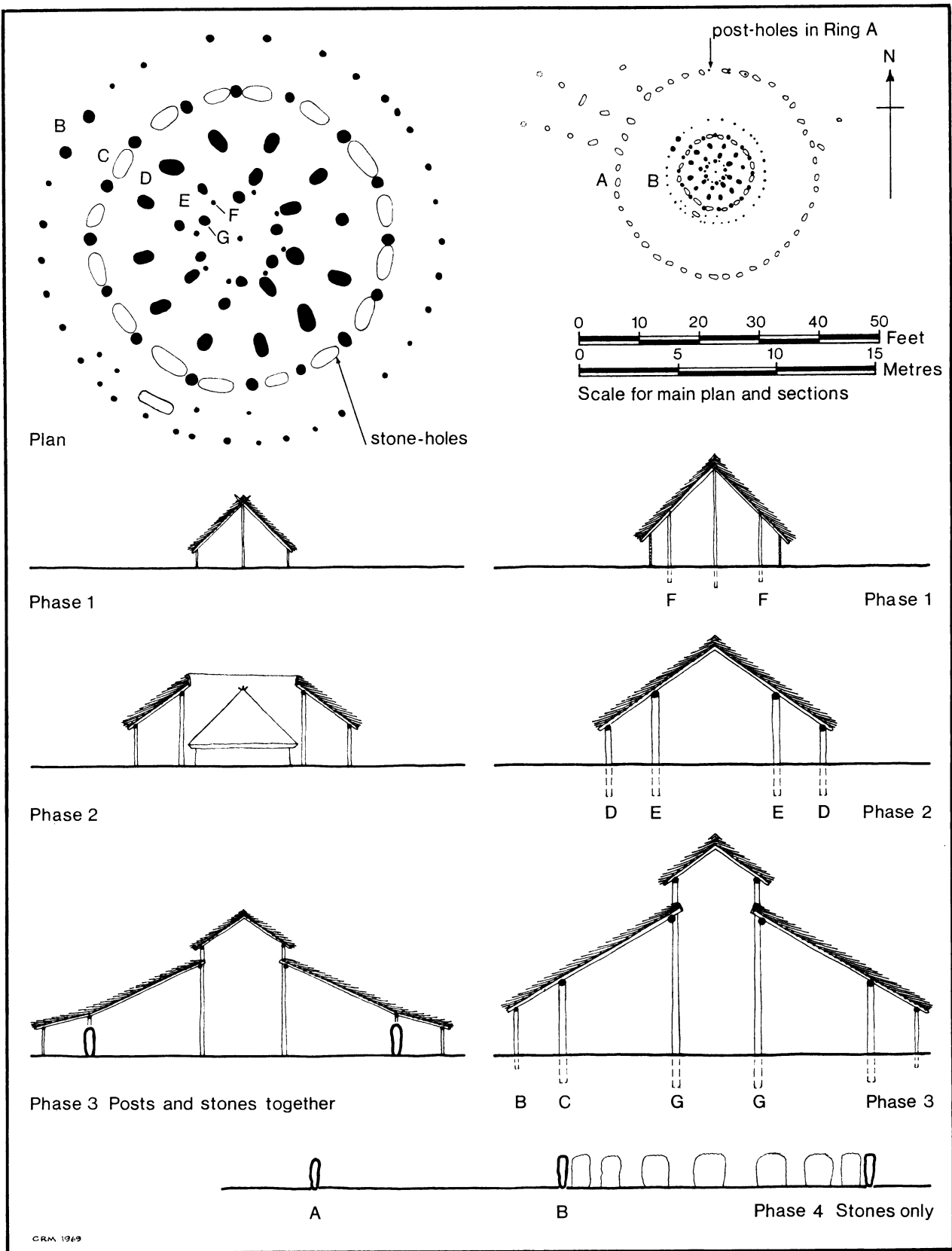


FIG. 114. The Sanctuary: alternative reconstructions

completely obliterates the original one; gradual replacement would hardly have resulted in every post being replaced once and once only — some would probably have been renewed twice, some not at all — nor would it account for the consistently greater depth of the replacement posts. In essence, the same arguments apply to circle E; post-holes E₃ and E₄ are double on the evidence of variations in depth, and the surviving cores are again in the outer halves of the holes; the shapes of E₂, E₅ and E₇ almost certainly represent re-cutting, while in E₁, E₆ and E₈ the new holes coincide almost exactly with their predecessors. On this evidence it looks very much as if a double-ring structure about 9.8 m. in diameter (Phase 2A) was completely replaced *in a single building operation* by a slightly larger structure of identical design (Phase 2B, about 10.7 m. in diameter). The close coincidence of the post-holes suggests that this rebuilding took place at a time when the positions of the original holes were still visible, either as the stubs of posts or as soil-marks in the ground. The closeness of post-holes E₃, E₄ and E₅ to the Phase 1 post-holes makes it unlikely that the 'sacred hut' was ever enclosed within the later building. No direct, or inferential, evidence can now be adduced to show whether the building was fully roofed, or had a central 'impluvium';¹ in the circumstances, it is probably more economical to assume a fully roofed conical design.

In discussing his Phase 3 building, Piggott used the peculiar undercutting of some of the post-holes to suggest that the stones in circle C had been erected before the posts.² Against this, it may be noted that the only post-hole in circle G illustrated in Mrs Cunnington's original report (G6) had a rather similar undercut profile, despite the absence of any stone-holes alongside it;³ this peculiarity might certainly be used to argue the contemporaneity of the posts in circles C and G, but hardly to explain the chronological relationship between the stones and posts in circle C.

There is no necessity, in fact, to assume that the stones and posts of circle C stood together at any time;⁴ it is equally possible that the present pattern resulted from a complete rebuilding in stone at a time when the stumps or soil-marks left by the Phase 3 posts still gave a clear guide for the erection, between them, of a new ring of standing stones, Phase 4. With this rebuilding can go the outer ring of stones, circle A, which may itself replace an earlier timber circle of which the only remains are four post-holes on the north, in the region of stones A₇, A₈ and A₉.⁵ Piggott considered two separate phases on these lines unlikely, partly on the grounds that the diameter of the outer stone-ring was twice that of the timber posts in circle B, rather than the stones of circle C. If, however, the outer stone-ring replaces an earlier timber circle and the inner stone-ring replaces the most 'important' post-ring of the

¹ If *all* the posts have been replaced, as suggested above, Piggott's main argument in favour of an open central court (the apparently differential decay of post-holes on the windward and leeward sides—Piggott, 1940, 200-1) can no longer stand. Nor can this differential weathering be used as inferential support for the idea of a roofed (and walled) building, as distinct from a setting of free-standing posts, all of which would be equally exposed to the ravages of the weather.

² Piggott, 1940.

³ Cunnington, 1931, pl. III, no. 6.

⁴ The stones and posts together would have formed a fairly effective barrier to anyone seeking a dignified entry to the central area, although the spaces between posts C₁, C₉, C₁₅ and C₃₁, and stones C₂, C₈, C₁₄ and C₃₀ respectively might perhaps have been wide enough to allow access in single file (Cunnington, 1931, pl. I).

⁵ This outer timber circle must remain conjectural. Only four posts were found. They were all relatively shallow however, and it is a possibility that others on the same line were missed by the excavators, or obliterated by the later stone-holes.

Phase 3 structure, this objection is removed. Phase 3 might then appear as a triple-ringed structure, replaced in Phase 4 by a double-ringed setting of standing stones, quite clearly unroofed. If so, there is at least a suggestion that Phase 4 was a transformation of Phase 3 into a new and more permanent material, and that Phase 3 was therefore not a roofed building at all but a simple arrangement of free-standing posts. The same inference could be extended backwards to cover Phases 2 and 1. Before discussing this more fully it is fair to place on record two contrary arguments. Firstly, the outward-sloping cores of posts C7, C19, D8 and D9,¹ *might* have resulted from the gradual outward collapse of buildings having insufficiently tied conical roofs. Secondly, the marsh-environment mollusca found in some of the post-holes *might* have arrived at the site on reeds used for thatching, a suggestion brought to my notice by Dr John Evans of University College, Cardiff, who has kindly provided a note on the subject.²

Nevertheless, an explanation of the Sanctuary as a developing series of free-standing timber circles has much to recommend it. In particular, there is no need to postulate a change in the *type* of monument between Phase 3 and 4, but simply a translation of the same basic idea into a more permanent building material. The great depth of the post-holes has already been mentioned in connection with Piggott's Phase 1 'hut'; both the outer posts and the centre-post of this building are considerably deeper than any found in domestic structures of similar size in the Middle and Late Bronze Age;³ the same applies to the principal post-holes of Phase 3 in relation, say, to the most massive of our comparable Iron-Age houses (Little Woodbury);⁴ the argument can be extended to cover most of the monuments considered in this discussion. This greater depth in a sense supports the concept of free-standing

¹ Cunnington, 1931, 307 and pl. III, no. 5.

² It is suggested that the fauna from the post-holes indicates damper conditions than obtain on the downs today and Mrs Cunnington in a note appended to the report makes a certain amount of this with regard to the date of the Sanctuary. However it now seems clear that molluscan faunas are strictly a reflection of local environmental conditions and not those of an area as a whole. In addition, the faunas from the post-holes are treated as one without any indication of how the material got into the holes in the first place; e.g. it may be packing material or it may be material which has fallen in after the post has decayed; detailed stratigraphical information would be necessary from each post-hole before any serious deductions could be made, and this, unfortunately, is lacking.

³ Taken as a whole the fauna is quite a rich one and would indicate conditions of scrub or local woodland, though the presence of five grassland species, common on the downs from the Neolithic period — *Vertigo pygmaea* (Draparnaud), *Pupilla muscorum* (Linné), *Vallonia costata* (Müller), *Vallonia excentrica* (Sterki) and *Helicella (xerophila) italia* (Linné) — means that open ground was not far away.

⁴ The presence of three species in the fauna however is anomalous. These are: *Lymnaea peregra* (Müller), *Planorbis leucostoma* (Millet) (= *P. spirorbis* (Linné)) and *Succinea pfeifferi* (Rossmässler), all generally associated with freshwater

habitats. Thus *Planorbis leucostoma* is a typical "slum" species, living in ponds and ditches and can survive the drying up of the habitat; likewise with *Lymnaea peregra*, which can survive a certain amount of desiccation by burying itself in mud. *Succinea pfeifferi* is more of a marsh species. It was suggested in the report that these species imply the presence of "... a small pool liable to desiccation. . . ." About 20 examples of *Lymnaea peregra* and *Planorbis leucostoma* were recovered from one sample from Circle G and *Succinea pfeifferi* occurred in two samples from Circle C. An alternative explanation would seem worth considering, namely that these shells had been brought to the site on reeds and rushes from the Kennet to be used for thatch or matting, or in river mud. Certainly during the Roman period — the only time for which there is any information — *Planorbis leucostoma* and *Lymnaea peregra* were the most abundant elements of the fauna at Winterbourne. Also the likelihood of a small pond forming on Overton Hill is not great.⁷

⁸ The centre post was 1.05 m. deep and the outer posts 0.75 m. deep. A brief study of later Bronze Age houses reveals none with post-holes more than 0.45 m. deep.

⁴ Even allowing for some erosion of the chalk, few of the post-holes at Little Woodbury would have reached 1.00 m. in depth; most would have been no more than 0.60 m. deep. The post-holes of Circle C at the Sanctuary averaged 1.30 m. deep.

timbers, since each post would have to stand individually, without the mutual support inherent in a walled and roofed structure.¹

A reasonable scheme of development might then see Phase 1 as consisting of the centre-post, along with the 8 posts of circle F or perhaps better the 6 posts of circle G. Phase 2 would contain the 8 posts of circle E and the 12 of circle D, Phase 2A using the inner posts in each hole, Phase 2B the outer. Phase 3 would have the 6 posts of circle G, or better still the 8 of circle F, with the 16 of circle E, the 34 of circle B and (perhaps) an unknown number in circle A. Finally, in Phase 4, standing stones would replace the main inner ring of posts, circle C, and of the outermost ring, circle A. This explanation has a neat numerical logic, and involves no fundamental change in the *nature* of the structures involved. It is, at any rate, an alternative which deserves to be considered alongside Piggott's earlier interpretations, whether in their original form or in the modified scheme presented in the discussion above.

Woodhenge

Woodhenge is perhaps best introduced by direct quotations from Piggott's 1940 paper;²

'... the obvious monument to be examined next is Woodhenge itself. Here... a study of the plan and other evidence suggests certain conclusions from which we can form a basis. In the first place we are struck by the dominance in the scheme of the great 'C' holes, which the evidence of the ramps show to have held the first set of posts erected, and outside these the A and B rings appear to be connected. . . . If one is to be regarded as a replacement of the other, A must replace B, for B has outward-facing ramps which could not have been used with the A posts in position. But the replacement theory seems most unlikely, in view of the wide interval . . . separating the two rings. It seems more likely that while A was the actual visible wall of the structure the thrust and weight was mainly taken by the posts of B. . . . While it is difficult to regard circles D, E and F as contemporary, it is equally difficult to detect evidence of any sequence. The small infrequent ramps give us no clue, and the holes of all three circles are practically identical in proportions.

'It is clear that the posts of the C ring must have formed the most important feature of any building at Woodhenge, and a satisfactory interpretation can only be gained if these are regarded as pillars carrying a main ridge-pole. If this was the case, the only form the building can have taken is a circular gallery with ridged roof, the whole open in the centre. Drainage would be on both slopes of the roof, outwards and inwards towards the atrium . . .'

In this discussion Piggott has accepted, for the sake of argument, that all the rings belong to a single structure. If so, one might expect the taller posts to be more deeply bedded in the ground; but in practice the post-holes of ring D are significantly shallower than those of rings E and F, the mean depths being 0.82, 1.00 and 1.00 m. respectively. Ring D could

¹ The extra depth is unlikely to have been necessitated by the inadequate crossbracing of the roof. In the size and layout of its posts the proposed Phase 3 building is considerably more economical than any of our later Iron Age houses. If it existed as a roofed structure, the rafters must have been efficiently braced by ties or other means; it is unlikely that the relatively slender columns of circle C could have provided sufficient lateral bracing through their own

stiffness, however deeply embedded. This suggests a high degree of sophistication in structural timberwork, in strong contrast to the 'strength-by-bulk' appearance of Phase 2 in the Southern Circle at Durrington Walls.

² Piggott, 1940, 207-10. See also fig. 115, Reconstruction A, in this Appendix. For the original excavation report see Cunnington, 1929.

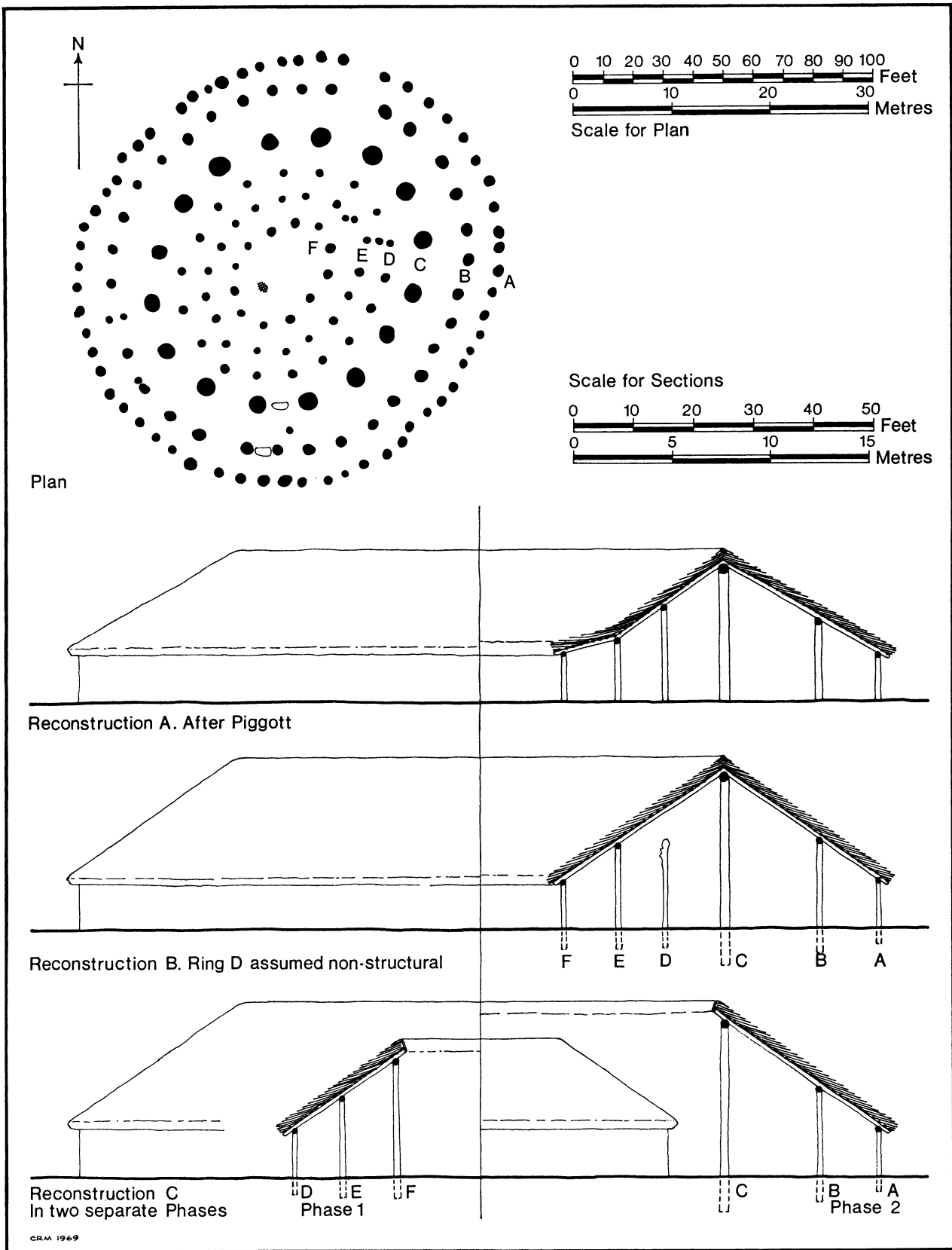


FIG. 115. Woodhenge: alternative reconstructions

therefore, belong to a different *phase* of building or to a different *type* of post — perhaps free-standing within a building still basically the same as that suggested by Piggott (fig. 115, Reconstruction B).

On the other hand, once ring D is detached from Piggott's scheme, the assumed unity of the remaining rings becomes doubtful, and other reconstructions, in two or more phases, become equally plausible. These might take the form of roofed buildings, the most probable scheme being two phases of centre-courted annular buildings with outward-sloping roofs (fig. 115, reconstruction C). Alternatively they might be ritual or symbolic settings of posts based, perhaps, on the dimensions of the post-rings or the number of posts which they contain.¹

Alternative explanations not involving roofed buildings

Before discussing the various building reconstructions, a few words are necessary about the structural evidence in relation to other explanations, principally ritual or symbolic settings in which the pattern of logic is numerical or dimensional rather than structural.²

On the purely negative side, doubts have been expressed about the roofing of Durrington Walls Southern Circle Phase 1; some of the rafter spans in Phase 3 at the Sanctuary are in excess of the largest found in comparable Iron Age structures;³ and the transition from Phase 3 to Phase 4 at the Sanctuary is also difficult to accept if the latter is a simple stone setting and the former a fully roofed building.

On the more positive side, the Cunningtons have pointed out dimensional similarities between Woodhenge and Stonehenge;⁴ diameters in the region of 48, 76 and 98 ft. (14.5, 22.5 and 29.3 m.) occur with some regularity at Stonehenge, Woodhenge, Durrington

¹ Such numerical and dimensional patterns have been discussed both by Mrs Cunnington in her original report, Cunnington, 1929, 28-31, 100-1, 104-5 and more recently by Professor Thom in his study of megalithic sites in Britain (Thom, 1967, *passim*). Some objections to the latter's propositions have been advanced by Wainwright above, and a purely visual study of the published plans of Woodhenge made during the preparation of these notes raises further doubts about some aspects of Thom's analysis. In this study as smooth a line as possible was drawn through each ring of post-holes; this was then copied on tracing paper, reversed, and adjusted over the original drawing until the closest fit was judged to have been obtained: the long axis of the rings *as actually dug* could then be found by simple graphical method. The orientations so obtained were as follows:

<i>Axes of rings</i>	<i>A, B</i>	<i>C, F</i>	<i>D, E</i>	<i>'Assumed' axis (midsummer sunrise)</i>
Cunnington's survey	36°.5	40°.5	43°.5	50°.5
Thom's survey	44°.0	47°.0	48°.5	49°.2

Despite the possible imprecision of this method, it is worth noting the considerable differences in the orientations of the rings, and in particular the divergence from the 'assumed' axes (lines of midsummer sunrise) adopted by Cunnington and Thom.

² The apparently 'unnecessary' depth of some of the post-holes is easy enough to understand if the 'purpose' of the monuments lies in the posts themselves, in their erection, or even in the digging of the holes in which they stand. The suggestion is at least worth considering.

³ The rafter span between circles C and G is about 5.10 m., measured on plan; this compares with a maximum of about 4.25 m. in similar Iron Age structures.

⁴ Cunnington, 1929, 28-31, 104-5.

Walls and the Sanctuary. Such repetition might, of course, be expected if the structures are derived from a common symbolic, religious or cultural background. There is also, however, a tendency towards recognizable patterns in the *number* of post-holes in successive rings. Thus, Woodhenge has 12—18—18 and 16—32—60, the latter perhaps intended to be 16—32—64. The Sanctuary has 8—12 and possibly 8—16—33, the latter perhaps intended to be 8—16—32. The second phase of the Southern Circle at Durrington Walls has estimated post-rings in the pattern 10—12—24—36—34—50; the last number was perhaps intended to be 48, and the two rings in italics (circles 2C and 2F) are 'outside the sequence' in other respects also. This frequent doubling, or near doubling of the number of posts in successive rings has no compelling logic in terms of beam spans or column distribution, especially as the posts rarely fall consistently on radial lines in successive circles. This is particularly noticeable in Phase 3 at the Sanctuary, where the posts are often placed just *off* radial lines — a strangely perverse or careless piece of setting out if the rationale is structural, or even visual. Such patterns, indeed, seem more closely related to a purely numerical or dimensional reasoning than to any kind of structural logic.

Summary of possible building forms at the various sites

Figure 116 illustrates the various building forms which can be assigned to the Sanctuary, Woodhenge and Durrington Walls. It should be stressed again that no conclusive evidence has been produced to show that these monuments *were* in fact roofed buildings. The reconstructions are advanced solely to aid discussion of possible continuities in form or structural technique.

The Sanctuary, somewhat separate from the others geographically, shows a full development from the humblest of beginnings to a large and highly sophisticated conical-roofed building, but it lacks the ramps and heavy timbers which characterize the later phases of the Durrington/Woodhenge group.

Phase 1 of the Southern Circle at Durrington Walls is built of such light timbers that the feasibility of a fully-roofed interpretation must be doubtful. More acceptable, in purely structural terms, is a narrow annular roof, sloping either inwards or outwards and surrounding an open court, with a central feature protected by a canopy or by four free-standing posts.

Phase 2 of the same circle follows soon after Phase 1 (assuming the similarities in dimensions and setting out to be other than coincidental). The only reasonable building interpretation is of an annular roof, draining outwards and surrounding an open court in which stands a ring of free-standing posts; one of the post-rings within the building (2C) may be non-structural. The scale of the posts, though not the span of the rafters, is enormous, and virtually all the post-holes have ramps. Two large posts mark the entrance through the outermost ring, as they do in the last timber phase at the Sanctuary.

The post-pattern of the Northern Circle at Durrington Walls is possibly incomplete. There is a distinct similarity to the first phase of the Southern Circle, but the massive ramped post-holes of the central quartet suggest that it comes later in the sequence. A conical roof, perhaps with a raised central 'lantern' would be quite feasible, but it is difficult to say whether an alternative annular pattern like that shown on the right of fig. 116 would be justified, since the outer line of post-holes (allocated to a hypothetical Phase 1) is so fragmentary.

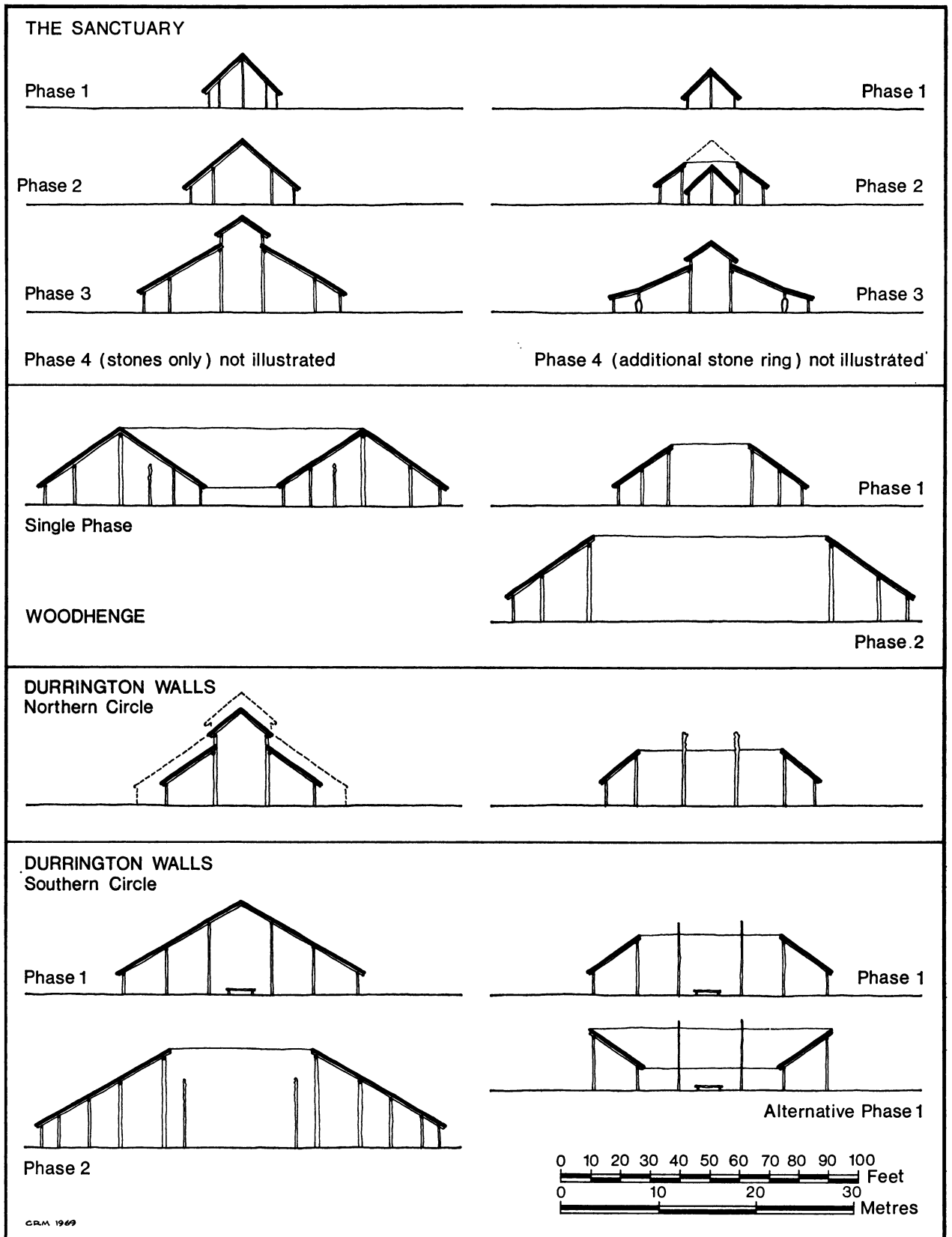


FIG. 116. Various theoretical reconstructions for the Sanctuary, Woodhenge and Durrington Walls

Two interpretations are possible at Woodhenge. The building may take an annular form with the roof draining both inwards and outwards from a high central ridge, and with one of the post-rings (ring D) possibly non-structural; if so, it is unique — none of the other monuments can take a similar roof form. Alternatively it may represent two separate buildings, each with an outward-sloping annular roof; the first and smaller phase, built without ramps,¹ might be contemporary with the earlier phase of the Southern Circle at Durrington Walls; the second phase, incorporating the massive ramped post-holes of the outer three rings might be grouped with the later phases of the Durrington circles.

It is difficult to see a convincing developmental sequence here, unless the outward-sloping annular interpretations are accepted in all cases. Certainly it is hard to credit the 'ambitious' scheme shown on the left of fig. 116, including, as it does, three fully roofed conical buildings, and two annular centre-courted structures, one with an outward-sloping roof, the other with the water draining in both directions from a high central ridge. The three concepts are really quite unlike one another in both structural and spatial terms, and it is difficult to imagine a convincing evolutionary sequence which could encompass all three. If the less ambitious sequence of annular buildings shown on the left of fig. 116 is not acceptable — and in a way it represents the 'lowest common denominator' in the interpretation of multi-ring structures — the best hope of an all-embracing explanation may lie in the idea of ritual or symbolic settings of free-standing posts controlled by some numerical, dimensional or geometrical logic.² On this rather unsatisfactory note the discussion may perhaps be allowed to rest, at least until there are more plans, and some secure radio-carbon dates on which to base further speculation.

¹ The apparent ramps in Cunnington's and Piggott's plans of these rings are badly dug or re-cut post-holes. See Cunnington, 1931.

² The objection that multiple rings of free-standing posts would be visually 'incomprehensible' is not a strong one. The tops of the posts could be treated in a variety of ways: some might have had lintels, either continuous or broken,

the height of the posts could be varied, some might have been painted or carved, and some of the less deeply bedded rings might represent the line of enclosing fences. This variety of treatment can be seen to great effect at Stonehenge — a monument which might well look 'incomprehensible' if examined in ground plan alone.

VIII. THE DETAILS OF THE POST-HOLES

(the measurements are in metres)

<i>No.</i>	<i>Diameter</i>		<i>Depth below natural chalk</i>	<i>Function</i>	<i>Illus. fig.</i>	<i>Length of ramp</i>	<i>Remarks</i>	
	<i>Pit (max.)</i>	<i>Pipe</i>						
Southern Circle: Phase 1								
123	0.21	—	0.15	This with nos. 124-39 and 141-4 comprise the façade of Phase 1	135	—	The post-holes increase in depth and diameter towards the presumed centre of the façade	
124	0.24	—	0.22		135	—		
125	0.21	—	0.21		135	—		
126	0.30	—	0.24		135	—		
127	0.21	—	0.22		135	—		
128	0.21	—	0.27		135	—		
129	0.39	0.21	0.45		135	—		
130	0.36	0.21	0.36		135	—		
131	0.60	0.24	0.64		135	—		Sealed by gravel platform of Phase 2
132	0.51	0.24	0.51		135	—		Sealed by gravel platform of Phase 2
133	0.22	—	0.24		135	—		Sealed by gravel platform of Phase 2
134	0.39	0.15	0.33		135	—		
135	0.42	—	0.24		135	—		
136	0.51	0.22	0.51		135	—		
137	0.51	0.24	0.60	135	—	Cut by 44		
138	0.67	0.30	0.67	135	—	Sealed by chalk platform of Phase 2 and cut by 45		
139	0.83	0.24	0.48	119	—	Cut by 23 and partially overlain by chalk packing of Phase 2		
141	0.39	0.24	0.45	135	—			
142	0.83	0.27	0.79	121	—	Cut by ramp of 48		
143	0.45	0.24	0.53	135	—			
144	0.60	0.30	0.48	135	—			
140	0.60	0.18	1.44	124	—	Cut by 67		
145	0.06	—	0.07	This with stakeholes 146-9 comprise a setting around post-holes 128 and 129 of the Phase 1 façade	—	—		
146	0.06	—	0.07		—	—		
147	0.07	—	0.07		—	—		
148	0.06	—	0.06		—	—		
149	0.03	—	0.07		—	—		
150	0.60	—	0.88	This with nos. 151, 153, 140 and 154 comprise Circle 1A	122	—	Cut by 55	
151	0.48	0.15	1.0		133	—		
152	0.33	0.12	0.68		133	—	Cut by ramp of 40	

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks	
	Pit (max.)	Pipe						
153	0.38	0.24	1.3	This with post-holes 157-75 comprise Circle 1B	123	—	Cut by 62	
154	0.76	0.18	1.0		133	—	Cut by Iron Age palisade trench	
155	0.60	—	1.60		128	—	Cut by 85	
156	0.45	—	0.91		125	—	Cut by 73	
157	0.45	—	1.9		125	—	Cut by 74	
158	0.45	—	1.7		125	—	Cut by 74	
159	0.53	0.24	0.91		126	—	Cut by 76	
160	0.60	—	0.91		126	—	Cut by 76	
161	0.45	—	1.14		126	—	Cut by 77	
162	0.45	—	1.24		126	—	Cut by 77	
163	0.60	—	1.21		126	—	Cut by 78	
164	0.53	—	1.0		126	—	Cut by 78	
165	0.45	—	1.40		127	—	Cut by 79	
166	0.60	—	1.75		127	—	Cut by 80	
167	0.45	0.18	1.12		133	—		
168	0.45	—	1.52		127	—	Cut by 81	
169	0.54	0.22	1.46	127	—	Cut by 82		
170	0.60	—	1.52	127	—	Cut by 82		
171	0.60	0.18	1.37	128	—	Cut by 83		
172	0.60	0.21	1.49	128	—	Cut by 83		
173	0.54	—	1.49	128	—	Cut by 84		
174	0.54	—	1.40	128	—	Cut by 85		
175	0.60	0.27	1.90	128	—	Cut by ramp of 85		
176	0.60	0.21	0.99	129	—	Cut by 90		
177	0.68	—	1.46	This with nos. 177-86 comprise Circle 1C	130	—	Cut by 91	
178	0.45	0.12	1.37		133	—		
179	0.53	—	1.37		130	—	Cut by 92	
180	0.45	—	1.0		131	—	Cut by 93	
181	0.53	—	1.43		131	—	Cut by 94	
182	0.45	—	1.76		131	—	Cut by 94	
183	0.60	0.21	1.49		131	—	Cut by 95	
184	0.60	0.18	1.82		132	—	Cut by 96	
185	0.60	—	1.52		132	—	Cut by 96	
186	0.51	—	1.52		132	—	Cut by 97	
187	1.0	0.38	1.2		133	1.58	Not replaced	
188	0.39	0.15	1.52		This with nos. 188-92 and 194-5 comprise supports and replacements for the roofing of Circle 1D	133	2.13	Cut by ramp of 99
189	0.48	0.15	1.21			133	—	? Replacement for 188
190	0.51	0.15	1.46			133	—	? Replacement for 188
191	0.60	0.22	1.37			134	1.52	Cut by ramp of 101
192	0.42	0.18	1.21			134	—	Cut by ramp of 102 ? replacement for 191
193	0.53	0.18	1.49	134		—	? Replacement for 103	
194	2.3	0.18	1.31	134		—	Cut by ramp of 104	
							? Replacement for 195 which it cuts through	

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
195	0.57	0.15	1.73	This with nos. 197-201 comprise Circle 1D	133	—	Cut by ramp of 104 and by ? replacement post-hole 194
196	0.45	0.15	0.24		134	—	
197	0.57	0.18	0.60		134	—	Top of pipe sealed with thin layer of red ash
198	0.76	0.18	0.51		134	—	Top of pit sealed with thick layer of red ash which extends to the north of the post-hole
199	0.45	0.15	0.38		134	—	
200	0.51	0.22	0.48		134	—	
201	0.82	0.22	0.36	134	—		
Southern Circle: Phase 2							
1	0.54	—	0.30	This with nos. 2-30 comprise Circle 2A	118	—	
2	0.73	0.24	0.45		118	—	
3	0.60	0.24	0.39		118	—	Cuts through ramp of 32
4	0.60	0.24	0.39		118	—	
5	0.60	0.24	0.36		118	—	
6	0.54	0.22	0.30		118	—	
7	0.45	0.18	0.27		118	—	
8	0.60	0.21	0.30		118	—	
9	0.57	0.24	0.18		118	—	
10	0.60	0.24	0.33		118	—	Cuts through ramp of 37
11	0.60	—	0.27		118	—	
12	0.70	0.24	0.42		118	—	
13	0.57	0.27	0.39		118	—	
14	0.83	0.38	0.51		118	—	Cuts through ramp of 40
15	0.88	0.30	0.60		118	—	
16	1.15	0.53	0.57		118	—	
17	0.91	0.30	3.81		118	—	
18	0.88	0.30	0.48		118	—	
19	1.03	0.27	0.42		118	—	
20	0.88	0.27	0.51		118	—	
21	1.06	0.39	0.79		118	—	Cuts through ramp of 22
22	1.8	1.06	2.43		119	1.67	Ramp partially covered by gravel platform and cut by 21
23	1.82	0.91	1.92	119	—	Cuts through 139	
24	0.99	0.42	0.54	118	—	Cut by Iron Age palisade trench	
25	0.88	0.38	0.51	118	—		
26	0.97	0.30	0.54	118	—	Cuts through ramp of 49	
27	0.94	—	0.24	118	—		
28	0.68	0.33	0.42	118	—	Cuts through ramp of 50	
29	0.91	—	0.24	119	—		
30	0.88	0.38	0.57	119	—		
31	1.21	0.68	1.90	119	0.85+		
32	0.97	0.38	1.70	119	1.67	At some time after the post had decayed the socket was covered by a cairn of flint nodules Ramp cut by 3	

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
33	0.73	0.57	1.40		119	1.67	
34	0.91	0.30	1.21		119	—	
35	0.85	0.22	0.91		119	—	
36	1.00	0.39	0.88		120	1.34	
37	1.37	0.42	1.92		120	1.60	Ramp cut by 10
38	1.73	0.68	1.90		120	1.67	
39	0.91	0.30	0.97		120	—	
40	1.46	0.60	1.82		120	2.46	Ramp cut by 14
41	1.46	0.60	1.82		120	2.46	
42	1.21	0.39	1.98		120	1.21	
43	1.03	0.82	2.37		121	3.13	Ramp cuts through hearth of Phase 1
44	1.21	0.60	2.05		121	2.31	Cuts through 137
45	1.37	0.68	2.25		121	2.31	Cuts through 138
46	1.28	0.53	2.43		121	1.21	
47	1.37	0.68	1.58		121	1.52	Cut by Iron Age palisade trench
48	0.76	0.39	1.46		121	1.52	Cuts through 142
49	1.46	0.45	1.61		122	1.64	Cut by 26
50	0.91	0.51	1.31		122	1.52	Cut by 28
51	0.94	0.53	1.75		122	1.31	
52	0.60	0.38	1.82		122	—	
53	1.28	0.48	1.73	This with nos 54—72 comprise Circle 2C	122	—	
54	0.91	0.45	1.37		122	1.21	
55	1.31	0.53	1.79		122	1.61	Cuts through 150
56	1.14	0.45	1.79		122	1.21	
57	0.99	0.33	1.67		123	1.75	
58	0.82	0.42	1.75		123	1.52	
59	0.91	0.38	1.49		123	1.52	
60	1.21	0.42	1.37		123	1.46	
61	1.58	0.45	1.60		123	0.97	
62	1.44	0.53	1.82		123	1.82	Cuts through 153
63	0.91	?	0.15		124	—	Cuts through 153. A doubtful post-hole owing to its lack of depth and diffuse nature of the ?pipe
64	1.18	0.45	1.64		124	1.52	Ramp cuts through hearth of Phase 1
65	1.21	0.51	2.28		124	2.74	
66	1.31	0.53	2.59		124	2.28	
67	1.55	0.51	1.58		124	1.37	Cuts through 140
68	1.06	0.38	1.43		124	3.88	Ramp cut by Iron Age palisade trench
69	0.99	0.42	1.34		124	1.52	Cut by Iron Age palisade trench
70	0.94	0.54	1.92		125	1.21	
71	0.82	0.53	1.92		125	1.21	
72	1.12	0.60	2.37		125	1.15	
73	1.37	0.51	2.04	This with nos. 74—88 comprise Circle 2D	125	—	Cuts through 156
74	1.37	0.51	2.10		125	2.4	Cuts through 157 and 158

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks	
	Pit (max.)	Pipe						
75	1.46	0.54	2.13	This with nos. 90-7 comprise Circle 2E	125	2.13		
76	1.46	0.57	1.67		126	2.31	Cuts through 159 and 160	
77	1.37	0.68	1.58		126	1.37	Cuts through 161 and 162	
78	1.82	0.67	1.98		126	1.21	Cuts through 163 and 164	
79	1.67	0.64	1.82		127	2.28	Cuts through ramp of 92 and pit of 165	
80	1.37	0.60	2.20		127	1.98	Cuts through ramp of 92 and pit of 166	
81	1.60	0.67	2.4		127	1.52	Cuts through 168	
82	1.52	0.68	2.31		127	2.28	Cuts through 169 and 170	
83	1.52	0.54	1.92		128	2.59	Cuts through ramp of 44 and pits of 171 and 172	
84	1.52	0.68	2.49		128	2.28	Pit cuts through 173 and ramp is cut by pit of 95	
85	1.70	0.68	2.40		128	1.61 +	Pit cuts through 155 and 174. Ramp cuts through 175 and is itself cut by the pit of 86	
86	1.52	0.60	2.07		129	1.98	Cut by Iron Age palisade trench	
87	1.06	0.42	2.07		129	2.13	Cut by Iron Age palisade trench	
88	1.21	0.48	2.49		129	—	Cut by Iron Age palisade trench	
89	1.37	0.51	2.25		129	1.67		
90	1.75	0.60	2.22		129	3.04	Cuts through 176	
91	2.20	0.51	2.36		130	2.37	Pit cuts through 177 and ramp is cut by 76	
92	2.07	0.76	2.89		130	5.10	Pit cuts 179 and 80 is cut into its ramp	
93	1.82	0.54	1.67		131	2.43	Cuts through 180	
94	1.52	0.60	2.20		131	3.65	Cuts through 181 and 182	
95	2.28	0.60	2.95		131	3.13	Pit cuts 183 and the ramp of 84. Its ramp cuts that of 85	
96	1.67	0.83	2.22		132	2.43	Cuts through 184 and 185	
97	1.82	0.64	2.68		132	1.98	Pit cuts 186 and its ramp is cut by the Iron Age palisade trench	
98	0.76	0.24	1.60		This with nos. 99-105 comprise Circle 2F	131	—	
99	0.64	0.21	1.03			132	1.43	Cuts through 188
100	0.91	0.27	1.09			132	2.13	
101	0.91	0.27	1.82			132	1.76	Cuts through 191
102	1.06	0.24	1.76			132	2.22	Cuts through 192
103	0.83	0.27	1.49			133	2.43	
104	0.83	0.22	1.95			133	1.67	Cuts through 194 and 195
105	0.88	0.24	1.79			133	1.88	
The Midden								
106	0.15	—	0.18		This with nos. 107-12 comprise the northern arc of stake-holes containing the midden deposit	—	—	

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
107	0.18	—	0.15	This with nos. 114-21 comprise the southern arc of stake-holes containing the midden deposit	—	—	
108	0.15	—	0.15		—	—	
109	0.18	—	0.21		16	—	
110	0.18	—	0.21		—	—	
111	0.21	—	0.18		—	—	
112	0.22	—	0.21		—	—	
113	0.07	—	0.09		—	—	
114	0.12	—	0.15		—	—	
115	0.27	—	0.22		—	—	
116	0.30	—	0.22		—	—	
117	0.30	—	0.30		16	—	
118	0.24	—	0.18		—	—	
119	0.22	—	0.15		—	—	
120	0.18	—	0.15	—	—		
121	0.18	—	0.18	—	—		
Structure A							
1	1.82	—	0.51	This with nos. 2-18 comprise the setting referred to as Structure A	19	—	Irregular profile
2	0.85	—	0.21		19	—	
3	0.73	—	0.36		19	—	
4	0.79	—	0.38		19	—	Irregular profile
5	0.42	—	0.09		19	—	
6	0.91	—	0.22		19	—	Irregular profile
7	0.45	—	0.18		19	—	
8	1.46	—	0.45		19	—	Irregular profile
9	0.91	—	0.15		19	—	
10	0.91	—	0.30		19	—	
11	0.76	—	0.21		19	—	
12	1.09	—	0.15		19	—	
13	0.42	—	0.24		19	—	
14	0.60	—	0.30		19	—	
15	0.24	—	0.15		19	—	
16	0.70	—	0.15		19	—	
17	0.45	—	0.18		19	—	
18	0.85	—	0.07		19	—	
Bank: North Sector							
B1	1.06	—	? 1.29	This with nos. B2-B6 follow the outer edge of the bank in its north sector	—	—	Destroyed to within 0.07 cm. of its base
B2	0.91	—	? 1.37		—	—	Destroyed to within 0.18 cm. of its base

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
B3	0.99	—	? 1.29		—	—	Destroyed to within 0.18 cm. of its base
B4	0.76	—	? 1.44		—	—	Destroyed to within 0.27 cm. of its base
B5	0.76	—	? 1.29		—	—	Destroyed to within 0.18 cm. of its base
B6	0.91	—	? 1.28		—	—	Destroyed to within 0.06 cm. of its base
Northern Circle							
10	0.38	—	0.22	This with nos. 11-14 represent the inner arc of Phase 1	136	—	The interpretation of this arc as part of a circle is highly conjectural
11	0.45	—	0.09		136	—	
12	0.38	—	0.06		136	—	
13	0.45	—	0.09		136	—	
14	0.45	—	0.15		136	—	
15	0.45	—	0.09	This with nos. 16-18 represent the outer arc of Phase 1	136	—	The interpretation of this arc as part of a circle is highly conjectural
16	0.30	—	0.09		136	—	
17	0.38	—	0.18		136	—	
18	0.38	—	0.09		136	—	
19	0.30	—	0.09	This with nos. 20-26 represent the ?Avenue of Phase 1	136	—	The interpretation of these alignments as part of an Avenue is highly conjectural
20	0.30	—	0.09		136	—	
21	0.30	—	0.09		136	—	
22	0.30	—	0.07		136	—	
23	0.30	—	0.07		136	—	
24	0.30	—	0.07		136	—	
25	0.30	—	0.06		136	—	
26	0.22	—	0.09		136	—	
27	0.76	0.36	0.36	This with nos. 28-41 represent the outer circle of Phase 2	136	—	
28	0.76	0.36	0.39		136	—	
29	0.83	—	0.30		136	—	
30	0.91	—	0.21		136	—	
31	0.60	—	0.21		136	—	
32	0.53	—	0.22		136	—	
33	0.60	—	0.24		136	—	
34	0.68	0.36	0.70		136	—	? Replacement
35	0.60	—	0.15		136	—	
36	0.60	—	0.15		136	—	
37	0.60	—	0.30		136	—	
38	0.60	—	0.30		136	—	? Replacement
39	0.83	—	0.30		136	—	
40	0.91	0.39	0.51		136	—	
41	1.21	0.51	0.67		136	—	? Replacement

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
42	1.52	0.54	1.15	This with nos. 43-5 represent the inner circle of Phase 2	137	3.35	The northern half of this façade has been largely destroyed but the variation in post-hole depth strengthens the argument for selective erosion
43	1.52	0.60	1.31		137	1.67	
44	1.52	0.64	1.00		137	1.52	
45	1.67	0.54	1.21		136	—	
57	0.38	—	0.06		137	—	
				This with nos. 59-63, 65-82 represent the façade to the south of the Northern Circle			
59	0.30	—	0.15		137	—	
60	0.30	—	0.15		137	—	
61	0.30	—	0.09		137	—	
62	0.38	—	0.15		137	—	
63	0.30	—	0.09		137	—	
65	0.38	—	0.09		137	—	
66	0.38	—	0.18		137	—	
67	0.30	—	0.21		137	—	
68	0.30	—	0.15		137	—	
69	0.30	—	0.22		137	—	
70	0.38	—	0.21		137	—	
71	0.38	—	0.15		137	—	
72	0.45	—	0.09		137	—	
73	0.38	—	0.15		137	—	
74	0.38	—	0.15		137	—	
75	0.38	—	0.15		137	—	
76	0.38	—	0.12		137	—	
77	0.45	—	0.15		137	—	
78	0.38	—	0.09		137	—	
79	0.22	—	0.09		137	—	
80	0.30	—	0.09		137	—	
81	0.30	—	0.12		137	—	
82	0.45	—	0.06	137	—		
86	0.38	—	0.36	137	—		
				This with nos. 86, 88-100, 104-11 represent the Avenue running south through the façade from the Northern Circle			
88	0.76	—	0.15		137	—	
89	0.60	—	0.15		137	—	
90	0.76	—	0.15		137	—	
91	0.45	—	0.22		137	—	
92	0.53	—	0.09		138	—	
93	0.45	—	0.15		138	—	
94	0.45	—	0.15		138	—	
95	0.53	—	0.09		138	—	
96	0.60	—	0.09		138	—	
97	0.53	—	0.09		138	—	

No.	Diameter		Depth below natural chalk	Function	Illus. fig.	Length of ramp	Remarks
	Pit (max.)	Pipe					
98	0.45	—	0.12		138	—	
99	0.30	—	0.09		138	—	
100	0.30	—	0.09		138	—	
104	0.38	—	0.12		138	—	
105	0.38	—	0.07		138	—	
106	0.60	—	0.09		138	—	
107	0.30	—	0.21		138	—	
108	0.22	—	0.09		138	—	
109	0.45	—	0.12		138	—	
110	0.30	—	0.15		138	—	
111	0.38	—	0.07		138	—	
Miscellaneous							
46	0.15	—	0.12		137	—	Post-holes which occur under this heading are scattered with no definite plan to the south of the Northern Circle. Their date is unknown but a Neolithic attribution is likely for some
47	0.30	—	0.21		137	—	
48	0.38	—	0.07		137	—	
49	0.30	—	0.09		137	—	
50	0.30	—	0.06		137	—	
51	0.45	—	0.12		137	—	
52	0.45	—	0.09		137	—	
53	0.60	—	0.09		137	—	
54	0.38	—	0.09		137	—	
55	0.30	—	0.09		137	—	
56	0.45	—	0.09	Doubtful	137	—	
58	0.83	—	0.09		137	—	
64	0.60	—	0.07		137	—	
83	0.60	—	0.12	? Associated with the façade	137	—	
84	0.30	—	0.24		137	—	
85	0.99	—	0.22		137	—	
87	0.38	—	0.15		137	—	
101	0.38	—	0.09		138	—	
102	0.30	—	0.09		138	—	
103	0.38	—	0.09		138	—	
112	0.38	—	0.07		138	—	
113	0.45	—	0.12		138	—	
114	1.21	—	0.15		138	—	
115	0.45	—	0.12		138	—	
116	0.60	—	0.12		138	—	
117	0.76	—	0.15		138	—	
118	0.83	—	0.15		138	—	
119	0.30	—	0.07		138	—	
120	0.36	—	0.07		138	—	
121	0.30	—	0.06		138	—	
122	0.45	—	0.07		138	—	
123	0.53	—	0.09		138	—	
124	0.38	—	0.09		138	—	

KEY FOR POST-HOLE SECTIONS

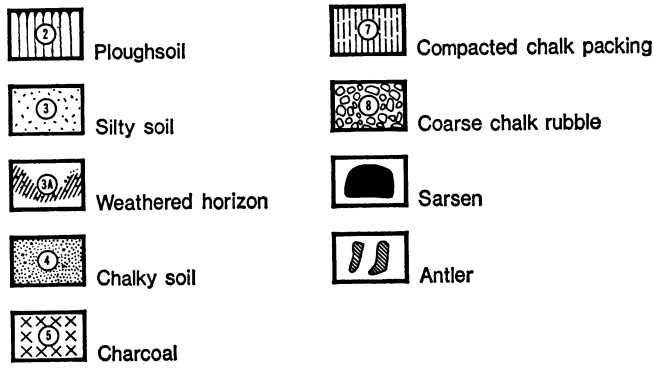


FIG. 117

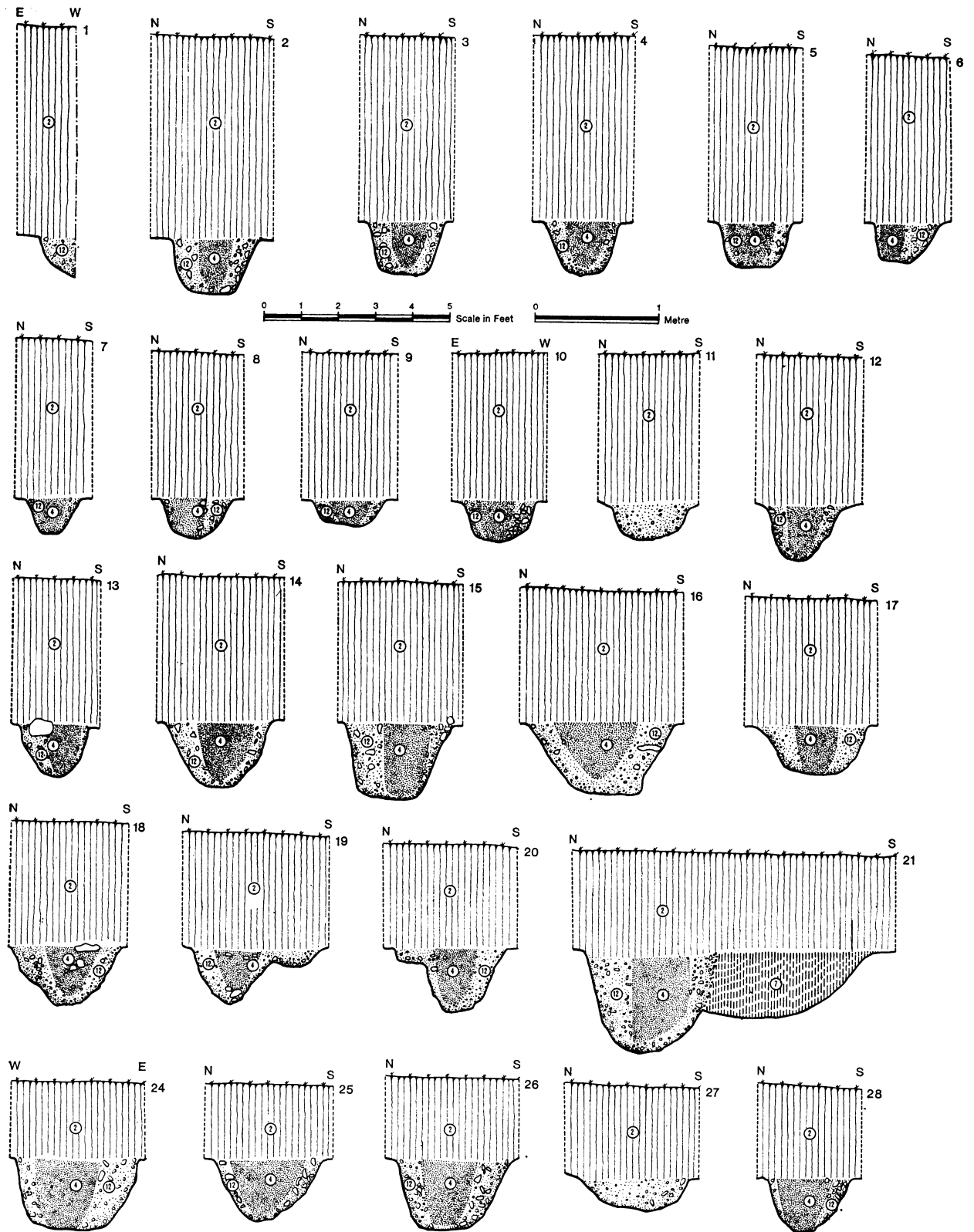


FIG. 118

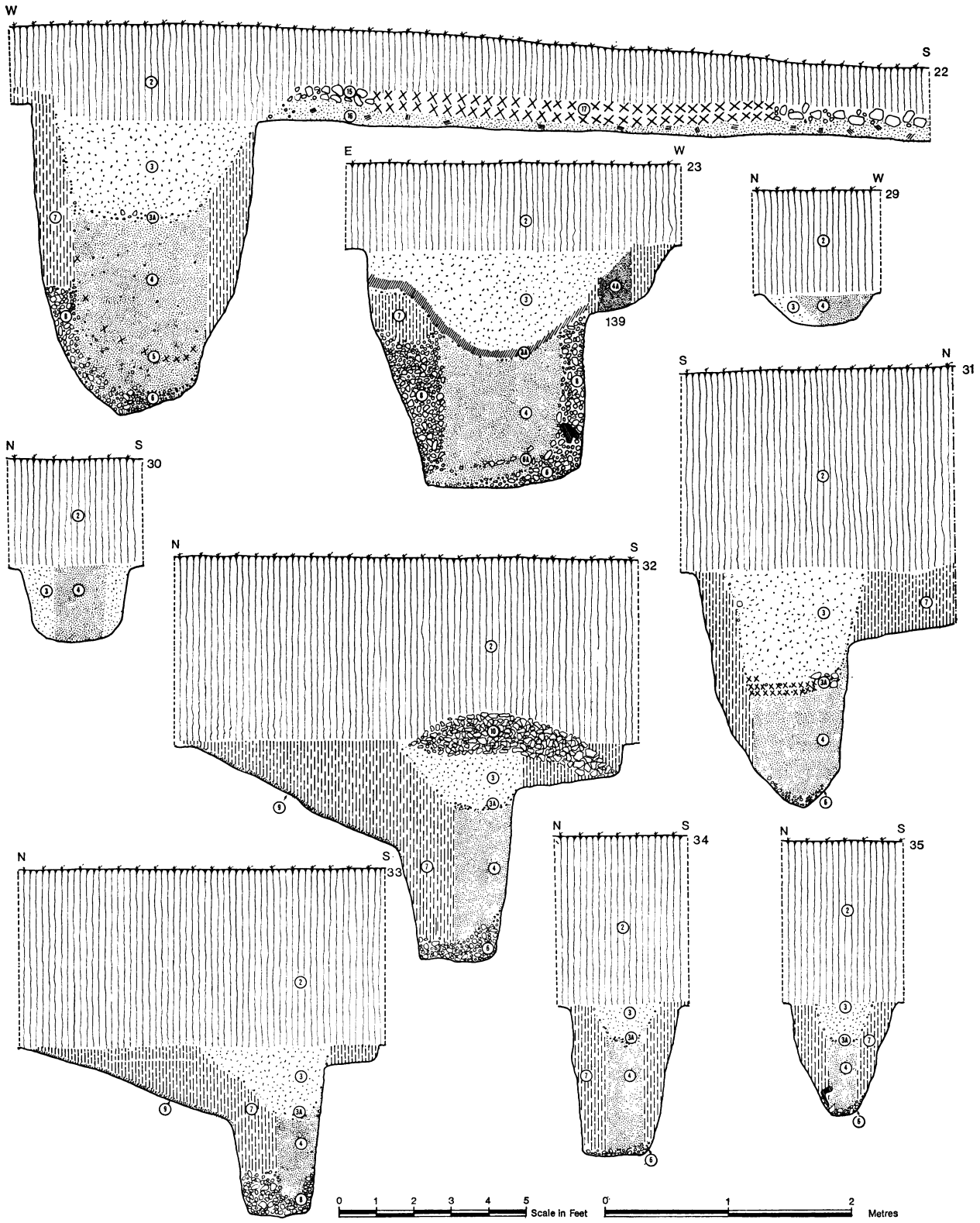


FIG. 119

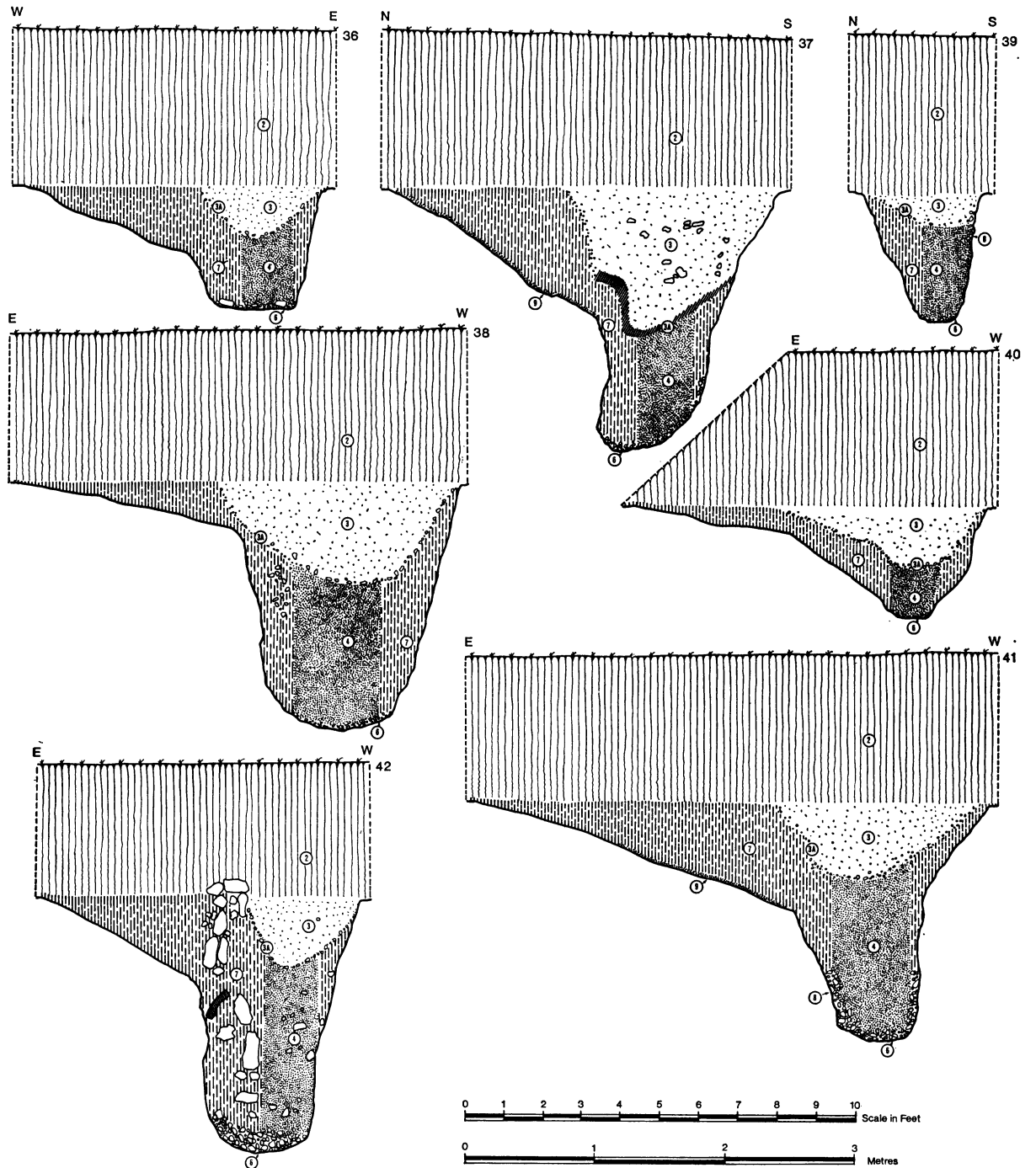


FIG. 120

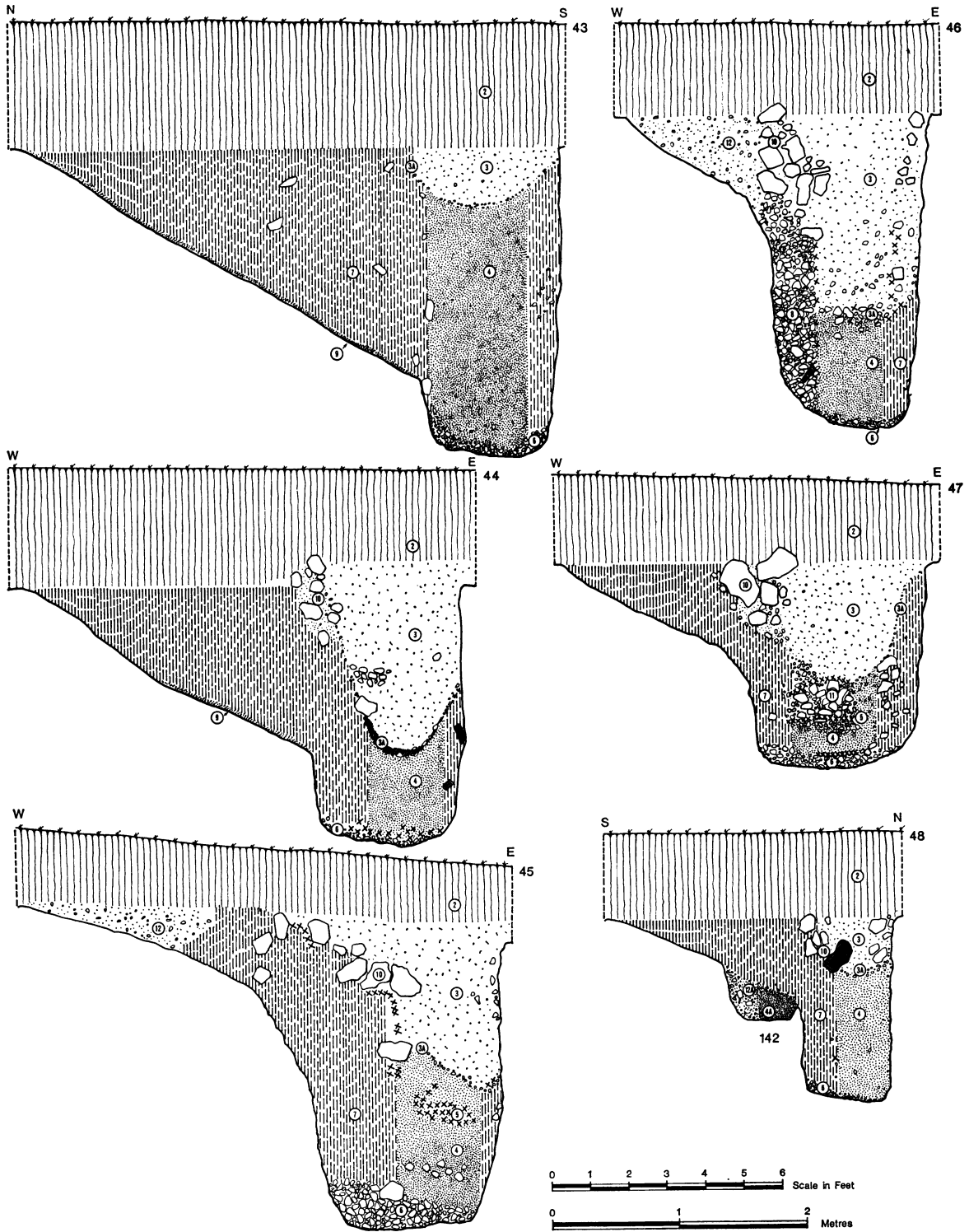


FIG. 121

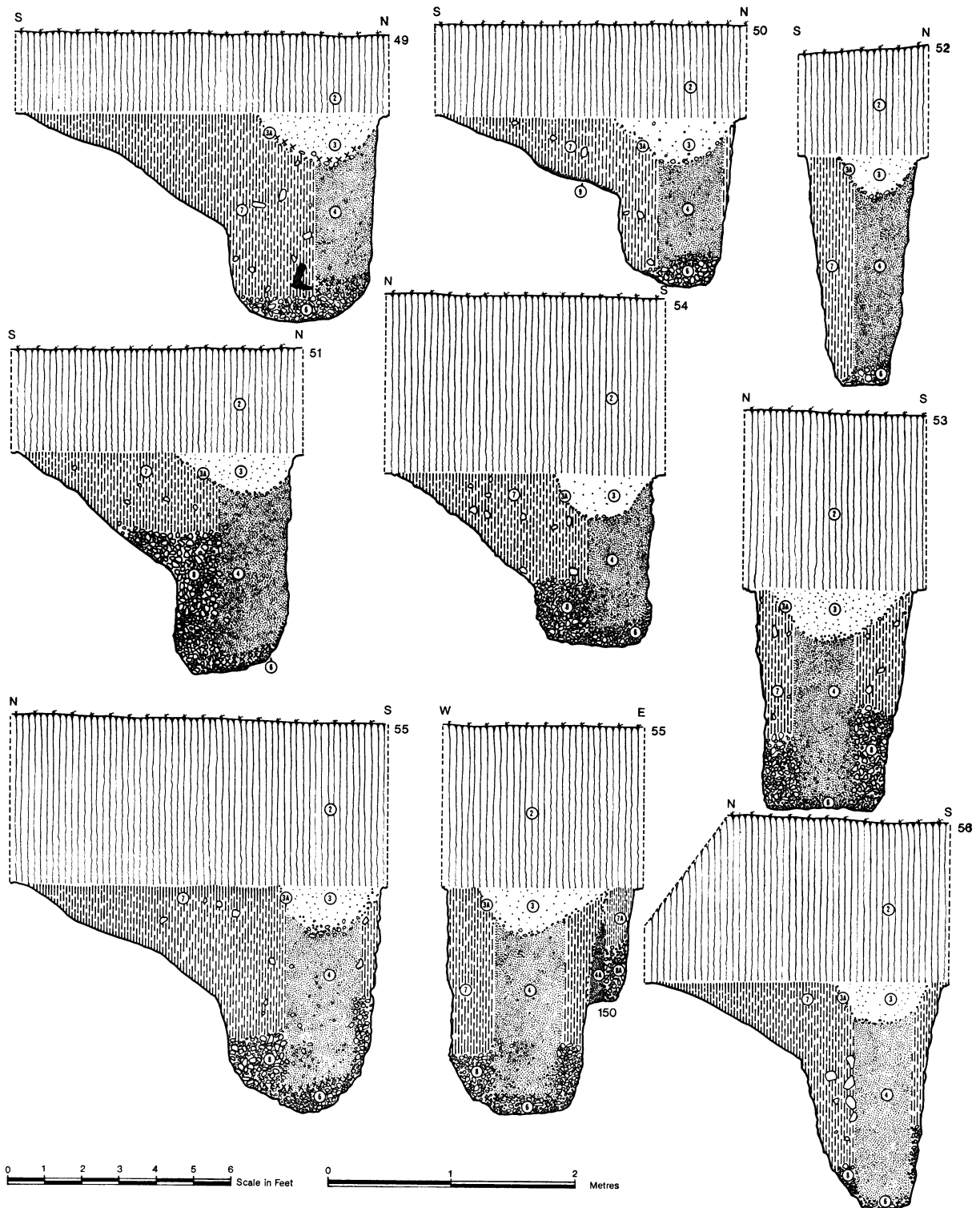


FIG. 122

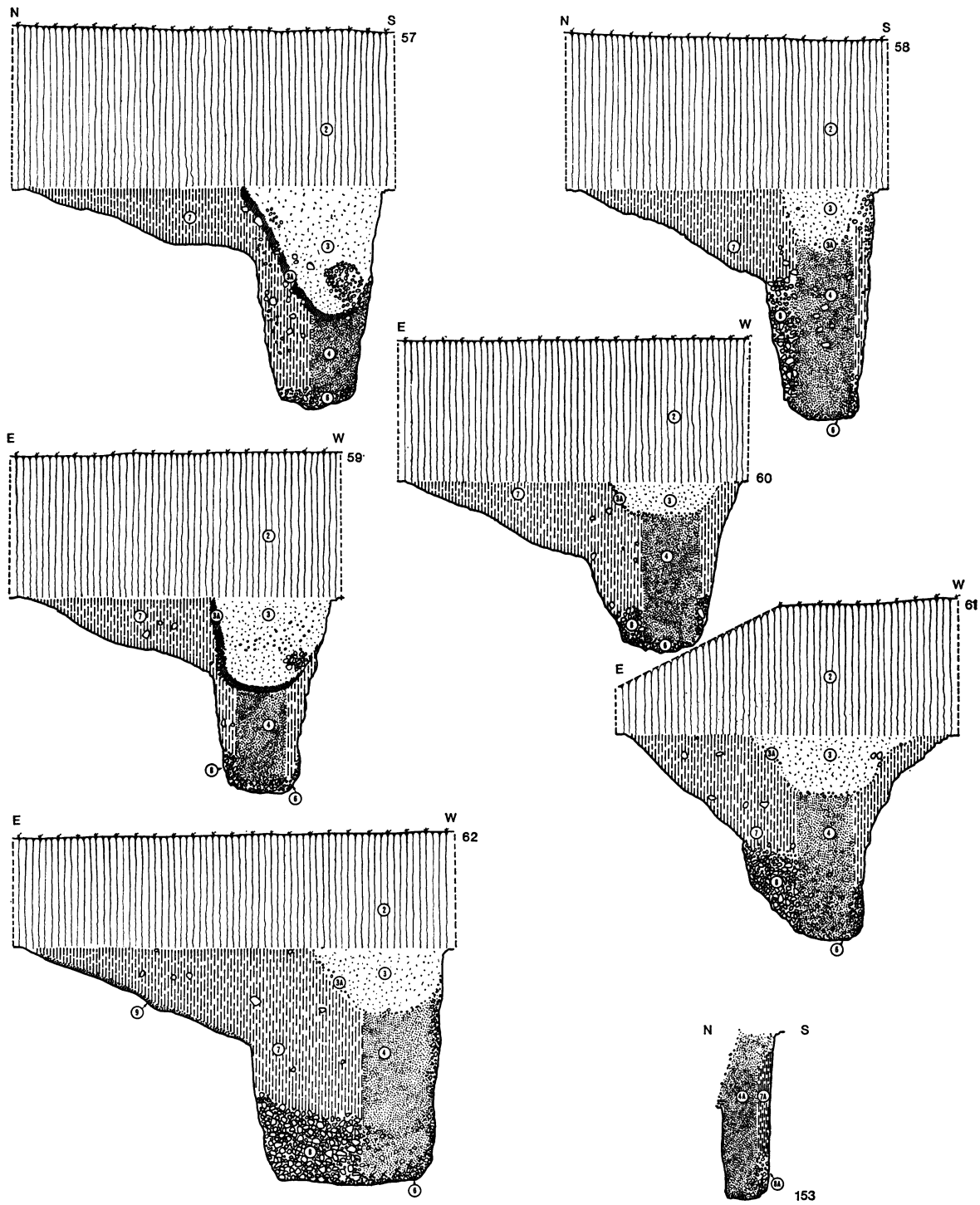


FIG. 123

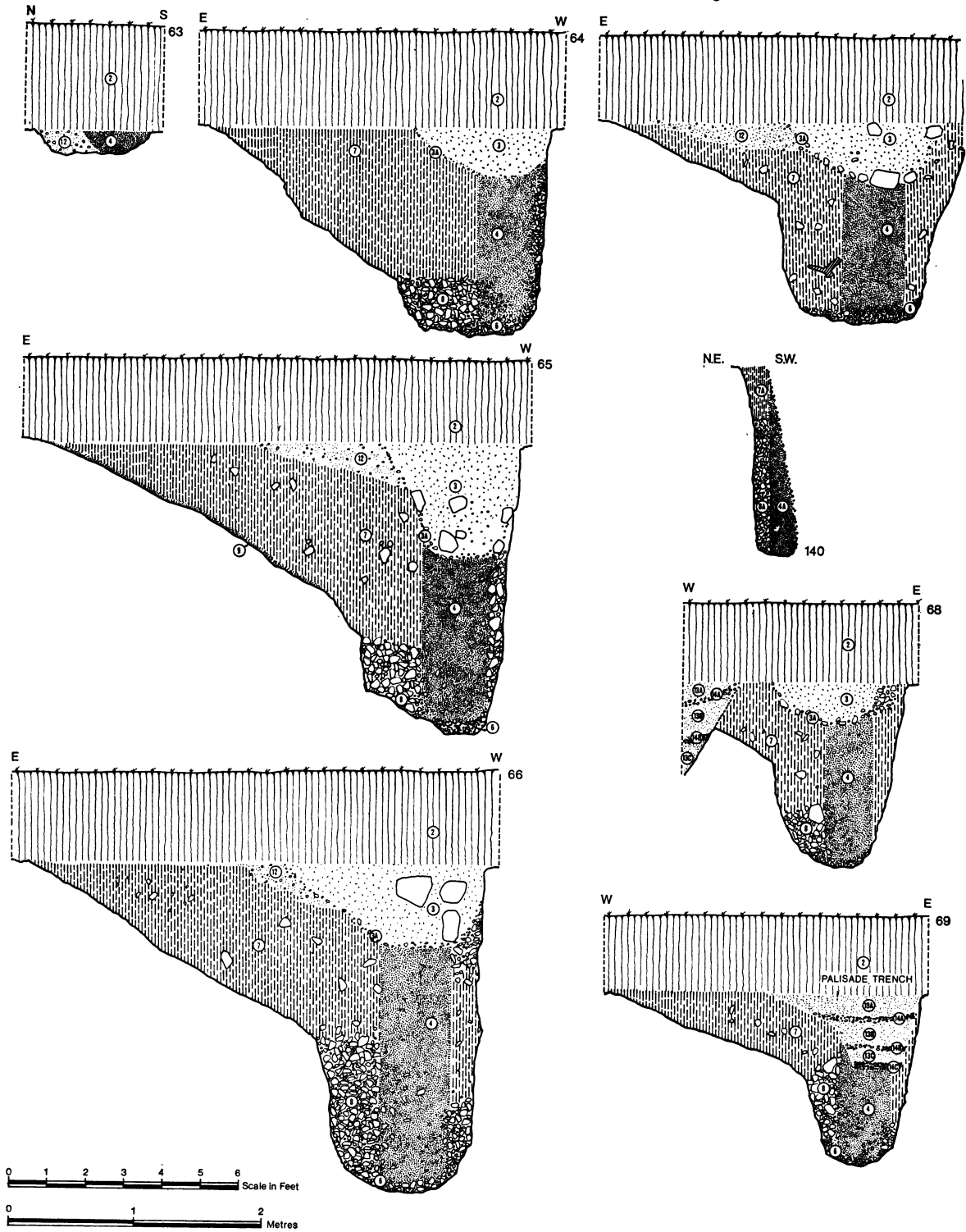


FIG. 124

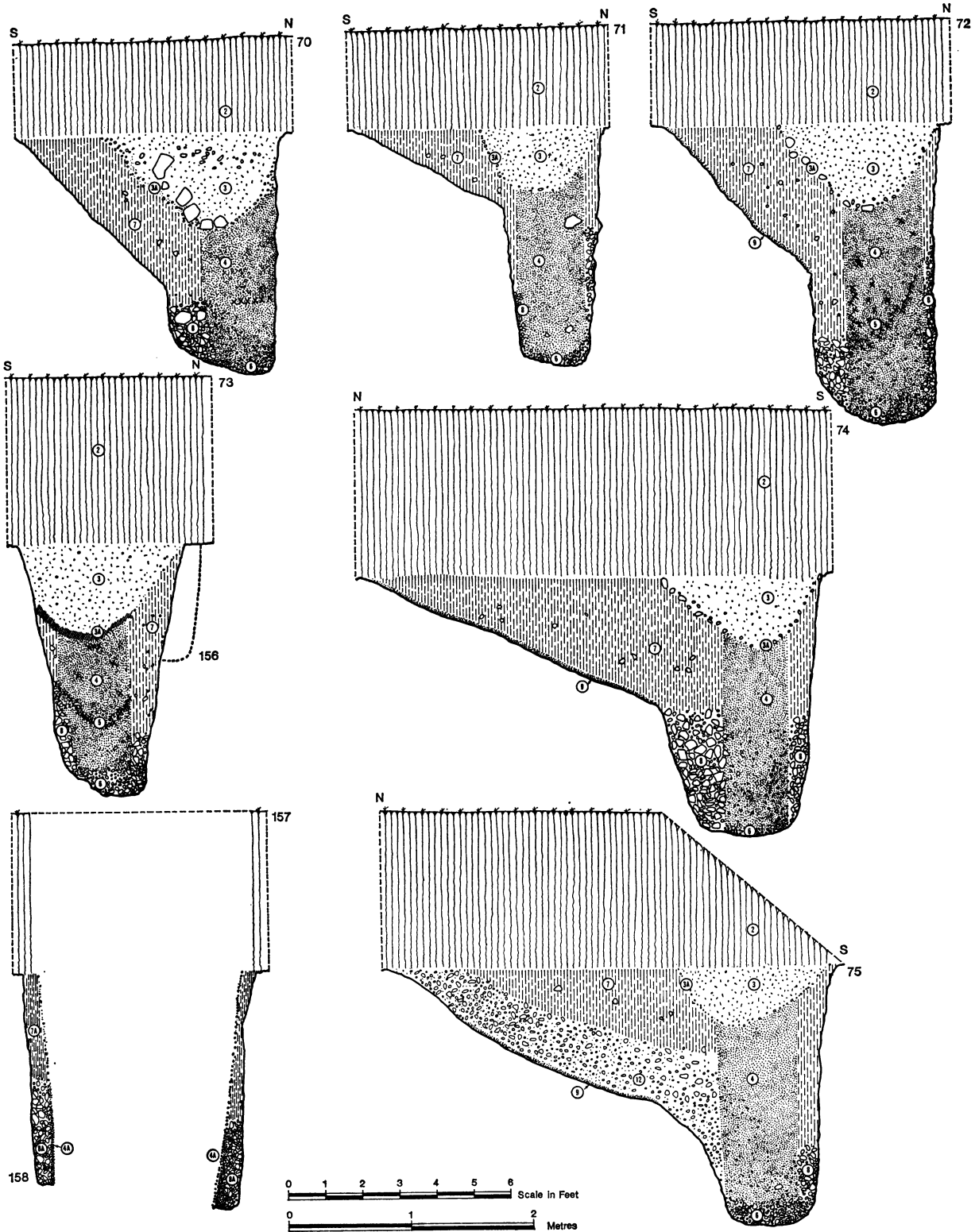


FIG. 125

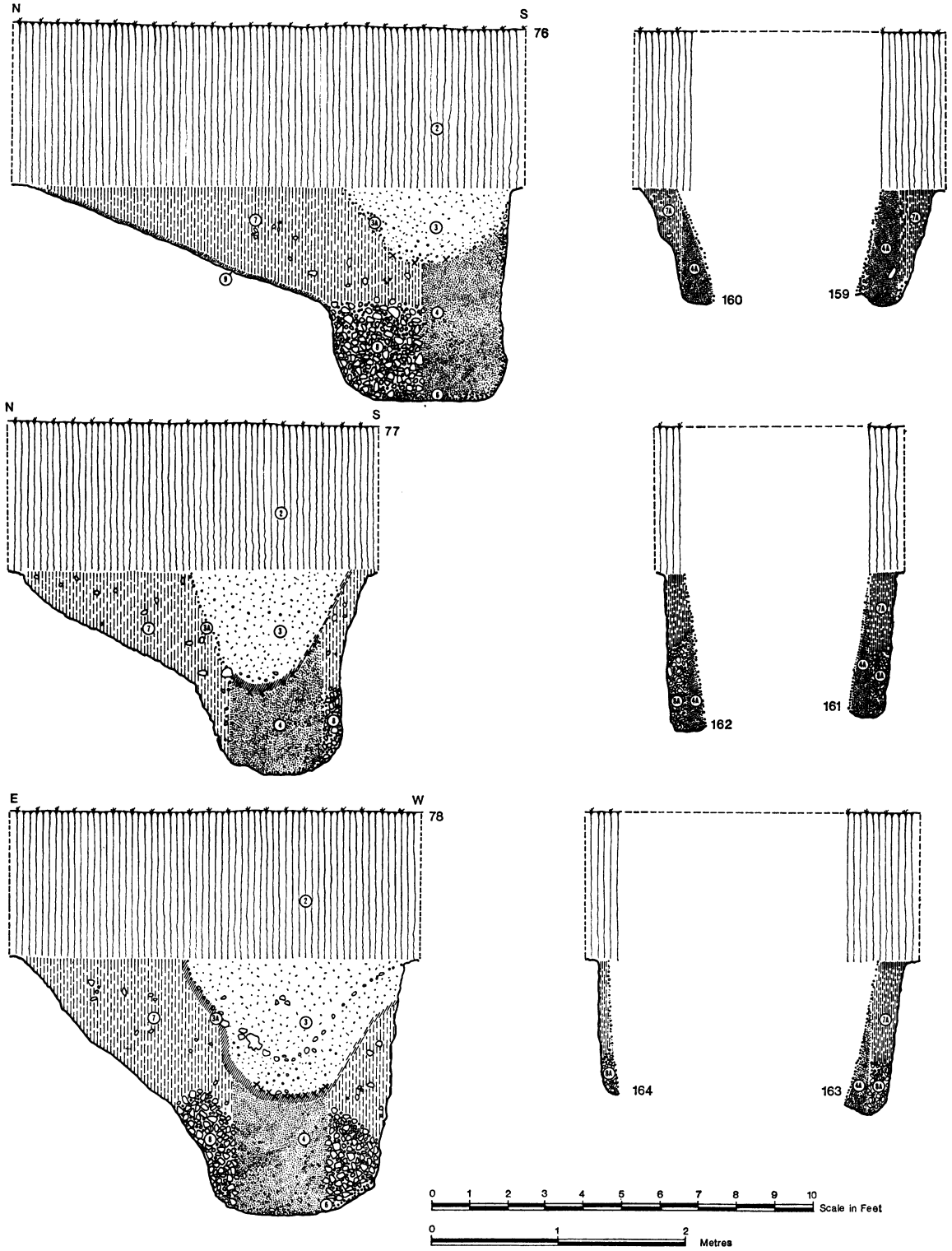
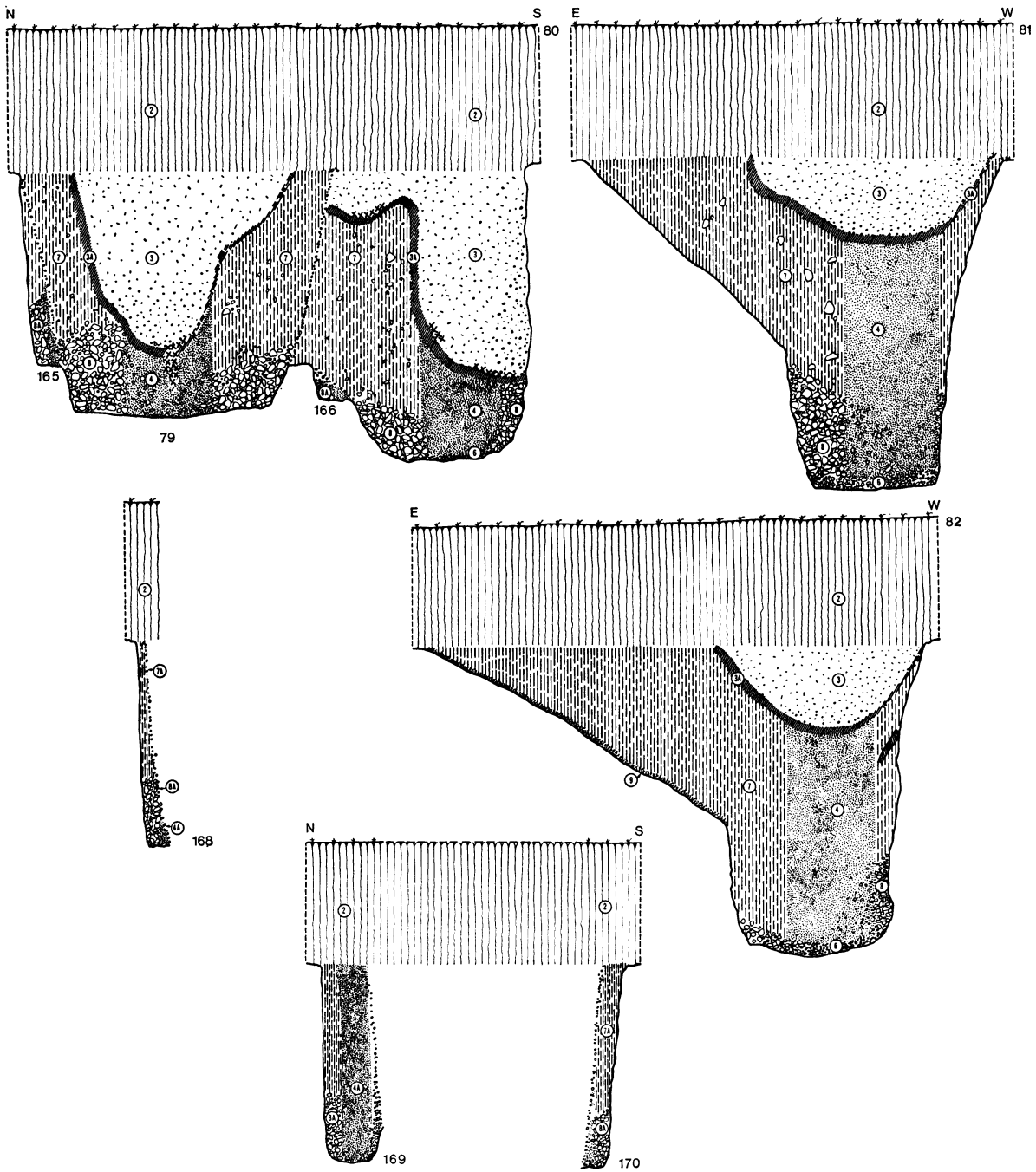


FIG. 126



0 1 2 3 4 5 Scale in Feet

0 1 2 Metres

FIG. 127

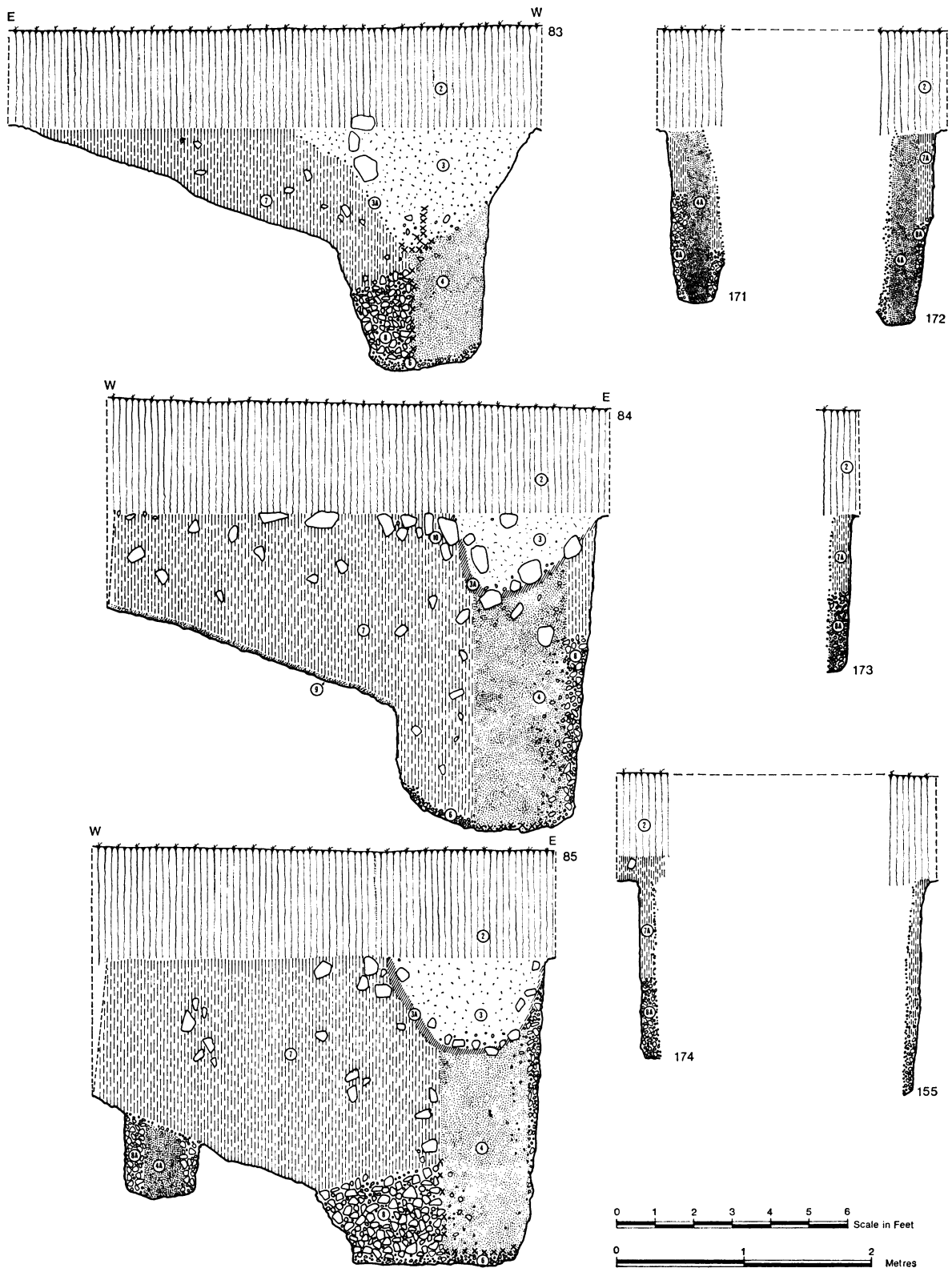


FIG. 128

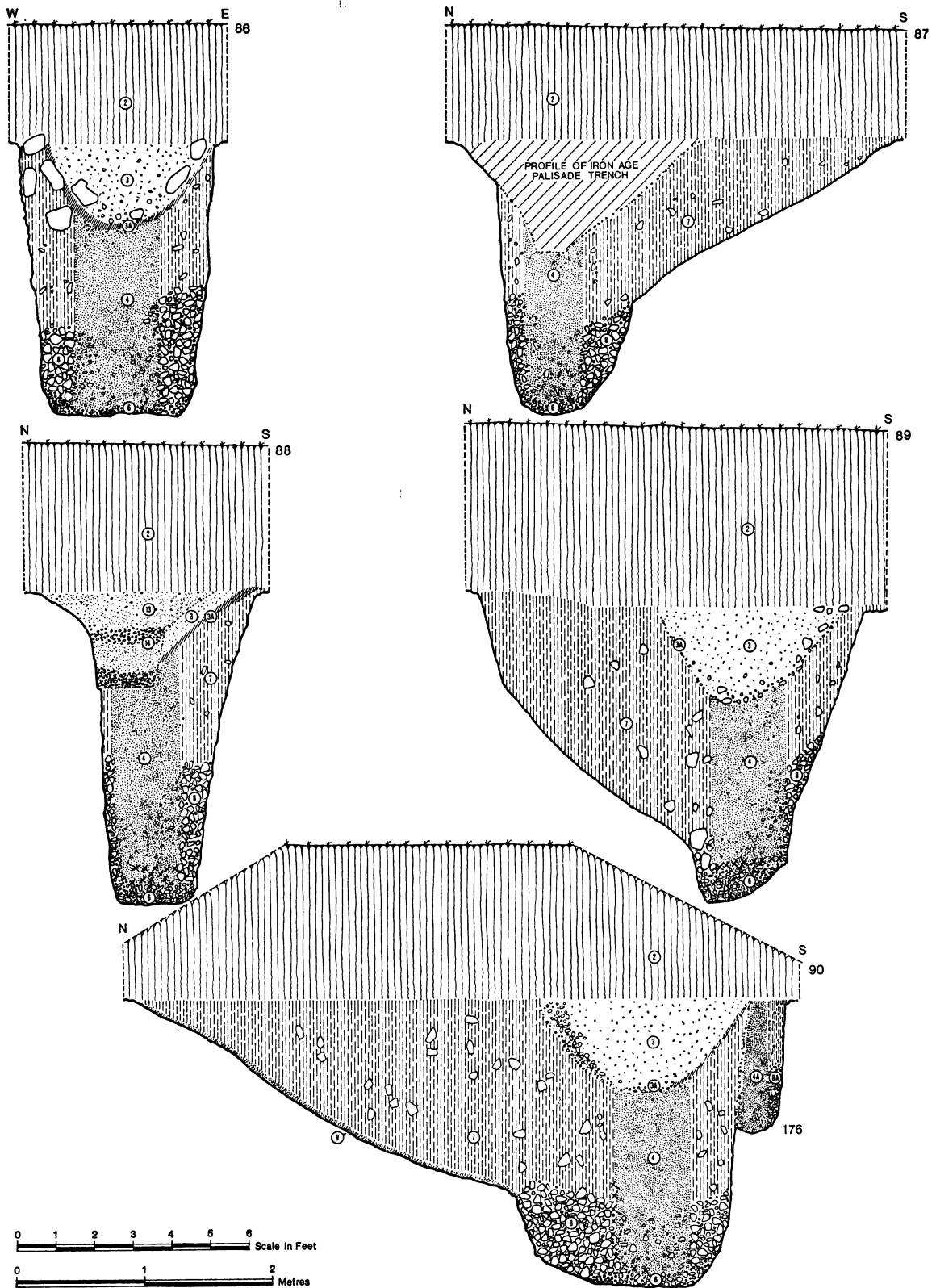


FIG. 129

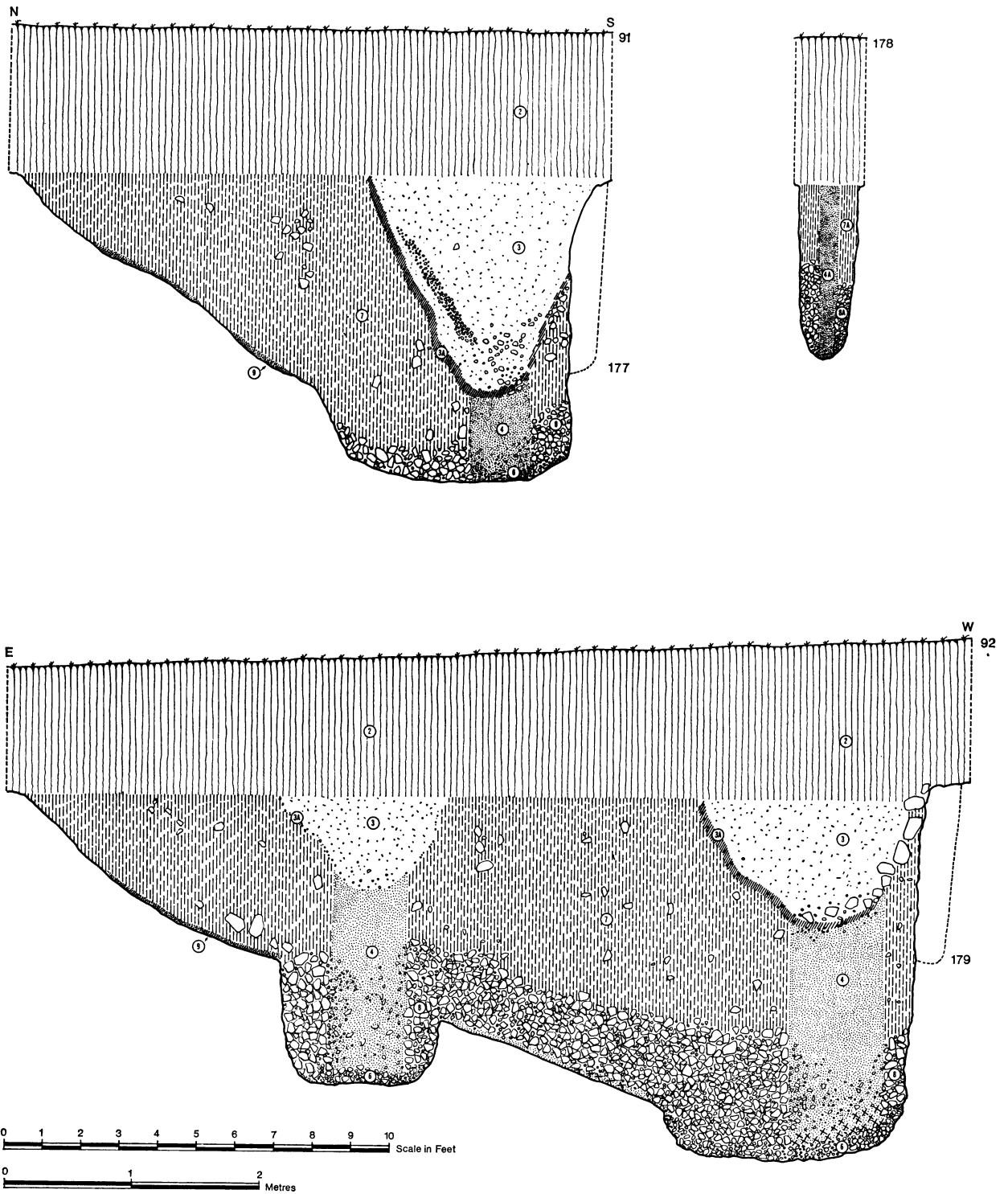


FIG. 130

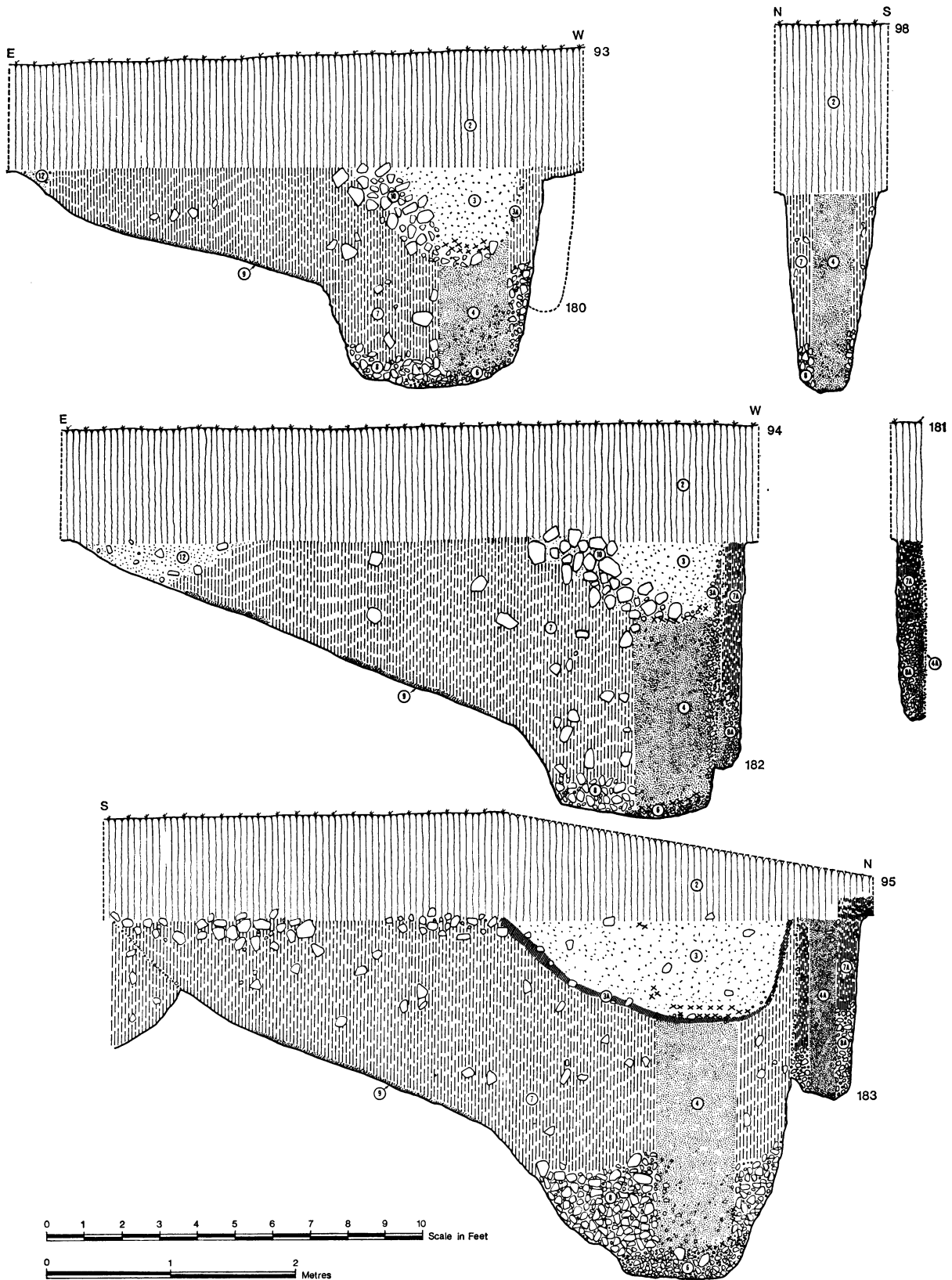


FIG. 131

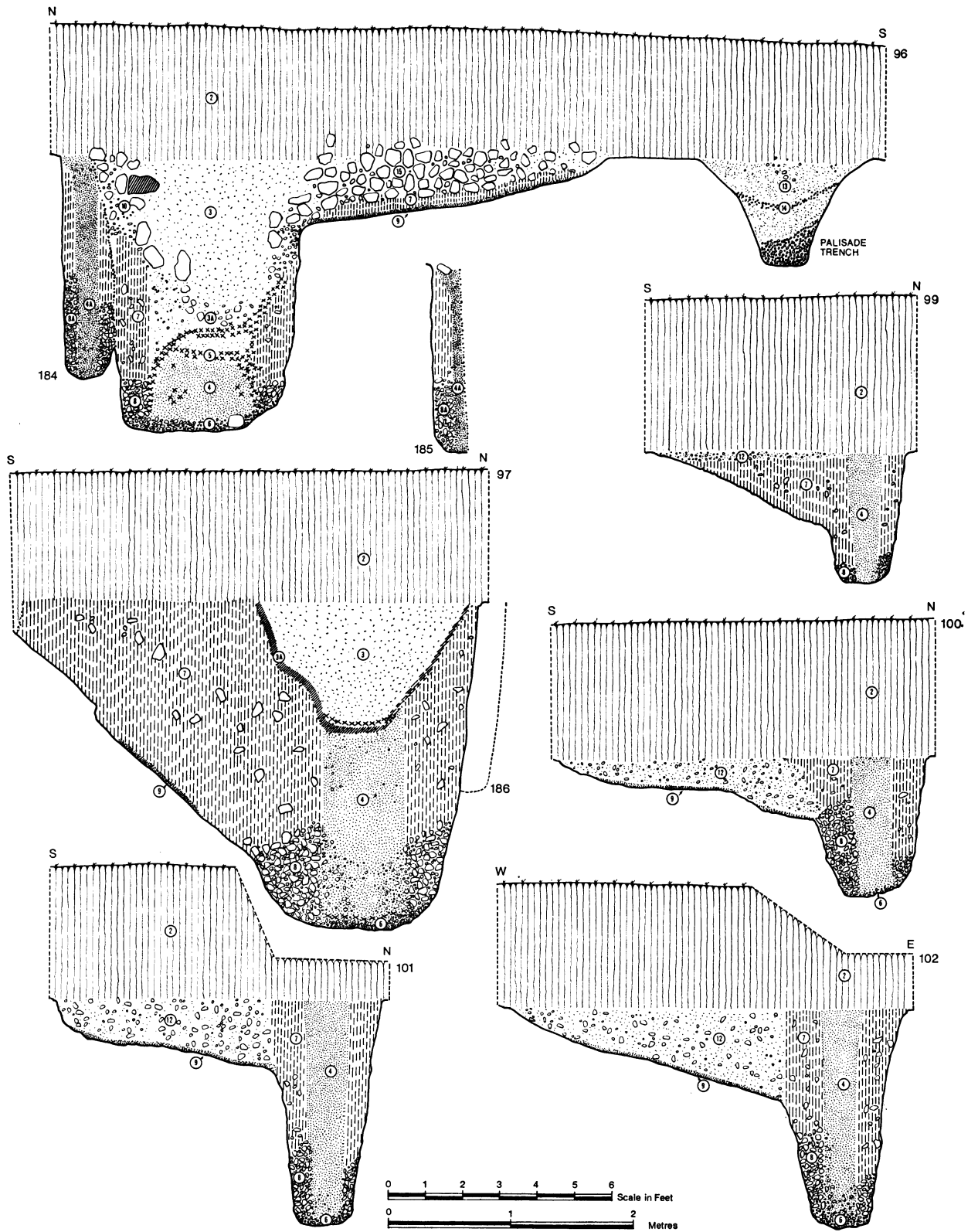


FIG. 132

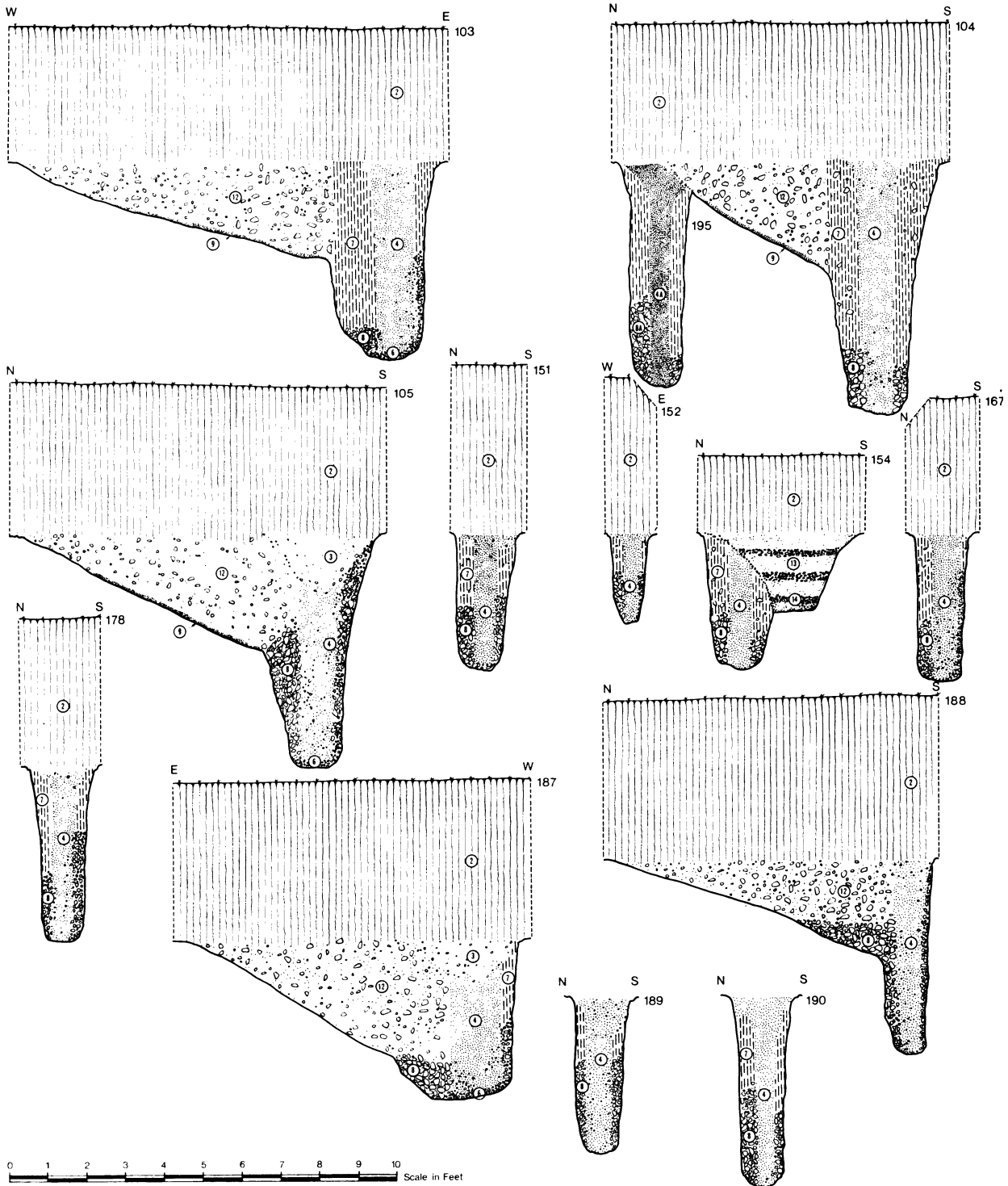


FIG. 133

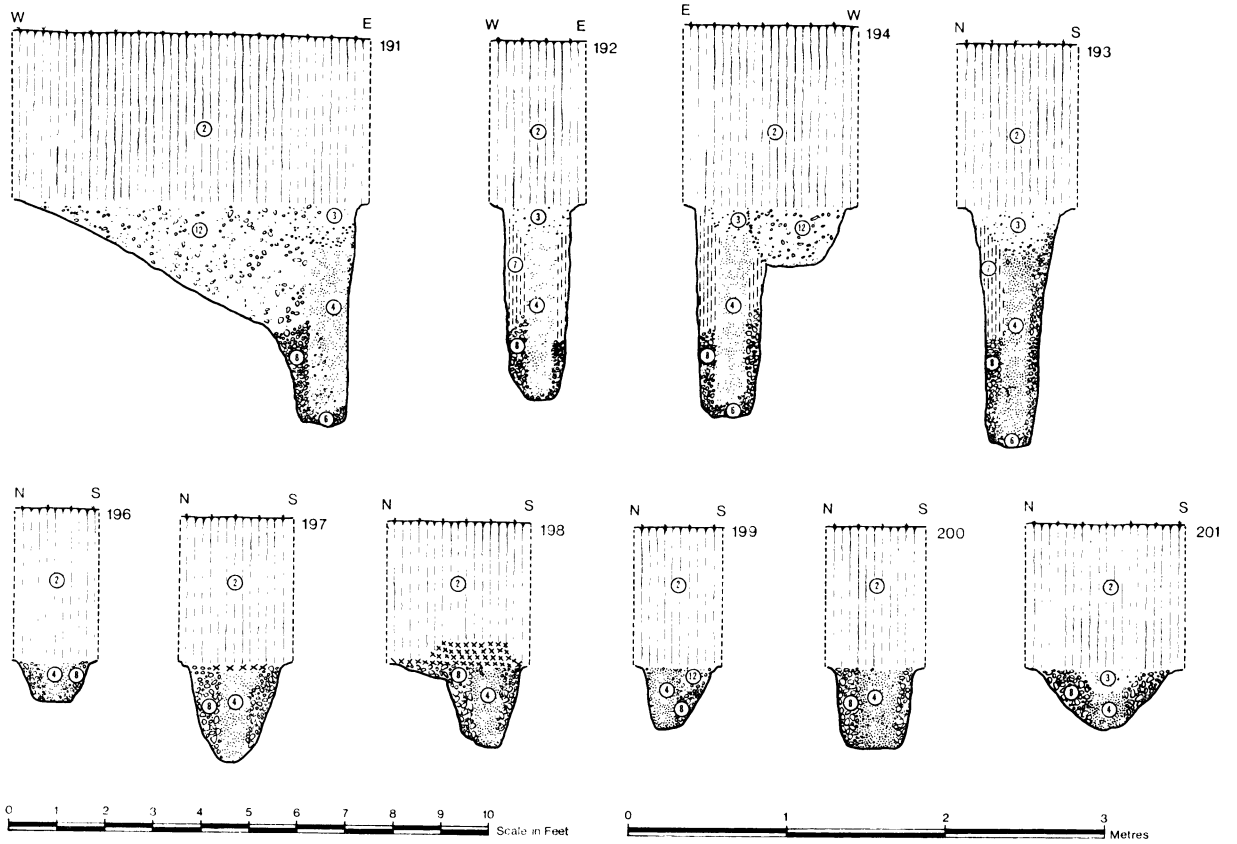


FIG. 134

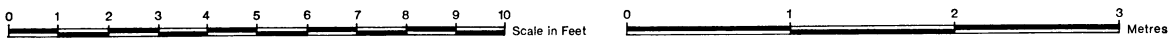
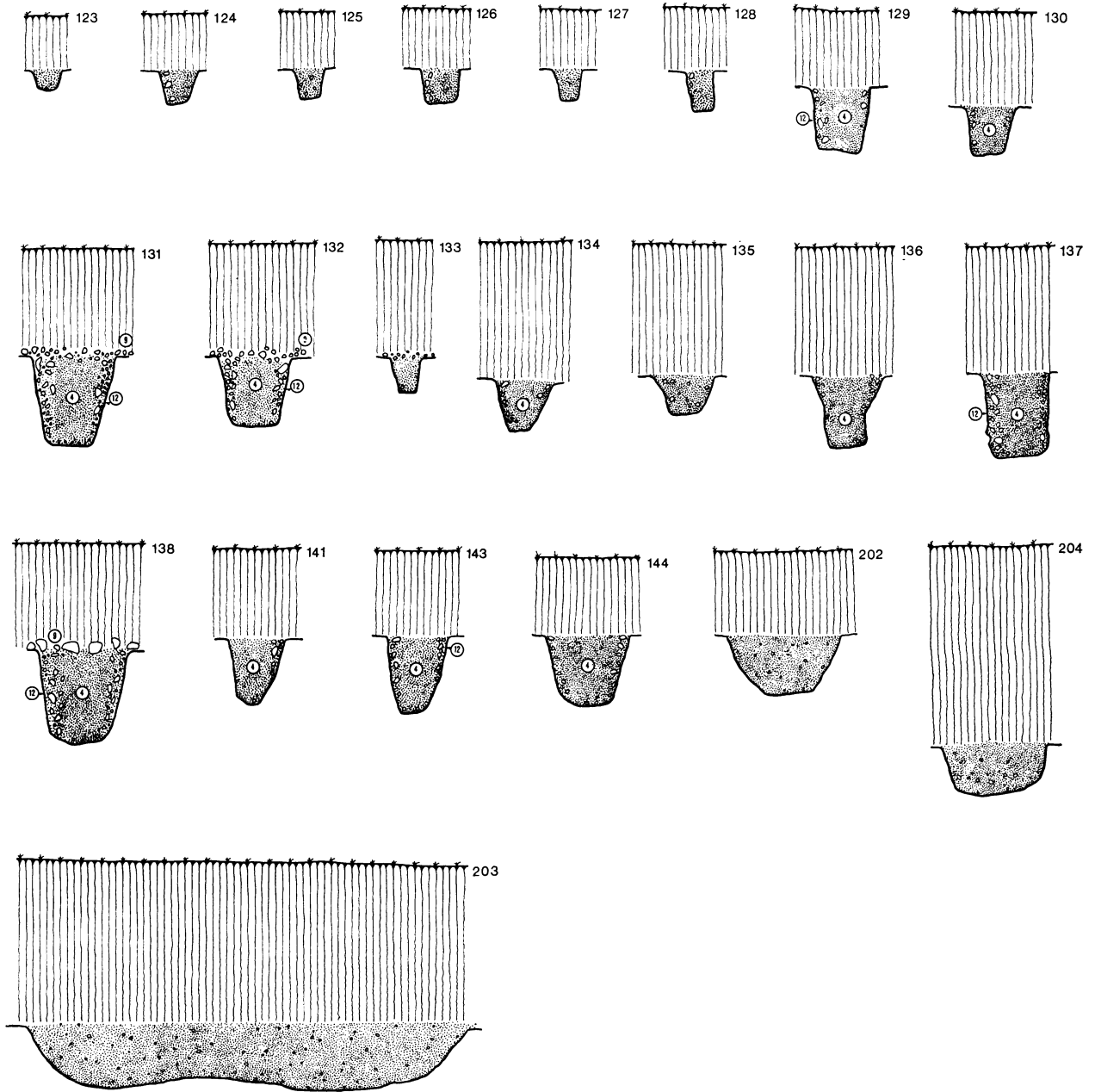


FIG. 135

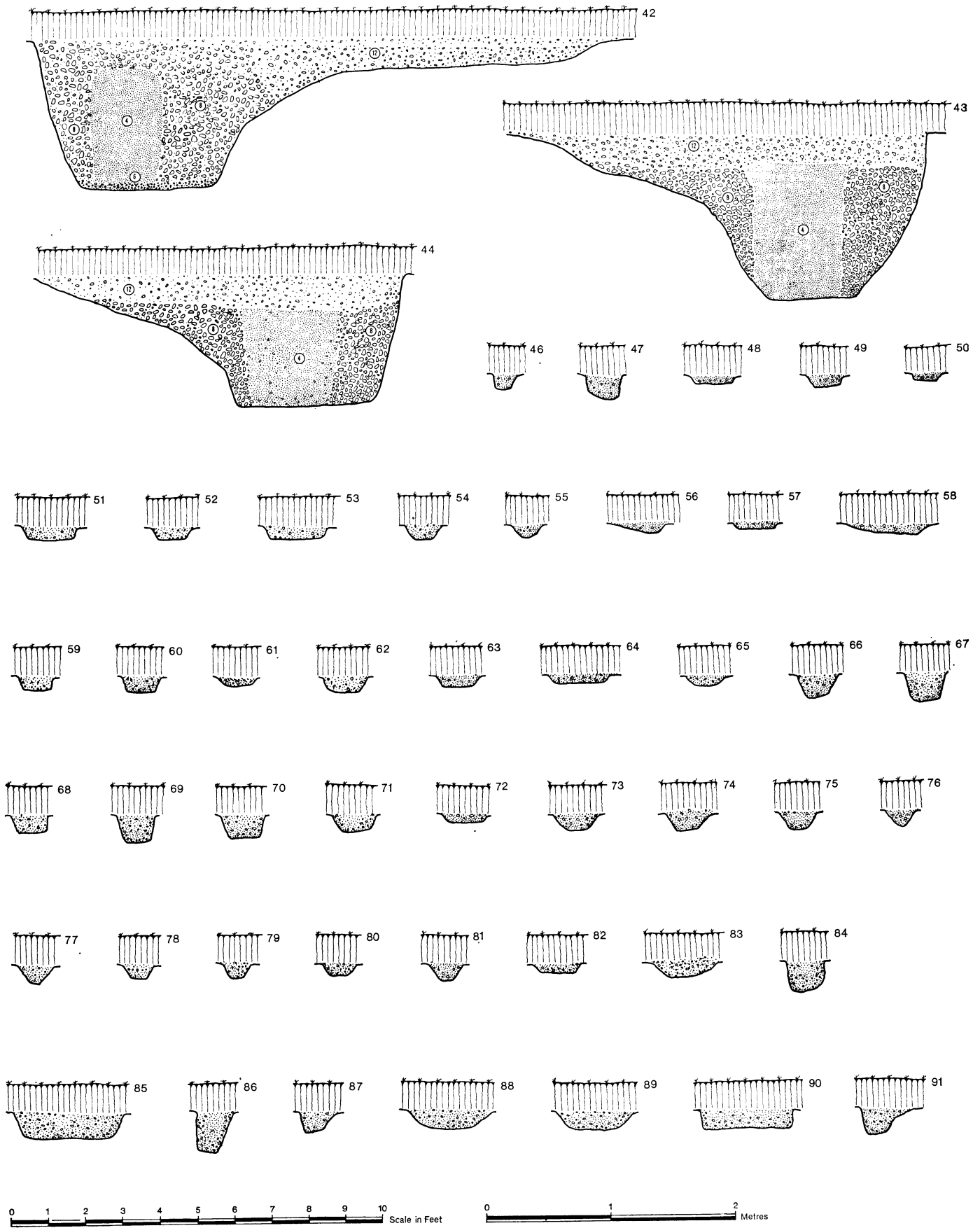


FIG. 137

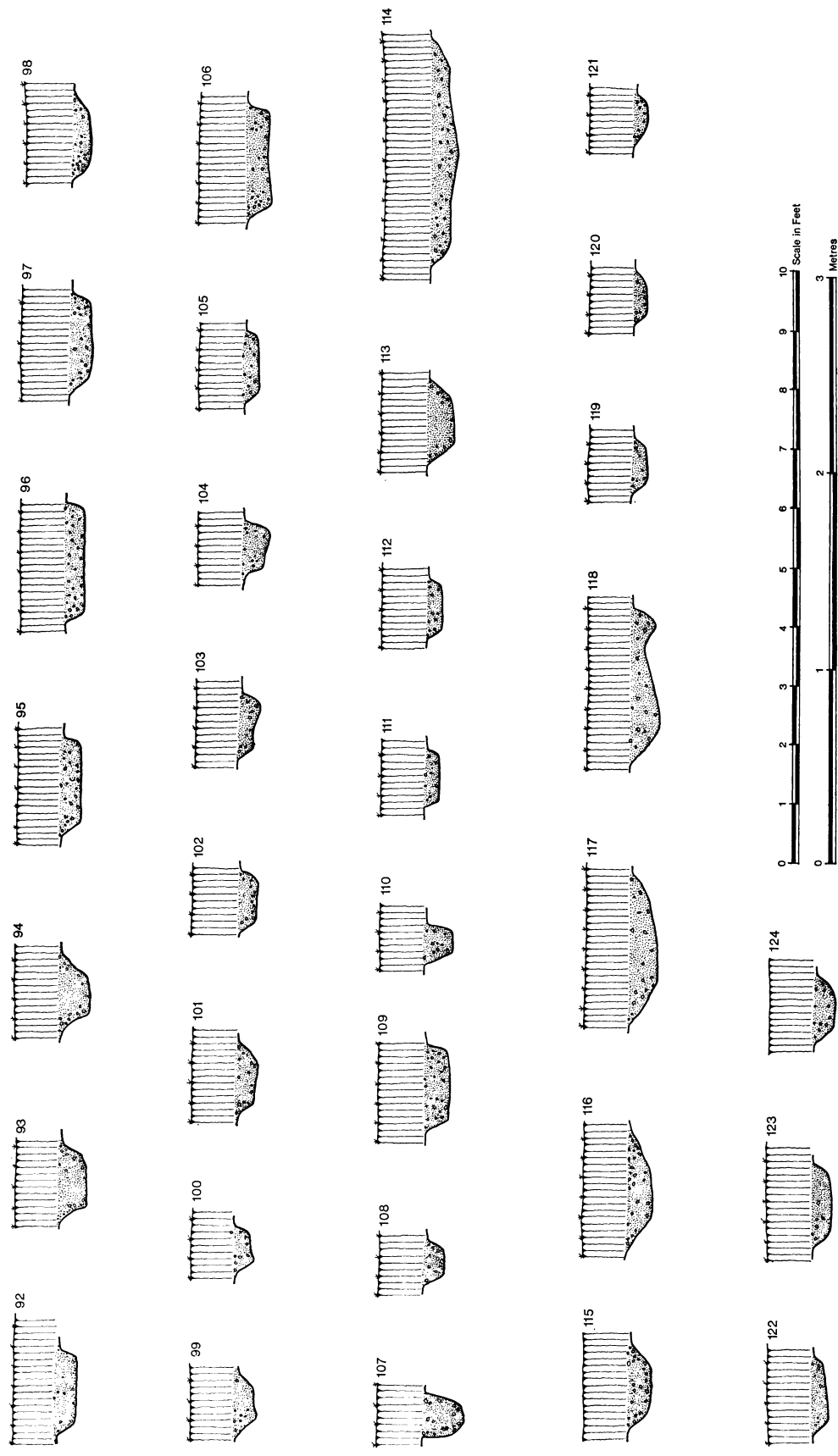


FIG. 138

IX. REPORT ON THE PETROLOGICAL EXAMINATION OF SHERDS FROM DURRINGTON WALLS

By L. A. FINCH

Ancient Monuments Laboratory, Department of the Environment

Fourteen sherds selected by Dr I. Longworth were thin sectioned and examined under the microscope, as well as in polished section. Results are as follows:

- 697117 Sandy fabric, containing shell fragments and sherd. Isotropic.
- 697118 Fabric of relatively fine clay containing clay pellets, sherd temper. Anisotropic.
- 697719 Slightly micaceous sandy fabric. Fragments of shell and sherd temper are present. Anisotropic.
- 697120 Sandy fabric, micaceous, containing particles of flint and chert. Anisotropic.
- 697121 Fabric of fine clay containing shelly limestone fragments. Anisotropic.
- 697122 Fine fabric containing clay pellets, sherd, particles of flint/chert. Anisotropic.
- 697123 Sandy, slightly micaceous fabric containing sherd, particles of flint/chert. Isotropic.
- 697124 Sandy, micaceous fabric containing sherd temper. Anisotropic.
- 697125 Fine clay fabric containing clay pellets and shell temper. Isotropic.
- 697126 Sandy fabric with grog temper. Isotropic.
- 697127 Fine, slightly micaceous clay with fragments of flint/chert and sherd. Anisotropic.
- 697128 Fine, slightly micaceous clay with fragments of flint/chert, sherd, and sandstone. Anisotropic.
- 697129 Fine, slightly micaceous clay heavily tempered with flint/chert fragments, and sherd. Anisotropic.
- 697130 Fine, slightly micaceous clay containing shell and sherd. Isotropic.
- 697131 Fine, slightly micaceous clay containing shell and sherd. Anisotropic.

Comments

Quartz

'Sandy fabric' is used here to describe clay with an abundance of angular quartz grains of mixed size, the largest of which are 1 mm. in diameter.

'Fine clay/fabric' is used here to describe clay with quartz particles averaging 0.5 mm. and less in diameter.

In both the above cases the quartz particles are well within the size range naturally occurring in impure clays. Sand is therefore unlikely to be an added tempering material in the pottery. This should be checked against local clay sources.

Clay pellets

Clay pellets are often present in poorly mixed clays. The ones mentioned in the above are a deep red colour which probably indicates a high mineral content (iron) in the clay, emphasized by firing.

Shell

Shell occurring in certain of the sherds is probably fossil shell-brachiopods. However, in only one case (697121) are there limestone fragments attached to the shell. This too, should be checked against local clay samples.

Sherd temper

Sherd temper found in the clay is of similar composition to the base fabric. It can be distinguished on differences in firing and differences in porosity of fabric rather than differences in composition of materials.

Firing

Firing temperature maximum can be seen in the optical properties of the clay fabric.

Isotropic — clay minerals remain unaltered and the fabric is invisible under crossed nicols indicating a maximum temperature of 800°C.

Anisotropic — clay minerals are altered by reaching a maximum temperature of 800°C and the fabric is illuminated under crossed nicols.

Alteration of shell and other carbonates depends on length of firing and kiln atmosphere, as well as temperature. A brief exposure at a high temperature may alter the clay minerals, but leave the carbonates relatively unaffected.

X. RADIOCARBON DATES FOR THE ENCLOSURE DITCH AND PHASE 2 OF THE SOUTHERN CIRCLE

By RICHARD BURLEIGH
Research Laboratory, British Museum

A series of closely similar radiocarbon dates has been obtained for the Enclosure Ditch and for Phase 2 of the Southern Circle of Durrington Walls. The six samples which provided these dates formed two groups, the first, relating to Phase 2, taken from the packing material of a post-hole and the second from the bottom of the main Enclosure Ditch. Each group consisted of separate but closely associated samples of Red Deer antler, domestic animal bone and wood charcoal. The charcoal sample from Phase 2 was derived entirely from Oak (*Quercus robur*) and that from the Enclosure Ditch included charcoal from Hazel (*Corylus avellana*), Hawthorn (*Crataegus* sp.) and Oak (*Q. robur*). These identifications were made by G. C. Morgan, Ancient Monuments Laboratory, Dept. of the Environment.

Because of the close stratigraphic association of the materials within these two groups a further opportunity¹ was provided to compare dates for the three different types of sample as part of a continuing study concerning the validity of radiocarbon dates for bone and antler.² Only the chemically separated organic protein fractions of the bone and antler samples were used for dating.³

The measurements were made by the liquid scintillation counting method, using a Packard Tricarb Liquid Scintillation Spectrometer to measure benzene samples synthesized from the original sample materials.

All the dates are indistinguishable statistically so that Phase 2 and the Enclosure Ditch appear to be contemporary within the limits of accuracy of the radiocarbon measurements. Secondly, the dates for the protein separated from the bone and antler provide valuable further evidence for the reliability for radiocarbon dating of selected bone and antler samples from suitable contexts.

Dates were calculated on the basis of the 5568 year half-life for Carbon-14 in conformity with the recommendations of the journal *Radiocarbon*. Each date is the weighted mean of two determinations.

Dates for Phase 2: Ref. Fe B 92

BM-395, Antler	3900 ± 90 years B.P. (c. 1950 B.C.)
BM-396, Charcoal	3950 ± 90 years B.P. (c. 2000 B.C.)
BM-397, Bone	3850 ± 90 years B.P. (c. 1900 B.C.)

Dates for the main Enclosure Ditch: Ref. Ditch (7)

BM-398, Charcoal	3927 ± 90 years B.P. (c. 1977 B.C.)
BM-399, Bone	3965 ± 90 years B.P. (c. 2015 B.C.)
BM-400, Antler	4000 ± 90 years B.P. (c. 2050 B.C.)

¹ Evans and Burleigh, 1969.

² Barker, 1967, 415.

³ *Radiocarbon*, 3 (1961), 39-45.

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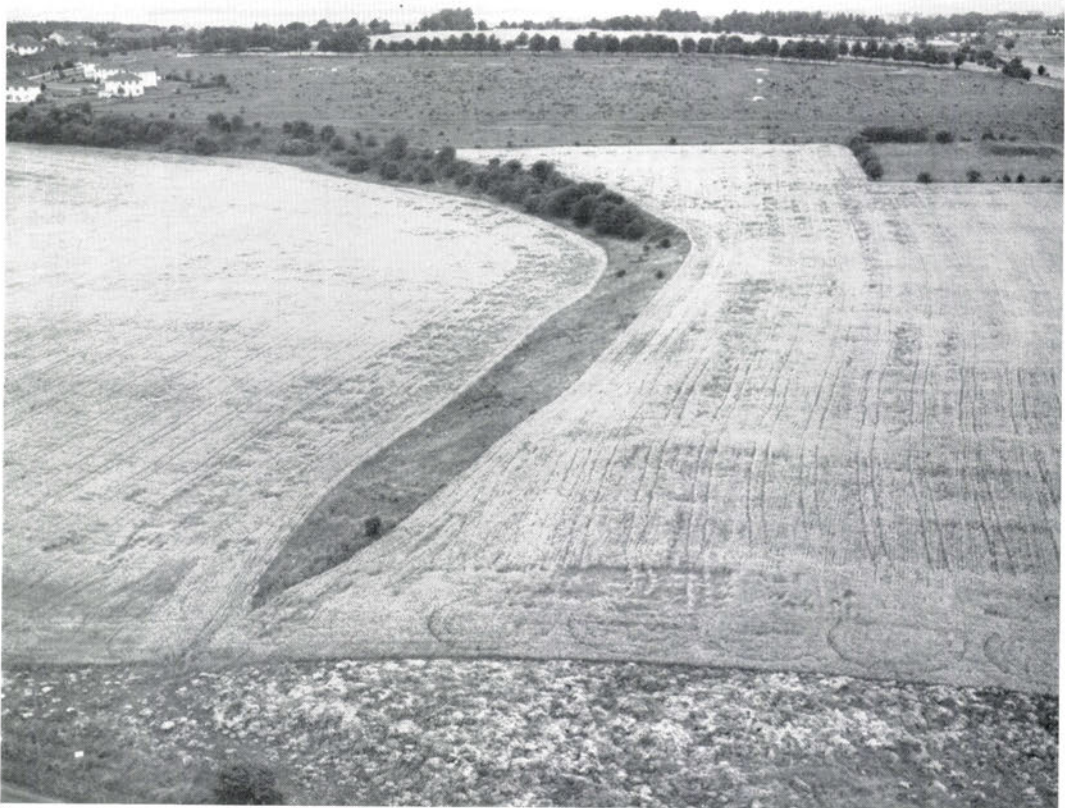
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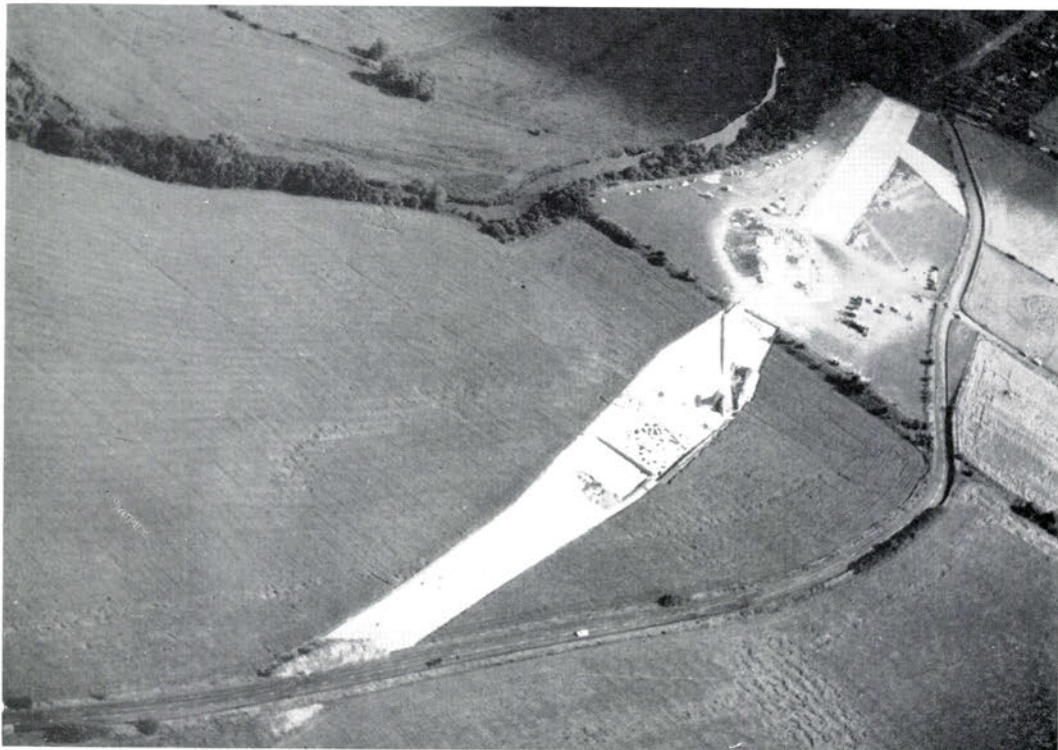


Durrington Walls: oblique aerial view from the north-east
(*Photographed 20.6.48 by J. K. St. Joseph: Cambridge University Collection*)

PLATE II



a. The north-west sector of the enclosure showing the lynchet and the site of the 1966 excavations in the foreground
(Photo: School of Army Aviation)

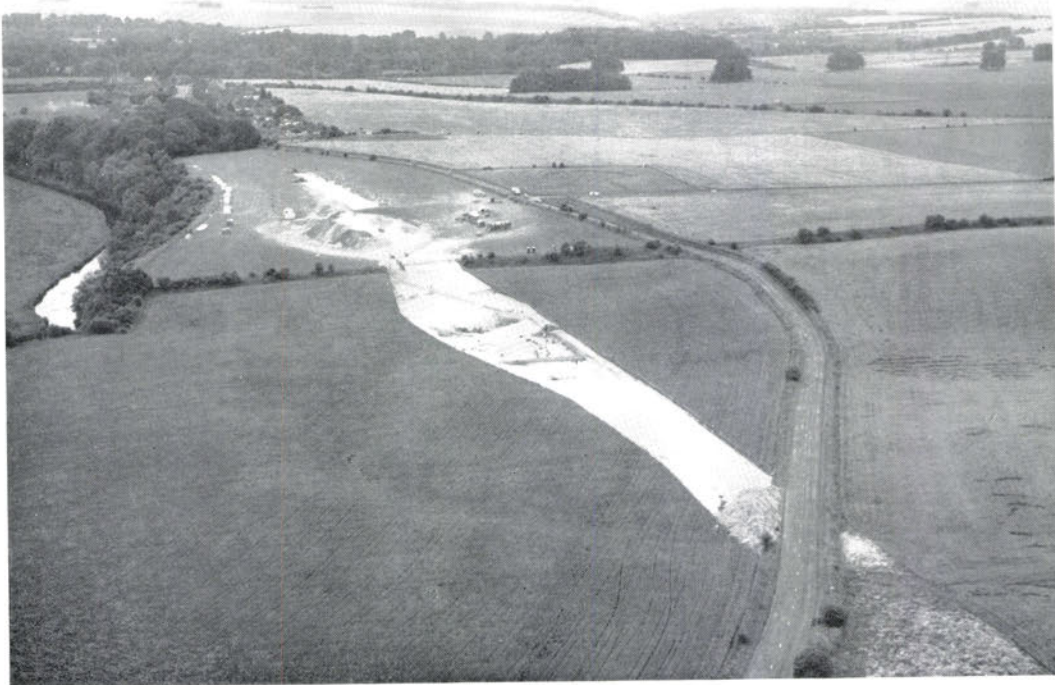


b. The 1967 excavations from the north
(Photo: School of Army Aviation)

PLATE III

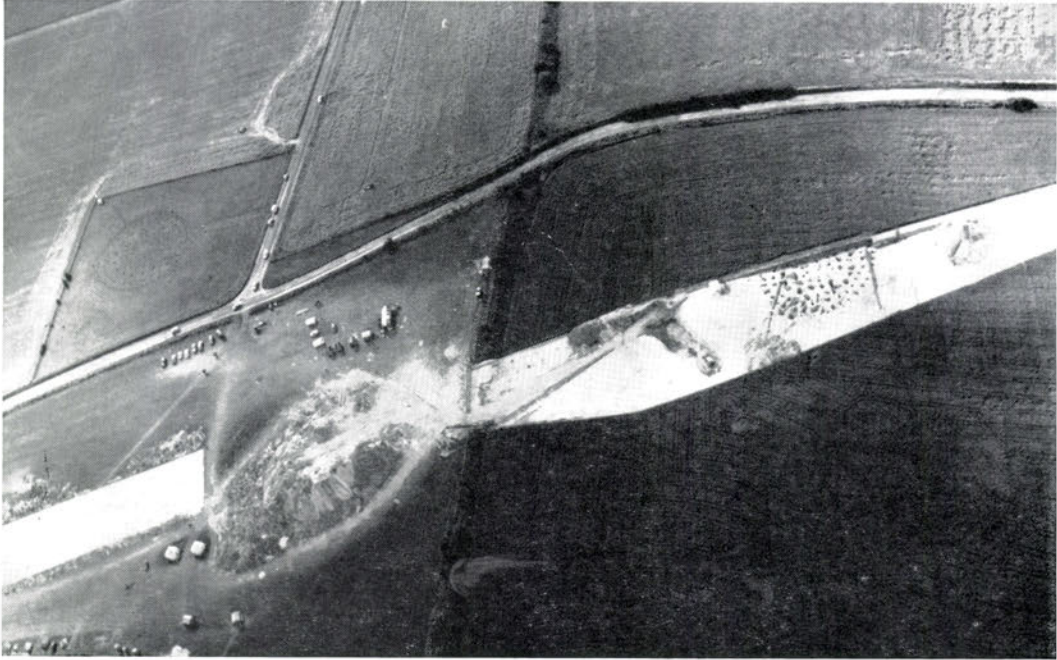


a. The 1967 excavations from the south-east
(Photo: School of Army Aviation)

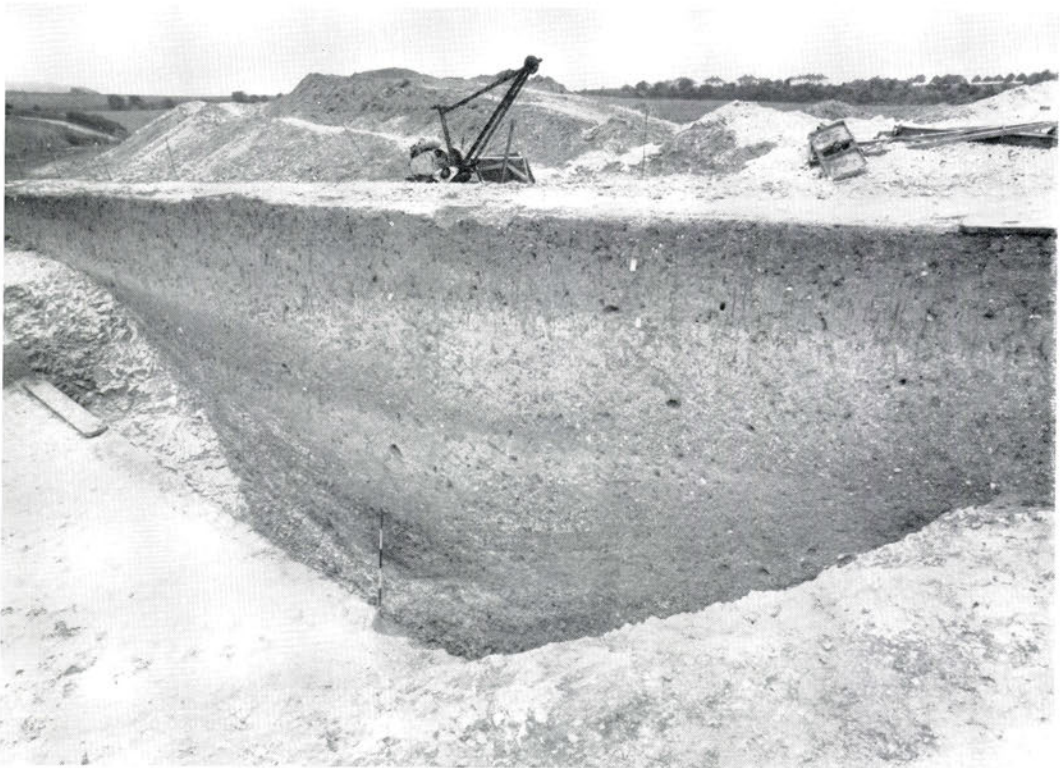


b. The 1967 excavations from the north-east
(Photo: School of Army Aviation)

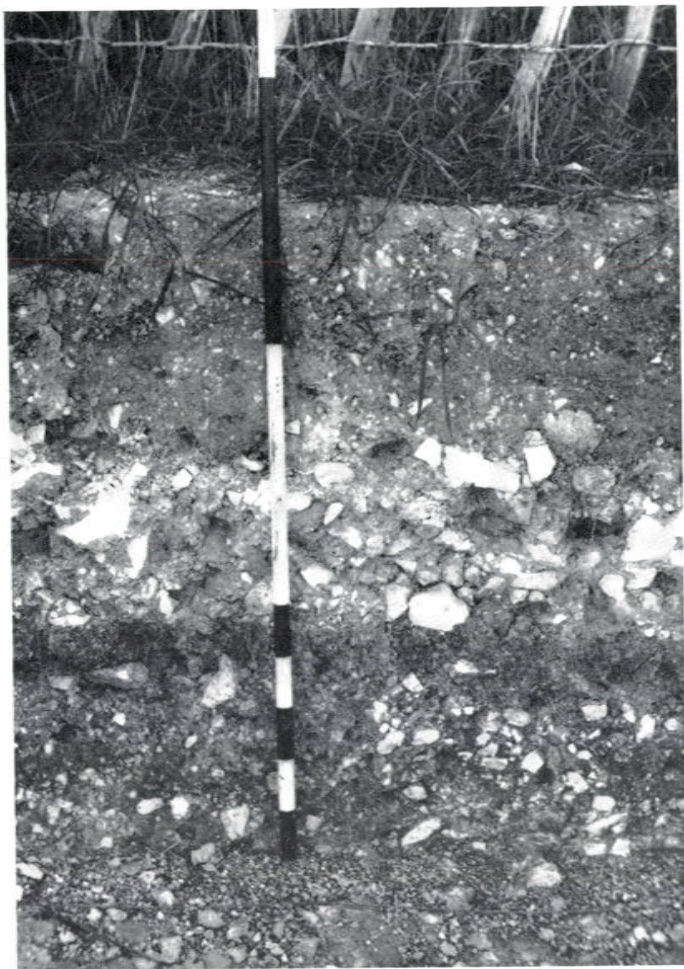
PLATE IV



a. Aerial view of the Southern Circle and Woodhenge
(Photo: School of Army Aviation)



b. Section of the enclosure ditch in its north sector
(Photo: Packway Studios, Larkhill)



a. Section of enclosure bank in its south sector showing modern plough soil (grey), bank material (white chalk rubble) and buried soil (dark). The scale is in 5 and 25 cm. intervals. Soil profile DW I
(Photo: J. Evans)



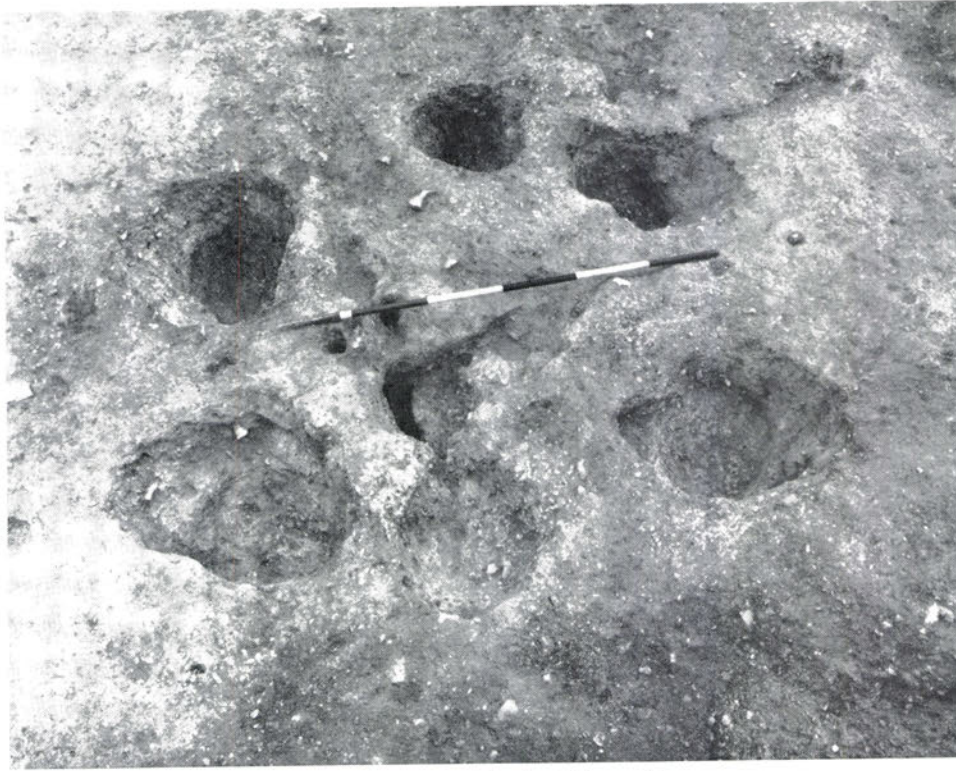
b. Antler picks on the floor of the ditch terminal at the south-east entrance
(Photo: P. Drewett)

PLATE VI



An aerial view of the Southern Circle
(Photo: School of Army Aviation)

PLATE VII

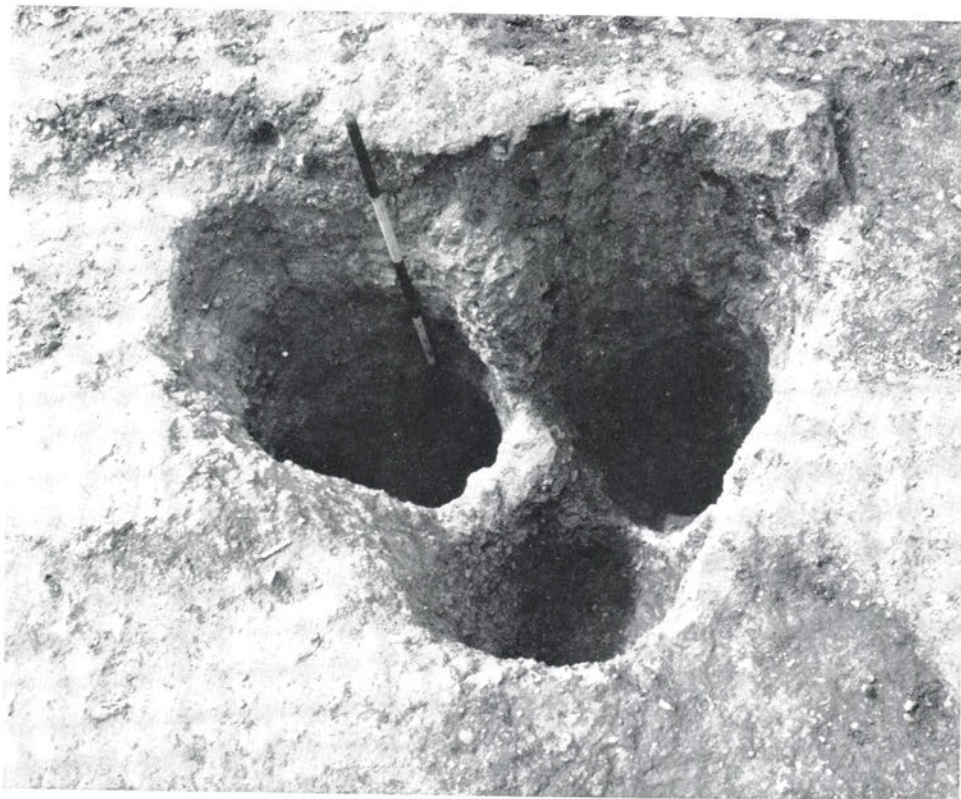


a. Southern Circle: Ring 1D
(Photo: M.P.B.W.)



b. Southern Circle: post-hole 82 of Phase 2 cut by post-holes 169 and 170 of Phase 1
(Photo: M.P.B.W.)

PLATE VIII



a. Southern Circle: Phase 1, post-holes 188-90
(Photo: M.P.B.W.)



b. Southern Circle: ramped post-holes 79 and 80 of Phase 2
(Photo: M.P.B.W.)



a. Southern Circle: Phase 1 façade from the north
(*Photo: M.P.B.W.*)



b. Southern Circle: Phase 2, section of post-hole 89
(*Photo: M.P.B.W.*)

PLATE X



a. The Southern Circle during excavation
(Photo: School of Army Aviation)

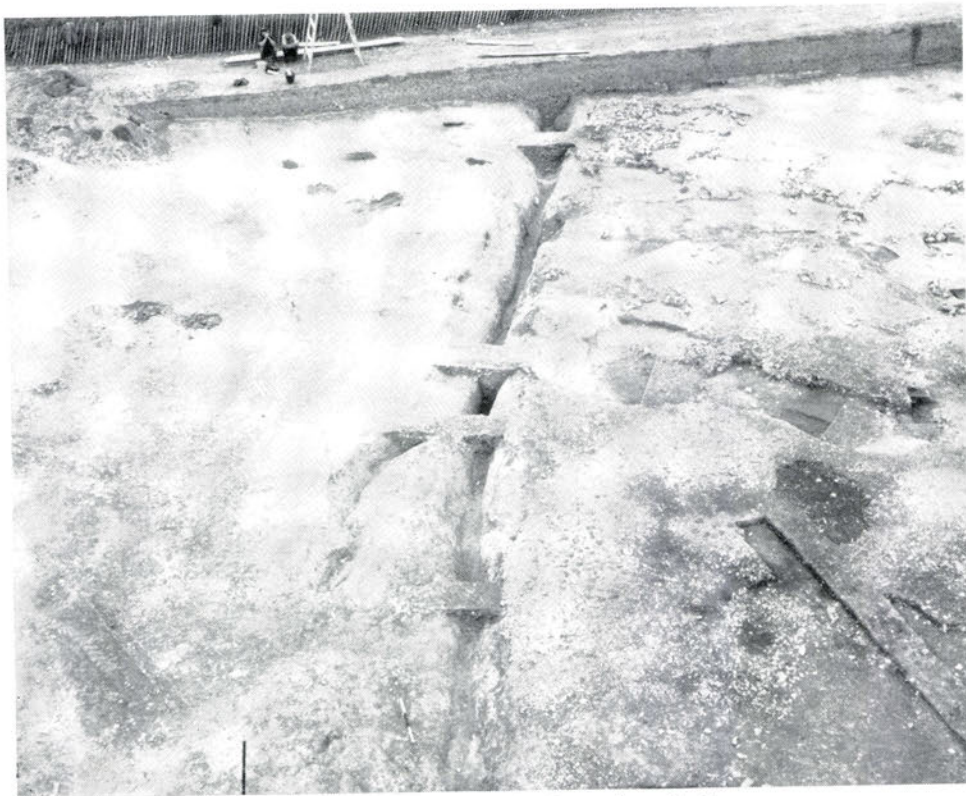


b. Southern Circle: aerial view of platform and partially excavated features
(Photo: School of Army Aviation)

PLATE XI

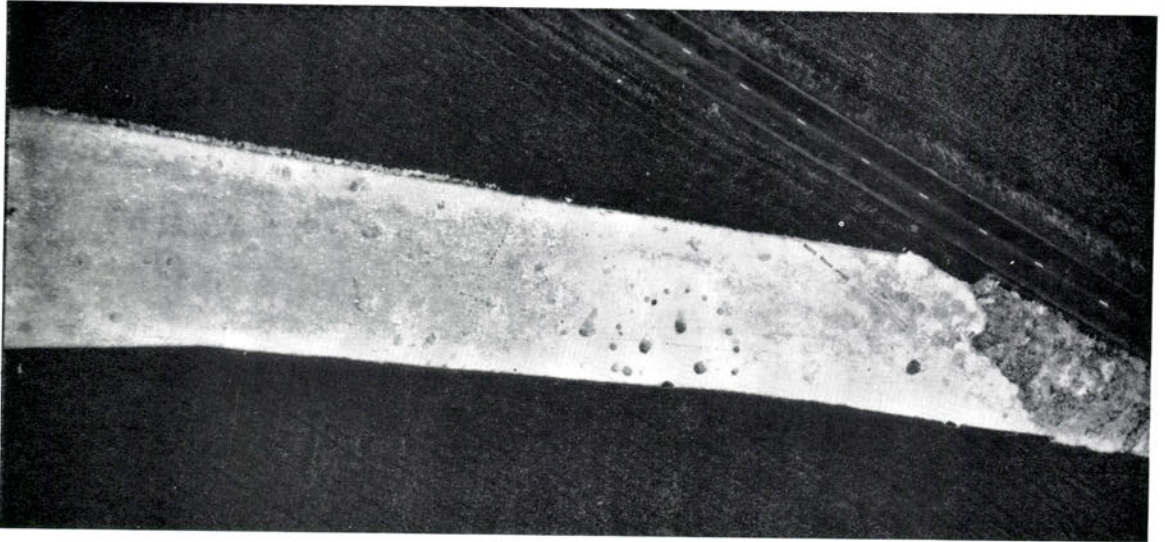


a. Southern Circle: view of the Midden from the east
(Photo: School of Army Aviation)

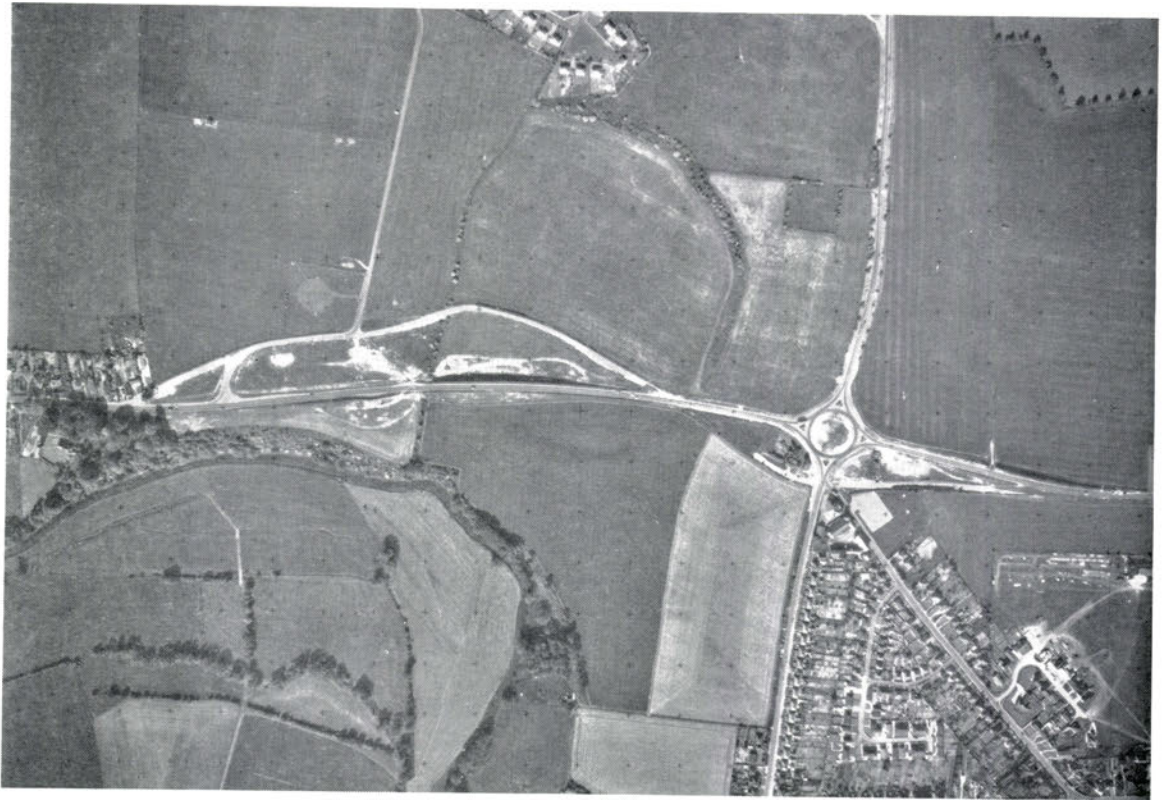


b. Southern Circle: the Iron Age ditch
(Photo: School of Army Aviation)

PLATE XII

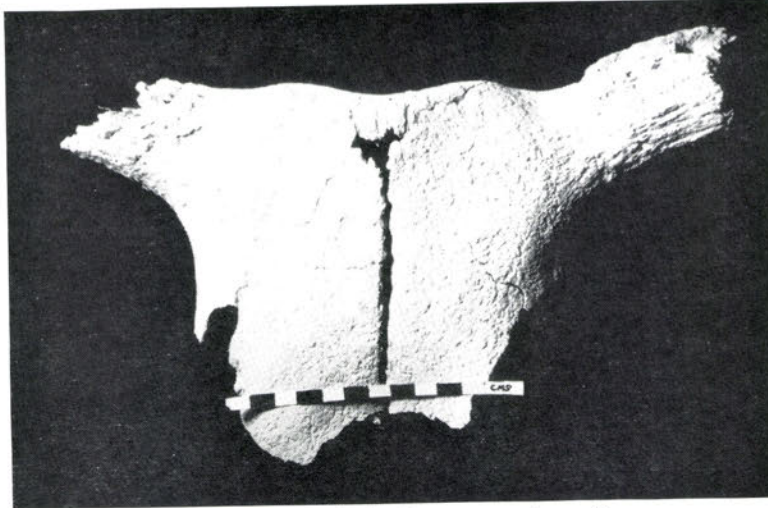


a. The Northern Circle
(Photo: R.C.H.M.)

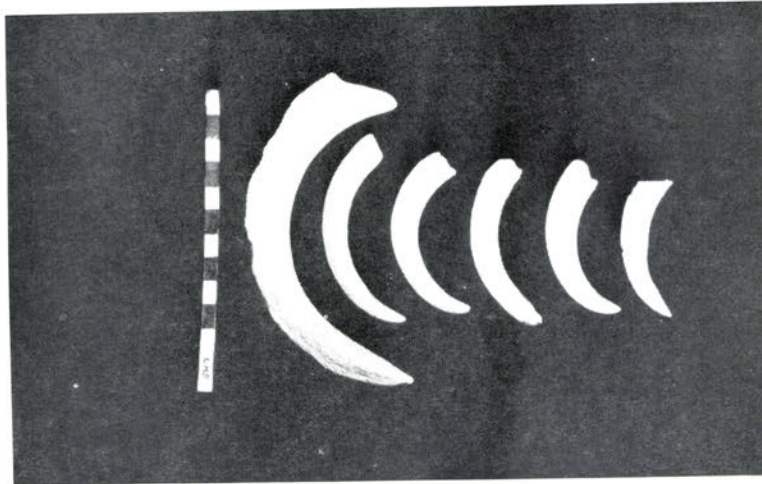


b. Durrington Walls: July 1969
(Photo: Ministry of Defence)

PLATE XIII



a. Skull of *Bos taurus* (Neolithic). Horn core circumference 150 mm.



b. Pig tusks from the Neolithic levels, showing one unusually large but slender specimen



c. First phalanx of *Bos taurus* showing widespread periosteitis without involvement of the articular surfaces. A normal specimen is shown for comparison

