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THE ROMAN CEMETERY AT PETTY KNOWES, ROCHESTER, NORTHUMBERLAND

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Introduction

THE CEMETERY of Petty Knowes (NY 835 983) was first located in 1975 by the Field Research Group of the Society of Antiquaries, Newcastle upon Tyne, during the course of a field survey of archaeological sites in Upper Redesdale, carried out for the University of Durham.¹

The burial area lies to the west of the Roman road of Dere Street and approximately 400 m south of the outpost fort of High Rochester (*Bremenium*) (fig. 1). Apart from the surviving monumental stone tomb (plate I), one of four excavated in 1850² by the Duke of Northumberland's land agent William Coulson, all the visible barrows are indicated by low, grass-covered mounds. One large group of seventy-five barrows is located on the north side of a shallow rock quarry (plate Ib), while 120 m to the south-east are another six. Further south-east again, in bracken near a modern fence line, are six more. Two burials, with a third which appears to have been robbed, lie adjacent to the stone tomb bordering on Dere Street and two are in The Stony Field, 450 m due south of the fort. These numbers do not include several less distinct mounds which may or may not be burials.

The main reason for undertaking the excavation was to try to determine whether this was the cemetery for the Roman fort at High Rochester. That there must have been a cemetery within easy reach of this fort and every other military post in Britain is as obvious as, with hindsight, are the clues which point to Petty Knowes. Roman burials customarily lie near Roman roads as this cemetery does, not far from the well known stone tombs. Since the nearest well-drained land to High Rochester lies immediately to the south-east but is largely occupied by external defences, and the two fields between the fort and Dere Street were known until recently to be marshy land,³ the most suitable location for the cemetery was on the rocky eminence near the deserted farm of Petty Knowes. Within sight of the fort and only a quarter of a mile from it, just to the east of Dere Street, it would be only a short distance for any funeral procession. It may well be that there was a track already in existence, leading from the road to the rock quarry beside the cemetery, making the site even more convenient as a burial ground. So little is known of Roman cemeteries in the

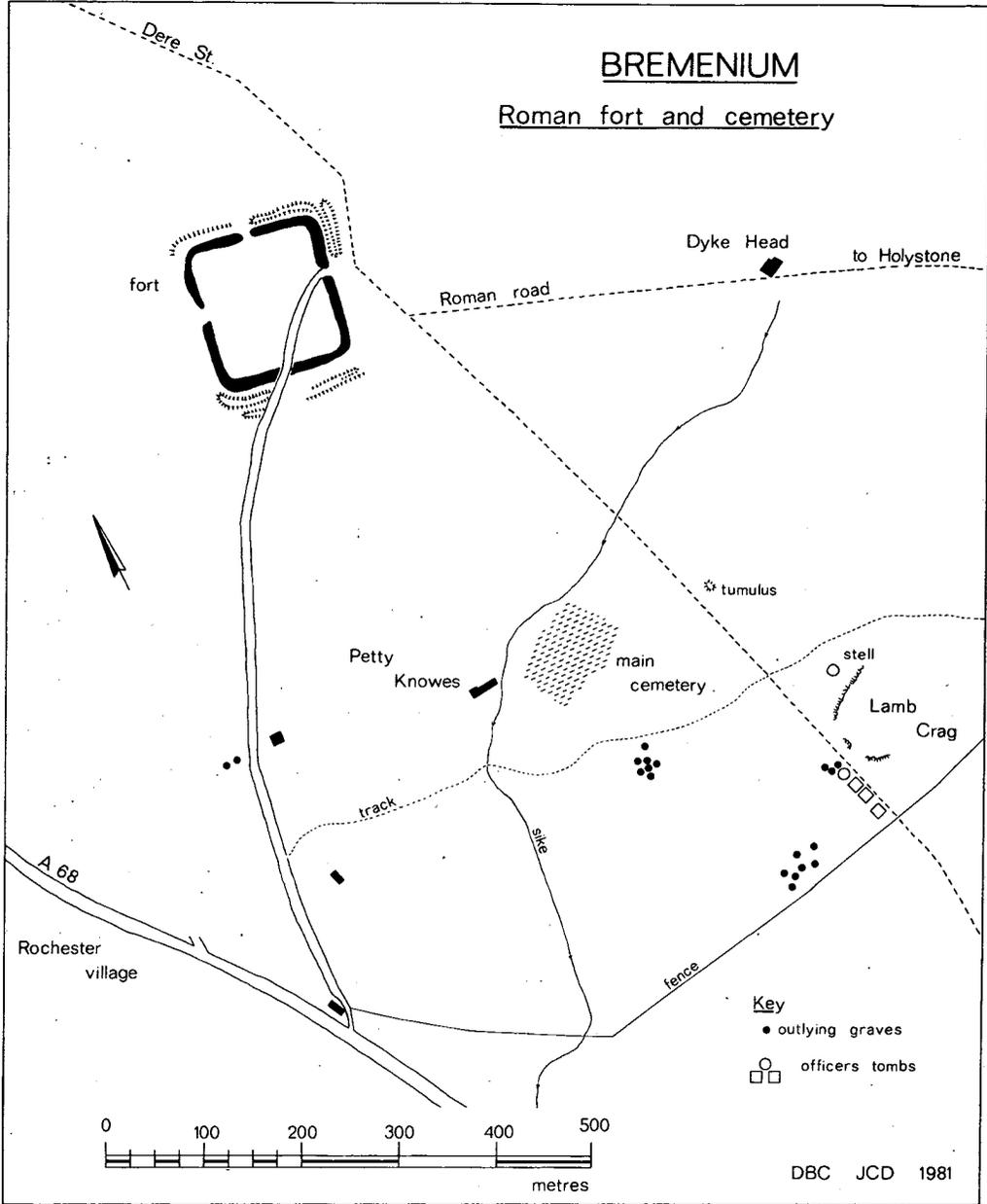


Fig. 1.



a. Petty Knowes: Officer's tomb.



b. Petty Knowes: Aerial view.

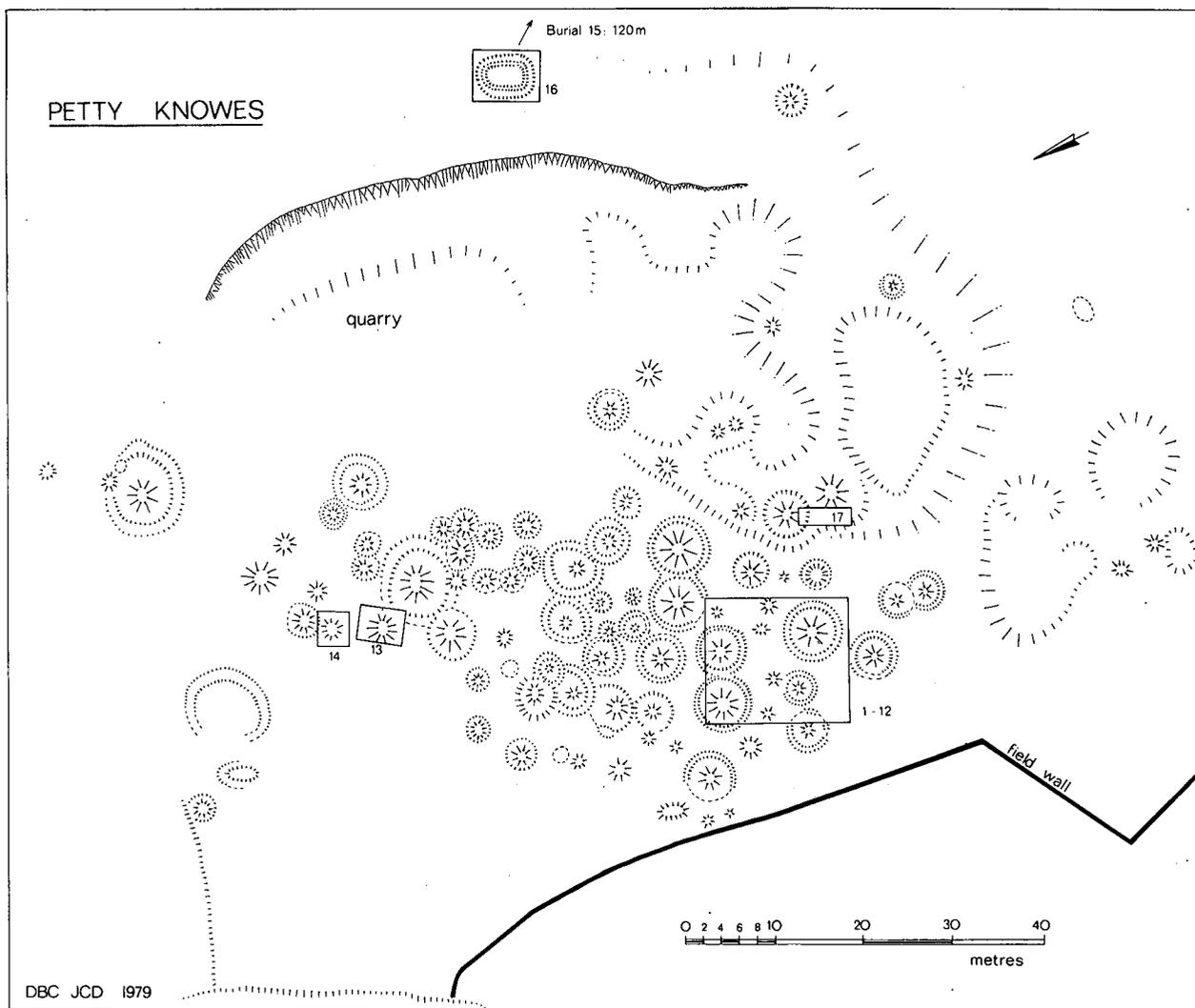


Fig. 2.

frontier zone that an opportunity to obtain further knowledge by investigating the cemetery at Petty Knowes was eagerly seized.

Excavation of a predetermined sample of about one-fifth of the cemetery was undertaken in 1978 and 1979 with the full cooperation and interest of the land-owners John and Hilda Dixon of Rochester House. The authors wish to record their thanks to Ronald Charlton and John Day in particular, and to Douglas and Irene Robson, Mary Creighton, John and Edna Thornborrow, William Dixon and the late George Stobie for their welcome assistance. These acknowledgements would be incomplete without reference to Drs. David Breeze and Brian Dobson whose helpful comments and constructive advice on the text have been greatly valued.

Findings from the excavation have been deposited in the Museum of Antiquities, Newcastle upon Tyne.

The Excavations

Excavation was confined to one area in the main cemetery, Burials 1–12, two burials, 13 and 14, on the periphery, one outlier, 15, and the small rectangular structure, 16, on the south side of the quarry face (fig. 2). On the ground, most of the barrows were circular, comprising a central mound surrounded by a shallow ditch and low external bank. In several instances the burial was marked by just the mound or was only revealed when the turf and topsoil had been removed. (Table of Data, page 6.)

Main Area of Excavation (fig. 3)

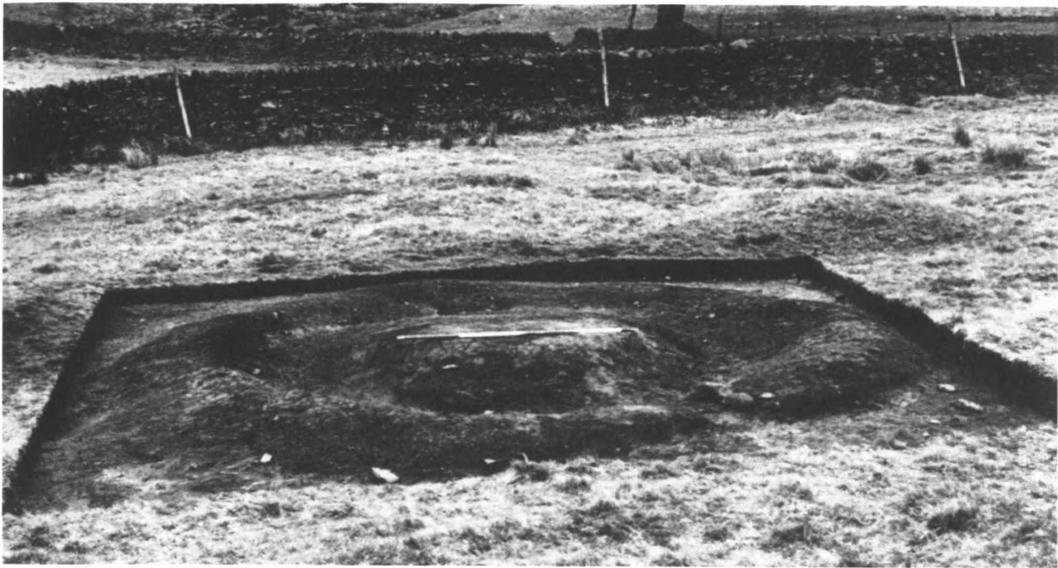
Initially a 7.5 m square was opened up and was gradually enlarged to cover a rectangular area 16 m by 14 m, with the longer axis lying in a north-easterly direction. The removal of the turf and the slight covering of peaty topsoil, 300 mm maximum in depth, showed the full extent and shape of each individual burial (plate IIa). Burials 1, 2, 11 and 12 conformed to the same pattern—an earth mound, surrounded by a shallow ditch and a low enclosing bank, Burials 3, 4, 5, 9 and 10 consisted of an earth mound only, whilst Burials 6, 7 and 8 were not apparent on the land surface, showing up during excavation as rectangular patches of dark soil in the yellow clay subsoil. In each instance where there was a mound, excavation followed the same procedure—half was trowelled down to the top of the subsoil and then the second half was removed.

Burial 1

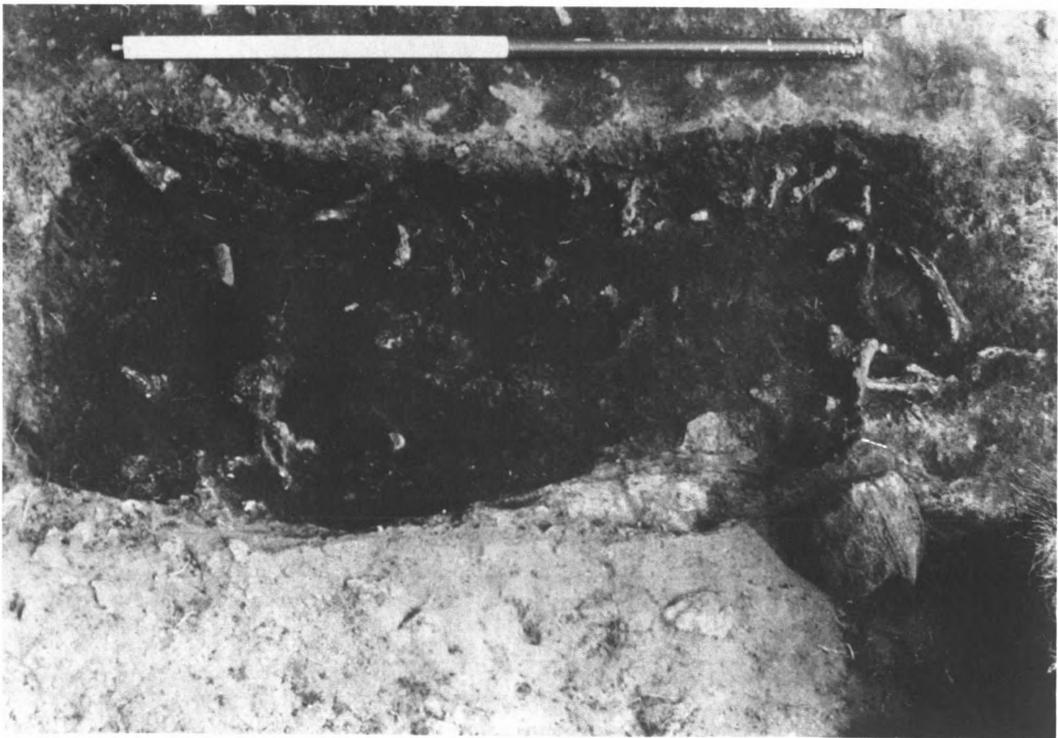
The earth mound 4 m in diameter, survived to a height of 600 mm. The ditch was 350 mm deep by 1 m wide and the outer bank was 300 mm high by 500 mm across the top. A band, about 150 mm deep, of light brown soil mixed with a few small stones covered the surface of the mound. Beneath this, a plug of the same material encircled by distinctive grey/black layers of rotted turf, ran all the way down through the centre of the mound to the yellow clay subsoil. Inserted into this plug was a vertical intrusion of grey/dark brown rather greasy soil, 140 mm diameter, presumably

TABLE OF DATA

| | BURIAL | | | | GRAVE PIT | | | | Cremation <i>in situ</i> | Marker post | Receptacle | Pottery (other than receptacle) | Coin | Metal objects | Bone | Remarks |
|----|--------|-------|------|---------------------|-----------|-------|-------|------------------|-----------------------------|----------------|--------------------------------------------|-------------------------------------------------|---------------------------|--------------------------------------------------|-----------------------------------|---------------------------------------------|
| | Mound | Ditch | Bank | Overall Diameter | Length | Width | Depth | Orienta- tion | | | | | | | | |
| 1 | X | X | X | 6.0 | 1.8 | 1.0 | .5 | NW-SE | X | X | — | mid 2nd cent. | — | nails (60-70) | adult | Predates 2 |
| 2 | X | X | X | 5.5 | 1.7 | 1.1 | .45 | NE-SW | — | — | — | not datable | — | nail (1) | none | burial subrectangular |
| 3 | X | — | — | 2.4 | 1.8 | .8 | .35 | NE-SW | X | — | — | 2 beakers, early- mid 2nd cent. | — | nails (44) hobnails (11) | none | vessels deliberately broken |
| 4 | X | X | — | 3.0 | 1.2 | .5 | .53 | N-S | X | X | BB1 mid 3rd cent. | — | — | nails (23) | adult male | — |
| 5 | X | — | — | 2.5 | 1.7 | .8 | .49 | NE-SW | X | — | — | mid-late 2nd cent. + hunt cup c. A.D. 200 | — | nails (47) hobnails (20) copper nails (20) | juvenile or female + animal | predates 11 |
| 6 | — | — | — | — | 1.3 | .3 | .21 | NNW-SSE | — | — | — | early-mid 2nd cent. | — | nails (6-10) | unidentified | postdates 11 |
| 7 | — | — | — | — | 1.8 | .7 | .12 | NE-SW | — | — | wooden coffin | — | — | nails (19) hobnails (13) coffin handles(?) | human | body cremated elsewhere |
| 8 | — | — | — | — | 1.1 | .5 | .29 | NNW-SSE | — | — | — | — | — | — | none | no detectable finds |
| 9 | X | — | — | 1.2 | 1.3 | .5 | .25 | NE-SW | — | — | — | — | — | — | none | no detectable finds |
| 10 | X | — | — | 2.7 | 1.2 | .6 | .45 | NE-SW | X | X | stone cist | not datable | — | nails (13) | unidentified | — |
| 11 | X | X | X | 5.0 | 1.0 | .7 | .51 | N-S | X | — | Dorset BB1 late 3rd-early 4th cent. | — | — | hobnails (33) | adult male | predates 5 postdates 6 |
| 12 | X | X | X | 7.0 | 1.1 | .6 | .43 | NE-SW | — | — | — | not datable | denarius (Vespasian) | nails (20) | — | — |
| 13 | X | — | — | 3.5 | 1.6 | .8 | .5 | NE-SW | — | — | Old Penrith late 2nd-early 3rd cent. | 3rd cent. | Sestertius (Hadrian) | hobnails (2) | adult | body cremated elsewhere |
| 14 | X | — | — | 4.0 | 1.2 | 1.0 | .46 | NE-SW | — | X | BB1 mid 2nd cent. | — | As (Antoninus Pius) | nails (50-60) hobnails (19) bit (?) | juvenile (5-10 yrs) | — |
| 15 | X | X | X | 5.0 | 1.6 | 1.0 | .48 | N-S | X | X | — | castor beaker late 2nd cent. | — | nails (2) hobnails (10) | adult | stake holes |
| 16 | — | — | — | — | 1.5 | .7 | .44 | NNW-SSE | X | — | — | not datable | — | nails (8) hobnails (11) | unidentified | remains of caliga with fused hobnails |



a. Petty Knowes: Burial 12.



b. Petty Knowes: Burial 7.

PETTY KNOWES-main area of excavation

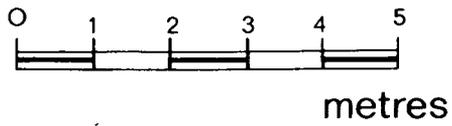
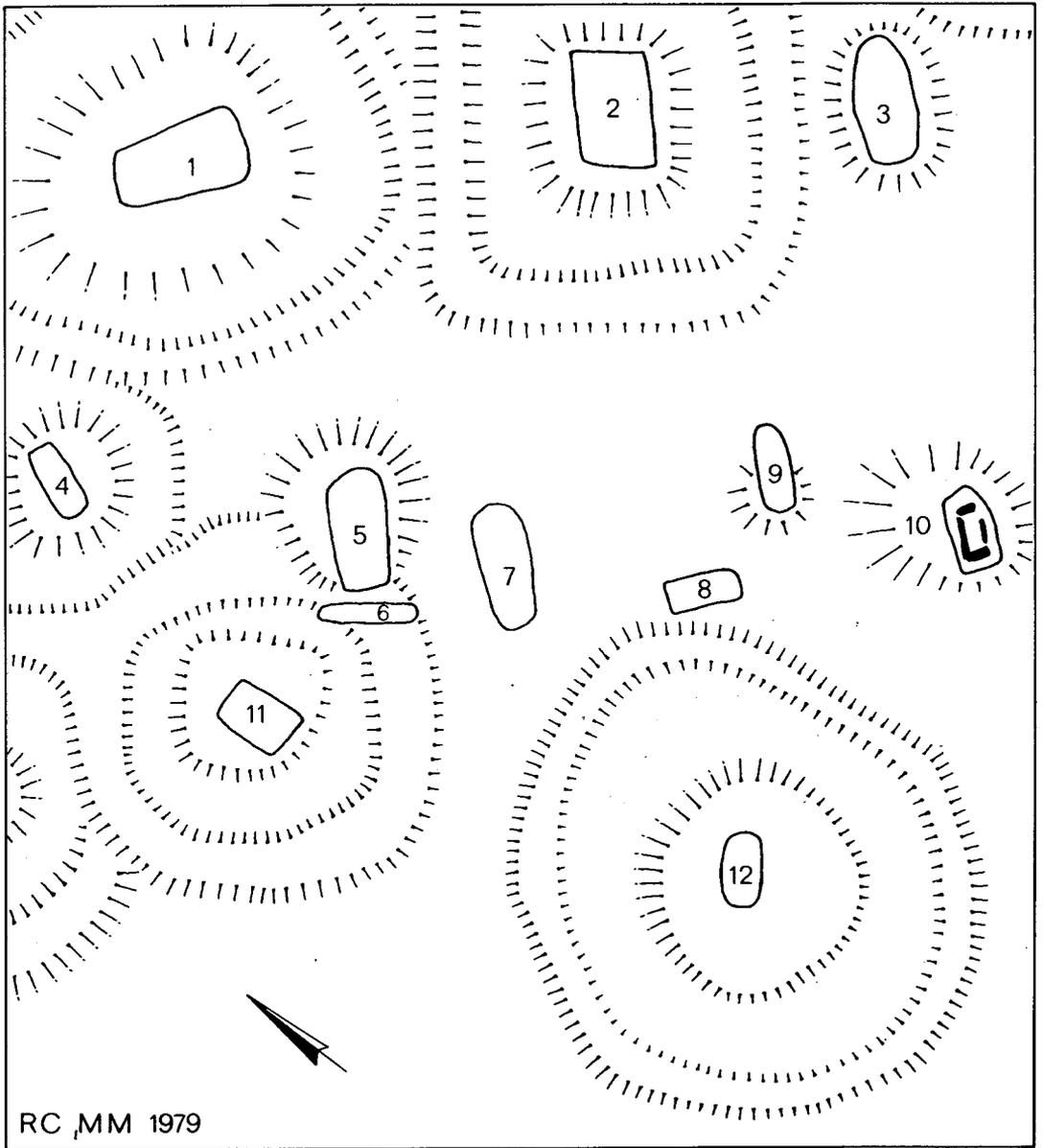


Fig. 3.

the socket for a timber post. One long, iron nail and a rim sherd of coarse black pottery were recovered from the mound material.

Beneath the mound and lying on the subsoil were a number of iron nails and a sherd of pinkish brown pot. Further trowelling at this level revealed the rectangular shape of a grave, delineated by a blackened outline and localized patches of burning. In the middle of the grave was a circular stain, 15 mm diameter, of black soil and flecks of carbon. When the edges of the grave had been defined, the process of emptying the contents began. First a layer about 60 mm thick of mixed yellow, grey and red burnt clay was removed. Below this was a pit 1.8 m long by 1 m wide by 500 mm deep, dug into the clay subsoil and orientated north-west to south-east. A jumbled mass of burnt soil, carbonized wood, minute fragments of heavily incinerated bone, iron nails distorted by heat and several small friable sherds of the pinkish brown vessel, filled the pit. It was impossible to determine whether the black intrusion continued down through this material to the bottom of the grave. The sides of the pit had been subjected to such great heat that the clay was burnt to an average depth of 26 mm, suggesting that the cremation had taken place in and over the pit itself.

Burial 2

Here the earth mound was 400 mm high by 3 m diameter, but the ditch with its outer bank which slightly overlies that of Burial 1, was more rectangular in outline, the ditch being 300 mm deep by 1 m wide and the bank 250 mm high and 750 mm across the top. The mound material was again light brown soil mixed with small stones, but the ring of turf layers was less distinct and there was no evidence of a marker post. Seven sherds of pot with a dark grey outer surface and an orange-red inner surface were found in the mound material. Below the mound, the grave, orientated north-east to south-west, was less well-defined than that in Burial 1. There was no sign of any burning on the surface and the pit itself, 1.7 m long by 1.1 m wide by 450 mm deep, contained only mixed yellow and grey clay, patches of brown soil, flecks of carbon, one long iron nail and several fragments of a light grey vessel with a reddish core.

Burial 3

A mound, 300 mm high by 2.4 m diameter, marked the site of this barrow. The mound material was mixed, light brown and black soil, patches of yellow and grey clay and flecks of carbon. Concentric layers of grey-black turf ringed a central fill of mound material which yielded five long nails. The grave, lying north-east to south-west, was outlined by black and red scorching of the yellow clay subsoil, again suggestive of a cremation *in situ*. A band of yellow and grey clay, 41 mm thick, sealed the grave-pit, which when emptied measured 1.8 m long by 800 mm wide by 350 mm deep. Scattered throughout the fill of black soil, carbon and small fragments of well-cremated bone, were thirty-nine long nails and eleven hobnails, distorted by heat. The remains of two fractured vessels placed adjacent to each other, sat on the floor of the pit, at the north-east end. One was a rough-cast beaker with a grey-

black coating and the other a light grey beaker, dusted with mica. Sherds from both beakers were also found at the opposite end of the grave-pit.

Burial 4

The mound was 500 mm high by 2 m in diameter. The ditch, 750 mm wide by 200 mm deep, was intermittent and the northern edge was partly covered by slip from the presumably later or contemporaneous outer bank of Burial 1. There was no enclosing bank. The mound, like Burial 1, consisted of a ring of turf with a central fill of mixed soil with a post hole, filled with grey-brown soil, running through it. No finds were retrieved. Beneath the mound was a small rectangular grave orientated north to south, with extensive burning round the edges. There was no trace of a post resting on or inserted into the clay seal 43 mm thick, on the top of the grave. Under the seal was a pit 1.2 m long by 500 mm wide by 530 mm deep. The sides were burnt to a thickness of 28 mm, suggesting that the cremation took place *in situ*. The pit contained carbon, black soil, fragments of incinerated bone and 23 iron nails. In the north-east corner of the pit, on the floor, stood a complete black-burnished cooking pot filled with large pieces of bone and grass roots, all matted together. The fact that the jar was in almost perfect condition with only a few hairline cracks and slight discoloration, suggests that it had been placed in the grave after the burnt material had cooled down.

Burial 5 (fig. 4)

This burial consisted of a mound 500 mm high by 2.5 m in diameter, part of which overlay a section of the bank of Burial 11. The mound material was mixed light brown soil and patches of yellow and grey clay. The layers in the turf ring round the perimeter were very distinct. A wall sherd from a black pot and several fragments of a light grey vessel were found in the fill in the centre of the mound. Lying immediately below the topsoil at the foot of the mound were fragments of "hunt cup" and a piece from the rim of a black pot with a red-brown core. The blackened edges of the grave, which was lying north-east to south-west, showed up clearly in the yellow clay subsoil beneath the mound. The clay seal, 20 mm thick, was removed to reveal the pit, 1.7 m long by 800 mm wide by 490 mm deep, which was full of burnt lumps of clay, small stones, black soil, pieces of carbon, much bone and a large concentration of nails and hobnails, particularly at the south-west end. A complete copper nail and the heads of two more provided additional interest in the contents of this grave. Again the sides of the pit were heavily burnt to a thickness of 30 mm indicating another cremation *in situ*.

Burial 6

Under the "tail" of the mound of Burial 5 was a further patch of burning on the subsoil. To trace the extent of this discoloration necessitated the removal of part of the outer bank of the later Burial 11. Beneath the bank was the outline of a narrow grave orientated north-north-west by south-south-east. Lying on the clay seal 35 mm thick, were the shattered fragments of the base and wall of a dark grey jar. The

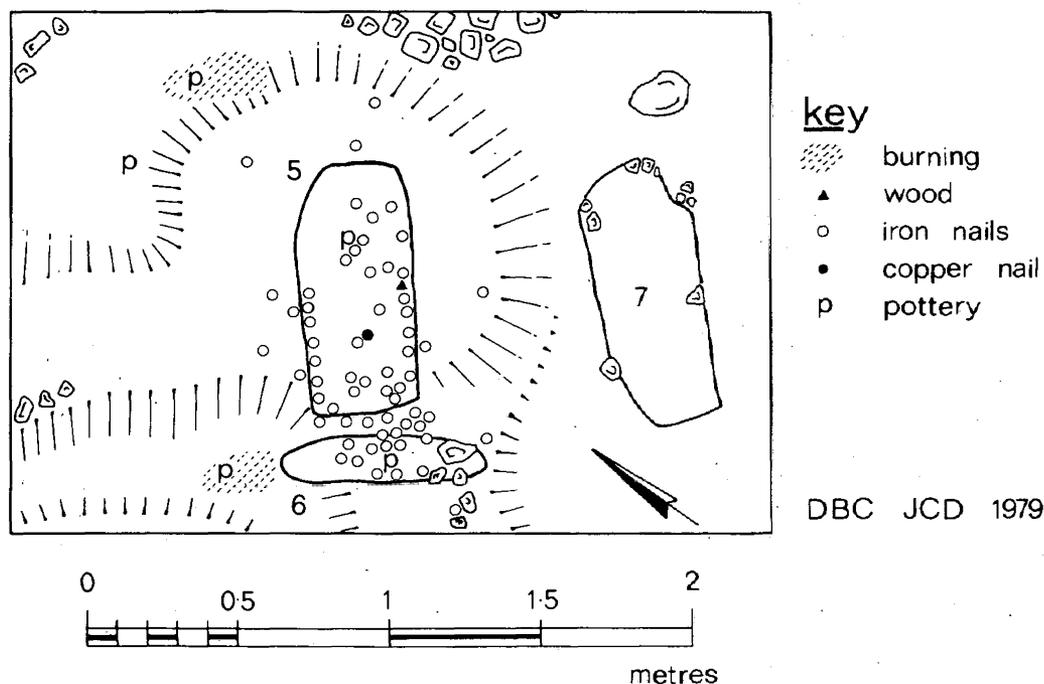
PETTY KNOWES - Burials 5,6,7

Fig. 4.

grave was 1.3 m long by 300 mm wide by 210 mm deep. There was no evidence of bones or of burning in the grave, but the shanks and heads of between six to ten nails all apparently affected by heat, were found in the light brown soil fill.

Burial 7

This burial was not marked by a mound, but a hollow, orientated north-east to south-west, had been dug to take a "coffin", 1.35 m long by 350 mm wide by 120 mm deep. The wooden sides, lid and base of the "coffin" were badly decayed. On the rotted remains lay two pieces of iron, perhaps handles, and, standing vertically in the sides, fifteen nails and four shanks. The "coffin" was filled with very black earth containing small pieces of carbon, eight hobnails and four shanks, and numerous, friable fragments of bone. It did not appear that an articulated skeleton had been placed in the "coffin" (plate IIb) and there were no grave goods. The surrounding earth showed no signs of burning, or of having been even slightly affected by heat.

Burial 8

Like Burial 7, this one was also unmarked above ground. Lying north-north-west to south-south-east, the grave measured 1.1 m in length by 500 mm wide by 290 mm

deep. It was filled with mixed brown soil, yellow and grey clay and flecks of carbon. No finds were recovered.

Burial 9

The site of this grave was marked by a small mound, 1.2 m in diameter by 300 mm in height. There were only two layers in the turf ring of this mound which consisted largely of brown soil, yellow clay and small stones. The grave itself was not completely covered by the mound; orientated north-east to south-west, it was 1.3 m long by 500 mm wide by 250 mm deep. The fill was the same as that in Burial 8. There were no finds.

Burial 10

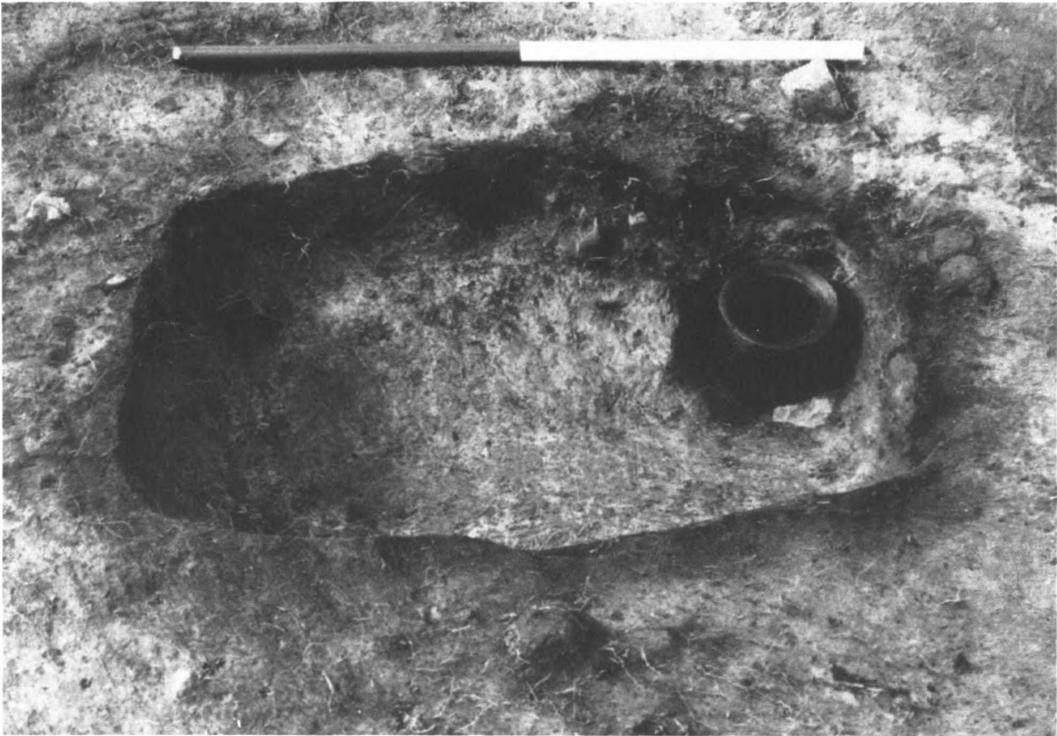
The mound over this grave was quite substantial, 2.7 m in diameter and as high as 800 mm on the west side. The construction and composition of the mound were the same as in Burial 1 and there was a clear indication of a post through the fill in the centre. Under the mound and projecting above the clay subsoil, was a flat stone which partly covered a rough stone cist of which the rest of the capping had been removed. The cist was set into a pit lying north-east to south-west and measuring 1.2 m in length by 600 mm wide and 450 mm deep. The stones showed no signs of having been subjected to heat, although there was widespread burning on the surrounding subsoil and in the pit. Black soil, carbon and a quantity of minute fragments of bone were wedged between the walls of the pit and the reddened sides of the pit, where it appeared that the cremation had taken place. The same material filled the cist, in which were found thirteen long nails, some fused together or twisted by heat, and a number of fragile, reddish-brown pot-sherds including one piece of rim.

Burial 11

The mound was 2.5 m in diameter by 250 mm high, the ditch was 1 m wide by 200 mm deep and the outer bank 250 mm high by 750 mm across the top. Again the construction and composition of the mound were similar to the mound in Burial 1 but there was no evidence of a post. The grave, orientated north to south, was 1.7 m long by 700 mm wide by 510 mm deep and sealed with 40 mm of yellow and grey clay. There was heavy burning on the subsoil round the edges of the grave and the sides of the pit were discoloured to a thickness of 30 mm, clear evidence of a pyre on the spot. Black soil mixed with fragments of bone and carbon, filled the pit and a number of hobnails were recovered. Resting on the floor at the north end of the pit was a complete and undamaged black-burnished cooking-pot, packed with bone and matted grass roots (plate IIIa). Burial 5 overlay the outer bank near the point where it in turn overlay Burial 6.

Burial 12

This burial was marked by a prominent mound 3 m in diameter and as high as 500 mm around the northern perimeter. The ditch averaged 1.25 m wide by 150 mm deep



a. Petty Knowes: Burial 11.



b. Petty Knowes: Burial 15.

with a distinct bank 200 mm high by 400 mm across the top. Despite its size, the burial was strangely unproductive. The construction and composition of the mound were again similar to those of the mound in Burial 1 but there was no post. Twenty iron nails were found in the mound material. Lying on the subsoil under the mound was a wall sherd of matt black cooking-pot and a denarius of Vespasian which was badly corroded. There was no burning on the surface of the subsoil. The grave which was lying north-east to south-west, measured 1.1 m in length by 600 mm wide, but was only 230 mm deep. The fill was a mixture of brown soil, yellow and grey clay, small stones and flecks of carbon. The only other finds were three neck sherds of a light grey pot with a fawn core, which came from the surface of the subsoil on the inside face of the enclosing bank. Another pot-herd, dark grey on the outside and pinkish fawn on the inside, came from the subsoil at the foot of the outer face of the bank where it almost impinges on Burial 8. It was impossible to tell whether this particular fragment should be associated with Burial 8 or with Burial 12.

Burials 13 and 14

Outside the main area of excavation, two other burials within the large cemetery were examined. Burials 13 and 14 had no ditch or outer bank, but in both cases the mound appeared to be stone-capped. Excavation showed that the "capping" was merely coincidental, created by several large stones which had been thrown at random into the mound, during its construction.

The mound in Burial 13 was 3.5 m diameter by 400 mm high, with a turf ring and central soil fill just like that in Burial 1. In the mound material were about a dozen small fragments of brick-red pottery and two rim sherds of a black-burnished vessel. On the surface of the clay seal of the grave were flecks of carbon and debris from burning. The grave was orientated north-east to south-west and was 1.6 m long by 800 mm wide and 500 mm deep filled with a mixture of dark soil, small pieces of carbon and bone, two hobnails and several burnt stones, two of which supported, near the centre of the floor, a large narrow-mouthed jar filled with calcined bone and with a bronze *sestertius* of Hadrian at the bottom.

Burial 14

A large mound 4 m diameter by 500 mm high covered Burial 14. Forty-four long nails, ten shanks and nineteen hobnails were retrieved from the turf ring and the central soil fill of the mound. Resting immediately on top of the clay seal over the grave, which was less clearly delineated than usual because of its waterlogged condition, was a distorted lump of iron which looked as though it could have been part of a bridle-bit or a coffin trapping. It was impossible to identify the object with certainty, even with the help of a metallurgical X-ray. The grave-pit was orientated north-east to south-west and measured 1.2 m long by 1 m wide by 480 mm deep. At the bottom supported by carefully placed small-stones, was an almost complete but heat-damaged black-burnished vessel, packed full of bone and with a heavily corroded *as* of Antoninus Pius at the bottom. One feature of particular interest was that the post hole, showing as a circular intrusion of greasy, grey-brown soil 230

mm in diameter running vertically down through the centre of the mound, was charred near the floor of the grave-pit where it terminated in a U-shape. This suggests that the material thrown into the pit, presumably the remains of a pyre built not too far away, retained sufficient heat to char the post, while not causing it to burn right through. The sides and floor of the pit were only slightly blackened.

Burial 15 (fig. 5)

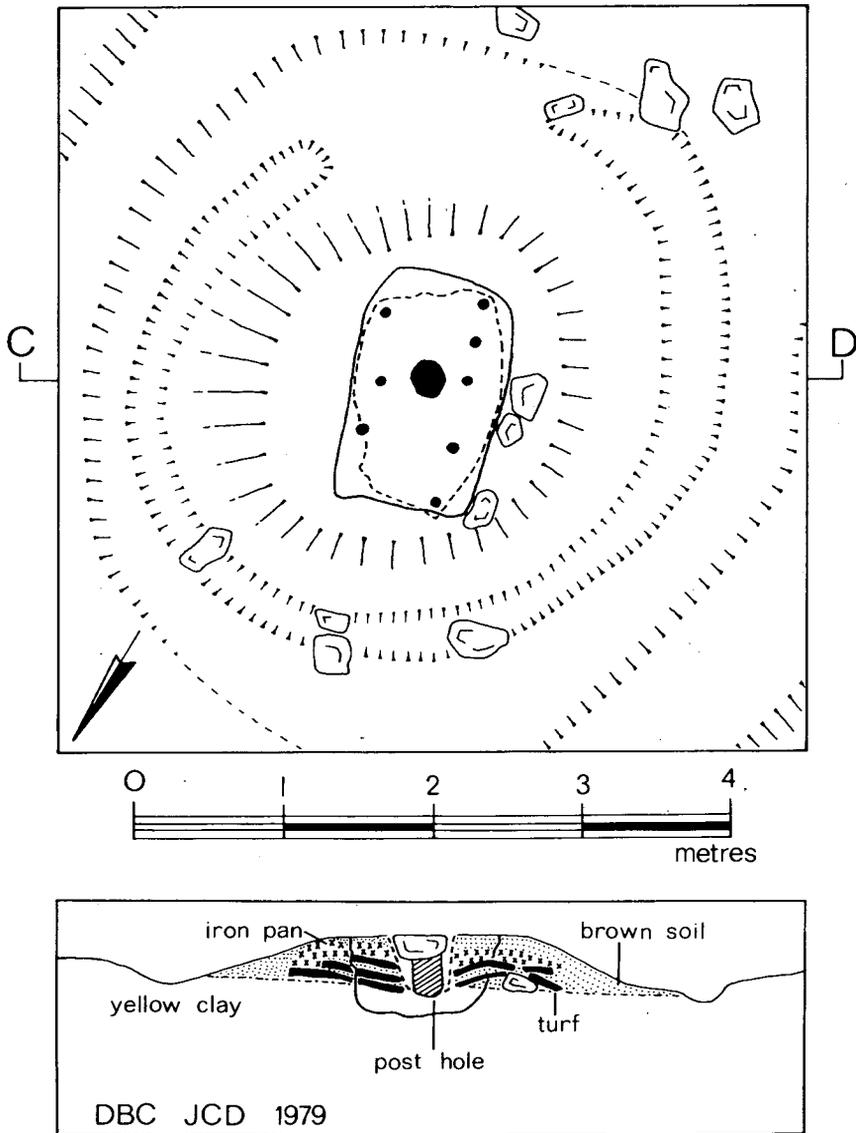
120 m south-east of the main cemetery is Burial 15, one of a group of six barrows lying on a grassy slope not far from the track to the old lime kilns at Dykehead. The grave was marked by a low, rather flat mound about 3 m in diameter and 350 mm high. It was encircled by a ditch 500 mm wide by 210 mm deep and an outer bank, 500 mm wide and 160 mm high. The mound was covered by a layer of brownish-red soil averaging 170 mm thick, beneath which was a ring of turf and, though the soil fill in the centre, the greasy, grey-brown contents of a post hole 90 mm in diameter, which showed up very clearly in the section (plate IIIb). The subsoil under the mound was extensively burnt so that the grave, with its yellow/grey clay seal 35 mm thick, was well-defined. It was orientated north to south and when emptied measured 1.6 m long by 1 m wide by 480 mm deep. The clay sides had been reddened to a depth of 47 mm which again argues for the theory that the cremation had taken place *in situ*. Moreover there was much carbon in the grave-pit and the bottom of the post had also been charred, like that in Burial 14. Even more significant were the eight charred stake holes positioned round the walls of the pit, which suggested that here, at least, a platform had been constructed to support the funeral bier, a tradition still practised in India today. In addition to the carbon, there was a great deal of bone which unfortunately was well-incinerated and very fragmentary. Two long nails and ten hobnails were also found in the pit. About thirty pot-sherds from a brown-coated castor beaker were retrieved from the surface of the subsoil on the outer side of the enclosing bank and two rim fragments from the same vessel were found on top of the clay seal over the grave-pit.

Burial 16

On the east rim of the quarry, a low, rectangular turf-covered bank, averaging 450 mm in height, outlined a structure 4.5 m long by 3 m wide with an external ditch 280 mm wide by 195 mm deep.

The presence of shrines within Roman burial grounds is well-attested⁴ and although this particular site did not look very promising on the ground, the prominent position of this feature on the quarry edge, overlooking Dere Street and the fort at High Rochester was enough to warrant investigation. When the turf was stripped off, the structure retained its rectangular shape; the bank was a mixture of brown soil, small stones, patches of yellow clay and pieces of rotted turf with no signs of post holes. There was the vestige of an entrance about 500 mm wide, near the west end of the long wall on the south-east side. In the course of cleaning down the bank, ditch and internal floor, several pot-sherds, including a small fragment of rim were found. They were all from the same vessel. The core was red and the outer surface was

PETTY KNOWES - Burial 15



Section C-D

Fig. 5.

shiny black and lumpy. The floor of the "building" was trowelled down to a thin layer of greasy, grey-brown, reddish-brown and yellow detritus, about 53 mm deep, which contained a scatter of carbon and minute fragments of burnt bone. When this layer had been removed, a burnt patch 260 mm wide, was disclosed at the east end. The burning appeared to run under the bank, which was then taken away, exposing the clear outline of yet another grave. Orientated north-north-west to south-south-east, the pit when emptied measured 1.5 m long by 700 mm wide by 440 mm deep. The sides had been burnt to a depth of 42 mm which suggested that the cremation fire had been *in situ*. Under the yellow/grey clay seal, 54 mm thick, the pit was packed with carbon and tiny fragments of bone. Eight long nails were recovered and, from the floor of the pit, near the centre, eleven hobnails and the remains of a leather sole, with the hobnails fused in position by the intense heat of the cremation.

Burial 17

Burial 17 which consisted of a mound 1.75 m diameter by 500 mm high, a ditch 500 mm wide by 146 mm deep and partial outer bank, lies in the main cemetery area on the western lip of the quarry. As a final exercise, in order to ascertain whether the burials or the rock quarrying came first, a trench 4 m long by 1 m wide was opened up across the ditch and outer bank. Excavation showed that both were constructed over what was clearly a mound of quarry spoil, from which it may be deduced that quarrying had taken place before this grave at least, was occupied.

Discussion

It is feasible that the first mark made by the Romans in this immediate area was the quarry, which they probably exploited to build Dere Street, forging northwards only yards away. It may be that the quarry was not utilized until the late second—early third century reconstruction, when it could well have provided the large sandstone blocks now visible in the west gate of the fort at High Rochester. All that can be said with certainty is that some quarrying had taken place while the cemetery was still in use.

It was during the eighteenth century that workmen prospecting for ironstone near Petty Knowes found "urns of a native type".⁵ In view of what is now known, it is more than likely that these urns were not native at all, but Roman coarse pottery, perhaps black-burnished cooking ware mistakenly identified. What is surprising is that the nineteenth-century antiquarians not only failed to follow up this reference by a search for barrows, but also did not notice either the main cemetery or the three grass-covered burial mounds, the most obvious of which has been robbed, adjacent to the circular stone tomb on Dere Street. It appears that William Coulson paid no attention to these mounds while he was engaged in excavating the four masonry tombs. Henry MacLauchlan, that ubiquitous draughtsman, visited Coulson's excavations here and at High Rochester and remarked on the name "Pettyknows" as perhaps meaning "grave knolls".⁶ Yet not even he took the further step of recognizing these earth barrows and associating them with the burials of individuals of lesser importance than the high-ranking officers in their fine tombs. Like

two of its smaller neighbours, the surviving circular tomb is encircled by a ditch and an outer bank.

There are however, no records of tombstones having been found in the vicinity of these burials. Two were found "in a field opposite to the north east corner of the station and on the north side of the rivulet",⁷ which led I. A. Richmond to suggest that there was a cemetery "near the turn in Dere Street"⁸ and indeed there may be another cemetery there. The provenance of the other High Rochester tombstones, with the exception of the re-utilized stone found within the fort, is unknown.

The tombstones do throw some light on another problem—who were the occupants of the Petty Knowes cemetery? Those whose death is recorded on the tombstones are not exclusively military personnel. They range from the fort commander (RIB 1288) to a common soldier (RIB 1292) and include a woman (RIB 1293), a freedman (RIB 1290) and a tribune's foster-child (RIB 1291).⁹ So far as it has been possible to ascertain from the skeletal remains which were recovered from the excavated areas, a similar variety of people were buried at Petty Knowes (Appendix C). Burial 4 contained an adult male, Burial 5 a female accompanied by an animal, perhaps a lamb (as at Brough under Stainmore),¹⁰ or a juvenile, and Burial 14 a child of five to ten years. No conclusion could be reached about any of the others except that Burial 1 was also an adult.

Whatever their status, those who were buried in the cemetery, took few possessions with them to the realm of Hades and, since only three coins were retrieved from the sixteen graves emptied, few can have been given the ferryman's fare. No weapons or armour, finger rings, brooches, toys or lachrymatories were found. With the possible exception of Burial 10, none of the graves excavated had been robbed so it would seem that the dead were deposited in their graves with virtually no personal effects. The stone tombs excavated by Coulson were apparently as bare as the smaller burials. The only recorded finds "an urn with bones, a fragment of glass unguent bottle and a coin of Severus Alexander",¹¹ (the whereabouts of which are unknown), came from the circular tomb. A similar paucity of grave goods was noted at another northern fort, Brough under Stainmore,¹² though cemeteries elsewhere, such as Trentholme Drive and Carlisle, have produced a rich array. Was the garrison at High Rochester so impoverished that personal possessions were too precious to be left to the dead? Was this just a cemetery for the lower ranks? Was it the custom of the army to husband its resources for the use of the living? D. J. Breeze propounds the theory that on the death or retirement of a soldier his weapons were customarily bought back by his unit¹³ but this would provide only a partial answer. The other questions remain open to conjecture, but it must be worth noting that the only hint of extravagance was that two very fine black-burnished ware vessels were used as receptacles for the cremated remains of two individuals.

It is not even possible to ascertain whether the bodies were clothed when set on the funeral pyre. The only indication of clothing is the presence of hobnails in several of the graves and part of the sole of a boot in Burial 16. This item itself suggests a degree of penury—on the one sole, there were three different types of hobnails in blocks. A much mended boot perhaps?

The *caliga* also provides some indication that soldiers may be among those buried in the Petty Knowes cemetery, otherwise the social categories of the dead can only be guessed at. Soldier or civilian? Veteran or trader? Families of the garrison? Their freedmen and slaves? The practice of contributing to a *collegium* or burial fund was not confined to military personnel,¹⁴ since most Romans wanted to ensure a decent funeral for themselves.¹⁵ There is no reason to suppose that civilian and soldier would be segregated from each other in death. At Auchendavy on the Antonine Wall: "Civilians are recorded on two tombstones which came from an otherwise military cemetery."¹⁶ Almost certainly the occupants of Petty Knowes would be part of the garrison at High Rochester or closely connected with it.

From epigraphic sources it is possible to determine some of the units stationed at this northern outpost of the Empire. The *cohors I Lingonum equitata* under Q. Lollius Urbicus and later the *cohors I Dalmatorum* (or *Dacorum*), provided the garrison in the second century, while in the third century it was the *cohors I fida Vardullorum milliaria equitata* with the *numerus exploratorum Bremenensium*.¹⁷ At some time, part of the Sixth Legion must also have been in the area, since the now lost tombstone of one of its soldiers was noted at High Rochester by Christopher Hunter.¹⁸ A recently discovered building inscription¹⁹ from the fort records the joint presence of two other units, a detachment of *cohors IV Gallorum equitata*, stationed at the neighbouring outpost fort of Risingham (*Habitancum*) in the second century, and a detachment of *cohors II Nerviorum* who were at Wallsend (*Segedunum*) under Marcus Aurelius. There is a closer association between these units in the third century, with a prefect of *II Nerviorum* dedicating within two miles of Chesterholm (*Vindolanda*), where *IV Gallorum* was based.²⁰ Garrison changes may have been more frequent than has hitherto been supposed but as yet the records are still incomplete. Nevertheless, some of the units already noted must have used the cemetery at Petty Knowes.

High Rochester remained in continuous occupation from the 140s to an unknown date in the fourth century. That the cemetery could have been in use throughout that period if not earlier, since the station was Agricolan in foundation,²¹ is borne out by the pottery which dates from the early second century and spans two hundred years (Appendix A). The three coins (Appendix B) a *denarius* of Vespasian, a *sestertius* of Hadrian and an *as* of Antoninus Pius, also fall within this period. On the basis of numismatic evidence, Casey and Savage postulate an abandonment of the fort by 314 A.D. when frontier defences were reorganized following the withdrawal of troops by Constantine.²² This theory is sustained by John Gillam's pottery analysis which places the black-burnished cooking-pot from Burial 11 in a late third-early fourth century context.

No link however can be traced between the units and the form of the burial monument. The distinctive "Petty Knowes" type of burial—a low central mound surrounded by a shallow circular ditch and outer bank, has so far been detected near few other forts in the frontier zone. Within a mile of Great Chesters (*Aesica*) are two groups—the six tumuli recorded by Horsley at Four Laws on the Stanegate²³ and two, possibly three at Markham Cottage.²⁴ Two more lie just south of Halton

Chesters (Onnum or Hunnum). The last mentioned were recognized by the authors as a result of the keen observation of Mr. A. Reed, who had noted a similar, though larger monument there. This mound is roughly oval, 9 m by 6.5 m, surrounded by a ditch and traces of an outer bank. The two smaller burial mounds, 2 m and 1 m diameter, have vestiges of a ditch but no bank. None of the units known to have been stationed at High Rochester is recorded at either Great Chesters or at Halton Chesters. Since the Petty Knowes burials are earth and turf structures and given that they are now much reduced, it is conceivable that similar barrows could have existed elsewhere in the frontier zone. It would not require much ploughing to destroy them completely. Although no earth barrow marks the site, the "fire-pits" at Camelon²⁵ on Dere Street beyond the Antonine Wall bear some resemblance to the cremation pits at Petty Knowes. On the other hand, though *cohors I Vardullorum* and *cohors I Lingonum* were stationed at Lanchester (Longovicium)²⁶ in County Durham, the cemetery discovered and excavated there in 1981 by the British Gas Corporation's Archaeological Unit in advance of a pipeline, showed little similarity to that at Petty Knowes. The area had unfortunately been under the plough for a long period of time and no trace remained of any burial mound or ditches. As well as a number of small stone cists, deposits of carbon and burnt material were found in shallow scoops not in rectangular pits as at Petty Knowes.²⁷

Elsewhere in England the typical Roman barrow is seen as a large mound, from 9.76 to 43.92 m in diameter, steep-sided and conical with a flat top and enclosed by a massive ditch.²⁸ However, in a discussion on Roman barrows in Wessex, P. J. Fowler suggests that there "a regional type of burial mound may prove to be not large and steep-sided, but low and perhaps small".²⁹ It may eventually prove to be the case that these low, small Roman barrows have a more general distribution than hitherto has been supposed. It is unfortunate that so little information about the form of the graves can be gleaned from some early excavations of Roman cemeteries such as that at Ospringe in Kent where 387 burials, mainly cremations, were recorded.³⁰

At Petty Knowes, excavations showed that it was the practice to remove a small area of turf and dig a rectangular pit. In eight of the burials numbers 1, 3, 4, 5, 10, 11, 15 and 16, the edge of the pit was so blackened and the surrounding earth baked red by heat to such a degree that it is clear that the cremation must have taken place over the pit. The funeral pyre which must have been substantial, would have been built there and the bier with the body of the deceased placed on it, or perhaps in the centre of it. The eight charred stake holes round the inner edge of the cremation pit in Burial 15 suggest that here, at least, a platform was constructed to support the funeral bier. That this method of cremation was used for other burials is indicated by the large number of nails distorted by heat which were retrieved from them. The pit which later was to receive the remains, seems to have provided sufficient draught for a fire hot enough to cremate a body very efficiently, in most cases, as is evidenced by the degree of cremation of the bones. Only in Burial 5 was the degree of cremation slight. After the fire had died down and the embers cooled, the celebrants probably raked through the ashes and collected what remained of the bones

of the dead. In four instances, Burials 4, 11, 13 and 14, most of these were put into a pottery vessel which was deposited on the floor of the pit and any residue was placed around the jar. The ashes of the funeral pyre were then scraped back into the pit, which was sealed by a layer of relatively clean yellow clay. In Burial 10 the remains of the dead were put in a stone-lined cist constructed in the pit. In Burials 1, 5, 15 and 16 the carbonized bone was merely collected up with the ashes from the funeral pyre and thrown into the pit.

The condition of the pottery, in particular the black-burnished ware from Burials 4 and 11, shows that the ashes must have been fairly cool when the jars were set down in the grave though in Burials 14 and 15 they were hot enough to char the bottom of a post standing upright, perhaps as a grave marker, in the centre of the pit. "Marker" posts were also noted in Burials 1, 4 and 10.

Once the cremation pit was sealed it was enclosed by a ring of turf which had been previously stripped from the surrounding area. The ditch, where one existed, was then dug and the material from it used to fill the centre of the turf ring and to construct the outer embankment. The Table of Data shows which parts of this composite picture are evidenced in individual burials. Though no mention is made of a cremation pit in the "Officer's" Tomb, the earth was reddened by fire indicating that here,³¹ too, the cremation was *in situ*.

Parallels can be drawn with some elements of this ritual in burials elsewhere. Additional evidence for the use of "marker" posts is given by John Hodgson. His informant at Chesterholm (Vindolanda)³² in 1810 described strong oak stakes having been found driven into the earth beside groups of urns "sometimes four or more together, covered with a square flat tile" in a swampy area south-west of the fort. The excavation of the large Roman barrow at Riseholm³³ in Lincolnshire showed that the body was burnt on a pyre built over a small "draught trench" into which the remains, and some grave goods, were heaped and sealed down with a layer of clay before the mound was raised over them. At Holborough³⁴ in Kent also, the body may have been burnt *in situ*. Nothing of this kind is noted in other Roman cemeteries or graves in this region apart from Beckfoot (Bibra)³⁵ where the excavator found "pyres with biers *in situ*". When excavations were taking place near Corbridge (Corstopitum),³⁶ prior to the building of a by-pass, cremations were found alongside Dere Street. Near them were large burnt areas presumably where cremation pyres had been. The cremations however were "of native character with Flavian pottery". At Trentholme Drive in York,³⁷ bodies were apparently not burnt on the spot where they were buried but were taken instead to a crematorium area (*bustum* or *ustrina*). The corpse, placed in a coffin or on a bier, was cremated on a pyre of wood and coal. Another feature at Holborough should be mentioned: ashes of the dead man and debris from the funeral pyre were placed "in a wooden coffin 6 feet 9 inches in length but only 6 inches wide and 5 inches deep".³⁸ At Petty Knowes in Burial 7 the coffin was shorter and wider but the circumstances suggest a similar rite.

Petty Knowes is an extensive burial ground, the exact bounds of which are uncertain since they are not marked by any physical feature detectable on the ground surface. The pottery and coins provide supportive evidence for the period of

occupation at High Rochester, whilst excavation has also given an insight into burial rites practised during the early second to late third century by auxiliary units stationed in the northern frontier region. The effectiveness of the cremations has made it impossible to glean much useful information about the age, sex, cause of death or physical characteristics of the dead. Nevertheless the excavation has thrown some light on the unjustly neglected topic of cemeteries outside Roman forts.

APPENDIX (A) POTTERY (figs. 6, 7)

by John Gillam, Ian Jobey and Frances Ramsay

* Denotes not drawn.

Burial 1

1. Single fragment from a bowl or dish in BB2. While this type had long been on the market in south-eastern England, it did not reach Scotland or northern England much before the middle of the second century. (1.1)
- *2. Numerous small friable fragments from an unidentifiable pinkish-brown vessel. (1.7)

Burial 2

- *3. Seven fragments from a small thin-walled unidentifiable vessel with dark grey outer surface and orange red inner surface. (2.1)
4. Three large and several small conjoined fragments from a large wheel-thrown jar in light grey unburnished fabric with a reddish, laminated, inclusion-free core; not closely datable. (2.2)

Burial 3

5. Some two dozen fragments making up almost the whole of a rough-cast beaker, in smooth cream-coloured fabric, almost devoid of inclusions, and with a grey-black coating, chocolate-brown inside the base. Differences in shade between conjoined fragments show that parts of the vessel had been subjected to heat after it had been broken. The rough casting is fine, resembling sand rather than small clay pellets, and this, with the fabric, suggests an origin in the Nene Valley. Mid second-century. (3.1)
6. A score or so of conjoined fragments making up a substantial portion of a beaker in light grey matt fabric. Both inside and outside surfaces are fairly heavily dusted with mica, giving a silver rather than a gold glimmer; some mica also appears in the fractures, but there are no other inclusions. Most fragments are khaki-grey in colour, while some are a bluish medium grey; clearly the vessel was subjected to heat after it had been broken. Regular panels of barbotine dots are reminiscent of Upchurch-ware poppy-head beakers, though there can hardly be any close connection; the fabric resembles neither Upchurch ware, as usually defined, nor BB2, much of which was produced at Upchurch. Silver mica-dusted vessels were produced at Wattisfield and at West

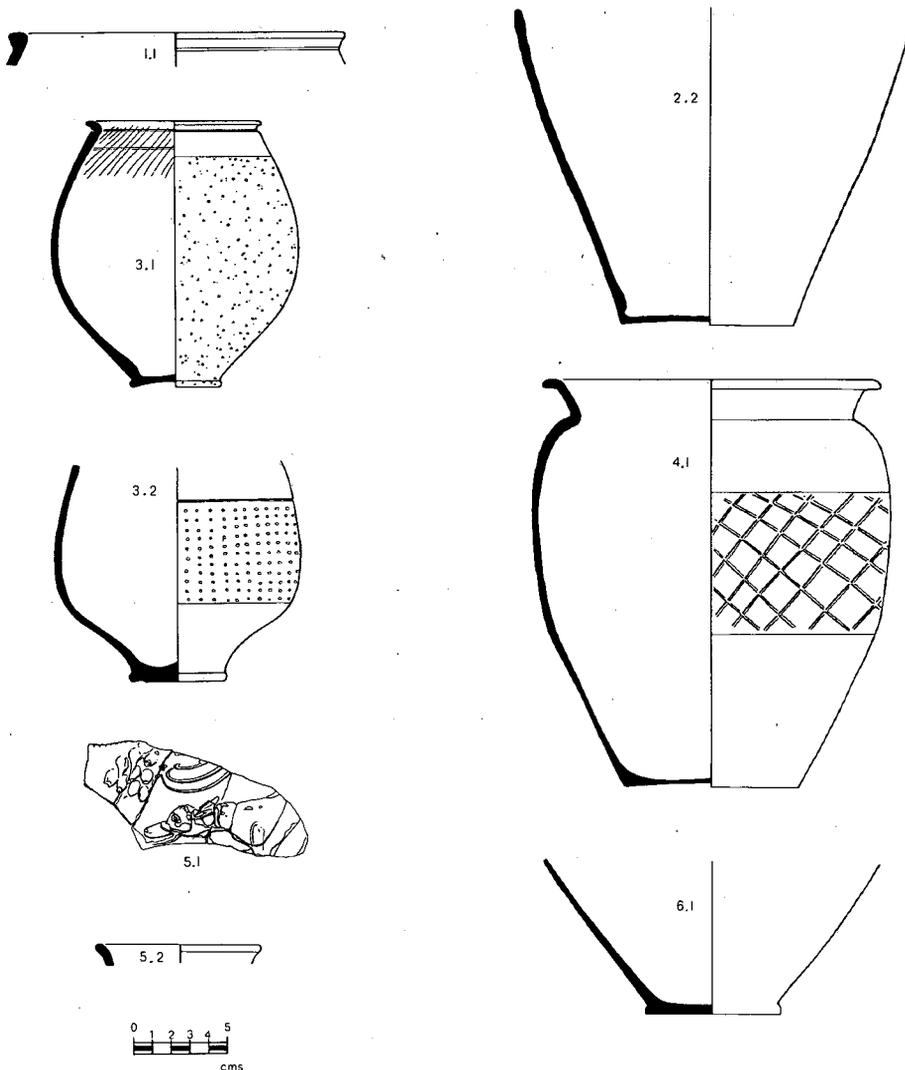


Fig. 6.

Stow, both in Suffolk, in forms similar to the present. Mrs. Vivien Swan, who drew attention to this, has also provided information about an unpublished vessel from a kiln site at Rickinghall, also in Suffolk; the vessel, which is a waster, lacks its base and lower part, but is identical, in every other particular, with the Petty Knowes vessel. In spite of the bag shape, reminiscent of mid second-century beakers, the sharply everted rim and the scored line on the shoulder indicate an earlier date than this, probably in the first quarter of the second century. (3.2)

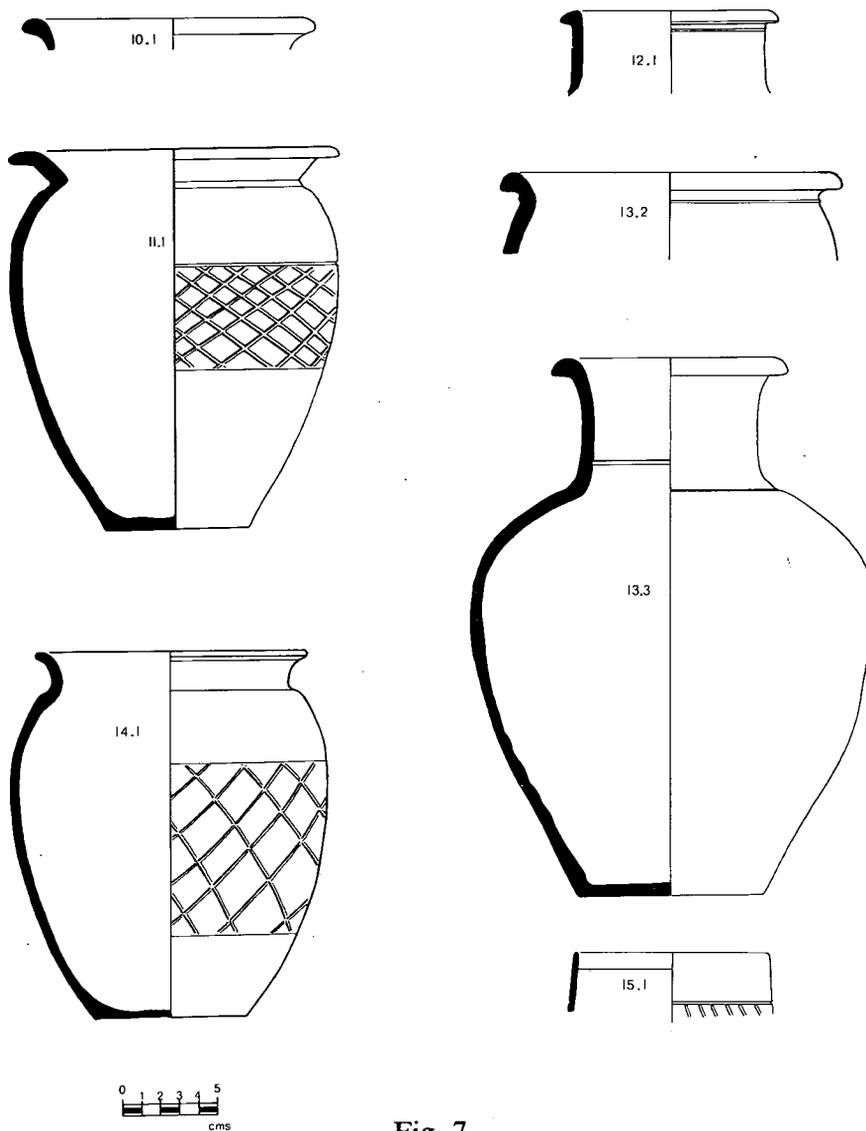


Fig. 7.

Burial 4

7. Complete cooking-pot in BB1; where the rim is slightly damaged, inclusions typical of east Dorset products are visible; cracks of the kind normally associated with heat, appearing round the shoulder, towards the base, and at the junction of base and wall, together with discoloration on the body, suggest that the vessel was re-heated after manufacture and sale. The general proportions, the splayed but not exaggeratedly splayed rim, the absence of a wavy

line on the neck, the presence of a lightly scored line above the unburnished zone, and the obtuse angle of the cross-hatching, combine to place this vessel firmly in the mid third century. (4.1)

Burial 5

8. Six conjoined fragments from a "hunt-cup" in light fawn fabric with a light to dark brown coating; the fabric is not typical of the Nene Valley, though it may still be classed as castor ware. In the absence of a more complete profile close dating is unattainable, though the elongated muzzle of the hound suggests a date late rather than early in the period of manufacture of the class; possibly neither much earlier nor much later than A.D. 200. (5.1)
9. Small fragment from the rim of a beaker in black fabric, now without burnish, with red-brown core and sparse small white inclusions; possibly a BB1 beaker of the middle or latter part of the second century. (5.2)
- *10. Tiny fragment from the wall of an unidentifiable black vessel; possibly BB1. (5.3)
- *11. Some dozen conjoined but extremely small fragments from a thin-walled bulbous vessel in matt light grey self-coloured fabric, without inclusions; undatable. (5.4)

Burial 6

12. Some three dozen conjoined fragments from the base and wall of a jar; the external form of the base does not resemble that of cooking-pots in BB1 or 2. The fabric is externally dark grey; in fracture it is a sandwich of dark grey between light grey; internally it is light-grey but covered with white "fur", that is a calcium compound deposited by boiling hard water; the vessel had thus been used domestically before reaching the cemetery; possibly early to mid second-century. (6.1)

Burials 7 and 8; cf. burial 12

Burial 9; no pottery

**Burial 10*

13. Forty-five fragments, some extremely small, and none obviously conjoining; not certainly all from the same vessel, though in the same reddish-brown fragile fabric; a beaded rim fragment has the appearance of being hand-made, and has a distinct sheen; on the other hand the largest wall fragment displays the internal rilling of a thrown vessel; there is also a fragment from a plain cut-away base. If it is all one vessel it is a beaker or small jar, and probably Roman rather than native. (10.1)

Burial 11

14. Complete cooking-pot in Dorset BB1, intact except for heat-cracks on rim and body. The slender proportions, the rim, as wide as the body, the distinct scored line and the markedly obtuse angle of the cross-hatching, combine to place this vessel in the late third century or the early fourth. (11.1)

Burial 12

15. Three conjoined fragments, from burials 12 and 7, from the neck of a narrow-mouth jar in hard light grey fabric with a fawn core and medium-sized black inclusions; the rim resembles, possibly fortuitously, those of bowls and dishes in BB2. Not datable. (12.1)
- *16. Wall fragment, possibly from a wheel-thrown cooking-pot, in matt black fabric with fine white inclusions; it does not seem to be BB1, and it may be pre-Hadrianic. (12.2)
- *17. Single small fragment, from burial 12 or 8; dark grey and lightly burnished outside, pinkish fawn inside, and light grey in fracture with sparse tiny sparkling inclusions; neither BB1 nor BB2; it could be of almost any date within the Roman period. (12.3)

None of the three vessels or fragments, from Burial 12, which were associated with a coin of Vespasian, is closely datable in itself.

Burial 13

- *18. Almost a dozen fragments, small or very small, cracked and fragile, in brick-red fabric; there are fragments of what looks like a curved rim, suggesting a small jar; quite unidentifiable. (13.1)
19. Rim fragment from a BB1 cooking-pot with roughly the same degree of splay as no. 7. Third century. (13.2)
20. Almost complete narrow-mouth jar in light grey self-coloured fabric, matt on the surface and granular in fracture; part of the neck is missing, and there are cracks in the body, probably caused dynamically rather than thermally. The vessel is probably of later date than the *sestertius* of Hadrian found inside it. The association with a fragment from a third-century cooking-pot may be significant. Most narrow-mouth jars found in northern Britain, in contexts ranging in date from the late first century to the later second, have a cordon at the junction of the neck and body, as had their Iron-Age precursors. The present vessel resembles one from Old Penrith which has been dated late second- to early third-century, on typological grounds. (13.3)

Burial 14

21. Almost complete cooking-pot; there is a hole in the body, some 15 mm square, surrounded by flaking on the outside as if the damage had come from inside rather than outside the vessel; on one side and on the rim there are many breaks, more than mere cracks, with missing or recently re-attached fragments; here again the cause appears to be dynamic rather than thermal. On the other hand there are some heat-cracks above the base, and, except in a patch near to and on part of the base where the original burnishing strokes are still visible, and the colour is still black, the fabric appears to have been much altered. The vessel is mainly light grey in colour, pinkish grey at the rim, and the surface is not merely unburnished but is rough. It contrasts dramatically with no. 14, and to call it black-burnished might seem to do violence to the concept

behind both terms; there is however no doubt that it is a BB1 vessel which has had a hard time, in two different ways, since it was made. Though there is no wavy line on the neck, the short, barely splayed beaded rim, the absence of a scored line, cross-hatching forming barely less than a right angle, and the relatively bulbous proportions, combine to place the vessel firmly in the middle of the second century, a century earlier than no. 7, and a century and a half earlier than no. 14; this is heart-warmingly consistent with its containing an *as* of Antoninus Pius. (14.1)

- *22. Fragment from closed vessel; black on outside; fawn on inside and in fracture; unidentifiable.

Burial 15

23. Some thirty fragments, many very small, from part of a plain-rimmed castor beaker with diagonal barbotine stripes; cream fabric with brown coating; probably late second-century. Graphically restored. (15.1)

Burial 16

- *24. Numerous small lumpy fragments from an unidentified reddish vessel. (16.1)

Discussion

The three outstanding vessels are nos. 7, 14 and 21; of the three, no. 14 is the best. Though the cooking-pot in BB1 was by far the commonest single type of pottery on sites in northern and western Britain, for two thirds of the period of the Roman occupation, complete specimens are rare. They hardly ever appear among site finds, though they appear in cemeteries, at, for example, among others, Brougham, Ospringe, Trentholme Drive (York), Winchester, and now here at Petty Knowes. They also appear on kiln sites in Dorset; elsewhere they have real scarcity value. Apart from small heat-cracks, limited in extent, no. 14 is as good as the day it was made. The cracks pass through the thickness of the wall of the vessel, for, when it was filled to measure its capacity, water oozed through the cracks; the capacity is 2.5 litres. The cracks were doubtless caused by the vessel's being filled with hot ashes from a cremation. Nos. 7 and 21 had suffered even worse damage from the same cause.

Although Petty Knowes cemetery lies near to what was for almost two centuries the most northerly fort in the whole Roman Empire, the community had nevertheless obtained its supplies of pottery from the usual wide range of sources. No. 1 is from the Thames Estuary, probably north Kent. Nos. 5 and 23 are castor ware from the Nene Valley, while no. 8, also castor ware, is probably from elsewhere. No. 6 is from Suffolk. Nos. 7, 14, 19 and 21 at BB1 from east Dorset, while no. 9, also BB1, may be from Rossington Bridge in south Yorkshire.

The range of date is also wide, spanning two hundred years from the early second century to the early fourth. No. 6 is early second-century. No. 12 is a little later. Nos. 5 and 21 are of the middle of the second century, while, in these parts, no. 1 is probably slightly later still. Nos. 9 and 23 fall in the latter half of the second century.

Nos. 8 and 20 are of the turn of the second and third centuries, while nos. 7 and 19 fall around the middle of the third century. The latest piece is the remarkable cooking-pot, no. 14, of a type which was still on the market in the early fourth century. Of the twelve datable vessels, which is about half the total yield, none is of the first century, seven, more than a half, are of the second century, four are either of the turn of the second and third centuries or of the third, while one is of the turn of the third and fourth centuries. The fact that the latest vessel is possibly of early fourth-century date may have some bearing on the question of the date of the end of the occupation of the fort. It is also interesting that a vessel of so late a date should have held a cremation.

APPENDIX (B) COINS

*P. J. Casey**Burial 12*

probably VESPASIAN

Denarius A.D. 69–79*Burial 13*

HADRIAN

Sestertius A.D. 117–21*Burial 14*

ANTONINUS PIUS

*As*Obv. *ANTONINVS AVG PIVS
PP TR P XVIII*Rev. *BRITANNIA COS IIII—SC*
A.D. 154–5

APPENDIX (C) BONE

Dr. J. S. Coles and Dr. D. E. Wright

In Burials 2, 3, 8 and 9 there was no bone and in Burials 6, 10, 12 and 16 the bone was in such a poor state that no positive identification could be made. The following report is therefore confined to the identifiable material.

Burial 1

The specimens were found to be scattered across the pit and not localized. There were thirty-seven bone fragments which were largely unidentifiable pieces of cancellous bone, but there were recognizable pieces of the tibia, fibula, tarsus, lumbar vertebrae, rib fragments, a left os calcaneum, the basiocciput portion of skull base and the right side of the mental portion of a mandible. A single tooth was positively identified by its roots to be an upper premolar. Much of the bone was calcined, while some, including some cancellous bones, showed signs of charring as well.

Conclusion: These bone fragments suggest an adult cremation but it is impossible to express any further opinion.

Burial 4

The material, which was recovered from a vessel, included a number of large bone fragments—parts of the skull, femoral shaft and head, vertebrae of various levels, pelvis, humerus, radius and ulna. There were smaller fragments of vertebrae, ribs, mandible and part of a radius.

Conclusion: The character of the osteology confirmed an adult male.

Burial 5

Many pieces were too small or too fragile to identify. Five fragments were undoubtedly human upper limb bones—from the humerus, the proximal radius and the ulna. The appearance of some pieces suggests a female; some exhibit juvenile, others adult characteristics. There were three fragments of long bone which appeared to be of fibia or tibia nature, many small pieces which looked like the outer table of the calvarium (skull) and some cindered hip bone.

There were also several pieces of bone which were not obviously human i.e. animal ribs which could have belonged to a species about the size of a lamb. The degree of cremation was not great, there being very little carbon material or evidence of carbonization.

Conclusion: This material suggests a juvenile, or a female, accompanied by a small animal.

Burial 7

Few elements in this collection were recognizable—part of the ischium, the proximal part of a femur, the proximal end of a radius and what could have been the proximal end of the ulna.

Conclusion: There is no doubt that the peaty soil with its high acid content is responsible for the disintegration of the bones. Such as remained were in a very fragile state and it is impossible to comment on the age or sex or whether the body was extended, crouched or disarticulated before burial.

Burial 11

These specimens were recovered from a vessel. The fragments which were readily identifiable included parts of the femoral head, pelvis and upper limb bones. Many smaller unidentifiable fragments were also present.

Conclusion: The character of the material suggests an adult male.

Burial 13

The material from the vessel consisted of numerous bone fragments, but there was only one identifiable piece—from the proximal shaft of the femur. In addition there were a few fragments suggestive of human skull.

Conclusion: An adult cremation.

Burial 14

There were some 427 unidentifiable bone fragments which were small in size, con-

sisting mainly of compact bone fragments but also some cancellous bone fragments. Of the fragments which were recognizable there were some portions of the base of the skull—viz. an internal auditory meatus, foramen rotundum and jugular and carotid foramina, several positively identified calvarial pieces and one rather damaged incisor. There were eight pieces which were rib fragments and two pieces of vertebrae from the cervical region—a piece of the body which showed signs of being juvenile, and a piece of the bifid spine of a cervical vertebra. A portion of the femoral head and another which suggested the proximal end of the femoral neck and part of the greater trochanter were also identified. These pieces also suggested a young adult. A further piece of bone strongly suggested the upper portion of a juvenile manubrium sterni. The bone was calcined.

Conclusion: The bone fragments were so severely damaged that accurate estimation of the age was impossible—a rough guide would suggest a juvenile between the ages of five and ten years.

Burial 15

There were 37 positively identified bone fragments, seriously affected by heat. None could be positively identified. There was also a small piece of flat bone, 5 cm by 4 cm, which was probably calvarian.

Conclusion: This was adult human material from a cremated individual.

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