# The Late- and Sub-Roman Cemetery at Queenford Farm, Dorchester-on-Thames, Oxon.

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SUMMARY

*In 1972 the SE. corner of an extensive inhumation cemetery was discovered at Queenford Farm during gravel quarrying and was subjected to a short emergency excavation. Earlier that year a pipeline had been laid across the cemetery, but the human remains encountered were not reported and no archaeological record made. In 1981 the remaining intact SW. part of the cemetery was excavated in advance of the construction of the Dorchester bypass. Over 2,000 people are estimated to have been buried in this cemetery, the majority of which lay within a 1–ha. (2.48–ac.) rectangular, ditched enclosure laid out, probably in the 4th century, against a road leading from the Roman town 0.7km. to the S. Burial had continued in the area S. of the enclosure. Five radiocarbon dates suggest that this cemetery was in use between the later 4th and mid 6th centuries AD. This report includes previously unpublished data from the 1972 excavation.*

FICHE SUPPLEMENT

*The main body of this report has been produced in print. To reduce the cost of publication the detailed inventory, with plans, of graves excavated in 1972 and 1981 has been produced on microfiche.*

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The excavation was directed by the writer for the O.A.U. Labour was supplied through a Youth Opportunities Programme. The O.A.U. is extremely grateful to the many volunteers who assisted with the excavation. The writer is especially grateful to Mr. A. Hardy for his Y.O.P. supervision and site recording. Miss S. Green and Miss J. Russen supervised the finds. Miss Green also produced a transcript of the 1972 records. Mr. J. Wallis with members of the Abingdon Area Archaeological and Historical Society, and Mr. P. Johnston of the Dorchester Archaeological and Historical Group, enabled work to continue seven days a week. Mr. J. Hazelden of the Soil Survey of England and Wales

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## INTRODUCTION

The cemetery at Queenford Farm (centred N.G.R. SU 582 949) was discovered in February 1972 when the Amey Gravel Company reported that topsoil stripping prior to gravel extraction had revealed a number of human bones at their Queensford Mill pit[1] (now Queenford Farm). The company allowed a two-week rescue excavation organised by the Oxford City and County Museum[2] and the Upper Thames Archaeological Committee. A small part of the SE. quarter of the cemetery enclosure was cleared, to reveal 188 graves whose locations were recorded on plan. Eighty-two graves were then excavated. Further graves were seen during their destruction by earth-moving machinery as the main body of the cemetery was quarried away (Fig. 2). Although burials probably extended over the whole of the cemetery enclosure, this could not be confirmed as a continuous watching brief was not possible at that time. Earlier in 1972 a gas-main was laid across the site, isolating the SW. corner of the cemetery; nothing is known of the cemetery within the pipeline corridor. Construction of the present access to Queenford Farm either destroyed or permanently sealed the corner of the cemetery.

In 1981 the construction of the Dorchester by-pass provided an opportunity to examine and record the remaining SW. graves to the S.[3] During the excavation 102 graves were identified, of which 82 were excavated.

The SW. corner of the cemetery overlay several prehistoric features. These features, and three other prehistoric sites excavated in advance of the Dorchester bypass, will be published elsewhere.[4]

## SITUATION AND ARCHAEOLOGICAL BACKGROUND

The cemetery lay on level ground 0.7km. N. of Dorchester-on-Thames. The present village of Dorchester occupies the site of a small, unnamed, walled Roman town. Queenford Farm, which includes the remains of Queensford Mill, lies just over 100m. E. of the cemetery on the edge of the flood-plain of the River Thame (Fig. 1). The Thame joins the River Thames 1.8km. S. of the mill. The Thame splits into two channels by Queensford Mill. The channel which once brought water to the mill is either a straightened and deepened length of a previous river-channel, or more probably an entirely artificial leat.

The cemetery at Queenford Farm is one of two major inhumation cemeteries known in the vicinity of the Roman town. The second cemetery lies 1km. ENE. of the town on the opposite bank of the Thame, in a similar situation to the cemetery N. of Verulamium on the

[1] B. Durham and T. Rowley, 'A Cemetery Site at Queensford Mill, Dorchester', *Oxoniensia*, xxviii (1972), 32–7.

[2] Now the Oxfordshire County Council Department for Museum Services, Woodstock. The excavation records and finds have been deposited with the Museum under accession numbers 76.240 and 82.30 and County Sites and Monuments Record Number 5416.

[3] C.B.A. Group 9 *Newsletter* 12 (1982), 143–6, and Figs. 38–9.

[4] To be published by R.A. Chambers and R. Bradley in the *Proceedings of the Prehistoric Society*.

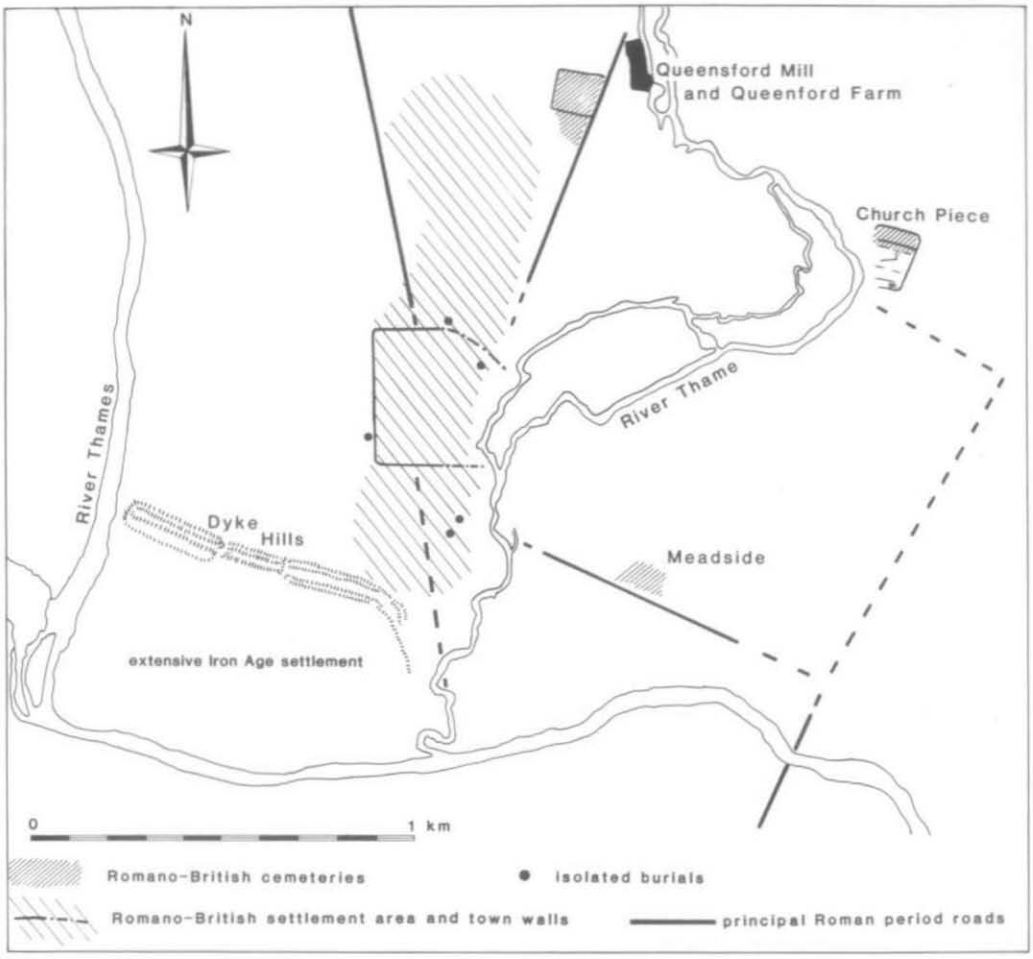


Fig. 1. Dorchester: the positions of the only two confirmed major Roman cemeteries in relation to the walled area of the Roman town and its suburbs. Nineteenth-century accounts suggest a third major inhumation cemetery at Meadside. To date, only the cemetery at Queenford Farm has received a useful amount of archaeological exploration. No early Roman cemetery has yet been discovered for Dorchester.

opposite bank of the Ver.[5] This second cemetery lies in a field named Church Piece, adjacent to Priest's Moor Lane. Aerial photographs[6] show orderly rows of burials orientated E.–W. or W.–E. within one or more ditched enclosures. It is not clear whether the enclosures were purposely constructed, or re-used boundaries surviving from an earlier period. The site was subjected to a brief examination in 1975 which allowed the cemetery to be tentatively dated to the 3rd or 4th, and possibly 5th, centuries AD.[7]

[5] J. Wacher, *The Towns of Roman Britain* (1975), 223.

[6] Ashmolean Museum Collection, Oxford: G.W.G. Allen; 33 476, 38 924: Cambridge Committee for Aerial Archaeology: J.K. St. Joseph; 48 AM4–5, 49 CD 2, 62 AFU 43.

[7] M. Harman, G. Lambrick, D. Miles and T. Rowley, 'Roman Burials around Dorchester on Thames'. *Oxoniensia*, xliii (1978), 1–16.

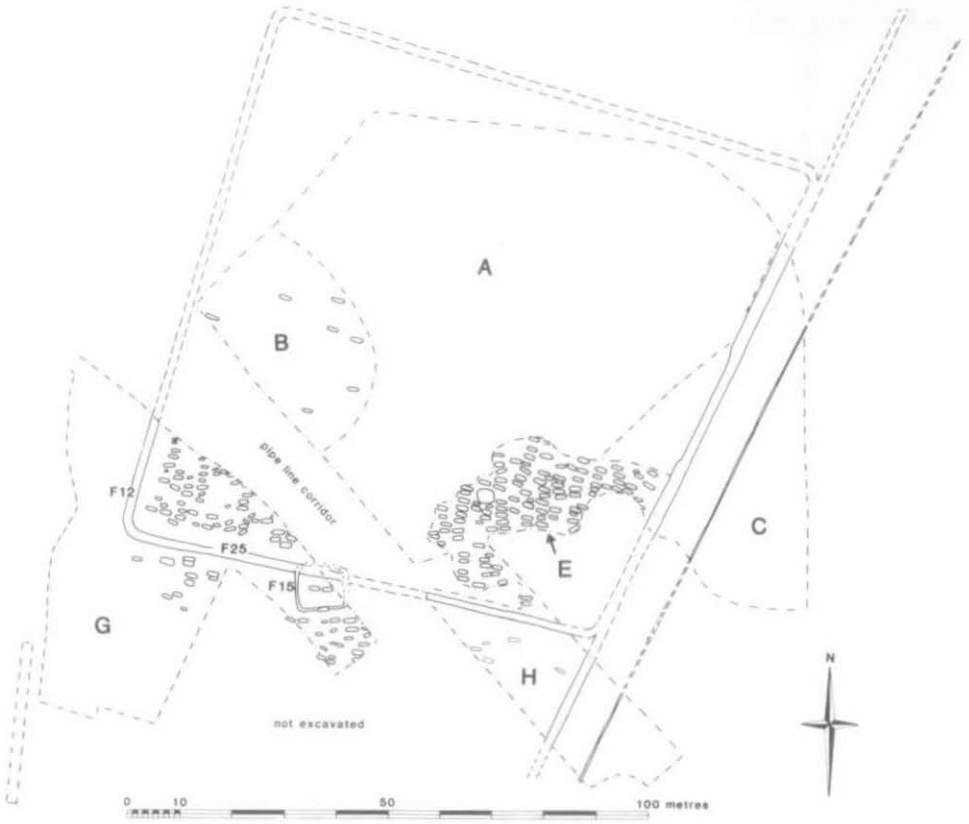


Fig. 2. Plan combining the results of the 1972 and 1981 excavations and watching briefs. In area A, graves were seen but not recorded. In area B, some of the graves observed were plotted. No graves were observed in Area C to the E. of the trackway. Eighty-two of 112 graves recorded on plan in area E were excavated in 1972, and 82 of 102 graves located in 1981 in area G were excavated. Area H was only partially cleared. Prehistoric features have been omitted.

Since the early 18th century, burials have been recorded from several points surrounding the town. In 1711 a burial accompanied by two pots was found, along with traces of other skeletons, in a area SW. of the town[8] and, more recently, undated inhumations have turned up to the S. of the walled area.[9] In 1874, and again in 1882, skeletons and Roman pottery were unearthed during ditch-digging in Meadowside Piece alongside the probable line of the Roman road, SE. of the town.[10] These find-spots may mark the site of one or more Roman cemeteries. It is not known whether a 3rd-century cremation discovered in the vicarage garden lay within or beyond the limits of the walled town.[11] Graves with early Germanic associations have been discovered both N. and S. of the town.[12]

[8] *V.C.H. Oxon.* i, 293.
[9] C.B.A. Group 9 *Newsletter* 13 (1983), 126.
[10] *V.C.H. Oxon.* i. 293.
[11] Ibid. 293.
[12] J.R. Kirk and E.T. Leeds, 'Three Early Saxon Graves from Dorchester', *Oxoniensia*, xviii (1953), 63–76; S. Chadwick Hawkes and G.C. Dunning, 'Soldiers and Settlers in Britain, Fourth to Fifth Century', *Medieval Archaeology*, v (1961), 1–70.

## GEOLOGY AND SOIL

Both Dorchester and the cemetery at Queenford Farm lie on the first gravel terrace. In the vicinity of the cemetery the gravel is overlain by up to 1m. of brown earth and topsoil. The depth of topsoil sealing the gravel has been much influenced by the position of headlands from the open field system. The soil is described by the Soil Survey as a typical argillic brown earth, and classified as either part of the Sutton Series or the Ludford Series (the distinction is one of depth).[13] The lower portions of these soils are often calcareous, as at Queenford Farm.

Ploughing had disturbed the majority of the subsoil either during or since the medieval period. This accounted for the presence of Neolithic and Bronze Age flints in the subsoil in many places. However, the base of the subsoil occasionally survived undisturbed. Dark patches were sometimes found at the base of the subsoil due to natural concentrations of the manganese salts. Within undisturbed areas of subsoil above the gravel, archaeological features were often almost invisible.

## THE CROP-MARKS

The crop-marks to the W. and SW. of Queenford Farm were first photographed from the air by Major G.W.G. Allen in 1933,[14] although the rectangular enclosure was not recognised as a cemetery until 1972. Later aerial photographs, in particular those taken for the National Monuments Record and the Cambridge University Collection, also depict the cemetery enclosure.[15] The cemetery plan illustrated in Fig. 2 differs from that previously published[16] and has been compiled from a revised cropmark plot supplemented by field surveying and excavated evidence.[17]

The thick blanket of soil which covered the gravel in the vicinity of Queenford Farm always prevented all but the major archaeological features from showing as crop marks.

The photographs revealed a range of monuments. Previous to the Roman period the area had lain within one or more prehistoric field systems (Fig. 9: *B*, *D* and *E*). Immediately S. of the SW. corner of the cemetery, the paired ditches (Fig. 3; F78–9) formed part of the earliest of these field–boundaries, which had probably originated in the late Bronze Age. This boundary cut an even earlier feature, the SE. terminal of a Neolithic cursus (F80) within which lay a small penannular henge; this would have survived into the Roman period only as a very low mound, if at all.

Two narrow, shallow, parallel ditches, which suggest a double ditched and hedged boundary (Fig. 9:*F*), extend south-westwards towards the Roman town from a point just N.W. of Queenford Farm. Although the W. ditch is easily recognised, the cropmark of the ditch fades as it proceeds south-westwards. A third and more substantial ditch *G* runs parallel to the western edge of *F* to form a roadway *H*, which widens slightly as it passes northwards.

One particularly strong, dark crop-mark indicated a broad, central entrance to the cemetery from the E. The cemetery enclosure ditch has rounded corners. Within the enclosure the area available for burial covered a little under one hectare.[18]

[13] Pers. Comm. J. Hazelden of the Soil Survey for England and Wales.

[14] Ashmolean Museum Collection, *Allen* 448–60, 477–8.

[15] D. Benson and D. Miles, *The Upper Thames Valley: an Archaeological Survey of the River Gravels* (1974), 68.

[16] Durham and Rowley op. cit. note 1, 33, Fig. 2.

[17] Plotted by the method described in G.C. Dickinson, *Maps and Air Photographs* (1969), 268–72.

[18] This estimate of the area of the cemetery enclosure differs from previously published figures, which did not have the benefit of later excavations to confirm the exact positions of the boundaries.

Several of the aerial photographs provide a false impression of graves within and beyond the cemetery enclosure. Although excavation demonstrated that these crop-marks extended into areas devoid of graves, their cause was not established. Periglacial features provided crop-mark impressions of burial and other enclosures both within and beyond the cemetery. 100m. S. of the cemetery, several small gravel quarries are represented by block-marks.

## THE ARCHAEOLOGICAL POTENTIAL

Until 1971 there remained the opportunity to explore and record the layout and administration of an entire late Roman cemetery. In addition to the physical anthropology, the opportunity remained to discover the class differences, changing fashions and beliefs reflected in the burial practices of a significant part of the population of this small, late Roman town. There existed an opportunity to make a record of one of the major cemeteries which served the Roman town so that it might be compared with the remaining cemeteries as and when they are discovered and recorded. Only when these cemeteries are viewed as a whole can they provide evidence for the development of the social structure and religious affiliations within an urban population.[19]

## LOSS OF THE ARCHAEOLOGICAL RECORD

In 1971 this cemetery, with its attendant burials to the S., lay intact; by 1982 only some 2 per cent of that area had survived destruction from road building, gravel-quarrying and pipe-laying. Less than 15 per cent of the cemetery had received any archaeological attention, and only some 12 per cent had been excavated sufficiently to identify graves in outline. Of that 12 per cent, the combined total of 164 excavated graves represents only some 7 per cent of the estimated 2,400 people inhumed within and to the S. of the cemetery enclosure. Nonetheless, the 164 skeletons from the Queenford Farm cemetery form the largest sample of late Roman and sub-Roman graves so far excavated anywhere in the Upper Thames Valley.

## EXCAVATION AND RECORDING TECHNIQUES, 1981

A 30–m. trial trench was excavated along the axis of a relict headland from the medieval open field system. The sections indicated that the archaeological features were sealed beneath cultivated soils varying from 0.6m. to 1m. deep. These comprised a modern ploughsoil above a disturbed calcareous reddish-brown earth which reached down to the surface of the underlying gravel terrace.

Some 1990 sq.m. of the site was stripped of soil to reveal the Roman cemetery and prehistoric features. The bulk of the soil was stripped by machine. As there was no colour difference between disturbed and undisturbed subsoil, the lower subsoil was removed by hand. This led to the discovery of 28 prehistoric cremation deposits above the penannular monument. No Romano-British cremations were found.

[19] The current state of cemetery studies and the remaining archaeological potential is provided by R. Reece, 'Bones, Bodies and Dis-ease', *Oxford Journal of Archaeology*, i, 3 (Nov. 1982), 347–58. In particular, Dr. Reece points out that the systematic analysis of the cemeteries of an urban population has not been undertaken for any town in Britain.

## THE ROMAN-PERIOD GRAVES

The majority of the Roman-period graves were cut into the gravel. Each grave was excavated, recorded and lifted the same day to avoid vandalism. Grave furniture and coffin outlines were described, planned and photographed as they appeared in order to create a three-dimensional record where appropriate. The skeletal remains were photographed, described and then planned. The majority of the inhumations were aligned along the axes of their grave-pits. The magnetic orientation of each burial was measured along the axis of the grave-pit, except in the case of very shallow graves where the pit outline had not survived.

## NOMENCLATURE IDENTIFYING THE GRAVES

The *site context numbers* (i.e., F81, F103, etc.) are those numbers allocated during the excavations in 1972 and 1981. These numbers appear in the original excavation records and are preceeded by an F.

In 1981, features were allocated context numbers immediately prior to excavation. There was no separate numerical index for the burials. Within the text of this report the graves are identified by their original site context numbers, (i.e., the reference 'grave F180' does not imply that this was the 180th grave to be recorded during the excavation in 1981).

*Grave numbers* represent a renumbering of the burials to form a continuous sequence beginning with the first burial recorded in 1972 and ending with the latest burial excavated in 1981. This numbering sequence appears beside the original context numbers in Tables 1, 2 and 3 to provide a precise reference to the detailed burial inventory in the microfiche appendix.

## THE BURIALS EXCAVATED IN 1981

Forty of the 102 graves identified in 1981 lay to the S. of the cemetery enclosure. During the excavation 82 graves were completely or partly excavated, 49 from within the enclosure and 33 to the S.

Most inhumations were orientated with their heads to the W. and feet to E. (W.–E.); only two graves (F9 and F66) were orientated in the reverse direction. F9, an adult female, and F66, an unsexed 11–13 year-old, occurred in separate rows. Most of the excavated graves contained supine inhumations with the legs straight and parallel, though there was some degree of variation of the arrangement of the arms and the attitude of the skulls. There were three exceptions to this. A child (F3) was buried on its right side with its legs bent up. The legs of an adult inhumation (F58) were bent to the body's right side and in consequence the western 0.5m. of the grave pit was not occupied. F109 was laid partly on its left side, legs bent up to its left. There was no archaeological evidence for decapitation or other mutilation from any of the excavated graves in the cemetery. Three graves (F3, F50 and F110) each contained a single, apparently residual, abraided sherd of Romano-British pottery. Thirty graves contained one or more iron nails in various positions. This and the other evidence for coffins is discussed later.

Most of the grave pits were sub-rectangular, with rounded corners and level bottoms. In some cases either one or both ends were rounded. The graves varied greatly in width and length, although none was too narrow or too short for supine burial. All but four of the grave-pits had penetrated the gravel at various depths up to 0.8m. Most of the inhumations lay close to the surface of the gravel.

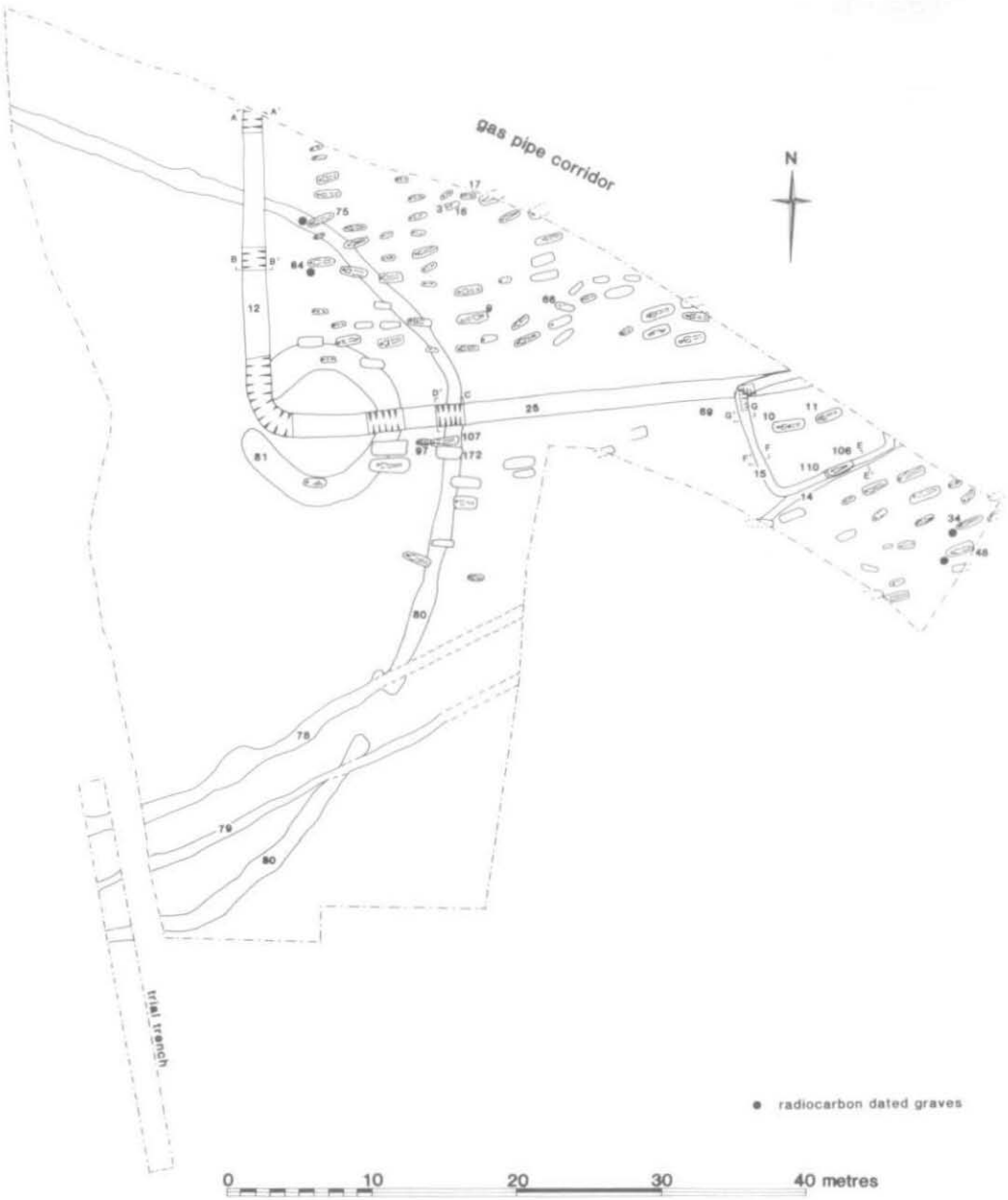


Fig. 3. The SW. corner of the cemetery, excavated in 1981. Ditches F78, 79, 80 and 81 are prehistoric and appear to have had no influence over the positioning of the cemetery. The presence of burials in the upper filling of the penannular ditch F81 suggests that this monument did not survive as a significant earthwork.

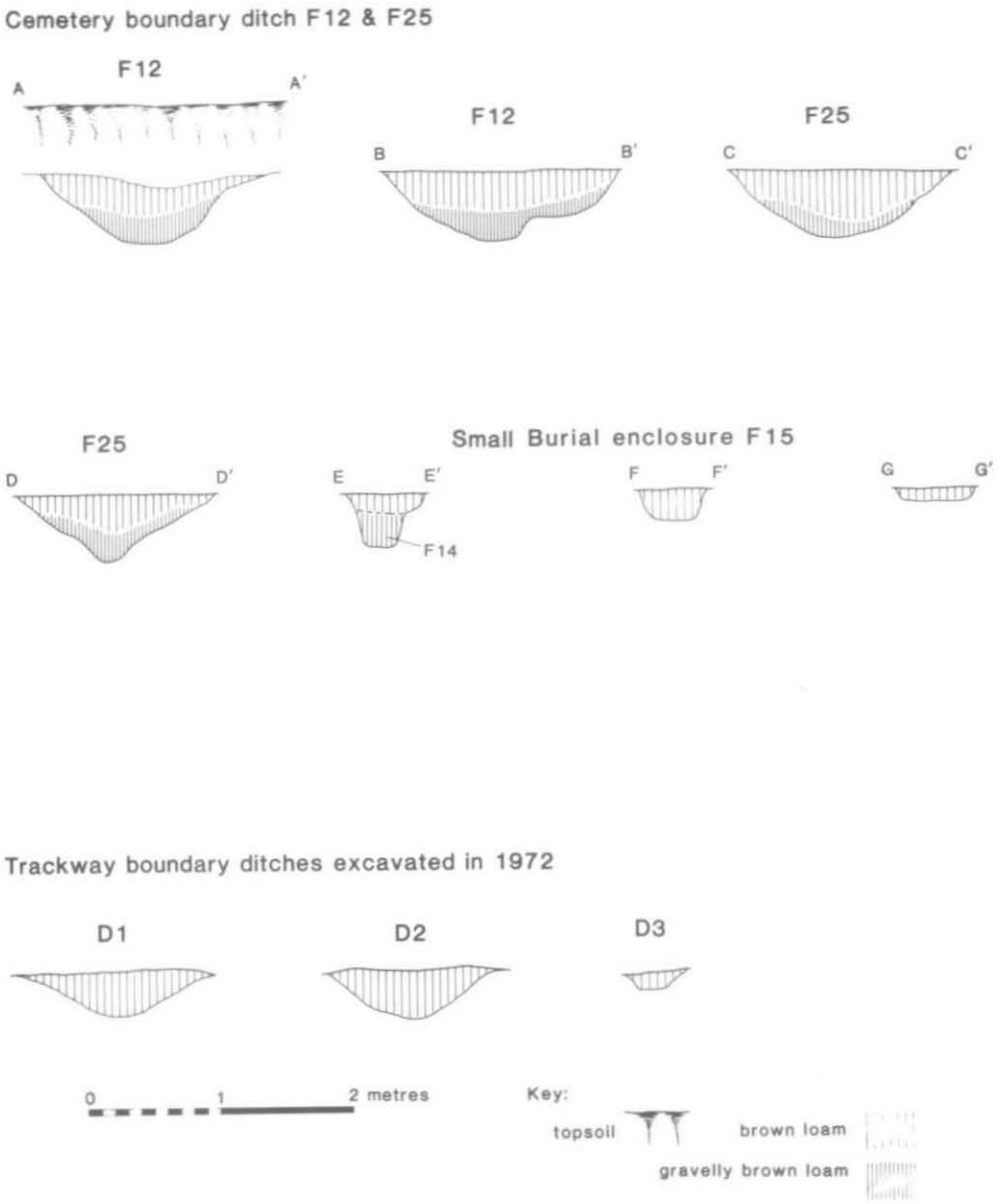


Fig. 4. Ditch sections excavated in 1972 and 1981. Section D1 is the W. side of the trackway later cut by the cemetery boundary ditch D2. D3 is the E. side of the N.–S. trackway.

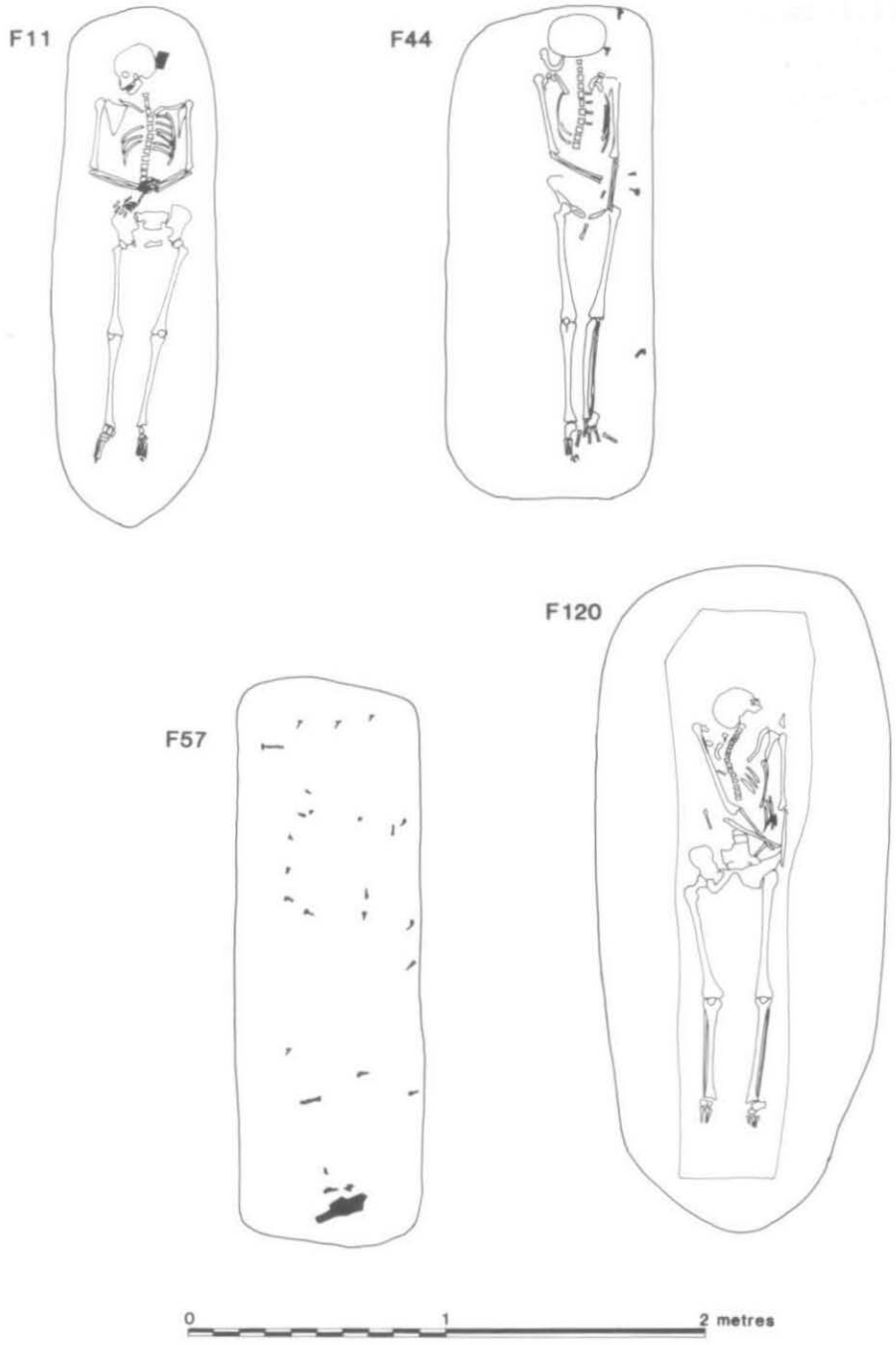


Fig. 5. Graves F11, F44, F57 and F129 excavated in 1981.

With five possible exceptions, the 62 graves revealed within the cemetery enclosure reflected a similar regularity in spacing to those uncovered in 1972. The rows respected the enclosure ditch (F12 and 25), and only one grave lay closer than 3m. to the inside edge. In four instances the graves displayed some irregularity of spacing. A shallow child's grave (F3) cut obliquely across F16, and a second shallow child's grave (F97) overlay the western tip of an adult grave (F107). Adult graves F92 and F107 touched corners but may have been purposely dug side-by-side.

A small, rectangular burial enclosure F15 cut across the filling of the S. boundary ditch F25. This enclosure measured some 6m. internally where it cut the gravel terrace. Only the 0.3m.–wide base of the ditch survived, in places cutting up to 0.3m. deep into the gravel. The junction between this enclosure and the cemetery boundary ditch was sectioned. Both ditch fillings were identical, but where F15 cut F25 the edge was sharply defined and not eroded by weathering. This appeared to confirm that this small burial enclosure was created after the main cemetery ditch had filled with silt. In the enclosure were two centrally-placed graves, each containing a W.–E. supine, female adult inhumation. The eastern grave contained a woman over 40 years old and apparently buried without a coffin. Beneath her skull lay a composite bone comb. This, and possibly a small, iron-bound wooden object, were the only obvious grave goods other than coffin fittings to be found anywhere in the cemetery. Two supine W.–E. male inhumation graves were aligned one (F106) above the other (F110) along the axis of the ditch (F15) which formed the S. side of the enclosure. This may represent an attempt at re-opening a grave.

TABLE 1

## The Burials: Grave Attributes and Skeletal Details

*Excav. Context Number*: (F) is the number from the original excavation record.

*Inventory Grave Number*: represents a renumbering of the burials to form a continuous sequence beginning with the first burial recorded in 1972 and ending with the last burial excavated in 1981. Gaps in this number sequence represent unexcavated grave pits. This numbering sequence appears beside the original context numbers in this table and in Tables 2 and 3 to provide a precise reference to the detailed burial inventory in microfiche.

m = male
f = female

VC = Virtually complete: probably missing some hand and foot bones, a few others.
LC = Largely complete: missing some vertebrae, ribs, occasional limb bones, hands and feet.

### GRAVES EXCAVATED IN 1972

| Excav. Context (F) | Inven. Grave No. | Burial position | Comments | Sex | Age | Height (ft) (m) | Caries | Abcess | Loss | Lambdoid Wormians | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | supine | | m | 30–40 | | 03/17 | 04/25 | 08/32 | | |
| 2 | 2 | supine | | m | adult | 5′5.5<br>1.67m | 02/28 | 01/31 | 00/31 | 1 | |
| 3 | 3 | supine | 3 nails | ? | 3 | | | | | | |
| 4 | 4 | supine | 2 nails | f? | 17–20 | | 00/28 | 00/25 | 00/28 | 0 | |
| 5 | 5 | | | m | 45+ | 5′11.75<br>1.82m | | 04/09 | 07/16 | 0 | Osteo-arthritis on all vertebrae. Two pairs fused: C7 & T1., 2 upper thoracics. |
| 6 | 6 | | | m | 30–35 | 5′7.25<br>1.72m | 03/14 | 01/16 | 00/16 | 0 | Slight osteo-arthritis on two lumbar vertebrae. |
| 7 | 7 | | | m | 20–25 | 5′8.5<br>1.74m | 00/25 | 00/25 | 00/29 | 0 | Right arm longer. Benign osteoma on frontal; club foot. |
| 8 | 8 | | | adol.? | | | | | | | |
| 9 | 9 | supine | | f | aged | | | 02/11 | 07/16 | | |
| 10 | 10 | supine | 3 nails | f | 45+ | short | 00/01 | 01/05 | 10/14 | 0 | |
| 11 | 11 | supine | | f | 45+? | | | | 03/04 | | |
| 12 | 12 | supine | 1 nail | m | 25–30 | 5′6″<br>1.67m | | | | 0 | Separate neural arch on fifth lumbar vertebra. Sacral spina bifida occulta. |
| 13 | 13 | supine | | ? | c7 | | 00/12 | 00/19 | 00/04 | | |
| 14 | 14 | supine | | f | 25–30 | 5′4.25<br>1.64m | 00/22 | 00/23 | 00/23 | 0 | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 15 | supine | | f | 45+ | | 02/07 | 02/14 | 06/20 | 0 | |
| 16 | 16 | supine | 7 nails | ? | 13–14 | | 00/16 | | 00/16 | | |
| 17 | 17 | supine | 1 nail | m | 30–35 | 5'5.25<br>1.66m | 02/28 | 01/29 | 01/32 | 0 | Bipartite inca bone. |
| 18 | 18 | supine | | ? | c7 | | 01/16 | 00/20 | 00/04 | | |
| 19 | 19 | supine | | f | adult | 5'7"<br>1.70m | | | | | Lesion on R femur, distal end. |
| 20 | 20 | supine | | m | 45+ | | 00/01 | 05/09 | 21/28 | 0 | |
| 21 | 21 | supine | | f | 35–40 | 4'11.75<br>1.52m | 03/08 | 00/12 | 00/12 | 0 | |
| 22 | 22 | supine | 1 nail | f | 30–35 | 5'3<br>1.60m | 03/11 | 00/12 | 03/17 | | Slight osteo-arthritis lumbar vertebra, sacrum and left wrist. Greenstick fracture of left radius. |
| 23 | 23 | supine | | f | 30–35 | 5'5"<br>1.65m | 05/24 | 05/29 | 05/32 | 0 | LC. |
| 24 | 24 | supine | | ? | 3–5 | | 01/17 | 00/20 | | | |
| 25 | 25 | supine | 2 iron strips<br>+ plate | ? | c12 | | 00/22 | 00/24 | 00/24 | 0 | |
| 26 | 26 | supine | 1 nail | f | 40+ | | 04/27 | 01/27 | 05/32 | 0 | Slight osteo-arthritis on cervical vertebrae. |
| 29 | 29 | supine | 1 nail | m | 45+ | 5'8.25<br>1.74m | | 06/19 | 11/31 | 6 | Slight osteo-arthritis on thoracic and lumbar vertebrae. Separate neural arch on final lumbar vertebra. |
| 30 | 30 | supine | | m | 45+ | | 03/12 | 08/24 | 10/32 | 1 | Slight osteo-arthritis on all vertebrae and thumbs. Fractured clavicle. ?Paget's disease. |
| 31 | 31 | supine | | ? | 5–6 | | | | | | |
| 32 | 32 | supine | | m | 35–40 | 5'6.25<br>1.69m | 06/27 | 03/28 | 05/32 | 0 | Right arm longer. Slight osteo-arthritis on many vertebrae and wrists. |
| 33 | 33 | supine | 2 nails | ? | 40+ | | 03/07 | 01/13 | 03/16 | | Osteo-arthritis on most vertebrae and at joints. Congenital fusion of elbow? |
| 34 | 34 | supine | 13+ nails | f | 20–25 | | 01/01 | 00/06 | 00/06 | | |
| 35 | 35 | | | m | 25–30 | | 01/16 | 00/24 | 00/24 | 0 | Separate neural arch on fourth lumbar vertebra. Metopic. Fractured ribs, clavicle, left tibia and fibula. |
| 36 | 36 | supine | 3 nails | ? | c12 | | 00/16 | 00/21 | 00/19 | 1 | |
| 37 | 37 | supine | | f | young adult | short | | | | | Inca bone. |
| 38 | 38 | supine | | ? | c2 | | 00/17 | 00/20 | | | |
| 39 | 39 | supine | | f | 20–25 | | 00/30 | 00/32 | 00/32 | 0 | |
| 40 | 40 | | | ? | 5–7 | | | | | | |
| 43 | 43 | supine | | ? | c10 | | 01/14 | 00/17 | 00/06 | | |
| 44 | 44 | supine | | | | | | | | | |

| Excav. Context (F) | Inven. Grave No. | Burial position | Comments | Sex | Age | Height (ft) (m) | Caries | Abcess | Loss | Lambdoid Wormians | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 45 | supine | | m | 40+ | 5′3.75<br>1.62m | 02/04 | 05/15 | 14/28 | 0 | Slight osteo-arthritis on lower cervical vertebrae. |
| 46 | 46 | prone | 1 nail | m | 40+ | 5′7.5<br>1.71m | 02/12 | 04/23 | 03/25 | | 1 sagittal wormian. Metopic. Slight osteo-arthritis on lumbar vertebrae. |
| 47 | 47 | supine | 1 nail | f | 40+ | 5′1.25<br>1.56m | 00/05 | 01/11 | 03/14 | 1 | Inca bone. Slight osteo-arthritis on cervical and thoracic vertebrae. |
| 48 | 48 | supine | | ? | c9 | | 00/24 | 00/24 | 00/12 | | |
| 49 | 49 | supine | 3 nails | f | 30–35 | 5′5.5<br>1.66m | 01/17 | 01/24 | 00/24 | | |
| 50 | 50 | supine | 1 nail | f | 17–20 | 5′5.25<br>1.66m | 00/11 | 00/14 | 00/14 | | |
| 51 | 51 | | | ? | c1½ | | 00/07 | 00/20 | | | |
| 52 | 52 | supine | | ? | c3 | | 00/14 | 00/20 | | 2 | 1 sagittal wormian. |
| 53 | 53 | supine | | f | 25–30 | 5′5.5<br>1.66m | 01/17 | 00/15 | 00/19 | 1 | 1 sagittal wormian. |
| 54 | 54 | supine | | | adult | | | | | | |
| 55 | 55 | supine | 1 nail | m | 25–30 | 5′9.5<br>1.76m | 02/13 | 00/13 | 01/14 | | |
| 56 | 56 | supine | | f | 20–25 | | | | | | |
| 56a | 56a | | | ? | 7–8 mo.i.u? | | | | | | |
| 57 | 57 | supine | 2 nails | f | 20–25 | 5′0.75<br>1.55m | 00/04 | 00/13 | 01/14 | 0 | |
| 58 | 58 | supine | 4 nails + coffin outline | ? | 45+ | | 00/04 | 00/04 | 11/15 | | |
| 59 | 59 | supine | 2 nails | f? | 30–35 | 5′3.75<br>1.62m | 04/21 | 01/26 | 01/27 | 1 | Inca bones. ?Cuts on skull. |
| 60 | 60 | supine | | | adult | | | | | | |
| 63 | 63 | supine | 3 nails | f | 30–35 | 5′1.75<br>1.57m | 02/13 | 00/15 | 01/16 | | Cleft neural arch on eleventh thoracic vertebra. |
| 64 | 64 | supine | | f? | 17–20 | | 00/25 | 00/08 | 00/28 | | |
| 65 | 65 | supine | | m | 25–30 | 5′9.25<br>1.76m | 00/31 | 00/31 | 00/32 | 1 | Cleft neural arch on atlas. |
| 66 | 66 | supine | | m | 30+ | 5′6″<br>1.68m | | | | 1 | Slight osteo-arthritis on mid-thoracic vertebrae. |
| 67 | 67 | supine | | f | 45+ | 4′11″<br>1.50m | 04/24 | 07/32 | 07/32 | 5 | |
| 68 | 68 | supine | | f | adult | 5′4″<br>1.62m | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 70 | supine | 3 nails | f | 20–25 | 4′10.25<br>1.48m | 00/01 | 00/07 | 00/08 | | |
| 71 | 71 | | | [m] | adult | | | | | | |
| 72 | 72 | supine | 1 nail | m | aged | 5′2.25<br>1.58m | | | 06/06 | 0 | Slight osteo-arthritis on some cervical and some lumbar vertebrae, left hip. |
| 73 | 73 | | | f | 30–35 | | 01/20 | 04/30 | 00/30 | 0 | |
| 74 | 74 | | | ? | c1¾ | | 00/20 | 00/20 | | | |
| 78 | 78 | supine | 2 nails | f | 45+ | | 02/06 | 02/16 | 15/31 | | Osteo-arthritis on cervical vertebrae, but C3 and C4 fused congenitally. |
| 79 | 79 | supine | | | adult | | | | | | |
| 88 | 88 | supine | 4 nails | f | 20–25 | 4′10.25<br>1.48m | 00/29 | 00/30 | 02/32 | 0 | |
| 105 | 105 | | | ? | 2–4 | | | | | | |
| 106 | 106 | supine | 1 nail | m | 45+ | 5′7″<br>1.71m | 02/09 | 05/14 | 13/23 | 1 | 2 coronal wormians. Osteo-arthritis on cervical and lumbar vertebrae. |
| 107 | 107 | supine | | ? | 7–8 | | 02/16 | 00/24 | 00/12 | | |
| 150 | 150 | supine | 1 nail | m | 45+ | 5′8″<br>1.73m | 01/16 | 01/20 | 03/23 | 0 | Left fibula fractured. |
| 151 | 151 | supine | 1 nail | f | 40–45 | 5′1″<br>1.55m | 05/24 | 01/27 | 01/31 | 0 | |
| 152 | 152 | supine | | m | 30–35 | 5′7.75<br>1.72m | 04/12 | 02/20 | 08/27 | 5+ | Metopic. Slight osteo-arthritis on lower thoracic vertebrae. Infective arthritis of right big toe. |
| 153 | 153 | supine | | m | 45+ | 5′3.75<br>1.62m | 03/20 | 03/24 | 09/32 | 1 | Right arm longer. Hole in sternum. Osteo-arthritis on several vertebrae and ankles. |
| 154 | 154 | supine | | | | | | | | | |
| 155 | 155 | supine | late RB pot sherd | f? | 30–35 | 5′4.5<br>1.64m | 01/30 | 00/30 | 00/30 | 0 | |
| 157 | 157 | supine | 1 nail | f | 25+ | 5′0<br>1.53m | | | | 0 | Metopic. ?Healed tuberculosis of spine. |
| 172 | 172 | supine | | f | adult | 4′11.75<br>1.52m | | | | | |
| 174 | 174 | supine | | ? | adult | | | | | | |
| 175 | 175 | supine | | m | 20–25 | 5′5.5<br>1.66m | 02/28 | 00/30 | 02/32 | 0 | |
| 176 | 176 | supine | | f | 20–25 | 4′11.5<br>1.51m | 00/05 | 00/06 | 00/06 | 1+ | |
| 177 | 177 | supine | 2 nails | f | 25–30 | 5′1.5<br>1.56m | | | | | |
| 178 | 178 | supine | 1 nail | ? | 15–18 | | 00/22 | 00/28 | 00/28 | | |
| 179 | 179 | supine | | ? | 13–14 | | 00/28 | 00/28 | 00/28 | 6 | Cleft neural arch on fifth lumbar vertebra. Sacral spina bifida occulta. |

GRAVES EXCAVATED IN 1981

| Excav. Context (F) | Inven. Grave No. | Burial position | Comments | Sex | Age | Height (ft) (m) | Caries | Abcess | Loss | Lambdoid Wormians | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 189 | crouched | above graves F203 & 199 | ? | 3–4 | | | | | – | LC |
| 4 | 190 | supine | 1 nail, 1 pot sherd | m | 18–22 | 5'6" 1.68m | | | | 0 | VC. Extra upper incisors. Extra cusp on upper left first molar. 6th lumbar vertebra. |
| 5 | 191 | supine | | ? | c3 | | 01/28 | 00/32 | 00/32 | 0 | LC. Osteoporosis on parietals. |
| 6 | 192 | supine | | f | 25–30 | | 01/23 | 00/24 | 04/24 | 0 | Skull. Dentigerous cyst in upper L maxilla. |
| 7 | 193 | supine | | | adult | | | | | | |
| 8 | 194 | | disturbed grave? | ? | 45+ | | 00/02 | 01/11 | 05/16 | – | Lower mandible. |
| 9 | 195 | supine | E–W | f | 35–40 | 5'5.25 1.66m | 07/22 | 05/31 | 01/32 | 0 | VC |
| 10 | 196 | supine | | f | 20–25 | 5'7" 1.70m | 03/25 | 02/30 | 00/32 | 0 | VC |
| 11 | 197 | supine | bone comb under head | f | 40+ | 4'11.75 1.52m | 03/21 | 07/22 | 07/32 | 3 | VC. 2 parietal wormian bones. |
| 13 | 198 | supine | beyond excavation | | | | | | | | |
| 16 | 199 | supine | | ? | c3 | | | | | 0 | LC. Rear half of sagittal suture closed. |
| 17 | 200 | supine | | ? | 1–2 | | | | | – | Parts skull, legs. |
| 18 | 201 | supine | | m | 16–20 | | 00/29 | 00/32 | 00/32 | 0 | VC. Possibily a sacralised 6th lumbar vertebra. |
| 19 | 202 | supine | coffin? | f | 14–15 | | 04/27 | 00/23 | 00/28 | 19 | LC. 1 coronal wormian bone. Fractured R clavicle. R upper M3 not developed. |
| 20 | 203 | supine | | ? | 2–4 | | | | | 0 | LC |
| 21 | 204 | supine | coffin? | ? | 5–6 | | 00/14 | 00/20 | 00/20 | – | LC. Sagittal suture almost entirely closed. |
| 22 | 205 | supine | | ? | 10–11 | | 01/26 | 00/27 | 00/28 | 0 | VC. Some osteoporosis on skull. Anomalous fusion of R femoral head. |
| 23 | 206 | supine | | m | 30–35 | 5'3 1.60m | 04/31 | 01/27 | 00/32 | 2 | LC |
| 24 | 207 | supine | | ? | 4–5 | | | | | 0 | LC. Inca bone. Open metopic suture. |
| 26 | 208 | supine | | m | 40+ | 5'6" 1.68m | 04/16 | 03/18 | 09/31 | 0 | VC |
| 27 | 209 | supine | | ? | 7–8 | | | | | 0 | Skull, arms. |
| 28 | 210 | supine | | m | 45+ | 5'5" 1.65m | 02/29 | 03/32 | 00/32 | 0 | Skull, part body. Osteoma on frontal. Fractured R radius. Sacrum and pelvis joined. |
| 29 | 211 | supine | | ? | 1–3 | | | | | – | Parts skull, legs. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 212 | supine | | ? | 11–13 | | 00/26 | 00/28 | 00/28 | 1 | LC. Extra cusps on upper M 1s. |
| 31 | 213 | supine | | f | 17–20 | 4′11.75<br>1.52m | 00/30 | 00/32 | 00/32 | 0 | VC |
| 32 | 214 | supine | | ? | c7 | | | | | 7+ | Skull. Extra cusp on upper R M1. |
| 33 | 215 | supine | | ? | 5–6 | | 00/22 | 00/24 | 00/24 | 0 | LC |
| 34 | 216 | supine | | f | 17–20 | 5′5.5<br>1.67m | 01/28 | 00/31 | 01/32 | 0 | VC. Extra cusps on lower M 3s. Separate neural arch on 5th lumber vertebra. |
| 36 | 217 | supine | | f | 35–40 | small | 01/13 | 04/22 | 06/27 | 0 | LC. Open metopic suture. |
| 37 | 218 | supine | | f | adult | | | | | 0 | Part skull, thorax. |
| 38 | 219 | supine | | ? | 2–3 | | | | | – | Skull, part legs. |
| 39 | 220 | supine | | ? | c4 | | | | | 2+ | LC |
| 40 | 221 | | in section only | | adult? | | | | | | |
| 41 | 222 | supine | | ? | 2–2½ | | | | | – | Skull, part body. |
| 42 | 223 | supine | | ? | ½–2 | | | | | – | Skull, some limbs. |
| 43 | 224 | supine | | f | 20–25 | 5′1.25<br>1.55m | 00/02 | 00/03 | 00/03 | 1 | LC |
| 44 | 225 | supine | 6 nails | m | 20–25 | 5′4″<br>1.63m | 01/23 | 00/28 | 00/28 | 8+ | LC. Inca bone. Cleft neural arch on 5th lumbar vertebra. Sacral spina bifida occulta. All M 3s not developed. |
| 45 | 226 | supine | | ? | ½–2 | | | | | – | Femur. |
| 46 | 227 | supine | 2 nails | m | adult | 5′4″<br>1.63m | | | | – | Part skull, limbs. |
| 47 | 228 | supine | | ? | c11 | | 03/22 | 00/24 | 00/28 | 0 | LC. Very bowed femora. |
| 48 | 229 | supine | | m | 30–35 | 5′6.75<br>1.69m | 04/09 | 00/30 | 02/32 | 0 | VC. 6th lumbar vertebra. Lesion on R tibia |
| 49 | 230 | supine | | ? | c1½ | | | | | – | LC |
| 50 | 231 | supine | | ? | 2½–3 | | | | | 5+ | LC. One parietal wormian bone. Open metopic suture. |
| 51 | 232 | supine | traces of wood? | ? | 13–15 | | 02/21 | 00/27 | 00/27 | 0? | LC. Upper L M 3 not developed. Fractured clavicle. |
| 52 | 233 | supine | | ? | 5–7 | | | | | 10+ | LC |
| 53 | 234 | supine | | ? | 6–8 | | | | | – | LC |
| 54 | 235 | supine | 4 nails | f | 20–23 | 4′10.5<br>1.49m | 00/18 | 00/28 | 00/28 | 0 | VC |
| 55 | 236 | supine | | ? | 3–4 | | | | | – | LC |
| 56 | 237 | supine | | | | | | | | | |
| 57 | 238 | supine | 23 nails, 1 Fe plate with 4 nails | f | 35–40 | 5′0.25 | 01/20 | 02/27 | 05/32 | 0 | LC |
| 58 | 239 | supine | | m | 45+ | 5′5.25<br>1.66m | 06/28 | 01/31 | 01/31 | 0 | LC. L 5th finger bones fused. |
| 59 | 240 | supine | 3 nails | ? | 15–20 | | 00/22 | 00/30 | 00/30 | 13 | LC. 1 coronal wormian bone. Extra cusps |

| Excav. Context (F) | Inven. Grave No. | Burial position | Comments | Sex | Age | Height (ft) (m) | Caries | Abcess | Loss | Lambdoid Wormians | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | on lower M 3s. 5th lumbar vertebra partially sacralised. |
| 60 | 241 | supine | | | | | | | | | |
| 62 | 242 | supine | | m | 45+ | 5′1.5<br>1.56m | 07/20 | 07/24 | 05/30 | 4 | VC. 6th lumbar vertebra. |
| 63 | 243 | | | ? | 3–6 months | | | | | – | Parts skull, legs. |
| 64 | 244 | supine | 1 nail | f | 25–30 | 5′1.25<br>1.55m | 05/29 | 01/32 | 00/32 | – | VC |
| 66 | 245 | supine | E–W | ? | 11–13 | | | | | – | Part. |
| 67 | 246 | prone | | ? | 9–10 | | 00/18 | 00/24 | 00/24 | 5+ | LC. Inca bone. Open metopic suture. |
| 71 | | | | ? | c1½ | | | | | – | Skull, part legs. |
| 73 | 248 | supine | 1 nail | m | 45+ | 5′4.75<br>1.65m | 00/26 | 01/31 | 02/32 | 0 | VC. Upper L canine not erupted. Open suture. Fractured fibula. |
| 74 | 249 | supine | 2 nails | ? | 3–4 | | 00/13 | 00/20 | 00/20 | – | LC |
| 75 | 250 | supine | | m | 40+ | 5′6.75 | 04/30 | 01/30 | 02/32 | 1 | VC. Upper M 3s have extra large roots. |
| 94 | 251 | supine | | ? | 1–1½ | | | | | – | LC |
| 95 | 252 | supine | | f | 40–45 | 5′2.5<br>1.59m | 05/22 | 00/24 | 06/26 | 0 | LC |
| 97 | 253 | supine | | ? | 1½ | | | | | 0 | LC |
| 101 | 254 | supine | | m | 30–35 | 5′6.25<br>1.68m | 00/23 | 00/26 | 00/26 | c32 | VC. 1 coronal wormian bone. Cleft neural arch on 6th lumbar vertebra, which is also sacralised. All M 3s not developed possibly also upper R 2nd incisor and canine. |
| 102 | 255 | supine | | ? | 7–9 | | | | | 5 | LC |
| 106 | 256 | supine | | m | 20–24 | 5′6″<br>1.68m | 00/31 | 00/31 | 00/31 | 5+ | VC. Partially separate neural arch on 5th lumbar vertebra. |
| 107 | 257 | supine | 6 nails | m | 35–40 | 5′4.25<br>1.63m | 02/30 | 00/29 | 00/31 | 0 | VC |
| 108 | 258 | supine | | m | 45+ | 5′7″<br>1.70m | 00/16 | 06/23 | 07/30 | 0 | VC. Osteomata on skull. |
| 109 | 259 | supine | | ?f | 30+ | | | | | 6+ | Parts. 2 or 3 sagittal wormians. |
| 110 | 260 | supine | | m | 45+ | 5′6.75<br>1.69m | 02/13 | 07/24 | 09/31 | 0 | VC. Partially sacralised 6 lumbar vertebra. Fractured R clavicle. |
| 111 | 261 | supine | | m | 35–40 | 5′5.75<br>1.65m | 03/24 | 05/30 | 03/32 | 11 | LC. Inca bone. Open metopic suture. Reduced upper R 2nd incisor. |
| 119 | 262 | supine | | ? | 3–4 | | | | | 2+ | Skull, limbs. |
| 120 | 263 | supine | coffin outline | m | 45+ | 5′9.75<br>1.77m | 01/08 | 05/18 | 10/30 | 1 | VC. 1+ sagittal wormian bone. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 122 | 264 | supine | | m | 45+ | 5'5.75<br>1.67m | 02/11 | 05/24 | 09/32 | 4 | LC |
| 126 | 265 | supine | 2 nails | m | 17–20 | 5'7.5<br>1.71m | 00/27 | 00/32 | 00/32 | 4 | VC. Sacral spina bifida occulta. |
| 127 | 266 | supine | | ? | c1½ | | | | | ? | Skull, limbs. 1+ sagittal wormian bones.<br>Open metopic suture. |
| 128 | 267 | supine | | ? | 2½–3 | | | | | – | |
| 129 | 268 | supine | | ? | 1½–3 | | | | | | Skull, some limbs. |
| 130 | 269 | supine | | ? | c4 | | | | | 3 | Skull, limbs. |
| 131 | 270 | supine | | f | 40+ | 5'.05<br>1.53m | 03/12 | 05/20 | 07/27 | 4 | LC<br>LC. 6th lumbar vertebra. |
| 147 | 271 | supine | | ? | adult | | | | | – | Skull. |
| 148 | 272 | supine | | ? | adult | | | | | – | Skull. |
| 149 | 273 | supine | | ? | 2–4 | | | | | 1+ | Skull, limbs. |
| 152 | 274 | supine | | m | 45+ | 5'2"<br>1.57m | 03/23 | 00/23 | 07/30 | 2+ | LC. Fractured fibula. |
| 153 | 275 | supine | | f | 20–25 | 5'1.25<br>1.55m | 01/30 | 00/32 | 00/32 | 1 | VC. Final lumbar vertebra sacralised.<br>Asterionic ossicle. |

## THE IRONWORK (1972 and 1981)

All iron objects recovered were in graves, and all may have come from coffins. The alkaline soil which had preserved the human remains so well caused heavy corrosion of all iron objects. Although larger objects survived, very small studs such as hobnails may have decayed beyond recognition.

### THE COFFIN FITTINGS

Only four of those graves which appeared to contain coffins revealed any coffin fittings. All were of iron and, like the nails, may mostly have served to hold the coffin-planks together, as traces of mineralised wood adhering to each item suggested. Perhaps the most important fittings are two small, decorative plates (Fig. 6, Nos. 1 and 2) from separate coffins and each originally attached by two nails. The traces of wood on the underside of each item did not indicate whether the plate was nailed across or following the grain of the coffin-planks. Both came from graves excavated in 1972 in the SE. corner of the cemetery. A third example from the Upper Thames Valley was recovered from an inhumation grave at Radley in 1984.[20]

A third grave excavated in 1972 included two curved iron plates (Fig. 6, Nos. 3 and 4) and a curved hook or catch (No. 5). The hook retained mineralised wood on all four sides, the grain running across the edges of the upper part of the object below the eye. Traces of a mineralised substance were more prevalent on the outside than the inside of the item but the remains were too poorly preserved to identify the direction of the grain. All three pieces may be from the same iron-bound wooden object, perhaps a small chest.

In 1981 the excavation of the SW. corner of the cemetery revealed only one grave (F57) with any ironwork except nails; this contained a cramp and a large plate with the remains of four nails (Fig. 6, No. 7). Nailed across the grain, the plate was almost certainly used to hold planking together. The cramp (Fig. 6, No. 6) presumably acted as a repair to hold coffin-boards together, as Clarke demonstrated for a similar piece at Lankhills.[21]

*Descriptions* (Fig. 6)

1. Originally some 90mm. × 43mm. Traces of mineralised wood on the underside preserved between the plate and each of the nail shank stubs. Heavily corroded. Grave 88 (1972).
2. Originally some 88mm. × 26mm. Slight traces of mineralised wood on the underside between the plate and the nail shank stubs. Heavily corroded. Grave 22 (1972).
3. Curved plate some 28mm. wide with nail-stub in straight end. Other end broken. Grave 154 (1972).
4. Flat plate with beginnings of a curve at either broken end. Same width as No. 3 above. Part of same? Same provenance.
5. Hook or catch formed from a single thin strip. Traces of wood (see discussion above). Same provenance.
6. Cramp? Traces of wood on legs. Grave F57 (1981).
7. Plate with four nails. Traces of mineralised wood on underside around nail shanks indicate that this plate was nailed across the grain, presumably cramping two planks together. Grave F57 (1981).

### THE COFFIN NAILS

Many nails were heavily corroded and many survived only as fragments of stem. In the assemblage recovered in 1981, 43 nail-heads represented 2 general types. Thirty-nine had roundish heads at right-angles to the stem and four had hammer-heads (Table 2). Numerous pieces of stem and points could not be categorised. In every instance the number of nails quoted refers to the minimum number of nails present. In several graves nails may have corroded away completely. Corrosion products preserved traces of wood on several nail shanks for 2–3cm. below the head. In every case the wood grain crossed the shanks at right-angles. Four of the 43 nails were clenched. The nails from grave F57 illustrated in Fig. 6, No. 8, are representative of the range within the assemblage recovered. The largest nail was over 90mm. long; the shortest could not be measured because of numerous broken points. No nail was small or fine enough to be considered a hobnail from any of the graves excavated in 1972 or 1981.

[20] R.A. Chambers, *Oxford Journal of Archaeology*, forthcoming.
[21] G. Clarke, *Pre-Roman and Roman Winchester. Part II. The Roman Cemetery at Lankhills* (1979), 340.

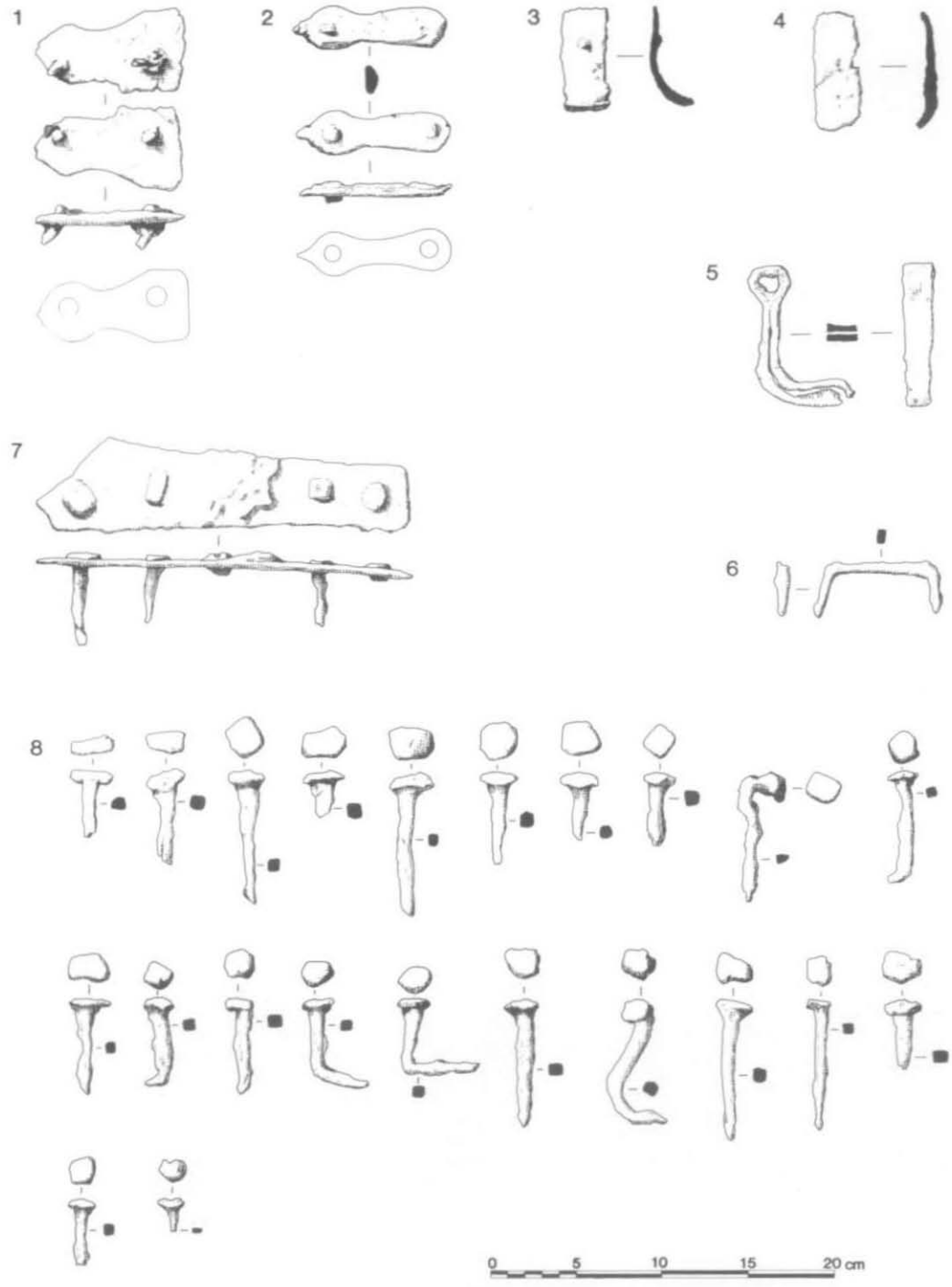


Fig. 6. Iron Objects.

TABLE 2
The Coffin Nail Heads

Those graves which yielded only nail shank fragments have been excluded from this table, and Table 3 should be consulted for further information. Clenched nails are those nails which have had protruding ends bent over.

| Year | Excav. Context No. (F) | Inventory Grave No. | Total Nail Heads | Roundish Heads | Hammer | Clenched Nails |
|---|---|---|---|---|---|---|
| 1972 | 3 | 3 | 3 | 3 | | 2 |
| | 4 | 4 | 2 | 2 | 2 | 2 |
| | 10 | 10 | 3 | 3 | | 1 |
| | 17 | 17 | 1 | | 1 | 1 |
| | 29 | 29 | 1 | 1 | | 1 |
| | 35 | 35 | 12 | 5 | 2 | 4 |
| | 49 | 49 | 4 | | 2 | 1 |
| | 55 | 55 | 1 | 1 | | 1 |
| | 59 | 59 | 2 | 2 | | |
| | 63 | 63 | 3 | 2 | 1 | 1 |
| | 68 | 68 | 1 | | 1 | |
| | 70 | 70 | 1 | | 1 | 1 |
| | 78 | 78 | 2 | 1 | 1 | |
| | 88 | 88 | 2 | 1 | 1 | |
| | 106 | 106 | 1 | 1 | | |
| | 151 | 151 | 1 | 1 | | |
| | 154 | 154 | 2 | 1 | 1 | 1 |
| 1981 | 4 | 16 | 1 | 1 | | |
| | 44 | 3 | 7 | 6 | 1 | 1 |
| | 46 | 4 | 1 | 1 | | 1 |
| | 48 | 5 | 2 | 2 | | 1 |
| | 54 | 7 | 2 | | 2 | |
| | 57 | 10 | 19 | 19 | | |
| | 59 | 30 | 1 | 1 | | 1 |
| | 64 | 8 | 1 | 1 | | 1 |
| | 73 | 19 | 1 | 1 | | |
| | 74 | 20 | 2 | 2 | | |
| | 107 | 50 | 4 | 4 | | |
| | 126 | 58 | 2 | 1 | 1 | |

## COFFIN SHAPE, COFFIN LIDS AND COFFIN CONSTRUCTION

No conclusive evidence for coffin shape was recovered from Queenford Farm. Occasionally coffins were outlined as soil marks or differential fillings within and around the container. In no case was the evidence sufficiently well-preserved to indicate whether any of the coffins were tapered or rectangular. It is possible that both shapes were employed, as was possibly the case at Lankhills, Winchester. As at Lankhills, there was insufficient evidence to indicate whether any of the coffins had lids as has been argued for the Roman-period coffins at Mucking.[22]

The number of nails varied widely: while in grave F57 there were 23 nails and a further 4 nails attached to an iron plate, 25 graves yielded less than 3 nails. In those graves which contained only a few nails, one or two often lay within the skeleton, suggesting that the nails had fallen there when the coffin sides decayed or collapsed, and also the possible presence of lids secured with nails. In several graves the head had been able to roll away from the shoulders or the jaw to fall onto the chest, both suggesting bodies decaying in a void. The coincidence of nails and bodies decaying in a void is shown in Table 3.

[22] M.U. Jones and W.T. Jones, 'The Crop-Mark Sites at Mucking, Essex, England', in R. Bruce-Mitford (ed), *Recent Archaeological Excavations in Europe* (1975), 133–87.

TABLE 3
The Evidence for Burial in Coffins

(The number of iron nails present represents the minimum number of nails within each grave filling)

| Year | Excav. Context No. (F) | Inventory Grave No. | Iron Nails | Jaw on Chest | Comments |
|---|---|---|---|---|---|
| 1972 | 3 | 3 | 3 | | |
| | 4 | 4 | 2 | | |
| | 10 | 10 | 3 | x | |
| | 12 | 12 | 1 | | |
| | 16 | 16 | 7 | | |
| | 17 | 17 | 1 | x | |
| | 22 | 22 | 1 | | |
| | 25 | 25 | 2 | | 2 iron strips with nails<br>1 shaped iron plate |
| | 29 | 29 | 1 | | |
| | 33 | 33 | 2 | | |
| | 35 | 35 | 13 | | |
| | 36 | 36 | 3 | | |
| | 46 | 46 | 1 | | |
| | 47 | 47 | 1 | | |
| | 49 | 49 | 3 | | |
| | 50 | 50 | 1 | | |
| | 55 | 55 | 1 | x | |
| | 57 | 57 | 2 | | |
| | 58 | 58 | 2 | | |
| | 59 | 59 | 2 | | |
| | 63 | 63 | 3 | | |
| | 68 | 68 | 1 | | |
| | 70 | 70 | 3 | | |
| | 72 | 72 | 1 | | |
| | 78 | 78 | 2 | x | |
| | 88 | 88 | 4 | | head rolled away from neck<br>iron strip with nails |
| | 106 | 106 | 1 | | head rolled to side |
| | 150 | 150 | | | metal object marked on plan |
| | 151 | 151 | 1 | | |
| | 154 | 154 | 2 | | iron plate with nails<br>iron hook |
| | 157 | 157 | 1 | | skull rolled away from shoulders, spine bent, skeleton collapsed within coffin. |
| | 177 | 177 | 2 | | |
| | 178 | 178 | 1 | | |
| 1981 | 4 | 190 | 1 | | |
| | 19 | 202 | | x | |
| | 44 | 225 | 6 | | |
| | 46 | 227 | 2 | | |
| | 51 | 232 | | x | outline of coffin |
| | 54 | 235 | 4 | | |
| | 57 | 238 | 23 | | iron plate with 4 nails |
| | 59 | 240 | 3 | | |
| | 64 | 244 | 1 | | |
| | 73 | 248 | 1 | | |
| | 84 | 249 | 2 | | |
| | 107 | 257 | 6 | | |
| | 120 | 263 | | | outline of coffin |
| | 126 | 265 | 2 | | |

## THE RADIOCARBON DATES with comments by D. HADDON-REECE

Five radiocarbon dates were obtained for this cemetery, in every case from human bone (Table 4 below): one from a grave in the SE. corner of the cemetery excavated in 1972, and four more from graves excavated in 1981 (see Fig. 3). It is still uncertain whether the collagen in bone may become contaminated with fossil or later C14 while buried. Such contamination, if it does exist, may vary between samples from the same locality and is not scientifically measurable.

TABLE 4
The Uncorrected Radiocarbon Dates

| Year | Context No. (F) | Inventory Grave No. | Uncorrected Date | Harwell Reference |
|---|---|---|---|---|
| 1972 | | N/A | 420 ± 100 yrs ad. | |
| 1981 | F34 | 216 | 470 ± 70 yrs ad. | HAR – 5325 |
| | F48 | 229 | 400 ± 70 yrs ad. | HAR – 5350 |
| | F64 | 244 | 520 ± 70 yrs ad. | HAR – 5324 |
| | F75 | 250 | 400 ± 80 yrs ad. | HAR – 5351 |

There is no evidence to show any real difference in radiocarbon date between the above determinations. All five dates can be combined using the statistics developed by Topping[23] and by Ward and Wilson[24] to give a mean radiocarbon date of AD (uncalibrated) 445 ± 40 years.

This group mean date can be calibrated using the Stuiver and Pearson[25] curve to give a date range of:
at 1 sigma (62 per cent confidence level): AD 530–550
at 2 sigma (93 per cent confidence level): AD 430–630

## THE BONE COMB (Fig. 7)

A composite, double-sided, rectangular bone comb with concave ends and incised dot and circle decoration. The whole is held together with 6 iron rivets. From grave F11. This style of comb became popular in the late Roman period. At Lankhills 12 of 13 combs of this type came from graves later than *c.* 365 AD, and in particular Grave 288 dated 390–410 AD. Galloway has suggested that decoration on these mass-produced late Roman combs may have been added later at the request of the purchaser.[26] There need not be any connection between this superficial decoration and a manufacturing typology.

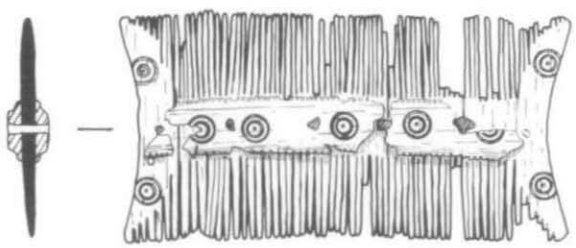

Fig. 7. The composite bone comb from grave F11. *Scale 1:2.*

[23] C. Hall, *Errors of Observation and Their Treatment* (1955).

[24] G.K. Ward and S.R. Wilson, 'Procedures for Comparing and Combining Radiocarbon Age Determinations: a Critique', *Archaeometry*, xx.1 (1978), 19–32.

[25] M. Stuiver and G. Pearson, 'High Precision Calibration of the Radiocarbon Time Scale, AD 1950–500 BC', *Radicarbon*, xxviii (1986), 2B.

[26] P. Galloway in Clarke op. cit. note 21, 247–8.

THE POTTERY identified by S. GREEN

In 1981 occasional sherds of Romano-British pottery occurred in the topsoil and disturbed subsoil. Fieldwalking revealed a thin scatter over the whole of the surrounding area.

The collective results from 1972 and 1981 provided eight sherds from the filling of the cemetery enclosure ditches F12 and F25/D2 and the ditch D1 (Fig. 3). Four sherds represented Oxford kiln product red colour-coated bowls including Young's type CIII (Fig. 8).[27] A white colour-coated flagon rim, Young's type WC1,[28] and a mortarium sherd in a white fabric were also present. All were heavily abraided and probably residual. The seventh sherd, again heavily abraided, was from a grey-ware vessel. The eighth sherd represented a substantial part of an unweathered dog-bowl rim. The assemblage is no earlier than the second half of the 3rd century, and the dog-bowl rim need be no earlier than the 1st half of the 4th century AD. From the 1981 excavations, two graves each produced one small sherd: a 3rd-century white colour-coated mortarium rim in grave F110, and an unabraided shell-gritted rim, which need not be later than the 1st century AD, in grave F4. From the 1972 excavations, grave 155 provided a single sherd of Oxford product colour-coat of *c.* 200–400 AD.

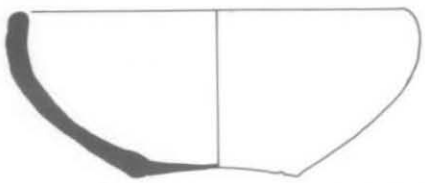

Fig. 8. Oxford product colour-coated bowl. *Scale 1:2.*

TILE

Several heavily weathered fragments of red clay tile were recovered from the cemetery enclosure ditches F12 and F25.

THE ANIMAL BONES RECOVERED IN 1981 by B. WILSON

TABLE 5
Frequency of Animal Bones in Romano-British Features

| Feature | 12&25 | 15 | 69–70 | 103 | Total |
|---|---|---|---|---|---|
| Cattle | 1 | – | – | 1 | 2 |
| Sheep | 1 | – | * | – | 1* |
| Pig | 1 | – | 1 | – | 2 |
| Horse | – | 1 | – | – | 1 |
| Dog | 1 | – | – | 2 | 3 |
| Water Vole | 1 | – | – | – | 1 |
| Goose (domestic?) | 3 | – | – | – | 3 |
| Total | 8 | 1 | 1 | 3 | 13 |
| unidentified | 5 | 1 | 1 | 3 | 10 |

(* 10 bones from a single sheep skeleton)

The species identifications are similar to those obtained elsewhere for the Romano-British period. There was a group of partly articulated bones from a sheep burial F69 inserted into the filling of the cemetery boundary ditch F12/25. The sheep's mandible is at stage G[29] and MWS 38.[30] Distal width of the tibia is 24mm. This information is not inconsistent with Roman or later data for sheep. The goose bones are the articulating elements of a wing.

[27] C.J. Young, *Oxfordshire Roman Pottery* (B.A.R. 43, 1977), 127 and 174.
[28] Ibid. 120–1.
[29] S. Payne, 'Kill-off Patterns in Sheep and Goats; the Mandibles from Asran Kale', *Anatolian Studies*, xxiii (1973), 281–303.
[30] A. Grant, 'The Use of Tooth Wear as a Guide to the Age of Animals', in B. Cunliffe, *Excavations at Portchester Castle, I: Roman* (1975), 378–408.

## THE HUMAN REMAINS EXCAVATED IN 1981 by M. HARMAN

The human remains excavated in 1972 have been examined and the results published elsewhere.[31]

All of the skeletons recovered in 1981 were examined. Most were in good condition, though many of the bones were broken and some adult and child skeletons were poorly preserved.

The sex of adult skeletons was decided where possible from the size of the bones and the conformation of the skull and the pelvic girdle, using the criteria recommended by Ferembach, Schwidetzky and Stoukal.[32] Their charts were also used in assessing the age of children from tooth eruption and epiphyseal fusion and the lengths of the diaphyses. The age of adults was assessed from the degree of tooth wear, using Miles's chart.[33] The height of adults was calculated using the regression formula of Trotter and Gleser as published by Brothwell.[34] Dental health was recorded using the formula suggested by Brothwell,[35] and the presence of any anomalies and any evidence of injury or disease was noted.

Details of individual skeletons are given in Table 1. A stray skeleton from the 1972 excavation on the same cemetery has recently come to light and is appended to Table 8, details of others having been published elsewhere.[36] This extra skeleton (No. 23) fortuitously brings the number examined from each excavation to 82: 164 people in all. The results of the earlier rescue excavation are used for comparison with the findings from the more recent one in the following conclusions.

Table 6 shows the distribution of individuals according to age and sex and the results of both excavations combined. While adult females outnumbered males in the 1972 group, the situation is reversed in similar proportions in the 1981 group; there is no apparent segregation according to age or sex in the spatial distribution of the burials, and the inequality on both cases is probably the result of having a relatively small sample of the total population buried. The totals for both groups combined show more nearly equal numbers of females and males; the number of each over the age of 20 and excluding the vague category 'adult' is exactly equal (40), of which just over half of the men and less than one third of the women lived beyond the age of forty – some of them probably well beyond it. Some of the deaths in younger women may be associated with difficulties in childbirth, although there are many other possibilities.

There is a much larger number of children in the 1981 than in the 1972 group, and altogether they represent just over a third of the total number of skeletons recovered. Table 6 suggests that more children died under the age of 5 years than in the subsequent 10 years; there are only two children of less than a year (though two more which were poorly preserved could have been between $\frac{1}{2}$ and 2 years old). One of the latter children was new-born, possibly premature and buried with an adult female. Infant mortality may have been considerably higher than the above would suggest, but the numbers of infant burials on occupation sites such as Mount Farm, Berinsfield[37] and the villa at Barton Court Farm, Abingdon[38] demonstrate that this 'lost' section of the population group rarely got as far as the cemetery.

The average height of 21 men was 5ft. 5½ins. (1.66m.) and of 12 women was 5ft. 2ins. (1.57m.). As in the 1972 group, there were several very short women, four less than 5ft. (1.52m.) and two more of 5ft.0¼ins. (1.53m.) and 5ft. 0½ins. (1.57m.).

There were 29 people with lambdoid wormian bones in 58 instances with that part of the skull present. Other cranial abnormalities were less common: three cases of single coronal wormian bones (F19, F59 and F101), five cases of sagittal wormian bones (F11, F50, F109, F120, and F127), one asterionic ossicle (F153), five cases of inca bones (F24, F44, F67, F101 and F111) and seven cases of an open metopic structure (F24, F36, F50, F67, F73, F111 and F127). Vertebral anomalies were not common: there were two examples of people with a separate neural arch on the fifth lumbar vertebra (F34 and F106); two with spina bifida occulta (F44 and F126), the first of these showing a cleft neural arch on the fifth lumbar vertebra also; three people had six lumbar vertebrae (F48, F62 and F131); in addition there is a small group of people with a complex lower lumbar/sacral area: four people (F4, F18, F101 and F110) have sixth lumbar vertebrae which are wholly or partially sacralised, one of them also showing a cleft neural arch: F59 has the fifth lumbar vertebra articulating with the sacrum on the left lateral process, and

[31] M. Harman, T.I. Molleson and J.L. Price, 'Burials, Bodies and Beheadings in Romano-British and Anglo-Saxon Cemeteries', *Bulletin of the British Museum of Natural History (Geology)*, xxxv (3), (1981), 145–188.

[32] D. Ferembach, I. Schwidetsky and M. Stoukal, 'Recommendations for Age and Sex Diagnoses of Skeletons', *Journal of Human Evolution*, ix (1980), 517–549.

[33] A.E.W. Miles, 'Assessment of the Ages of a Population of Anglo-Saxons from their Dentitions', *Proceedings of the Royal Society of Medicine*, lv (1962), 881–6.

[34] D.R. Brothwell, *Digging up Bones* (1981), 101.

[35] Ibid. 53.

[36] Harman et al. op. cit. note 31.

[37] G. Lambrick, pers. comm.

[38] D. Miles, *Archaeology at Barton Court Farm, Abingdon, Oxon.* (C.B.A. Research Rep. 50, 1984).

F153 had a sacralised final lumbar vertebra, but though this appears to be a sixth lumbar vertebra it is probably really the fifth, as there appear to be only eleven thoracic vertebrae, suggesting the absence of a pair of ribs, and the twelfth thoracic assuming the appearance of an extra lumbar vertebra.

A group of individuals who have one of these anomalies may well be related: the probability varies according to the type of anomaly, and is increased if more than one is shared by several individuals. F19, F59 and F101 all have multiple lambdoid wormian bones and a coronal wormian bone; coronal wormian bones are also recorded in two of the 1971 group, F56 and F106, the former also having multiple lambdoid wormian bones. No coronal wormian bones have been recorded from the other four contemporary cemeteries studied in the Oxford area. F44 and F101 both have multiple lambdoid wormian bones and an inca bone, the latter being a complex of small bones in F101; F44 has a sacral spina bifida occulta and a cleft neural arch on the fifth lumbar vertebra, and F101 has a cleft neural arch on the sacralised sixth lumbar vertebra; neither of these men have developed wisdom teeth, though F44 certainly has room for them in the jaw. F67 and F111 both have multiple wormian bones, an inca bone and an open metopic suture. Apart from F19 and F59, none of these people who share a particular group of anomalies is buried close to another.

Five people have extra cusps on some teeth: F4 on the upper left molar, F32 on the upper right first molar and F30 on both upper first molars and F34 and F59 on both lower third molars. F4 also has extra upper incisors, the third one partially erupted, lying obliquely behind the normal incisors, while the right one has erupted in the usual plane behind the first incisor. F73 has the upper left canine unerupted and visible lying obliquely in the maxilla above and behind the other front teeth. F101 has no upper right second incisor or canine, and it seems more likely that they have not developed than that they have been lost antemortem. F75 has large crowns on the upper third molars and very enlarged roots, each of the three normal roots being double but not quite bifid and partially joined to each other.

Table 7 summarises the state of dental health: it is similar to the situation in the 1972 group except for more caries in the youngest age group and far fewer teeth lost in the oldest age group.

Almost every individual over the age of 30 has some evidence of osteo-arthritis in parts of the spine, F11, a female of over 40 years, being the only one with no evidence in a fairly complete vertebral column, unusual in one of that age. In most cases some of the cervical vertebrae, the lower thoracic vertebrae and some of the lumber vertebrae are affected. Most individuals have only slight indications of the disease: minor exotoses, but two females, F57 and F131, show more serious signs and this applies to three men also: F101, F108 and F110. The last three are all over 45 years; others in this age group such as F58, F62, F73, F122 and F152 are only slightly affected.

F67 was buried prone. This is unusual in several respects. F67 is a child and it is rare for children to be buried prone, though there is an example at Cassington. Other late Romano-British cemeteries in the area – Curbridge, Radley (two cemeteries) and Stanton Harcourt – all include some decapitated and some prone burials, but very few burials of children. Queensford Mill differs from these in having a high proportion of child burials and, apart from this single example, no prone or decapitated burials. There is nothing odd about the skeleton to suggest why it should have been buried prone. Unless the body were very thoroughly wrapped or placed in a container, it is unlikely that there could have been a mistake in positioning at burial and as the practise occurs elsewere it is almost certainly deliberate.

TABLE 6

Distribution of People According to Age and Sex: 1981, and, below, the 1972 and 1981 Groups Combined.

| Sex | Age in Years | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 45+ | Adult | Total |
| Male | | | | | 3 | 2 | | 3 | 2 | | 11 | 1 | 22 |
| Female | | | | | 2 | 4 | 2 | | 3 | 1 | 2 | 2 | 16 |
| ? | | 26 | 8 | 6 | 1 | | | | | | 1 | 1 | 44 |
| Total | | 26 | 8 | 6 | 6 | 6 | 2 | 3 | 5 | 1 | 14 | 5 | 82 |
| Male | 1 | | | | 3 | 4 | 3 | 8 | 4 | | 21 | 2 | 45 |
| Female | | | | | 5 | 11 | 6 | 7 | 4 | 2 | 10 | 6 | 51 |
| ? | 1 | 33 | 12 | 11 | 2 | | | | | | 3 | 4 | 68 |
| Total | 2 | 33 | 12 | 11 | 10 | 15 | 9 | 15 | 8 | 2 | 34 | 12 | 164 |

Children under 15 years: 1981 and both groups combined.

| | Age in Years | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1981 | 1 | 3 | 52 | 3 | 5 | 4 | 2 | 1 | 2 | | 1 | 2 | 1 | 1 | | 1 | 1 | 2 | | | 1 |
| Both | 11 | 3 | 72 | 4 | 7 | 5 | 2 | 2 | 3 | | 2 | 2 | 4 | 1 | | 2 | 1 | 1 | 4 | 2 | | 1 |

TABLE 7
Summarised Incidence of Caries, Abcesses and Tooth Loss in Number of Teeth Present and Number of Tooth Sockets Seen, for Different Age Groups

| Age | Caries | | Abscess | | Loss | |
|---|---|---|---|---|---|---|
| 20–30 | 11/181 | 6% | 3/208 | 1% | 4/215 | 2% |
| 30–40 | 22/912 | 12% | 17/222 | 8% | 17/244 | 7% |
| 40+ | 42/277 | 15% | 48/355 | 14% | 86/422 | 20% |

THE ABNORMAL BONES RECOVERED IN 1981 by M. HARMAN, T.I. MOLLESON and J.L. PRICE

Most of the bones showing abnormalities, other than the vertebrae of the older adults, were extracted temporarily by Miss M. Harman and X-rayed by Miss T.I. Molleson at the British Museum (Natural History). The radiographs were sent to Dr. J.L. Price of Guildford, and his comments follow with some additional notes about the individuals concerned and descriptions of a few bones which did not appear abnormal on the X-rays.

F6, a young woman, has a large rounded cavity in the anterior palatine process of the right maxilla, extending through to the floor of the nasal aperture. The margin of the defect is smooth and there is no reactive bone changes: it seems likely that the anterior margin of the maxilla was intact. This defect was almost certainly due to a dentigenerous cyst.

Two people suffered from osteo-arthritis in joints other than the vertebrae. F111, a man of 35–40, had a normal left hip joint but severe osteo-arthritis in the right hip. There is no evidence of hip dysplasia, but as the subject is relatively young, a slipped epiphysis or osteochondrosis could be postulated as an underlying cause, particularly as the acetabulum is not so severely damaged. This man also has osteo-arthritis in the left foot in the first metatarsophalangeal joint (the base of the big toe). F131, a woman over 40, has slight evidence of osteo-arthritis at the proximal end of the right humerus and in both wrists: the left hip-joint is almost normal but the right has gross long-standing oseto-arthritic changes, and in the right foot the first digit (the big toe) is also affected.

Other conditions occur: F120, a man of over 45, has the lower four thoracic vertebrae joined and nearly all the other vertebrae are mis-shapen, showing extensive calcification of intervertebral ligaments with traction spurs and bridging of intervertebral spaces; the changes are those of diffuse idiopathic skeletal hyperostosis or Forestier's disease. F28, also a man of over 45, has the sacrum and pelvis joined on both sides, on the ventral aspect of the sacro iliac joints, probably a result of ankylosing spondylitis. This man also has a small benign osteoma, about 6mm. in diameter, on the frontal, a little above the right orbit, and a low bump on the medial aspect of the right femoral shaft, almost certainly a small osteoid osteoma: a stress fracture is a possible alternative but the site is unusual. F108, another man of over 45, has 8 osteomata on the skull, on the right side of the frontal and on the left parietal, with maximum dimensions varying between 7mm. and 26mm. A small spike of bone on the mid shaft of the left humerus is a benign osteochondroma. F110, a man of over 40, had an osteophyte head of the first right metatarsal, a degenerative osteopathy.

Several people had suffered fractures, most of them men of over 45. The adolescent, F19, had a healed fracture of the right clavicle, with an overlap of fragments, sustained two or three years before death; F51, another adolescent, and F110 both had well-healed fractures of the clavicle sustained more than five years before death. F28 had a healed impacted fracture of the lower right radius, also sustained at least five years before death. F152 had a healed fracture of the lower end of the left fibula; F73 probably had a healed fracture of the lateral malleolus of the left fibula, and on the right osteophytes extend from the lower margin of the tibia and fibula into the interosseous ligament. This is due to abnormal traction, presumably the result of an old soft-tissue injury. The articular surfaces on both sides are intact, so there is no evidence of osteo-arthritis.

Other anomalies may also be the result of trauma. F58, a man of over 45 years, had two fused phalanges from the fifth digit of the left hand; the angulation and roughened cortex, with distorted trabeculae crossing the joint space, make it unlikely to be congenital, and it is probably the result of childhood trauma, possibly inflammatory. F48, a man of perhaps 30–40, had a bump on the right tibia shaft on the medial surface towards the proximal end, a low raised area about 30mm. × 20mm.: an osteomatous periosteal change in the subcutaneous area. It is of doubtful significance and is probably traumatic – an ossified sub-periosteal haemotoma.

Three children had abnormal conditions: those on the skulls did not show on X-rays. F5, a child of about three years, had osteoporosis on both parietals near lambda and also premature fusion of the sagittal suture. F22, 9–11 years old, had a small area of osteoporosis on the left parietal, near the occipital, and on the frontal and the right parietal is an area of roughness on the external surface, similar in appearance to a rough-surfaced lichen: this could be the result of a scalp infection or a larval infestation eroding the bone. This child also had an anomalous right femur: the head was fusing at death and not quite a normal shape. This could be epiphyseal dysplasia

multiplex, multiple ossification centres on the medial aspect of the femoral head, usually associated with short limbs and a predisposition to osteo-arthritis, or it could be epiphyseal dysplasia (Trevor's disease) and this is perhaps more likely. F47, about 11 years old, had bowed femoral shafts; they are bowed anteriorly in the upper part, and both appear to be compressed medio-laterally; the left has an almost triangular, rather than rounded, section in mid-shaft. The upper limb-bones of this child are in poor condition, but the lower legs appear to be normal.

The preponderance of men with pathological conditions does not necessarily reflect the true proportion in the adult population; more men than women were found during this excavation, and they lived longer. Evidence from other sites in the area suggests that men were more likely to suffer fractures and other traumatic injuries than women.

## AN ESTIMATION OF THE NUMBER OF INDIVIDUALS BURIED AND OF THE POPULATION WHICH THE CEMETERY SERVED.

In 1972 the excavated area available for burial within the cemetery enclosure was approximately 600 sq.m., and revealed 112 grave pits. In 1981 the excavated area available for burial within the cemetery enclosure was approximately 350sq. m., and revealed 62 grave pits. The area available for interment within the cemetery enclosure was approximately 9,700 sq.m. suggesting a holding capacity of 1780 graves. Estimating some 3,000 sq. m. of land used for burial to the S. of the cemetery enclosure, which at a similar density would yield a further 6–700 graves, an estimate of the total number of graves may be put at 2,400.

Assuming an average life expectancy of 33 years and reproduction on a 1:1 basis at 20 years of age (i.e. 5 generations per century), the cemetery, if it remained in use for 100 years, would have served a theoretical population of $\frac{2400}{5} = 480$ persons

Similarly, if the cemetery remained in use for 150 years it would have served a theoretical population of 340, and over a 200 year life span it would have served a population of 240.

These simple calculations serve to illustrate the approximate size of the population that the Queenford Farm cemetery may have served. Given the current defficiencies in our knowledge, detailed population calculations have been left to the reader.

## CONCLUSIONS

Five radiocarbon dates suggest that this cemetery was in use during the 5th century, and do not preclude burial continuing late into the 6th century. Although pottery from the enclosure ditches was not manufactured any later than the 4th century the majority of the sherds were heavily abraided, suggesting that they were residual within the fill of the enclosure ditch. It is therefore possible that the enclosure ditch was not dug until the 5th century. A similar proportion of later RB sherds in the fillings of the graves at Beacon Hill, Lewknor, Oxon. were abraided, but the radiocarbon dates later obtained for the human bone demonstrated a mid to late Anglo-Saxon date.

The orderly layout and internal organisation within the cemetery, the practice of W.–E. inhumation and the absence of both grave-goods and cremations all suggest that this cemetery may have served the Christian element of the late- and sub-Roman town.

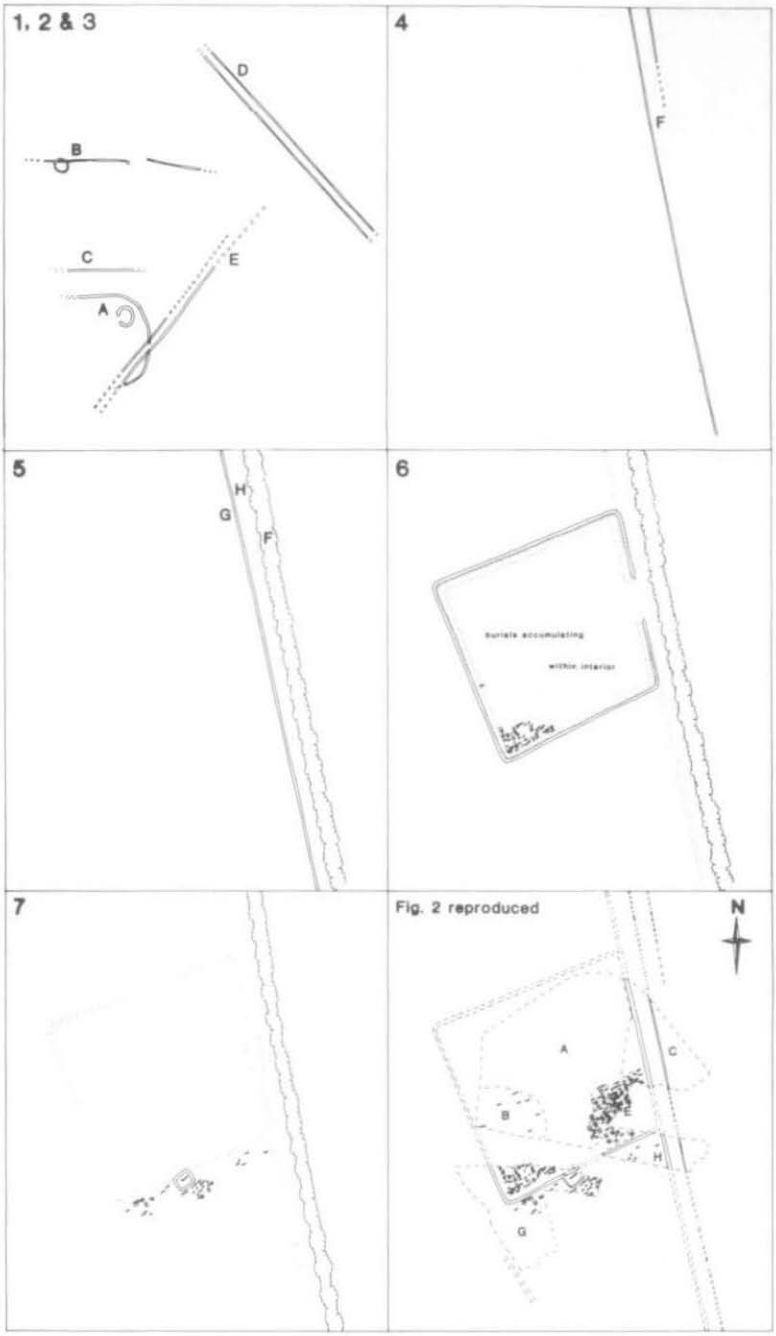


Fig. 9. The suggested sequence of land use and the chronological development of the cemetery. Phases 1, 2 and 3: Neolithic *A* and *C*, Bronze Age – Iron Age *B*, *D* and *E*. Phase 4: Iron Age or early Romano-British. Phase 5: 4th or 5th century AD. Phase 6: cemetery enclosure ditch and internal bank, late 4th century? Phase 7: cemetery enclosure full and burials accumulating to S. in 6th century.

## PREVIOUS LAND-USE AND THE CHRONOLOGICAL DEVELOPMENT OF THE CEMETERY

The suggested sequence of land-use on this site is illustrated in five plans (Fig. 9). The prehistoric features are discussed in detail elsewhere by Chambers and Bradley.[39]

*Phase 1*: The earliest detectable features are prehistoric: a small penannular monument *A* within the terminal of a Neolithic cursus. The penannular monument became the focus for a late Neolithic or early Bronze Age cremation cemetery.

*Phase 2*: The boundary ditch *B* suggests a change of land-use to some aspect of farming. *B* either precedes or post-dates *D* and *E*. There is no direct dating evidence for either *B*, *D* or *E*.

*Phase 3*: Field-boundaries are suggested by the two sets of parallel ditches *D* and *E*. The width that the ditches were set apart (2–3m.) suggests the remains of contemporary hedged enclosure banks with side ditches. South-west of Queenford Farm these side ditches were shallow and had not reached the underlying gravel in places. Assumed to be pre-Roman in the absence of direct dating, these boundaries may belong to the same extensive field system of which the Bronze Age ditches 1km. to the N. are a part.

*Phase 4*: The above boundaries gradually decayed and were replaced by a linear, double-ditched feature *F* similar to *D* and *E*. This boundary crossed the site cutting through the remains of *D*. Either Iron Age or Roman period.

*Phase 5*: *F* is probably the remnant of a banked and ditched boundary which with *G* enclosed a trackway *H*.[40] It is not known whether *G* is earlier, contemporary or later than *F*. Allowing for topsoil *G* was about 1m. deep and 2–3m. wide. The trackway *H* may have been 6–7m. wide. This trackway broadened out slightly towards the NE.

*Phase 6*: It was probably during the 4th century that a rectangular cemetery enclosure was laid out with a broad, central, eastern entrance opening out onto the trackway. That this enclosure required new ditches to be dug alongside the trackway indicates that *G* was by then a shallow, silted-up depression. The re-dug ditches showed clearly as cropmarks against the remains of *G*. The cemetery enclosure was not arranged at right-angles to the trackway but on an E.–W. alignment which suggests an enclosure purposely constructed for W.–E. burial. Within the areas excavated, the graves respected the cemetery enclosure ditches. In the SW. corner of the cemetery only one grave lay closer than 3m. to the inside edge of the ditch, which suggested the presence of an internal boundary bank possibly surrounded by a pail or hedgerow. Allowing for topsoil, the cemetery boundary ditch was originally about 1m. deep and 2–3m. wide. This would have provided sufficient soil for a significant internal bank. Burials immediately outside the cemetery lay against the projected outside edge of the boundary ditch, demonstrating that there was no hedge or bank present. Unfortunately, in 1972 little of the E. and S. cemetery boundaries were cleaned and examined. However, graves lay significantly closer to the inside edge of the E. and S. ditches than was the case in the excavated SW. corner of the cemetery. Allowing for topsoil, one grave lay within 0.5m. of the inside edge of the boundary ditch, which suggests burial along a decayed and eroded boundary. Burial in this area may have been later than in the SW. part of the cemetery.

*Phase 7*: The edges of the cemetery boundary ditch were gradually eroded by weathering, and the ditch filled with silt. Perhaps by the later 5th or early 6th century, burial was also taking place to the S. of the cemetery. A small, private, rectangular burial enclosure was laid out across the line of the former boundary ditch. Subsequent burials

[39] R.A. Chambers and R. Bradley, *Proceedings of the Prehistoric Society* forthcoming.

[40] *G* was ditch *D1* in the 1972 excavation report: Durham and Rowley op. cit. note 1.

were laid out in rows aligned on this prominent new feature.

No burials were found either on or E. of the trackway *H*, suggesting that *H* continued in use as a trackway and land-boundary during the 5th century AD. Whether the cemetery expanded beyond its W. and N. boundaries is not known.

## INTERNAL ARRANGEMENT

The graves appear to have been arranged at right-angles or parallel to the cemetery boundary ditches and the later private burial enclosure which, apart from the road, were the dominant topographical features. This practice is mirrored both in urban cemeteries and in small rural late Roman cemeteries as at Curbridge,[41] Stanton Harcourt[42] or Radley.[43] At Queenford Farm many of the graves appear to have been arranged in rows. Some graves may have been purposely placed end-to-end in lines. The latter is apparent along the inside edge of boundary ditch F25 in the SW. corner of the cemetery, and also to the S. of the private burial enclosure F15. Whether grave spacing may be taken as evidence for the prevailing use of gravemarkers or memorials is debatable. No gravestones are known from the Dorchester area. Graves will always generate more soil than is required to back-fill them. Clark has suggested that surplus soil mounded over the graves at Lankhills, Winchester,[44] would have provided sufficient marking for graves to be accurately sited in relation to each other, especially if the cemetery was grazed.

Within the cemetery areas devoid of graves, and deviations in rows and lines, both suggest that there were obstacles such as trees and bushes as well as occasional graves which could disrupt the orderly layout. Some isolated graves may have been too shallow to leave any surviving archaeological remains. Fig. 2 demonstrates that deviations in some rows and lines induced a corresponding change in grave orientation. Other rows display a stepped effect, reflecting an apparent effort towards accurate W.–E. grave alignment whilst avoiding standing obstacles. Those graves that deviated most from the normal were, significantly, often adjacent to spaces, suggesting that their orientation had been altered to avoid those obstacles. More importantly, it may be inferred from the grave plan of the S.W. corner of the cemetery that the graves had almost always been arranged at right-angles to the axis of the row in which they occurred. Once a strip of land had been allocated for a row of graves they were dug at right-angles to the row, suggesting that the strips of ground allocated for rows were permanently marked out at the time of allocation. Where rows were discernible, they appear to comprise several short sections. In one area grave-pits are close together, whilst in another section the graves are spaced further apart. Sometimes there is a slight break between sections; this can be seen most clearly in the SE. part of the cemetery enclosure.

Isolated burials suggest either an occasional breakdown of the overall administration of the cemetery, possibly an overflow from allocated plots, or that certain bodies, for reasons of religion, status, lack of family or otherwise, were exempted from the rows and lines.

[41] R.A. Chambers, 'A Romano-British Settlement at Curbridge', *Oxoniensia*, xli (1976), 38–55, and R.A. Chambers, 'Two Radiocarbon Dates from the Romano-British Cemetery and Settlement at Curbridge, Oxon.', *Oxoniensia* xliii (1978), 252.

[42] N. McGavin, 'A Roman Cemetery and Trackway at Stanton Harcourt', *Oxoniensia*, xlv (1980), 112–23.

[43] R.A. Chambers, *Oxford Journal of Archaeology*, forthcoming.

[44] Clarke, op. cit. note 21 183–97.

## SEQUENCE OF BURIAL

If land within the cemetery was allocated for family plots or rows, burial may have begun to the S. of the enclosure before every plot, and therefore the cemetery enclosure, was full. This would upset the chronological sequence previously suggested. The radiocarbon dates support neither one sequence nor the other.

## THE PRIVATE BURIAL ENCLOSURE

Similar burial enclosures occur in large, late Roman urban cemeteries outside the region, as at Lankhills, Winchester. They are also to be found in smaller, well-regulated cemeteries in the Upper Thames Valley, at Radley[45] and Claydon Pike W. of Lechlade.[46] At Lankhills the enclosures were constructed throughout the 4th century to mark and protect important graves, and a similarly dated enclosure at Claydon Pike is also associated with presumed 3rd- or 4th-century inhumation burials. Similar treatment was given to a 2nd-century cremation at Radley in a cemetery of mixed burial rites. All three enclosures appear to have acted as foci for later burials, the enclosure at Radley receiving cremations until the end of the 4th century.

The enclosure was presumably constructed for the benefit of the two central female burials, of which the body with the comb (F11) may have been primary, but there is no direct evidence to confirm this speculation. This break within the traditional style of burial exhibited in this cemetery suggests a burial of some importance. Coming late in the life of the cemetery, possibly well into the 6th century, at a time when the Roman town and surrounding countryside had, by force of circumstance, become self-regulating, this enclosure may represent a change or relaxation of the rules governing burial rites in this cemetery. However, probably the single most important fact concerning this cemetery is its apparent longevity, suggesting a continuing stable structure within at least one section of the community in, and possibly for some distance around, the Roman town. Viewed against this background, numerous reasons may be put forward to explain the presence of this burial enclosure.

An estimated 0.5m. of soil above the gravel suggests that the gully F15 forming the enclosure may have been 0.8m. wide and 0.6m. – 0.7m. deep. Clark interpreted the Lankhills enclosure gullies as possible planting trenches, although the Queenford example is perhaps too large for that and the insertion of two later graves (F110 and F106) into the ditch fill also suggest that there was no hedge. Whether this enclosure followed the Lankhills examples with an entrance to the E. is not known.

The central female burials F10 and F11, aged 20–25 years and 40–45 years respectively, appear to be complemented by the two male burials F106 and F110, aged 20–24 and over 40 years.

## OTHER GRAVE ENCLOSURES

Three graves excavated in 1972 each appeared to be surrounded by a discontinuous series of stake-holes. However, unless the soil was considerably shallower in that part of the

[45] Chambers, op. cit., note 43.
[46] Oxford Archaeological Unit excavation records, courtesy of D. Miles.

cemetery this interpretation is unlikely, and in the experience of the present writer the effects of burrowing animals is a more likely explanation. The phenomenon is encountered on many gravel sites. No other traces of monuments or grave markers survived within the Queenford Farm cemetery.

## BURIAL RITE

Throughout the Queenford Farm cemetery the burial rite was remarkably regular, although 164 fully excavated graves was too small a number to reflect minor changes in burial custom accurately and in their true proportions. No chronological changes have been detected in any of the possible relationships between body posture, coffins, grave depths, age, sex, orientation or groupings within rows or lines. In only four graves did body posture vary markedly from the normal supine inhumation. The first exception, F3, was a child laid on its right side in a semi-crouched position. Burial F58 was a semi-supine male adult with its legs bent up to its right leaving some 0.5m. of the W. end of the grave unoccupied. Grave F109 contained an unsexed adult or adolescent half-turned onto its left side, legs bent to its left. A fourth grave, F67, contained a prone inhumation. These burials were dispersed throughout the excavated part of the cemetery. It is possible that the legs were bent to accommodate some wholly organic article of grave furniture, as much as a reflection of the position in which a body wrapped in a shroud might have been laid to rest.

## THE CEMETERY BOUNDARY DITCHES

The cemetery enclosure ditches yielded 8 sherds of Romano-British pottery. Seven of these were heavily abraided and probably residual as there is a general spread of similar sherds over the whole area. None of the sherds need be any earlier than the mid 3rd century; one unweathered sherd is from a vessel probably manufactured during the 4th century.

A group of partly articulated sheep-bones occurred in the upper filling of D2. This may have been a natural fatality within a flock grazing the area sometime in the later 4th century and partly disarticulated by natural predators, rather than the burial of a ritual killing.

## RELIGION

The archaeological evidence for late Romano-British burial practice has recently been summarised by Clarke in his analysis of the Lankhills cemetery.[47] Clarke notes the paucity of Romano-British material, a point more recently emphasised by Thomas[48] and Reece.[49]

West–east supine inhumation burial without grave-goods is common in late Roman Britain and almost certainly leads to the mis-dating of similar cemeteries of the later Anglo-Saxon and medieval periods. The later 3rd- and 4th-century change to W.–E. burial has been recorded on many sites within the Thames Valley and beyond. Within the extensive cemetery at Poundbury, Dorset, Green has suggested the presence of a

[47] Clarke, op. cit. note 21, 347–76.
[48] C. Thomas, *Christianity in Roman Britain to AD 500* (1981).
[49] Reece op. cit. note 19.

4th-century Christian burial area bounded by ditches.[50] The ditches appear to separate burials of an arguably Christian character from surrounding pagan graves. However, the presence of a substantial cemetery enclosure cannot be taken as a common feature in late Romano-British Christian cemeteries. Many later Romano-British cemeteries do not appear to be enclosed, possibly because the boundaries did not incorporate a ditch.

No explicit evidence for religious beliefs, either pagan or Christian, has been recovered from the cemetery. Queenford Farm is directly comparable to the cemetery at Ancaster which Thomas considers as near as we can get to a (typical) 4th-century, Romano-British 'small town' cemetery of mainly Christian character.[51]

It is always possible that grave treatments such as burial in gypsum, ostensibly associated elsewhere with Christian burials, occurred within the unexcavated 90 per cent of the cemetery. However, the practice may never have been fashionable in this small provincial town. The presence of one prone, two E.–W. and two 'side-on' burials is consistent with the continuing pagan practices found in late Romano-British W.–E. rural inhumation cemeteries. However, the presence of so many child burials may be a result of Christian influence.

A clear interpretation of the status and rôle of the Queenford Farm cemetery in the social and religious structure of Roman Dorchester, and of the proportion of the town's population which the cemetery served, cannot be attempted without comparative material from the other major cemeteries, in particular that at Church Piece (Fig. 1).[52] However, Church Piece appears to fall outside the usual urban extra-mural position alongside an approach road to the town, and may have served a wider catchment area.

If, as seems likely, the Queenford Farm cemetery remained in use for about 100–150 years, it would have served a theoretical population of 200–300 people. It is not known what proportion of the town's population this represented. The abandonment of the Queenford Farm cemetery, well into the 6th century at least, may be linked to the unsatisfactory nature of burial outside the original cemetery enclosure. Possibly burial then took place closer to, or even within, the town as the Roman style of administration altered and decayed. Such a new burial-ground may have possessed a mortuary chapel later developed into a church in the 7th century by St. Birinus.[53] Future excavation within the former abbey precinct for the remains of a sub-Roman cemetery is clearly important. The presence of a 3rd-century cremation in the rectory garden[54] suggests either that the earlier town defences lay W. of the rectory and the later wall followed a new line down to the river, or that the area later occupied by the abbey was always outside the walls.[55]

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[50] C.J.S. Green, *Poundbury – A summary of Recent Excavations at Poundbury, Dorchester* (1979).
[51] Thomas op. cit., note 48, 237.
[52] Harman et al. op. cit. note 7.
[53] As suggested by N. Doggett, 'The Anglo-Saxon See and Cathedral of Dorchester-on-Thames', *Oxoniensia*, li (1986), 55–7.
[54] *V.C.H. Oxon.* i (1939), 293.
[55] Cf. Doggett op. cit. note 53, 53–5.