

ROMAN BURIALS FROM OLD FORD, E.3.

FEBRUARY AND MAY 1972

BY WILLIAM J. OWEN, IRENE SCHWAB AND HARVEY SHELDON

INTRODUCTION

On February 3rd 1972, during the excavation of a Metropolitan Water Board trench along the east side of Armagh Road, a stone coffin was found containing a skeleton.¹ Fig. 1. No. 10.

Some three months later (18th May 1972) a similar coffin was uncovered 25 metres south-west of the first, at McInerney's Beale Road Development site. This contained the remains of two bodies. A third burial, probably originally in a wooden coffin, was found alongside this sarcophagus.² Fig. 1. No. 11.

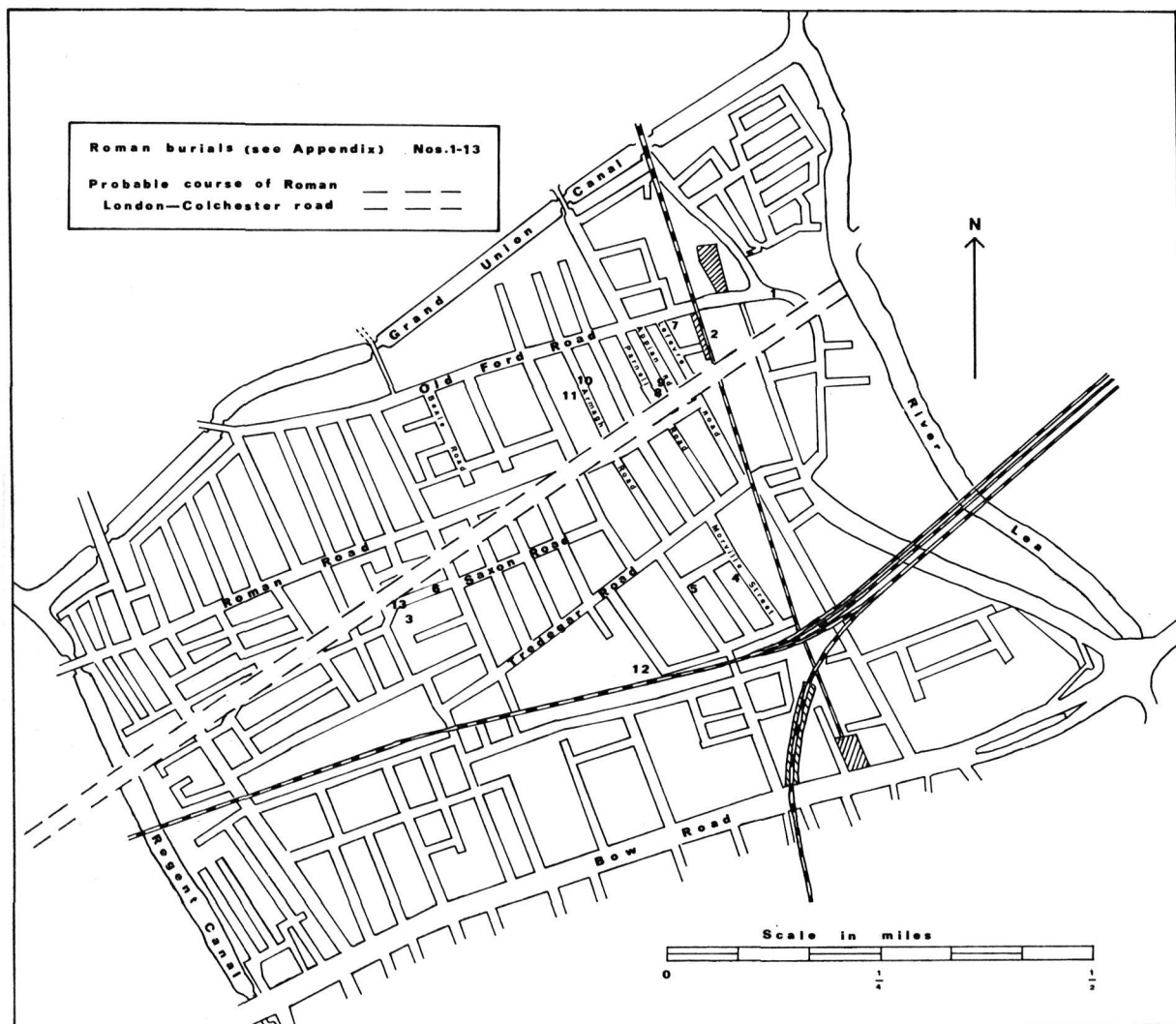


Fig. 1. Area plan

These interments lay approximately 125 metres north of the Roman road from London to Colchester,³ but in neither case was there any trace of associated Roman features.

Mechanical excavation had damaged the lids of both sarcophagi but the contents were undisturbed. The second coffin was removed and is now being stored by the Borough of Tower Hamlets until it can be exhibited locally.⁴

ARCHAEOLOGICAL CONTEXT

The sarcophagus, discovered outside No. 114 Armagh Road (TQ 36790, 83600), was carved from a single block of oolitic limestone. It was orientated at 95° east of north (Fig. 2). The top of the lid measuring 2.20 m x 0.75 m lay about 0.80 m below the modern road surface. It was ridged along the centre where the depth was 0.15 m compared with 0.10 m at the sides. Apart from the modern break, there was one crack which was apparently of ancient origin. The coffin walls were 0.10 m thick and 0.50 m externally. They enclosed a chamber 1.90 m by 0.50 m which was 0.40 m deep.

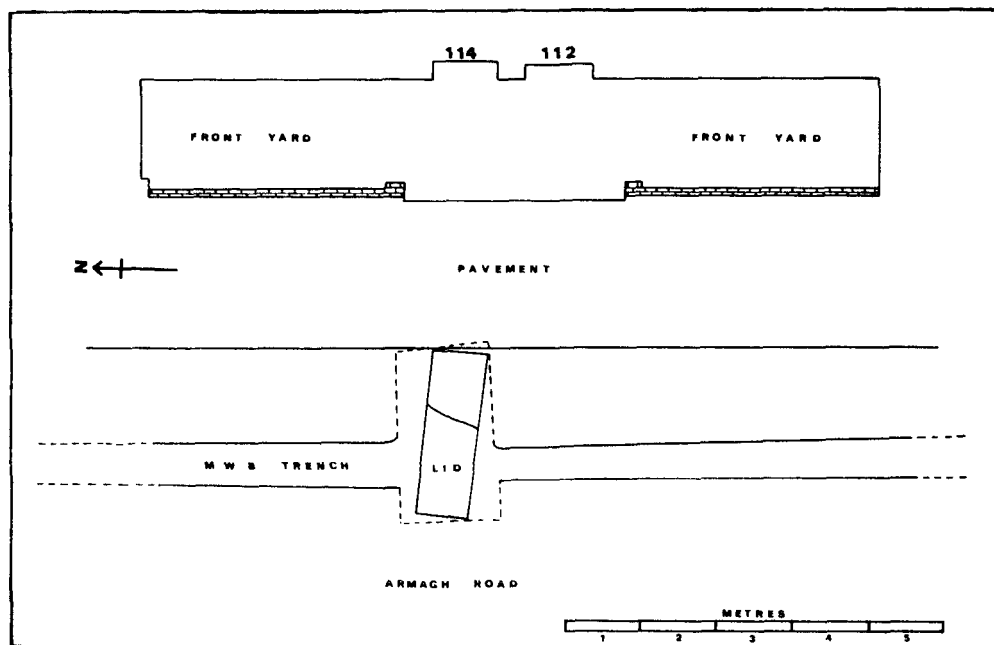


Fig. 2. Site plan: Armagh Road

Removal of the lid showed that the body had been laid on its back in an extended position, with the head to the west, the feet to the east, and the hands meeting over the pelvis (Fig. 3). White-coloured calcium carbonate in a semi-liquid state underlay the body.⁵ By the right hip lay an iron key (Fig. 4) and in the calcium carbonate near to the head were two pins, one of bone and the other of jet,⁶ the latter having been finely carved and turned on a lathe (Fig. 5). They had possibly been used to dress the hair. The only other object found in the coffin was a pottery sherd of red oxidised fabric⁷ which lay under the right foot.

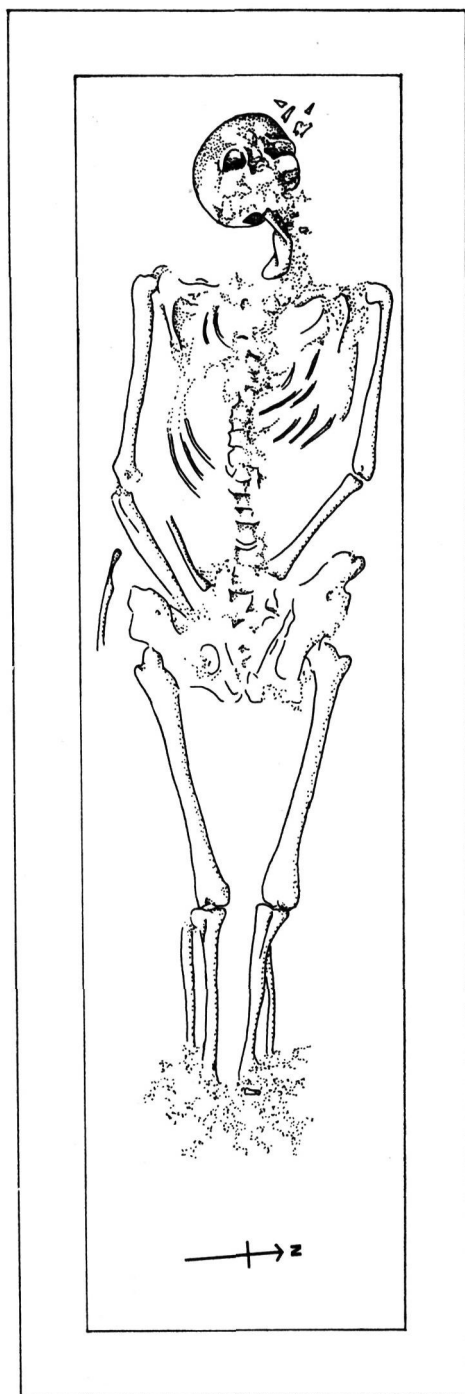


Fig. 3
Plan of Skeleton I in coffin: Armagh Road

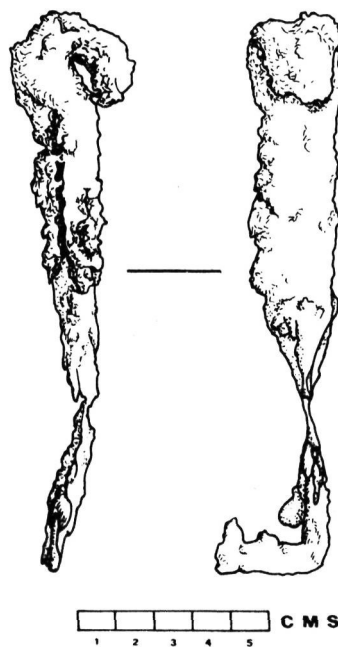


Fig. 4
The iron key ($\frac{1}{2}$ actual size):
Armagh Road

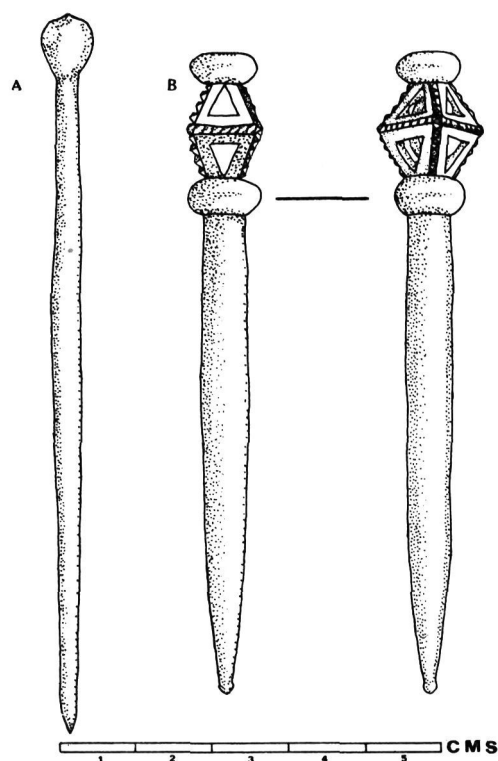


Fig. 5

The pins found close to the head—the left-hand one is made of bone and the right-hand one of jet (actual size): Armagh Road

The coffin had been placed in a pit cut down into the natural sand and in the fill of this, above the coffin, was found a coin dating from the late third or fourth century A.D.⁸

The second coffin (TQ 36772 83581), orientated at 5° east of north, was 2.07 m long by 0.71 m wide (Fig. 6). Its external depth varied between 0.32 and 0.34 m. The base was therefore roughly the same thickness as the sides which were 0.10 m thick at the short ends and 0.11 m thick on the long sides. This sarcophagus was also carved from a single block of oolitic limestone and the mason's chisel marks could be clearly discerned, especially on the internal surfaces.

Six small rectangular niches (average 6 x 4 cms, 2 cms deep) two on each of the long sides and one at each end were presumably connected with the use of hooks and ropes to lower the coffin into its grave pit. As the grave pit was only 3 or 4 cms wider than the coffin itself this lowering mechanism would have had to be specially efficient.

The lid of the coffin measured 1.95 m by 0.72 m and was 0.12 m thick at the sides, rising to 0.15 m in the middle because of a ridge running lengthwise along the centre. It had been broken in two places, once apparently in antiquity. A square niche at the centre of each short end corresponded with those on the coffin itself (Fig. 7).

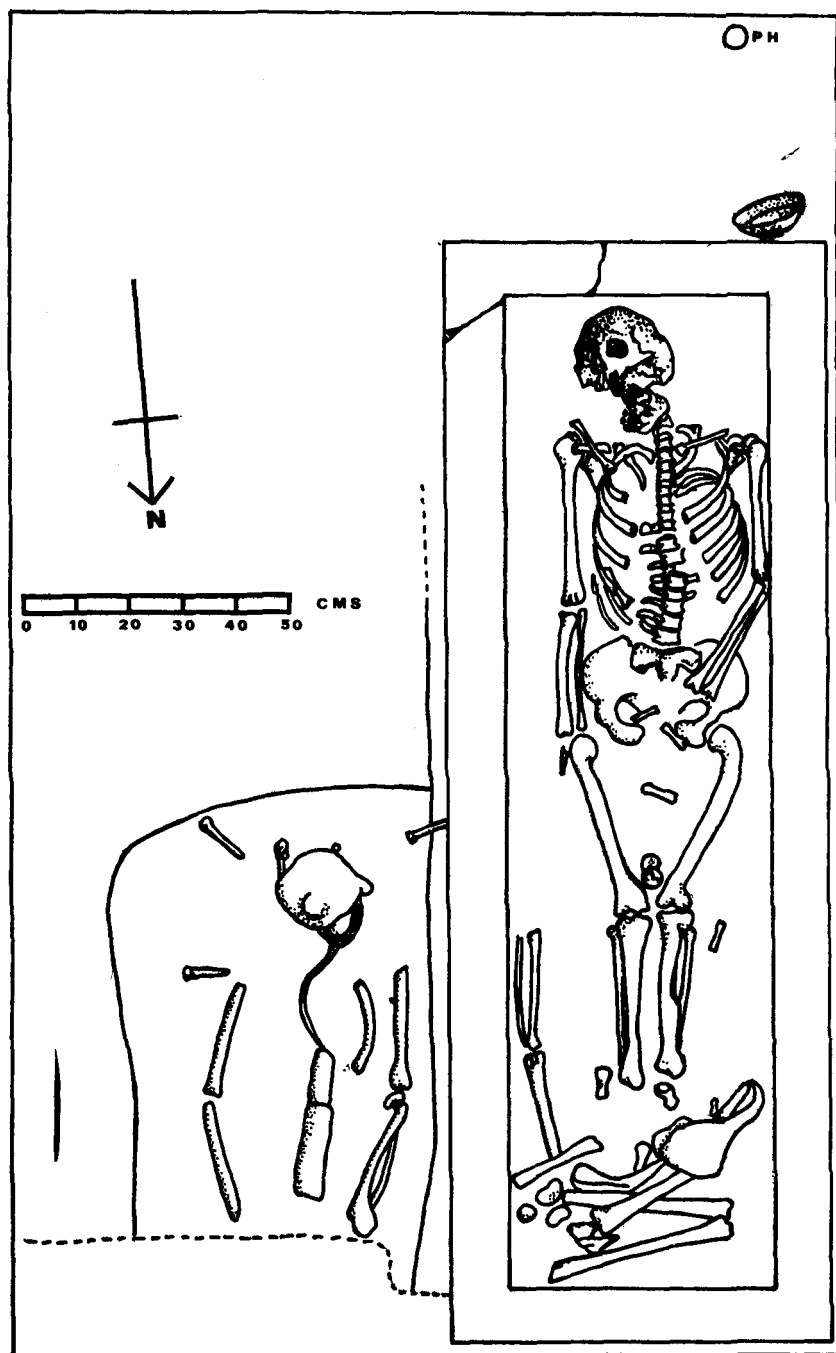


Fig. 6. The Beale Road burials; note position of iron nails around the head of the third burial

Also noted on the lid of the coffin were three shallow scorings, 8 cms wide which converged slightly on one side. It is thought that these were for the attachment of ropes, either to lower the coffin into the ground or to hold it onto a cart for its journey from the place of death to the burial ground.

A fragment of lead attached to the lid may indicate that it originally had a lead covering or decoration.

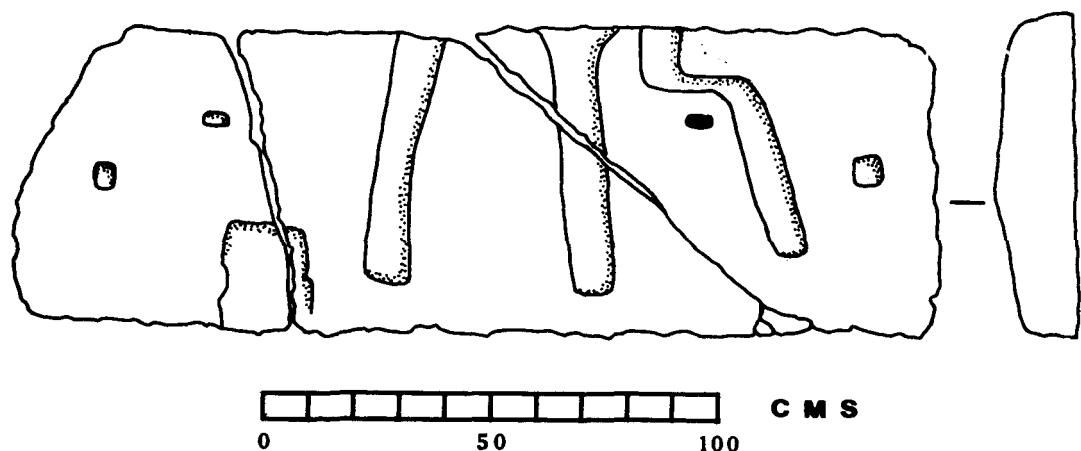


Fig. 7
Plan of the coffin lid—lead fragment in black: Beale Road

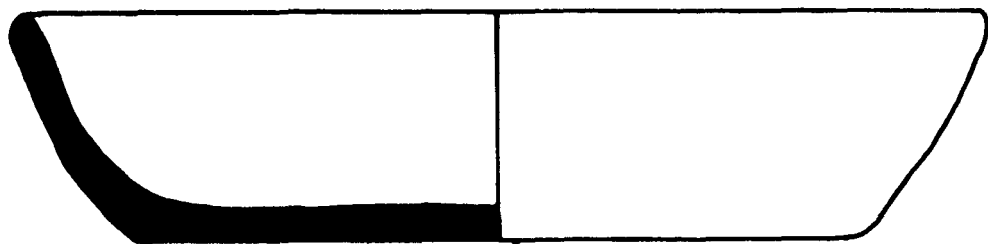


Fig. 8
Shallow dish (actual size): Beale Road

On removal of the lid, a skeleton was found lying in an extended position on its back with the head to the south (Skeleton III). The skeleton was partly covered by a deposit of calcium carbonate in a semi-liquid state.⁹ According to the wave-like stains on the inside wall of the coffin, the calcium carbonate had been in this state for some if not all the time in which the body had been interred, and therefore no trace of clothing or hair could be seen moulded within it. At some stage the liquid level inside the coffin had been even higher according to the coffin stains. Removal of the banked up calcium carbonate towards the north revealed a second skeleton, partly disarticulated (Skeleton II).

There were no grave goods within the coffin but at the south end of the grave pit was found a shallow dish of wheel-thrown, dark-faced, grey ware (Fig. 8).

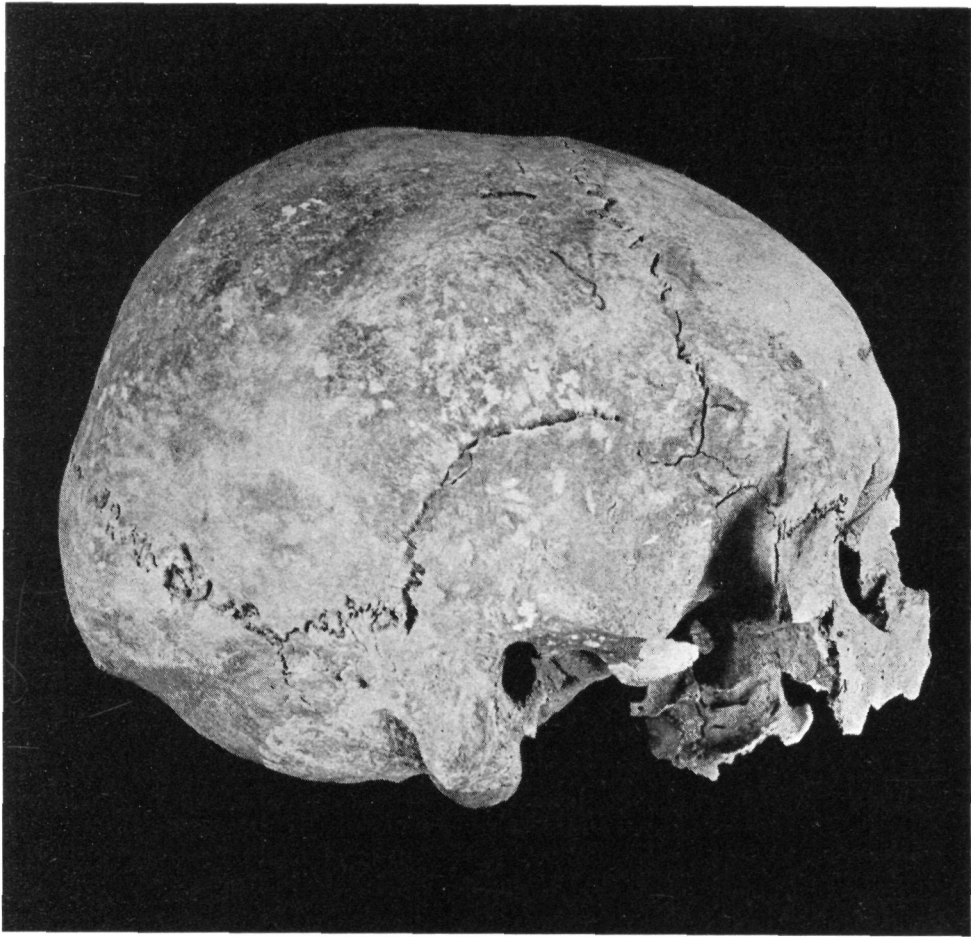


Plate 1. The skull of Skeleton I, showing the occipital bun

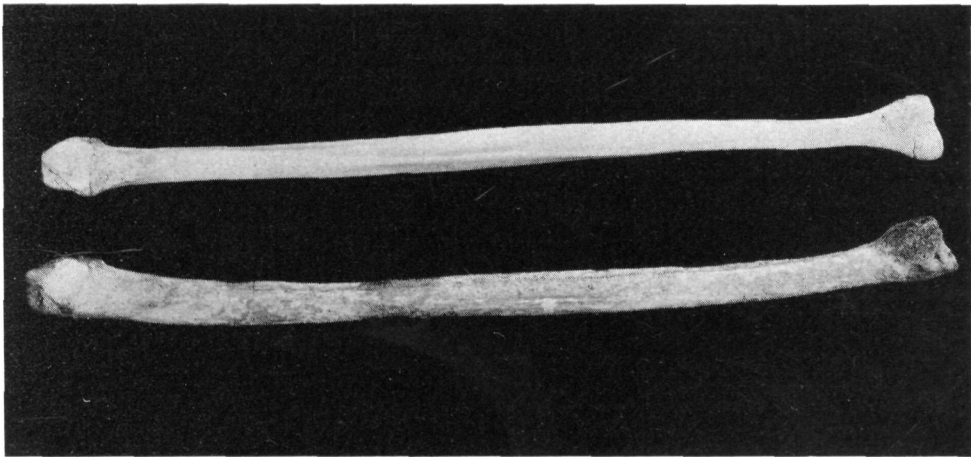


Plate 2. Note the bowing of the fibula from Skeleton I (bottom), indicating a degree of malnutrition

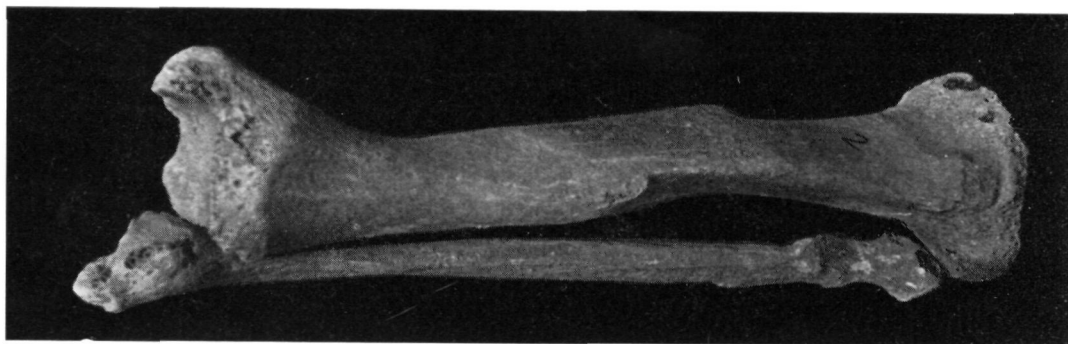


Plate 4. Left tibia and fibula of Skeleton III, showing the healed oblique fractures of both bones

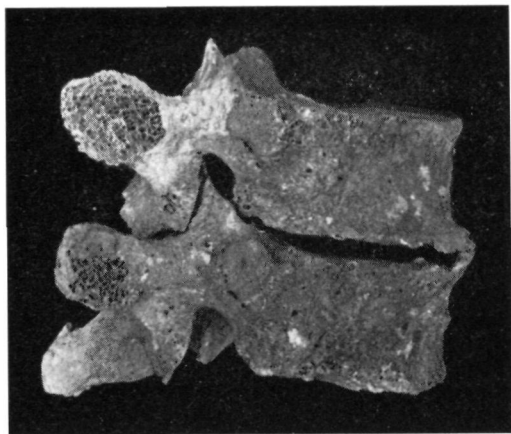


Plate 3. Two vertebrae of Skeleton III joined together abnormally

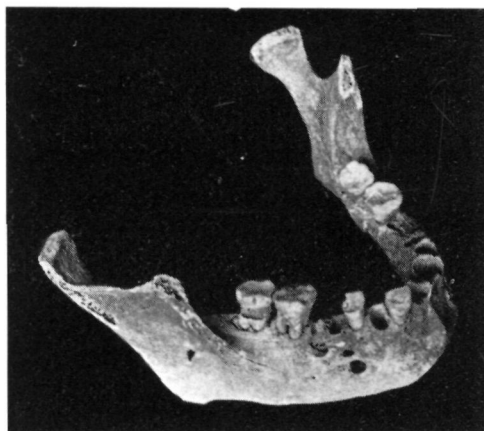


Plate 5. Lower jaw of Skeleton III, showing evidence of a dental abscess



Plate 6. The skull of Skeleton III, showing the low flat forehead and occipital bun

A black burnished sherd probably from the shoulder of a cooking jar, with an obtuse latticework decoration, was discovered underneath the coffin. According to R. A. H. Farrar these wares (Black Burnished, Category 1) were produced in Dorset between 250 and 400 A.D.

South of the coffin was a small round stakehole, 5 cms in diameter, which may have originally contained a marker for the grave.

On the east side of the sarcophagus a third skeleton was found lying on the same alignment but slightly further north (Skeleton IV). As a result of its positioning the lower half of the body had been destroyed in mechanical excavation leaving intact only that portion actually alongside the stone coffin. It also appeared to be lying in an extended position on its back and the position of large iron nails around the body suggested that it had been buried in a wooden coffin. In contrast with those from the stone coffin, this skeleton was in a very fragile condition, probably because of the acidity of the surrounding sandy soil.

THE SKELETAL REMAINS

The four skeletons found at Bow in February and May 1972 yielded valuable and interesting information about the mode of life of these Romano-British inhabitants; also about some of the diseases from which they suffered. With the exception of the fourth skeleton (Skeleton IV) the bones were in good condition and therefore a confident assessment of stature, sex, build and age of death has been put forward.

I. ARMAGH ROAD, OLD FORD

The skeleton was complete with the exception of (i) deficiency of the left orbital bones and nasal bone of the skull, (ii) the thoracic vertebrae which were fragmentary.

The age at death is estimated to be between 25 and 30 years. The wisdom teeth had erupted and bony growth had ceased as judged by the disappearance of all cartilaginous growth plates both in the long bones and also in the base of the skull; both these processes are usually completed by 22 years of age. Todd's method of estimating the age at death is based on examination of the junction of the two pelvic bones (symphysis pubis) and in this case gave an age of between 25 and 30 years.¹⁰ This method depends on the systematic assessment of the ridges at the pubis as these bones wear down to an almost smooth surface by the age of 60 years.

The sex of this skeleton was clearly female. The most reliable method for sexing a skeleton is on the basis of the pelvic bones and this is conclusive in 90 per cent of cases: (i) the typical female adaptation for childbirth, such as, the large circumference of the pelvic ring with the small hip socket diameter; (ii) the small bony ridges on the skull (supraciliary ridges and mastoid processes) further testify to the sex.

The stature was calculated using the formulae of Trotter and Glesser¹¹ based on the lengths of the long bones. Three separate estimations using fibula, radius and femur gave a mean height of 165 cms. By Romano-British standards a female of 5 ft 5 ins would have been unusually tall as the average height of the Trentholme Romano-British females in York (Warwick)¹² was 5 ft 1 inch.

The only asymmetry of long bone length was that between the humeri, the right humerus being 15 mm longer than the left. This difference probably represents a congenital shortening of the left humerus and it is a fairly common type of abnormality to come across in otherwise normal skeletons.

The lateral profile of the skull presented a low flat cranium with a prominent posterior bulge (Plate 1); Warwick noted this occipital bun as being characteristic of the York Romano-British and this adds weight to the other evidence that this skeleton was that of a Romano-Briton. The muscular markings on the upper limb bones (deltoid and biceps markings) were very prominent and indicate a way of life involving repeated heavy lifting.

The teeth were remarkable in that they showed extensive wear in the part exposure of the dentine with complete flattening of the dental cusps. A large dental cavity was found on the biting surface (non occlusal) of the first lower molar tooth. These findings as shown later are typical of Romano-British dentition as described by Cooke and Rowbotham¹³ in the York finds.

Apart from the dental decay mentioned above, the only other pathological finding in this skeleton was the marked bowing of the bones of the lower limbs—showing striking evidence of osteomalacia (Plate 2). This was principally seen in the tibia and fibula. Osteomalacia is a malnutritional disease of bone associated with lack of calcium, Vitamin D and sunshine and is now seen amongst poor immigrants in Northern England. The skeleton showed no signs of any wear and tear type of osteoarthritis or of any injury and there was no clue to the cause of death. In summary, therefore, the Armagh Road skeleton was that of a tall 25 to 30 year-old Romano-British female who appeared to have led a very active life involving much manual work and who died from an unknown cause.

SKELETON II was that of a woman aged between 30 and 35 years and whose height is estimated to have been 5 ft 1½ ins. Sexing of the skeleton was once again ascertained from the pubis which was typically female with its large internal diameter, but small acetabular (hip socket). Sometimes difficulty is encountered in ageing a skeleton when different bones give differing ages. In this case Todd's method using the pubic bones gave an age at death of 30 years but in view of the marked osteoarthritis present in the bones of the spine and the excessive dental wear, an estimate of 35 years could possibly be more accurate. The wear and tear changes found in the lumbar vertebrae (lower end of the spine) are the type of changes which are often associated with a slipped disc—although this was certainly not the primary cause of death—and might well have caused a considerable amount of pain and weakness of the legs.

The stature, according to the methods of Trotter and Glesser using the lengths of the fibula, radius and humerus, gave results averaging at 5 ft 1½ ins. The humerus was remarkable again in the muscle marking of the deltoid; this was more marked on the right side than the left and would suggest that this woman was right-handed and also a woman who used her arms a great deal for heavy lifting. The skull was typically female but showed no other notable characteristics.

The bones of the upper half of the body (the skull, upper spine, shoulder girdle bones and arm bones) were in the correct anatomical alignment but were lying apart from those of the lower half. This suggests that the strong ligaments linking the limb bones were intact at the time of interference but that the soft tissue joining upper and lower halves of the body had disintegrated. The appropriate interval of time for this degenerative process is difficult to assess but would be within 10 years.

SKELETON III

The second burial in the sarcophagus was that of a man aged between 55 and 65 years and whose height is estimated to have been about 5 ft 5 ins.

The age is based on:

- (a) the calcification of the thyroid cartilage of the larynx. Calcification of the thyroid cartilage is seen radiologically in people over the age of 55 years and represents an ageing process in the cartilaginous matrix.
- (b) the presence of well-marked wear and tear changes in the thoracic spine. Two vertebrae were joined together abnormally by degenerative bony outgrowths (Plate 3).

A well-healed spiral fracture of the left tibia and fibula was found which probably resulted from an indirect twisting force applied to the left foot (Plate 4). The healed position of the bone ends was very satisfactory and such alignment would have been achieved by using some form of orthopaedic splint.

Dental decay was considerable and at least five dental cavities were seen on the non-biting surface of the teeth. A periapical abscess had also formed in relation to one carious tooth and had ruptured outwards through the jaw persisting as a discharging sinus (Plate 5). This old man therefore apparently suffered from marked osteoarthritis, had a discharging sinus on the face and possibly walked with a limp because of his shortened left leg.

Lateral profile of the skull did present the characteristic appearance of a Romano-Briton as described by Warwick in the York series. The characteristics were (a) a low flat forehead and (b) a prominent suboccipital bulge (Plate 6). As in Skeleton II the very prominent muscular markings on the right humerus suggested right-handedness and also an arduous manual occupation.

SKELETON IV was fragmentary and it was not possible to assess sex or stature. The only bone that yielded much information was the jaw. The main characteristic was the absence of dental wear. The age at death is likely to have been between 18 years and 25 years, as judged by the lack of wear and absence of any dental decay. An impacted third molar was found on the left side.

CONCLUSIONS

A number of burials, dating to the Roman period, have been found in the vicinity of Old Ford on both sides of the London-Colchester road. At least six were recovered in the mid-nineteenth century during the first modern development of the area. They came to light in the cutting made for the North London Railway and in the excavations for the houses which spread across land previously used for agriculture. It is probable that these relate to the Roman settlement which seems to have stretched west back from the Ford along the highway. It has been identified by excavations at Lefevre Road,¹⁴ Appian Road and Parnell Road.¹⁵

The six stone coffins which have been recorded are all of the same type; they are undecorated and carved out of a single block of oolitic limestone or freestone. Lids are ridged along the centre or flat and hollowed out and the sarcophagi usually contain a substance described as lime, but which may represent the calcium carbonate found in the wooden coffin from Parnell Road¹⁶ and in the latest two sarcophagi. The latter are slightly wider than those previously found but other attributes are typical.

Several points of interest arise from examination of the skeletons:—

- (1) the extreme degree of dental wear present on three of the skeletons with relatively low incidence of dental caries and cavities as compared with the present population. The

cavities that were seen were all on the non-biting surface of the teeth. Cooke and Rowbotham in the York series also remarked on this low incidence (4%) of caries as compared to the present day population and equate this find to:

- (a) the absence of refined carbohydrates
 - (b) the tough, gritty, fibrous diet which results in this excessive wear of the biting surface of the teeth thus excluding any pits or irregularities where bacterial growth and food accumulation could give rise to dental caries.
- (2) Stature. There has been a trend since the Roman period for both men and women to become taller. Thus Romano-British females in the York series averaged 5 feet 1 inch whereas the present day mean female height is 5 feet 4 inches. The mean Romano-British male height was 5 feet 7 inches as compared with the present day mean male height of 5 feet 8 inches. This data is in keeping with the height of Skeletons II and III. Skeleton II and III are therefore typical, although Skeleton I was surprisingly tall.
- (3) Disease. Most fatal illnesses leave no indication on the bones and so it is not surprising that the cause of death is unascertainable in all four cases. The high incidence of wear and tear, osteoarthritis and the prominent muscular markings on the bones contrast with the present day skeletons of people of comparable ages and probably represent a very arduous way of life. The presence of rickets in the Armagh Road skeleton may represent a dietary deficiency.
- (4) Age at death — The discovery of four skeletons representing people aged 20, 30, 35, and 55 in the present day population would surely imply premature deaths. In the Roman period, on current evidence, it would seem that 50% of the population died between 20 and 40 years and the above ages are therefore compatible with these findings.¹²

ACKNOWLEDGEMENTS

The excavations were conducted by members of a full-time unit, now based in Southwark. The unit was assisted in excavation and removal of the bones by Dr. A. Missen, B. Barrell, P. Daniels and E. Jeffreys. Stephen Curtis of the London Borough of Tower Hamlets and John Earp were responsible for the site photography. K. Fitzpatrick of Guys Hospital Department of Anatomy photographed the bones of Skeleton I. The bones of Skeletons II and III were photographed by John Earp.

We would like to thank Professor R. Warwick, Department of Anatomy, Guys Hospital Medical School, and Dr. A. Missen, Department of Pathology, for their preliminary examination of the bones and for their advice, help and criticism.

R. A. H. Farrar commented on the pottery. S. A. Mackenna identified the coffin material and analysed the calcium carbonate.

H. Hodges and Miss E. Pye, of the Conservation Department, Institute of Archaeology, treated and X-rayed the key.

We would also like to thank Fred Goddard and the construction gang working in Armagh Road, and Mr. Farrow and the staff of McInerney's Beale Road Development site for all their help.

Special thanks are also due to Mrs. V. Conlon, of the Photographic Department, Institute of Archaeology, and to Andrew Kelt, Deputy Borough Architect and Planning Officer for the Borough of Tower Hamlets.

The report was typed by Win Exley.

The excavations were carried out on behalf of the London & Middlesex Archaeological Society and were financed by the Department of the Environment.

APPENDIX

List of Roman burials found in Old Ford (area plan (Fig. 1) numbers 1-13):

1. Urns containing burnt bones found a few years before 1844. C. Roach-Smith, *Archaeologia* 31 (ii), p. 310. Discovered in the centre of Old Ford Road, on the east corner of Wick Lane.
2. A stone coffin containing a skeleton found in 1870. R. Smith, *Proceedings of the Society of Antiquaries of London* (xxiii), 1910, p. 235. Discovered near the end of the platform at Old Ford Road Station.
3. A stone coffin containing a skeleton of an adult male, said to have been found near Saxon Road and Coborna Road (*Trans. L.A.M.A.S.* (iii), 1870, p. 206), sixty yards south of Roman Road. The site is given as 200 yards north of the Morville Street burials (4), but R. Smith (*P.S.A.* (xxiii), 1910, p. 232) suggests that this coffin was probably found in Parnell Road. The latter location was given in *Trans. L.A.M.A.S.* (xxiii), 1971, Fig. 10, but Smith produces no evidence to support the assertion, and the original site is given here.
4. Two stone coffins, one containing the remains of two adult females and a male, the other encasing the skeleton of a female. At the foot of the latter was found a broken amphora containing bones belonging to two individuals. J. E. Price, *Trans. L.A.M.A.S.* (iii), 1870, p. 208. Discovered in Morville Street in 1868.
5. R. Smith (*op. cit.*, p. 234) says that railwaymen remember a stone coffin being found on the site of Carlisle Tavern at the south-west corner of Lacey Street. The Morville Street burials (see 4) were stored in the same place after excavation; it may have been one of those coffins referred to here.
6. Railwaymen also remember a coffin being found in the middle of Saxon Road on the Collingwood Estate probably after 1868 (R. Smith, *op. cit.*). No details are given, and this may represent the rediscovery of a burial found earlier in the vicinity (possible 3 or 13).
7. In 1969 the staff of John Laing Construction recorded a cremation probably of the first century on the Lefevre Road development project (TQ 3697 8372).
8. A stone coffin containing a skeleton, found opposite number 85 Parnell Road in 1969 (TQ 3693 8360). *Trans. L.A.M.A.S.* (xxiii), 1972, p. 147.
9. A burial in a wooden coffin, uncovered during excavations at Parnell Road in 1970 (TQ 3694 8361). *Trans. L.A.M.A.S.* (xxiii), 1972, p. 101.
10. A stone coffin containing the skeleton of an adult female, found opposite number 114 Armagh Road in 1972 (TQ 3679 8360).
11. A stone coffin containing the remains of an adult male and female and a burial in a wooden coffin east of this sarcophagus found in 1972 at Beale Road development site (TQ 3677 8358).
12. A stone coffin containing a skeleton, found in 1856, at Mr. Hemming's Iron Church and House Works, which lay between Tredegar Road and Mostyn Grove. *Trans. L.A.M.A.S.* (i), p. 192.
13. A stone coffin containing the skeleton of an adult male found in 1865 at the site of the first house in Saxon Road, west of the corner with New Coborne Road. *P.S.A.* (iii), 1865, pp. 123-4.

NOTES

- ¹ *London Archaeologist* I, 15, pp. 348-53.
- ² *London Archaeologist* II, 2, pp. 27-31.
- ³ The Water Board trench later cut across the road.
- ⁴ The remains of the Armagh Road coffin were left *in situ*.
- ⁵ According to S. A. Mackenna, the material consisted almost entirely of extremely fine-grained calcium carbonate (Ca CO₃) with occasional iron-stained quartz grains, sized 0.25 - 0.5 mm and rare grains of glauconite which showed as dark flecks. The material was almost certainly derived from a very pure marine limestone (perhaps chalk).
- ⁶ Two jet pins were found with a burial in what is now Corfield Street, Bethnal Green (*Trans. L.A.M.A.S.*, 1862, p. 76).
- ⁷ The edges of the sherd were not at all eroded and it was apparently recently broken at the time of deposit.
- ⁸ The coin, which was very corroded, was identified by M. J. Hammerson.
- ⁹ S. A. Mackenna identified this as an example of extremely fine-grained calcium carbonate, almost certainly derived from a marine limestone.
- ¹⁰ T. W. Todd, "Age Changes in the Pubic Bone" *American Journal of Physical Anatomy* (1920), 3(3), pp. 285-334.
- ¹¹ Trotter & Glessner, *American Journal of Physical Anatomy* (1952), 10(4), pp. 463-514.
- ¹² R. Warwick, "Report of Skeletal Remains", *The Romano-British Cemetery, Trentholme Drive* (York), 1968.
- ¹³ C. Cooke & T. C. Rowbotham, "Dental Report", *The Romano-British Cemetery, Trentholme Drive* (York), 1968.
- ¹⁴ *Trans. L.A.M.A.S.*, vol. 23 (I), pp. 42-77.
- ¹⁵ *Trans. L.A.M.A.S.*, vol. 23 (II), pp. 101-147.
- ¹⁶ *Ibid.*, p. 101.