

have been excavated<sup>6</sup>. Death by hanging, in the absence of evidence for decapitation, is inferred when skeletons are discovered in this manner. The finding of flexed fingers has seldom been remarked upon previously. We have been able to find only one reference to it<sup>7</sup>. Skeleton No. IV is described as having "Hands bound behind the back touching at wrists - the left one on top - fingers half flexed towards the palms."<sup>8</sup> No particular significance is attached to this observation which was probably made because the skeleton was prone.

There was no damage to the cervical spine in either of our skeletons; this is not surprising since execution would have taken place with a running noose. Cave examined the skeleton of Mary Bateman who had been hanged for murder in 1809, and whose body was then given for dissection to the surgeons at Leeds; the skeleton was found in its final resting place in the anatomical museum of Leeds University where Cave examined it in 1941<sup>9</sup>. There was no damage to the cervical vertebrae or to those ligaments of the neck which were extant.

The effects of suspending a body from a running noose are complex. Pressure on the neck may inhibit

6. For reviews of the different sites see M. Harman, T. L. Molleson and J. L. Price 'Burials, bodies and beheadings in Romano-British and Anglo-Saxon cemeteries' *Bull Br Mus Nat Hist (Geol)* **35** (1981) 145-88; R. Poulton 'The former Goblin works. Leatherhead: Saxons and sinners' *London Archaeol* **5**, no. 12 (1987) 311-7.
7. D. M. Liddell 'Excavations at Meon Hill' *Proc Hants Field Club Archaeol Soc* **12** (1933) 127-62.
8. *Op cit* fn 7, 135.
9. A. J. E. Cave 'The earliest English example of bilateral cervical rib' *Brit J Surg* **29** (1941) 47-51.
10. C. J. Polson 'Hanging' in *The essentials of forensic medicine*,

the vagus nerves in the neck and also occlude the carotid and vertebral arteries and obstruct the airways. Very little pressure is required to occlude the arteries (about 3.5kg, 8lbs, for the carotids and 16.6kg, 37lbs, for the vertebrae)<sup>10</sup> and unconsciousness rapidly supervenes unless the point of suspension is low or the ligature exerts pressure under the chin and does not encircle the neck; it may be several minutes before the victim dies, however. There is no bony injury although the hyoid may be fractured. Modern judicial hangings with a 'drop', however, may result in injury to the cervical spine or to the base of the skull, although the precise nature of these injuries appears to be a matter of dispute amongst forensic pathologists<sup>11</sup>.

It seems likely, therefore, that osteological evidence for hanging will be absent in most excavations, and more circumstantial evidence such as the tying of the hands behind the back will be crucial. In this context, the signs of a violent, rapid death such as we postulate from flexion of the fingers may be invaluable supportive evidence, and we suggest that careful attention to this point in future excavations of buried criminals may be fruitful.

4th edition, Oxford, Pergamon Press (1985) 357-88.

11. Sir Arthur Keith, in a letter to A. W. G. Lowther about the skeletons discovered at Guilddown writes that "one skull (that of a man) shows rupture of its base - a lesion found in death by hanging - with a long drop." (Appendix II, p. 46 in A. W. G. Lowther 'The Saxon cemetery at Guilddown, Guildford, Surrey' *Surrey Archaeol Collect* **39** (1931) 29-50. Unfortunately Keith did not say to which skeleton he is referring, and seems to have given no further details subsequently. The skeletons are no longer extant, so it is impossible to re-examine them. Keith is wrong to infer that the lesion he found resulted from a long drop since hanging would have been with a running noose.

## Letters

### GRAVEL-STONE IN MIDDLESEX CHURCHES

I READ with great interest the recent article and especially the reference to the church of St. Mary, Harrow on the Hill.

As a Drainage Engineer with Harrow Council, I recently supervised the excavation and laying of a new sewer along Football Lane, Harrow on the Hill. During the course of the excavation work it was brought to my attention that the excavator was pulling out lumps of rock, whereas until then all the excavation had been in clay. On inspection I found a depression in the clay filled with this mixture. As we only excavated a trench 600mm (2ft) wide through it, by 1.1m (3ft 6in) deep, I have no knowledge of its extent in a N-S direction, but it was about 5m (16½ft) long in the E-W direction.

As a keen amateur archaeologist I have always kept an eye on any excavations I supervise and have considered that Harrow on the Hill would have early occupation so kept a weather eye open for any indications of ditches etc. in the trench in Football Lane. Although the shape of the depression was a shallow ditch, the fill was geological not archaeological.

I kept a piece of this rock and compared in to that built into the church tower, after reading the article. They are definitely the same material, which bears out the hypothesis that the church builders would use local materials where possible.

Subsequent discussion with colleagues in the office has unearthed an old Geological Survey map of the relevant part of the Borough, to a scale of 6 inches to the mile, which shows the boundary of the Claygate Beds and London Clay crossing Football Lane at exactly the spot where I recovered the rock sample. There are also hand-written notes on the map suggesting that blocks of iron conglomerate have been found in the Claygate Beds.

51 Headstone Lane  
North Harrow  
Middlesex  
HA2 6JJ

JOHN REEVES

THE ARTICLE by Eric Robinson endeavours to establish 'ferricrete' as a nomenclature covering all iron-cemented  
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# Books

**The Thames: Record of a Working Waterway**, by David Gordon Wilson. *B. T. Batsford Ltd.*, 1987. 125 pp., 100 pl., bibliog., index. £10.95.

'MESSING ABOUT on the river' appeals to us all, whether we are in the class of Ratty or of the Three Men, but in the exuberance of floating on the water we tend to overlook the fact that for 4000 years and more the Thames has been a crucial transport artery penetrating deep into England, as well as serving as a source of food. In the later periods, the river has also been a provider of power.

It is easy to forget when passing through a frothing lock with its adjacent charming and well-kept keeper's garden, that the original *raison d'être* of the weir was to pound a stretch of river in order to produce a head of water to power a corn mill. Another use for a weir was, of course, as a placement for fish traps.

Today, although many locks remain to indicate the former presence of mills, virtually nothing is to be seen on the river of the once rich variety of boats which plied for trade up and down the Thames. Luckily this book does to some extent atone for that state of affairs.

*The Thames* is a fascinating record of boats, their loads and their installations which once lined this river. Although of necessity the book's strength lies in the descriptions and illustrations of the post-medieval traffic above the Port of London, much else is covered.

The development of the design of the 'Western barge' is traced from the Roman large punt-like boats such as those found at Zwammerdam, the early swimhead barges and later horse ferries to their modern steel descendants. Also not forgotten are the steel-ended pole-implements, the connecting canals into the hinterland, the maintenance of the river, 'Thames barges' and medieval references to boats and locks. The illustrations of Tudor, 18th and

20th century 'halers' (gangs of men who from the river-bank towed barges upstream) recall their Roman forebears illustrated on bas-reliefs from the Rhineland.

For anyone with a weakness for the Thames and its history, this book is a must. The wealth of photographs, prints and paintings of the river at work will feast the eyes, while the text both provides a useful commentary and fills in some of the gaps which the illustrations are unable to cover.

NICHOLAS FUENTES

**Dolmens for the Dead – megalith building throughout the world**, by Roger Joussaume (translated from the French by Anne and Christopher Chippindale). *B. T. Batsford Ltd.*, 1987. 320 pp., 26 pl., 65 figs., bibliog., index. £19.95.

THE SUB-TITLE "Megalith building throughout the world" is something of a misnomer, since the author concentrates on megalithic chambered tombs, originally covered by a mound (whether they are still covered or not), which were used for the disposal of the dead: stone circles, alignments and standing stones are only discussed when found in close association with structures which fit his definition. This is probably the most controversial aspect of the book, since not all the structures included by Joussaume are universally accepted as having been originally covered by a mound or even used primarily for the disposal of the dead.

The first seven chapters provide an excellent general survey of European chambered tombs, while the remaining six chapters deal with North and Central Africa, Madagascar, the Near East, the Caucasus, India, the Far East and South America. These latter chapters are more superficial in their treatments of the monuments than the first seven, but this almost certainly reflects the smaller amount of information available and the current state of research in those areas.

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conglomerates. It hopefully will not get confused with 'ferrocrete', the name given to early examples of reinforced concrete.

Examples of these conglomerate stones used in construction work are by no means uncommon. They occur in Beeleigh Abbey, Colchester Castle and at St. Osyth's in Essex as well as in a number of locations along the valleys of the rivers Stour, Avon and Frome<sup>1</sup> in Dorset and Hampshire and a little west of the example cited in the article at St. Mary's, South Stoneham (on the fringe of Swaythling but not its parish church). Within the London area but south of the Thames the soffit of the southernmost arch of the Clattern Bridge at Kingston-upon-Thames is lined with ironstone.

There is an indication that in the Roman and later periods a knowledge of the hardwearing and concrete nature of iron-

cement bound gravels when exposed to air was used to good advantage. Iron pyrites, shot<sup>2</sup> and ferrous waste was sometimes mixed with compacted gravel to form a suitable road surface. Could this be the derivation for the term 'metalling the road'?

CHRISTOPHERE. OLIVER

46 Woodville Road  
Richmond  
Surrey  
TW107QN

1. Wool, Sturminster Marshall, Shapwick, Wimborne Minster, Corfe Mullen, Fordingbridge.
2. Paul Arthur and Keith Whitehouse 'Report on excavations at Fulham Palace Moat, 1972-1973' *Trans London Middlesex Archaeol Soc* 29 (1978) 45-72; Wright, Hassall and Tomlin 'Roman Britain in 1974' *Britannia* 6 (1975).