
Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological Society)

Volume LXXXVI
for 1997



Recent Publications of the Cambridge Antiquarian Society

Proceedings LXXXIII, 1994: Price £10 for members, £12 for non-members

- Alex Jones: *Little Paxton Quarry, Diddington, Cambridgeshire: Archaeological Excavations 1992–3*
J.B. Tipper: *A Late Iron Age/Romano-British Settlement at Madingley, Cambridgeshire*
Wendy Horton, Gavin Lucas & Gerald A. Wait: *Excavation of a Roman Site near Wimpole, Cambridgeshire, 1989*
Ernest Greenfield, Jeany Poulsen & Pamela V. Irving: *The Excavation of a 4th century AD Villa and Bath-House at Great Staughton, Cambridgeshire, 1958 and 1959*
Mary Hesse: *The Anglo-Saxon Bounds of Littlebury*
Graham Chainey: *The East End of King's College Chapel*
Alison Taylor, Tim Malim & Christopher Evans: *Field-work in Cambridgeshire: October 1993–September 1994*

Proceedings LXXXIV, 1995: Price £10 for members, £12 for non-members

- Jane Kenney & Alistair Oswald: *Belsar's Hill, Willingham, Cambridgeshire: a Survey by the Royal Commission on the Historical Monuments of England*
T.E. Miller: *The Romano-British Temple Precinct at Great Chesterford, Essex*
Cyril Hart: *Land Tenure in Cambridgeshire on the eve of the Norman Conquest*
A.E. Brown and C.C. Taylor: *Little Linton and the Linton Landscape*
L. Potter: *A Perambulation of the Manor of Barham, Linton, Cambridgeshire in 1761*
Robert Halliday: *Wayside Graves and Crossroad Burials*
Hilary Wayment: *The Late Glass in King's College Chapel: Dierick Vellert and Peter Nicholson*
Roger Wolfe: *'Quite a Gem': an Account of the Former Mortuary Chapel at Mill Road Cemetery, Cambridge*
J.B. Finney, S.M. Finney & N. James: *Wind Pumps in the Haddenham Level: an Archaeological Survey*
Tim Denham, Christopher Evans, Tim Malim & Tim Reynolds: *Field-work in Cambridgeshire: September 1994–May 1996*

Proceedings LXXXV, 1996: Price £10 for members, £12 for non-members

- Tim Malim: *Alison Taylor FSA, MIFA: Cambridgeshire County Archaeologist 1974–1997*
Christopher Evans: *The Excavation of a Ring-Ditch Complex at Diddington, near Huntingdon, with a Discussion of Second Millennium BC Pyre Burial and Regional Cremation Practices*
Tim Malim with Ken Penn, Ben Robinson, Gerald Wait & Ken Welsh: *New Evidence on the Cambridgeshire Dykes and Worsted Street Roman Road*
Niall Oakey with Paul Spoerry: *Excavations at Orchard Lane, Huntingdon, 1994*
Mary Hesse: *The Field called 'Augey' in Ickleton: an Anglo-Saxon Enclosure?*
C.C. Taylor: *An Archaeological Field Survey of Wothorpe, Cambridgeshire*
Christopher Evans, Gavin Lucas, Tim Malim, Tim Reynolds & Twigs Way: *Field-work in Cambridgeshire: April 1996–July 1997*

**Proceedings of the
Cambridge Antiquarian Society**

(incorporating the Cambs and Hunts Archaeological Society)

**Volume LXXXVI
for 1997**

Editor Alison Taylor

Published by the Cambridge Antiquarian Society 1998

ISSN 0309-3606

Officers & Council, 1996–1997

President

Professor M. B. Hesse, M.Sc, Ph.D, F.B.A.

Vice-Presidents

D. Hawkins, M.A, M.Phil, F.R.C.P, F.R.C.R.

Professor M. K. Jones, F.S.A.

C. C. Taylor, F.B.A, F.S.A.

Disney Professor of Archaeology

Professor Lord Renfrew, M.A, Sc.D, F.S.A, F.B.A.

Curator of the University Museum of Archaeology and Anthropology

D. W. Phillipson, M.A, Ph.D, F.S.A, F.R.G.S.

Ordinary members of Council

D. Banham, Ph.D.	P. Park, B.Sc, F.R.S.C.
E. M. Davies	P. Saunders, Ph.D.
B. Fuller	M. E. Shepherd, M.A, Ph.D.
N. Hellawell, F.R.S.A, R.I.B.A.	M. E. Stazicker, M.A.
R. Horrox, M.A, Ph.D, F.R.Hist.S.	Miss A. Syme, M.A.
M. W. Thompson, M.A, Ph.D, F.S.A.	

Secretary

S. M. Oosthuizen M.A.
Board of Continuing Education
Cambridge CB3 8AQ

Treasurer

Dr. J. Shepherd, M.B, Ch.B.
28 Barton Road
Cambridge CB3 9LF

Editor

A. Meaney, M.A, Ph.D, F.S.A, F.A.H.A.
260 Milton Road
Cambridge CB4 1LQ
Tel: 01223 424433

Registrar

Mrs. R. Desmond
3 Orchard Estate, Cherry Hinton
Cambridge CB1 3JW
Tel: 01223 242703

Hon. Librarian and Assistant Editor

J. D. Pickles, M.A, Ph.D, F.S.A.
The Old Schools
Cambridge CB2 1TN

Excursions Officer

C. Butler Dip. Rur. Est. Man.
10 Huntingdon Road
Cambridge CB3 0HH
Tel: 01223 351249

Editor of Conduit

Tim Reynolds, Ph.D.

Representative of the Cambridgeshire Local History Society

J. M. Farrar, M.A.

Hon. Auditor

R. E. Seaton, C.I.P.F.A, I.I.A.

Contents

An Iron Age Square Barrow at Diddington, Cambridgeshire Third Interim Report of excavations at Little Paxton Quarries: 1996 Alex Jones	5
Prehistoric and Roman remains at Edix Hill, Barrington, Cambridgeshire Tim Malim	13
An Anglo-Saxon cemetery at Oakington, Cambridgeshire Alison Taylor, Corinne Duhig and John Hines	57
<i>Cloistered Communities: Archaeological and Architectural Investigations in Jesus College, Cambridge, 1988-97</i> Christopher Evans, Alison Dickens and D.A.H. Richmond	91
Prehistoric Fields into Medieval Furlongs? Evidence from Caxton, Cambridgeshire Susan Oosthuizen	145
Medieval Pottery from Cambridge: Sites in the Bene't Street - Market areas David Edwards and David Hall	153
The Foundation of an Alien Priory at Linton, Cambridgeshire J.A. Everard	169
Reviews Alison Taylor & John Alexander	175
Field-Work in Cambridgeshire: C. Evans, D. Keen, G. Lucas, T. Malim, I. Meadows, T. Reynolds, & J. Roberts	179
<i>Index</i>	187

Editorial

My first task in this volume is to thank and pay tribute to the retiring editor, Audrey Meaney. She took the Proceedings through several difficult years, from 1993-7, coping in particular with new publishing technology and increasingly complex archaeological reports. In this time she made tremendous efforts to catch up with annual publication, so that, by September 1998, we are only nine months behind the date for which the issue is intended. This is despite the size and professional standards required for the only vehicle for regular reporting of most archaeological discoveries to a wide local and international readership in Cambridgeshire, as well as publishing historical and other antiquarian research.

1996-7 once again had a well-filled programme for the Society, with two conferences, on Fenland Waterways in March and on recent archaeological excavations in November. There was an impressive programme of lectures, headed by Barry Cunliffe and our own ex-President Christopher Taylor, and some enjoyable excursions. It was also a year when the Council, and in particular its President and Secretary, were involved in efforts to protect local services for archives, archaeology and local studies. Sadly, just as this volume was being prepared for the press, we heard of the deaths of two of our stalwart members and supporters. Nesta Rooke, for many years Sites and Monuments Officer for Cambridgeshire, and Brian Charge, Director of the Haverhill and District Archaeological Group, died in July 1998.

This volume contains a few minor changes in design, principally with the intention of making better use of expensive space, and it follows the usual format except for the revival, after several years, of a Reviews section. As a first attempt it perhaps appears rather incestuous, but I hope that in future we will receive a wider range of books, and I would also welcome offers of suitable reviews by other writers. This is an important way to bring works that might easily be missed to the attention of members, and to entice them to read reports which are often more interesting than their titles suggest.

Alison Taylor

An Anglo-Saxon cemetery at Oakington, Cambridgeshire

Alison Taylor, Corinne Duhig and John Hines

with contributions by Phyllis Jackson, Stephen Macaulay and Audrey Meaney and
illustrations by Linda Meadows

Summary

Part of an Anglo-Saxon cemetery was excavated within the medieval village of Oakington. In total, 26 burials were found, including one urned cremation and one double grave. The survival of human bone was generally good, although several graves had been disturbed by later features. Most burials were accompanied by grave-goods, though some of these were very humble. They included 18 brooches, about 90 beads, 7 buckles, 1 ivory bag-ring, 10 knives, 3 latch lifters, 6 pins of bone, copper alloy or iron, a Roman coin, 1 spear, 2 shield-bosses, 2 strap-ends, 1 pair of tweezers and 2 sets of wrist-clasps. Apart from one almost complete pot, 9 graves contained sherds that appear to have been deliberately deposited, usually on the shoulder or by the pelvis, and 4 graves had animal (meat) bones placed as grave-goods. Study of the skeletal remains demonstrated a tall and generally healthy population which nonetheless suffered periods of famine and was accustomed to a life of constant hard physical work. All grave-goods were of 6th-century date. Early prehistoric ditches preceded use of the land for a cemetery. In the early medieval period the site lay on the western side of Oakington village, adjacent to the main road through the settlement; ditches of this date were also found.

Introduction

Oakington is situated where a greensand ridge crosses a tongue of gravel and alluvium that projects from Histon, just north of Cambridge. Otherwise, the surrounding geology is mostly gault clay. The site is close to Beck Brook, a tributary of the Ouse, and it lies midway between the Roman town of Cambridge, about 3 miles to the southeast, and the edge of the Fens, a similar distance to the north and northwest. The nearest important Anglo-Saxon site to Oakington was the cemetery excavated at Girton College, two miles to the south-southeast. Traces of early Saxon settlement have been found adjacent to Girton church, roughly midway between the two cemeteries, and within the medieval centres of neighbouring villages at Cottenham, Waterbeach and Willingham (Taylor 1997, 54, 1998, 27, 92, 105).

There are few prehistoric finds known from Oakington, and Roman occupation has been recognised only from occasional pot sherds found in gardens and fields close to the village, apart from coins found near the Cambridge to Godmanchester road. This Roman road, known as the Via Devana, passes along the parish boundary just over a mile south of the village. A route from this road to the Fens, passing by the cemetery, was in use by the 11th century at least. In 1086 there was a substantial population in Oakington, about 275 people in all, and a priest is recorded. Most land was held by the Abbot of Crowland, who had a manor house near to the church. In the Middle Ages, settlement was concentrated on the route ways slightly to the north of the cemetery. From the mid 14th century the population in Oakington was quite small and the cemetery site was undisturbed, the land probably being used for grazing. In the 1920s it was changed into nursery gardens, and ploughing and digging disturbed several graves at this time. Finds reported to the Cambridge Museum of Archaeology and Anthropology consisted of a male skeleton with a spear and shield-boss over his head, three more skeletons, and three coloured glass beads. Villagers also noted 'many bits of bone' on the field surface.

The land was later purchased for use as a village recreation ground, and there was no further disturbance to the subsoil until 1993. Then an area of about 15 x 18m was cleared for erection of swings and slides etc, and human bones were unearthed. The police called Alison Taylor to the site, and she noticed a 6th-century brooch with a skeleton. Machining was stopped instantly, and Simon Bray and Stephen Kemp of Cambridgeshire's Archaeological Field Unit were called to lift the skeleton that afternoon, as the place was too public to leave exposed finds in the ground. It was clear that many other burials were present, and so the parish council kindly agreed to delay further construction work for a year, in which time South Cambridgeshire District Council was able to make a grant available to pay for excavation of the area that would be disturbed.

The excavation, directed by Stephen Macaulay, took place over a fortnight in the following May



Figure 1. Location plan showing cemetery excavation

(1994). Problems encountered were unseasonably wet weather, which made some recording and lifting of delicate items difficult, and the overriding need to lift every skeleton that was exposed on the same day because the nature of the site, on a public recreation ground surrounded by housing estates, made privacy and security impossible. It was for this reason that the locations of a few items that lay beneath skeletons were unfortunately not recorded.

The Excavation

Prehistoric Features

Two ditches of early prehistoric date were noted in the area of excavation. One ran roughly northwest to southeast, was about c. 1.5m wide x 0.5m deep, and was cut by Grave 25 (1993 excavation). It had a leached orange-brown silty clay fill and contained worked flints of Mesolithic and Neolithic date. It was not excavated, but merely noted during the lifting of the skeleton found in 1993. A second ditch, Ditch 52, ran northeast to southwest, was 1.4m wide x 0.42m deep, and had a similar fill and finds. It is possible that these ditches were two sides of a rectangular feature.

The Anglo-Saxon Cemetery

Grave 1.

Female, aged mid 40s, ht: 1.61 m (5' 3")

1. Cruciform brooch, copper alloy, (Mortimer Type C). Length: 126mm.
2. Large potsherd, max. dimension: 170mm, estimated rim diameter: 180mm. Hard fabric, differentially fired red and grey, with finely pulverised shell-tempering.
- 3 and 4. Wrist-clasps, 2 pairs, copper alloy, (form B7). Length: 35mm.
- 5 and 6. Pair of annular brooches, copper alloy. Diameters: 49mm.
- 9-22. 14 amber beads. Total weight: 9gm. *Location not recorded.*
- 23-4. 2 blue glass beads. *Location not recorded.*
25. Silver-in-glass bead. Length: 10mm. *Location not recorded.*
(The beads probably all lay beneath the body)

Belt-set:

7. Ring, iron. Max diameter 34mm.
8. Strap-end, copper alloy with iron rivet. Length 37mm.
26. Knife, iron (Type B; size group 1). Total length 112mm, length of blade: 67mm.
27. Buckle, iron, with D-shaped loop. Width of loop: 18mm. *Location not recorded.*

The grave was gently-shelving and wide, 1.12 x 0.8 x 0.3m, with a yellow-brown sandy clay fill, and had been truncated by modern disturbance to the north.

The skeleton is complete apart from a few of the smaller hand bones, one patella and most of the bones of the foot. All the sex-determining features are female and this woman's height, determined from the length of several long bones, was about 1.61m (5' 3"). Although the pubis, the part of the pelvis normally most reliable for estimating age, is broken, the dental wear and the condition of the auricular area of the pelvis indicate that she was probably in her mid 40s when she died. The level of degenerative change in

her spinal column is marked, with osteophyte development, cysts and some eburnation. The teeth also are in poor condition: six are carious and five abscesses had developed at tooth roots at various times; there is slight tooth crowding at the front of the mandible. Within the skull, the *sella turcica*, the seat of the pituitary gland, has changes suggestive of erosion during life, which is most commonly due to raised intracranial pressure or a tumour of the pituitary itself. Further study is impossible as the skull is broken.

Grave 2.

Immature, 12 years or under

No grave goods

Indeterminate, sub-rectangular grave, cut and mostly destroyed by Ditch 12.

Only a few bones are present: the right humerus, two rib fragments, part of the pelvis, both legs and the left foot. The epiphyses are unfused in all cases, showing that this was an immature individual, but the absence of the skull and much of the skeleton prevents precise ageing. The acetabulum is unfused, so this was a child of not more than 12 years of age. The length of the long bones suggests late childhood.

Grave 3.

Male, aged 25-35, ht: 1.91m (6' 3")

1. Knife, iron (Type B; size group 1). Total length: 133mm, length of blade: 93mm.

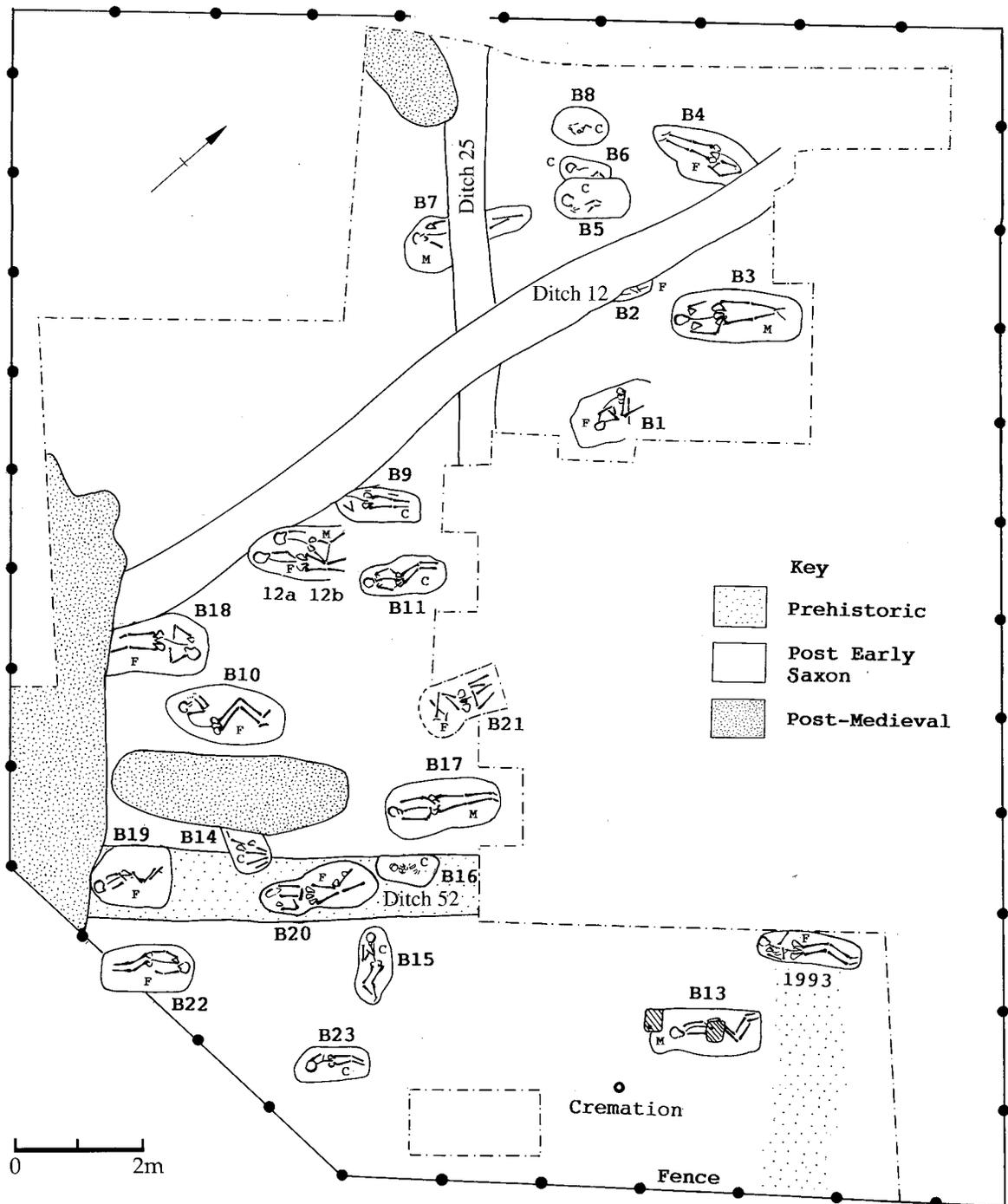
Wide, sub-rectangular grave-cut with steep sides, 2 x 0.8 x 0.2m, dark yellow-brown silty clay fill.

This massive skeleton shows marked male characteristics in skull and pelvis and male proportions in other bones, with a height in life of approximately 1.91m, or 6' 3". The shoulder area is missing, and although a few ribs were visible on excavation they were not recovered. Both dental wear and the condition of the pubic symphysis indicate that this man was probably in the range 25-35 years of age when he died, but he had already developed changes in his spine similar to those of 1, as well as Schmorl's nodes on every vertebra. Bony lipping by osteophyte development is present in the joints of his elbows and in his right arm at the site of the attachment of the deltoid, one of the major muscles of the arm. It is likely that heavy work was the cause of all these changes.

Grave 4.

Female, aged 40-?, ht: 1.65 m (5' 5")

1. Cruciform brooch, incomplete, copper alloy, (Mortimer Type B or C). Surviving length: 78mm.
2. Small long brooch, cross-headed/trefoil derivative type). Length: 74mm.
- 3-5. 3 blue glass beads. Max. diameter: 11mm.
6. 1 amber bead, wt. >1gm.
7. Ring, iron. Diameter: 53mm.
8. Buckle, iron with D-shaped loop. Inner width of loop: 24mm.
9. Knife, iron (Type B; size group 1). Total length: 150mm, length of blade: 90mm.
10. 2 potsherds with hard dark-grey fabric, tiny white mica flecks, one of them from the base of a small round-



bottomed pot, found just above the grave and probably part of its grave-goods.

Wide, irregular, sub-rectangular grave with shallow sides, 1.7 x 0.8 x 0.18m, brown, sandy clay fill.

The skull, right arm, shoulder girdle and most of the hand bones are missing from this skeleton. Despite the absence of the skull, sexing of the remains is not difficult as the pelvis is clearly female in form and all recovered bones are quite gracile. This woman would have been of middle height in life, about 1.65m (5' 5"). Her age is difficult to determine as the condition of the pubic symphysis corresponds to a very wide

range, from 42 to 87 years, but degenerative age changes in the spine are only present in the four lowest joints, so it is tentatively suggested that she probably was not much older than her 40s when she died.

The third and fifth (last) lumbar vertebrae show a condition known as spondylolysis, in which the arch of a vertebra is not attached to its vertebral body. The cause can be an inherited defect, but is more commonly brought about by injury to the lower spine in youth, causing separation at a narrow point of the arch. If no movement of the separated parts takes place the condition usually causes no problems, but if

the arch and body slide in relation to each other, then sciatic pain can ensue, sometimes of crippling severity (Adams 1961). In this case it is possible that the twisted shafts of the right metatarsals were caused by extra pressure on this foot, due to sciatic pain which forced her to favour the left leg when walking.

Grave 5.

Child, aged about 2 years.

1. Wrist-clasp, incomplete half, copper alloy (form B7). Surviving length: 25mm.

The fill of the grave also contained 12 tiny fragments of copper alloy, 2 pieces of sheet and 10 globules. These are tentatively identified as working waste.

Sub-rectangular grave with steep sides, 1.5 x 0.6 x 0.15m, yellow-brown sandy silt fill.

The remains are those of a child, whose delicate bones have suffered badly from erosion and are very fragile. The hands and feet and most of the vertebral column are missing. Fortunately, teeth preserve well, so much of the dentition has been recovered even though the jaws are fragmentary, and from the tooth development and stage of eruption age at death can be established as about 2 years.

Grave 6.

Child, aged about 18 months.

No grave goods.

Sub-rectangular grave with shallow sides, 0.78 x 0.72 x 0.6m, yellow-brown sandy silt fill, cut by Grave 5.

As with the previous remains, this small skeleton is poorly preserved, in this case consisting of a skull and a few limb bones only, but the teeth have been recovered with some jaw fragments. The child's age at death was approximately 18 months. The condition of *cribra orbitalia* is present in the eye orbits, indicating iron-deficiency anaemia, although in a mild form (stage 2) and there is also another indication of stress to the growing child in a spot of defective enamel on one tooth, representing a period or periods of starvation or very severe feverish illness during the time at which the tooth was developing.

Grave 7.

Male, aged 25–35, ht: 1.9m (6' 2")

2. Pair of tweezers, copper alloy. Length 45mm.

Belt-set

1. Buckle, iron, with D-shaped loop. Inner width of loop: 23mm.
3. Knife, iron, (Type A; size group 1). Total length: 133mm, length of blade: 93mm.

Fragments of pottery deposited by left shoulder, with 2. and 3. lying beneath them. 4 sherds, probably from the same pot, max. size 13 x 12mm. Hard dark grey fabric, tiny white mica flecks.

Wide, sub-rectangular grave with shallow sides, 2 x 0.5 x 0.9m, dark yellow-brown sandy silty clay fill, cut by Ditch 25.

Disturbance to this burial means that the skeleton lacks the lower thorax and abdominal area, including the ribs, lower lumbar vertebrae, pelvis and upper femora, as well as the forearms and right hand which

must have lain at the same level. Only a few foot bones have been recovered. Male features are marked in the skull, and the whole skeleton is robust and tall, with an estimated stature of 1.9m or 6' 2". The complete absence of the pelvis and the fragmentary nature of the skull necessitates ageing by dental wear, which gives only very general ranges: in this case, an age at death of 25 to 35 years. Two teeth had been lost in life.

A severe accident to this man's right shoulder had left him with a dramatically altered shoulder joint, which probably caused continuing pain and some handicap. His clavicle had fractured in the usual way, in mid-shaft, with good healing but some loss of length due to imperfect alignment of the broken ends: this is what would be found as the result of a fractured collar-bone even today, and leads to no resulting discomfort or disability (Adams 1961). The humerus has been crushed by conditions after burial, so is difficult to visualise, but its neck, the area just below the shoulder joint, appears to have been fractured as well. The head of the bone has become deformed by arthritic changes and is severely lipped, cystic and eburnated, as is an area of the scapula outside of the glenoid fossa, the 'socket' part of the ball-and-socket shoulder joint. Apparently, the humeral head had rejoined the shaft at an abnormal angle, normal articulation was impossible and a false joint had formed with the distorted humeral head lying against the blade of the scapula. The polish of eburnation on both bones shows that some movement was taking place at this joint although it was probably very painful in the absence of the usual protecting cartilage or lubricating synovial fluid, and could only have become more so had the man lived into old age. Mild *cribra orbitalia* was present in both eye orbits, suggesting some period of iron-deficiency. Schmorl's nodes were found on six lower vertebrae.

Grave 8.

Infant

No grave goods.

Sub-rectangular grave with shallow sides, 0.8 x 0.5 x 0.7m, fill not recorded.

The size and developmental stage of the bones show that the infant was newborn or up to six months of age.

Grave 9.

Child, aged 7–12

Sheep femurs were deposited by the left side of the skeleton. Pottery, 1 sherd

Sub-rectangular grave with shallow sides, 1.3 x 0.45 x 0.2m, brown sandy clay fill, cut by Ditch 12.

The skeleton represented here by most of the limb bones, three vertebrae and a few hand and foot bones was that of a child of more than 7 or 8 years and less than 12 years of age, shown by the fusion of one area of the pelvis (the ischium and pubis) and non-fusion of another area (the acetabulum). More precise ageing is prevented by the absence of the skull.

Grave 10

Female aged 45–9, ht: 1.73m (5' 8")

1. Cruciform brooch, copper alloy, (Mortimer Type C). Length: 123mm.
2. Small long brooch, copper alloy, incomplete, (cross headed/trefoil-derivative type). Surviving length: 82mm. Location not recorded.
3. Disc brooch, copper alloy. Diameter: 33mm.
4. Bone loop. Diameter: 23 x 37mm, (found in upper levels of grave-fill and possibly not associated with the grave)
5. Knife, iron, (Type B; size group 1). Total length: 111mm, length of blade: 75mm.
6. 2 small potsherds, hard dark-grey fabric with tiny white mica flecks, one of which was from the carinated shoulder of a small urn, were found in the grave-fill.

Wide, well-defined, sub-oval grave with shallow sides, 1.8 x 0.9 x 0.15m, with yellow-brown silty clay fill.

Most of the bones have been recovered for this body, excepting only the left wrist and some finger and toe bones; even the hyoid, a small bone which lies beneath the tongue, is present. Erosion, however, has damaged most of the skeleton and the skull has become severely warped in the ground. Were it not for the female artefacts that were present, sexing would be problematical in this case, as some male and some female features are present in both the skull and the pelvis. This is unusual for an Anglo-Saxon individual, as these populations in Cambridgeshire tend to be quite sexually dimorphic. Stature would have been relatively tall for a woman, at 1.73m (5' 8"), but not exceptional.

The pubic symphysis is eroded, and cannot be used for determining age at death, but there are changes in the auricular area which conform to the standard for the age range 45 to 49 years, which is concordant with the arthritic deterioration present throughout the spine, even in the neck vertebrae. Some osteoarthritic change has also taken place in the right knee and foot. A condition known as *hyperostosis frontalis interna* (HFI) can be seen in the skull; it shows in the skeleton as bony thickening on the inner surface of the frontal bone, appears to be clinically insignificant, and is almost exclusively found in post-menopausal women (Moore 1955).

It is occasionally found that the spine has an anomalous number of vertebrae in its different regions, the normal being 7 in the neck (cervical vertebrae), 12 in the back (thoracic), 5 in the lower back (lumbar) and 5 fused together to form the sacrum which is part of the pelvis. There appears to be no clinical significance in these variations, but the same trait is often prevalent in a family, so it can be used to suggest relatedness in a skeletal population. This skeleton has only 6 cervical vertebrae but an additional one in the lumbar region. Six teeth had been lost in life, and there is one abscess cavity present, but no dental decay in any of the remaining teeth.

Grave 11

Child, aged about 11

Potsherd, hard grey fabric with tiny white mica flecks, too shattered after excavation for measurement, lying over the

pelvis of the body, apparently deliberately deposited.

Wide, sub-rectangular grave with shallow sides, 1.37 x 0.55 x 0.14m, dark, yellow-brown silty clay fill.

A child is represented in this skeleton, which consists of fragmentary bones from all areas of the body but few from the extremities. Upper and lower jaws are well preserved, showing a changing dentition with most of the adult teeth, some completing eruption, but with three of the deciduous teeth still retained: the pattern is that of an 11 year old. Linear and spotted defects of the tooth enamel are visible over the crowns of the upper premolars, covering a development period from about 3 to 6 years of age (Ubelaker 1989) and representing episodes of starvation or severe feverish illness.

Double Grave 12A and 12B

12A Child aged 8.

No grave-goods

12B Female aged 15.

1. Annular brooch, copper alloy. Diameter: 39mm.
2. Bone pin. Surviving length: 71mm.
- 2-6, 10-11, 12. 8 amber beads. Net weight: 2gm.
7. Silver-in-glass bead. Length: 8mm.
9. Blue glass bead
13. Knife, iron, (Type A; size group 1). Total length: 115mm, length of blade: 67mm.

Apart from 13 all the grave-goods lay beneath Skeleton 12B, and their locations were not recorded.

12A and B both lay face-downwards in a wide sub-rectangular grave with steep sides, 1.5 x 0.88 x 0.26m, with brown silty clay fill, cut by modern disturbance to the north. 12A lay with its legs sprawling but 12B, overlying part of a leg of 12A, lay tidily and in a straight position.

Both these immature skeletons are fragile and eroded in some areas, probably due to local waterlogging, and the skulls are badly broken. 12A consists of a skull and most of the vertebral column, the right arm and shoulder, pelvis and both legs, and 10 bones from the feet. Both upper and lower jaw are well preserved, and the teeth exhibit a changing dentition appropriate to the standard for an 8-year-old child, with deciduous canines and molars still in place over the erupting permanent teeth. Bands of enamel defects cover the crown of a lower canine, and there are one or two bands on other permanent teeth, showing that stress periods, as mentioned for 11, affected the development of these teeth, from about 1 year up to the completion of the second molar crown at 7 years. The four examples of caries on the immature molars might also be due to defective enamel, because this would be particularly weak and susceptible to decay. Another mild case of *cribra orbitalia* can be seen in the orbits; it is possible that this indication of anaemia relates to physiological stress periods which have damaged the teeth.

12B lacks ribs and both hands and feet but has a complete spine, all limb bones and a pelvis. Within the right ear were two of the three tiny bones which transmit sound to the eardrum. All teeth are well pre-

served, although half of the upper jaw is missing, and are those of a person of 15 years of age, with the third molars (the wisdom teeth) just emerging from their bony crypts. Carabelli's cusps, the extra cusps on the upper first molars, are present, as is another extra cusp on a lower third molar. There is some heritable tendency in these dental anomalies, so their absence in **12A** suggests that the children were not closely related. Defective enamel can be seen on the upper canine and first and second molars.

Grave 13

Male, aged 25–35.

1. Shield-boss, iron, with most of flange missing (Group 3). Diameter of cone: 110mm, overall ht: 80mm, ht. of wall: 35mm.
2. Spear-head, iron, (Type E2), with mineral preserved textile on the blade. Overall length: 255mm, length of blade: 175mm.

Belt-set

3. Knife, iron, (Type B; size group 1). Total surviving length: 90mm, length of blade: 57mm.
4. Buckle, iron, represented by rounded plate, with mineral preserved textile. Length: 35mm.

1, 3 and 4 were found in soil already disturbed by foundations for a slide and could not be accurately recorded.

Wide rectangular grave with steep sides, 1.75 x 0.75 x 0.2m, mid-brown silty clay fill, disturbed by concrete foundations for a slide.

Almost all of this body was recovered except the pelvis, a few small fragments of which are pathetically attached to lumps of concrete. Despite the good recovery, sexing features are absent from all of the skeleton apart from the skull, and the skull characteristics are contradictory: most are male in form, but some female and some indeterminate. A general age range of 25 to 35 years is indicated by the dental wear, and this is confirmed by the slight appearance of age-degenerative arthritis in the lower spine.

This person's skull was distorted by abnormal growth of the vault. The frontal bone is longer from front to back on the right side, while the parietal bone behind it is shorter on the right by the same amount. The deformity would probably not have been particularly visible in life, as it did not affect the face itself. Both tibiae have the marked side-to-side flattening called platycnemia, which has been considered as indicative of hill-walking or constant squatting, both being characterised by strong flexion of the foot on the lower leg. The cause is still under debate, but in Cambridgeshire squatting is obviously more likely.

Grave 14

Sex and age indeterminate

1. Buckle, iron, with copper-alloy plate and iron rivets (incomplete). Length of plate: 37mm.

Sub-rectangular grave with shallow sides, ? x 0.54 x 0.5m, dark yellow-brown silty clay fill. Cut into Ditch 52 and truncated by a 20th-century ditch for nursery gardens.

The remains of this adult consist of the lower body only: the right forearm, both hands, the pelvis, legs and left foot. Sex and age are indeterminate. This in-

dividual had similarly flattened shinbones to 13, above.

Grave 15

Child, aged 9

1. 2 fragments of a small pot, one lug remaining, hard grey fabric with flint inclusions. Ht. of surviving fragment: 66mm, max. diameter: 80mm. Location not recorded.
2. Knife (Type A; size group 1). Total surviving length: 75mm.

Irregular, sub-rectangular grave, 1.2 x 0.5 x 0.2m, with shallow sides, dark brown sandy clay fill.

A child's skeleton, with the skull and long bones reasonably well preserved but with fragmentary vertebrae, pelvis and ribs and few epiphyses. As with **12B**, two of the bones of the ear were still present. Excellent recovery of the teeth and jaws permits age estimation, and this child died at about 9 years old, with the second permanent molars emerging from their crypts and some of the deciduous teeth still in place. Mild *cribra orbitalia* can be seen in the right orbit.

Grave 16

Infant, 7–8 months

1. Small round-bottomed pot, rim destroyed by ploughing but otherwise complete. Hard dark grey fabric with tiny white mica flecks. Surviving ht: 66mm, max. diameter: 100mm.

Indeterminate grave, 0.76 x 0.35 x 0.12m, within Ditch 52, dark yellow-brown silty clay.

Few bones of this infant have survived: the skull, half a mandible, 5 long-bone shafts and a few fragments, and parts of 15 vertebrae (out of an expected number of 29). Three incomplete tooth crowns were present in the jaws, their development indicative of an age of 7 to 8 months (Moorees, Fanning and Hunt 1963).

Grave 17

Male, aged about 18 years, ht: 1.73m (5' 8")

1. Shield-boss, iron, (Group 2). Diameter; 170mm, overall ht: 93mm, ht. of wall: 20mm, width of rim: 28mm.
2. Incomplete iron grip. Surviving length: 70mm.
3. 1 body sherd, (not illustrated). Max. dimension: 50mm, hard grey fabric, may have been deliberately deposited by the right arm.

Wide, sub-rectangular grave, fairly steep sides, 1.7 x 0.83 x 0.23m, with dark yellow-brown silty clay fill.

The remains are those of a young adult, whose teeth are little worn (Brothwell stage 1: 17–25 years) and whose epiphyses had just fused at the top of the humeri, immediately post-adolescence, about 18 years of age. All bones are present except those of the right forearm and parts of the hands and feet. There is a perfect set of teeth in both upper and lower jaw, although with enamel defects in several teeth due to the stress periods mentioned in relation to several other skeletons from this cemetery.

The features used for sexing are completely contradictory in this individual: all those of the skull are female in form; were the pelvis not present, this would certainly be recorded as the skeleton of a woman. There is also a septal aperture in one humerus, a fea-

ture more common in women. Most of the aspects of the pelvis, which is more reliable as a sex indicator than the skull, are quite strongly male in type, but it would be impossible to determine conclusively were it not for the accompanying artefacts. As mentioned for skeletons 10 and 13, this mixture of male and female characteristics in one individual is unusual in Saxon remains from this area, and it is usually found that artefactual and skeletal sex determinations are consistently in agreement. Assuming this is a male, stature in life was approximately 1.73m (5' 8"), calculated from the lengths of the leg bones. Another case of *cribra orbitalia* is present in one orbit, but in a more advanced form than any other example from the cemetery, at stage 4.

Grave 18

Female, aged about 18 years, ht: 1.69m (5' 6").

1 and 2. Pair of small long brooches, copper alloy, (cross-headed type). Length: 62mm.

Belt-set

Ivory bag-ring:

3 latch lifters. Length of longest latch lifter: 165mm.

Plate, drawn only in the field as it is too fragile to lift, appears to be a buckle with an iron loop and copper alloy plate.

4. Fragment of copper-alloy plate with iron rivet. Surviving length: 11mm.
5. Strap-end, copper alloy. Length: 37mm,
6. 'Clip', copper alloy. Length: 18mm
8. Ring, iron. Diameter: approx. 45mm.
7. Mount, copper alloy, consisting of two pieces of sheet-metal joined by iron rivets, with mineral preserved wood. Max. length: 22mm, gap between plates: 9mm
3. Pin, iron, with crooked head. Length: 140mm. *Location not recorded.*

9-56. 54 amber beads, (only 48 drawn). Net weight: 20gm.

Chain of small iron links. Drawn only in the field.

Sheep femur deposited by left leg.

Wide, sub-rectangular grave, steep concave sides, 1.56 x 0.85 x 0.2m, yellow-brown silty clay fill, feet and lower legs disturbed by trenches for a 20th-century nursery.

This body is reasonably well preserved apart from the absence of ankles and feet. Once again, characteristics indicative of sex are mixed in all areas of the skeleton, although the majority are of male type, contradicting the female suite of artefacts in the grave. The loss of the pubic bone is unfortunate as it has several features useful for sexing. This bone is the least robust part of the pelvis and tends to be uppermost in a normal supine burial, so is often destroyed even when recovery is otherwise good. Calculation from the length of the femur shows that height would have been around 1.69m or 5' 6".

The unworn teeth show that death occurred in very early adulthood, when the wisdom teeth had just erupted. There are slight indications of infection, of a kind which cannot be determined without other changes in the skeleton, on the left lower leg.

Grave 19

Child, aged about 8 years

1 and 2. Pair of small long brooches, copper alloy (square-

headed type). Length: 70mm

3. Perforated Roman coin, very worn and indecipherable. Diameter: 21mm.
 4. Buckle plate, copper alloy with iron rivets. Length: 24mm. Found at neck with perforated coin and therefore possibly worn as a pendant.
 5. Spindle whorl, ceramic. Diameter: 40mm.
 6. Glass bead, very worn, probably originally blue.
 7. Glass bead, very worn, with a faint design of blue stripes on yellow.
 - 8-10. 3 amber beads. Net weight: 1gm.
 11. Pin, copper alloy (crook-headed type). Length: 71mm.
- Wide sub-oval grave with steep sides, 1.25 x 1.05 x 0.16m, dark yellow-brown clayey silt fill, cut into Ditch 52.

The well-preserved skeleton, with all bones except the hands and parts of the feet, is that of a child, about 8 years old as shown by the development and eruption of the permanent teeth beneath the deciduous ones. Stage 4 *cribra orbitalia* can be seen in both eye orbits, so here is yet another example of iron-deficiency anaemia.

Grave 20

Female, aged 35-9, ht: 1.66m (5' 5")

1. Applied brooch, gilt copper alloy plate with crystal inset in centre; copper alloy back-plate (zoomorphic type). Diameter: 60mm.
2. Opaque white glass bead with red and blue spots. *Location not recorded*
3. Blue glass bead. *Location not recorded.*
4. Opaque white glass bead with blue swirls and red spots.
5. Blue and red glass bead
6. Cruciform brooch, copper alloy (Mortimer Type B). Length: 112mm.
- 7-10. Wrist-clasps, 2 pairs, copper alloy (form B 13a). Length: 32mm.
11. Pin, iron, shaft only. Surviving length: 136mm.
12. Perforated iron plate, found at neck and possibly worn as pendant, 27 x 24mm.
13. Nail, iron. Length: 28mm.
14. Knife, iron, (Type A; size group 2). Total length: 160mm: length of blade: 130mm.
15. Broken fragment of copper alloy sheet, probably another clasp-half (unclassifiable)

Potsherd to left of pelvis.

Irregular sub-rectangular grave with shallow sides, 1.8 x 0.8 x 0.16m, brown sandy clay fill, cut into Ditch 52. There were deposits of charcoal on the left leg of the skeleton.

The remains of this skeleton consist of the skull and mandible, all but the upper 6 vertebrae, the whole thorax, abdomen and legs and most of the hand and foot bones. Yet again, sex determination is problematical: the head is quite strongly male in form, the pelvis strongly female. As the artefacts point to this being the skeleton of a woman, stature has been calculated from the female formulae and would have been approximately 1.66m or 5' 5". The pubic symphysis is too eroded to be of use in ageing, so the auricular area has been used and its form is of the age range 35-39 years, which corresponds well with the dental wear estimate of 35 to 45 years. Schmorl's nodes indent the body surfaces of 5 vertebrae.

Grave 21

Male, aged 25–35, ht: 1.83m (6')

1. Knife, iron, (Type A; size group 2). Total surviving length: 153mm, length of blade: 120mm.
2. Potsherd. Max. dimension 93mm, hard dark-grey fabric, deposited on the right shoulder.

Wide sub-rectangular grave with shallow sides, ? x 0.7 x 0.18m, dark yellow-brown clayey silt fill, truncated by modern disturbances to the north and south, and with a modern post in the pelvic area.

Another large man, comparable in height (approximately 1.83m or 6') and robusticity to 3 and 7, is represented by these bones, which are those of fragments of the skull, a complete mandible, the whole vertebral column, both arms, portions of the legs and about half of the hand and foot bones. All sexual characteristics are markedly male in form, and both the condition of the pubic symphysis and the dental wear point to an age at death of approximately 25 to 35 years. One tooth crown had been totally lost to decay. 21 has only 11 thoracic but 6 lumbar vertebrae; variations of this sort have been mentioned in relation to 10. The ten lowest vertebrae have Schmorl's nodes. Phyllis Jackson (pers. comm.) noted that the foot had two facets on the *sustentaculum tali*, which suggests limited movement at the ankle.

Grave 22

Female child, aged about 11

1. Great square-headed brooch, gilt copper-alloy with silver plating (Group IX). Length: 113mm.
2. Nail, iron. Length: 30mm.
3. Perforated bone pin. Length: 68mm.
4. Perforated bone pin. Length: 85mm.

Wide sub-rectangular grave with shallow sides, 1.4 x 0.7 x 0.6m, dark grey-brown sandy clay fill.

Severe erosion has rendered the skeleton of this child very fragile, but it still lacks only the right shoulder, all but two of the hand bones, and most of those of the feet. The changing dentition, from child to adult teeth, shows that the age at death was about 11 years. Both orbits exhibit stage 3 *cribra orbitalia*. Just as with the man above, this body has 6 lumbar vertebrae, indicating the child may be related to 21 and perhaps 10 also. Grave-goods indicate that this child was definitely female.

Grave 23

Child, aged about 6 years

Single cattle bone

Sub-rectangular grave, 1.19 x 0.5 x 0.15m, child lay face-downwards with a cattle bone between its legs.

This is another case where erosion has produced fragility and consequent bone destruction, although it is the epiphyses which have suffered most severely and have become indistinguishable as to side. There are few hand or foot bones and no ribs. Most of an immature dentition is present with the developing adult teeth beneath and the first molars erupted almost to their full height, so age at death would have been close to 6 years. The right elbow joint has been affected by some disorder which has produced smooth-

edged cavities with a little new-bone formation, but the actual joint surface is undamaged, so movement would not have been restricted or painful.

Grave 24

Cremation

A single cremation was found at a high level during machine-cleaning of the site. It was very fragmented and scattered, and it is likely that much of it was lost. Most of the pottery collected was from a pot with poorly fired red and grey fabric, with uneven sides up to 17mm thick and small flint inclusions. One small rim sherd was gently everted.

The cremated bone represented one unsexed adult. All areas of the skeleton were represented, indicating a normal cremation. Pyre technology had been good, as the organic component was almost completely burnt away.

Grave 25 (1993)

Female, aged about 25, ht: 1.63m (5' 4")

1. Annular brooch, copper alloy. Diameter: 46mm.
2. Small long brooch, copper alloy (cross-headed/trefoil derivative type). Length: 73mm.
3. Buckle, copper alloy with iron loop and rivets. Fabric adhering. Internal width of loop: 18mm, overall length (complete) 60mm.

Oval grave, almost vertical sides, c. 1.6 x 0.5 x 0.3m, cut into prehistoric ditch.

This body, excavated in 1993, is almost complete, although parts of the skull are missing as are 2 vertebrae and a few of the smaller hand and foot bones. It is that of a female, but the combination of characteristics of both male and female form, remarked on in several skeletons, is found to a lesser degree in this one also: the pelvis is unmistakably female, but the skull has mixed features. Unfortunately, the absence of pubic symphyses prevents determination of age by the best method. The auricular surface morphology is that of phase 2, in the range 25 to 29 years, which confirms the overall impression of this being the skeleton of a young adult, lacking any signs of age degeneration. Only half of the dentition is present, the anterior teeth being missing, but the molar teeth show a wear pattern in the 17–25 year age range. The woman was probably about 25 years old at death. Her height would have been about 1.63m, or 5' 4". Both eye orbits have areas of *cribra orbitalia*, at stage 4 of development, and six of the mandibular tooth crowns have linear and pitted enamel defects, which would have been caused during the period when the girl was 4 to 12 years of age. Within the skull are unusual venous impressions, which indicate a variant of the usual venous drainage of the skull, but are not signs of any disorder.

Later Features

Ditch 25, 0.8m wide and only surviving to a depth of 0.07m, had a fill of yellowish brown silt. No artefacts were found in it, but it was clearly later than 7, which it cut, and earlier than Ditch 12.

Ditch 12 was 0.6m wide and 0.28m deep. Its fill was a

dark yellowish brown silt which contained occasional sherds of early medieval pottery, animal bone and disturbed human bone. It cut through 2, 4, 9, 12 and 18.

Discussion

The Skeletal Remains

The graves recently excavated at Oakington comprise 26 individuals, two of whom were interred in a shared grave (12) and one of which was cremated. Disturbed fragments of about 7 bodies were also noted when holes were being dug for play equipment, though some of these may have belonged to excavated skeletons, and at least three burials and other bones had been disturbed in the past. The size of the cemetery cannot even be guessed at, but it must have exceeded 35 individuals.

Age

One burial (14) survived in too fragmentary a form for the occupant to be identified as more than an adult. Of the remaining graves, twelve were those of children of no more than 12 years of age at death. This is unsurprising given the high child mortality, especially infant mortality, to be anticipated on the basis of comparison with third world populations today, but it serves to demonstrate that it was expected that all members would be buried in the cemetery, which was not the case in many early societies. A pertinent point, however, is that the cemetery at Edix Hill, (Barrington) Cambs, had a definite concentration of children's graves in one particular area (Malim and Hines 1998), and it is reasonable to suspect that the limited excavations at Oakington were concentrated in such a zone.

Sex

As mentioned in relation to 10, half of the adult skeletons, even though relatively complete, are difficult to sex on osteological grounds because of contradictory features. This is unlike other Anglo-Saxon skeletal material from Cambridgeshire, and suggests that this might have been an unusual type of population.

Stature

The three fully-grown men whose stature can be determined were tall even by today's standards, at about 6' 6" 2" and 6' 3" (1.83m, 1.90m, 1.91m). Heights such as these are not unusual in themselves for local Anglo-Saxon males, but the concentration is noteworthy. The women are closer to the usual range, with an average height estimated at just over 5' 5" (1.66m). Few populations of this date have been studied well enough to give comparisons. Barrington Edix Hill cemetery gave averages of 5' 8" x (1.73m) for men and 5' 4" (1.64m) for women, comparable to modern populations up to the 1960s.

Pathological Conditions and Anatomical Variants

Seven examples of *cribra orbitalia* and six of enamel developmental defects were found, which is a high

percentage out of the 19 skulls recovered and suggests that this population was subject to nutritional stresses. The two conditions are found together in four of the nine affected skulls, as might be expected. However, the correlation of the two conditions has been found to be surprisingly poor (R. Wiggins, pers. comm.), and the iron deficiency is more likely to be attributable to parasite infestation, showing two unrelated sources of physiological stress in this population.

Saxon Characteristics apparent in the Foot-bones

A foot from each of eight skeletons that were particularly well preserved was examined by Phyllis Jackson as part of an experimental programme to compare populations that were culturally Anglo-Saxon with those of preceding Romano-British times. The intention was to test whether skeletal variations, notably the cuboid foot bone, might help to distinguish the racial origins of those buried in Anglo-Saxon cemeteries. Roman skeletons recently excavated at Foxton (Price 1997) were used as a control. It was possible to establish that, whereas the feet of the Foxton skeletons were definitely of 'native' type, the majority of the Oakington feet had distinctive Anglo-Saxon characteristics. However, these characteristics differed to some extent with the Saxon populations Phyllis Jackson had examined more extensively in Oxfordshire and Gloucestershire. This is the first presumably Anglian population to be examined by these means, and it is very much hoped that further experiments will clarify the potential and validity of this method.

It was noted that seven of the skeletons, 3, 4, 7, 10, 17, 20 and 21 had feet of Anglo-Saxon type. Close examination of the bones of 7 also revealed a very firm ankle joint (the *peroneus tubercle* was lipped, indicating that the *peroneus longus* and *brevis* had been tight). The cuboid of 25 was also Anglo-Saxon, but the *calcaneus talus* was not, suggesting, most probably, the preservation of non-Anglian characteristics from a British ancestor.

The Grave-Goods

Children

Most of the Oakington children's graves are poorly furnished compared to women's graves, but some form of grave-good was found in every child's grave that was not hopelessly disturbed, with the possible exception of 12A. Children about 8 and 11 years old had some of the richest grave-goods on the site.

Four children's graves contained the remains of small accessory pots or had sherds of pottery deliberately deposited by the pelvis (9, 11, 15 and 16), a familiar feature in Anglo-Saxon children's graves. Two, 19 and 22, stand out as the graves of girls still below their teens but buried with grave-goods, in particular in a costume involving dress-accessories, that are more typical of women who have entered the socially adult class. Such treatment is not unparalleled (Crawford 1991, Malim and Hines 1998) but is rare.

The girl of about 8 buried in grave **19** had a pair of small long brooches worn at the shoulders and a slightly incongruous necklace assemblage comprising 3 amber and 2 glass beads, a coin pendant and an old buckle plate re-used as a pendant. It is unclear how the copper-alloy pin in her grave related to her outfit. A spindle whorl lay by her head. At about 11, the girl in grave **22** was on the threshold of the adult age-set in early Anglo-Saxon society (Härke 1997). She was buried wearing the most spectacular artefact found here, a great square-headed brooch (see below), together with two bone pins at her neck or shoulders. Her grave was deep and contained a single nail of indeterminate function. In both **19** and **22**, although the characteristic accessories and disposition of adult female dress are readily recognisable, both the grave assemblages are unusual as a whole to a degree that may reasonably be attributed to the youth of the deceased.

Two children, **9** and **23**, had bones from joints of meat deliberately placed in their graves, presumably an additional food supply to whatever their pots contained. One, **5**, had a broken piece of a wrist-clasp, perhaps used as a pendant, and only one, **15**, had a small knife.

Female

Grave-goods from women's graves are dominated by a range of dress-accessories representing the characteristic costume of Anglian women of the Early Anglo-Saxon Period (Owen-Crocker 1986, 25-57). This costume comprised a *peplos*-type dress with two shoulder fasteners, usually brooches though sometimes a pin, an optional third brooch, which presumably fastened a shawl or mantle, and what is thought to have been a separate sleeved under-garment using wrist-clasps. Most of the women were also buried wearing a necklace and a belt or girdle, with which a knife was usually associated. There are few other grave-goods. An exception is the ivory bag-ring and its contents, found beneath the head of **18** (below). Three women, **1**, **4** and **10**, were buried with pot sherds that had perhaps once been accessory vessels. Only one woman, the teenager in Grave **18**, had an animal bone in her grave. As in **9**, this was by her left leg.

Brooches on these women's costumes are remarkable in their consistency. For cruciform brooches to have been found in four out of the seven graves (**1**, **4**, **10** and **20**) is a high frequency. Small long brooches also occur in four graves, twice in association with cruciform brooches (**4**, **10**, **18** [a pair] and **24**). Three of these graves contained single specimens of similar cross-headed/trefoil derivative small long brooches, although in none of these is there mould-linkage between the brooches. Annular brooches, another common Anglian type, occur here in three graves (**1** [a pair], **12B** and **24**). The form of the brooch in **12B**, with a cast flanged slot for the end of the pin, is noteworthy as an example of a type Ager discussed in relation to quoit brooches in England, listing 14 comparable specimens, mostly from Northamptonshire, Rutland

and Warwickshire (Ager 1985, type D3). Remaining brooches comprise one disc brooch (**10**) and one applied saucer brooch (**20**).

The 'girdle-group' found under the head of **18** was of the standard local type, consisting of a large ivory ring from which a bag was suspended, with a set of latch lifters. It had probably been worn on a strap over her shoulder, and may have swung behind her head as she was laid in the grave. The chain is likely to belong with this group. The ivory ring appears to have been complete when placed in the grave and, since it overlay the shafts of the latch lifters, the bag probably lay with its opening uppermost. The latch lifters were clearly fastened together when they were deposited: perhaps their ends were bent around a small iron ring which is now obscured by a mass of rust, or they may have been tied to the ivory ring.

A buckle with a copper-alloy plate and an iron loop lay near the ivory ring, presumably, like the copper-alloy tag-end with repoussé decoration, part of the suspension system. The shape of the foot end of the Oakington latch lifters is not well evidenced, for two of them are broken. One, however, is definitely 'finger-crooked', and another complete but broken one can be reconstructed in the same way. The set is therefore paralleled by the triple sets at Edix Hill, Barrington.

Pins are surprisingly frequent, occurring in three of the seven women's graves: iron specimens in **18** and **20**, at the shoulder in the latter case, and bone in **12B**.

Amongst the bead sets one may note that the necklaces appear to have been either predominantly of amber beads (**1**, **12B** and **18**) or glass (**4** and **20**), with little intermixture of different materials. A remarkable feature is the iron chain observed at the neck of the woman buried in **18**. Iron chatelaine chains are familiar enough as female dress accessories, apparently from the later Migration Period (mid 6th century) onwards (Meaney 1981; Geake 1997, 57-8), but we know of no parallels to the position of this chain, which appears from the grave plan to have been lying across the throat of the woman, who was also wearing a substantial necklace of amber beads. Since, however, her set of three latch lifters and ivory ring were lying directly beneath her skull, we can infer that an item which normally hung down the body, usually from the waist, was unusually displaced within this burial.

Male

The graves illustrate how the male sex was materially represented either by association with weaponry (in two burials out of five) or by a male costume devoid of the ostentatious dress-accessories characteristic of the women: at most we have evidence for a belt, in the form of buckles from two graves, knives from three/four and tweezers from another. It should be noted, however, that many of the men's graves had been disturbed at several times in the site's recent history. Spears and shields were often placed in higher levels of the graves, and their loss in these circumstances may have been disproportionately great. As in the graves of women and children, large sherds of

pottery appear to have been deliberately included within the grave (7, 17 and 21). The sherds occur by the shoulders (left in one case, right in another) or arm (right) of the bodies.

General

Knives occur with men, women and children, although the 9 year old in 15 is the only child recorded as having been buried with a knife at Oakington. Typologically, the range of knife forms is interesting. Five of the ten knives have a blade with a curved back (Type A) and five a blade with a straight back (Type B), an unexpectedly high proportion of the latter type, which presumably simply represents a local preference. Härke (1989) has examined typological features of knives, in particular blade form and length, in relation to the age and sex of the person they were associated with and date, observing a tendency for larger knives to be found with older men, and this holds true at Oakington.

One interesting aspect of this cemetery is the willingness to include very worn and even rather inappropriate artefacts as grave-goods. The cruciform brooch in 4 and the small long brooch in 10 had been broken well before deposition in the graves, the applied brooch in 20 had been much repaired and was very worn, as was the great square-headed brooch with the adolescent in 22. The single broken wrist-clasp with a child in 5 was found by the neck, probably on a necklace, and so was an old buckle plate in 19. Most noticeably of all, at least 9 burials included pot sherds that are unlikely to have been complete vessels when they were buried, and it must have taken some imagination to see them as symbolic of food-offerings for the afterlife. This thriftiness gives the archaeologist problems in estimating the date of the cemetery, which could be generations away from the time the artefacts were made, and it also would have affected the perceived value of the objects to the Anglo-Saxons. Assessments of the wealth of the community and the symbolism of specific items in relation to the status of individuals are probably not credible in these circumstances.

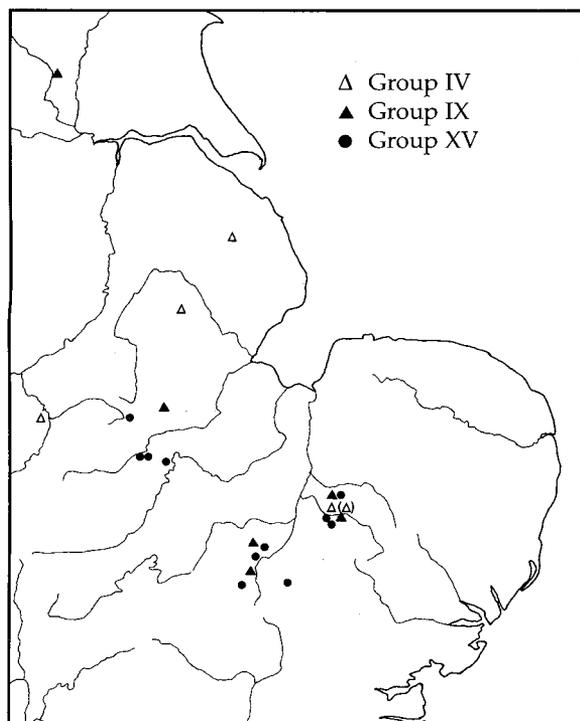
The Great Square-Headed Brooch from 22

This is the most interesting single artefact amongst the grave-goods and many of its details are both curious and important in art-historical terms. It is a relatively individualistic product, although its place within an overall series is clear. It belongs to a family of brooch-groups, three generations of which span the history of Anglo-Saxon great square-headed brooches in the 6th century: group IV (Phase 1), group IX (Phase 2) and group XV (Phase 3) (Hines 1997, esp. 48-58, 80-6, 111-18 and 198-204). Despite its many unique features, the Oakington brooch is most logically to be assigned to group IX, a group otherwise represented by five brooches: Bourne, Lincolnshire; Haslingfield, Cambridgeshire; Lackford, Suffolk, urn 50/126; Lakenheath, Suffolk; and a metal-detector find reportedly made near York (Hines 1997, pls. 31b-33a).

The most conspicuous and characteristic features of this family of brooches are the profile masks in the footplate side lobes and the large full-face mask in the footplate terminal lobe. Also typical is the general form of the squat, panelled bow, which on the Oakington brooch contains the highly-stylised residue of Style I ornament, as found here on group IV and group IX specimens. Several features of the Oakington brooch are indeed most closely related to elements found on the early members of the family in group IV: in particular, the upward-facing mask flanked by two roundels in the headplate inner panel (*cf.* particularly Holywell Row 11: Hines 1997, Fig. 26a and Pl. 16b), and the general scale and layout of the Style I animal motifs in the side and cross panels of the headplate second panel outside these, although for the lentoid elements in the two upper corners we can only look to group IX brooches for parallels. On the footplate, the Oakington brooch retains in a simplified form the couchant beasts in the lower borders, but these have practically lost their curly tails, which appear as side-locks to the terminal-lobe mask below (*cf.* Hines 1997, 84-5). Behind the footplate, the brooch has an attached catch piece for the pin of a form most closely paralleled on the group IV brooch from Rothley, Leics (Hines 1997, Fig. 26k), while another group IV brooch provenanced only to Suffolk has a mark on the back of the footplate showing that an applied catch piece of this shape was once there. More characteristic of the group IX stage, however, are the plain rhomboidal footplate inner panel and inner panel frame: the central swastika typical of group XV brooches has not yet been introduced here. Like all group IX brooches, the Oakington brooch retains the small mask at the top of the four arcs of the footplate frame inherited from group IV brooches.

The most striking feature of the design is in the footplate upper borders. Here groups IV and IX are characterised by a distinctive and much discussed 'rampant beast' (Hines 1997, 54-6 and refs), while group XV brooches replace this with an equally distinctive, downward-facing, crested profile head. The underlying rampant beast motif is still perceptible on the Oakington brooch in the form of the raised fore-limb found immediately to either side of the above-mentioned mask at the top of the footplate frame, together with the large eye element in the upper outer corners of the footplate upper borders. Far more conspicuous, however, is the large curl below this eye, a familiar Style I element which one would usually identify as the jaws of a bird or beast and which clearly anticipates the mouth parts of the downward-facing profile head of group XV brooches (Hines 1997, Fig. 57c-e and Pls. 46-50). It is not easy to explain the derivation of this feature in terms of a re-interpretation of some typical part of the rampant beast. Here, for once, perhaps we can only resort to artistic licence to account for its emergence.

The comparable features of the Oakington 22 brooch thus nicely illustrate the line of development from group IV to group XV amongst the Anglo-Saxon great square-headed brooches. This particular speci-



Great square-headed brooches, groups IV, IX and XV: distribution. The group IV brooch provenanced only to "Suffolk" is placed close to Holywell Row 11 to which it is linked by an identical silver-copper alloy (Hines 1997, 212 and 313–15).

men is to be aligned with the intermediary stage that is group IX, although in relation to the other brooches of that group it carries elements which uniquely preserve features of the group IV models as well as uniquely anticipating innovations that characterise group XV. This implies a date of manufacture around the middle of the first half of the 6th century: later than the Phase 1 of the group IV brooches proper and effectively at the threshold between Phases 2 and 3, which it is recognised must have overlapped substantially (Hines 1997, 198–204 and 223–34). In accordance with our present absolute-chronological dating estimates, this would imply a date of production for the Oakington brooch *c.* 520–540 AD.

While the majority of group IV and group IX brooches are associated with the East Anglian county of Suffolk and a northeastern Midlands area that crosses the Fens and reaches as far north as Humberside, with which East Anglia is recurrently associated in material-cultural terms at this date, group XV brooches are more persistently associated with a contrastive Cambridgeshire/southern-central Midlands zone (see above; Hines, forthcoming). It thus seems particularly appropriate that such a hybrid brooch-design as that of 22 should occur in one of the more northerly Early Anglo-Saxon cemeteries of Cambridgeshire, close to the Fen edge. This certainly gives us reason to suspect that this brooch was not produced very far from its eventual resting place in the grave of this 11 year old girl.

The Graves

The great majority of the Oakington skeletons, nineteen of them, lay with their heads roughly to the southwest. There were four whose heads lay in the opposite direction, to the northeast, and two odd ones who lay northwest to southeast. No grave-markers were found, but only the infants' graves 5 and 6 were intercutting and so there must have been some system whereby the positions of burials were known. Four burials lay in prehistoric ditches. The soft fill of these may have been appreciated by the grave-diggers, but there is no reason to think they had any further significance to the Anglo-Saxons.

Most of the skeleton were found in a supine flexed 'sleeping' position with their grave-goods correctly arranged as we would expect them to be worn. The visibility of these during the burial rites was presumably important. In the double grave, 12, however, the bodies were prone, so the jewellery 12B was wearing naturally fell beneath her body. It is possible that she was buried in a shroud, perhaps fastened with a bone pin, and so her eventual position was not noticed. 12A, a child of about 8 in the same grave, was lying face-down in a distinctly casual manner without grave-goods, perhaps the result of an unusually hasty ceremony. The only other prone burial was another child, 23. A rich grave of an adolescent girl, 18, had a bag containing latch lifters and other items which seems to have swung round beneath her head. This could have happened during the burial ceremony if she was buried in a coffin. The graves generally only survived to a shallow depth, and were probably never very deep. Only three were more than 300mm. Two of these, 20 and 22 were an exceptional 600mm. As these both had particularly rich grave-goods which included single nails, and as the bodies lay fairly straight in the ground, these burials, too, may well have been in coffins.

The Cemetery: Date and Cultural Affinities

The 26 excavated burials from Oakington are, of course, only a small sample, and we have no basis on which to infer how large a proportion of the complete Oakington cemetery it may represent. Attempts to extrapolate from the excavated evidence must also be hindered by the unusually high degree of consistency we find amongst the material.

One point worthy of note, however, is that Oakington shares with a neighbouring cemetery at Girton College a very high prevalence of cruciform and small long brooches in its female graves. The evidence at Girton was poorly excavated and curated, but it appears that these types respectively constitute 37 and 40% of the 38 brooches that can now be assigned to inhumation graves from this cemetery. As noted above, these brooch-types are particularly characteristic of the costume of Anglian women in England, and their preponderance at Girton and Oakington creates a marked contrast even with the cemeteries of South Cambridgeshire, where there is a considerably higher admixture of, for instance, saucer and disc brooches (Malim and Hines 1998). The com-

mon occurrence of wrist-clasps and amber beads in female graves confirms the Anglian nature of the burials at Oakington

It is impossible to establish any relative chronological sequence amongst the graves excavated at Oakington, and the only vertical-stratigraphical relationship is one between two poorly furnished graves of very small children, 5 and 6. It is, therefore, possible that the sample of the Oakington cemetery excavated represents only a short period of burial. However there is no evidence for frequent change in chronologically diagnostic artefact-types as grave-goods within the 6th century in Anglian England in general (Hines 1998), and all one can confidently say about the overall date range of these burials is that they belong within the Migration-period cultural phase within the 6th century. The conventional date for the end of this phase is at present *c.* 570 AD. It would therefore be improper to speculate on the dating of the burials beyond assigning them to the period *c.* 500–570 AD, a date range which centres nicely on the estimated date of production of the most closely datable artefact amongst the grave-goods, the great square-headed brooch from 22.

Comparison with other Cemeteries in Southern Cambridgeshire

There are nine other 6th-century cemeteries in Cambridgeshire in which more than 20 skeletons have been found and, although the only one of these to be excavated in recent years is Barrington Edix Hill, a few useful if general comments can be made about relationships of these sites to the Oakington cemetery. The other cemeteries are Edix Hill, (Barrington A) (*op. cit.*), Barrington B (Foster 1883), Cambridge St. John's (Fox 1923), Cratendune, near Ely, (Fowler 1948, Murray 1954), Girton College (Hollingworth and O'Reilly 1925), Haslingfield (Taylor 1997), Linton Heath (Neville 1854), Little Wilbraham (Neville 1852, Lethbridge 1931), and Soham (Lethbridge 1931–2).

All of the cemeteries are sited on raised ground relative to their locality but, given the flatness of the Cambridgeshire countryside, these sites are not very imposing and in many cases are barely noticeable without a contour map. They are also close to waterways, all except Oakington being near the Cam or its tributaries, the Rhee and Granta. Several, (Cambridge, Cratendune, Girton, Linton and Little Wilbraham) are on or very near significant Roman roads, but Oakington is sited just over a mile from the Via Devana, possibly on a minor drove-road. Roman influence on the location of large cemeteries is also apparent in the way that some (Cratendune, Girton and possibly Linton) were sited on top of Roman cemeteries, and all, with the exceptions of Barrington and Oakington, are close to Roman villas or towns. Re-use of prehistoric burial mounds is another recurrent feature in the siting of cemeteries in Cambridgeshire. The conditions of most of the excavations meant that features less obvious than a skeleton with metal grave-goods could be easily missed, but there is evidence that suggests Barrington Edix

Hill, Girton, Linton and Soham were on and around Bronze Age round barrows. No such evidence was found in the small area investigated at Oakington, though early prehistoric activity was certainly present. Relationships with parish boundaries are also more than coincidental, with most cemeteries either on or close to them. Oakington is about 400m from its boundary with Westwick and, like Barrington B, is close to the medieval village centre.

When considering the nature of the Oakington cemetery, one very clear aspect is the short time-span that the burials are concentrated within. In contrast, all the other cemeteries with the possible exceptions of the fragmentary remains at Cratendune and Soham contain a few artefacts that could be dated to the 5th century, and many of these sites also have finds of 7th-century date. Given the early origins of most cemeteries and their relationships with Roman sites it is not surprising that Roman artefacts are often found in Anglo-Saxon graves, sometimes as curios, such as the coins that are pierced for suspension and some, such as brooches, being used for their original purpose. Roman customs, such as the common use of bangles and finger-rings and inclusion of brooches in men's graves, are particularly noticeable at Girton and Linton, and all the cemeteries except Barrington Edix Hill show many links with the earlier culture. Oakington, however, has so far produced only one very worn Roman coin that was used as a pendant.

Interesting but often ignored grave-goods are the meat-bones and potsherds that were deliberately deposited with many Oakington burials. Apart from a small number of graves with sherds at Barrington Edix Hill this custom does not seem to have been noted on other 6th-century Cambridgeshire cemeteries, although complete pots are not uncommon. In many cases this could be due to the nature of the excavations and the interests of the excavators. T.C. Lethbridge, for example did find animal bones in this position at Little Wilbraham, and also at the 7th-century cemetery he dug at Burwell (Lethbridge 1931). Similar meat-bones have been noted elsewhere in Britain, for example at Holywell Row and Lakenheath in Suffolk, Lyminge in Kent, and in Yorkshire, so their occurrence is by no means unique.

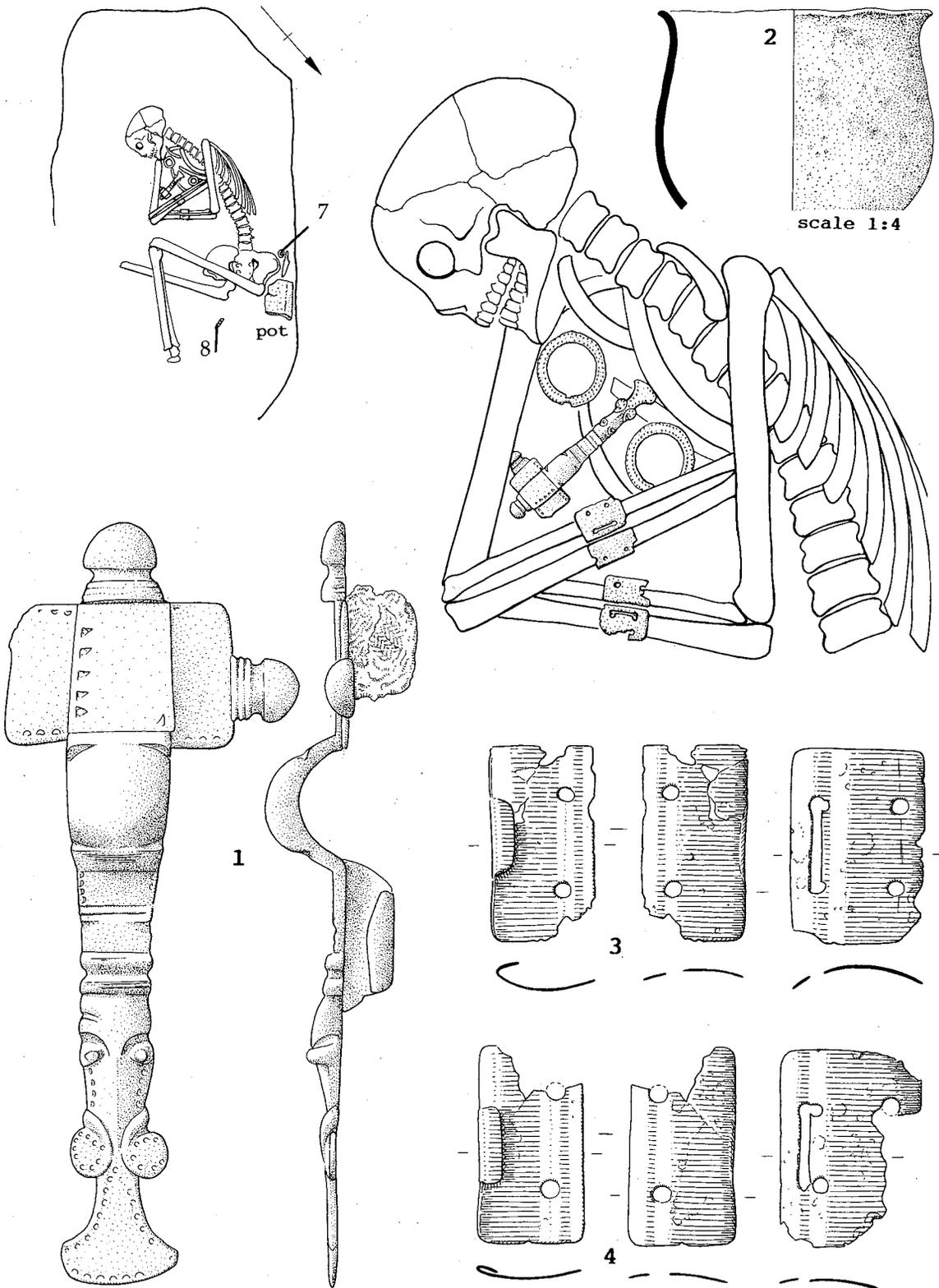
The large Cambridgeshire cemeteries contain both inhumations and cremations, though these are unevenly balanced. At Cambridge, Girton and Little Wilbraham the majority of burials are cremations, though the rite of inhumation is well represented. At others, including Oakington, the overwhelming majority of graves are inhumations. Cremations in these inhumation cemeteries are at higher levels than most of the inhumations, and are sometimes cut into the inhumation graves. For this reason they are probably seriously under-represented in the archaeological record, particularly when sites have been cleared by machine.

As noted above, the sample of graves excavated at Oakington is too small and probably unrepresentative to be used for any realistic assessment of wealth. All we can note is that the population had access to im-

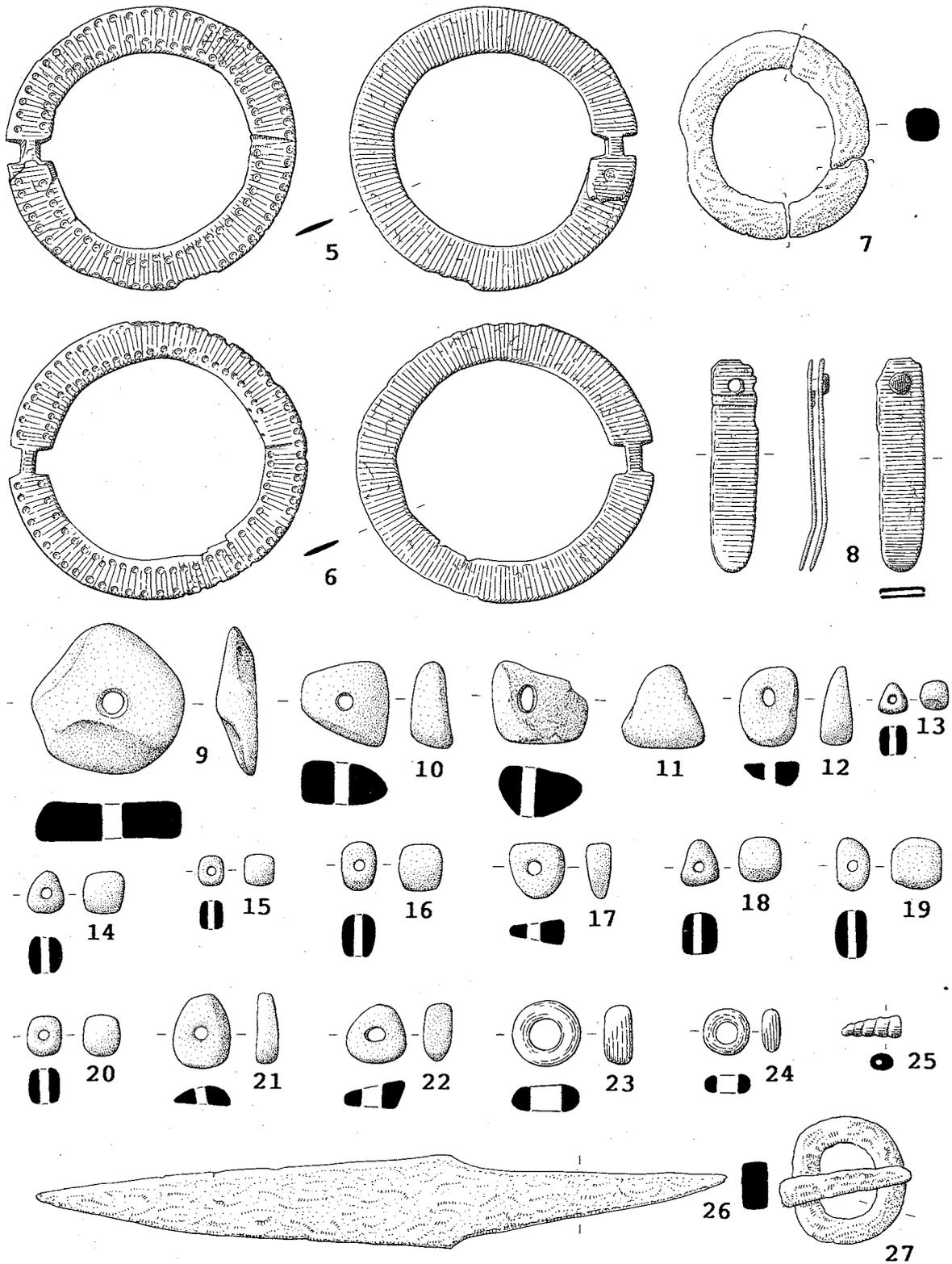
ported goods such as ivory, glass beads and a good supply of amber, that there was at least one high-status brooch in the community, and that virtually everyone, even infants, had rights to some of this wealth. On the other hand, the range of artefacts is quite modest, and the worn and broken condition of many is worth noting.

In summary, therefore, the graves excavated at Oakington contained artefacts that are very typical of a 6th-century Anglian cemetery. The small sample is unusual in this region for its short life-span and the apparent homogeneity of its population's belongings and customs. This population shared some physical characteristics such as a tall build and slight hereditary peculiarities and might well have been closely interrelated. They also shared the stresses of occasional famine conditions and, probably, a severe parasite burden. The cemetery is also unusual in Cambridgeshire for its lack of evidence for contact with the preceding Roman culture, probably due both its late foundation and the lack of easily retrieved artefacts in the close vicinity, emphasising a rather random approach to the choice of appropriate grave-goods in local cemeteries in general.

BURIAL 1

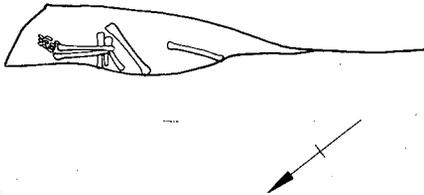


Scales
Grave 1:20
Artefacts 1:1, except where shown

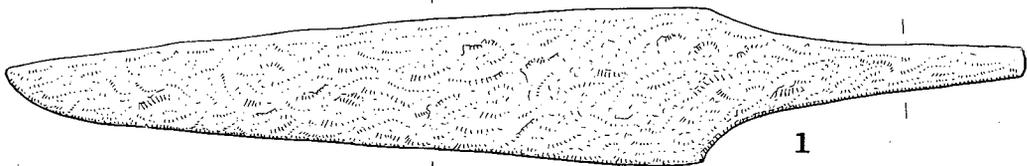
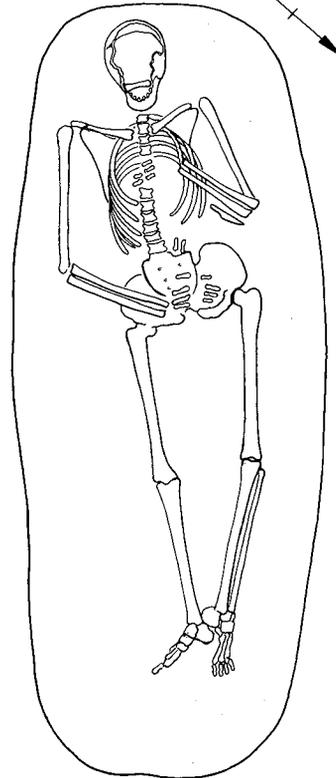


Burial 1 continued
Scales
Artefacts 1:1, except where shown

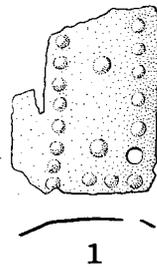
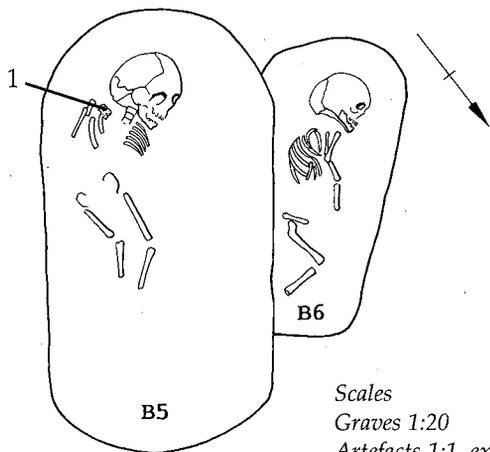
BURIAL 2



BURIAL 3

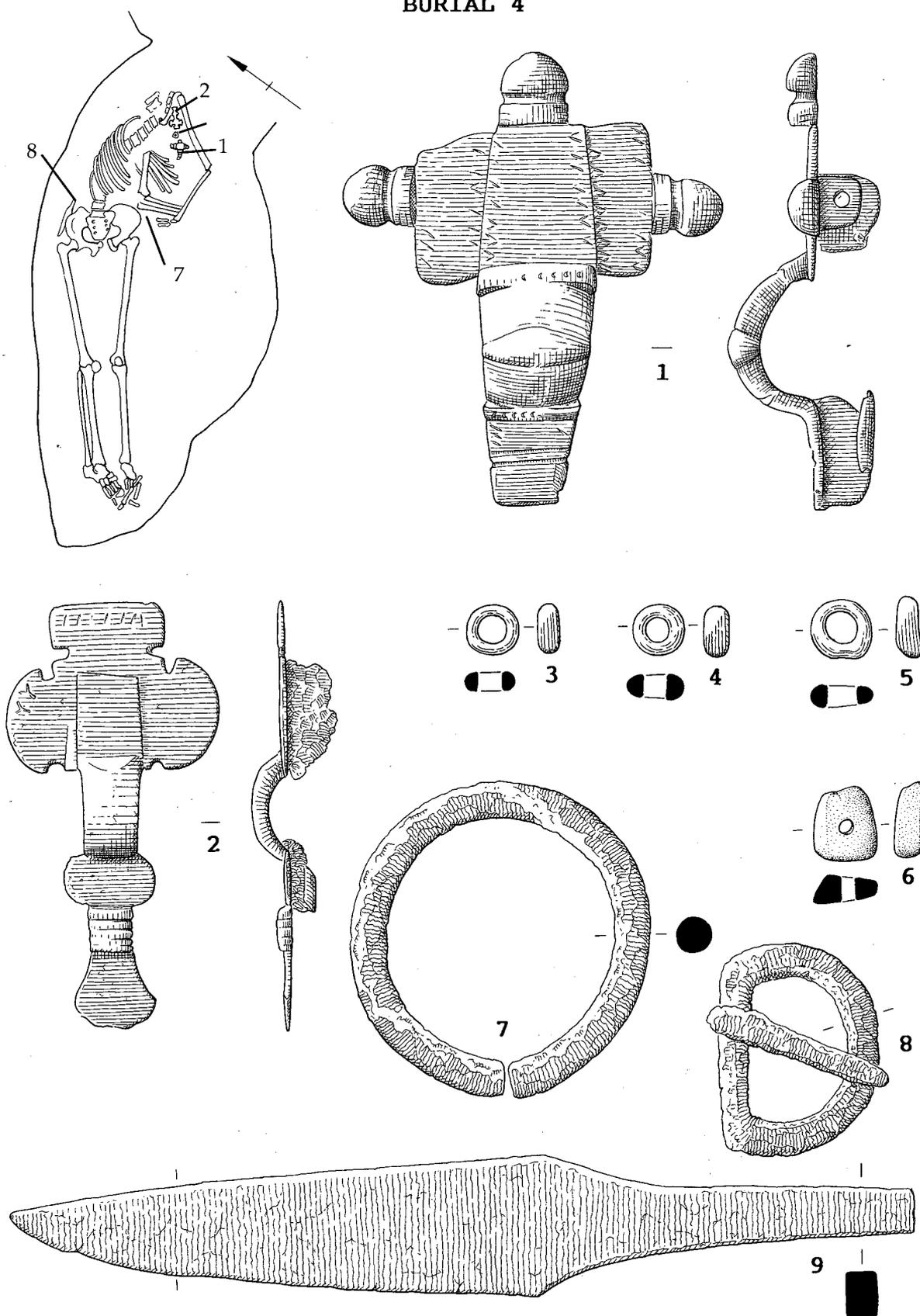


BURIALS 5 and 6



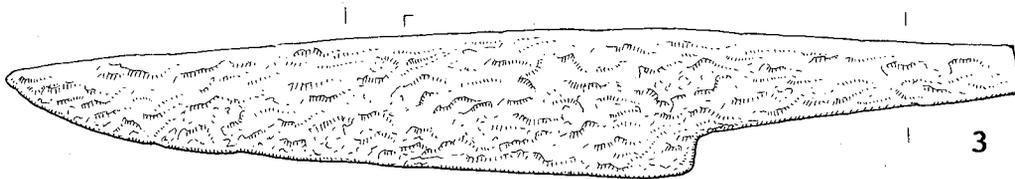
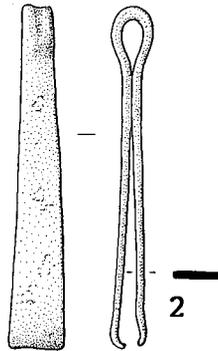
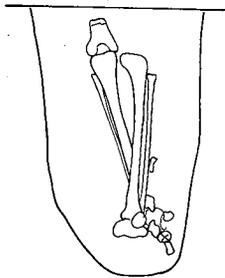
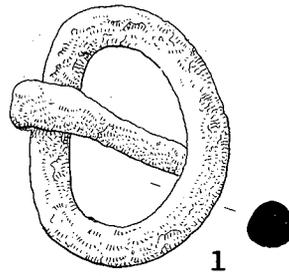
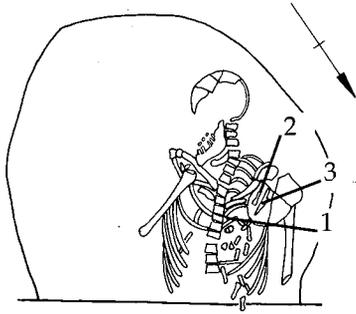
Scales
Graves 1:20
Artefacts 1:1, except where shown

BURIAL 4

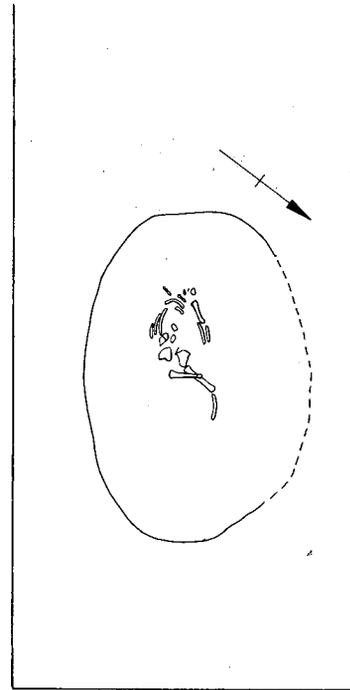


Scales
Grave 1:20
Artefacts 1:1, except where shown

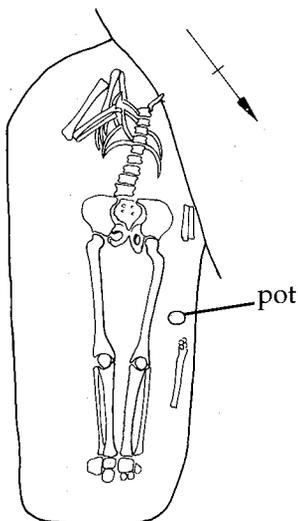
BURIAL 7



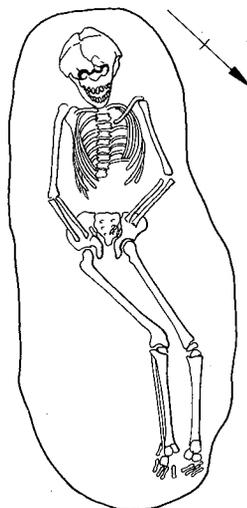
BURIAL 8



BURIAL 9

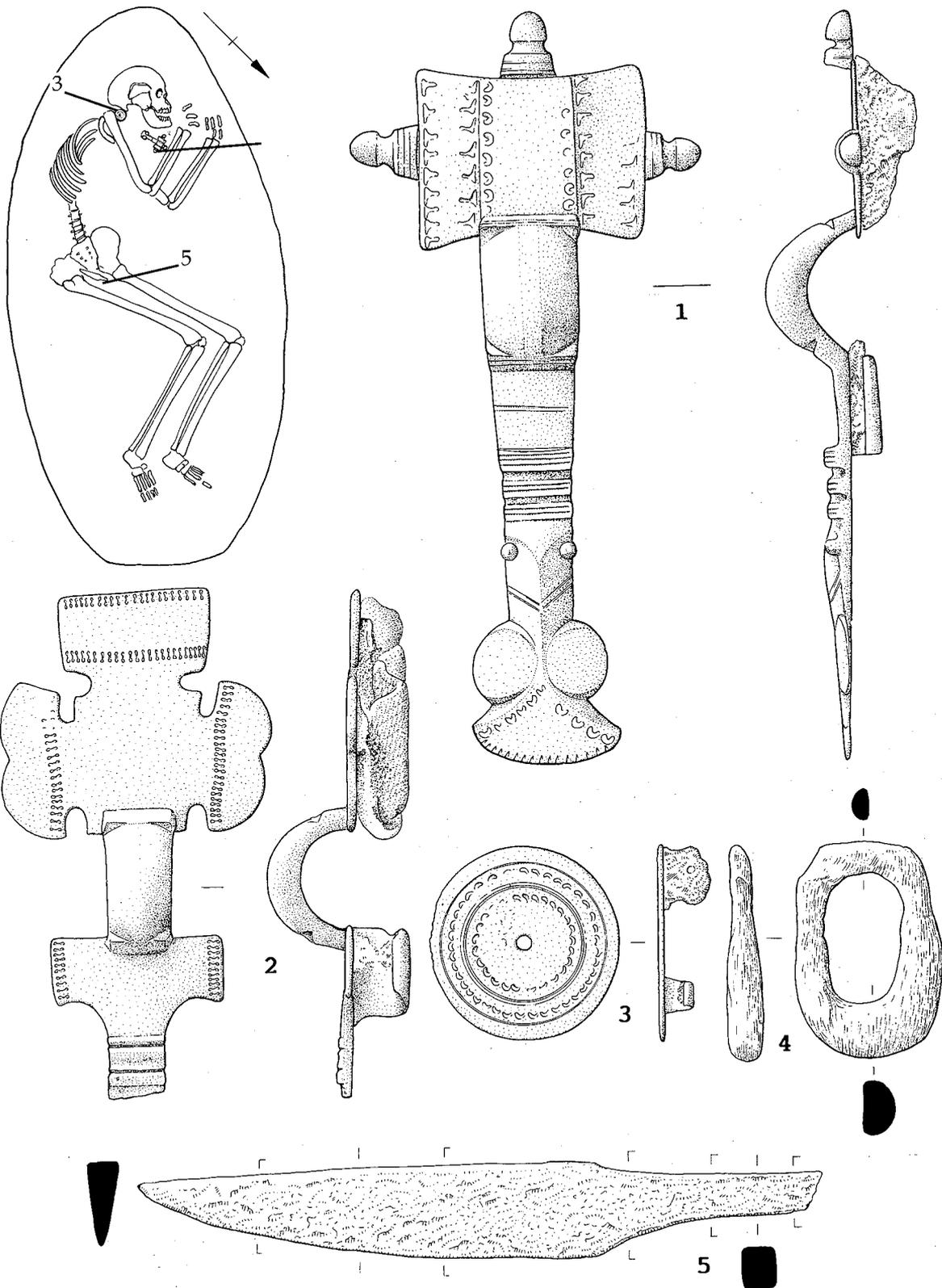


BURIAL 11



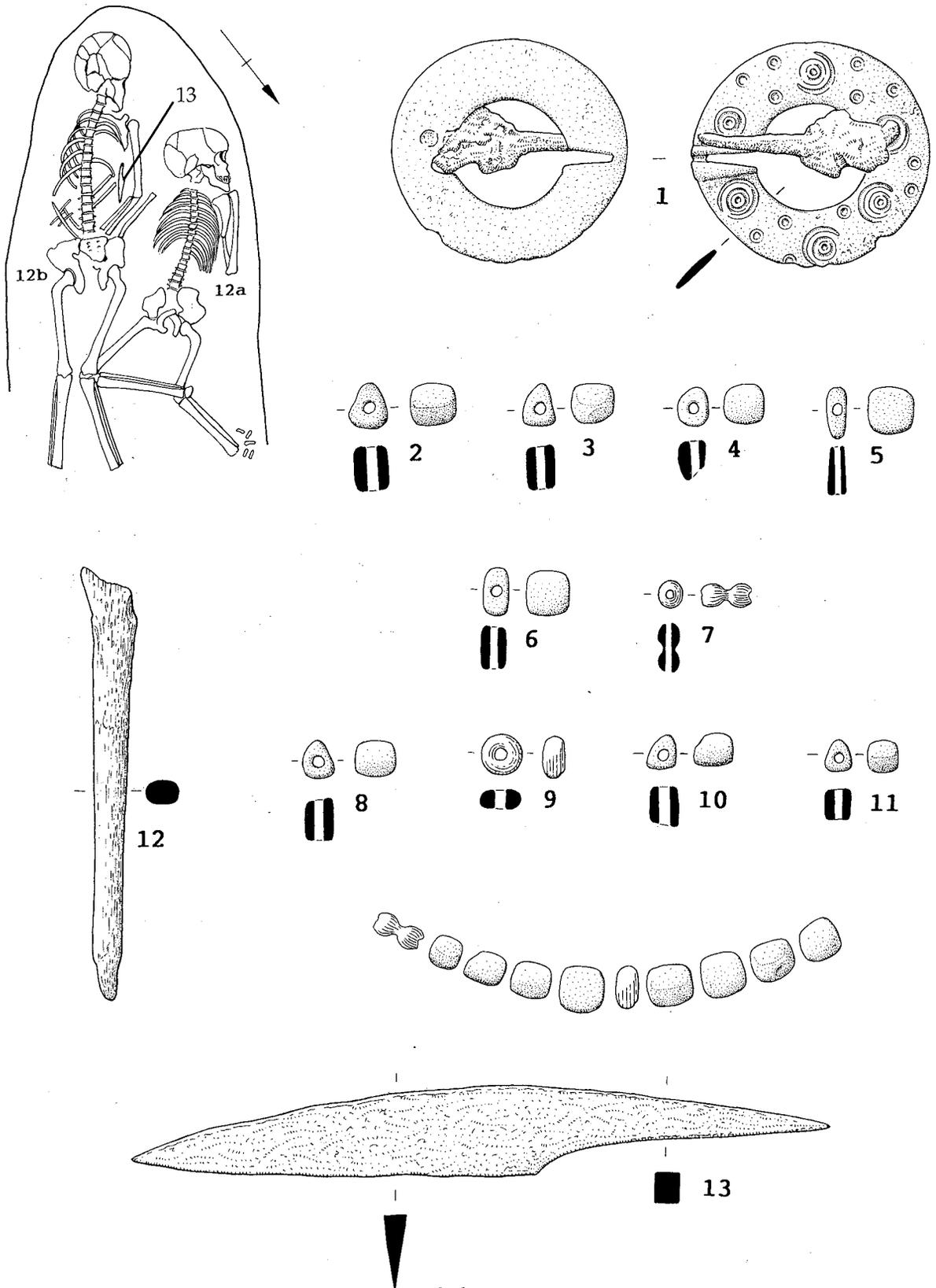
Scales
Graves 1:20
Artefacts 1:1, except where shown

BURIAL 10



Scales
Grave 1:20
Artefacts 1:1, except where shown

BURIALS 12a and 12b

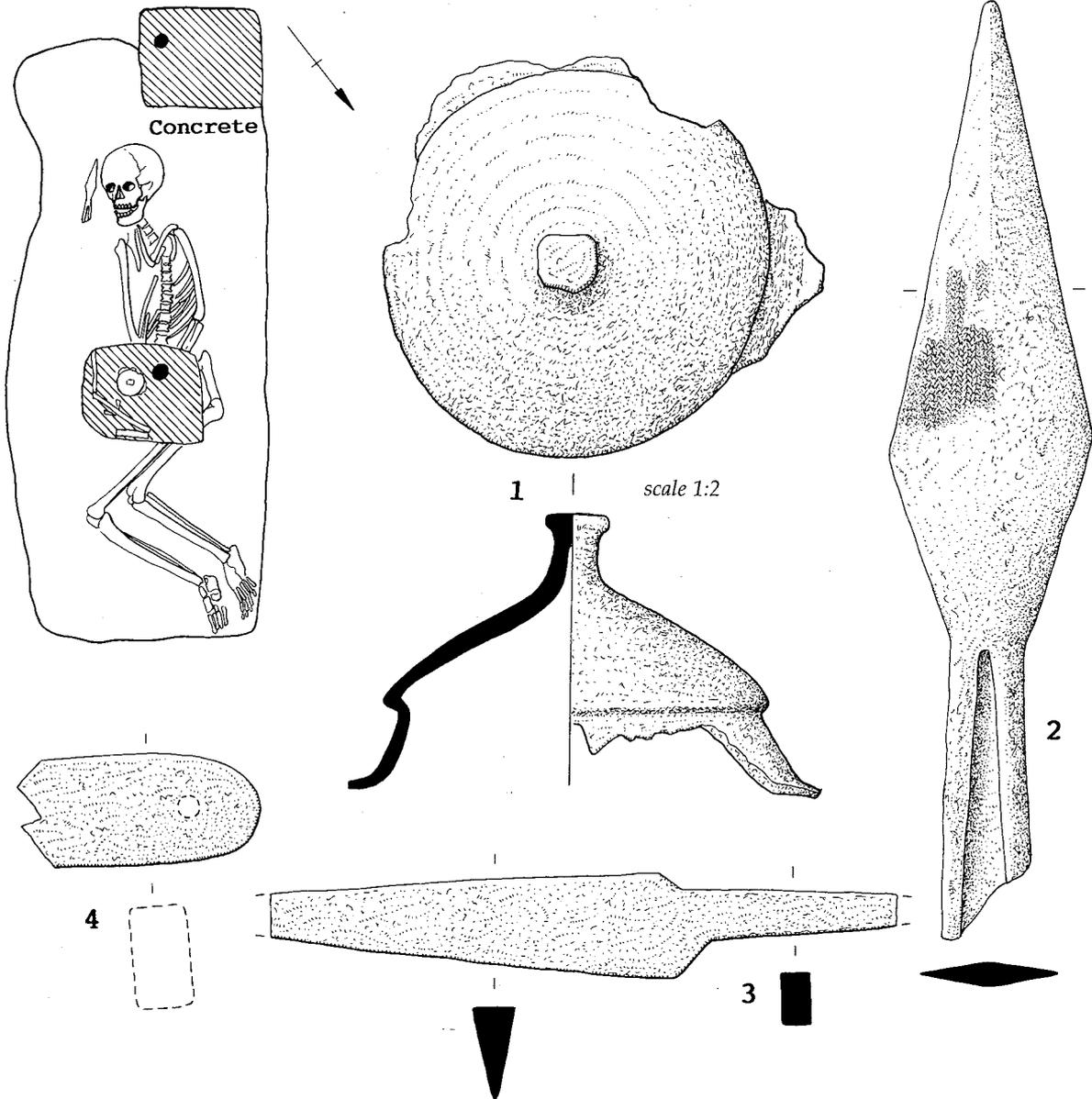


Scales

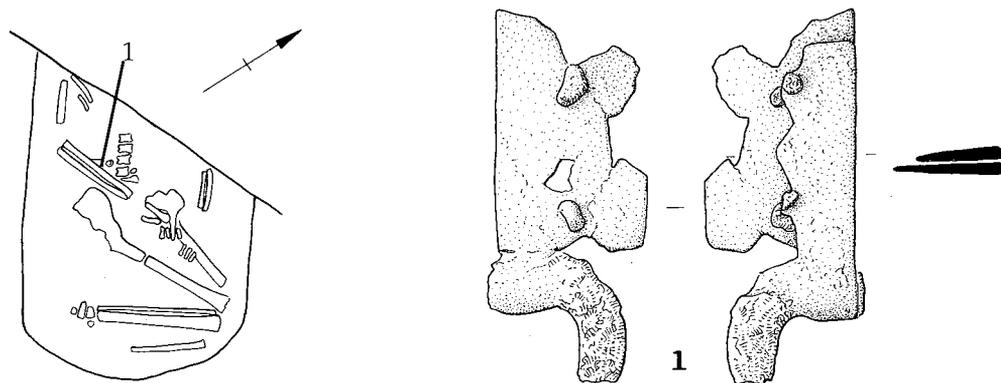
Grave 1:20

Artefacts 1:1, except where shown

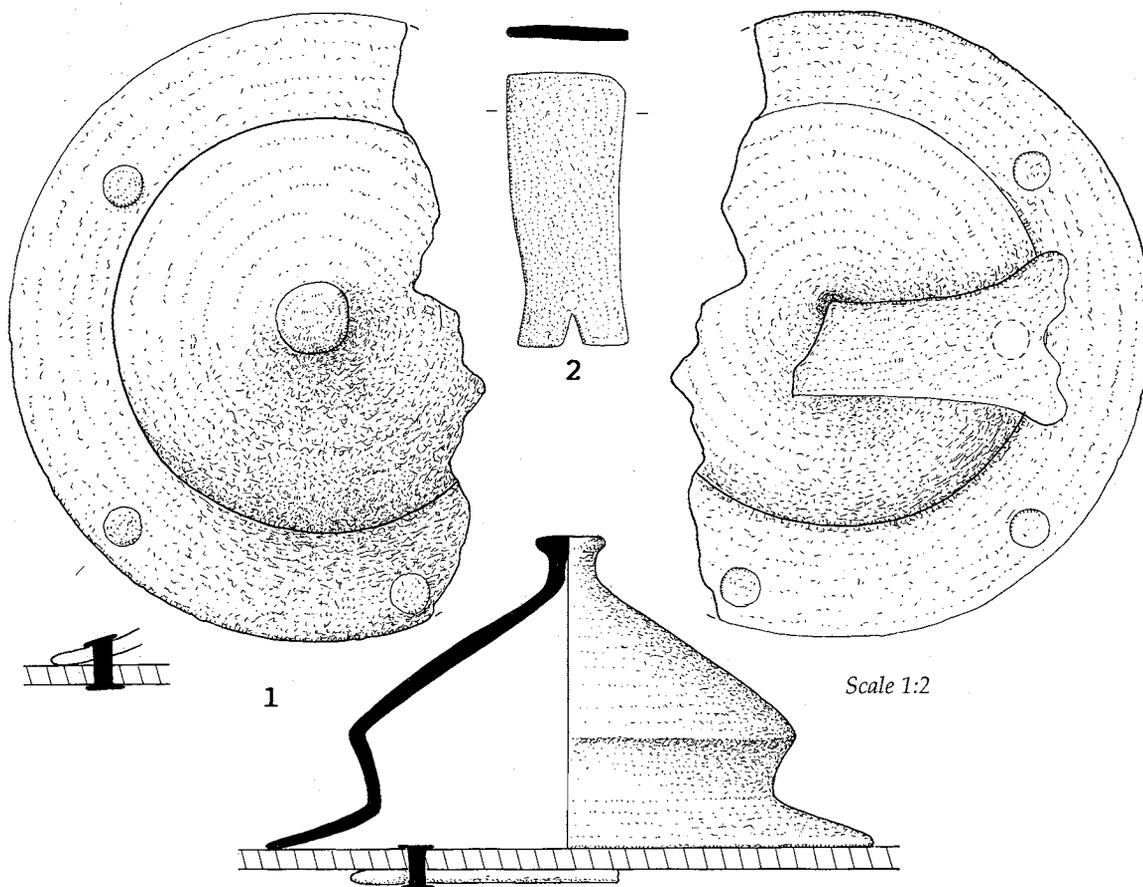
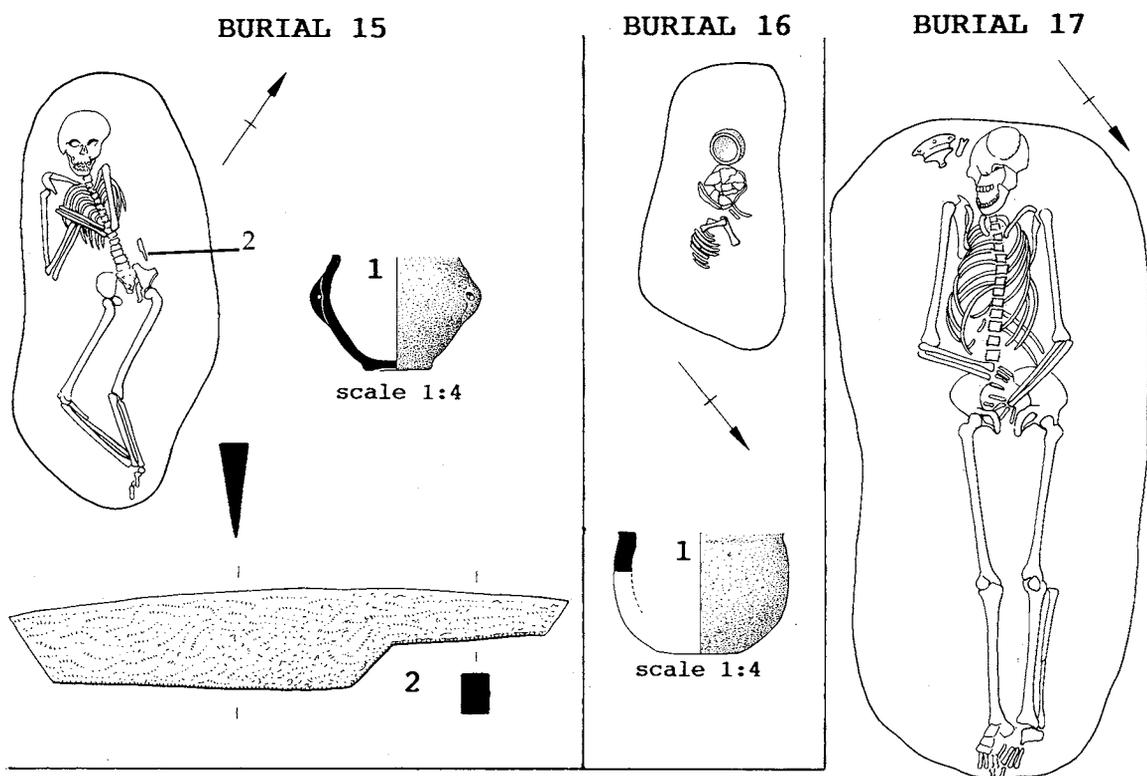
BURIAL 13



BURIAL 14

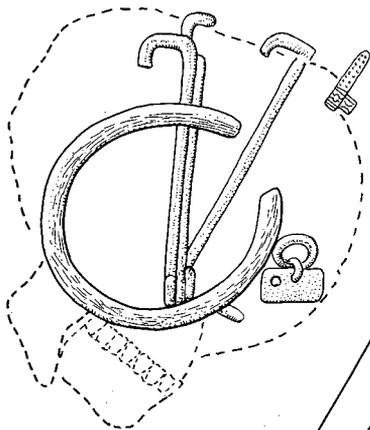
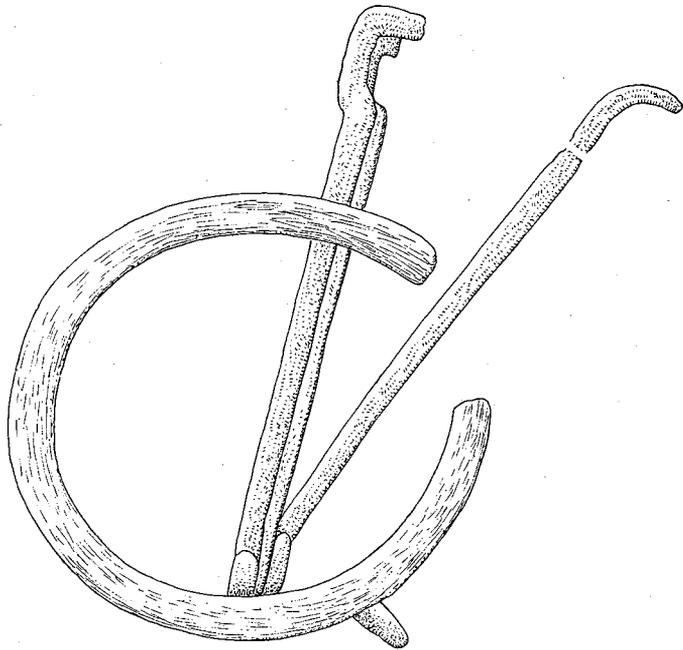
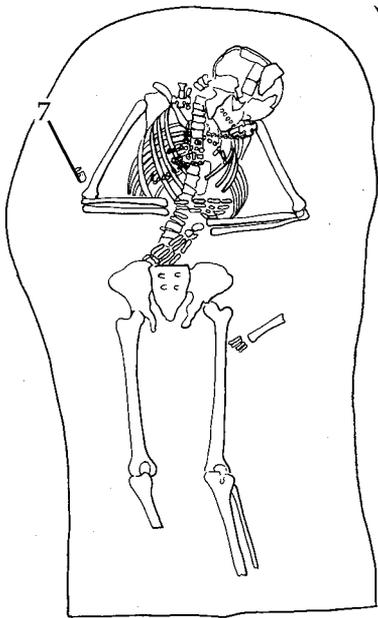


Scales
Graves 1:20
Artefacts 1:1, except where shown

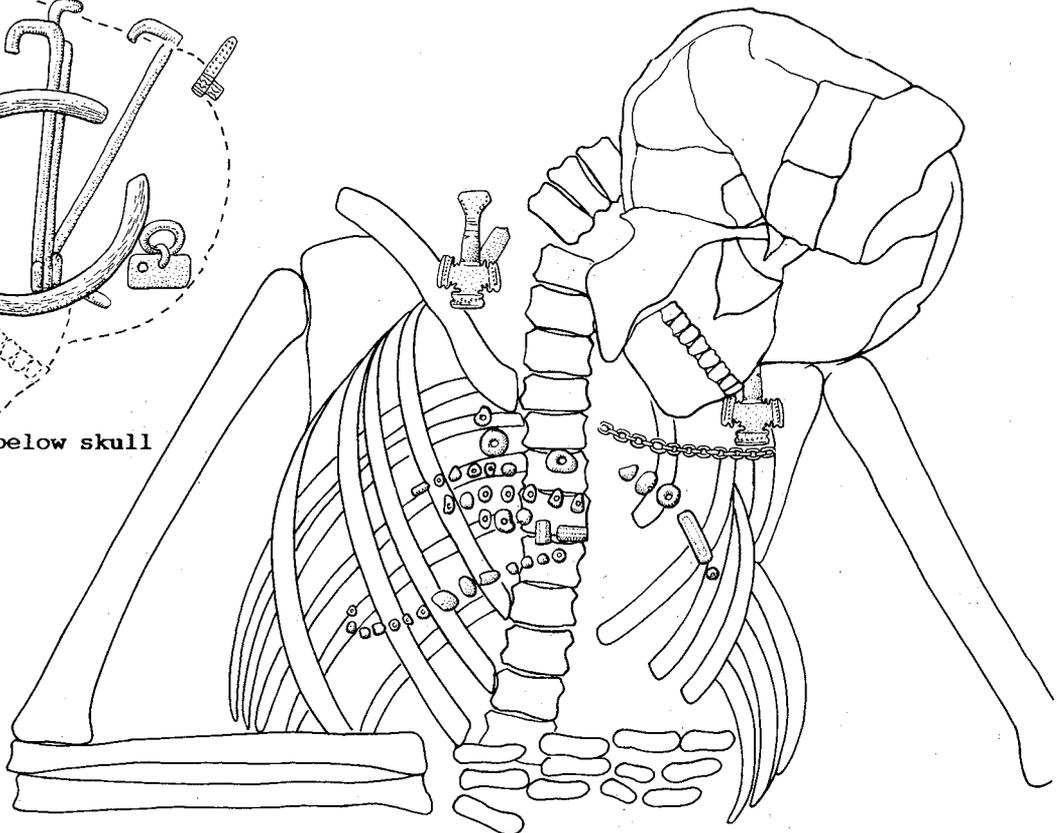


Scales
Graves 1:20
Artefacts 1:1, except where shown

BURIAL 18

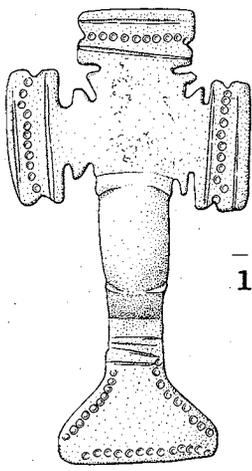


objects below skull

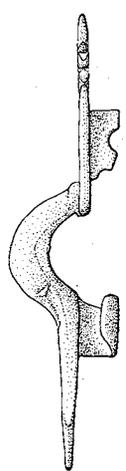


Scales
Grave 1:20
Artefacts 1:1, except where shown

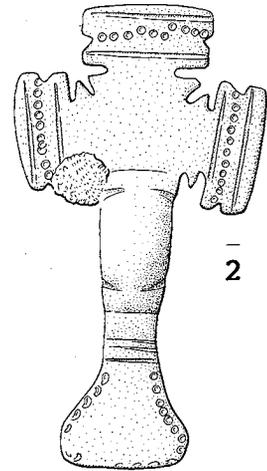
BURIAL 18 Cont.



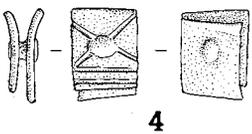
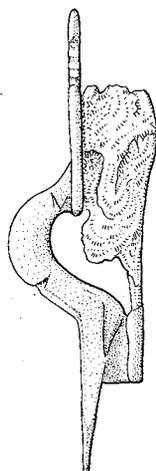
1



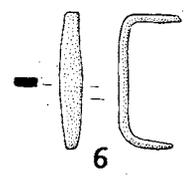
2



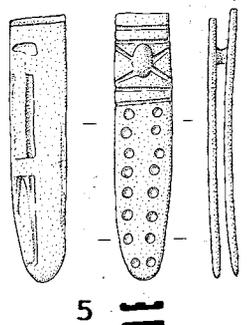
3



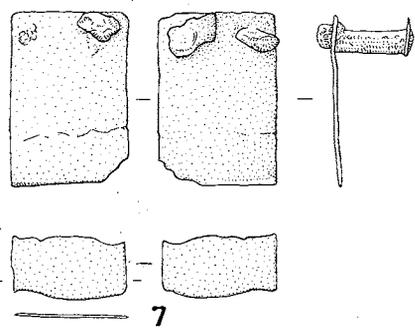
4



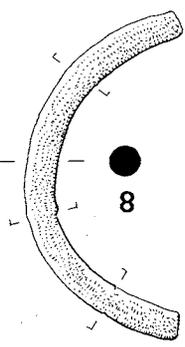
6



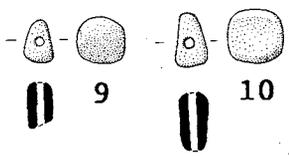
5



7

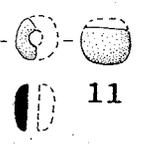


8

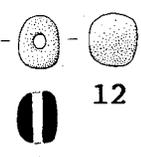


9

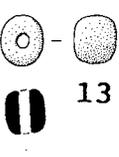
10



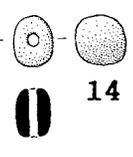
11



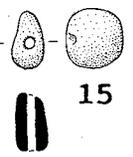
12



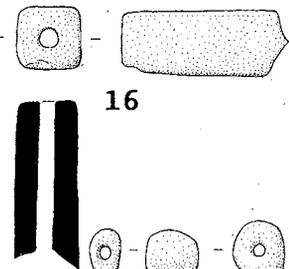
13



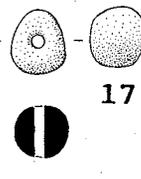
14



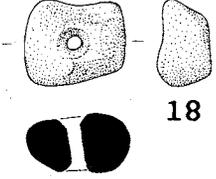
15



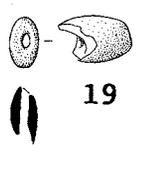
16



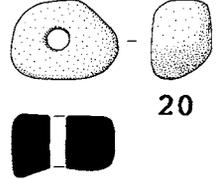
17



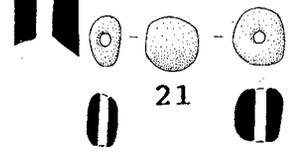
18



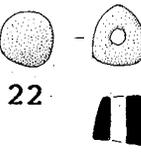
19



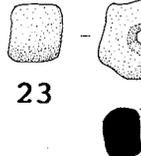
20



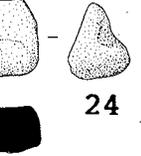
21



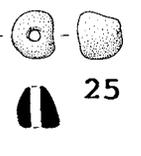
22



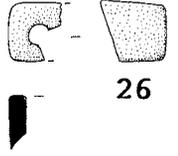
23



24



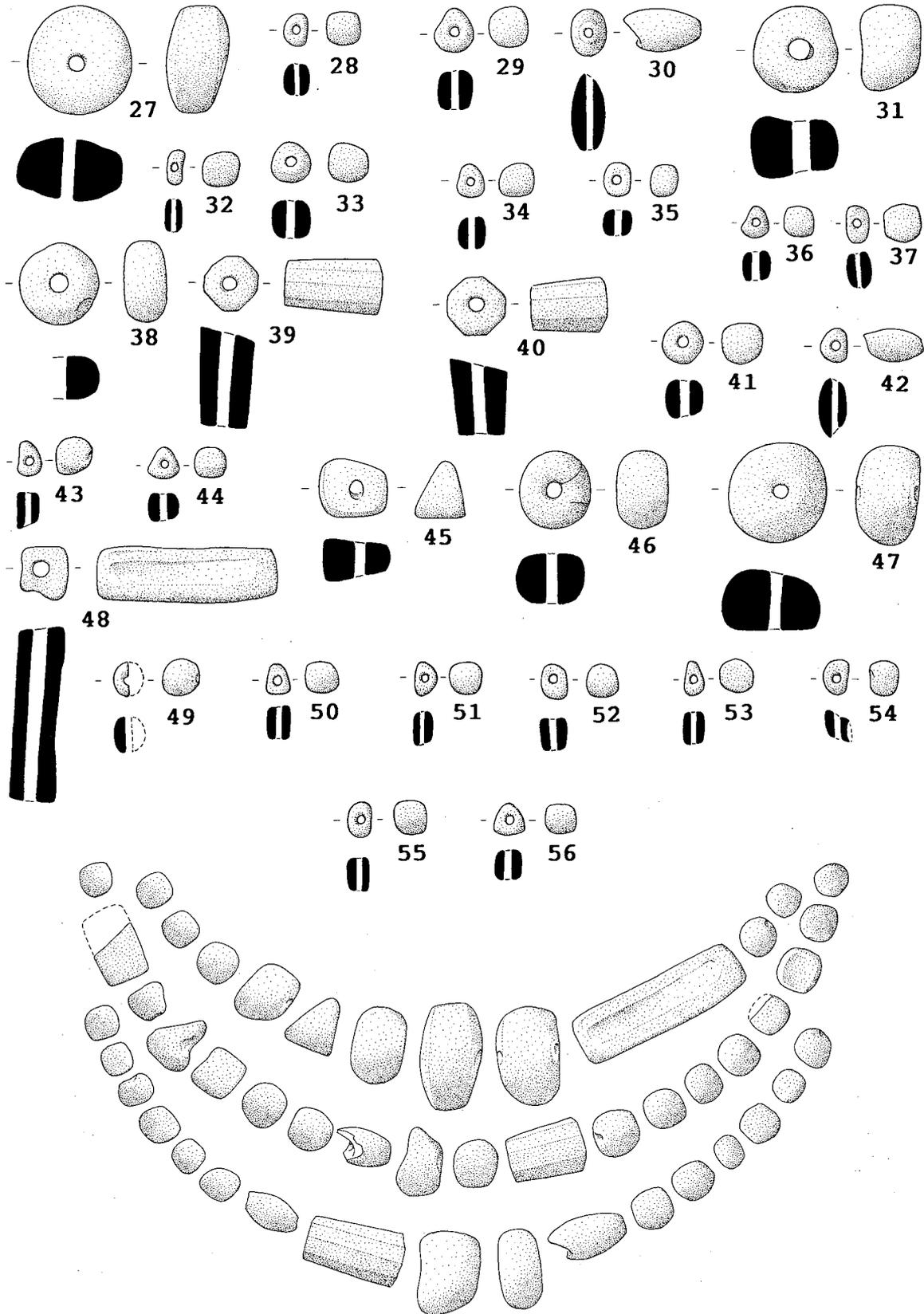
25



26

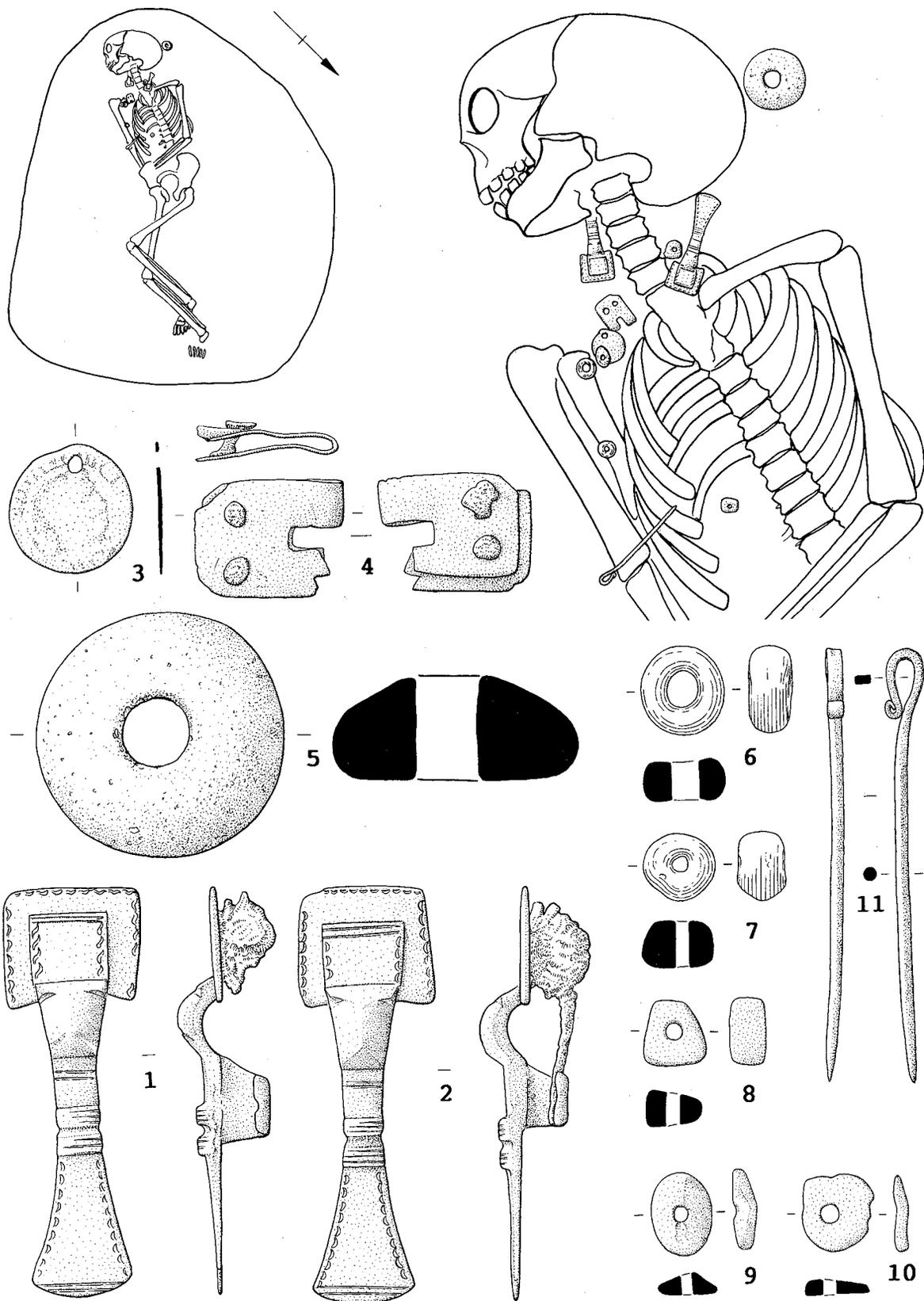
scale 1:1

BURIAL 18 Cont.



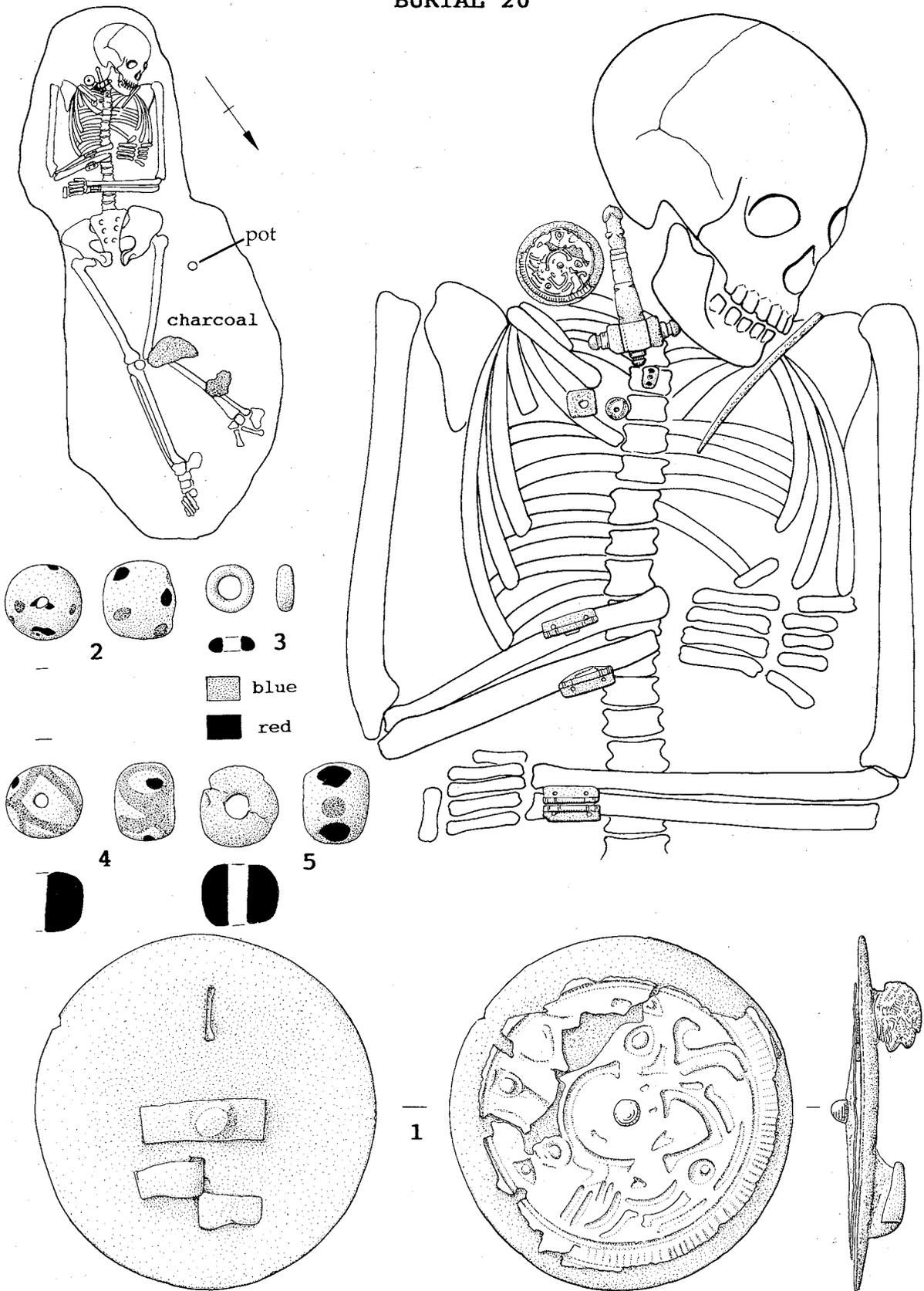
scale 1:1

BURIAL 19



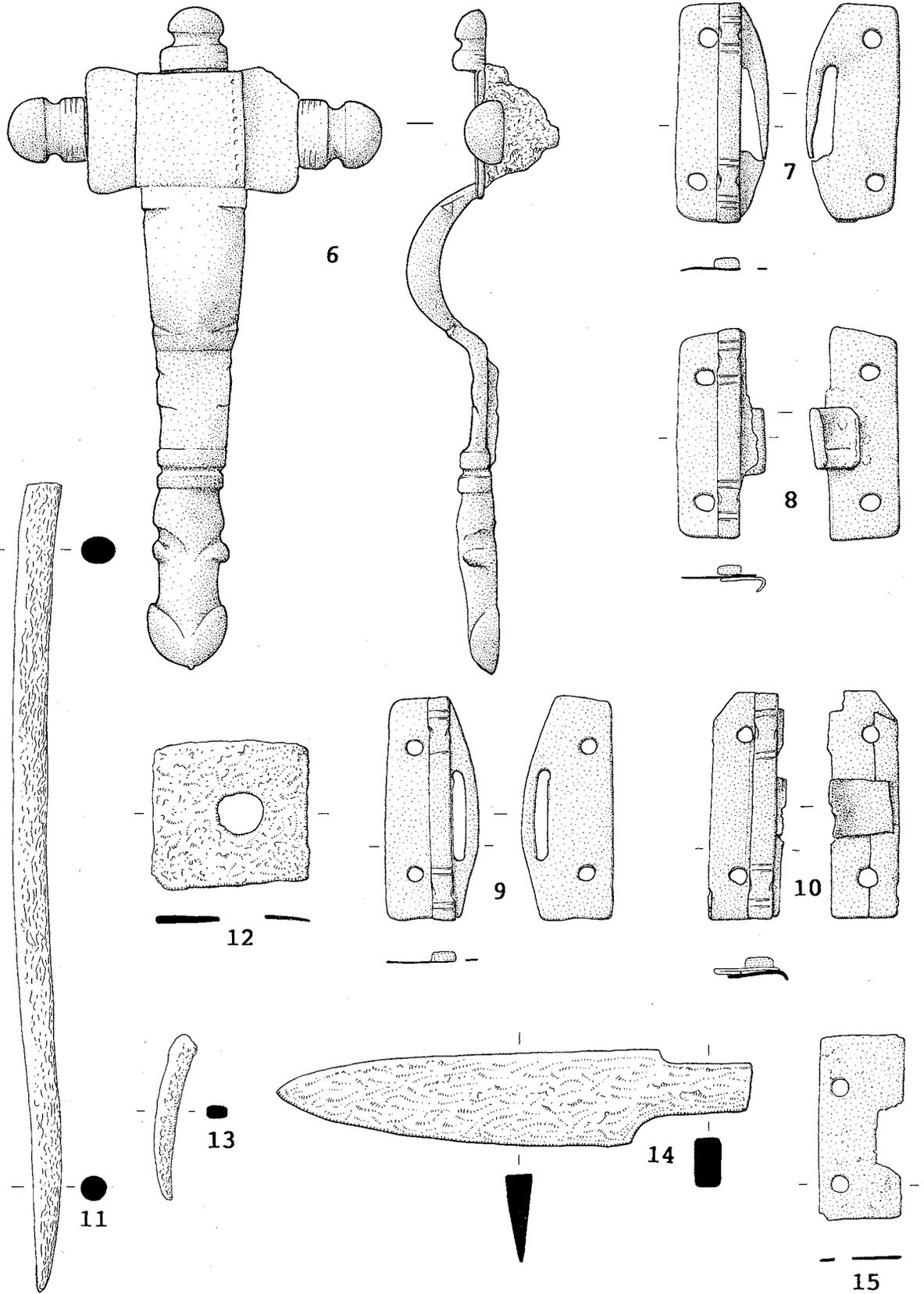
Scales
 Grave 1:20
 Artefacts 1:1, except where shown

BURIAL 20



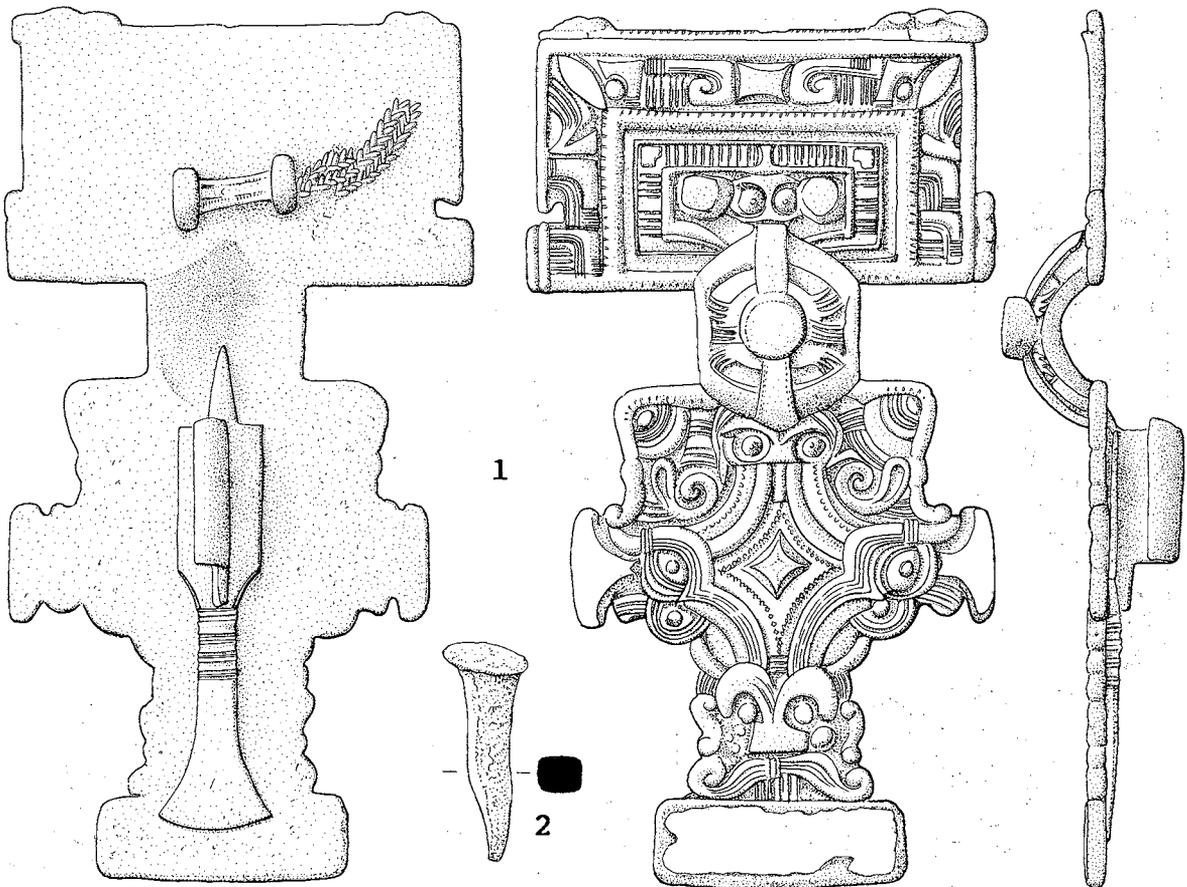
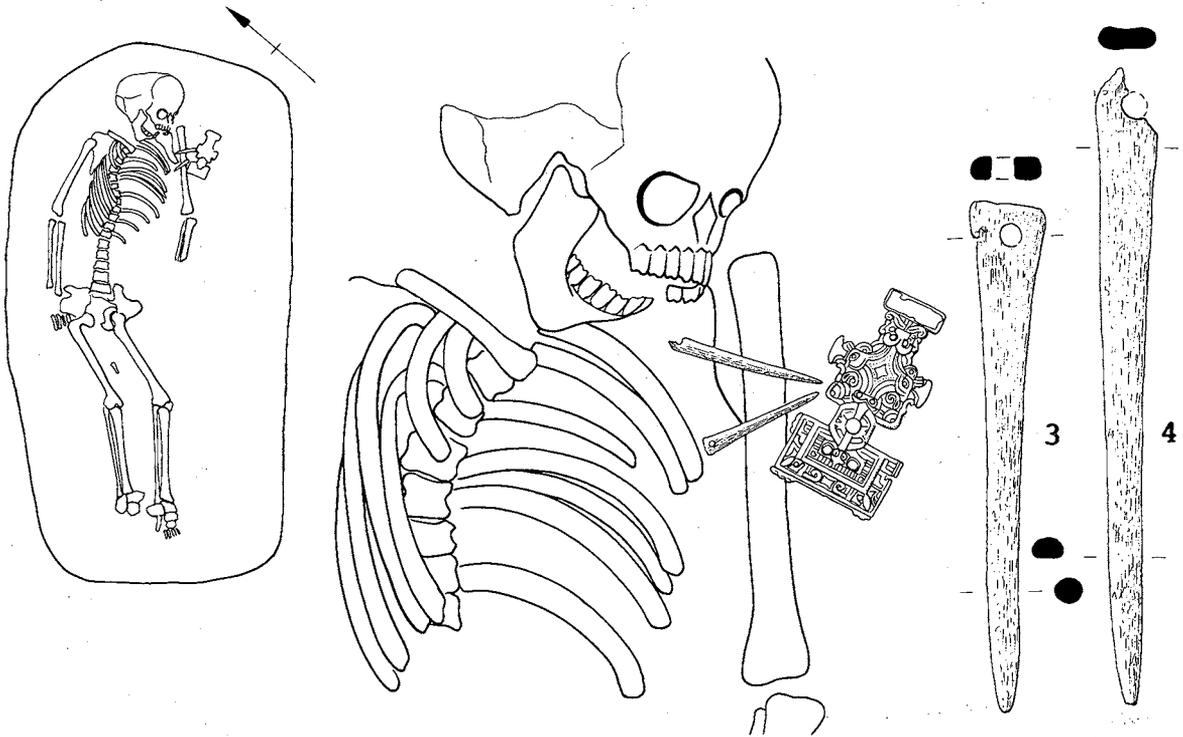
Scales
Grave 1:20
Artefacts 1:1, except where shown

BURIAL 20 Cont.

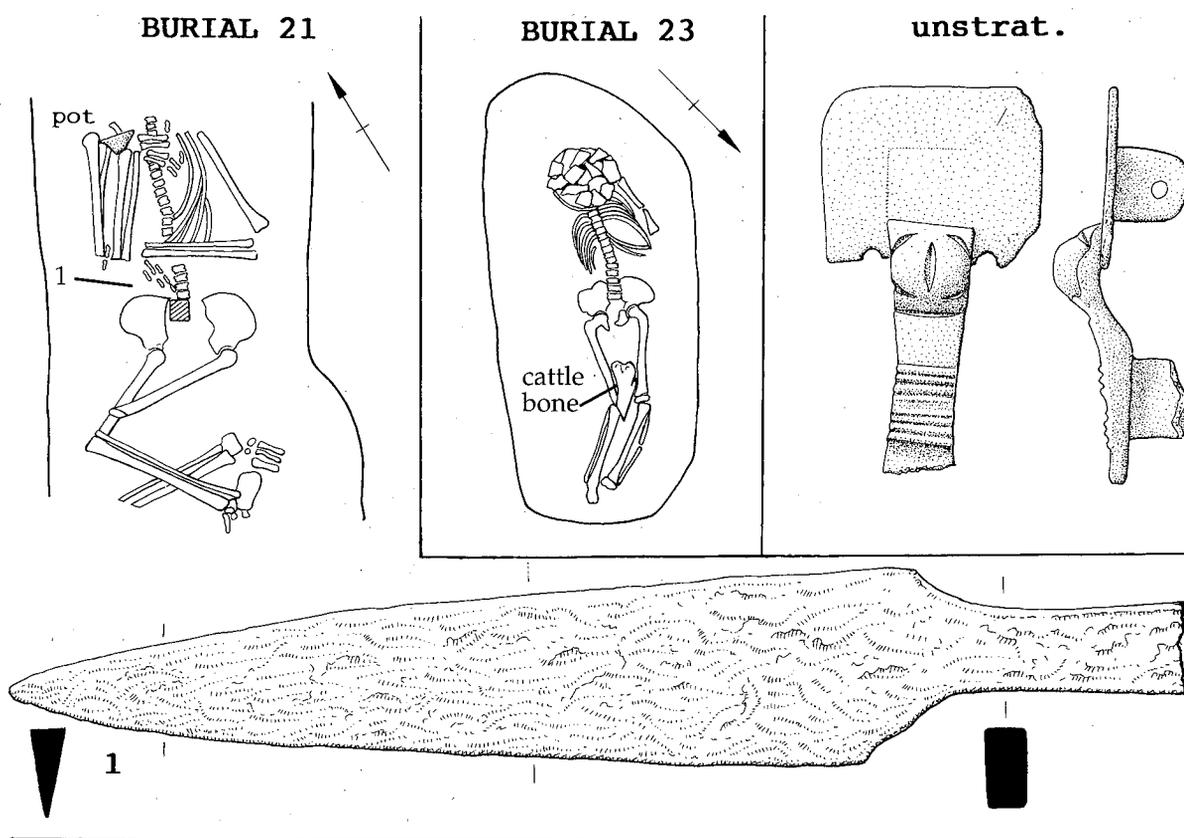


scale 1:1

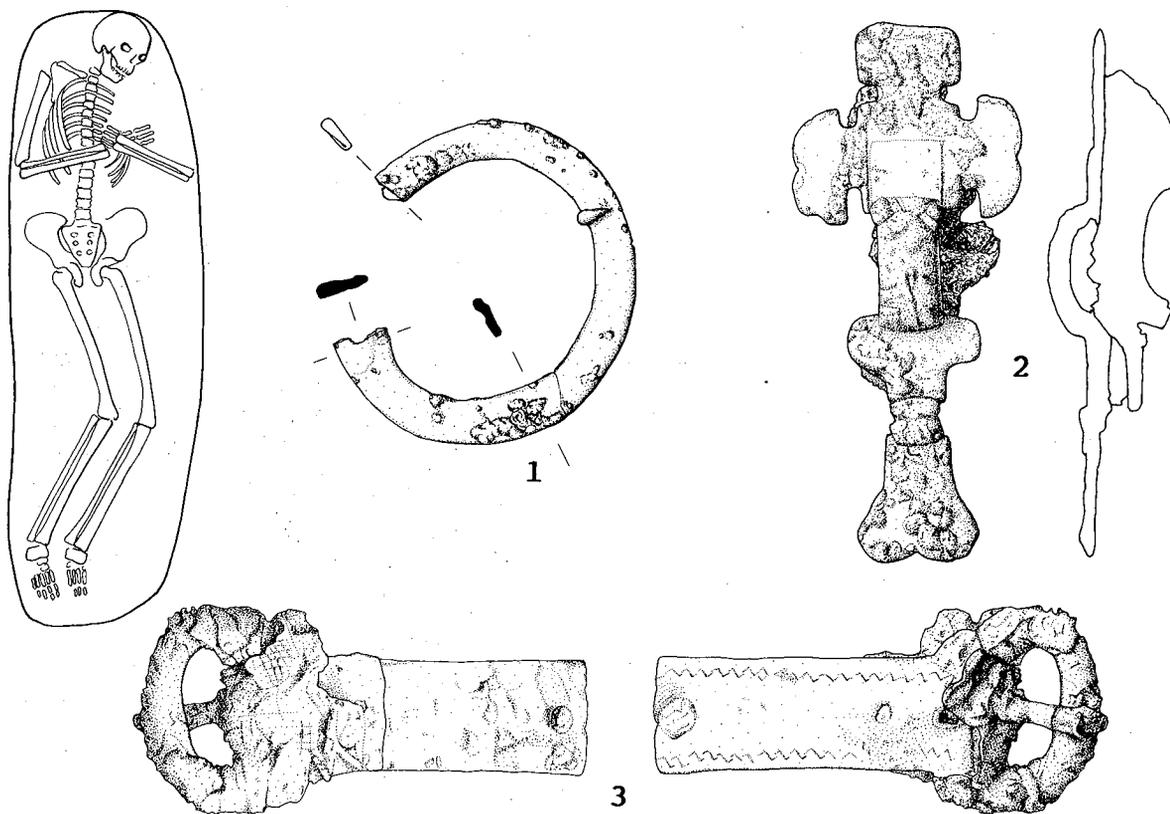
BURIAL 22



Scales
Grave 1:20
Artefacts 1:1, except where shown



Oakington 1993 Burial 25



Scales
 Graves 1:20
 Artefacts 1:1, except where shown

Appendix I

Skeletal remains- methods and glossary

General methods of skeletal identification and analysis used are those of Bass (1987), Steele and Bramblett (1988), and Ubelaker (1989), statures are from the methods of Trotter and Gleser (1952), dental ageing follows the system of Brothwell (1972) and other methods are referred to in the text.

Acetabulum: the hip socket, made up of the three separate bones of the pelvis which join at about 12 years of age.

Auricular area: part of the pelvis which forms the sacro-iliac joint. Changes in this area can be used to determine age at death (Lovejoy *et al.* [1985]; see also 'pubic symphysis' below).

Cribra orbitalia: a porous or sieve-like pattern in the top of the eye orbits, produced by overdevelopment of the bone marrow which makes red blood cells, as a reaction to anaemia (Stuart Macadam 1972).

Cysts, eburnation and osteophytes: respectively, pits in a joint surface, polishing due to direct bone-to-bone contact and bony nodules around joint surfaces. All are formed by breakdown of the articular cartilage due to age degeneration or excessive or unusual use of a moving joint, and are diagnostic features of arthritis (Rogers *et al.* 1986).

Epiphyses: the growing ends of bones: they adjoin the cartilage which produces new bone cells, and when growth stops the cartilage disappears and the epiphysis fuses to the rest of the bone (people say the bone 'sets'). Age can be determined from the state of fusion of different epiphyses in the same skeleton.

Pubic symphysis: the point at the front of the pelvis where the two pubic bones meet. The form of the bone surface in this area changes with age, and the standard ageing systems developed by American anthropologists can be used on archaeological or forensic human remains. The one used here is the Suchey-Brooks system (latest revision Brooks & Suchey 1990).

Schmorl's nodes: indentations in the body surfaces of vertebrae, produced by stress on the spine and consequent weakening of the discs between the vertebrae (Schmorl & Junghanns 1971).

Sexual dimorphism: sexual differences in body shape and size, which can be used to determine the sex of skeletons by examination and measurement of certain bones. Some populations are highly dimorphic, and their skeletons are therefore easy to distinguish by sex.

Acknowledgements

We would like to thank all those who contributed to this report: Celia Honeycombe for conservation of the artefacts, Phyllis Jackson for the notes on feet, Stephen Macaulay for descriptions of the graves and for supervising the excavation, which was carried out by the Cambridgeshire Archaeological Field Unit, Audrey Meaney for discussion of the ivory bag set,

assistance on the excavation and advice during the production of the report, and Linda Meadows who produced the illustrations. Financial support for the excavation was given by South Cambridgeshire District Council, who were also the owners of the site. Help and support was given during the excavation by Oakington Parish Council, in particular their chairman, Alan Milton.

Bibliography

Abbreviations used

BAR	British Archaeological Reports
CBA Res Rpt	Council for British Archaeology Research Report
CUP	Cambridge University Press
EAA	East Anglian Archaeology
PCAS	Proceedings of the Cambridge Antiquarian Society

- Adams, J.C. 1961. *Outline of orthopaedics*. E. & S. Livingstone.
- Ager, B. 1985. 'The smaller versions of the Anglo-Saxon quoit brooch'. *Anglo-Saxon Stud. Archaeol. Hist.* 4, 1-58.
- Bass, W.M. 1987. *Human osteology. A laboratory and field manual*. Columbia, Mo: Missouri Arch. Soc. (Special Publication No. 2).
- Brooks, S. & J.M. Suchey. 1990. 'Skeletal age determination based on the os pubis: a comparison of the Acsádi-Nemeskéri and Suchey-Brooks methods.' *Human Evolution* 5(3): 227-38.
- Brothwell, D.R. 1972 (2nd ed.). *Digging up bones*. British Museum (Natural History).
- Crawford, S.E.E. 1991. *Age Differentiation and Related Social Status: A Study of Earlier Anglo-Saxon Childhood*. Oxford University D. Phil. thesis, unpublished.
- Farwell, D.E. & T.I. Molleson. 1993. *Poundbury. Vol. 2: the cemeteries*. Dorchester: Dorset Natural Hist. & Archaeol. Soc. (Mono. Ser. No. 11).
- Foster, W.K. 1883. 'Account of the excavation of an Anglo-Saxon cemetery at Barrington, Cambs.', *PCAS* 5, 5-32.
- Fowler, G. 'Cratendune: A Problem of the Dark Ages', *PCAS* 41, 70-6.
- Fox, C. 1923. *The archaeology of the Cambridge region*, 242-3. CUP.
- Geake, H. 1997. *The Use of Grave-Goods in Conversion-Period England, c. 600-c. 850*. BAR Brit Ser 261.
- Härke, H. 1989. 'Knives in Early Saxon burials: blade length and age at death'. *Med. Archaeol* 33, 144-8.
- Härke, H. 1997. 'Early Anglo-Saxon social structure'. In J. Hines, ed, *The Anglo-Saxons from the Migration Period to the Eighth Century: An Ethnographic Perspective*: 125-70. Boydell and Brewer.
- Hines, J. 1997. *A New Corpus of Anglo-Saxon Great Square-Headed Brooches*. Soc. of Antiquaries of London, Rep of Res Committee 51.
- Hines, J. 1998. 'The sixth-century transition in Anglian England: an analysis of female graves from Cambridgeshire'. In J. Hines (ed), *The Pace of Change: Studies in Early Medieval Chronology*. Oxbow Monographs.
- Hines, J. forthcoming. 'The Anglo-Saxon archaeology of the Cambridge region and the Middle Anglian kingdom.' *Anglo-Saxon Stud. Archaeol. Hist.* 10.
- Hollingworth, E.J. and O'Reilly, M.M. 1925. *The Anglo-Saxon Cemetery at Girton College, Cambridge*. CUP.
- Lethbridge, T.C. 1931. 'Anglo-Saxon cemetery at Little

- Wilbraham', *PCAS Quarto Series 3*, 71–4.
- Lethbridge, T.C. 1931–2. 'Anglo-Saxon burials at Soham, Cambs.', *PCAS 33*, 152–63.
- Lovejoy, C.O., R.S. Meindl, T.R. Pryzbeck & R. Mensforth. 1985. 'Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age at death'. *American Journal of Physical Anthropology 68*, 15–28.
- Malim, T. and J. Hines. 1998. *The Anglo-Saxon Cemetery at Edix Hill (Barrington A), Cambs.* CBA Res Rep 112.
- Meaney, A.L. 1981. *Anglo-Saxon Amulets and Curing Stones.* BAR Brit Ser 96.
- Moore, S. 1955. *Hyperostosis cranii.* Springfield, Ill. Charles C. Thomas.
- Moorrees, C.F.A., E.A. Fanning & E.E. Hunt. 1963. 'Formation and resorption of three deciduous teeth in children.' *American Journal of Physical Anthropology 21*, 205–13.
- Mortimer, C. 1990. *Some Aspects of Early Medieval Copper-Alloy Technology, as illustrated by a Study of the Anglian Cruciform Brooch.* Oxford University D. Phil. thesis, unpublished.
- Murray, M. 'The finds at Ely Fields Farm', *PCAS 48*, 1954.
- Neville, R.C. 1852. *Saxon Obsequies.*
- Neville, R.C. 1854. 'Anglo-Saxon cemetery, excavated January, 1853.' *Archaeol. J.* 11, 95–115.
- Owen-Crocker, G.R. 1986. *Dress in Anglo-Saxon England.* Manchester University Press.
- Rogers, J.T. Waldron, P. Dieppe & I. Watt. 1986. 'Arthropathies in palaeopathology: the basis of classification according to most probable cause.' *Journal of Archaeol. Science 14*, 179–93.
- Schmorl, G. & H. Junghanns. 1971. *The human spine in health and disease.* 2nd American edn, ed. E.F. Besemann, New York: Grune and Stratton.
- Steele, D.G. & C.A. Bramblett. 1988. *The anatomy and biology of the human skeleton.* College Station, Texas: Texas A & M University Press.
- Stuart-Macadam, P. 1982. *A correlative study of a palaeopathology of the skull.* Unpublished Ph.D. thesis, University of Cambridge.
- Taylor, A. 1997. *Archaeology of Cambridgeshire: Vol I, South West Cambridgeshire*, 66. Cambs. Co. Council.
- Taylor, A. 1998. *Archaeology of Cambridgeshire: Vol II, South East Cambridgeshire and the Fen Edge Villages.* Cambs. Co. Council.
- Trotter, M. & G.C. Gleser. 1952. 'Estimation of stature from long bones of American whites and negroes.' *American Journal of Physical Anthropology 10*, 463–514.
- Ubelaker, D.H. 1989. *Human skeletal remains: excavation, analysis, interpretation.* Washington
- West, S.E. 1988. *The Anglo-Saxon Cemetery at Westgarth Gardens, Bury St Edmunds, Suffolk: Catalogue.* EAA 38, Bury St Edmunds.

Proceedings of the Cambridge Antiquarian Society

Notes for contributors

The Editor welcomes the submission of papers which are principally on the history and archaeology of the County. Papers will be sent out to referees.

Format of articles

All articles should begin with a Summary. The main text of the Article should be followed by (as appropriate): Appendices; Glossary; Acknowledgements; Endnotes; Bibliography; Acknowledgement of Grant.

Notes should be numbered consecutively throughout the article.

References in the Bibliography should be cited as follows:

Manuscripts: Buckinghamshire Record Office (hereafter Bucks RO) Dormer estate, D/93/Box 2, Court Roll of Ravensmere Manor, Hughenden 1752.

Books: Schmorl, G. & H. Junghanns. 1971. *The human spine in health and disease*. 2nd American edn, ed. E.F. Besemann, New York: Grune and Stratton.

Articles in books: Hines, J. 1998. 'The sixth-century transition in Anglian England: an analysis of female graves from Cambridgeshire'. In J. Hines (ed), *Studies in Early Medieval Chronology*. Oxbow Monographs.

Articles in Journals: Moorrees, C.F.A, E.A. Fanning & E.E. Hunt. 1963. Formation and resorption of three deciduous teeth in children. *American Journal of Physical Anthropology* 21, 205-13.

Theses: Mortimer, C. 1990. *Some Aspects of Early Medieval Copper-Alloy Technology, as illustrated by a Study of the Anglian Cruciform Brooch*. Oxford University D. Phil. thesis, unpublished.

Format of submissions

The *Proceedings* are produced electronically: authors must supply copies of their final text both on paper and on disk. Contact the Editor for information on appropriate software packages. The following information must also be supplied on paper: the filenames on the disk; the software package from which each file originated; and the platform (Mac/PC) on which the disk and files were produced. Files may also be emailed; contact the Editor for more information. Artwork will be scanned, placed and printed.

Tables

These should be set out with no vertical rules and as few horizontal rules as possible. A paper copy must be supplied. Files supplied from a specialist database must be compatible with Microsoft Excel.

Figures and illustrations

A complete list of figures and their captions must accompany each article; note that photographs are to be referred to as figures and included in the list of figures rather than separately as plates. Each piece of artwork and/or digital file must be clearly identified with the correct figure number. The desired location of each figure must be marked in colour on the paper copy of the final text.

If created digitally these should be supplied in digital format, both to save time and cost, and to ensure that the final versions are of the best quality. Requirements for both digital files and camera-ready artwork are noted below; please contact the Editor for more specific information.

Note that the PCAS page is set in two columns: maximum column width is 73mm ; maximum full page width is 155mm; maximum full page height is 240mm.

Photographs

Prints: glossy black and white prints should be submitted at the size at which authors would ideally wish them to appear.

Crops should be marked on an overlay.

Scans: greyscale image resolution should be 300dpi when printed at the desired size. TIF and EPS are appropriate file formats.

Artwork

Camera-ready artwork must be supplied at the desired final size, in finished form, and with adequate keys and scales included (note that a textual statement of scale is inaccurate if the image is subsequently resized). The scanning process is less able to compensate for some problems than was the camera – extremely fine lines and small text cause particular problems.

Line art scans should have a resolution between 900 and 1200dpi when printed at the desired size, and should be supplied as TIF or EPS.

Graphic files should originate from graphics software such as Illustrator or Freehand, and be in a standard graphic format such as TIF or EPS which can be imported into another application.

Copyright

Papers are accepted for publication on the understanding that they have not already been accepted for publication elsewhere. The copyright will normally remain with the Society.

Other information

Twenty-five offprints of each paper will be supplied. Further offprints may be ordered at extra cost at proof stage.

Contributors who know of possible sources of subventions towards the cost of printing their paper should inform the Editor of this when submitting the typescript; long articles will not normally be accepted without some financial support.

Proceedings Volume LXXXVI, 1997

Price £10 for members, £12 for non-members

Contents

An Iron Age Square Barrow at Diddington, Cambridgeshire Third Interim Report of excavations at Little Paxton Quarries: 1996 Alex Jones	5
Prehistoric and Roman remains at Edix Hill, Barrington, Cambridgeshire Tim Malim	13
An Anglo-Saxon cemetery at Oakington, Cambridgeshire Alison Taylor, Corinne Duhig and John Hines	57
<i>Cloistered Communities: Archaeological and Architectural Investigations in Jesus College, Cambridge, 1988-97</i> Christopher Evans, Alison Dickens and D.A.H. Richmond	91
Prehistoric Fields into Medieval Furlongs? Evidence from Caxton, Cambridgeshire Susan Oosthuizen	145
Medieval Pottery from Cambridge: Sites in the Bene't Street - Market areas David Edwards and David Hall	153
The Foundation of an Alien Priory at Linton, Cambridgeshire J.A. Everard	169
Reviews Alison Taylor & John Alexander	175
Field-Work in Cambridgeshire: C. Evans, D. Keen, G. Lucas, T. Malim, I. Meadows, T. Reynolds, & J. Roberts	179
<i>Index</i>	187