

Excavations at Carmarthen Greyfriars 1983-1997

Analysis of Skeletal Remains



VOLUME II Detailed Descriptions

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TEXT EDITED BY TERRY JAMES *for* CAMBRIA ARCHAEOLOGY 2001

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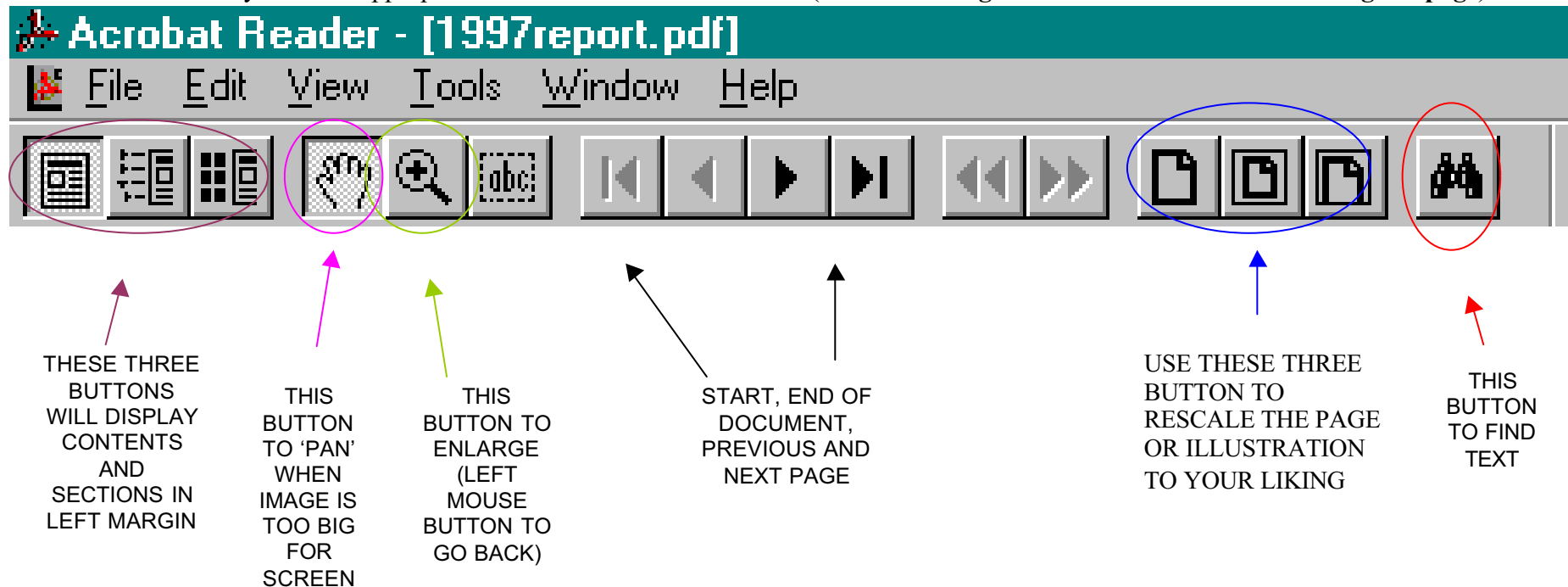
1988 & 1990 Excavations of the East end of the Choir 137

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The other reports in this series, published in electronic format, are: **small finds; pottery** and **floor tiles** as well as the 1997 excavation report (**1997report.pdf**). The electronic publications can be read using Adobe® Acrobat.™ The main structural report is published in *medieval Archaeology*, Vol. xli 1997 pp. 100-194.

Hints on using this document:

Take a moment to learn how Acrobat works. Time spent now will help you harness the power and ease of moving around this electronic document. Text Marked like **this is a 'hot link'** (see the cursor changes to a POINTING HAND when you hover over red words). Click on any red words and letters: these will take you to the appropriate cross reference or illustration (then use **the right mouse button to return to original page**)



Note you can rescale a page and move to another page number by clicking on the relevant part of the lower left of the screen.

Editorial Note

The following bone reports were compiled by Dr Wilkinson at particular periods of the Greyfriars excavations. Given the rolling nature of redevelopment of the site it was never clear when the excavations would terminate. His reports were designed to stand on their own. The task of text editor has been to try to present a cohesive report, but neither time nor finance allows a complete restructuring. The individual synopses have been extracted and presented first (Volume I) Detailed descriptions are in Volume II. The method of analysing the bones was undertaken according to a skeleton's completeness. Complete skeletons, (or assemblages of individuals clearly identified on site), were examined first. Mixed assemblages of bone from common contexts followed after these. Because of this the descriptions do not follow a Context Number sequence, although within the working process described here numbers like, complete skeletons, tend to be sequential. After study the bones were interred in the graveyard of St. Mary's RC Church, Carmarthen, and Dr Wilkinson's typescript was deposited with the rest of the archive and finds in Carmarthen County Museum. Please note that Context Numbers for the 1997 excavations restart at No. 1.

Conventions used for Dentition

The following notation has been adopted throughout this publication

<i>Usual convention</i>	<i>Meaning</i>	<i>Adopted Convention</i>	<i>Example</i>
χ	loss a.m.	double strikethrough	8
or /	loss p.m.	single strikethrough	8
u	unerupted	inferior/subscript figure	₈
o	erupting	superior/superscript fig. underlined	⁸
ul=upper left (for MS. ⌋)		ll=lower left (for MS. ⌋)	
ur=upper right (for MS. ⌌)		lr=lower right (for MS. ⌌)	

**The
Photographs**



Plate 1 Context 576:
Lower end of right humerus from below



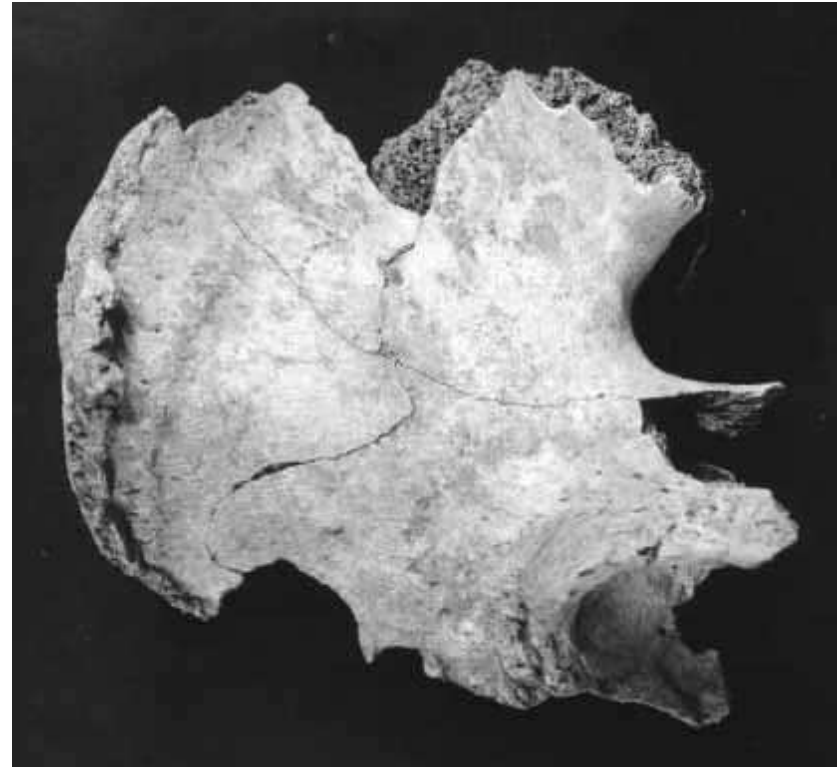
Plate 2 Context 576:
Right humerus, radius and ulna (elbow joint) from front



Plate 3. Context 595: Left 5th metacarpal (on right of photo) showing results of old fracture. Compare with normal right 5th metacarpal (left of photo) – this is more slender.



Plate 4. Context 615: The 5th left metatarsal (left of photo) has been fractured (also Xrayed). Compare with normal 5th right metatarsal (right of photo)



Context 754:

Plate 5 [Left] Left femur showing exaggerated tendon insulation with the linea aspera (due to DISH)

Plate 6 [Above] Left hip bone, note the roughening and lipping of the muscular attachment to the iliac crest (DISH).



Plate 7 Context 957: Pseudarthrosis of left tibia and fibia viewed from behind.



Plate 8. Context 957: Pseudarthrosis of left tibia and fibia – these have been separated to demonstrate the irregular toothed surfaces of the false new ‘joint’.

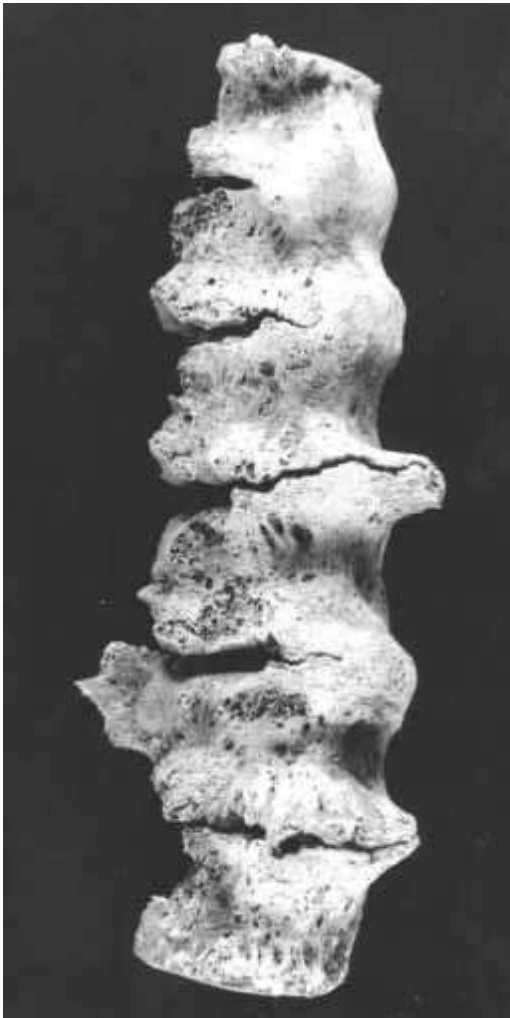


Plate 9 Context 971: 'Bamboo Spine'. Fusion of thoracic vertebral bodies.

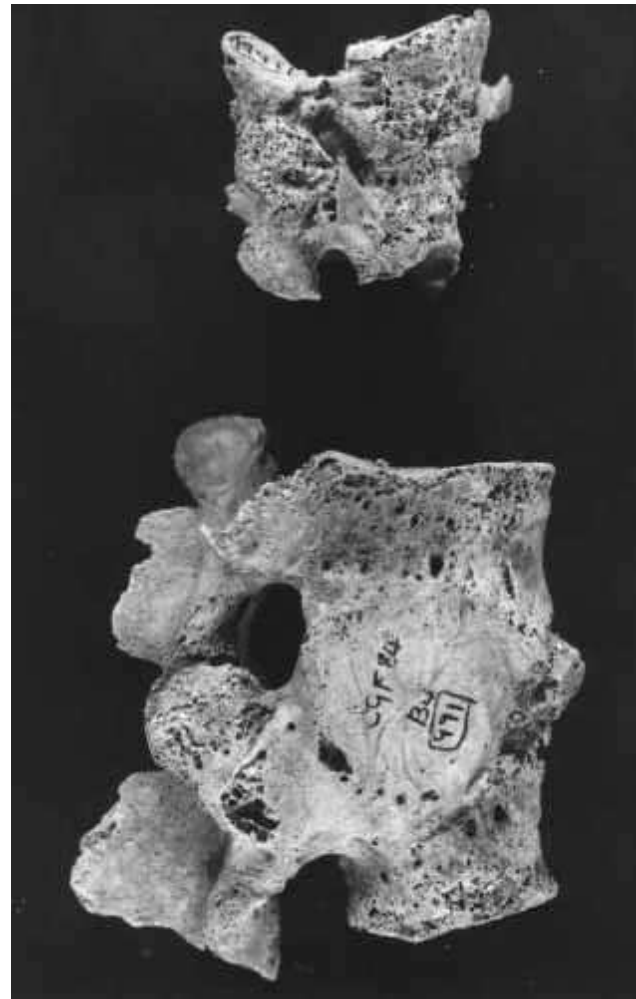


Plate 10 Context 971: Fusion of cervical vertebral. Fusion of lumbar vertebral.



Plate 11 Context 972: [left] Early fusion of cervical vertebræ - ('spondylitis').

Plate 12 Context 980: [right] Isolated tibial shaft showing indentation and overgrowth of its margins due to external pressure from a soft tissue growth.



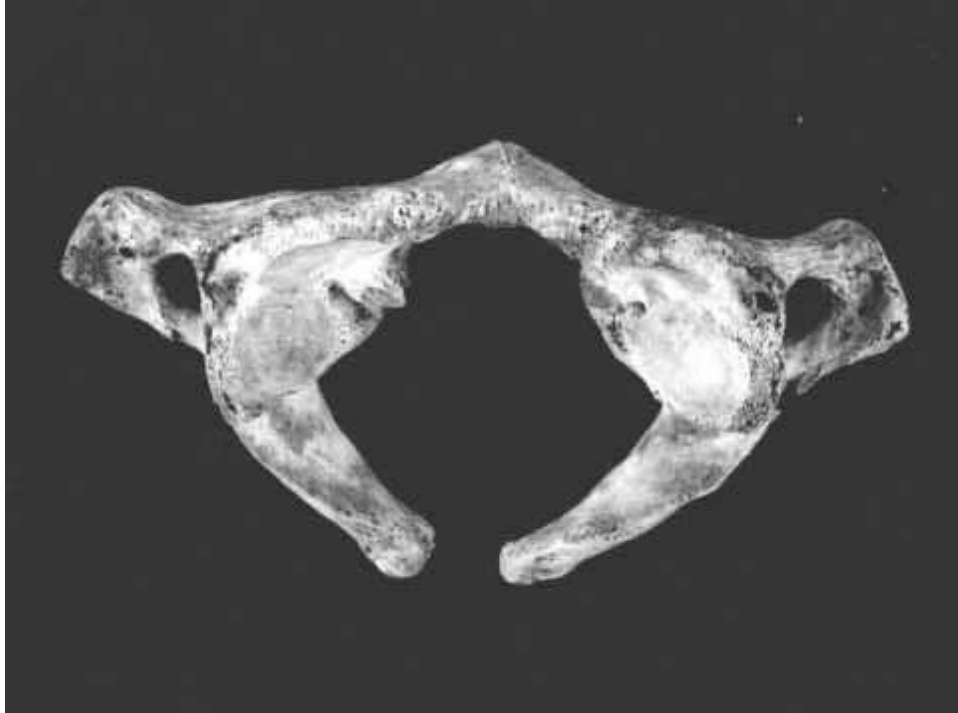


Plate 13 Context 987: [above] Atlas vertebra, failure of fusion of the posterior arch.

Plate 14 Context 992: [right] 5th lumbar vertebra showing a congenital anomaly, spondylolisthesis.





Plate 15 Context 1007:
[left] Metatarso
phalangeal joint of great
toe showing arthritis.

Plate 16 Context 1022:
[right] Mandible showing
torus formation lingually.



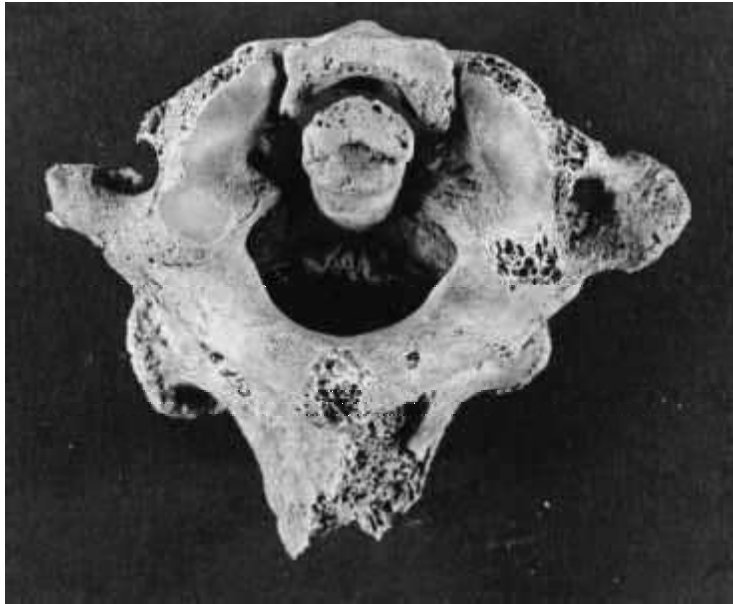


Plate 17 Context 1394: [left] Atlas and axis vertebrae. Gross arthritic change between odontoid process of axis and anterior arch of atlas.

Plate 18 Context 1701 [right].

Plate 19 Context 1822: [below] Malunited fracture of ulna.





Plate 20 Context 1829 [left] Scapula (I) Acromion – unusual joint for clavicle – DISH; (ii) suprascapular foramen – congenital anomaly.

Plate 21 Context 1829 [above] Under surface of clavicle – a facet for articulation with acromion of scapula a ligament is attached here but DISH has caused unusual changes and development of a different type of joint.

Plate 22 Context 1833 [below] Arthritic cervical vertebrae.





Plate 23 Context 1862 [left]: Unusual spinous process of L5 vertebra (bifid spinous process).

Plate 24 Context 1881 [below]: Fractured and healing left clavicle.

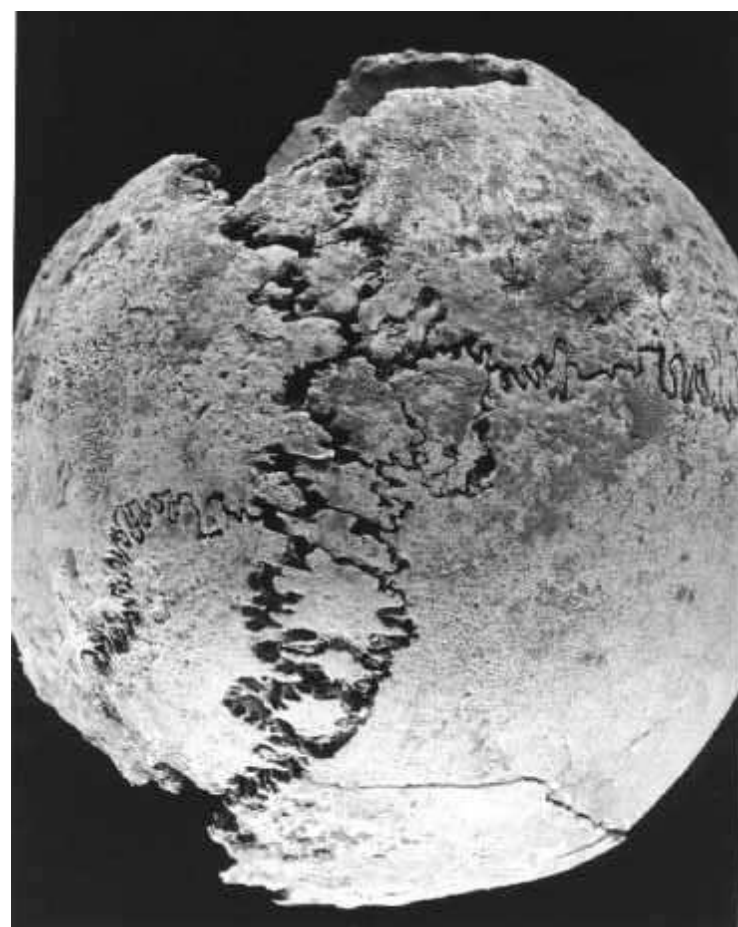


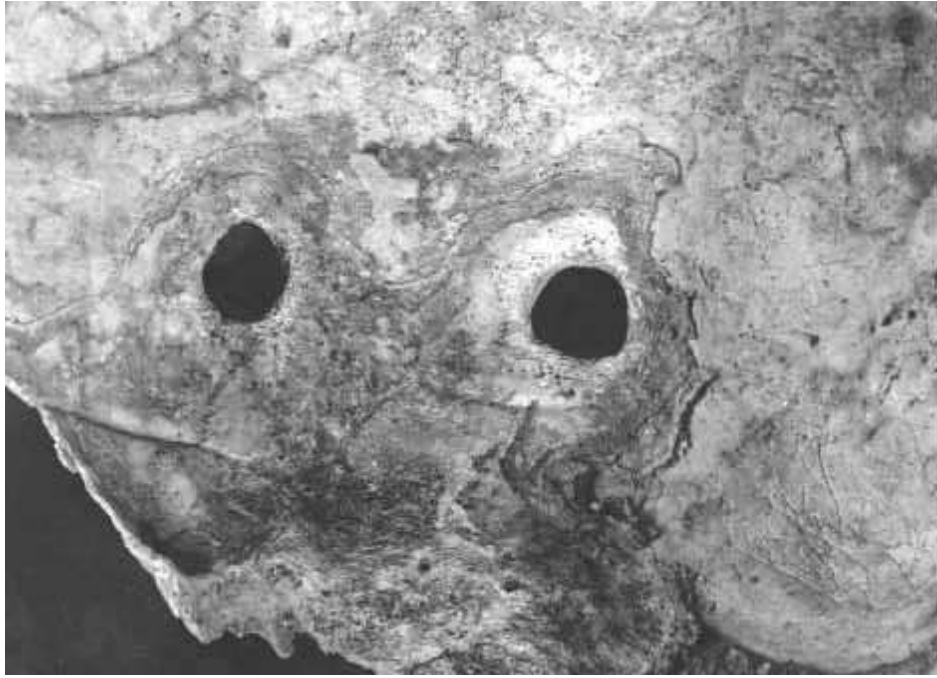


Plates 25 & 26

Context 1889:

Multiple Wormian bones, persistent metopic suture.





Plates 27 & 28 Context 1893: Trephine holes in right parietal bone of skull.

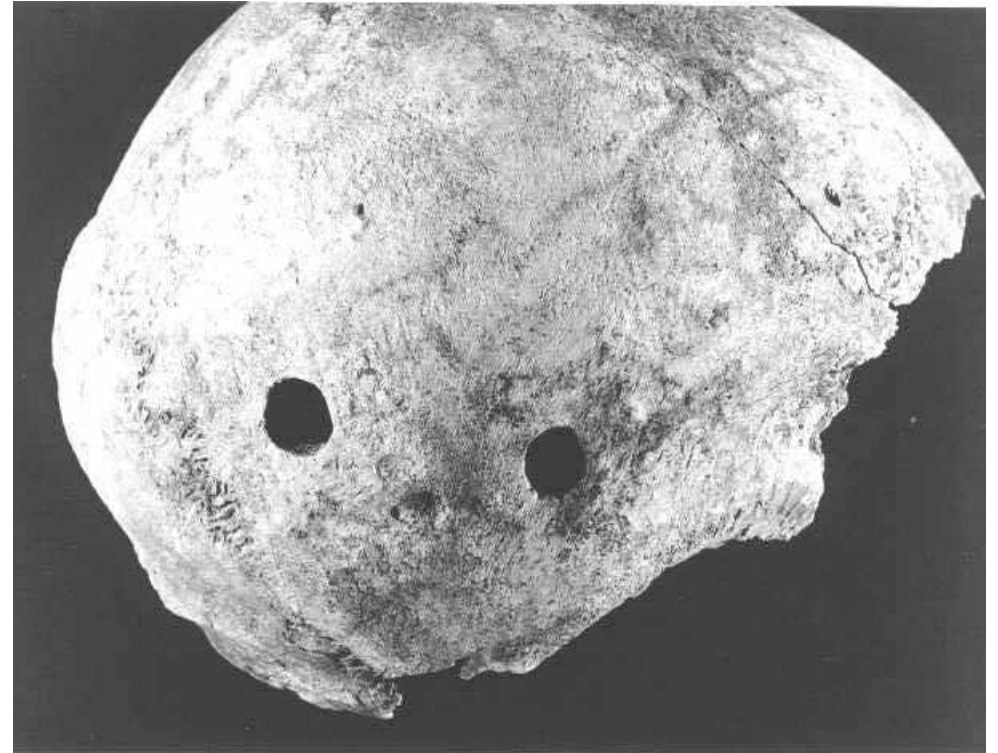




Plate 29 Context 1902 [left]: DISH-type lipping of the outer border of iliac crest anteriorly, also of the reflected head of rectus femoris.

Plate 30 Context 1916 [below]: Fusion of 2nd and 3rd thoracic vertebrae (congenital defect).



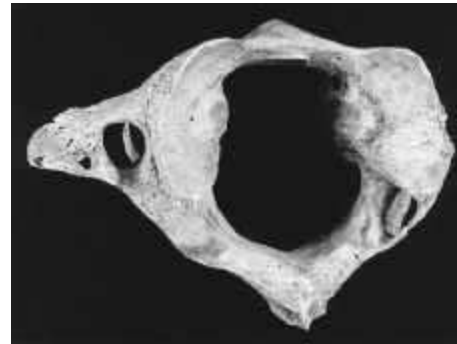


Plate 31 Context 2096 [far left]: Ridged public face.

Plate 32 Context 2179 [left] Fused supraspinous ligaments and pedicles but not interspinous ligaments.

Plate 33 Context 2185 [below left] : A bony over vertebral artery groove right side of photo.

Plate 34 [below right] Congenitally fused premolar teeth.



Detailed Report on Skeletal Remains (1984-87 Excavations)

CONTEXT 572.

General: Scanty remains; bone fragments are very fragile

Skull: 12 fragments of vault; the largest, 9.2 x 5.5cm, includes the fronto-parietal suture, fused and endosteally. Vault is up to 6mm thick. One 4.5cm piece of the left side of the body of the mandible with a first molar tooth in situ. Several smaller mandibular fragments.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

The 3rd. molars have fully formed crowns but no root development, unerupted.

The 2nd. molar root canals have not got adult closure at the apices yet, i.e. immature. The 1st. molars have very slight attrition, the 2nd. molars show none. No caries.

Upper limbs. One 14.5cm piece of humeral shaft plus several smaller long bone fragments.

Lower limbs. Both femora are represented, 26.5cm of the right shaft, 24cm of the left shaft. They are of slender build, 1.6cm minimum transverse diameter. The cortical surface is much eroded. There is an unfused epiphyseal line at the lower end of the right femur.

Conclusions:

Age: Approximately 16 years (3rd. molars unerupted, 2nd. molars have immature apices. Minimal dental attrition. Unfused femoral epiphysis).

Sex: Difficult to determine because of immaturity and absence of sexually determinative parts of the skeleton. Probably female because the femora are of such slender build.

No pathology noted.

CONTEXT 573

Skull. Most of the vault is intact, from nasion to foramen magnum; the temporal bones have both separated. There is endosteal fusion of alar sutures. ½there is some distorsion but the skull is moderately dolichocephalic. The frontal sinuses are small and the supraorbital ridges are shallow. Internally the anterior meningeal grooves are unusually deep and lead to two marked parasagittal depressions which would have been associated with particularly large arachnoid granulations and venous lacunae of the superior sagittal sinus. The features indicate advancing age. There are also two well marked parasagittal emissary vein foramina. The temporal bones are intact, their mastoid processes small. Both zygomata are present. Only fragments of the skull base. Maxillae and a hard palate with premolar, canine and incisor teeth in situ. Body of mandible bearing all teeth apart from 3rd. molars which were probably congenitally absent; the ascending mandibular rami are absent.

Dental formula:

c	
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Notes on teeth: Attrition of molars on the left side is very advanced, destroying all occlusal surfaces; attrition of I16 & I17 is oblique, the U7 is represented only by its roots. The I15 occlusal surface is also worn away. The U1 cutting edge is broken and worn. The lower incisors are all worn. Of the 3rd. molars only the U8 is present; it has a small central carious cavity. This degree of attrition indicates an age of 45+ years. There is severe periodontal recession throughout.

Vertebrae. A damaged atlas and an axis (with odontoid) are present, together with small fragments of 2 other cervical vertebrae.

Upper limbs. All the long bones are in a fragile condition. Base of left scapula. Fragments of both clavicles. Humeri - 20.5cm of the right, 15.7cm of the left shaft. One humeral head. The radius and ulna of both sides are represented by midshaft fragments.

Right Hand: Scaphoid, lunate and capitate carpal bones. The head of the first metacarpal has some arthritic lipping dorsally; the proximal phalanx of the thumb is intact. Three other metacarpal fragments.

Lower limbs: Femora - midshafts only, 20.5cm of the left, 10.5cm of the right. Tibiae - two midshaft fragments, 20cm and 17.5cm., part of the lower articular surface of the right tibia.

Feet: Right side-talus, navicular, medial and intermediate cuneiforms, upper surface of calcaneum, 1st., 2nd., and 3rd. metatarsals, proximal phalanx of 1st. toe, one other proximal phalanx.

Left side: Fragments of talus, calcaneum, intermediate cuneiform and two metatarsals.

Note: The relatively intact bones of the feet are from a person of small stature, presumably female. The in situ measurements of humerus (24cm) and tibia (40cm) would give two very different estimates of body height.

Conclusions: Age: More than 45 years (dental attrition, degree of development of arachnoid granulations indentations of the inner surface of the skull vault).

Sex: Female (dolichocephalic skull with small supraorbital ridges and mastoid processes; size of foot bones).

Pathology: Advanced abd asymmetrical dental attrition; periodontal recession. Osteoarthritis of the right thumb.

Height: This may be re-established by review of measurements taken of the skeleton before it was disturbed.

CONTEXT 576.

General. A fairly complete skeleton, relatively well preserved.

Skull. The skull vault, facial skeleton, temporal bones, upper and lower jaws are all only slightly damaged. Some of the base is missing. The skull is moderately brachiocephalic, its cephalic index is 81. Supraorbital ridges are moderately developed. The external occipital protuberance and muscular markings at the occiput are strong; the mastoid processes are unusually broad, particularly the left. The root of the zygoma extends strongly posteriorly above and behind the external auditory meatus. All the vault sutures are fused endosteally but not externally. The vault is robust, the parietal bone up to 7.5mm thick, the internal occipital protuberance is 16mm thick.

The mandible is robust, Cr H = 7cm., RB' = 4mm.

Dental formula:

AA	A		A
8 7 6 5 4 3 2 1			1 2 3 4 5 6 7 8
<hr/>			
8 7 6 5 4 3 2 1			1 2 3 4 5 6 7 8
	C		CCC
			AAA

Dental pathology: There was unusually severe periodontal disease. All the upper molar teeth have been lost, and on the right side there is a large abscess cavity in the ul7,ul8 region. The remaining lower molars are in a very bad condition as a result of cervical caries undermining the crowns, eventually cutting them off; only the roots of ur6 remain. The crowns of ur3 and lr5 are also destroyed. There were apical abscesses of lrs 5, 6,7, and ul4 & ur1. The absence of molar teeth resulted in over-use of remaining incisors and canines, these upper right teeth showing gross attrition on their posterior surfaces.

It is difficult to gauge age by the degree of molar attrition in this individual because occlusion here has evidently been absent for some years, hence attrition is not advanced in ll6 and ll7; the overall dental condition suggests an age of 35 - 40 years.

Vertebrae. The entire vertebral column is represented throughout by bodies but some vertebral arches are missing posteriorly; most spinous processes are lost.

Pelvis. The upper 3 sacral bodies are present, fused together. Both hip bones are present but the iliac crests, pubic bones and ischial tuberosities are damaged. The sciatic notches are narrow, no pre-auricular sulci; moderately large acetabulae - 5.1cm in vertical diameter.

Ribs. Both first ribs and second left rib are present. Nine other fragments from the left side, up to 9.5cm long. On the right side there are 14 fragments up to 6.5cm long.

Upper limbs. Both scapulae are represented by a glenoid fossa and base of spinous process. Both clavicles present, lateral ends missing, estimated as 14.5cm in length, moderately robust; well developed attachment sites for costo-clavicular ligaments.

Both humeri have damaged heads, are of robust build with strong muscle markings. The lower ends of both forearm bones are damaged on the right, the left radial head is missing.

The singular feature is in gross disease of the right elbow joint; there is marked overgrowth of the opposed articular surfaces of radius, ulna and humerus and great distortion of their contours. There has been a reactive hypertrophy of subchondral bone and eburnation of articulating surfaces. Movements would have been both restricted and painful; extension of the elbow beyond

about 100 degrees would have been impossible. This condition was probably due to an infective, suppurative but non-tuberculous arthritis. It may have been caused by a penetrating injury initially, even by a small object such as a thorn. Alternatively it may have been due to septicaemic spread from a septic focus elsewhere, the most obvious being gross dental disease. (Monarticular suppurative arthritis is an occasional complication of gonorrhoea).

Right hand: Capitate, 4 metacarpals, 3 proximal phalanges.

Left hand: Capitate, lunate, trapezium, trapezoid, 3 metacarpals, 1 proximal phalanx.

Lower limbs. Both femora are largely intact, length 45cm. This gives an estimated total (male) body height of 170cm. (5' 7"). The vertical diameter of the head, 4.6cm and of the neck, 3.5cm are strongly male features. Both patellae are intact. Left tibia is intact, upper end of right tibia is damaged. Robust build. Both fibulae are damaged.

The bones of both feet are exceptionally well preserved.

Right foot: All tarsal and metatarsal bones are present and undamaged; 5 proximal phalanges, 3 intermediate phalanges, 2 small terminal phalanges; 2 sesamoid bones from the 1st. metatarso-phalangeal joint.

Left foot: All tarsals and metatarsals, 5 proximal phalanges, 2 small intermediate phalanges and the terminal phalanx of the great toe.

Conclusions.

Age: 35-40 years (dental features)

Sex: Male (cranial features, pelvis, femoral measurements)

Height: 170cm (5' 7")

Pathology:

1) Gross periodontal disease, dental abscesses, cervical caries, loss of teeth.

2) Suppurative arthritis of the right elbow joint causing severe limitation of movement and virtual fixation at approximately a 90 degree of flexion. (Plates 1 and 2)

CONTEXT 587.

General: This is an incomplete excavation; only the upper part of the body is represented.

Skull. The vault is complete though posteriorly it is deformed by postmortem compression. No facial bones or skull base. Two small fragments of petrous temporal and of zygoma. The bones of the vault are of slender build, maximum thickness of the parietal is 6mm. and at the occipital protuberance, 9mm. The frontal bone is thin and the frontal sinuses are rudimentary. Overall dimensions are rather small (9.4cm between fronto-zygomatic sutures). ½all sutures are unfused. There are two maxillary fragments bearing incisor and canine teeth.

Mandible: The body is intact, the angles and ascending rami are missing. All erupted teeth are in situ, 2nd molars are loose, 3rd molars unerupted. The lower left canine is not completely erupted and its apex is not fully developed.

Dental formula:

area								missing							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
c															

Dental Notes: A loose deciduous upper molar (E) is present.

Development of tooth roots: The I17 and I7 are 2/3rds developed, I7 half, upper premolars 3/4. This degree of immaturity suggests an age of approximately 13 years.

Attrition: The cutting edges of the lower incisors are worn and the 1st lower molars are slightly pitted. No wear of the 2nd molars. There is a small carious pit on the buccal side of I7.

Post-cranial material: 18cm shaft of left humerus, 11.5cm of right humerus, both are of very slender build, 1.4cm maximum diameter at midshaft. The length (from just below the head to the upper part of the olecranon fossa) is about 2/3rds. average adult size. Two rib fragments.

Conclusions:

Age: Approximately 13 years (dental evidence, size of humerus)

Sex: Indeterminate as the individual is juvenile and the remains are incomplete.

Pathology: Early caries, persistent deciduous tooth.

CONTEXT 595.

General: All regions are well represented.

Skull. The vault is intact, all bones apart from the right temporal are articulating. Very strong supraorbital ridges and well developed mastoid processes. The overall size is large, brachiocephalic (cephalic index = 80). All sutures are fused endosteally, the interparietal and lambdoid sutures are also fused externally. The right temporal, parts of the right zygoma and the maxillae are loose. The hard palate is intact, most of the teeth are in situ.

Mandible: Intact, all teeth are in situ, very robust (H1 = 3.3cm., RB' = 3.1cm., Cr H = 7cm)

Dental formula:

$$\begin{array}{c} \text{A} \qquad \qquad \qquad \text{AA} \\ \hline \cancel{8} \cancel{7} 6 5 4 3 \cancel{2} 1 \quad 1 2 3 4 5 6 \cancel{7} 8 \\ \hline 8 7 6 5 4 3 2 1 \quad 1 2 3 4 5 6 7 \textcolor{green}{8} \end{array}$$

Attrition: The three surviving 1st molars have gross oblique attrition; the cutting edges of the lower incisors has been lost. All occlusal surfaces are very worn. The ur8 was barely erupted and only the proximal edge is worn. There is no lr8 though an adequate space for eruption exists; this is assumed to be congenitally absent. The remains of ur6 are loose roots only, with apical abscesses here and at the ur7 site where a root tip was also in situ. There is an apical cavity at the missing ul2 . There is considerable periodontal recession and root exposure. The teeth are generally large. The degree of attrition indicates an age of 35-40 years.

Vertebrae. Eroded bodies of most of the thoracic and lumbar vertebrae are present, their neural arches either damaged or missing. No cervical vertebrae.

Pelvis. Sacral remains are very fragmentary. Both hip bones are well represented; the sciatic notch is unusually wide for a male pelvis; the acetabular fossa is very large, 5.6cm in vertical height.

Ribs. Fragments only.

Upper limbs. Each scapula is represented by the glenoid and base of spinous process. Both clavicles are present, their ends missing; the costo-clavicular ligamentous impressions are strong.

Humerus, radius and ulna of each side are intact apart from damaged humeral heads. All are very robust, with powerful muscle markings, more evident on the left than on the right, particularly for the shoulder muscles (deltoid, pectoralis major, latissimus dorsi). No arthritis.

Hands: 11 carpals, 10 metacarpals, 15 phalanges. The left 5th metacarpal has been fractured at the junction of the distal third and proximal two thirds, having healed with shortening and some angulation: this probably resulted from a blow to the end of the bone (as in boxing) (Plate 3).

Lower limbs. Each femur, tibia, fibula and patella is present, the fibular heads missing. Powerfully built, strong muscle insertions. The combined length of femur and tibia, 85cm giving an estimated body stature of 174cm (5' 9").

Right foot: 6 tarsal bones (cuboid is missing), 5 metatarsals, 5 phalanges.

Left foot: 5 tarsal bones (intermediate and lateral cuneiforms are missing), 4 metatarsals (1st missing), 3 phalanges.

Conclusions:

Age: 35-40 years (dental attrition)

Sex: Male (cranial features, size of acetabulum, robust long bones)

Height: 174cm (5' 9")

Pathology: Dental abscesses. Congenitally absent lower wisdom tooth on one side.
Healed feature of the left 5th metacarpal bone.

General: Strong musculature, probably a manual worker, possibly left handed.

CONTEXT 615.

General: The grave had been cut into obliquely by a modern feature, removing the skull and right side of the body above the knee. The remaining bones are well preserved.

Vertebrae. The lower 4 lumbar vertebrae, bodies and neural arches are intact, of large size. The upper surface of L4 body has slight osteoarthritic lipping on the left side. Half of the 1st sacral vertebra is present.

Pelvis. Left hip bone only. The sciatic notch is narrow, the acetabulum large, 5.9cm in vertical height, all male features. There is slight arthritic lipping of the acetabulum and the sacro-iliac joint surface. There is considerable roughening at the site of attachment of the iliofemoral ligament.

Ribs. 13 mid-shaft fragments up to 12cm long and 2cm vertical height.

Upper limbs. Left arm - lower 2/3rds of humerus, intact radius and ulna. Slight arthritic lipping of superior radio-ulnar joint.

Hands - from the left side, 3 carpal bones (trapezium, trapezoid, lunate), 4 metacarpals, 4 phalanges.

From the right side, 1 carpal bone (scaphoid), 4 metacarpal fragments (the metacarpal of the thumb has distal arthritic lipping).

There are 9 phalanges which have not been allocated to right or left sides. Some intermediate phalanges show arthritic lipping distally.

Lower limbs. The left femur is intact; it has a well developed "third trochanter" and a strong insertion for gluteus maximus; of make type - vertical diameter of the head is 5.2cm, minimum vertical diameter of the neck is 3.7cm. The total length is 48cm; this gives an estimated stature of 176.9cm. (5' 10").

Lower 2/3rds of right femur. Both tibiae are intact. Both patellae show ossification of the quadriceps insertion. The left fibula is relatively intact, the right fibula is damaged.

Left foot. 7 tarsal bones, arthritic lipping on the dorsum of the navicular. Five metatarsals. The fifth metatarsal has a healed oblique fracture of the shaft - this is not typical of a 'march fracture' and was probably caused by direct violence, e.g a rock falling on the outer side of the foot (X-rayed and (photographed [Plate 4](#))). There are 12 phalanges (from both feet) including the proximal and terminal phalanges of the left and terminal phalanx of the right great toe.

Right foot. 6 tarsal bones (intermediate cuneiform is missing), 5 metatarsals.

Conclusions:

Age: Mature adult, probably over 30 years.

Sex: Male (Pelvic features, femora).

Stature: 177cm (5' 10").

Pathology: ½early osteoarthritis hip, sacro-iliac, radio-ulnar, metacarpo-phalangeal, left talo-navicular. Healed fracture 5th.metatarsal.

CONTEXT 700

General: A complete skeleton apart from the left foot which has been lost in a previous disturbance of the grave.

Skull. The vault is complete but individual bones have separated. Maximum thickness of the parietal bones is 7mm, of occipital protruberance 12mm. Supraorbitalridges are moderately developed, the frontal sinus on the left is much larger than on the right. Mastoid processes and occipital muscle markings are moderately well developed. There is partial fusion of the interparietal suture. The spheno-occipital synchondrosis is obliterated (over 25 years of age). Temporal and zygomatic bones are detached. The base of the skull and the facial bones are largely in fragments. The hard palate is intact.

Mandible: Very robust (H1 = 3.1cm., RB' = 3.5cm). The body is intact, the angles are damaged.

Dental formula:

$$\begin{array}{cccccccc|cccccccc}
 & A & & C & & & & & & & & & & & & AA & \\
 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & \\
 & & & & & & & & & & & & & & & & \\
 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & \neq & 8 & \\
 & & & & & & & & & & & & & & & C &
 \end{array}$$

Dental notes:Upper molars ll8, lr8, lr7 are loose, residual sockets damaged; the roots are crowded, deformed, partly fused and their apices clothed in amorphous calcarious material, hypercementosis. This condition is usually associated with periodontal disease and can be caused by excessive movements of teeth, if unapposed and elongated. Here it appears that periodontal recession and resorption of bone gave rise to excessive mobility. The ul6 consists of one broken root only, embedded in bone - probably traumatic rather than infective initially, e.g. cracking of a cut which exposed pulp. ll7 has a small occlusala cavity. The lr6 was evidently lost or extracted and the bone has healed over completely. The lower third molars were probably congenitally absent.

Dental attrition is only moderate and corresponds to an age of about 25 years.

Vertebrae. Seven cervical and 12 thoracic vertebrae are intact. All the lumbar vertebrae are broken. The sacrum is damaged; all the bodies are fused to one another (over 25 years old).

Pelvis. The right hip bone is intact apart from damaged pubis and ischium. The left hip bone is in fragments. The sciatic notch is narrow angled, male type. The acetabulum is large, vertical diameter 6.5cm. All muscle markings are very strong, particularly the hamstring attachments to the ischial tuberosity.

Ribs. A full series of ribs is represented bilaterally, individual fragments are large and robust, up to 18.5cm in length and 2cm in vertical height.

Upper limbs. Both scapulae are well represented, but in fragments. Clavicles - both are intact, robust, male type, 15.6cm long; the attachments for costo-clavicular and coraco-clavicular ligaments and pectoralis major muscle are slightly stronger on the left than on the right. Humeri - the right is intact, the left is damaged at both ends; very robust build, strong muscle markings bilaterally.

Forearm bones - intact on the right side; the left radial head and upper 3/4 of the left ulna are missing.

Right hand - 6 carpal bones (triquetral and pisiform missing), 3 metacarpals, 6 phalanges (1 proximal, 3 intermediate, 2 terminal).

Left hand - 4 carpal bones (lunate, hamate, trapezium, pisiform missing), 5 metacarpals, 7 phalanges (4 proximal, 2 intermediate, 1 distal).

Lower limbs. Femora - both are intact, very robust, vertical diameter of head 5.1cm., minimum vertical diameter of the neck 3.6cm. Length is 45.6cm; this gives an estimated body stature of 171.32cm (5' 7.5"). Muscle markings, especially that for gluteus maximus are very strong, those for gluteus medius and minimus also marked well; the popliteus groove on the lateral aspect of the lateral femoral condyle is deep. Patellae - the superficial fibres of the quadriceps insertion are ossified.

Tibiae - the upper shaft is damaged on the left side, the attachments for semimembranosus and soleus are strong.

Fibulae - the head of the left bone is missing, the right is intact.

Right foot - all tarsal and metatarsal bones are present and well preserved; 5 proximal phalanges, 4 small intermediate and distal phalanges.

The left foot is missing.

Conclusions:

Age: 25-30 years (dental attrition, speno-occipital fusion, sacral development).

Sex: Male (cranial, pevic and long bone features).

Stature: 171cm (5' 7.5") tall, of robust build, muscular, ? Celtic

Pathology: Hypercementosis of upper molar teeth, due mainly to periodontal disease.

CONTEXT 754.

General. The skull has been damaged by previous disturbance of the grave. Otherwise there is good regional representation of the body.

Skull. The vault is missing. The right temporal bone (without petrous or squamous parts) has a well developed mastoid process; the root of the zygoma extends strongly above the auditory meatus. ½right zygoma. Fragments of sphenoid, occipital, and maxilla. The hard palate is intact, with 8 teeth in situ. The mandible is broken behind 6,the left ascending ramus is separated. The mandible is strongly developed(H1 = 3.2cm., RB' = 3.5cm., Cr H = 8cm)

Dental formula:

area															
missing															
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
area missing															

Dental notes: The I1 root only is present, it appears to have fractured post mortem. The occlusal enamel has been lost from all teeth, including incisors and canines. Dentine is exposed throughout the occlusal surfaces of all molars. Oblique attrition, particularly marked in the 1st molars. Attrition ageing is approximately 40-45 years. There is very marked periodontal recession, calculus is abundant on the inner aspect of the lower teeth.

Hyoid bone - the undamaged body is present.

Vertebrae. All the vertebrae are represented, though most are damaged. There is diffuse arthritis of the spine, some lipping affects the bodies of most vertebrae, most marked in the lower cervical region, lumbar and lumbo-sacral joints.

Pelvis. Both hip bones are present, though damaged. The sciatic notch is of male type. There is gross spiky roughening of the outer lip of the iliac crest, anteriorly in the attachment of tensor fascia lata, also marked roughening of the anterior inferior iliac spine and above the acetabulum (the two heads of rectus femoris and the ilio-femoral ligament). These appear to reflect a generalized collagenous degenerative condition (see also spine and femur) (**Plates 5 and 6**). The ischial tuberosity has a nodular roughening at the attachment of the hamstring muscles. The sacro-iliac joint surface has arthritic changes.

Ribs. There are fragments from most ribs on both sides, up to 9cm in length. The costo-sternal cartilage of the 1st rib has ossified.

Upper limbs. There is no evidence of arthritis in the joint of the upper limb bones but muscle insertions have been affected by collagenous degeneration. Scapulae - each side is represented by the base of the spinous process and part of the glenoid surface.

Clavicles - one midshaft fragment from each side. Humeri - the upper ends of both bones are damaged. Forearm bones - some damage to the shafts, no unusual features.

Right hand - 5 carpal bones (lunate, triquetra, pisiform missing), 5 metacarpals, 7 phalanges (4 proximal, 2 intermediate, 1 distal).

Left hand - 7 carpal bones (pisiform missing), 4 metacarpals (two are damaged), 11 phalanges (5 proximal, 3 intermediate, 3 distal).

Lower limbs. Femora-relatively intact on the left, the head and condyles broken on the right. The linea aspera, gluteal tuberosity and greater trochanter are grossly elevated by partial ossification of the tendinous attachments (**Plates 5 and 6**). There is slight arthritic lipping of the femoral head. The femora are of male type, vertical diameter of the head is 5cm., minimum vertical diameter of the neck is 3.6cm. The length is 54.5cm., giving an estimated body stature of 171cm. (5' 7.5"). Both patellae show ossification of fibres in the quadriceps insertion.

Tibiae - both upper ends are damaged; the soleal line shows some tendon ossification. Fibulae - both shafts are intact, the extremities are damaged.

Right foot - 7 tarsal bones, 5 metatarsals, 5 proximal phalanges.

Left foot - 7 tarsal bones (calcaneus is damaged), 5 metatarsals, 1 proximal phalanx.

Conclusions.

Age: 40 -45 years (dental attrition, ossification of 1st costal cartilage, arthritis).

Sex: Male (Hip bone, femora)

Stature: 171cm (5' 7.5")

Pathology: Osteoarthritis of the spine

Collagenous degeneration of tendinous insertions, mostly affecting the lower limbs.

CONTEXT 757.

General.

Most of the vertebrae are missing. The post-cranial bones are very friable. The in situ photograph shows damage to the ends of most major long bones; the left forearm was strongly flexed at the elbow.

Skull. Well represented but fragmented. Generally well formed but small (10cm between the two zygomatico-frontal sutures); there are several immature features. The frontal sinuses are still developing and consequently there are no supraorbital ridges. All sutures are unfused externally but there is some endosteal fusion of the fronto-parietal sutures. Maximum thickness of the parietal bones is 5mm. The mastoid processes are small. Both petrous temporal bones are present. The sphenoccipital synchondrosis is unfused (less than 25 years of age). The sphenoid is fragmented. Both zygomatics are present. The hard palate is in two parts. The mandible is small, its articular head below the level of the coronoid process; the ascending ramus slopes backwards at an angle of about 120 degrees to the body of the bone. CrH = 6cm, RB' = 3cm.

Dental formula:

$$\begin{array}{c} \overline{8} 7 6 5 4 3 2 1 \mid 1 2 3 4 5 6 7 8 \\ 8 7 6 5 4 3 2 1 \mid 1 2 3 4 5 6 7 8 \end{array}$$

Dental notes:

The ur5 is incompletely erupted and there is a persistent deciduous urE overlying it. There is loss of bone over the lower 'wisdom teeth' but they are still well buried. The ur8 was probably closer to eruption, the roots are more than half developed. The incisors are worn but the molars show minimal attrition. There is moderate periodontal recession and some calculus formation. Enamel of incisors and molars is stained buccally - evidently a post mortem contamination.

Vertebrae. The atlas and axis are relatively intact. The apex of the odontoid process has not fused with the rest of the bone - this usually occurs at about 12 - 13 years of age. Fragments of 5 other cervical vertebrae. The plate-epiphyses of the vertebral bodies have not fused.

Pelvis. There are fragments of both hip bones, not complete enough for sexing. The periphery of the acetabulum was still cartilaginous. Iliac crests and ischial tuberosities are not represented.

Ribs. Numerous small fragments up to 5cm long and a few larger fragments up to 12cm long, from both sides.

Upper limbs. Base of the spine and part of the glenoid of the right scapula - the glenoid surface is immature, the epiphyseal plate of the glenoid is unfused.

Humeri - The heads, upper shafts and lower ends are missing, no epiphyseal surfaces; maximum width of midshaft is 2cm., the cortex is thin, about 2mm; the estimated length is approximately 3/4 of average adult size. Broken, slender shafts of both ulnars and left radius. The upper end of the right ulna has an unfused surface of an epiphyseal plate. There are no bones of the hands.

Lower Limbs. Femora - the lower metaphysis of the right femur is damaged and the (unfused) condyles are broken; the upper epiphyseal surface plus detached epiphysis of the head are present; the epiphyseal surface of the lesser trochanter is visible. On the left side the upper and lower metaphyses are broken, the head and (separate) neck are represented. A rough estimate of the femoral length on the rightside can be made in two ways: a) by measuring from the head to the lower end of the linea aspera

and comparing this length with a graph of a similar portion of a number of intact femura, b) by measurements taken from the photograph of the bone in the grave. Measurement a) = 154.8cm (5' 1"), measurement b) = 159.2cm (5' 2.5").

Tibiae - upper 3/4 of both shafts (right 25cm., left 24cm) from unfused upper epiphyseal plates; broken fragments of lower ends. Midshafts of both fibulae (right 21cm., left 15.5cm).

Right foot - fragments of calcaneum (the posterior epiphyseal plate is unfused), talus, navicular, cuboid, bases of 3 metatarsals (3rd., 4th and 5th).

Left foot - fragments of calcaneum, 4 metatarsals (5th missing; the 1st has an unfused basal epiphysis present).

Conclusions.

Age: 14-16 years (dental development, unfused epiphyses, spheno-occipital synchondrosis unfused, unfused apex of odontoid process, shape of mandible, size of long bones).

Sex: Indefinite - because of immaturity, and pelvic evidence destroyed. However, the length of long bones, as compared with dental development suggests that this is quite a small person for the degree of maturity: thus more likely to be female.

Height: Approximately 154-159cm (5' 1" - 5' 2. 5"). It would be as well to compare this with records of body height in situ.

CONTEXT 773.

General: Incomplete due to disturbance of the grave. Most of the head and neck, the lower legs, feet and hands are missing.

Skull. Only the basi-occiput has survived; there is an unfused spheno-occipital synchondrosis (age is less than 25 years).

Vertebrae. No cervical vertebrae; only fragments of thoracic region (one body, neural arch fragments). The bodies of 5 lumbar vertebrae, these have unfused epiphyseal plates. The first piece of the sacrum is present, the inferior vertebral surface is unfused anteriorly, fused posteriorly; of male type, width of vertebral articulation is 4.7cm., overall width is 10.8cm.

Pelvis. Both hip bones are well represented, the left more complete than the right. The sciatic notch is of male type. The acetabulum is large, 5.8cm in vertical diameter. The secondary epiphysis of the ischial tuberosity is unfused. No pre-auricular sulcus.

Thorax. The 2nd piece of the sternum is present, unfused superiorly and inferiorly. There are a few short rib fragments from both sides, up to 7.5cm long. The articular surfaces of the heads are immature, their epiphyseal plates unfused.

Upper limbs. All cortical surfaces are eroded, their muscular markings therefore unclear. Humeri - on the right side the head and surgical neck are missing, 25cm of shaft and lower articular surface present; the capitulum and part of the trochlea have fused (16-17 years). Of the left humerus only a 9cm fragment of the lower shaft remains.

Forearm bones - fragments of right radius (20.5cm) and left radius (17cm) include an unfused epiphyseal plate of the head; the lower ends are missing. The right ulna (23cm) is more complete than the left (13cm), no epiphyseal surfaces are present.

There are no remains of the hands.

Lower limbs. Left femur-epiphysis of the head and upper half of the shaft.

Right femur - the shaft, upper and lower epiphyses are present and intact. All epiphyses (head, both trochanters, condyles) are unfused. The epiphysis of the head is fully formed, well lipped marginally and ready to fuse (approximately 17 years). Length including epiphyses is 47.5cm; this gives an estimated body stature of 175.7cm (5' 9"); smooth cortical surface, muscular markings not well developed. Of robust male type, vertical diameter of the epiphysis of the head is 5cm., that of the neck (minimal) is 3.2cm.

Right tibia - intact upper epiphyseal plate and upper half of shaft.

Right fibula -10cm fragment of shaft.

Conclusions.

Age: 16-17 years.

Sex: Male (Pelvic characteristics, femoral measurements).

Stature: 175.7cm (5' 9").

CONTEXT 783.

General: Most of the skeleton has survived. The state of preservation of the lower half of the body is better than for the upper part.

Skull. Most of the vault is represented; though damaged it has been partially reconstructed; it is disproportionately wide, markedly brachiocephalic. Maximum bi-parietal diameter is considerable (17.6cm) and the distance between the two zygomatico-frontal sutures is 11cm. The glabella is prominent, frontal sinuses well developed, supraorbital ridges moderate in size. The parietal bones are up to 7mm thick. None of the sutures are fused. The occipital protuberance and the muscle markings here are not particularly strong. Both temporal bones are intact; the mastoid processes are of moderate size; the root of the zygoma extends above the external auditory meatus. The basi-occiput and basi-sphenoid are fused together (these fuse at 17-25 years). The alveolar region of the maxillae is intact, the palate high.

The mandible is unusual - the chin is very protruberant, spade shaped in profile. The ascending rami slope back at an angle of 130 degrees. All the lower teeth and most of the upper teeth are in situ.

Dental formula:

$$\begin{array}{c} 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1\ 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8 \\ \hline 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1\ 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8 \end{array}$$

Dental notes: Only the upper 'wisdom teeth' have erupted though there is adequate space for eruption in the mandible, the lower ones are presumably congenitally absent. Periodontal recession is marked. Molar attrition, generally slight, is most marked in the ul6 and indicates an age of approximately 25 years.

Vertebrae. The cervical and thoracic vertebrae are poorly preserved. Fragments of atlas, axis and 3 other cervical vertebrae. Most of the thoracic spine is represented though only a few vertebral bodies are intact. The lumbar spine is well preserved. The upper and lower surfaces of the vertebral bodies are slightly irregular, ossification of epiphyseal plates is not quite complete. Sacrum: There is no fusion between S2 and 3 bodies; there is complete fusion of the lateral masses. (Approximately 25 years). Of male type.

Pelvis. Large proportioned, male type pelvic bones, narrow sciatic notch, narrow sub-pubic angle. The acetabular fossa is 5.9cm in vertical diameter. There are secondary centres of ossification for the ischio-pubic rami and these have not completely fused. The pubic symphyseal surfaces have deep irregular transverse grooves extending up on to the pubic crest, consistent with unfused secondary epiphyseal surfaces and more marked and extensive than the roughening usually seen at this age.

Ribs. Numerous large rib fragments from both sides, up to 20.5cm on the right and 18.5cm on the left. Both 1st ribs are present. Cortical surfaces are porous and fragile.

Upper limbs. Each scapula is represented by the base of the spinous process and lateral border. The clavicles are present but their surfaces are eroded and their ends missing. The humeri are long (approximately 34.5cm), their heads damaged and surfaces very eroded. The radius and ulna of each side are relatively intact, though with some damage to their extremities and with porous surfaces.

Right hand - only 2 damaged carpal bones (lunate, hamate) and some small metacarpal fragments.

Left hand - 6 carpal bones (trapezium and pisiform missing), 1st., 2nd and 4th metacarpals, 4 proximal phalanges, 4 intermediate phalanges.

The epiphyses of all long bones are fused.

Lower limbs. All the major long bones are intact and well preserved; their epiphyses are fused.

The femora are of large build, 50.7cm long, giving an estimated body stature of 183cm (6 feet). The femoral heads are large, 5.2cm in vertical diameter, the neck stout. In general the muscular insertions are not pronounced but the greater trochanter is large and the attachments of gluteus minimus is unusually strong. In the intercondylar area the anterolateral notch (occupied by the anterior cruciate ligament in extension of the knee joint) is particularly well marked and narrow.

The femoral and tibial attachments of the cruciate ligaments are well marked. The tibiae are robust, the attachment of the iliotibial tract particularly strong.

The right fibula is well preserved, the left slightly damaged.

The patellae are intact, no ossification of the quadriceps fibres.

Feet - All the tarsal bones of both feet are present and well preserved. They are very robust; plantar ligamentous and tendon insertions are strong. On the left calcaneus the attachment of the abductor hallucis is ossified to form a 'calcaneal spur'. Metatarsals - 5th right, 4th and 5th left. One subterminal phalanx.

Conclusions.

Age: 20-24 years (Dental evidence, incomplete fusion of pelvic epiphyses, the degree of sacral fusion).

Sex: Male (Pelvic features, robust long bones).

Stature: 183cm (6 ft) tall, possibly of rather unusual appearance with a very broad head and protruberant jaw. The ascending mandibular rami are very sloping for this age.

Occupation: A number of factors suggest that he did a lot of standing and walking (strong iliotibial tract, gluteus minimus, extensive notch for anterior cruciate ligament of knee, strong plantar ligaments and insertions of tendons (e.g. tibialis anterior) in the feet, a calcaneal spur. There is no evidence that he carried heavy weights or did strong manual work. Tall, of rather imposing appearance - he may have had sentry duties, custodial or door-keeping type of work.

CONTEXT 801.

General: Partial remains from skull and left arm.

Skull. Most of the vault is present, though damaged in the fronto-parietal region and slightly distorted by compression. The skull is probably less than full adult size, the bones are thin, the sutures unfused. The supraorbital regions of the frontal bone are damaged but the right frontal sinus is well developed. The petrous temporal bones are of small size, the (damaged) mastoid processes were probably not well developed, the root of the zygoma does not extend strongly posteriorly. There are fragments of greater wings and body of sphenoid; the spheno-occipital synchondrosis is unfused.

There is one fragment of left side of the hard palate, posterior region of the alveolus with a ur7 in situ and the crown of an unerupted ur8 visible. The ur5 & ur6 are loose. Slight attrition of ur6 and none of ur7.

Ribs. One 8.2cm slender fragment.

Left upper limb. Humerus - slender shaft fragment 18.8cm long with a minimum diameter of 1.5cm; the head, neck and lower end are missing; the surface is porous.

There is a well preserved 2nd metacarpal with an unfused epiphyseal plate distally. One other damaged metacarpal (? 3rd) which appears to have a fused head and may be an accidental inclusion from another body.

Conclusions:

Age: Approximately 15 years (dental evidence, unfused metacarpal epiphysis, unfused spheno-occipital synchondrosis).

Sex: Uncertain because of immaturity. The skull vault dimensions, the temporal bone and small humerus suggest female sex.

CONTEXT 803

General: Most of the body is represented, the vertebral column is poorly preserved, many of the long bones are damaged.

Skull. Most of the vault is present, but broken and separated at sutures. The bone is thin, maximum thickness of parietal bones is 4mm. No fusion of sutures. No obvious external occipital protuberance, poor muscle markings. The frontal bone is broken but the right frontal sinus is moderately developed, the left sinus is small, supraorbital regions are damaged. Both temporal bones are present, their mastoid processes fairly well developed, the root of the zygomatic process extends above the auditory meatus. Body and the left greater wing of the sphenoid; the spheno-occipital synchondrosis is unfused. The hard palate is present, teeth in situ, but broken through the sockets of unerupted wisdom teeth.

The mandible is broken in the midline, some of this area is missing. It is small and immature, the ascending ramus slopes back at an angle of 130 degrees, the coronoid process is higher than the condyle. CrH = 5.2cm., RB' = 2.8cm.

Dental formula:

$$\begin{array}{c} 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \mid 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \mid 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \end{array}$$

Notes on the 'wisdom teeth': lr 8 crown is visible, obliquely placed; ll 8 is well buried but visible through a gap in the overlying bone. The lr 8 is loose - the crown is developed but the cusps are ill-formed and apart from a 1mm rim of adjacent dentine, there is no root development.

Attrition: Slight in lower 1st molars, less in upper 1st molars, nil in 2nd molars (attrition age approximately 16-17 years old).

Vertebrae. The atlas is almost intact, the odontoid process of the axis is fully developed. Two other bodies of cervical vertebrae are present, their secondary epiphyseal plates unfused. No thoracic vertebrae; bodies of 4 lumbar vertebrae and some neural arch fragments.

Pelvis. Two large pieces of ilium, each with an irregular acetabular area, not yet having fused with either ischium or pubis. The sciatic notch is damaged, its angle indeterminate. No preauricular salcus. There are 2 ischial fragments, the secondary ischial epiphysis for the tuberosity unfused, perhaps undeveloped.

Ribs. 45 slender fragments up to 9cm long, with a maximum vertical height of only 9mm.

Upper limbs. One small fragment of the left scapula, with the base of the spinous process. Humeri - Shafts only, upper and lower ends missing, left 22.5cm., right 20.5cm; slender minimum thickness of shaft is 1.4cm. Radius and ulna of both sides are present, their lower 1/4 - 1/3rd missing, upper unfused epiphyseal plates, epiphyses missing.

Right hand - partial remains of 4 metacarpals and 5 subterminal phalanges; epiphyseal plates, where present, are unfused.

Left hand - 1 metacarpal fragment, 3 phalanges.

Lower limbs. The femora are relatively intact but their greater trochanters are missing. The lesser trochanter is unfused; the metaphyseal epiphyses are present but unfused - reconstructed with epiphyses in situ the total length is 38.5cm., which gives an estimated body stature of 154.8cm. (5' 1") for a male, or 149.2cm (4' 11½) for a female. The shafts are immature, slender with a minimum transverse diameter of 2.2cm. The epiphysis of the head is 4cm in coronal diameter. The neck is long and slender, approximately 2.8cm vertically (it somewhat eroded). Considering that this is an immature bone, the linea aspera and gluteal tuberosity are well developed.

Left patella - diminutive, 3.3cm diameter.

The left tibia is more intact than the right, the shaft being 22.5cm with unfused epiphyseal surfaces. The right tibia is in several fragments. 20.5cm of right fibula, 15.8cm of left fibula.

Right foot - calcaneum (unfused secondary posterior epiphysis), talus, 3 damaged cuneiforms and 1 damaged cuboid. 5 metatarsals (the basal epiphysis of the 1st is present), 3 subterminal phalanges.

Left foot - talus, navicular, damaged cuboid, medial cuneiform, fragment of calcaneum. 5 metatarsals, including basal epiphysis of 1st. 3 subterminal and 1 terminal phalanges. All epiphyses are unfused in both feet.

Conclusions.

Age: Approximately 15 years (dental evidence, unfused acetabulum and all epiphyses, dimensions of the femora).

Sex: Difficult to determine because of immaturity and damage to pelvis and skull. Pelvic and cranial evidence, plus dimensions of femora are, on balance, in favour of male sex, noting also the height/age figures.

Stature: 154cm (5' 1") tall, assuming male sex.

CONTEXT 812

General: Partial remains, pelvic and lower limb fragments only.

Pelvis. A fragment of right ilium including part of the sacro-iliac joint surface and an unfused acetabulum. The sciatic notch area is damaged. No preauricular sulcus.

Right femur. Relatively intact between epiphyseal surfaces; the trochanteric region is damaged and the cortex eroded. A damaged terminal epiphysis is present. Total length estimated at 38.5cm. Minimum transverse diameter of the shaft is 2.2cm.

Tibiae. 19cm of right tibial shaft, smaller fragments of left tibia. The cortical surfaces are very eroded.

Conclusions.

Age: 15-16 years (unfused epiphyses & acetabulum, femoral dimensions).

Sex: Indeterminate due to insufficient evidence.

Height: Approximately 154cm (5' 1").

Note: There are strong similarities between this skeleton and that in Context 803.

CONTEXT 957

General: This mostly represents the incomplete remains of one skeleton but there are 2 additional femoral shafts from another body - it is possible that some fragments attributed to the first body may come from the latter; see also the note on Context 955 at the end of this account.

Skull. Vault bones only. Left parietal and left side of the frontal bone, the fronto-parietal suture show endosteal fusion, generally thin, the parietal being up to 5mm only in thickness. There is another piece of frontal bone which is more robust, up to 8mm thick at the fronto-parietal suture with a blackened external appearance; also a piece of occipital including the confluence of the sinuses with a similar mottled appearance - these may come from the second body.

Vertebrae. Intact atlas and axis; very robust, roughening of the odontoid at the site of attachment of ligaments. Fragments of 4 thoracic and 1 lumbar vertebrae.

Ribs. Right 1st rib, robust. 3 other rib fragments, including one piece 11cm long.

Upper limbs. Most of the left clavicle, midshaft only of right; large size, robust build, 14.5cm long; strong markings for costo-clavicular and coraco-clavicular ligaments; osteoarthritic lipping of the sterno-clavicular and acromio-clavicular joint surfaces. Left scapula-glenoid, base of spinous and coracoid processes, lateral border; osteoarthritic lipping of glenoid. A small fragment of the right scapula.

Right humerus - head is detached and upper metaphysis is missing. The head is large, the bone robust, muscle markings strong (particularly pectoralis major, teres major, deltoid). Arthritic lipping of the head.

Forearm bones - less well preserved as compared with humerus and metacarpals, and may come from the second body; cortical surfaces are porous.

Left ulna - complete apart from lower end, the upper and lower ends of the right ulna are missing. The two radii are represented by shafts only.

Hands - 3rd and 4th left metacarpals only.

Lower limbs. Left hip bone - a fragment of ilium which includes part of a capacious acetabulum. Right hip bone - a fragment of ischial atuberosity and the lower part of the acetabulum.

Femora: two pairs are present -

1) One pair relatively well preserved, heads and condyles present (greater trochanter and neck are damaged on the right). Robust, vertical diameter of the head 4.9cm., of neck 3.5cm., length 47.3cm. Estimated body height from this is 175.2cm (5' 9"). Strong linea aspera, no arthritis.

2) One pair of femoral shafts, 33cm long, heads and condyles missing, less well preserved, probably buried longer, surfaces more porous, slight black mottling. Moderately robust.

Left tibia - upper end is missing. There is a curious exostosis at the lower end laterally, immediately above the inferior tibio-fibular joint; it has an irregular outer surface which articulates with a similar exostosis from the fibula. This represents a pseudarthrosis, or false joint. It was evidently caused by a dislocation of the ankle joint which caused a tearing of the inferior tibio-fibular ligament, resulting in a separation (diastasis) of the two bones (and probably a fracture higher up in the fibular shaft - now missing); there would also be bleeding and the formation of a haematoma which subsequently became ossified, within which a new inferior tibio-fibular joint formed (Plates 8 and 9). There would have been residual instability of the ankle joint because of increased separation of the two malleoli.

Midshaft of right tibia. Lower 10cm only of left fibula (as described above).

Note. There are 5 very fragmentary, porous, black-mottled long bone fragments, mostly of tibial shaft, also 1 piece of femoral neck. It is assumed that these are from the second body.

Left foot - 1st, 2nd, 3rd and 4th metatarsals, all intact.

Conclusions.

Two bodies are represented:

- 1) Relatively well preserved and regionally representative.
- 2) Poorly preserved, probably an earlier burial, only some skull fragments, two femoral shafts, small tibial shaft fragments.

It is assumed that (on the basis of regional representation), the four forearm bones belong to the main burial, but they are not well preserved.

(1)

Age: Mature adult, probably 40 + years (osteoarthritic).

Sex: Male (robust clavicle, femoral features).

Height: 175cm (5' 9").

Pathology: a) Pseudoarthrosis above inferior tibio-fibular joint following a dislocation tearing of inferior tibio-fibular ligament, and diastasis of the two bones. There would be permanent weakness of the ankle joint, with instability and a limp.

b) Diffuse osteoarthritis (cervical spine, clavicle, shoulder)

(2)

Age: Adult.

Sex: Male (robust femoral shafts, and skull bones)

Note: The skeleton in Context 955 consists mosly of large animal bones but there are 4 fragments of parietal bone, one of which articulates with the frontal bone of Context 957 skeleton; there is also black mottling and evidently the Context 955 fragments belong to the second individual in Context 957.

CONTEXT 966 & 971

General. There is archaeological and skeletal evidence that these come mostly from individuals, partly displaced due to the collapse of the coffin. In particular, the two femora, one from each context, are a pair. The remains will be described as one skeleton, the context being indicated where necessary. In general, Context 966 bones are better preserved than the 971. Note also that the spine, and possibly other bones from 971 lay between Contexts 967 and 972 and that there was almost certainly some disturbance when the latter two graves were dug.

Skull (966). 3 small and slender fragments of skull vault, occipitaland frontal.

Mandible - relatively complete apart from damage to the right coronoid process and condyle. Robust, RB' = 3.1cm., CrH = 6.4cm.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Dental notes: Attrition is severe, and oblique in ll 6 , lr 6 & lr 7. Wear is more severe on the left than on the right side. There is advanced attrition of the lr 8. There is also wear on the buccal side of the exposed roots of lr 3 , lr 5, lr 6. Periodontal recession is severe. Age as judged by attrition is 45 + years.

(Note: included here are two upper premolars and in amature lower molar from an adolescent; they have no attrition).

Vertebrae. (971). The bodies of the lower 2 thoracic vertebrae are fused together by an ossification of the anterior longitudinal ligament only, no lateral or posterior arthritic changes; this is of the nature of the condition 'bamboo spine' (spondylitis deformans) (Plates 9 and 10). There are 9 other fragments of thoracic vertebral bodies. There are 10 thoracic and 5 lumbar neural arch fragments. There are also 4 vertebral fragments from Context 966.

Pelvis. (966). Two fragments, from the same Context, each of which includes the left greater sciatic notch and part of the left sacro-iliac joint; one includes part of the left acetabulum. Evidently these represent different bodies. In each the notch is too damaged to assist in sexing; neither has a pre-auricular sulcus.

Ribs. 6 fragments up to 14cm long.

Upper limbs. (966). Left humerus - most of the shaft and lower end, the head is detached; robust, strong muscle markings; the minimum transverse diameter of the shaft is 2cm. There is a 20cm fragment of another humeral shaft, very eroded, probably right side, slender, thin cortex, minimum transverse diameter is 1.6cm., probably from an adolescent.

Left ulna, lower end is missing, robust. Lower end of right ulna, robust.

Hands. (966) - left lunate, 1 damaged proximal phalanx

Hands. (971) - 3 damaged metacarpals, probably 2nd, 3rd and 4th of right hand.

Lower limbs. The right femur (966) is almost complete, the medial condyle is missing. The left femur (971) has much of the upper end missing. The two bones form a pair, having the same diameters and a powerfully built linea aspera. The gluteal insertions into the right greater trochanter have ossification extending into their tendons, evidence of collagenous degeneration

(cf, spine). The bones are of male type; the head is 5cm in vertical diameter. Overall length is 48.2cm: from this the body stature is estimated at 177.3cm (5' 10").

There are 2 right-sided tibial shafts, both found in Context 971. One has an intact lower end and a detached upper plateau. The other is more slender, more porous, both ends missing, adult proportions, soleal line well marked, not likely to be from an adolescent. Note - there is no tibia from Context 966, so one of these, probably the more complete one may come from that body; the other is more difficult to account for, possibly an accidental inclusion during excavation, but there is no right tibia attributed to the adjacent Context 972, and it may belong there. One left fibula (of complete length, very fragile), no context given. Also upper left shafts of right and left fibulae (966); presumably the other is from one of the adjacent two contexts. Feet - right 1st and 2nd metatarsals, upper surface of right calcaneum (966).

Conclusions.

1) Most of the remains of Contexts 966 and 971 come from one body.

Sex: Male (femoral dimensions, mandible).

Age: 45 + years (dental attrition).

Height: 177cm (5' 10")

Pathology:

a) Spondylitis deformans - ossification of the anterior longitudinal spinal ligament, causing fusion of vertebral bodies, 'bamboo spine'.

b) Evidence of a more diffuse collagenous degenerative process noted in the ossification of tendon insertions.

2) Adolescent remains - 3 teeth, a humeral shaft.

3)Adult right tibia, possibly an accidental inclusion from Context 972.Am additional left fibula and a pelvic fragment may come also from this adjacent context.

CONTEXT 967

General: Well preserved, good regional representation.

Skull. The vault is all present, though in large pieces. Fronto-parietal and inter-parietal sutures are fused. Large mastoid processes and prominent supraorbital ridges. Very strong nuchal muscle markings and external occipital protuberance. Moderately robust skull, the parietal bones are up to 7mm thick. Temporal bones are intact; most of the occipital bone and parts of the sphenoid are present. The maxillae are mostly intact, with teeth in situ.

Mandible - robust H1 = 3.2cm., RB' = 2.9cm., CrH=7cm.

Dental formula:

Vertebrae. The spine is well represented regionally, though most of the vertebral bodies are missing. Apart of the arch of the atlas, odontoid of the axis, bodies of only 2 cervical vertebrae are present with some arthritic lipping. Neural arches of 12 thoracic and 5 lumbar vertebrae. The spine is robust throughout; there is some ossification in ligamenta flava.

Pelvis. The sacrum is almost complete, of male type. The sacro-iliac joint surface extends almost through 3 vertebral levels. The bodies of S1 and S2 vertebrae are incompletely fused.

The hip bones are broken but most of their features are present. The sciatic notch has an acute angle; the acetabulum is large; the ischial tuberosity bears very strong muscle markings; the pubic symphyseal surface indicates an age of 30 + years.

Ribs. Remains of 14 ribs, mostly from the right side, robust.

Upper limbs. Two clavicles are present, their ends damaged; moderately robust, with well developed muscle and ligamentous markings.

Both scapulae are present, the right better preserved than the left. The glenoid cavity is large.

The humeri are relatively intact; muscle insertions near the bicipital groove are more marked on the right; the subscapularis insertion into the lesser tuberosity on the left side is pronounced.

The lower ends of the right forearm bones are missing, present on the left; all muscle markings are strong.

Left hand - 6 carpal bones (trapezium and pisiform missing), 5 metacarpals.

Right hand - No carpal bones, 4 metacarpals.

In addition there are (unsided), 7 proximal phalanges, 6 intermediate phalanges, 2 terminal phalanges.

Lower limbs. Femora - both are relatively complete, robust. Vertical diameter of the head is 4.9cm. The length, 44cm, gives an estimated body stature of 167.6cm (5' 6"). There is a very strong linea aspera, insertion of gluteus maximus and medial head of gastrocnemius.

Left tibia is intact, the right tibia is damaged. Muscle markings on the fibulae are very strong. The patellae are not particularly robust.

Right foot - all the tarsal bones are well preserved, 5 metatarsals are represented, mostly intact, 3 proximal phalanges.

Left foot - all tarsal and metatarsal bones are intact; 3 proximal phalanges. The metatarsals are all robust, the insertion of peroneus brevis into the 5th metatarsal base is marked.

Conclusions.

Sex: Male (skull & pelvic features, femora).

Age: Approximately 35 years (dental evidence, pubic symphysis).

Height: 167cm (5' 6").

Pathology: Dental apical abscess, periodontal recession. Early cervical spondylitis.

Occupation: He was probably a manual labourer, accustomed to stooping and lifting.

CONTEXT 972

General. There is adequate regional representation but most of the bones are broken and their surfaces porous.

Skull. Most of the vault is present. The sutures are mostly fused endosteally, the interparietal externally also. The frontal bone is broad, 11.5cm between fronto-zygomatic sutures. Frontal sinuses are large; occipital muscular markings and mastoid processes are prominent. The bones are robust, the parietal 7mm thick, the occipital protuberance 1.6mm. Both temporal

bones, the greater wings of the sphenoid and zygomata are present and most of the maxillae, including the hard palate but there are no teeth in situ, only 7 very shallow sockets - most of the alveolus has been resorbed.

Mandible - almost edentulous, all molar teeth having been lost, only the root of 4 is in situ. The ascending ramus slopes posteriorly at an angle of 130 degrees, the coronoid process is higher than the condyles. The mandible is in a relatively poor state of preservation, its surface porous.

Dental formula:

$$\begin{array}{cccccccc|cccccccc} & & & & & & & A & & & & & & & & & A & & & & & & & A \\ \hline \cancel{8} & \cancel{7} & \cancel{6} & \cancel{5} & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & \cancel{5} & \cancel{6} & 7 & 8 & & & & & & & & \\ \hline 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & \cancel{5} & \cancel{6} & \cancel{7} & \cancel{8} & & & & & & & & \\ & & & & & & & & & & & & & & & & C & & & & & & & \end{array}$$

Dental Notes - The ur 8 has a very shallow socket, there is an abscess between its roots, almost all the enamel has been worn from its occlusal surface. Apart from ll3 and lr 3, only the roots remain of lower teeth. The ll 3 has gross cervical caries. There is severe periodontal disease throughout, exposing the roots on their buccal surfaces. Attrition age is 45 + years.

Vertebrae. There is gross osteoarthritis of the cervical vertebrae (cervical spondylitis) with osteophytes, narrowing disc spaces and fusion the vertebrae C6 & 7 (**Plate 11**). The atlas and axis are relatively unaffected though there is some lipping around the odontoid.

Most of the thoracic and lumbar vertebrae are partially represented, though rarely intact and less well preserved than in the cervical region. There is osteoarthritis of the lower thoracic and the lumbar vertebrae with osteophytes anteriorly; no fusion of vertebrae is visible now, but most of the lumbar vertebrae are fragmented.

Pelvis. The sacrum and hip bones are broken. The sciatic notch is of an acute angle; the acetabulum is of moderate capacity, 5.3cm in its vertical diameter.

Sternum. One small fragment which shows ossification in the attached rib cartilage, as seen in advancing age.

Ribs. 17 ribs are represented (6 left, 11 right). The costal cartilage of the 1st rib is calcified.

Upper limbs. Both clavicles are present, slender with porous surfaces and damaged ends. Both scapulae are represented by the base of spinous processes. All the long bones are damaged and in poor condition. Humeri - upper end missing on right, both ends lost on left, moderately robust build.

Forearm bones of both sides present but fragmented.

Right hand - fragments of 5 carpal bones, 4 metacarpals, 4 phalanges.

Left hand - 1 carpal (lunate) fragments only.

Lower limbs. All the long bones are poorly preserved. The right femur is broken through the trochanters and above the condyles; the left femur was reconstructed: the head is large, 4.8cm vertical diameter, the neck 3.5cm minimum vertical diameter; the length is 45.5cm, giving an estimated total body stature of 171cm (5' 7.5"). The left femur has a supracondylar spur posteromedially at the lower insertion of adductor magnus, bounding the opening through which the femoral artery passed. It is not possible to determine whether this was present bilaterally.

The left tibia is intact, the right tibia is missing (possibly included in Context 971). Both patellae are present.

Right foot - all tarsal bones present, though damaged, 4 metatarsals, 9 phalanges. One terminal and subterminal phalanx are fused together, a congenital condition, most common in the little toe.

Left foot - the bones are better preserved than on the right side. All tarsal bones are present. The attachment of the plantar ligament to the calcaneum is particularly strong. Five metatarsals, the head of the 1st shows some arthritic lipping, 4 phalanges.

Conclusions.

Age: 45 + years (dental evidence, ossified 1st rib cartilage, arthritis)

Sex: Male (skull, pelvis, femora)

Height: 171cm (5' 7.5")

Pathology: Severe cervical spondylitis with fusion of vertebrae. Osteoarthritis of lower thoracic spine, head of 1st left metatarsal. Severe periodontal disease and loss of teeth.

Anatomy: Supracondylar femoral spur.

Context 980

General. The skull is well preserved but the post cranial remains are only partly represented and in poor condition.

Skull.

The vault and much of the base are almost complete but are broken into 37 fragments. The vault is thin, the parietal bones only up to 4.5mm thick. Sutures are all unfused. The sphenoid, occipital and 3 temporal bones are present; the sphenoccipital synchondrosis is unfused, the occipital condyles are immature, a groove still present at the junction where condylar and basilar parts of the occipital bone fused. The mastoid processes are small. The root of the zygomatic process of the temporal bone extends over the auditory meatus. The frontal sinuses are large but the supraorbital ridges are not (yet) developed. Muscular markings at the occiput are moderate and the bone is 1cm thick at the internal occipital protuberance. The alveolar region of the maxilla is damaged, 3 molars are in situ, 1 is loose, the 3rd molars were congenitally absent. Mandible - intact apart from damage to the ascending rami; of small size - RB=2.7cm, H₁=2.7cm. The mental foramen points medially, the ascending rami slope at 125°. Four molars are in site, the crowns of the 3rd molars are visible but unerupted, overlying bone has resorbed.

Dental formula:

8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
C		C

There are small cavities buccally on ll 6 and lr 7. There is only moderate wear of the enamel on the 1st molars and this is minimal on the 2nd molars. For a young individual there is a surprising degree of periodontal resorption of alveolar bone. calculus is still present around the upper molars.

Vertebrae.

Five vertebrae present (2 cervical, 2 thoracic, 1 lumbar). The epiphyseal plates of the bodies are unfused. One thoracic vertebra shows incomplete fusion of neural arch and centrum.

Ribs.

19 fragments up to 12.5cm long and 1.2cm in vertical height. Only 5 heads and tubercles are represented. Dimensions and curves indicate an immature individual.

Upper Limbs.

Both scapulae are represented by the glenoid and base of spinous process. The coracoid process is unfused.

Medial 2/3rds of a slender right clavicle.

The shaft of the right humerus is intact, upper and lower epiphyses unfused; 25 cm long, minimum transverse diameter 1.7cm, i.e. approximately 1-2 year less than adult stature. Muscle markings are slight. The left humerus is represented by 2 large broken fragments.

The left ulna is intact apart from missing epiphyses; most of the right ulna is present, broken. The left radius is complete apart from unfused epiphyses. the right radius is missing.

Hands - no carpal bones, 3 metacarpal fragments, 1 proximal phalanx, 1 terminal phalanx of a thumb; epiphyses are unfused.

Lower Limbs.

Four fragments of the left hip bone. the ilium, ischium and pubis are unfused at the acetabulum; no secondary epiphysis to the ischial tuberosity. The sciatic notch is damaged and not determinative of sex. Upper 1/2 of right femur and unfused greater trochanter; the shaft is slender, its minimum transverse diameter 21.1cm. The left femur is missing. No tibiae or fibulae. Right patella present.

Feet - both calcanei, their posterior epiphyses are unfused. Right navicular and 3 cuneiform tarsal bones; 4 metatarsals (1st, 3rd, 4th, 5th) of right foot; epiphyses are unfused.

Conclusions

Age: Approximately 15-16 years (all epiphyses are unfused, the hip bone components are unfused, immature vertebrae, dental evidence)

Sex: Indeterminate because of immaturity and damage to the pelvis. The large frontal sinuses favour male sexing; the small mastoid processes and the slender long bones and mandible are more like those of a young female.

Pathology: periodontal disease.

Note

In this context there is also a 22cm midshaft of an adult long bone; the ends are missing and it is bowed anteriorly and deformed. It is probably a right tibia. Anterolaterally the cortex is indented over a 5.5 x 2.7cm area and there is some smooth hypertrophy on the anterior border of the tibia (**Plate 12**). This was presumably due to an overlying soft tissue abnormality such as a tumour or an enlargement of a blood vessel i.e. an aneurysm; evidently it was quite a chronic condition for hypertrophy to have occurred.

CONTEXT 984

General

The skull is well preserved, the spine is fragmentary, forearms and hand missing. there is some admixture from another body (? from context 982)

Skull

The vault is almost complete, though in 20 pieces. all sutures are fused internally and externally. Moderately robust, the parietal bone up to 5mm thick, the internal occipital protruberance 1.2cm. Frontal sinuses are large, supraorbital ridges are prominent. The temporal bones are slightly damaged - the mastoid processes are large; the root of the zygomatic process extends over the auditory meatus strongly. Both zygomatic bones, fragments of sphenoid and ethmoid bones, one occipital condyle. The maxillae are damaged, the hard palate in 3 pieces. mandible - damaged in both molar regions, the left ascending ramus is missing (There are 2 ascending rami which belong to another body, ?982).

Dental Formula:

c							A/c	A
8	7	6	5	4	3	2	1	1 2 3 4 5 6 7 8
8	7	6	5	4	3	2	1	1 2 3 4 5 6 7 8
c	c							

Dental Notes: There are a number of carious cavities, all cervical in position, associated with severe periodontal disease and gum recession, most evident buccally. The 4lr is a root only with an apical abscess. Most of the mandibular roots are exposed buccally - some of this is due to post mortem abrasion of bone and teeth, but much resorption has taken place. attrition is advanced in all teeth except the 3rd molar. there is total loss of occlusal enamel by oblique attrition in the 1st and 2nd molars. the anterior teeth are also heavily worn. The degree of attrition corresponds with an age of about 40 years.

Vertebrae.

The atlas is virtually intact, of moderate size; apart from this the spinal remains are fragmentary: odontoid process of axis; damaged bodies from 1 cervical, 3 thoracic and the 1st sacral vertebrae; 11 neural arch fragments.

Ribs.

10 fragments up to 10cm in length.

Upper Limbs.

Both scapulae are represented by spinous processes, and a glenoid cavity on the left. There is some arthritic lipping of the glenoid cavity posteriorly. The suprascapular notch is converted into a foramen by a bar of bone extending from the coracoid base.

Humeri - the right humerus is represented by the upper part of the shaft with head and lesser tuberosity; the greater tuberosity is damaged. Muscle insertions for subscapularis and latissimus dorsi and teres major are strong. The articular surface of the head is 4.7cm in vertical diameter.

Left humerus - 3 fragments of the head only. (There are also two large fragments comprising most of the shaft of a more robust humerus, less decalcified, from another body, ? 982)

There are no bones from the forearms or hands.

Lower Limbs.

There are no remains of the hip bones. Both femora are represented though the anterior and posterior surfaces of the heads have sheared away; the right femoral shaft and part of the condyles are intact, 43.6cm long - this gives an estimated total body stature of 166.7cm (5 5 1/2). The vertical diameter of the head, 4.6cm, and of the neck, 3.4cm, are those of a small male. The

linea aspera is strong. the lower tibial articular surfaces and shafts of both sides are present but the upper articular surfaces are missing. The shafts and lower articular surfaces of both fibulae are represented. Both feet are well preserved, 7 tarsal bones, 5 metatarsals and 2 proximal phalanges from each side. (There are also the right calcaneum, talus and cuboid of another body , ?982).

Conclusions

1. Age: Approximately 40 years (dental attrition)
Sex: Male (cranial and femoral features)
Height: 166.7cm (5 51/2)
Pathology: dental caries, abscesses & periodontal disease
2. A right humerus and some tarsal bones from the right foot of another body, possibly 982
(Note: site photographs should be consulted to verify this)

CONTEXT 987

General.

A good regional representation but there is much fragmentation of the remains and few bones, apart from those of hands and feet, are intact.

Skull

(Included here is a partly calcified thyroid cartilage)

The vault is in 34 pieces up to 8cm long, robust build, the parietal bones are up to 9mm thick. There is a well marked glabella and supraorbital ridges but the frontal sinuses are small. The occipital protruberance is small but the muscle markings here are strong. Sutures are fused endosteally but not externally. Temporal bones, zygomata, basiocciput and condyles are present but the sphenoid is missing. The mastoid processes are large and the roots of the zygomatic process above the auditory meatus are well developed. The hard palate is in three fragments, the teeth in situ apart from the incisor region. The mandible, though broken, can be completely reconstructed - generally robust, the ascending ramus is of exceptionally powerful build (RB=3.8cm), strongly male in type. All the teeth are present and apart from some buckle periodontal lipping around the molars, they are in good condition with no caries. The degree of attrition is slight, corresponding to an age of about 25 years.

Dental Formula:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

As the teeth are in such good condition, it may be that the diet was of a more refined type than usual

Vertebrae

The cervical spine is well preserved, all 7 vertebrae present, mostly undamaged. Note: there is a midline gap posteriorly in the neural arch of the atlas due to a failure of fusion of the two halves here (**Plate 13**). All the thoracic and lumbar vertebrae are represented but they are fragmented.

Pelvis.

Only small fragments of the sacrum and right hip bone. The left hip bone is well preserved, though the iliac crest and pubic region are damaged. The sciatic notch is of male type (approx. 55° angle). The acetabulum is large and deep (5.1cm in vertical diameter) no preauricular sulcus. The muscle markings on the ischium are strong.

Ribs.

11 left and 8 right ribs represented by their heads and posterior third or more of their shafts; 10 other fragments up to 19cm long. These are all robust.

Sternum

The posterior surface of the manubrium is intact, large and unfused with the body. One 6cm fragment of the body of the sternum.

Upper Limbs.

The left scapula is intact; ligamentous attachments to the coracoid and the tendinous intersections of the subscapularis origin in the subscapular fossa are well marked. The right scapula is damaged, the glenoid and base of spinous process present.

Both clavicles are present, the inner end of the left and the outer end of the right are missing; robust, male type, their length is estimated at approximately 14.7cm. There are very strong attachments for costo-clavicular and coraco-clavicular ligaments, for pectoralis major and the deltoid muscles.

Humeri: on both sides the heads and lower articular surfaces are damaged; attachments for deltoid and pectoralis major are strong.

The forearm bones are damaged on both sides; the ulnar attachments for brachialis and supinator are strong.

Right hand - 4 carpal bones (capitate, hamate, scaphoid, trapezium), 5 intact metacarpals, 4 proximal phalanges, 1 intermediate phalanx.

Left hand - 1 carpal bone (hamate), 4 metacarpals (3 are damaged, 4 proximal phalanges, 5 intermediate phalanges, 2 terminal phalanges).

Lower Limbs.

All major long bones are fragmented and too damaged to reconstruct. The femoral head is 4.6cm vertical diameter, cortex of femoral shaft is robust, the linea aspera is strong, gluteus maximus insertion is well developed; damaged femoral condyles present for both sides. Most of each tibial shaft, upper and lower articular surfaces are present, in fragments. Most of each fibular shaft and intact lower articular surface is present.

Right foot - 5 tarsal bones (navicular and intermediate cuneiform are missing), the talus is damaged; 5 metatarsals, proximal phalanx of great toe.

Left Foot - 7 tarsal bones, the talus and calcaneus are damaged; 5 metatarsals. five small phalangeal fragments, unsided.

In both feet the insertion of the tendo achilles and the attachments of the plantar ligaments are strongly developed. The insertion of peroneus brevis into the base of the 5th metatarsal is strong. all the bones are robust.

Conclusion

Age: approximately 25 years (dental attrition)

Sex: Male (cranial and pelvic features, robust long bones)

Height: not determined

Anatomical anomalies: 1. Congenital failure of fusion in the posterior arch of the atlas

2. Early calcification of the thyroid cartilage

Occupation: Strong musculature suggests that he was a manual worker but the relatively slight dental attrition and apparently good dental hygiene points towards a diet less coarse than usual and possibly a good social standing.

CONTEXT 991

General

In addition to the main burial there is considerable admixture from another body, possibly an earlier burial. The second, presumably older remains are generally less well preserved: since it is not always possible, with certainty to assign these separately, the context will be described together in regional order.

Skull

The vault is well represented, in 18 large fragments. All sutures are fused endosteally but not externally. Moderately robust, the parietal bones are up to 8mm thick. The frontal bone is intact, the bregma, supraorbital ridges and frontal sinuses are not well developed. Internally there is parasagittal pitting for arachnoid granulations (these become more marked with age). The external occipital protuberance is not strong, the bone is 13mm thick here. Both temporal bones are present, their mastoid processes moderately well developed. The root of the zygomatic process extends over the auditory meatus. Much of the base of the skull is missing apart from the basi-occiput and the right greater wing of sphenoid. The hard palate is present but the teeth are missing.

Mandible - intact apart from a damaged right ascending ramus and a missing left condyle; moderately robust. RB=3.4cm, CrH=7.3cm. Only 4 teeth are in situ.

Dental formula:

area missing		area missing
8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
A A		A c/A A

There is gross abscess formation around all the lower incisor teeth and buccally on lr 7. The ul 2 consists of a root only. attrition of lr 7 is very advanced and very oblique. The teeth were probably of little residual use in mastication. Dental wear suggest an age of about 45 years or more.

Vertebrae

Six cervical vertebrae (the atlas is missing). Two of these are fused together by osteoarthritis. Nine thoracic vertebrae are represented, most have arthritic lipping. five lumbar vertebrae, all with arthritic lipping, two bodies are fused.

Pelvis

Two sacral bones are present:

1. intact, male type, all vertebral bodies fused together
2. five sacral fragments of lighter, more porous bone.

Hip bone - two bodies represented:

1. One pair of hip bones, damaged, pubic regions missing. Characterized by calcification of muscle/tendon insertions in the iliac crest; large acetabulum, 5.5cm in vertical diameter; male type sciatic notch, no preauricular sulcus.
2. Two acetabular fragments, presumably from the second body.

Ribs

40 fragments up to 8.5cm long, including 5 with heads (3 right, 3 left), both 1st ribs are present. All are moderately robust.

Upper Limbs

One very eroded fragment of the left clavicle. Fragments of both scapulae include the spinous processes; there is arthritis of the acromio-clavicular joint.

Humeri - there are 2 humeral heads, the shaft and damaged lower end of the right bone, lower 2/3rds of the left: it is not possible to be sure that these form a pair from the same body.

Forearms - there is reduplication of remains; two pairs of ulnas (upper 1/4 to 1/2 of each); two pairs of radii (4 lower articular surfaces, 3 heads)

Hands - two bodies are represented:

1. All bones show either arthritic lipping of joint surfaces or calcification of tendon insertions; from the right hand - 3 carpals (scaphoid, lunate, capitate), 3 metacarpals, 3 proximal and 2 subterminal phalanges.
2. No arthritis, right and left hands represented - 3 metacarpals, 3 proximal phalanges.

Lower Limbs

Femora - two pairs:

1. One pair is characterized by gross calcification of tendinous and ligaments insertions; the left femur is only slightly damaged, 46.8cm long - this gives an estimated body stature of 174.1cm (5 9). The head is 4.9cm in vertical diameter, the neck 3.5cm (strongly male features).
2. Two femora, more damaged, more porous surfaces. the head of only one is present, both condyles are present and have a rather characteristically narrow anterior intercondylar notch. the condyles are 7.9cm broad (male type). Muscle insertions are not unusual.

One left sided patella

Tibiae - two pairs:

1. Left tibia with malleolar surface, right tibial mid-shaft.
2. Left tibia with malleolar surface, right tibial shaft. More porous bone, less well preserved than the first body.

Two fragments of left fibula.

Feet-reduplication is present:

1. Right calcaneus with calcified insertions of ligaments and tendons, a pair of talus bones, 1 damaged navicular, 3 metatarsals.
2. One right talus, smaller than in the first body.

Conclusion

Two bodies represented.

Main burial.

Age: 45+ years (dental attrition, loss of teeth, arthritis)

Sex: Male (Pelvic bones, sacrum, femora)

Height: 174cm (5 9)

Pathology: Diffuse osteoarthritis of spine and collagenous degeneration of tendon and ligament insertions.

2. Probably an earlier burial; the bones are more porous and damaged (2 radii, 2 ulnas, hand bones, pelvic fragments, 2 femora, 2 tibiae, 1 tarsal bone)

Age: Mature adult

Sex: Male (femoral condyles)

CONTEXT 992

General

All regions are well represented, state of preservation is good, many major long bones are intact.

Skull

The vault is fairly complete but in 36 fragments up to 10x 7cm in size. sutures are unfused. Moderately robust, the parietal bones are up to 7mm thick. Muscle markings at the occiput are strong, the bone here is 14mm thick at the internal protuberance. the frontal bone is incomplete and the degree of development of the frontal sinuses and supraorbital ridges cannot be determined. Both temporal bones, basi-occipital, most of the sphenoid and ethmoid are present. The spheno-occipital synchondrosis is fused. Mastoid processes are robust; the root of the zygomatic process extends strongly over the auditory meatus.

The hard palate is intact, most of the teeth are in situ. The mandible is complete apart from damage to the right condyle and a missing left condyle. Moderately robust, RB=3.2cm, CrH=7.7cm, H₁=3.1cm.

Dental Formula:

C								A/C							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
c								c							

Dental notes:

ur 8 consists of roots only, in a large abscess cavity. ur 5 is missing, was probably a root only - the socket is small. ur6 had been lost and the bone had healed over. there is thus considerable dental disease in the upper left dentition. The caries in ul5,

ur6, ll4 and lr6 are all interproximal cavities. There is diffuse alveolar resorption affecting all teeth and some residual calculus is present. Molar attrition is slight and corresponds to an age of approximately 25 years. Dentine is exposed along the cutting edges of the upper incisors.

Vertebrae

The atlas and axis are intact and well preserved. The other cervical vertebrae are present but damaged. Eleven thoracic and 5 lumbar vertebrae are represented; the upper thoracic region is damaged, the lower thoracic and all the lumbar vertebrae are almost complete. The 5th lumbar vertebrae has a congenital anomaly (spondylolisthesis) and is in two parts, the body, pedicle and upper articular facets being separated from the laminae and lower articular facets by a joint on each side (Plate 14). The upper and posterior parts of the sacrum are present, including the 1st sacral vertebrae and the alae of the sacrum: these are of male type.

Hyoid Bone

Body and greater wings are present.

Ribs

The heads of 7 ribs and shafts from the right side (up to 15cm long). Only small fragments from the left side.

Upper Limbs

Both clavicles are present, the right better preserved than the left, but both ends are damaged; they are robust. Both scapulae are represented, right more than left, including glenoid, spinous and coracoid processes and the lateral margin.

both humeri are intact, robust, 32.3cm long; muscle insertions, particularly subscapularis, pectoralis major, latissimus dorsi, teres major and deltoid are strongly developed. The forearm bones are complete, better preserved on the right side.

Right hand - 6 carpal bones (trapezium and pisiform missing), 4 metacarpals, 3 proximal and 3 subterminal phalanges.

Left hand - 3 carpals, i.e. capitate, scaphoid & triquetral, 3 metacarpals, 3 proximal and 3 subterminal phalanges.

Lower Limbs

Both pelvic bones are represented, that on the right side being more complete; the sciatic notch is of male type, there is no preauricular sulcus. Large acetabulum, 5.7 cm in vertical height. The pubic symphyseal surface has ridges corresponding to age range of 19-29 years.

Femora - both are complete but the condyles are damaged on the left side; Strong muscle markings; length 45.1cm which gives an estimated total body stature of 170.16cm (5 7). The head is large, 5cm in vertical diameter, the neck short and stout, 3.9cm in minimum vertical height. Both tibiae are intact. Fibulae present, their head damaged. Both patellae present.

Right foot - 7 tarsal bones, 5 metatarsals, 3 proximal phalanges, 2 subterminal and 1 terminal phalanges.

Conclusion

Age:	Approximately 25 years (dental evidence, pubis)
Sex:	Male (cranial features, pelvic bones, femora)
Anatomical anomaly:	Spondylolisthesis - this may well have been asymptomatic, but is sometimes the cause of low back pain.
Pathology:	Dental caries-interproximal cavities, probably associated with sugar in the diet. Periodontal disease.
Occupation:	strong development of shoulder muscles point to manual work.
Height:	170cm (5 7)

CONTEXT 1000

General

A relatively complete skeleton in good condition.

Skull

The frontal bone, sphenoid, zygomatic, maxillae and nasal bones are in articulation as one fragment. The occipital and right temporal bones form another fragment. The left temporal bone is separated. The rest of the vault is in 25 pieces. All sutures are fused endosteally. The frontal bone is fairly narrow (10.5cm between the outer margins of the zygomatico-frontal sutures). the parietal bone is up to 7.5mm thick, the occipital bone up to 15mm thick at the internal protuberance. Occipital muscle markings are strong. The mastoid processes are fairly well developed and the root of the zygomatic process extends above the auditory meatus. The mandible is intact and robust, RB=3.6cm, CrH=7.4cm H₁=3.7cm. The condylar articular surfaces are eroded and broad, indicative of a temporo-mandibular arthritis; the temporal surface of the joint is also broad antero-posteriorly.

Dental formula:

A/C																					
8	7	6	5	4	3	2	1						1	2	3	4	5	6	7	8	
<hr/>																					
8	7	6	5	4	3	2	1						1	2	3	4	5	6	7	8	
																C					

Dental Notes:

The upper 2nd and 3rd molars had been lost, their sockets have healed over. The ul6 lies loose in an abscess cavity. There is extensive periodontal disease and exposure of roots on their buccal sides. There is cervical caries of ul6 and lr7. The degree of dental attrition corresponds to an age range of 40-45 years.

Vertebrae

All the cervical vertebrae are intact. In the atlas there is arthritic lipping of the facet for the dens; there is a congenital anatomical anomaly in a bridging of the groove for the vertebral artery to make a canal. Eleven thoracic and 3 lumber vertebral bodies are represented, many damaged; 20 neural arch fragments. The first piece of the sacrum is present, in two pieces, of male type. there is slight arthritic lipping of bodies in the lower thoracic region.

Ribs

30 fragments of right ribs, up to 15.5cm long, including 7 heads and the first rib. 33 fragments from the left side up to 14cm long, including 7 heads and the 1st rib. The ribs are all of robust build.

Upper Limbs

The whole of the right clavicle and the medial 2/3rds of the left clavicle are present, of robust build, 16.3cm long. Both scapulae are in fragments; there is osteoarthritic lipping of the acromio-clavicular joint.

Both humeri are present, their upper ends damaged, the lower end of the right one is broken. There is considerable subperiosteal deposition and surface irregularity around the surgical neck on the right side; since the area is partly missing it difficult to be sure of the nature of this. Evidently there has been an old fracture of the surgical neck which impacted, and therefore healed without deformity; there was also at this time some tearing of the capsule of the shoulder joint at its humeral attachment. The radius and ulna on each side are intact.

Right hand - 6 carpal bones (trapezium and pisiform are missing), 3 metacarpals, 3 proximal and 1 intermediate phalanges.

Left hand - 7 carpals (pisiform missing), 5 metacarpals, 3 proximal and 5 intermediate phalanges.

Lower Limbs

Each hip bone is damaged through the acetabulum (this is capacious), the pubic region is detached and the ischium mostly missing. The narrow sciatic notch and eventide ischio-public rami indicate male sex. The symphyseal surface is smooth.

Femora - the left is complete, the right has damaged condyles; the head is 4.7cm in vertical diameter, the neck is 3.4cm in minimum vertical height. Very strong glottal tuberosity. Length 42.4cm - this gives an estimated total body height of 163.89cm (5 4¹/₂).

The tibiae are complete, though broken . The upper ends of the fibulae are missing. The patellae show some calcification of the quadriceps insertion.

Feet - all tarsal and metatarsal bones are present, also the proximal and distal phalanges of a great tow and 9 other small phalanges.

Conclusion

Age:	40-45 years (dental evidence)
Sex:	Male (Cranial & pelvic features, femora)
Height:	164cm (5 4 ¹ / ₂).
Anatomical anomaly	on the atlas vertebrae the groove for the vertebral artery is a canal bilaterally, i.e. the groove is bridged by bone.
Pathology:	<ol style="list-style-type: none">1. Slight arthritis of the lower thoracic spine and in the atlas vertebra2. Arthritis of temporo-mandibular joints3. Old impacted and healed fracture of the surgical neck of the right humerus.4. Periodontal disease and dental abscesses

CONTEXT 1006

General

The remains are of a skull only, in fragments.

the skull vault is in 30 fragments. Supraorbital ridges are moderately well developed but there is almost no development of frontal sinuses. The parietal bone is up to 8mm thick; arachnoid granulation depressions are well marked parasagittally. the occipital bone is up to 16mm thick at the internal protuberance, muscle markings are strong. Fronto-parietal and interparietal sutures are fused endosteally. The temporal bones have well developed mastoid processes. The root of the zygomata and fragments of sphenoid are present; the spheno-occipital synchondrosis is fused. Only the left side of the hard palate is present, with 3 teeth in situ, 7 teeth are loose. The mandible is missing.

Dental formula:

$$\begin{array}{c} 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \quad | \quad 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ \hline \text{area missing bilaterally} \end{array}$$

There is only mild attrition, corresponding to an age of approximately 25 years.

Conclusion

Age: Approximately 25 years (dental evidence)

Sex: Male (Supraorbital ridges, mastoid processes, thickness of skull vault)

CONTEXT 1014

General

Partial remains only, including skull and right upper arm.

Skull

The vault is fairly complete but broken into 33 fragments up 10 x 7cm in size. Not very robust, the parietal bones are up to 5.5mm thick. the occiput is up to 12mm thick at the occipital protuberance; muscle markings here are strong. Fronto-parietal and interparietal sutures are fused endosteally but not externally.. The frontal sinuses are large and the supraorbital ridges are prominent. Both temporal bones are present; the mastoid processes are well developed, the root of the zygomatic process extends above the auditory meatus. The greater wings of the sphenoid and part of the left zygomatic bone are present. The maxillae include the hard palate with teeth in situ. the mandible is broken throughout the ll7 socket; the bone is not particularly robust (RB=3.1cm, CrH=5.7cm, H₁-2.8cm.).

Dental Formula:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Dental Notes - The ur2 was lost ante-mortem, its socket has healed over. There is a small accessory tooth, partly erupted on the buccal side between ur3 and ur4. Molar attrition is server, all occlusal enamel has been lost on the lower molars; there is oblique attrition of the upper 1st molars; there is oblique attrition of the upper right premolars. The ur8 shows little wear as it is not in occlusion - the lower 3rd molars are probably congenitally absent. Apart from this all teeth show loss of the occlusal surfaces and exposure of dentine. Attrition age is approximately 40 years.

Upper Limb

Right clavicle, the medial end is missing; moderately robust, probably of male type. the coraco-clavicular ligament attachment is strong, particularly the conoid tubercle. There is slight lipping of the lower border of the acromio-clavicular joint surface.

Right humerus - robust; the insertion of pectoralis major is particularly strong; the head is 4.85cm in vertical diameter; total length is 31.8cm - assuming male sex this gives an estimated total body stature of 170cm (5 7).

Conclusion

Age:	Approximately 40 years
Sex:	Male (cranial features, size of clavicle, dimensions of humeral head, strong muscle markings)
Pathology:	Osteo-arthritis of acromio-clavicular joint.

CONTEXT 1019

General

The skull and cervical spine are missing due to incomplete excavation; otherwise regional representation and state of preservation are good.

Vertebrae

Seven lower thoracic vertebrae (only 3 with intact neural arches), five lumbar vertebrae with neural arches intact. These are all of large size and have severe osteo-arthritis, mostly evident in the lipping of bodies, but also affecting some articular facets.

Pelvis

The first piece of the sacrum is present, of male type; there is arthritic degeneration of the apposed surfaces of L5 and S1 vertebral bodies. The hip bones are large, robust and almost complete, though broken. The sites of tendon and muscle insertion at the outer lip of the iliac crest, ischial tuberosity and above the acetabulum are markedly roughened by calcification in tendon fibers. The sciatic notch is narrow. The acetabulum is large and deep, 5.8cm in vertical diameter. The pubic symphyseal surface is smooth, with peripheral lipping consistent with an age of 40+ years.

Ribs

20 fragments of right ribs up to 15cm long, no heads. 21 fragments of left ribs up to 15cm long, 3 heads present. Not very robust, up to 16mm in vertical diameter.

Upper Limbs

No scapulae or clavicles.

Humeri - both are complete, very robust, 33cm long. there is calcification of tendon insertions into the tuberosities bilaterally, also at the outer and inner lips of the bicipital grooves. The forearm bones are complete but only the left radius is unbroken. Insertions of the biceps and brachialis are very roughened.

Right hand - 4 carpals (capitate, scaphoid, trapezoid, triquetral), 5 metacarpals, 4 proximal and 2 intermediate phalanges.

left hand - 5 carpals (capitate, scaphoid, lunate, hamate, trapezoid), 5 metacarpals, 3 proximal phalanges, 3 damaged intermediate phalanges.

Lower Limbs

Femora - both are intact, very robust, 46.5cm long : this gives an estimated total body stature of 173.4cm (5 8). The head is 5.1cm in vertical height, the condyles 8.4cm in transverse diameter. All tendon insertions are grossly affected by calcification of their fibers, particularly evident with the glutei, psoas and the attachments to the linea aspera.

Tibiae - both are intact. fibulae - both are represented, the lower end of the right and the upper end of the left are damaged.

Feet - all tarsal and metatarsal bones are present, 12 phalanges include proximal and terminal phalanges of the two great toes.

Conclusions

Age:	40 years or more (osteoarthritis, appearance of pubic symphyseal surface)
Sex:	Male (Pelvic characteristics, size of vertebrae, femoral measurements)
Height:	173cm (5 8)
Pathology:	1. Degeneration osteo-arthritis of the spine. 2 Diffuse collagenous degeneration shown in calcification of tendon insertions

CONTEXT 1022

General

Partial remains only: skull, atlas, 2 femoral fragments.

Skull

The left side of the vault plus the temporal bone, orbital roof and part of the occipital bone are in one piece. Most of the frontal bone is missing. the right temporal bone is separate. There are 16 other fragments of parietal and occipital bones. all sutures are fused endosteally. the bones are robust, the parietal bones up to 7.5mm thick; the occiput is up to 14mm thick at the internal protruberance. The mastoid processes are moderately developed. The root of the zygomatic process extends strongly over the auditory meatus. mandible - both rami are missing, the right (robust) condyle is present; it is powerfully built, though difficult to measure because of damage. The angle measures 4cm obliquely, H₁ is estimated at about 3.2cm.

Dental Formula:

are missing	are missing
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	c c

There is severe periodontal disease and alveolar recession throughout the buccal margin and in the molar region lingual. The periodontal condition has caused cervical caries buccally on lr4 and lr6. there is moderate torus formation on the lingual aspect of the region between canine and 1st molar teeth bilaterally (This is probably a hereditary and congenital condition). (Plate 16) Dental attrition has destroyed all occlusal enamel of the 1st molars, attrition being also oblique here, and corresponds to an age of about 35 years. Dentine is also exposed on the incisor and canine teeth.

Vertebrae

Right half of the atlas vertebrae only.

Limbs

Only 2 midshaft fragments of femora, 20cm and 23cm, not particularly robust, in poor condition, with very porous surfaces.

Conclusions

Age: Approximately 35 years (dental attrition)

Sex: Male (very robust mandible, thickness of skull vault)
Pathology: 1. Periodontal disease, caries
2. Mandibular torus

HUMAN BONES NOT IN GRAVES : LISTED IN ORDER OF CONTEXTS

C2 CONTEXT 1

A proximal phalanx of a third or second finger.

CONTEXT 300

A crown of a deciduous upper canine tooth (C), only the cervical region of the root has developed. Age approximately years.

B2 CONTEXT 500

Three bones, all fairly well reserved, robust, probably male. Left lunate carpal bone. Proximal phalanx of 2nd or 3rd finger. Midshaft of a left ulna, upper and lower ends are missing (also one phalanx of animal origin).

B1 CONTEXT 591

A small eroded fragment of bone, probably human, probably from the lower shaft of a humerus above the olecranon fossa, but too damaged to allocate with certainty.

B1 CONTEXT 616 (in backfill of grave 576)

Skull remains, very fragmentary: Both temporal bones, the right more complete than the left; the mastoid is moderately well developed and the root of the zygomatic process extends strongly over the auditory meatus. Fragments of frontal, parietal and occipital bone up to 8.8cm long. the parietal bone is up to 7mm thick. There is a persistent metopic suture in the frontal bone (a 4.5cm fragment), which is fused endosteally, visible externally. the occipital bone fragment (4.7cm) is up to 13mm thick at the occipital protuberance. Altogether there are 82 fragments, many less than 2cm in length. There are teeth - ur7 with interproximal and occlusal carious cavities and a ur6. no dentine is exposed.

Long bones: one 24 cm fragment of the midshaft of a femur, with a porous and damaged surface.

Conclusion

Age:	approximately 20-25 years (attrition of 1st molar)
Sex:	probably male (skull features)
Anatomical anomaly:	partial persistence of metopic suture

B1 CONTEXT 668

Long bone fragment 4.4cm x 1cm, probably from a forearm bone.

B3 CONTEXT 710

Small tarsal or carpal bone, animal in origin.

B2 CONTEXT 722

Foot bones from an adult, probably male, well preserve.

From the right foot, four metatarsals (1st, 2nd, 3rd, 4th) and the proximal phalanx of a great toe.

From the left foot, a 3rd metatarsal with a damaged head.

CONTEXT 775

General

Apparently the sparse remains of one individual.

Skull

15 fragments of vault, the larger is 10 x 6cm. the parietal bone is up to 7mm thick, there is some endosteal fusion of sutures. Right petrous temporal-damaged, the mastoid process is slender. Fragments of greater wings of the sphenoid.

Vertebrae

One fragment comprising most of the right half of the atlas .

Ribs

2 fragments up to 4.8 cm long

Pelvis

5 fragments of right hip bone including parts of the public bone, ischial tuberosity and iliac fossa. No features are sexually clearly determinative; the tuberosity is fairly small.

Upper Limbs

Left scapula-base of spinous process, a capacious glenoid. Left clavicle-midshaft only. Humeri-right head and surgical neck; neither the tuberosities or the bicipital groove are particularly well developed; the vertical diameter of the head is 4.7cm. Shaft of left humerus, the extremities are missing, of medium build, muscle attachments are not prominent. Upper half of right radial shaft, the head missing 2/3rd of the shaft of the right ulna, the olecranon is damaged.

Lower Limbs

Femoral head, articular surface only 5.3cm in vertical diameter. 4 fibular fragments up to 10.5cm long, of slender build. Feet - 3 tarsal bones (a talus from each foot, a left calcaneus), right 3rd metatarsal.

Conclusion

Age: Adult

Sex: Male (This sexing is based on the size of the femoral head, other bones suggest probably a male of small stature. Muscle insertions are not well marked, partly due to post mortem attrition).

B2 CONTEXT 826

8.5cm midshaft fragment of left clavicle, porous surface.

C2 CONTEXT 871

General

Incomplete remains of more than one skeleton, possibly mainly falling into 2 groups in appearance; most of the bones are well preserved, a smaller number are more friable and darker in colour. Five separate individuals represented in the foot bones.

Skull

Anterior part of the right side of the hard palate; one central incisor tooth with interproximal caries mesially but no attrition. Central part of the body of the mandible bearing I14 and I15 - these show moderate attrition but no exposure of dentine. a loose U16 with minimal attrition - this belongs to a different individual, juvenile.

Vertebrae

Two bodies are represented:

An elderly individual. One cervical and 9 thoracic vertebrae; the latter are very robust, some have arthritic lipping of their bodies; 2 upper thoracic vertebrae have arthritic fusion of adjacent neural arches. 3 neural arch fragments.

Immature individual. 1 shallow cervical body and part of a lumbar vertebral body showing immaturity of the intervertebral face.

Pelvis

3 hip bone fragments, right and left ilium, left ischium, all of these include the acetabular region - this surface is immature and fusion of the three components (ilium, ischium, pubis) in the floor of the acetabulum is only partial, suggesting an age of 14-16 years. Accessory epiphyses of the iliac crest and ischial tuberosity are unfused. The sciatic notch is narrow, of male type.

Ribs

5 fragments of mature ribs of which 2 are juvenile with immature articular surfaces of the heads.

Upper Limbs

Two right sided clavicles, robust, of male type, each has a damaged acromion, one has a particularly strong cost-clavicular ligamentous attachment. One is in excess of 15cm long, the other is a juvenile clavicle, 11.4cm long with an unfused medial epiphysis. One small eroded fragment of the base of a spinous process of a right scapula. Left humerus - damaged head an up 1/4 of shaft; of slender build with thin cortex, vertical diameter of the head is 3.7cm (probably adult female). Upper 1/2 of left ulna, damaged and upper 1/4 of right ulna - these are probably a pair. There is a detached, small radial head.

Hand bones - 2 right 1st metacarpals, one larger than the other, 3 left metacarpals (1st, 2nd, 3rd) slightly smaller than the others (i.e. 3 adult individuals are represented in the hand bones). 2 proximal phalanges.

Lower Limbs

There are no major long bones apart from a very friable lower end of tibia.

Feet - Tarsal bones : 1 large right talus, 1 large left cuboid, 1 small left 1st cuneiform, 1 damaged left calcaneus. Five separate adult left metatarsals, 6 other metatarsals (5 right, 1 left), 1 proximal phalanx of a great toe.

Conclusion

1. One juvenile, approximately 14-16 years old, male (pelvis)
2. Partial remains of up to 5 adults as shown by the singular presence of five left 1st metatarsal bones. Three adults are represented in the hand bones. The other bones seem to fall mainly into two groups, one older than the other in burial years. Sexing is uncertain, one may be female (humeral features)
Pathology: Spinal osteoarthritis.

Note

No explanation is offered as to why five adult left feet should be represented by their great toe metatarsals; it is difficult to believe, since other remains are somewhat sparse, that this is coincidental.

B4 CONTEXT 902

a single fragment of uncertain origin, possibly an unfused epiphysis of a femoral greater trochanter.

C2 CONTEXT 909

Left calcaneus, very robust, male type. Left 1st rib, broken anteriorly, has immature head, from a juvenile. Proximal phalanx from a hand, probably 4th or 5th digit.

B4 CONTEXT 916

Fragment of adult skull vault, 6.5cm long, up to 7mm thick, parietal bone articulating posteriorly with a wormian bone. Broken fragment of left temporal bone, petrous part only. also animal bone.

C2 CONTEXT 930

Animal bones only

B3 CONTEXT 938

6 fragments of skull vault-includes a frontal bone with intact glabella, well developed supraorbital ridges, no orbital plates, no sutures; of small dimensions with small frontal sinuses, possibly immature. The other fragments are smaller but more robust and probably from another body - they articulate to form two pieces, parietal and occipital - the latter is 1.5cm thick at the occipital protruberance. Lower end of a left adult ulna.

Left hip bone - a large fragment of ilium which includes part of the acetabulum and a damaged sciatic notch, probably male.

Lower 23cm of the shaft of a right femur, including condyles; robust male type; the transverse width of the condyles is 8.1cm; there is arthritic lipping of the articular surfaces.

8 animal bones.

C2 CONTEXT 943

General

At least 2 individuals are represented. On the basis of general appearance the bones are divided into 2 groups, one relatively well preserved, the other with a porous surface and darker in colour.

1. Skull Vault

3 large fragments articulate as frontal and right parietal bones; sutures are unfused externally but there is some endosteal fusion; the supraorbital regions are missing. Fragment of left temporal bone including auditory meatus; the mastoid process is well developed. Left zygoma. Part of right greater wing of sphenoid. 2 large maxillary fragments with hard palate, teeth in situ. Left half of mandible.

Dental formula:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
area missing	1 2 3 4 5 6 7 8

Dental Notes

There has been severe post mortem abrasion on the buccal side of the upper right dentition. The cutting edges of the incisors are severely worn but there is minimal molar attrition; this would correspond to an age of about 20 years. The I18 is probably congenitally absent. The mandible is robust, of male type, RB=3.1cm.

Ribs

7 fragments up to 6.5cm in length

Upper Limbs

Outer 2/3rds right clavicle. right scapula-glenoid and base of spinous process. Right humerus-head and upper 1/3rd of shaft; robust, male type, the vertical diameter of the head is 5cm.

2. Skull Vault

1 large fragment 12 x 9.5cm representing the midline region of both parietal bones, the interparietal suture is fused internally and externally; pitting for arachnoid granulations is marked, the appearances are those of a mature adult. There is a fused wormian bone posteriorly. One occipital fragment is up to 1.2cm thick near the protruberance. There is a damaged right temporal bone, the mastoid process is largely missing; the root of the zygomatic process extends posteriorly over the auditory meatus. 1 occipital condyle. 1 fragment of left greater wing of sphenoid. Left ascending ramus of the mandible including condyle but the coronoid process and angle are missing; RB = 3cm.

Upper Limbs

Upper half of the shaft of the left ulna, a fragment of the lateral border of the scapula, both very porous and damaged.

Conclusions

1. Adult Male aged approximately 20 years
2. Adult, mature, possible about 40 years old, probably male.

C2 CONTEXT 944

One skull vault fragment-right parietal bone, almost complete, disarticulated at the sutures, of slender build, only up to 5mm thick; there has been some endosteal fusion of fronto-parietal and interparietal sutures; there is only slight pitting for arachnoid granulations.

Conclusions

A young adult, sex indeterminate on this evidence only, could be female.

CONTEXT 948

1st metatarsal right foot, adult, human.

5 large animal bones.

CONTEXT 978

3 small fragments of animal bone.

CONTEXT 982

Vertebrae

2 neural arch fragments, 1 small piece of body.

Upper Limbs

1 damaged fragment right scapular glenoid. 1 thin sliver of lower humerus, including part of trochlea.

Lower Limbs

Right patella. Left tibia-upper end is missing and the shaft is damaged.

Foot bones - 4 tarsal bones (right navicular and 3 cuneiform), 4 right metatarsals (1st, 2nd, 3rd, 4th) 1st phalanx of great toe.

All bones are moderately robust.

Conclusion

Adult, probably male.

B4. CONTEXT 983

General

Probably the very partial remains of one individual.

Vertebrae

The bodies of 2 cervical and 1 lower thoracic vertebrae, all showing osteoarthritis, affecting bodies and apophyseal joints. 2 neural arch fragments.

Upper Limbs

Right clavicle - of slender build, 15.5cm long, well marked attachments for costo-clavicular and coraco-clavicular ligaments. Arthritic lipping of the acromio-clavicular joint.

Lower Limbs

A fragment of ilium which includes part of the acetabulum and an apparently wide-angled sciatic notch, though this is incomplete. 2 eroded metatarsal shafts.

Conclusions

Age:	Mature Adult, ?40 + (arthritis)
Sex:	Male (length of clavicle, the pelvic fragment is too incomplete and includes probably only the anterior part of the sciatic notch)
Pathology:	osteoarthritis of the spine.

CONTEXT 1001

Damaged fragment of a femoral condyle (adult, fused epiphysis). Right talus, small, either from a female adult or an adolescent. Proximal phalanx of a great toe with an unfused epiphysis.

Conclusion

An adult and adolescent are represented.

CONTEXT 1007

Foot bones.

Right foot - 1 tarsal (navicular, 5 metatarsals; 1 proximal and one terminal phalanx of a great toe. 3 intermediate phalanges and 4 terminal phalanges which are not sided .

Left foot - metatarsal and proximal phalanx of a great toe, fragments of 2 other metatarsals.

Note

There is a very gross arthritis of the metatarso-phalangeal joints of both great toes, though arthritis is not apparent in the other joints that are represented; much worse in the right great toe than in the left ? due to gout (**Plate 15**).

Right fibula, the head missing.

CONTEXT 1011

General

Probably the sparse remains of one individual.

Vertebrae.

1 lumbar vertebral body, immature with unfused epiphyseal plates. 1st piece of the sacrum, small and unfused inferiorly.

Pelvis

Ilium only, about 2/3rds adult size, unfused in the acetabulum.

Lower Limbs

Upper 2/3rds left femur; the epiphyses of the head and greater trochanter are unfused and missing overall dimensions about 2/3rds of adult size. One damaged metaphysis with unfused epiphyseal plate, probably lower end of femur. One midshaft fibular fragment. 3 metatarsals with unfused epiphyses of the heads. 2 proximal phalanges with unfused basal epiphyses.

Conclusion

A juvenile aged approximately 10-12 years. There is also midshaft of tibia of adult proportions from another body.

CONTEXT 1017

1 midshaft femoral fragment, 27.4cm long. 1 midshaft humeral fragment 13.4cm long. Both have very porous surfaces, almost all features have been lost.

CONTEXT 1021

1 upper canine tooth, moderate attrition, cervical erosion buccally due to periodontal disease.

C2 CONTEXT 1108

Animal bone.

DEG U/S

1 lower cervical vertebra with arthritic lipping of the body.

1 proximal phalanx of the hand.

1 midshaft of a right radius, porous surface.

The 1987 Excavations

CONTEXT NO. 1371, BOX NO. 52

General

Skull fragments

1. Skull A

Articulated parietal and occipital bones. Very little endosteal suture fusion. slender, parietal thickness is up to 5mm. Occipital protruberance fairly well marked. Right temporal bone with damaged mastoid process. Occipital condyles. Fused spheno-occipital synchondrosis.

Conclusion

Probably female, aged about 20 years (sutures)

2. Skull B

Parietal and frontal bones articulated. Strong supraorbital ridges. Frontoparietal and interparietal sutures completely fused endosteally, the interparietal externally also. Distance between frontozygomatic sutures 10.3cm. Left temporal bone with medium sized mastoid process; root of zygoma extends over external auditory meatus. The skull base is fragments. Fused spheno-occipital synchondrosis. Left zygoma. Fragment of hard palate.
Mandible - robust, RB¹+3.5cm, Cr.H=6.2cm

Dental Formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	--	---	---	---	---	---	---	---	---

Attrition age is about 25 years.

Conclusion

Male aged 25 years.

3. Fragments of frontal, parietal and occipital bones. Unfused sutures. Slender build, parietal thickness is up to 4.5cm. small occipital protruberance. Sphenoid. Maxilla with hard palate.

Dental Formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	--	---	---	---	---	---	---	---	---

The 2nd molars are only just erupting. The 3rd molar - crown has developed but no root formation has taken place.

Conclusion

Age 12 years, probably female.

4. Right parietal bone - robust, up to 7.5mm thick, endosteal fusion of sutures.

Mandible - robust, H₁=3.5cm, RB₁=3.3cm, CrH=7cm.

Dental Formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	--	---	---	---	---	---	---	---	---

Oblique molar attrition.

Conclusion

Male aged about 40 years.

5. Left side of frontal bone, robust, frontoparietal suture is completely fused. 12 parietal fragments up to 8mm thick. Damaged right temporal bone. Occipital protruberance 1.2cm thick. Left zygoma. left side of hard palate. Mandible - robust, central region of the body only.

Dental formula:

missing	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 missing
A	

Oblique molar attrition.

Conclusion

Male aged 40 years.

6. 14 parietal and frontal bone fragments, some from another body, robust, up to 7.5mm thick, 2 occipital bones (one from another body). right temporal bone. Hard palate

Dental Formula:

A													
8	7	6	5	4	3	2	1		1	2	3	4	5

Severe attrition, breakage of molar enamel.

Conclusion

Male aged 40 years, probably of poor social status. Dental abscess.

7. Miscellaneous -

a) a very slender parietal bone, 2mm thick, with poorly developed diploe.

Conclusion

Child aged about 4 years.

b) Fragment right side of mandible with 2 premolar and 2 molar teeth.

Conclusion

Sex not determined. Age about 22 years. (molar attrition).

General Conclusions : skulls

Number of adults: 6 (1 female aged 20, 1 male aged 25, 3 male age 40, 1 sexually indeterminate).

Number of children: 2, aged 4 years and 12 years.

CONTEXT 1371, BOX NO. 57

General

Miscellaneous skull fragments, listed according to packaging.

1, Male frontal bone, both parietal bones, sutures fused throughout. Left side of mandible, all teeth in situ, attrition age about 25 years.

Conclusion

Male aged 25 years.

2. Frontal bone and right parietal bone of a child aged about years. Parietal thickness is about 2.5mm.

Conclusion

Child aged 8 years

3. Occipital and both parietal bones, partial endosteal fusion of sutures. Left side of damaged frontal bone. Left side of mandible, of male dimensions; oblique attrition of 1st molar with loss of all occlusal dentine, attrition age about 35 years.

Conclusion

Male aged 35 years.

4. Frontal bone with very small frontal sinuses, 18cm between fronto-zygomatic sutures. 7 fragments of parietal bones. 2 occipital bones. Partial endosteal fusion of sutures.

Conclusion

Female aged about 25 years, plus other fragments.

5. Miscellaneous parietal, frontal and occipital fragments. Left temporal bone of male type.

Conclusion

Male adult plus other fragments.

6. Multiple small fragments of vault, mostly parietal. right side of male frontal bone. 2 occipital bones, probably one male one female.

Conclusion

1 adult male, 1 adult female.

7. Two frontal bones, right sides only, probably both female. Five occipital bones. Multiple small parietal fragments.

Conclusion

Up to 5 adults (occipitals). 2 females represented by frontal bones.

8. One frontal bone (female). 5 parietal fragments.

Conclusion

One adult female

9. 7 temporal bones, 4 right, 3 left.

Conclusion

Up to 4 adults represented.

10. 1 occipital bone with an unfused spheno-occipital synchondrosis.

Conclusion

Adolescent aged about 14 years.

11. Mandible of male dimensions, 6 molars in situ, attrition age about 30 years.

Conclusion

Male aged 30 years.

12. 1 fragment right side of mandible including angle, of female dimensions.

Conclusion

Female mandible.

13. Hard palates: 2 left sides of hard palates with teeth in situ, attrition ages about 30 years and 40 years.

1 right side of hard palate with 3 molars in situ, probably from the 30 year old listed above.

Conclusion

Two adults, one age 30 years, the other 40 years.

General Conclusions from these skull bones

Number of adults: at least 8 - 4 male (aged 25, 30, 35, ?40 years)

3 female (one 25 years, 2 not aged)

1 sexually indeterminate

Number of children: 2 - aged 8 years and 14 years.

General

Femora.

Intact femora: 3 male (left side only), 1 female (left).

Estimated body heights:

Male - 180.7cm (5 11), 179.4cm (5 11), 169.4cm (5 7)

Female - 161.3cm (5 3 1/2)

Broken femora: 4 right, 4 left (not sexed because damaged renders this inaccurate). All adult. Only one has an intact head - this is of a male aged about 18 years. (recently fused epiphyses).

Conclusion

At least 7 adults and one 18 year old are represented. Of those sexed, 3 are adult male, one 18 year old male, 1 adult female. The body heights of 5 adults are estimated.

CONTEXT 1371 BOX 56

General

Long bone fragments, mostly femoral

Femora:

10 upper ends - 5 right (all male) - one aged about 16 years with unfused epiphyses. 5 left (male, 1 female)

12 lower ends, 7 right, 5 left, too damaged to sex accurately.

19 shaft fragments

Tibiae : 2 shaft fragments

Humeri: 1 shaft fragment

Conclusion

At least 7 individuals represented here. Of those sexed, 5 are male (one aged 16 years), 1 female. Taken together with intact femora, the estimate is of at least 7 males and 1 female.

CONTEXT 1371, BOX 55

General

Broken long bones

1. Upper limbs:

Humeri - 5 upper ends (3 left, 2 right); 5 lower ends (left 2 right)

6 other fragments

Radii - 1 left, 1 right

2. Lower Limbs:

Femora - 6 upper ends, (4 right, 2 left). One is of a child aged about 12 years. All are too damaged to sex reliably.

4 lower ends, 2 right (1 aged about 15 years), 2 left (1 aged about 12 years)

Tibiae - only one is intact (right, male). 4 left lower ends. 2 left shafts. 3 damaged plateau.

Conclusion

Taken together with previous femoral counts in context 1371, the total number of individuals must be at least 9 including 3 juveniles aged 12, 15/16, 18 years.

CONTEXT 1371 BOX 54

General

Miscellaneous

Skull fragments - 2 left temporal bones, 1 right temporal. 1 occipital. 1 sphenoid.

Vertebrae - 8 thoracic and lumbar vertebral bodies, some with intact arches. One lower thoracic body shows Schmorl's nodes.
1 lumbar vertebra has arthritic lipping of the body.

Ribs - 10 fragments, mostly robust.

1 damaged sacrum, small, probably a young female.

Hip bones. Major fragments - 6 left (3 male, 3 female)

2 right (1 male, 1 indeterminate)

5 other fragments

Upper limbs - Scapulae - 1 left, 1 right, 1 shaft of left humerus.

Ulnas - 4 right, 2 left.

2 metacarpals.

Lower Limbs - 1 lower end of fibula. 1 right calcaneum, 1 left talus.

Also miscellaneous small broken fragments, including animal bones.

Conclusion

At least 3 adult males and 3 adult females are represented.

Vertebral osteoarthritis. Schmorl's nodes.

CONTEXT NO. 1382, BOXES 58-61

General

Partial remains of a number of individuals: the box numbers relate to common items such as skulls, femora etc., not to separate graves, and will be described together.

Skulls

1) Well represented. Vault - cranial index 74.3 (dolichocephalic). All sutures are unfused. Narrow forehead, distance between inner surfaces of the fronto-zygomatic sutures is 9.2cm. Supraorbital ridges are shallow. Bilateral supraorbital foramina. Parietal thickness up to 5mm. External occipital protuberance 1cm thick. Right temporal bone, small mastoid process, the root of the zygoma does not extend over the external auditory meatus. Right side of hard palate.

Mandible - Small size, H₁=2.6cm, RB₁=3.2cm.

Dental formula:

8 7 6 5 4 3 2 1	Area missing
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Note The lower 3rd molars are imperfectly erupted.

Conclusion

Female aged 18yrs, dolichocephalic, bilateral supraorbital foramina.

There is a hard palate and teeth from another body, attrition age about 35yrs.

2) Vault fragments. Frontal bone has moderate supraorbital ridges. 16 parietal fragments. Parietal thickness is up to 9mm. Occipital bone, fused speno-occipital synchondrosis. Fragments of sphenoid. Right zygoma. Right and left temporal bones, mastoid processes damaged, root of zygoma extends over external auditory meatus. Right hard palate with 2 premolars and 2nd incisor in situ, marked attrition, age 35yrs +.

Conclusion

Male adult aged 35yrs+.

Also included left side of hard palate, 3 molars in situ, 3rd molar only partially erupted, attrition age about 17yrs.

3) Frontal bone broad forehead, 10.5cm between inner aspects of fronto-zygomatic sutures. Strong supraorbital ridges. Left supraorbital foramen. 6 parietal fragments up to 9mm thick. Endosteal fusion of interparietal and frontoparietal sutures. Temporal bones with strong mastoid processes, the root of zygoma extends over auditory meatus. 2 occipital bones, one robust with an external occipital protuberance 1.6cm thick, the other more slender, the protuberance 1.3cm thick.

Conclusion

Adult male aged over 25yrs. (suture fusion)

Vertebrae

Very poorly represented. 3 fragments of vertebral bodies, one of which is of an adolescent.

Pelvis

Hip bones 2 left (1 male, 1 female), 6 fragments

Ribs

21 fragments up to 14cm long.

Upper limbs

Two scapulae, 1 right, 1 left.

Clavicles all damaged 1 right; 4 left (3 male, 1 female) two, 1 male, 1 female, have unfused medial ends, aged less than 25yrs.

Humeri 3 upper ends, 1 right, 2 left, 6 shafts, 1 lower end (left)

Ulnas 3 right, 2 left.

Radii 2 right, 4 left. 11 forearm shaft fragments.

Hands 8 metacarpals.

Lower limbs

Femora all broken. Upper ends 3 right (2 male, 1 female) 1 left (male). Lower ends 3 right (1 male, 1 female, 1 child of 12yrs); 2 left (1 male, 1 female).

Shafts 1 right 3 left

Conclusion

At least 5 individuals (2 male, 1 female, 1 child 12yrs)

Tibiae plateaux 2 right. Lower ends 8 right 8 left. 22 shaft fragments.

Conclusion

At least 8 individuals represented.

Fibulae 32 fragments. Patellae 2 right.

Feet Tarsal bones are very well represented.

Calanei 8 right (4 male, 3 female, 1 child aged about 12 yrs): 9 left (4 male, 3 female, 2 indeterminate).

Tali 5 right (3 male, 3 female); 9 left (5 male, 4 female).

Naviculars 5 right, 8 left

Cuboids 5 right, 8 left

Medial cuneiforms 5 right, 6 left

Intermediate cuneiforms 4 right, 5 left

Lateral cuneiforms 3 right, 5 left

First metatarsals 7 right, 7 left. 71 other metatarsals, 29 phalanges.

Conclusion

At least 10 individuals 5 males, 4 females, 1 child aged about 2yrs.

General Conclusions, Context 1382

Numbers - at least 10

Sexes 5 males, 4 females, 1 child

Ages (mostly from skulls) Males 25, 35yrs, Female 18yrs, Indeterminate 35yrs, Child 12yrs.

Congenital 1 bilateral supraorbital foramina, 1 left supraorbital foramen.

BOX 62. MISCELLANEOUS SMALL FINDS

CONTEXT 1350

1 parietal bone fragment, only 2.5mm thick, from skull vault of a juvenile

Left 3rd metacarpal

CONTEXT 1358

Lumbar vertebra. 2nd metatarsal

CONTEXT 1370

Lower half of left humerus, male. Rib fragment. Animal bone

CONTEXT 1371

A pair of femora, vertical height of head 5.1cm, of neck 3.4cm, bicondylar width 8.8cm. Strong muscle markings. Length 47.3cm, corresponding to a body height of 175.2cm (5 9)

CONTEXT 1372

Lower 2/3rds right femur, male. Upper 2/3rds left tibia, probably male. Fragment of iliac crest. Fragment of radial shaft. 3 animal bones.

CONTEXT 1374

Skull fontal bone fragment, large supraorbital ridge. 1 parietal bone fragment.

Body of lumbar vertebra.

2 hip bones, including large, male-type acetabulum. Head of right femur, 5.4cm in vertical diameter. Lower end left fibula, robust. Midshaft robust right humerus.

Conclusion

Partial remains of a robust adult male. 2 animal bones.

CONTEXT 1380

2 fragments of right scapula. 2 fragments lower end right tibia. 3 calcaneum. All bones are of slender build

Conclusion

Partial remains of an adult female.

CONTEXT 1388

1) Skull vault intact, but distorted by post mortem pressure. All sutures are completely fused. Moderate supraorbital ridges. Bilateral supraorbital foramina.

Conclusion

Male aged 35yrs+, bilateral supraorbital foramina.

2) Fragment right side of frontal bone. Left parietal bone 2.6mm thick. Occipital bone with an external occipital protuberance 7mm thick. All bones are of slender build, unfused sutures.

Conclusion

Female aged about 14yrs.

BOX 63: MISCELLANEOUS SMALL FINDS

CONTEXT 1382

Skull vault parietal, occipital and temporal bones. Endosteal fusion of interparietal but not occipitoparietal sutures. Parietal thickness is up to 8.5mm. Small mastoid processes.

Conclusion

Female aged about 20 yrs. (suture fusion)

12 parietal fragments up to 9mm thick. Left temporal bone with medium-sized mastoid process. Left squamous temporal without petrous or mastoid. Sexually indeterminate.

Left humerus, unfused head and lateral epicondylar epiphysis: an adolescent aged about 14yrs

Right ulna. Midshaft of femur. Damaged right talus. Damaged left calcaneum. 2 metatarsal fragments.

Midshaft of femur from a child aged about 6yrs.

CONTEXT 1389

Skull vault with eroded surfaces. Damaged frontal and 2 parietal bones. Strong supraorbital ridges. Parietal thickness is up to 5mm. Left mastoid process strongly developed. The root of the zygoma extends over the external auditory meatus. 3 parietal fragments. Occipital bone.

Mandible damaged body only

Dental formula:

8 7 6 5 4 3 2 1	1 2 3 missing
-----------------	---------------

Attrition indicates an age of 40yrs+. Gross periodontal disease

Hyoid bone. Greater and lesser horns are fused.

Vertebrae. 3 cervical vertebrae including axis. 9 fragments of thoracic vertebrae, some with arthritic lipping of bodies.

Sacrum. Male type. Spinour sproccessed of S1 vertebra are unfused.

Ribs. 8 fragments. Arthritic lipping of costo-transverse joints.

Upper limbs. Damaged right scapula. Right clavicle moderately robust, lateral end damaged.

Damaged right humerus, upper end missing. Shaft of left humerus. Midshaft of right ulna. Radial fragment.

Conclusion

Male aged 40yrs+. Periodontal disease. Osteorthritis of thoracic vertebral bodies and costs-transverse joints.

CONTEXT 1391

Lower end of large left tibia (male)

CONTEXT 1393

2 fragments of parietal bones of skull, up to 8mm thick. 1 rib fragment. 2 hip bone fragments, robust, of male type with large acetabulum.

CONTEXT 1394

Mandible. Body and right angle, robust, H₁=3cm, RB¹=3cm

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
		A														

Attrition indicates an age of about 35yrs+. Severe periodontal recession. Dental abscess ll7.

Vertebrae. Atlas and axis very robust, gross arthritis of the joint between anterior arch of atlas and odontoid of axis (photograph). 4 fragments of thoracic vertebral bodies.

Ribs. 2 small fragments.

Upper limbs. Fragment of left humeral shaft, 1 proximal phalanx.

Lower limbs. Fragments of femoral, tibial and fibular shafts.

Feet right talus and navicular. 10 metatarsals, 2 phalanges.

Conclusion

Male aged 35yrs+. Peridontal disease, dental abscess. Atlanto-axial osteoarthritis.

Also: Midshaft of the humerus of a child aged about 4yrs.

CONTEXT 1400

Intact left radius, slender build, 23.2cm long.

CONTEXT 1410

1) Skull. Frontal bone, zygomata and maxillae are articulated. Large supraorbital ridges. Broad forehead, 10.5cm between the outer margins of the fronto-zygomatic sutures. Complete fusion of the fronto-parietal sutures. The hard palate is intact, but only atypically and imperfectly erupted ul3 and ur2 are in situ, largely still buried in the bone. The left molars had all been shed..

Conclusion

Male aged 40yrs+. Atypical dentition.

Skull. 9 fragments of parietal bones, very robust, up to 9mm thick. Occipital bone with a large external occipital protuberance 2 cm thick. 2 temporal bones with large mastoid processes.

Large mandible: H₁=3.3cm, RB₁=3.7cm, CrH=7.1cm

Dental formula:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
c c	c

Note: ll4 and ll5 are carious roots. The right lower molar sockets are very small only the root tips would have occupied them, indicating gross periodontal recession. lr4 is broken and carious.

Conclusion. Male aged 40yrs+. Gross periodontal disease. Caries, tooth breakage. Probably of poor social status.

Supposed Charnel House Remains

Editorial Note: These bones were discovered within the fill of a robbed out wall of the north side of the nave, and are believed to have been formerly housed in a lost Charnel House nearby

CONTEXT No.1631

General. These are the remains of a number of individuals. They are examined for sex, height and pathology. There is the necessary proviso that sexing individual isolated long bones is sometimes imprecise. There are 129 animal (bovine and sheep) bones, mostly long bones, a few vertebrae and rib fragments, total weight 1.22Kg..

Vertebrae

The bodies of 13 vertebrae are present, all adult (4 lumbar, 7 thoracic, 2 cervical)

Pelvic Bones

Sacrum: 4 adults, (2 male, 2 female)

Hip bones: to avoid overlap, only fragments including acetabulum are sided:

9 right (2 male, 3 female, 4 indeterminate-too fragmented)

14 left (7 male, 7 female)

58 other fragments

17 animal bones (

Ribs 11 fragments up to 12 cm. in length

Upper Limbs:

Scapulae: 3 right, 4 left.

Clavicles : 1 right

Long Bones

Undamaged complete bones

Femora: total 8 (3 right, 5 left)

<i>Side,</i>	<i>Length</i>	<i>Head height</i>	<i>Neck height</i>	<i>Bicondylar width</i>	<i>Sex</i>	<i>Body Height.</i>
R	46.5cm.	5cm.	3.4cm.	8.3cm.	Male	173.4cm.(5'8½")
R	42.1	4.5	3.3	7.2	Male	163.2 (5'4½)
R	43.9	4.2	2.8	---	Female	162.5 (5'4)
L	44.5	4.8	3.5	8	Male	168.7 (5'6½)
L	47	4.8	3.6	8.05	Male	174.5 (5'8½)
L	45.7	4.7	3.5	---	Male	171.5 (5'7½)
L	45.8	4.5	3.2	---	Male	171.7 (5'7½)
L	42.8	4.5	3.3	7.4	Female	159.8 (5'3")

Tibiae: total 14 (9 right 5 left)

These have not all been measured, since the derived information about body height would overlap to an unknown extent with the above.

The longest is 40.1cm. (male), giving a body height of 178.9 cm. (5'10½)

The shortest is 33.5cm. (female), giving a body height of 158.68cm. (5'2½")

Note: these measurements lie outside the range derived from the femora

Humeri: total 2 (both right)

Ulnars: total 3 (2 right, 1 left)

B)Long bone fragments

General. Some fragments (total weight 1.16 Kg.) are too small to allocate usefully.

Lower limb

Femora:

Head and upper shaft-

7 right- 5 adult (4 male, 1 female), one aged about 16yrs., one about 12yrs.

12 left- all adult (8 male 4 female)

head only, side not determined, 7 adults (3 male, 3 female)

Condyles and lower shaft-

14 right- 13 adult, 1 about 18yrs.. Sexing as judged by the length of the lateral condyle, where undamaged: 3 male, 5 female, 6 indeterminate.

20 left- 19 adult, 1 aged about 16yrs..(8 male, 7 female, 5 indeterminate)

Major shaft fragments of femora: 29, not sided or sexed.

Tibiae (sexing is imprecise):

Tibial plateaux (upper articular surfaces)-

10 right, adult (4 female, 6 male)

13 left, adult, 1 about 19yrs (10 male 3 female)
3 indeterminate
lower articular surfaces and medial malleolus (not sexed)

11 right, adult
6 left, adult, (1 aged about 19yrs.)
major shaft fragments of tibiae-

32 (not sexed)

Fibulae (not sexed):
5 lower end (4 left, 1 right), 3 upper end, 8 shaft fragments (not sided)

Upper limb

Humeri:
Head and upper shaft-

4 right, adult (2 male, 2 left)

5 left (3 male, 2 female)

Head only
Upper epiphysis partly fused 1, age about 16yrs.
Lower articular surface (sexing is imperfect)

7 unsexed

12 right (7 male, 5 female)

16 left (11 male, 5 female)

Major long bone fragments- 22, not sexed.

Radius:

Head and upper shaft- 4 (2 right, 2 left)

Lower end and shaft- 5 (3 right, 2 left)

Major shaft fragments- 6

Ulna:

Upper articular surface and shaft- 5 (3 right, 2 left)

Lower articular surface and shaft- 3 (2 right, 1 left)

Major shaft fragments

1

Miscellaneous unspecified broken fragments, 812 g.

Number of individuals

Summary

Femora: Adults- 15 male, 8 female. Juvenile- 1 aged 12yrs., 1 aged 16yrs.

Tibiae: Adults- 10 male, 4 female, 3 indeterminate. Juvenile- 1 aged 19yrs.

Humeri: Adults- 14 male, 7 female

CONTEXT 1631 (*continued*)

Skulls

General. These remains are often only vault fragments.

Skull No.1 (intact). Cranial index 76.3 (mesocephalic). Fairly broad forehead, distance between outer surfaces of the fronto-zygomatic sutures is 10.55cm.. Supraorbital ridges are well developed. Strong mastoid processes, external occipital protuberance and muscle markings. The zygomatic process extends over the external auditory meatus. The spheno-occipital synchondrosis is fused. The left supraorbital notch is a foramen. The interparietal and much of the parieto-occipital skull sutures are fused externally. The maxilla is intact, most of the teeth were lost post-mortem, some carious molar roots remain.

Mandible- absent

Conclusions

Age. 45yrs+ (skull sutures, dental roots)

Sex. Male

Congenital. Mesocephalic. Left supraorbital foramen.

Skull No.2. Vault intact, occipital and temporal bones detached. Cranial index 72.8 (dolichocephalic). Distance between outer surfaces of the fronto-zygomatic sutures is 10.3cm.. Supraorbital ridges are strong, frontal sinuses large. Large supraorbital notches. Male type frontal bone. Very large mastoid processes. Strong root of zygoma. Fused interparietal, partly fused parieto-occipital skull sutures.

Conclusions

Age. 40+ (skull sutures)

Sex. Male.

Congenital. Dolichocephalic

Skull No.3. Vault, temporal bones, maxillae. Cranial index 74.3. Distance between outer surfaces of the fronto-zygomatic sutures is 10.3cm. Shallow forehead. Supraorbital ridges moderately well developed. Deep supraorbital notches. Mastoids damaged. Strong external occipital protuberance. Strong root of zygoma which extends over external auditory meatus. Persistent unfused metopic suture. Interparietal suture is fused endosteally. Maxilla: fairly wide palate, distance between 1st. molars 3.6cm.

Dental formula:

$$\begin{array}{c} 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1 \quad | \quad 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8 \\ \hline \end{array}$$

Attrition of 1st. molars is equivalent to 20yrs.; 3rd. molars are erupted but not worn at all

Conclusions

Age. 20yrs. (dental attrition)

Sex. Male

Congenital. Persistent metopic suture. Dolichocephalic.

Socio-economic. Diet not very coarse

Skull No.4. Damaged vault, cranial index cannot be measured. Petrous temporal, basal fragments. Distance between outer surfaces of the fronto-zygomatic sutures is 10.4cm. Supraorbital ridges are strong, frontal sinuses large. All skull sutures are fused endosteally, the interparietal is partly fused externally also. The spheno-occipital synchondrosis is fused. The left mastoid process is damaged, its base is large. Root of zygoma extends over external auditory meatus.

Conclusions

Age. 35yrs. (skull sutures)

Sex. Male.

Skull No.5. Frontal bone, 2 parietal fragments and the occipital bone. Narrow, sloping forehead, distance between outer surfaces of the fronto-zygomatic sutures is 10cm.. Low supraorbital ridges, small frontal sinuses. Parietal thickness is up to 7mm.. Fronto-parietal sutures were just fused endosteally but not externally. Well developed arachnoid pits in frontal bone. External occipital protuberance is 9mm. thick.

Conclusions

Age. 30 (well developed arachnoid pits in frontal bone, suture fusion)

Sex. Female (frontal bone)

Extraneous Inclusion:. The skeletons of two small medieval church mice! .

Skull No.6. Half of frontal bone, left parietal, occipital. Moderate supraorbital ridges. Arachnoid pits. Parietal thickness is up to 9mm. External occipital protuberance 1.5cm.. Fusion of interparietal and partly of frontoparietal.

Conclusions

Age.40+yrs. (skull sutures)

Sex. Male

Skull No.7. Frontal bone is intact. Broken fragments of parietal bones. 2 temporals, occipital, sphenoid. Moderate supraorbital ridges. Right supraorbital foramen. Distance between frontozygomatic sutures 10.45cm.. Parietal thickness is up to 1 cm. Endosteal and partial external fusion of frontoparietal and interparietal sutures. Medium sized mastoid processes. Zygomatic root extends over external auditory meatus. Fusion of the spheno-occipital synchondrosis.

Conclusions

Age. 40yrs. (skull sutures)

Sex. Male

Congenital. Right supraorbital foramen.

Skull No.8. Damaged frontal bone. Both parietals are fragmented. Both temporal bones. Strong supraorbital ridges. Parietal thickness 8mm..Arachnoid pits. Distance between frontozygomatic sutures is 10.5cm. Endosteal fusion of most skull sutures. Strong mastoid processes. The root of the zygoma extends over the external auditory meatus.

Conclusions

Age. 35yrs. (skull sutures)

Sex. Male

Skull No.9. Frontal bone, fragments of parietals and occipital. Persistent metopic suture, fused endosteally. Strong supraorbital ridges. Left supraorbital foramen. The distance between fronto-zygomatic sutures is 11.2cm.. External occipital protruberance is 1.1cm. thick. The fronto-parietal and interparietal sutures are fused endosteally only.

Conclusions

Age.35 (skull sutures)

Sex. Male

Congenital. Persistent metopic suture. Left supraorbital foramen.

Skull No.10. Includes most of left side of vault, both temporals and sphenoid. Damaged frontal bone with large frontal sinuses exposed. Probably fairly narrow forehead. Endosteal fusion of interparietal and frontoparietal sutures; fused spheno-occipital synchondrosis. Medium sized mastoid process. Root of zygoma extends over auditory meatus. Frontal bone is up to 8mm. thick, parietal up to 6mm.

Conclusions

Age. 35 yrs. (skull sutures)

Sex. Female

Skull No.11. Damaged vault, left temporal bone. Strong supraorbital ridges. Large frontal sinuses. Very deep arachnoid pits. Frontoparietal and interparietal sutures fused endosteally. Parietal thickness 7mm. External occipital protuberance 1.5cm. thick. Moderate sized mastoid process. Zygomatic root extends over external auditory meatus.

Conclusions

Age. 40 (sutures, deep arachnoid pits)

Sex. Male

Skull No.12. Damaged frontal bone. Endosteal fusion of frontoparietal sutures. Narrow forehead. Distance between outer surfaces of the fronto-zygomatic sutures is 10cm.. Of slender build. Occipital, temporal and maxillary fragments, not definitely assigned to this skull: molar teeth lost ante-mortem. premolars very worn.

Conclusions

Age. 40

Sex. Female.

Skull No.13. Damaged frontal bones. Narrow forehead of female type.. Endosteal fusion of fronto parietal sutures. Frontal bone thickness 6.5mm.

Conclusions

Age. 25yrs. (sutures)

Sex. Female

Skull No.14. Isolated occipital bone, and posterior part of fused parietal; 11 mm. thick, very robust.

Conclusions

Age. Adult, probably 40+ (disease onset)

Sex. Male

Pathology. Paget's disease

Skull No.15. Left side of frontal bone, left parietal. Fairly strong supraorbital ridges. Left supraorbital foramen. Parietal thickness 7mm. Frontoparietal and interparietal sutures fused endosteally and partly externally.

Conclusions

Age. 35yrs.(sutures)

Sex. Male

Congenital. Left supraorbital foramen.

Skull No.16. Very damaged frontal bone with large sinuses. External occipital protuberance 1.4cm. thick. Right maxilla with I16 and I17. Attrition age 30yrs. Two right temporal bones. Left temporal.

Conclusions

Age. 30yrs. (dental attrition)

Sex. Male

Skull No.17. Left side of frontal and anterior part of both parietals. Moderate supraorbital ridges. Small sloping forehead. Parietal thickness 7mm. Right temporal: root of zygoma does not extend over external auditory meatus. Mastoid process is damaged. Frontoparietal and interparietal sutures are fused endosteally and partly externally.

Conclusions

Age.35yrs. (sutures)

Sex. Male

Skull No.18. Most of the vault is present but in many fragments, plus right temporal and hard palate. Distance between outer surfaces of the fronto-zygomatic sutures is 10.3cm. Moderate supraorbital ridges. Parietal thickness 7mm. Fronto-parietal and interparietal sutures are fused endosteally. Large mastoid processes and strong root of zygoma. Hard palate- all molar and premolar teeth have been lost ante-mortem. I1 1 is a carious root only

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Conclusions

Age. 45yrs. (dental attrition and tooth loss)

Sex. Male.

Skull No.19. Most of the vault is present but in fragments. Frontal, right zygoma, and maxilla are articulated. 2 temporal bones. Slight supraorbital ridges, sharp upper orbital margins. Distance between frontozygomatic sutures is 11cm. Medium sized mastoid processes. Root of zygoma does not cross external auditory meatus. Parietal thickness 7mm.. Fronto-parietal and interparietal sutures are fused endosteally. External occipital protruberance is 1.5cm. thick.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Conclusions

Age. 45yrs. (dental condition)

Sex. Female.

Skull No.20. Intact vault (frontal, parietals and occipital are articulated). Right temporal, nil else of base. Cranial index 75.1 (mesocephalic). Narrow forehead. Distance between outer surfaces of the fronto-zygomatic sutures is 9.4cm.. Shallow supraorbital ridges, small frontal sinuses. No arachnoid pits. Recent endosteal fusion of frontoparietal and interparietal sutures. Weak root of zygomatic process. Small mastoid process. External occipital protruberance 1.7cm. thick.

Conclusions

Age. 30yrs. (sutures)

Sex. Female

Congenital. Mesocephalic

Skull No.21. The vault is damaged. 2 temporal bones. 2 maxillae including hard palates, (1 from another body). Sphenoid, occipital and parietal fragments (some from other skulls). Cranial index 74.7 (dolichocephalic). Distance between outer surfaces of the fronto-zygomatic sutures is 10.1cm.. Supraorbital region is damaged; fairly large frontal sinuses. Slender parietal and frontal bones. Endosteal fusion of frontoparietal and interparietal sutures. Root of zygomatic process extends over external auditory meatus. Small mastoid process. External occipital protuberance 1.3cm. thick. The maxilla belonging to this skull has the following

Dental formula:

$$\frac{\begin{array}{cccccccc} \text{\textcircled{8}} & 7 & 6 & 5 & 4 & 3 & 2 & 1 \end{array}}{\begin{array}{cccccccc} 1 & 2 & 3 & \text{missing} \end{array}}$$

Oblique attrition of ll 5. Attrition corresponds to an age of about 35yrs..

Note the other hard palate and parietal fragments are from an older person

Conclusions

Age. 35yrs. (dental attrition)

Sex. Probably male (frontal sinuses- some other features are indeterminate)

Congenital. Dolichocephalic

Skull No.22. Vault can be partially reconstructed. Also the sphenoid and a left temporal bone. Cranial index 77.9 (mesocephalic). Narrow forehead, distance between outer surfaces of the fronto-zygomatic sutures is 10.1cm.. Shallow supraorbital ridges, medium sized frontal sinuses. Slender bones of vault. Endosteal and much external fusion of a metopic,

frontoparietal, interparietal and occipitoparietal sutures. Root of zygomatic process does not extend over external auditory meatus. Small mastoid process. External occipital protuberance is 1.1cm. thick.
Adventitial inclusions: additional occipital protuberance, animal frontal bone, one iron coffin nail.

Conclusions

Age.40yrs. (sutures)

Sex. Female

Congenital. Mesocephalic. Persistent, partly fused metopic suture.

Skull No.23. A frontal bone totally fused with the parietal bones, damaged on the left side. Shallow narrow forehead. Slight supraorbital ridges. Small frontal sinuses.

Conclusions

Age. 40yrs. (Sutures)

Sex. Female

Skull No.24. Vault- the frontal bone and most of the parietals. Occipital bone is missing. Damaged right temporal bone. 2 zygomata. Hard palate. Narrow forehead. Distance between outer surfaces of the fronto-zygomatic sutures is 10.2cm.. Shallow supraorbital ridges. Bilateral supraorbital foramina. Metopic suture present. Early endosteal fusion of frontoparietal, interparietal and occipitoparietal sutures. Root of zygomatic process does not extend over external auditory meatus. Small mastoid process. Narrow hard palate, 3.2cm. between 1st. molars.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

The degree of attrition is equivalent to an age of 25yrs.

Conclusions

Age 25yrs.

Sex. Female

Congenital. Metopic suture. Bilateral supraorbital foramina.

Skull No.25. The vault can only be partly reconstructed. Not possible to measure the cranial index but is evidently brachycephalic. Many small vault fragments. Broad forehead. Distance between outer surfaces of the fronto-zygomatic sutures is 10.7cm. Strong supraorbital ridges. Parietal thickness 7mm.. Deep arachnoid pits. Frontoparietal and interparietal sutures are largely fused endosteally and externally, occipitoparietal endosteally only. Root of zygomatic process extends strongly over external auditory meatus. Strong mastoid process.

Conclusions

Age. 40yrs (sutures)

Sex. Male

Congenital. Brachycephalic.

Skull No.26. Large fragments of vault, including duplication of the left side of the frontal bone (one from another subject). Strong construction. Strong supraorbital ridges. Parietal thickness up to 9.5mm. Numerous arachnoid pits in frontal bone. All sutures were fused. External occipital protuberance 1.5cm. thick. Left supraorbital foramen. Part of right side of hard palate with 1st. and 2nd. molars in situ. Attrition age is about 40yrs..

Conclusions

Age. 40yrs.

Sex. Male

Congenital. Left supraorbital foramen

Context No.1629.

Skull No.27. 10 parietal fragments. Very robust, up to 1.1cm. thick. 1 frontal fragment with large sinuses. Endosteal fusion of sutures.

Conclusions

Age. 40yrs. (endosteal fusion and thickness of bone)

Sex. Male. Also sheep bones

Skulls: Summary of numbers and sex

Male 17, Female 8

Miscellaneous skull fragments.

Frontal bones. 42 bones, of which 13 represent major supraorbital fragments, i.e. 13 separate individuals, of which 7 are male, 5 female, 1 indeterminate, as judged by supraorbital ridging, and where possible, width and slope of forehead.

Congenital: 2 left sided supraorbital foramina

Parietal bones. 198 fragments, some of which are small and could be frontal. Generally too damaged to number or sex individuals.

Occipital. 28 fragments, of which 16 have the occipital protruberance and represent 16 individuals.

Sphenoid. 15 fragments.

Temporal bones. 31 fragments of which 12 have right petrous temporals (12 individuals), 8 have left petrous temporals

Zygomatic bones. 7

Maxillae. 18 fragments, of which only 3 have more than $\frac{1}{2}$ of a hard palate and can be taken to represent separate individuals.

Mandibles. 14 fragments, of which 7 have the midline region and represent individuals, 2 are from the right side, 4 from the left side of the jaw

Also: 12 loose teeth, 5 animal bones

The 1988 Excavations of the Choir

CONTEXT 1701, Find No.6701

General. Almost complete. Very well preserved. In the same grave, to the right of the skull there was an infant burial (no. 1702), also accidental inclusion of the right side of the body of another adult mandible.

Skull. The vault is in fragments, of medium build, the parietal bone is up to 5.5mm. thick. Endosteal fusion of frontoparietal and interparietal sutures. Large frontal sinuses, well marked supraorbital ridges. Slender but well developed mastoid processes. Each zygomatic process extends well over the auditory meatus. Very strong occipital muscle markings. Only the occipital and petrous temporal represent the skull base. The spheno-occipital synchondrosis was fused (over 25yrs. old). The hard palate is fragmented.

Mandible- of medium build, strong muscle markings. $H_1=3.2\text{cm.}$, $RB^1=2.8\text{cm.}$, $Cr.H=6\text{cm.}$

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>																
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

No caries. No periodontal disease. No tooth loss. Molar attrition, more marked on the right, suggests an age of about 25yrs.. There is some wear of the cutting edges of the upper central incisors. The lower 3rd. molars were probably congenitally absent.

Vertebrae. All the vertebral bodies are present, some arches are damaged. Very robust, no arthritis.

Pelvis. The sacrum is damaged; alar width is 12.6cm., 1st. body width is 5.2cm.; the 1st. and 2nd. bodies are fused anteriorly and posteriorly. Robust hip bones, narrow (though slightly atypical) sciatic notch, capacious acetabulum, 6.2cm. in height, everted ischio-pubic rami. The ridging of the pubic symphysis is in the 22-29yr. range.

Ribs. Moderately well represented from both sides, robust- up to 1.8cm. in vertical thickness.

Sternum. Part of the manubrium and 1st. sternebra.

Upper limbs. Clavicles- robust, 14.5cm. long, strong ligamentous markings. Scapulae- large, the blades are damaged.

Humeri- both are intact, robust, strong shoulder muscle markings; their length of 34.2cm. gives an estimated total body height of 176.9cm. (5'9½").

Forearm bones- broken, strong supinator crest on both ulnas, strong tendon ridges distally on the dorsum of each lower radius.

Right hand- 5 carpals, 5 metacarpals, 5 proximal and 3 intermediate phalanges.

Left hand- 7 carpals, 5 metacarpals, 5 proximal, 4 intermediate and 4 terminal phalanges.

Lower limbs. Femora- very robust, the shaft is bowed laterally, slightly more marked on the right than on the left (Plate 18).

Vertical diameters of head and neck are 4.85cm. and 3.26cm. respectively. Bicondylar width is 8.05 cm. (strongly male-type).

Total length is 46cm., giving an estimated total body height of 172.25cm. (5'8"). Muscle markings, particularly the gluteal tuberosity, are strong.

Tibiae and fibulae are not bowed.

Right foot- 7 tarsals, 5 metatarsals, 4 proximal, 2 intermediate and 1 terminal phalanges

Left foot- 7 tarsals, 5 metatarsals, 5 proximal, 2 intermediate and 1 terminal phalanges.

Note- in both calcaneal bones the lateral tubercle is unusually large and the peroneal tubercles are well marked.

Conclusions

Age. 28- 30yrs. (dental attrition, skull sutures, sacral fusion)

Sex. Male (cranial and pelvic features, clavicles, robust long bones)

Height. Averaged at 174.58cm. (5'9")

Socio-economic. The excellent dental condition suggests a good social class and non-coarse diet

Physique Strong shoulder and hip muscles. The femoral bowing is not rachitic and has evidently been acquired from an early age, probably as a result of much horseriding; the calcaneal features may also be significant in this.

Congenital. Absent lower 3rd. molars

Pathology Nil.

Context 1702

General. The incomplete remains of an infant burial. Weight 33g.

Skull. The vault is up to 2.6mm. thick, the diploe poorly developed. The occipital protruberance is 5mm. thick. The 2 frontal bones are unfused. The petrous temporal is at least 6 months post-natal.

Dental formula:

<u>E</u> <u>D</u> <u>C</u> B A	<u>A</u> <u>B</u> <u>C</u> <u>D</u> <u>E</u>
<u>E</u> <u>D</u> <u>C</u> B A	A B <u>C</u> <u>D</u> <u>E</u>

The incisor roots are 1/2 to 2/3rds. formed (they are normally fully developed by 1½yrs.) The E crown is fully formed but there is only the beginning of the root junction (the crown is formed by 10 months)

Vertebrae. The arches are unfused to one another or to the bodies

Limbs. The clavicle is 4.6cm.+ long (the ends are slightly damaged). Humeral and femoral midshafts are present.

Conclusions

Age. 10-12 months. (the most reliable evidence is dental, but this is supported by the size of clavicles and petrous bones).

CONTEXT No.1826, Find No.6703

General. Incomplete; the hands, feet and vertebrae are missing. All bones are broken and dark coloured.

Skull. The vault is fragmented. Of robust build, the parietals are up to 6.9mm. thick. The frontoparietal, interparietal and occipitoparietal sutures are all completely fused. Large frontal sinuses and supraorbital ridges. Strong mastoid processes. Strong occipital muscle markings. The base is represented by petrous temporals, occipital and damaged sphenoid bones. Mandible- very robust with strong muscle markings. H₁=3cm., RB₁=3.3cm., Cr.H=7.7cm.

Dental formula:

AA								AA							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
<hr/>								<hr/>							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

Dental attrition indicates an age of about 40yrs., the wear of the lower 1st. molars is oblique. Apical abscesses of upper molar teeth bilaterally. Periodontal recession.

Pelvis. One fragment of each hip bone. The acetabulum is capacious.

Upper limbs. One fragment of left scapula. No clavicular remains.

Humeri- fragmented and eroded, robust with well developed shoulder muscle insertions. The left humerus is 32.5cm. long, giving an estimated body height of 172cm. (5'8").

Forearm bones- fragmented.

Lower limbs. Femora- robust, the vertical diameter of head and neck are 4.75cm. and 3.7cm. respectively (male-type measurements). The length of the right femur is 43.7cm., giving a total body height of 166.9cm. (5'6"). The linea aspera and gluteal tuberosities are well developed. There is arthritic lipping of the condyles, encroaching on the intercondylar notch. Tibiae- gross arthritic lipping of the upper articular surfaces. The soleal line is well marked.

Conclusions

Age. Approximately 40yrs. (dental attrition, skull suture fusion, arthritis)

Sex. Male (cranial and femoral features)

Height. 169.4cm. (5'7") (averaged)

Physique. Muscular.

Socio-economic. Poor dental hygiene and coarse diet.

Pathology. 1) Dental abscesses, periodontal disease.

2) Osteoarthritis of the knee joints.

CONTEXT 1827, Find No.6704

General. Most regions are represented; only a few bones from the hands are present. State of preservation is fairly good. The skull and most of the major long bones are broken. (There is extraneous inclusion of a pectoral girdle, also some elderly male vertebrae with arthritic lipping).

Skull. Many broken fragments. The vault is grossly thickened throughout: the parietal bone is 1.32cm. thick, evidence of Paget's disease. Frontoparietal and interparietal sutures are fused. Large frontal sinuses but no supraorbital ridges. Narrow forehead, small mastoid processes, moderate occipital muscle markings. The base is represented by petrous temporals, occipital and fragments of sphenoid bones. The hard palate is intact, with 4 teeth in situ.

Dental formula:

$$\begin{array}{c|cccccccc} 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ \hline 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ & & & & & & & & & A & A & & & & & \end{array}$$

Vertebrae. All the vertebral bodies are present and many vertebrae are intact; of small size, no arthritis.

Ribs. Both sides are well represented, of medium build, up to 1.3cm. in vertical diameter. No ossification of the 1st. costal cartilage. No arthritis

Sternum. The sternebrae are fused.

Humeri- of medium build, moderately strong shoulder muscle insertions; humeral length 31.1cm., giving a total body height of 162.46cm., (5'4").

Forearm bones- fragmented. Right hand- 4 carpal bones, 2 metacarpals, 1 subterminal phalanx. Left hand- not represented.

Lower limbs. Femora- 43.5cm. long, giving a total body height of 161.54cm. (5'3½"). The vertical diameters of the head and neck are 4.57cm. and 3.25cm. respectively (quite large for a female). Muscular ridging is strong.

Tibiae- well developed soleal line. Fibulae- fragmented. Patellae- intact.

Right foot- 7 tarsals, 5 metatarsals, 3 subterminal phalanges.

Left foot- 5 tarsals, 5 metatarsals, 1 subterminal phalanx.

Conclusions

Age. 35-40 yrs. (the dental attrition is difficult to evaluate because of tooth loss; other evidence includes fusion of skull sutures, incomplete sacral fusion, no costal cartilage ossification).

Sex. Female (pelvis)

Height. 162cm. (5'4") (averaged)

Physique. Good muscular development, fairly stout bony build.

Socio-economic. Tooth loss and bad dental hygiene suggest poor status.

Pathology. 1) Paget's disease (osteitis deformans) affecting skull only.

2) Periodontal disease, tooth loss, dental abscesses.

CONTEXT No.1825, Find No.6705

General. A complete skeleton, almost undamaged. (There is an accidental inclusion of a collection of extraneous pelvic and hand bones).

Skull. Intact. Mesocephalic, cranial index 76.8. Vault sutures are all unfused externally. There is a large wormian bone in the left parieto-occipital suture. Shallow supraorbital ridges. Narrow forehead- 10.6cm. between the outer borders of the fronto-zygomatic sutures. Small mastoid processes. Poor occipital muscle markings. Fused spheno-occipital synchondrosis. Facial bones and hard palate are intact.

Mandible- Shallow body but unusually wide rami. H₁=2.5cm., RB¹=3.5cm., Cr.H=5.9cm.

Dental formula: .

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

Molar attrition is slight and corresponds to an age of 22-24yrs. There is moderate wear of the cutting edges of the incisors. No caries. Moderate periodontal recession. The ll 8 has erupted rather obliquely. The upper 3rd. molars are congenitally absent. It is rather surprising that the lr 7 and lr 8 have been lost- probably there was some initial traumatic factor.

Hyoid bone. The body and greater cornua are intact.

Vertebrae. All the vertebrae are present and most are intact; of slight to medium build. There is a congenital defect in the atlas, the two halves of the arch having failed to fuse in the midline posteriorly.

Pelvis. The sacrum is of female type: total width is 11.4cm., the width of the first sacral vertebral body is 4cm. The following intervertebral discs are unfused or imperfectly fused anteriorly: S1-2, S2-3, S4-5. The lateral masses are fused (this takes place before 25yrs. of age). The hip bones are of female type with wide sciatic notch, shallow preauricular sulcus, wide subpubic angle. The pubic symphyseal faces are deeply grooved dorsally and ventrally and therefore should correspond to an age of about 19-20yrs. according to accepted criteria. The secondary epiphysis of the iliac crest is not quite completely fused, giving an age of 23-25yrs.

Sternum. Complete. The 1st. and 2nd. sternebrae are largely unfused (they fuse between puberty and 25yrs.)

Ribs. Fully represented, of slight build, maximum vertical diameter 1.45cm.

Upper limbs. Scapulae present. Clavicles- of slight build with poor muscular and ligamentous markings, 14cm. long, the medial epiphysis is unfused (fuses by 25yrs.)

Humeri- of slight build; their length of 30cm. gives an estimated total body height of 156.77cm. (5'1½"). Only deltoid muscle insertion and the common origin of flexor muscles of the forearm are well marked.

Forearm bones - intact; the supinator crest and brachialis insertion of the right ulna are more marked than on the left. All epiphyses are fused.

Right hand- 8 carpals, 5 metacarpals, 5 proximal, 4 subterminal and 4 terminal phalanges.

Left hand- 7 carpals, 5 metacarpals, 5 proximal, 4 subterminal and 4 terminal phalanges.

Lower limbs. Femora- 41.25cm.long , giving a total body height of 155.9cm. (5'1½"). The vertical diameters of the head and neck are 4.15cm. and 2.85cm. respectively. The upper part of the gluteal tuberosity is enlarged as a 'third trochanter'. The linea aspera is not pronounced but the insertions of gluteus medius and minimus are strong. The upper end of the inter-trochanteric line (iliofemoral ligament) is in the form of a small tuberosity.

Tibiae, fibulae and patellae- present and intact.

Right foot- 7 tarsals, 5 metatarsals, 4 proximal, 4 subterminal and 3 terminal phalanges; 2 metatarso-phalangeal sesamoid bones.

Left foot- 7 tarsals, 5 metatarsals, 5 proximal, 2 subterminal and 1 terminal phalanges. 1 sesamoid.

Conclusions

Age. Approximately 22 yrs. (22-24yrs.) (fused spheno-occipital synchondrosis, erupted 3rd. molars, imperfect sacral and sternal fusion, unfused clavicular epiphysis, recently fused iliac crest epiphysis, ridged pubic symphyseal surfaces, slight dental attrition.)

Sex. Female (pelvis, skull, femora)

Height. Averaged at 156.3cm. (5'1½")

Physique. Mesocephalic. Slender build, well marked forearm flexors and hip muscles.

Congenital. Wormian skull bone. Unfused arch of atlas vertebra. Absent upper 3rd. molars.

Socio-economic. Good dental hygiene. Did not have a coarse diet.

Pathology. Nil.

CONTEXT No.1830, Find No.1830

General. All regions are well represented; well preserved, relatively undamaged. (A few extraneous foot bones are present.)

Skull. The vault is intact, the base fragmented. Brachycephalic, the cranial index 80.8. The frontoparietal, interparietal and occipitoparietal sutures are completely fused. There are the remains of a persistent metopic suture. Very small frontal sinuses and shallow supraorbital ridges. Medium sized mastoid processes. Strong occipital muscle markings. The spheno-occipital synchondrosis is fused. The hard palate is intact with 14 teeth in situ.

Mandible- medium build, a small torus behind 3 .H1=3.4cm., RB1=2.8cm., Cr.H=5.5cm.

Dental formula:

A A																C	
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8	
<hr/>																	
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8	
A C																	

Dental attrition is uneven because of the loss of ll 6, ul 7 & ul 8 ; it is severe in ll 6, more marked in ur 6 than ul 6; moderately advanced wear of the lower incisors: the age range indicated is 30-40yrs. Central caries in ll 7, cervical caries in ur 8. Severe periodontal recession. Abscesses around ll 8 and roots (now lost) of ul 7 & ul 8.

Vertebrae. Robust build, all are present, mostly undamaged. No arthritis of bodies, some lipping of lower costo-transverse joints.

Pelvis. The sacrum is wide, 12.5cm., the first sacral body is 4.7cm. across; the sacroiliac joint surface covers the height of two body segments only (female type). All sacral vertebrae are completely fused to one another (probably aged 40+). Hip bones-

wide sciatic notch, very wide subpubic angle, shallow preauricular sulcus. There is erosion of the pubic symphyseal surface (35yrs.+). The acetabulum is 5.4cm. in vertical diameter. There is some arthritic lipping of the sacroiliac joints.

Ribs. About 1/3rd. of each side is present, of slight to medium build, up to 1.5cm. in vertical thickness; osteoarthritic lipping of the lower costo-transverse joints bilaterally. No ossification of costal cartilages.

Sternum. Only the body is present- there is no grooving between sternebrae (40yrs.+)

Upper limbs. The scapulae present but broken. The clavicles are of medium build, 14.35cm. long; the sternoclavicular joint surface is worn, the costoclavicular ligament attachment strong..

Humeri- intact, length 32.1cm. gives an estimated total body height of 165.82cm. (5'5"). Of medium build, muscle markings not strong but the surface is eroded, so difficult to judge.

Forearm bones- intact, large supinator crests on both ulnas, the brachialis insertion is stronger on the left ulna.

Right hand- 1 carpal bone (hamate), 4 metacarpals, 5 proximal phalanges, 2 subterminal phalanges.

Left hand- 5 metacarpals, 1 proximal phalanx.

Lower limbs. Femora- 43.7cm long, giving a total body height estimation of 162cm. (5'4"), moderately robust. The vertical diameters of the head and neck are 4.56cm. and 3.3cm. respectively (large for a female). Moderate muscular markings.

Tibiae and fibulae - intact.

Right foot- 4 tarsals, 2 metatarsals, 1 subterminal phalanx.

Left foot- 5 tarsals, 5 metatarsals.

Conclusions

Age. 40+ (skull suture fusion, sacral fusion, pubic symphyseal surface, dental condition, arthritis).

Sex. Female (pelvis)

Height. 163.9cm. (5'4½"), averaged.

Physique. Brachycephalic. Robust bone structure. Moderate muscular development

Congenital. Persistent metopic suture. Small mandibular torus.

Pathology. 1). Caries, periodontal disease, dental abscesses

Context No.1833,

Skull. Intact. Brachycephalic, cranial index 80.3. The lower parts of the frontoparietal and most of the interparietal sutures are fused externally. Very large mastoid processes. Well developed supraorbital ridges. Very strong occipital muscle markings. Facial bones and hard palate are intact: only one (carius) tooth, 5 in situ.

Dental formula:

[illegible]

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Pelvis. Sacrum- of male type: the sacroiliac joint surface covers the height of 3 vertebrae; total width 11.7cm., first vertebral width is 5.05cm. There is marked arthritic lipping of the upper surface of the 1st. sacral vertebra. Hip bone- narrow sciatic notch, capacious acetabulum; the pubic symphyseal surface is eroded throughout (elderly type).

Ribs. Moderately well represented but most of the heads are missing. There is very extensive ossification of costal cartilages, including the whole of the first rib cartilage (aged 50+).

Sternum. Only the manubrium is present. The left 1st. costo-sternal joint is fused. There is arthritic erosion of the sterno-clavicular joints.

Upper limbs. The only remains of the left arm are a damaged radius and some hand bones (3 carpals, 4 metacarpals, 4 proximal and 4 subterminal phalanges).

Right arm: robust clavicle, 13.2cm. long, with ossification in the coraco-clavicular ligaments. Right scapula- arthritic lipping of the acromio-clavicular joint.

Humerus- 31.5cm. long, giving an estimated total body height of 169.13cm. (5'6½"); robust with very strong muscle markings

Forearm bones- strong flexor muscle markings but the supinator crest is not well developed..

Right hand- 4 carpals, 3 metacarpals, 2 proximal phalanges.

Lower limbs. Both feet and the lower third of both legs are missing.

Femora- the left is intact, the right damaged; the length is 44cm., giving an estimated total body height of 167.61cm. (5'6"). The vertical diameters of the head and neck are 4.55cm. and 3.2cm. There is some ossification of the gluteal tendon insertions and the linea aspera is also marked. There is slight arthritic lipping of the left femoral head.

Patellae- there is ossification in the tendinous fibres superficial to the patellae, more marked on the left side.

Tibiae- increased roughening of the soleal line. The fibulae are fragmented. Feet- nil present.

Conclusions

Age. 50 yrs.+ (ossification of costal cartilages, eroded pubic symphysis, diffuse osteoarthritis, fusion of skull sutures, loss of teeth).

Sex. Male (pelvic and cranial features)

Height. 168.37cm. (5'6½")- averaged.

Physique. Brachycephalic. Moderately robust.

Socio-economic. Very bad dental condition and diffuse arthritis suggest poor social status.

Pathology. 1) Periodontal disease, loss of teeth, caries, dental abscesses.

2). Diffuse idiopathic skeletal hyperostosis (DISH) and osteoarthritic degeneration of joints. Moderate ossification in tendon insertions, particularly of the pectoralis major and latissimus dorsi in the upper limbs and the glutei in the lower limbs. Ossification in costoclavicular and intervertebral ligaments. Joint degeneration: particularly severe in the spine, with total fusion of 5 thoracic vertebrae to one another (largely due to DISH-ossification of ligaments). Arthritic changes also in costo-transverse joints, sterno-clavicular and acromio-clavicular joints. The arthritis of the left hip joint is slight and the limbs are relatively free of this condition.

Context No. 1945, Find No. 6708

General. Most regions, apart from the ribs are represented, but the bones are much fragmented

Skull. Fragmented, most of the frontal regions, base and face are missing. Moderately robust, the parietal bones are up to 7.7mm. thick. There is endosteal fusion of frontoparietal, interparietal and occipitoparietal sutures. Moderately large mastoid processes. The zygomatic process extends strongly over the auditory meatus. Large frontal sinuses. The hard palate is intact, with 4 teeth in situ; all molar teeth and the right premolars have been shed, no sockets remain.

Mandible- of medium build with backwards-sloping rami. The 3rd. molars had erupted obliquely and, in the absence of occlusion, are not worn, but have gross periodontal infection with abscess formation. Probably only the llr 3, lr 3 and lr 4 were intact, the incisor sockets are very shallow and evidently only the roots remained. H1=3.2cm., RB1=2.75cm., Cr.H=5.75cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>								<hr/>								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
A																A
C																

Vertebrae. 7 cervical vertebrae are present, including an intact axis and half of an atlas- both very robust. There is some degeneration of the lower cervical disc surfaces. 7 thoracic and 5 lumbar body fragments.

Pelvis. Sacrum- 1st. sacral body only- robust, 4.8cm. diameter. Hip bones- fragmented; there is a narrow subpubic angle, the symphyseal surfaces are without any residual ridging. (35yrs.+).

Ribs.- nil

Sternum.- part of the anterior surface of the manubrium only

Upper limbs.- damaged left scapula. No clavicles remain. All long bones are fragmented.

Humeri- only the left is present, no head, strong muscle markings.

Forearm bones- partial remains only

Right hand- 2 carpals, 4 metacarpals, 1 proximal phalanx

Left hand- 1 carpal, 4 metacarpals, 1 proximal phalanx.

Note: the carpal bones are of very robust build.

Lower limbs. All long bones are fragmented.

Femora- the left femur was reconstructed, its length is 46.7cm. , giving an estimated total body height of 173.87cm. (5'8½"). The vertical diameters of the head and neck are 5.3cm. and 3.9cm. respectively (strong male-type measurements). Well developed linea aspera.

Tibiae and fibulae are very broken. left patella present.

Right foot- 7 tarsal bones, 5 metatarsals, 2 proximal phalanges. Note-there is a calcaneal spur.

Left foot- 6 tarsal bones, 5 metatarsals. All tarsal bones are very robust.

Note: there are 3 extraneous tarsal bones from another body.

Conclusions

Age. 40+ (skull suture fusion, tooth loss, pubic symphysis, intervertebral cervical erosion)

Sex. Male (subpubic angle, very robust bones)

Height. 173.87cm. (5'8½")

Physique. Muscular

Socio-economic. Dental condition suggests a poor status.

Pathology.1) Dental loss, periodontal disease, abscesses

2) Early cervical spondylosis.

3) Right calcaneal spur.

CONTEXT No.1847, Find No.6709

General. A complete skeleton, extremely well preserved, with little breakage of long bones.

Skull. The vault is fragmented. Robust, the parietal thickness is up to 10.5mm. Well marked supraorbital ridges and occipital muscle markings. Strong mastoid processes. The interparietal, frontoparietal and occipitoparietal sutures are fused endosteally. Only the occipital and temporal bones represent the base; the facial bones are missing. The hard palate is present with 3 teeth in situ.

Mandible- reconstructed: moderately robust. H1=3.25cm., RB1=3.05cm.;the coronoid processes are damaged.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
																C

Attrition- no dentine is exposed in the lower 2nd. molars, upper molars or premolars; there is fairly marked wear of the incisor cutting edges: molar attrition corresponds to an age of approximately 25yrs. There is a central cavity in lr 7; the ur 5 consists of roots only. The upper 3rd. molars are congenitally absent. The degree of dental loss suggests an age of 25-30yrs.. There is little periodontal recession.

Vertebrae. 6 cervical, 12 thoracic and 5 lumbar vertebrae, all intact apart from a damaged atlas. There is some ossification in the thoracic ligamenta flava.

Pelvis. The sacrum is large, of male type, the alar width 12.3cm., the 1st. sacral vertebral width 6.28cm. All vertebrae are completely fused (30yrs.+)

Hip bones- large , male type, the acetabulum measures 5.75cm. vertically; narrow sciatic notch, narrow subpubic angle. The pubic symphyseal face is not ridged and has a peripheral edge, corresponding to an age of about 30yrs.

Ribs. Both sides are well represented, though broken; moderately robust, their maximum vertical measurement 1.6cm. . No ossification of costal cartilages.

Sternum. The sternebrae are fused.

Upper limbs. Robust scapulae and clavicles. Clavicular length is 14.4cm., moderately strong ligamentous markings.

Note- the right arm is longer than the left- from the top of the humerus to the wrist is: right- 56.6cm., left-56.1cm.

Humeri- the right humerus is 33.8 cm. long, giving a total body height of 173.76cm. (5'8½"). Strong shoulder muscle markings.

Forearm bones- strong brachialis insertion (forearm flexor), moderate supinator crest.

Right hand- 5 carpals, 5 metacarpals, 5 proximal and 3 intermediate phalanges.

Left hand- 8 carpals, 5 metacarpals, 5 proximal, 4 intermediate and 4 terminal phalanges.

Lower limbs. Femora- 47cm long, giving a body height of 174.57cm. (5'8½"). The vertical diameters of head and neck are 5.2cm. and 3.6cm. respectively. There is slight arthritic lipping of the head and the condyles. The muscle insertions of the glutei and gastrocnemius are strong; the linea aspera is well developed.

Tibiae- strong insertions of soleus, semimembranosus and tensor fascia lata.

Fibulae- robust, strong ligamentous markings for the superior and inferior tibio-fibular joints.

Right foot- 7 tarsal bones, 5 metatarsals, 5 proximal, 1 intermediate and 1 terminal phalanges.

Left foot- 7 tarsals, 5 metatarsals, 4 proximal, 3 intermediate and 5 terminal phalanges. Note- there is some arthritic degeneration of the 2nd. metatarso-phalangeal joint.

Conclusions

Age. Approximately 30yrs.. (teeth, skull sutures, pubic symphysis, sacral fusion)

Sex. Male (pelvis)

Height. 174.16cm. (5'8½") - averaged

Physique. Muscular

Congenital. 1)Slight asymetry in the length of the upper limbs.

2) Congenital absence of the upper 3rd. molars

Socio-economic. Relatively slight molar attrition for his age indicates a non-coarse diet; the incisor wear was probably caused by frequent meat eating

Pathology. Early osteoarthritis of hip, knee and a metatarso-phalangeal joint.

CONTEXT No. 1850, Find No.6710

General. Very incomplete remains, consisting of a few fragmented limb bones only, in poor condition. There is the extraneous inclusion of a right humerus from another skeleton

Upper limbs. Only the right limb is represented. Scapula- of medium build. Clavicle- robust, 13.07cm. long, very strong markings for the costo-clavicular and coraco-clavicular ligaments.

Humerus- robust, with very strong muscle markings, 30.8cm. long, giving a total body height of 167.1cm. (5'6")

Forearm bones- intact, strong muscle markings.

Lower limbs. Midshaft of one femur, damaged lower third of another; a detached femoral head 4.47cm. in vertical measurement. A damaged patella, a fibula and left calcaneum, 3 metatarsals

Conclusions

Age. Mature adult, over 30yrs. (degree of development of muscular and ligamentous markings)

Sex. Male (robust bones).

Context 1885, Find No.6721

General. Incomplete- skull, scapulae and right hip bone only. There is also an extraneous left hip bone.

Skull. The vault is intact. The cranial base, facial bones and upper jaw are missing. Dolichocephalic, the cranial index is 73.36. All sutures are fused endosteally. Moderate supraorbital ridges and large frontal sinuses. Medium sized mastoid process. The occipital surface is too worn to evaluate muscle markings.

Mandible- robust, H1=3.5cm, RB1=3.3cm., CrH=7.1cm.

Dental formula:

Area	missing
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Attrition age is about 25yrs. No caries. The lower 3rd. molars are congenitally absent.

Scapulae. Robust, the left bone is relatively intact, most of the right body is missing.

Right hip bone.- very robust, large acetabulum 5.8cm. in vertical diameter, medium sized sciatic notch.

Note: there are the partial remains of a left hip bone from another skeleton with a smaller acetabulum and narrower sciatic notch.

Conclusions

Age. 25-35 yrs. (dental attrition, skull suture fusion)

Sex. Male (cranial and pelvic features)

Physique. Dolichocephalic.

Congenital.Absent lower 3rd. molars.

Context 1818, Find No.6712

General.Very scanty remains.

Skull. Nil

Molar attrition corresponds to an age of about 30yrs..The degree of premolar wear suggests an age of 30-35yrs.. Dentine is exposed along the cutting edges of the central incisors but there is only slight wear of the lateral incisors. No periodontal recession or caries.

Vertebrae. 2 thoracic vertebrae only.

Pelvis. The sacrum is missing. The fragmented hip bones have been reconstructed. They are small, of female type. Preauricular sulcus. The right sciatic notch is more wide-angled than the left. The subpubic angle is wide. Small acetabulum, 5cm. in vertical diameter. There is slight symphyseal ridging, corresponding to a 19-29yr. range.

Ribs. 6 large and 6 small fragments; of light build and small curvature, up to 1.6cm. in vertical diameter.

Sternum. Manubrium only, small, no ossification of the first costal cartilage.

Upper limbs. Small right scapula. No clavicles.

Humeri- of light build with poor muscle markings, length 29.9cm. , giving a total body height of 158.4cm. (5'2½").

Forearm bones- right radius and ulna, lower half of left ulna, poor muscle markings.

Hands- 4 proximal phalanges.

Lower limbs. Femora- length 41.1cm. , giving a total body height of 156.6cm. (5'1½"). The vertical diameters of the head and neck are 4.2cm. and 3.1cm. respectively, the bicondylar width is 7.5 cm. (female type measurements), Well marked gluteal tuberosity, raised as a small 'third trochanter', There is a deep 'hypotrochanteric fossa' near the lesser trochanter.

Tibiae- only the right side is represented, intact, with well marked insertions for the semimembranosus tendon and the iliotibial tract.

Feet-only one bone, a 3rd. right metatarsal: its shaft is bowed, the neck narrow and the head diseased, probably as the result of a suppurative arthritis secondary to penetrating injury.

Conclusions

Age. Approximately 30yrs. (dental attrition, pubic symphysis, skull suture fusion)

Sex. Female (skull, pelvis, long bones)

Height. 157.5cm. (5'2"), averaged

Physique. Dolichocephalic. Small arm muscles, stronger leg muscles.

Congenital. Femoral hypotrochanteric fossa and third trochanter.

Socio-economic. Dental condition suggests good status.

Pathology. Suppurative arthritis of the third right metatarso-phalangeal joint, probably secondary to injury. Since this is the only foot bone present, the extent of the condition cannot be fully evaluated.

CONTEXT No.1852 Find No.6713

General. Incomplete. The skull, vertebrae, upper limbs (apart from hand bones) and most of the left leg are missing. Note- the long bones of two right legs have been accidentally included.

Pelvis. Sacrum- upper 2 bodies and alae are present: typically male, the body is 5cm. across, total alar width is 10.7cm.. The 1st. and 2nd. bodies are only partially fused anteriorly and not at all centrally. There is a joint surface under the S2 body (probable age about 30yrs.).

Hip bones- narrow angled sciatic notch, large acetabulum, 5.8cm. vertically. The pubic symphyses are damaged, their dorsal demi-face ridging corresponds to the 19-29yr. group.

Upper limbs. One fragment of the lower end of the left ulna.

Right hand- 5 carpals, 4 metacarpals, 4 proximal and 1 subterminal phalanges.

Left hand- 4 carpals, 5 metacarpals, 3 proximal and 3 subterminal phalanges

Lower limbs. There are 2 right femora and tibiae and it is not possible to be certain which belongs to this body; they are all robust, of male type. According to site records the related femur is the more intact one: this is 47.6cm. long, giving a total body height of 175.9cm. (5'9"). Very strong markings for the hip muscles, iliofemoral ligament and linea aspera.

1 right patella and damaged fibula.

Right foot- 2 tarsals, 4 metatarsals, 1 proximal phalanx.

Left foot- 7 tarsals, 5 metatarsals, 4 proximal, 2 intermediate and 1 terminal phalanges.

Conclusions

Age. Approximately 30yrs. (sacral fusion, pubic symphysis)

Sex. Male (pelvis, femur)

Height. 175.9cm. (5'9")

Physique.Strong hip muscles

CONTEXT No.1856 Find No.6714

General. Incomplete and in poor condition. The long bones are much fragmented.

Skull. The vault is almost intact, though with much surface erosion and damage to frontal, occipital bones and base. Dolichocephalic, not possible to measure the cranial index. Of small overall size, narrow forehead, of female type. The sutures are unfused. Wormian bones present in the parieto-occipital sutures. The sphenoccipital synchondrosis is unfused. The facial bones and hard palate are missing.

Mandible- the body is present,its alveolar margin intact, the rami are missing. Of medium build, too damaged to measure.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>																
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Molar attrition is slight, corresponding to an age of about 16-17yrs.. The cutting edges of upper and lower central incisors are worn. The lower 3rd. molars are in the process of eruption, their roots about 2/3rds. formed. No caries.

Vertebrae. Eroded bodies and vertebral arches of 7 vertebrae from lumbar and lower thoracic regions; 8 detached arches. Of medium size.

Pelvis. Upper part of sacrum, damaged; the 1st. vertebral arch is unfused to the 2nd. on the right side. Small fragments from both hip bones include wide-angled sciatic notches.

Ribs. 10 fragments up to 7.5cm long

Upper limbs. Medial end of right clavicle with an unfused epiphysis. Midshaft of a humerus, of both radii and ulnas, their surfaces eroded; no articular surfaces are present.

Lower limbs. Most of the shafts of the femora and tibiae are present, much eroded. The two femoral condyles and one head are separate, the latter with an unfused epiphyseal plate. There is a well preserved, unfused right lower tibial epiphysis. The shafts are of mature dimensions, the incomplete femoral shaft 37cm long.

Feet-a damaged right talus

Conclusions

Age. 15-16yrs. (unfused epiphyses, spheno-occipital synchondrosis and sacral arch; partly erupted 3rd. molars).

Sex. Female (skull, pelvis)

Congenital. Dolichocephalic. Wormian bones

Socio-economic. Not on a coarse diet; the incisor wear probably relates to meat-eating.

CONTEXT No.1858, Find No.6715

General. Incomplete. The skull is in fragments and parts of the spine, hands, feet and pelvis are missing.

Skull. The parietal, occipital and frontal bones are disarticulated and damaged by surface erosion. Probably dolichocephalic but the cranial index cannot be measured. The frontal sinuses are large and are exposed by surface erosion. Strong occipital muscle markings. No fusion of vault sutures. The temporal bones are damaged. The hard palate is intact with 6 teeth in situ.

Mandible- of medium build, H1=3cm., RB1=3cm., Cr.H=6.8cm., 4 teeth in situ.

Dental formula:

$$\begin{array}{c} \begin{array}{cccccccc|cccccccc} 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \end{array} \\ \hline \begin{array}{cccccccc|cccccccc} 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \end{array} \end{array}$$

The upper and lower 3rd. molars are congenitally absent. No caries. Molar attrition age is about 25yrs. The cutting edges of the incisors is worn.

Vertebrae. 16 pieces of vertebral arches, only 1 (incomplete, lumbar) body.

Pelvis. The alae of the sacrum are damaged and cannot be measured; the sacrum is of male type. The 1st. and 2nd. bodies are only partly fused anteriorly; the 4th. and 5th. bodies are unfused. The 5th. sacral and 1st. coccygeal bodies are fused together. The lateral masses are fused.

Both hip bones are represented; the epiphysis of the iliac crest is imperfectly fused posteriorly. The sciatic notch is of medium size; no preauricular sulcus. The acetabulum is capacious, 6.6cm. in vertical diameter.

Ribs. 12 left and 10 right ribs are represented, incompletely; up to 1.8cm. in vertical thickness. No arthritis of costovertebral articulations.

Upper limbs. Both scapulae are represented, robust. The outer part of the left clavicle is present and has very strong markings for the coraco-clavicular ligament..

The major long bones are very poorly preserved; there is much surface erosion. The upper ends of both humeri are missing, their lower ends damaged. The forearm bones are present but damaged.

Right hand- 3 metacarpals, 4 phalanges.

Left hand- 2 metacarpals, 1 phalanx.

Lower limbs. Femora- relatively complete, robust, length 49.8cm., giving an estimated total body height of 181cm. (5'11½"). The head and neck are 4.9cm. and 3.6cm. respectively , in vertical diameter (male type). Tibiae- robust, 40.7cm. long. The fibulae are damaged. The surfaces of these bones are too damaged to assess muscular markings.

Right foot- 4 tarsal bones, 3 damaged metatarsals.

Left foot- 5 tarsals, 2 damaged metatarsals.

Conclusions

Age. Approximately 25yrs. (dental attrition, sacral fusion, epiphysis of iliac crest)

Sex. Male (skull, femora)

Height. 181cm. (5'11½")

Physique. Tall, of moderate to slender build- the mandible is fairly small and the skull vault is of medium thickness

Congenital. Dolichocephalic. Absent 3rd. molars.

Socio-economic. Moderately coarse diet. The strength of the coraco-clavicular ligament suggests manual labour

CONTEXT No.1866. Find No.6716

General. Incomplete. Most of the vertebrae and major long bones of the lower limbs are missing. Considerable fragmentation.

Skull. The vault is in many pieces. The interparietal suture is completely fused; the frontoparietal suture is fused endosteally. Very robust, the parietal bones are up to 8mm. thick. Strong supraorbital ridges, large mastoid processes, very well developed muscle markings. Both temporal bones and part of the sphenoid are present. Most of the hard palate is present with 8 teeth in situ.

Mandible- Very large, 10 teeth in situ. H1=4cm., RB1=3.5cm., Cr.H=7.8cm.. There are tori on the lingual aspect of the premolar regions.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

Note: the 5 consists of a root only; all upper molars have been lost apart from 8 which was probably only a carious root. Multiple root abscesses. Periodontal recession. Despite the loss of the upper molars and therefore lack of occlusion, the lower molar attrition is gross with loss of almost all the enamel surface, indicating an age of in excess of 45yrs.. All other teeth also have gross attrition.

Vertebrae. The atlas is almost intact and there is an odontoid process of the axis: there are no other vertebral remains.

Pelvis. The sacrum is missing. Both hip bones are represented by fragments. The acetabulum is 5.2cm. vertically. The sciatic notches are too damaged to measure.

Upper limbs. Both scapulae and clavicles are represented by fragments only.

Humeri- of robust build, the left almost intact is 33.1cm. long, giving an estimated body height of 173.8cm. (5'8½"). Muscle markings are very strong. The forearm bones have considerable surface erosion; the right ulnar supinator crest is strong.

Right hand- 7 carpals, 5 metacarpals, 3 proximal and 1 subterminal phalanges.

Left hand- 4 carpals, 4 metacarpals, 5 proximal, 5 subterminal and 1 terminal phalanges.

Note: there is carpo-metacarpal fusion at the base of the 2nd. left metacarpal.

Lower limbs.

Right foot- 7 tarsals, 5 metatarsals, 2 proximal phalanges.

Left foot- 7 tarsals, 5 metatarsals, 4 proximal and 1 terminal phalanges.

Conclusions

Age. Probably about 60yrs.(the level of lower molar attrition had reached the 45yr. degree some time previously, before the upper molars had been lost).

Sex. Male (skull, mandible, robust long bones).

Height. 173.8cm. (5'8½")

Physique. Thick set, muscular type.

Congenital. Mandibular tori.

Socio-economic. Coarse diet, very poor dental hygiene, very strong shoulder muscles. Probably a manual labourer

Pathology. 1) Periodontal disease, dental abscesses.

2) Fusion of the 2nd. left carpo-metacarpal joint, probably secondary to localized trauma, arthritic changes developing later.

CONTEXT No. 1887, Find No. 6717

General. Incomplete skeleton. The following are absent: skull, left clavicle, both hands and many ribs.

Vertebrae. 4 cervical vertebrae, including atlas; 8 intact thoracic vertebrae, 4 have only vertebral arches; 5 intact lumbar vertebrae. All are of very robust build. No arthritis.

Pelvis. Upper part of sacrum is intact; all the bodies are completely fused. Alar width 10.6cm. Both hip bones present, with damaged pubic regions; of male type, robust, with narrow sciatic notch. Acetabulum large, its vertical height 5.6cm.

Ribs. 16 fragments up to 18.5 cm. long, all very damaged. Both sides are represented, left more than right.

Sternum absent.

Upper limbs. Right clavicle is damaged at the outer end, of medium build. Left clavicle is missing. Left scapula: medial margin is missing. Right scapula: only glenoid cavity and lateral margin.

Humeri- right fragmented, left intact, length 30.4cm., giving estimated body height of 165.9cm. (5'5"), moderate muscular markings. Forearm bones of both sides are present, but damaged. No hand bones.

Lower limbs. Right femur intact, left damaged, length 42.4cm., giving estimated total body height of 163.89cm. (5'4½"). Vertical height of head 4.7cm., of neck 3.4cm., bicondylar width 7.4cm : all these are strongly male. Of robust build with strong muscle markings, particularly in gluteal tuberosity. Tibiae- right intact, left damaged; length 34cm. strong soleal line. Both fibulae are damaged. No arthritis.

Feet: all tarsal and metatarsal bones present, 3 proximal and 1 distal phalanges.

Conclusions

Age. Approximately 40yrs. (fusion of sacrum but no excessive joint wear)

Sex. Male (pelvis, robust long bones)

Height. 164 cm. (5'4½")

Physique. Moderately robust build

Pathology. Nil.

CONTEXT No. 1881, Find No. 6712

General. Incomplete: clavicles, scapulae, feet, right hand and most of the spine are missing. Many bones are damaged and not well preserved.

Skull. The upper vault bones, frontal and both parietals are articulated but deformed by postmortem pressure; skull appears dolichocephalic. The sutures are unfused. The bone is thin, eroded on the surface. Frontal sinuses are large. The occipital bones are separate, the occipital protuberance not well developed. The temporal bones are separate: the petrous temporals are immature - the subarcuate fossa is not filled in. The mastoid processes are eroded. The base of the skull is missing. The mandible is missing.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Note: the apices of the 2nd. upper molar roots are not yet closed. Only the cervical region of the root of ll 8 is formed. First molar attrition is slight. Some teeth have marked periodontal erosion of the cervical region.

Vertebrae. Only 6 vertebral fragments are present, including 3 lumbar bodies. The epiphyseal plates of the bodies are unfused. Note: there is an abnormal unclosed fusion line between the upper and lower articular facets on the right side only of the 5th. lumbar vertebra, i.e. unilateral spondylolisthesis.

Pelvis. Sacrum: the 1st. body and lateral mass are unfused to those of the 2nd., apart from partial early fusion of the laminae. There is no fusion between the upper three bodies. The 4th. and 5th. bodies and lateral masses are fused together. The alae are too damaged to measure.

The hip bones are damaged. The sciatic notch is acute angled. The ischial tuberosity epiphysis is unfused. Large acetabulum, 5.8cm. in vertical diameter.

Ribs. 3 small fragments only

Upper limbs. Right side: lower 3/4 humerus, midshaft radius and ulna.

Left side: midshafts of humerus and radius, unfused lower radial epiphysis.

Left hand: 7 carpal bones, 4 metacarpals, unfused epiphysis of 1st. metacarpal.

Lower limbs. Both femoral shafts present but damaged, with all epiphyses unfused. Estimated total length 47.2cm., giving body height of 175cm. (5'9") plus

Both tibial shafts, with unfused and damaged epiphyses. One small fibular fragment. No foot bones.

Conclusions

Age. 16yrs.

Sex. Male

Height. 175cm. (5'9") or more

Physique. Dolichocephalic. Tall and slender

Congenital. Unilateral spondylolysis

Pathology. Periodontal disease

CONTEXT No.1869 Find No.6719

General. The skeleton is almost complete and very well preserved. The skull is fragmented.

Skull. Most of the skull was reconstructed. Cranial index is 84.2 (brachycephalic). Narrow forehead: 10.3cm. between outer aspects of the frontozygomatic sutures. Shallow supraorbital ridges. Small frontal sinuses. Small mastoid processes. Posterior

root of the zygomatic process does not extend over the external auditory meatus. The parietal bones are thin. The external occipital protuberance is 1cm. thick. All vault sutures are completely fused. The spheno-occipital synchondrosis is fused. Mandible- not robust, of small size. H1= 2.7cm., RB1= 3.15cm., Cr.H= 5.6cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>									<hr/>							
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
	C	A													A	
		A														

The hard palate is small, 4.3cm. between 3rd. molar crowns. Tooth loss has increased attrition between upper and lower right 1st. molars: oblique attrition here. There were apical abscesses of 7 and 7. There is breakage, caries and an apical abscess of 8. The teeth are small in size.

Vertebrae. 7 cervical vertebrae, including atlas and axis, 10 thoracic, 4 lumbar. There is sacralization of the 5th. lumbar vertebra. Arthritic lipping anteriorly of most of the thoracic vertebral bodies.

Pelvis. Small, female type sacrum, alar width 11cm.. Sacroiliac joint extends over 2 vertebral levels only. Hip bones are of female type: wide sciatic notch, preauricular sulcus, small acetabulum (4.8cm. in vertical diameter), very wide subpubic angle. Pubic symphyseal surfaces are rough, worn, not ridged. There is DISH-type lipping of the outer edge of the iliac crests.

Ribs. Most of the ribs from both sides are represented. Some arthritic lipping of the costotransverse joints.

Sternum. Manubrium and body are present. All sternbrae are fused.

Upper limbs. Both scapulae are present. Both clavicles are intact, of slender build, 13.6cm. long, moderate muscular and ligamentous ridging, especially of the coraco-clavicular ligament attachment. The long bones of the left side are broken, those

on the right intact. Humeral length is 29.6cm., giving estimated body height of 157.42cm. (5'2"). Muscular markings are strong on both sides.

Right hand: 7 carpals, 5 metacarpals, 9 phalanges, including 1 terminal phalanx.

Left hand: 7 carpals, 5 metacarpals, 11 phalanges, including 1 terminal phalanx.

Lower limbs. All the long bones are present, right tibia and both fibulae are broken.

Femora: vertical diameter of head 4.2cm., of neck 3cm., bicondylar width 7.2cm., length 41.8cm, giving a total estimated body height of 157.2cm. (5'2"). Muscular markings very strong, particularly of linea aspera and gluteal tuberosity. Tibiae: strong soleal line. Patellae: DISH-type ossification of superficial (rectus femoris) fibres.

Right foot: 7 tarsals, 5 metatarsals, 14 phalanges (including terminal phalanx of great toe). 2 sesamoids of first metatarso-phalangeal joint.

Left foot: 7 tarsals, 5 metatarsals, 9 phalanges (including terminal phalanx of great toe). 2 sesamoids of first metatarso-phalangeal joint.

Conclusions

Age. 40 yrs. (dental attrition, skull fusion, arthritis)

Sex. Female (skull, teeth, pelvis)

Height. 157.2cm. (5'2")

Physique. Brachycephalic. The long bones are of strong build.

Congenital. Sacralization 5th. lumbar vertebra

Socio-economic. Muscle development suggests she was used to heavy work

Pathology. DISH. Arthritis. Periodontal disease, apical abscesses.

CONTEXT No.1892, Find No.6720

General. Incomplete and in a very poor state of preservation. Most of the vertebrae, pelvis, ribs and left hand are missing. An additional skull has been included, probably by accident.

Skull. Frontal bone with large supraorbital ridges and frontal sinuses; a broad forehead, 11.5cm. between outer margins of the fronto-zygomatic sutures. The vault is in fragments. Parietal bone thickness is 6.5mm.. The external occipital protruberance is 1.55cm. thick. Both temporal bones are present, with large mastoid processes. Maxilla and hard palate are relatively intact.. Mandible- massive build; the condyles and coronoid processes are damaged. H1=3.35cm.

Dental formula:

A								C C C								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>								<hr/>								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
								A A								

Note: ur 4, ur 5, ur 6 are roots only, with gross caries and breakage of crowns. ul 6 is missing, in its place an apical abscess cavity. Apical abscess cavities also for lr 6 and lr 7, the latter having been shed ante mortem. ll 6 is broken and carious. Diffuse periodontal recession.. Moderate molar attrition indicates an age of about 30yrs.: no molar dentine is exposed. There is more obvious occlusal wear of the incisors, with much exposure of dentine.

Vertebrae. Fragmented remains of arch of atlas, 5 lumbar bodies and arches.

Pelvis. Nil

Ribs. 1 fragment only

Upper limbs. All the bones are of large diameter, but poorly preserved. Fragmented remains of right scapula (glenoid only) and both clavicles.

Humeri: most of the right shaft but only a cortical shell of the left humerus. Forearm bones from both sides are represented, the right radius relatively intact.

Right hand: damaged fragments of 3 carpals, 5 metacarpals, 2 phalanges.

Lower limbs. Both femora and tibiae (of large size) and one fibula are present but in poor condition. The femora have broken ends; the vertical diameter of the head is 5.3cm.. Estimated femoral length is 48cm. , giving a body height of 176.89 cm. (5'9½"). Tibial length is 38½cm., giving a body height of 175.1cm. (5'9"). Both patellae are present.

Right foot- damaged remains of 6 tarsal and 5 metatarsal bones.

Left foot- damaged remains of 7 tarsals, 5 metatarsals and 2 phalanges.

Conclusions

Age. 30 yrs.

Sex. Male (cranial features, large long bones)

Height. 176cm. (5'9½")

Physique. Robust

Socio-economic. Poor dental condition and incisor wear suggests poor status

Pathology. Periodontal disease, dental abscesses.

Additional Skull. Intact vault, all sutures fused. Large supraorbital ridges and frontal sinuses. Broad forehead, 10.5cm. between outer margins of the fronto-zygomatic sutures. Right temporal bone present, its mastoid process large.

Conclusion

Sex and Age: Adult. Male. This skull is probably from an adjacent body..

CONTEXT No.1889 Find No.6722

General. This consists of two skulls and a collection of post cranial bones. These are described as being the remains of two individuals, the male bones being darker, rougher-surfaced and less well preserved than the female bones.

Female bones

Skull. Intact vault with temporal bones, occipital and most of sphenoid. Cranial index 77.6 (mesocephalic). Shallow supraorbital ridges, medium sized frontal sinuses. Narrow, shallow forehead, 10.5cm. between outer surfaces of the fronto-zygomatic sutures. The right supraorbital notch is a foramen. Moderate endosteal fusion of vault sutures. Small mastoid proceses, poor muscular markings. Fused spheno-occipital synchondrosis. The maxilla is intact, but the mandible is missing.

Dental formula:

8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
Area		missing

There is marked molar attrition with exposure of dentine, indicating an age of about 35yrs. Periodontal recession.

Post cranial bones-

Limbs intact right talus

Vertebrae.-1 cervical vertebra; 4th. and 5th. lumbar vertebrae.

Sacrum.- alar width 11.5cm., width of 1st. sacral vertebra 4.8cm..

Male bones

Skull. The vault was reconstructed. Cranial index 82.9 (brachycephalic). Strong supraorbital ridges, large frontal sinuses. Broad forehead, 11.25cm. between outer borders of fronto-zygomatic sutures. No fusion of skull sutures. Persisting and unfused metopic suture. There is a most unusual row of 11 wormian bones between occipital and parietal bones, also one between the parietals and frontal bone. Large mastoid processes. On each side there is a vascular foramen in the orbital plate of the frontal bone, about 5mm. behind the orbital margins (**Plates 25 and 26**).

Vertebrae. 2nd., 3rd. and 4th. lumbar vertebrae, of fairly large size.

Sacrum. Male type. Alar width 12.4cm.; width of 1st. sacral body 5.7cm. S1 and S2 are fused anteriorly but not centrally or posteriorly

Ribs. 6 fragments, including intact 1st. left rib.

Limbs. Left clavicle, robust, outer end missing. 1 radial and 2 ulnar shaft fragments.

Conclusions

1) Sex Female (Cranial and sacral features)

Age. about 35 yrs (dental attrition, moderate skull suture fusion).

Socio-economic. Coarse diet

Congenital. Mesocephalic. Supraorbital foramen on the right side.

Pathology. Periodontal disease.

2) Sex Male (Cranial and sacral features, robust clavicle.)

Age. about 25yrs. (imperfectly fused sacrum, no fusion of skull sutures)

Congenital. Brachycephalic. Multiple parieto-occipital wormian bones (**25 & 26**). Vascular foramen in orbital plate of frontal bone on each side (photo). Persistent and completely unfused metopic suture.

CONTEXT No.2096, Find No.7087

General. Complete skeleton in a very good state of preservation. Note that this was a relatively late burial, probably 15th. or 16th. century stratigraphically: relevant to general condition and possibly diet/dental attrition.

Skull. The vault was reconstructed. Cranial index is 77.7 (mesocephalic). Strong supraorbital ridges. Broad forehead. Right supraorbital foramen. Skull sutures are unfused internally and externally. Large mastoids. Root of zygoma extends strongly over external auditory meatus. Wormian bones in both occipitoparietal sutures. Strong occipital muscle markings. External occipital protuberance is 1.1cm. thick. Fused sphenoccipital synchondrosis.

Mandible- of robust build: H1=3.2cm., RB1=3.45cm., Cr.H=6.7cm.

Dental formula:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Attrition is slight and equivalent to an age of about 25 yrs. The carious ll 5 is secondary to a vertical breakage, as might be produced in cracking a nut.

Vertebrae. All are present and are of robust build. The atlas and axis are large. There are Schmorl's nodes in 4 lower thoracic and upper lumbar vertebrae. There is spondylolisthesis of the 5th. lumbar vertebra.

Pelvis. Sacrum: broken, of male type; slightly imperfect fusion anteriorly between the upper three sacral vertebrae.

Hip bones are of large male type. Narrow sciatic notches, acetabulum is 5.6cm. vertically. Narrow subpubic angle. Extensive horizontal ridging of the pubic symphyseal faces equivalent to an age of about 23yrs. (Plate 31). All secondary epiphyses, such as the iliac crest, are fused..

Ribs. All are present and many are intact. Maximum vertical width 1.8cm.

Sternum. The body and manubrium are fused together: this is very uncommon in a young person, and rarely occurs even in advancing age. All sternebrae are fused.

Upper limbs. Scapulae-only the blades are damaged.

Both clavicles are present, the medial epiphyses are unfused (less than 25 yrs. old). The clavicles are robust, 15.7cm. long. Ligament attachment is moderately strong.

Humeri- robust, length 35.5cm., giving an estimated body height of 180.7cm. (5'11"). Strong muscle markings.

The forearm bones are broken, strong muscle markings for biceps and supinator.

Right hand- 7 carpals and large pisiform, 5 metacarpals, 12 phalanges, including 5 terminal phalanges..

Left hand- 7 carpals, 5 metacarpals, 14 phalanges, including 2 terminal ones.

Lower limbs. Femora- robust, length 48.7cm., giving estimated body height of 178.5cm. (5'10½"). Vertical diameter of head 5.1cm., of neck 3.8cm. Bicondylar width 8.7cm.

Tibiae- strong soleal lines. Fibulae are broken. Patellae intact.

Right foot- 5 tarsals, 5 metatarsals. There is lipping of the upper calcaneal margin of the calcaneo-cuboid joint, suggestive of injury

Left foot- 5 tarsals, 3 metatarsals, 2 phalanges

Conclusions

Age. 23yrs. (dental attrition, ridged pubic symphysis, unfused clavicular epiphysis)

Sex. Male (Cranial and pelvic features, femoral measurements)

Height. 178.5cm. (5'10½")

Physique. Robust

Congenital. Mesocephalic. Wormian bones. Right supraorbital foramen. Spondylolisthesis. Fused manubrio-sternal joint.

Socio-economic. Used to manual work and probably climbing

Pathology. Schmorl's nodes (central disc protrusions into bodies of vertebrae). May have sustained an injury to the mid-tarsal joints of the right foot.

CONTEXT No.2098, Find No.7088

General. Stratigraphically late (the same as 7087). The skull, vertebrae, pelvis and ribs are very fragmented.

Skull. Most parts are represented but in multiple fragments which cannot be reconstructed. Supraorbital ridges moderately well developed, fairly small frontal sinuses. In general the vault bones are not robust. Parietal thickness is up to 8mm.. Frontoparietal and interparietal sutures were fused endosteally. Only small arachnoid pits. Large mastoid processes. External occipital protuberance. The root of the zygoma extends strongly over the external auditory meatus.

The external occipital protuberance is 1.1cm. thick. The maxillae and mandible were reconstructed.

Mandible- RB1=3.4cm., Cr.H=6.2cm.. Of medium build; gonial flaring.

Dental formula:

$$\begin{array}{c} \text{8 7 6 5 4 3 2 1} \mid 1 \text{ 2 3 4 5 6 7 8} \\ \hline \text{8 7 6 5 4 3 2 1} \mid 1 \text{ 2 3 4 5 6 7 8} \end{array}$$

Periodontal recession. All the 3rd. molars and ll 4 are congenitally absent. Attrition is most marked in the lower 1st. molars, the upper incisors and canines. Probably equivalent to an age of about 35yrs.. Loss of all occlusal enamel of the upper incisors indicates some gnawing of these teeth, perhaps as part of his occupation.

Vertebrae. The atlas, axis and one cervical vertebrae are almost intact, otherwise the vertebrae are grossly fragmented. The atlas is large, of male size.

Pelvis. Sacrum: fragments only. Hip bones are broken, with a male type sciatic notch and narrow subpubic angle. The acetabulum is of moderate size, 5.2cm. vertically. The pubic symphyseal faces are worn, indicating an age of over 30yrs..

Ribs. Both sides are represented but in fragments only; maximum vertical width is 1.9cm.

Upper limbs. Scapulae are broken. Clavicles- medial ends of both are missing, of moderate build, with fairly well developed coraco-clavicular ligamentous markings. All the major long bones are broken, worse on left side; all are of robust build.

Humeri- length 34.65cm., giving an estimated body height of 178cm. (5'10").

Forearm bones have well developed muscle markings.

Right hand- 7 carpals, 5 metacarpals (damaged), 9 phalanges including 1 terminal phalanx.

Left hand- 5 carpals, 5 metacarpals (damaged), 8 phalanges, no terminal ones.

Lower limbs. The right fibula and tibia are intact, otherwise all the major long bones are broken. Right tibia- length 36cm., giving estimated body height of 169cm. (5'7"). Vertical diameter of femoral head 4.55cm., of neck 3.3cm.

Right foot- 7 tarsals, 5 metatarsals, 8 phalanges, 2 sesamoids

Left foot- 7 tarsals, 5 metatarsals, 2 phalanges

Conclusions

Age. 35yrs. (dental attrition, pubic symphysis)

Sex. Male (cranial, pelvic features, robust long bones)

Height. Averaged at 173cm (5'8½")

Physique. Moderately robust

Congenital. Absent 3rd. molars and lower 1st. premolar

Socio-economic. The severe incisor attrition suggest a gnawing activity, possibly at work, as in holding a leather strap between the teeth

Pathology. Periodontal disease.

CONTEXT No.2184, Find No.7102

General. From a double grave. Late date- 15-16th. century. Feet cut away by a later grave. Condition of bones generally good but the skull is fragmented.

Skull. Largely reconstructed from fragments but due to post-mortem deformation the cranial index cannot be measured. Apparently mesocephalic. All sutures are unfused. Persistent metopic suture. A large wormian bone at the anterior end of the interparietal suture. Broad forehead, supraorbital ridges are fairly strong. Large (damaged) mastoid processes. The root of the zygoma extends over the external auditory meatus. Strong occipital muscle markings. The skull vault bones are of medium thickness. External occipital protuberance 1.2cm. thick.

Mandible- damaged, of medium build, RB1=3.1cm..

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>																
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Note: the upper and lower 3rd. molars are only partly erupted; their upper roots are 2/3rds. formed. Attrition is very slight. Age is approximately 17yrs.

Vertebrae. 6 cervical (atlas is missing); 12 thoracic; 5 lumbar. Note: the upper and lower surfaces of the bodies are immature, of adolescent type.

Pelvis. Sacrum- the lower half is missing. Alar width 10.4cm.; width of 1st. sacral vertebra 5.2cm. The 1st., 2nd. and 3rd. sacral bodies are not fused to one another. The sacroiliac joint surface is immature.

Hip bones- of male type, with small sciatic notch and narrow subpubic angle. Large acetabulum, 6cm. in vertical diameter. Incompletely fused secondary epiphyses of iliac crest and ischial tuberosity. Extensive horizontal ridging of the pubic symphyseal surface indicative of immaturity.

Ribs. 9 right, 10 left, plus other small fragments.

Sternum. Manubrium and 1st. (unfused) sternebra, both with immature joint surfaces.

Upper limbs. Both scapulae are present.

Clavicles- medial ends unfused, moderately robust, 13cm. long. Note: there is evidence of a recent fracture of the left clavicle at the junction of the medial 2/3rds. and outer 1/3rd., the broken edges rough and ununited, callus formation around the margins.

Robust long bones. Humeri- upper epiphyses unfused. Length 33.4cm., giving an estimated body height of 174.6cm. (5'9").

Forearm bones- upper epiphyses were recently united, lower epiphyses unfused.

Right hand- 4 carpals, 3 metacarpals (unfused epiphyses), 7 phalanges.

Left hand- 5 carpals, 5 metacarpals (unfused epiphyses), 7 phalanges.

Lower limbs. Femora- unfused epiphyses at lower end, partially fused epiphyses of head, greater and lesser trochanters. Length 48.2cm., giving estimated body height of 177.35cm. (5'10"). Vertical diameter of head 4.9cm., of neck 3.6cm. Bicondylar width 8.1cm.

Tibiae and fibulae have partly united upper and lower epiphyses.

Patellae intact.

Feet- left calcaneum only

Conclusions

Age. 17yrs. (3rd. molar eruption. Partial epiphyseal fusion. Immature intervertebral, sacroiliac, manubrial and pubic joint surfaces. Incompletely fused sacrum)

Sex. Male (Cranial and pelvic features, robust long bones)

Height. Averaged at 176cm. (5'9½")

Physique. Of medium build

Congenital. Persistent metopic suture. Mesocephalic. Wormian bone.

Pathology. Had a fracture of the left clavicle about 10 days before death. It is possible that he sustained other internal injuries at the same time, which later proved fatal.

CONTEXT No.2185, Find No.7103

General. A double grave with 2184, of relatively late date. The feet were cut away by a later grave. Generally in good condition.

Skull. The vault is largely intact; the frontal region required reconstruction. Cranial index 80.8 (brachycephalic). Distance between outer surfaces of the fronto-zygomatic sutures is 10.6cm. Medium sized supraorbital ridges. frontal sinuses fairly small. Persistent and unfused metopic suture. Frontoparietal and interparietal sutures partly fused endosteally. The vault is of medium build. Large mastoid processes. The root of the zygoma extends over the external auditory meatus. External occipital protuberance 1.4cm. thick. Very strong occipital muscle markings. The spheno-occipital synchondrosis is fused.

Mandible- H1=2.8cm., RB1=3cm., Cr.H=6.1cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>								<hr/>								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

The 3rd. molars are fully erupted. Attrition is slight and equivalent to an age of 20-25yrs. The cutting edges of the upper central incisors is worn.

Vertebrae. All are present, mostly intact. Fairly robust. There is a slight anomaly of the atlas vertebra: a bony arch spans the vertebral artery groove, and is connected superiorly to the superior articular facet (Plate 33).

Pelvis. Sacrum- broken; the 1st, 2nd. and 3rd. sacral bodies are only fused peripherally, not centrally.

Hip bones- male type, narrow sciatic notch and subpubic angle. Medium sized acetabulum, 5.15cm. in vertical diameter. The dorsal demi-face of the pubic symphysis is moderately ridged, indicating an age of approximately 25yrs..

Hyoid.- body and left greater wing.

Ribs. 8 right, 10 left, some heads are missing. Of moderate build, maximum vertical width 1.5cm.

Sternum. All sternbrae are fused, the manubrium is missing.

Upper limbs. Scapulae present, blades damaged.

Clavicles intact- of fairly strong build, 14.7cm. long. There is a very well marked attachment of the costo-clavicular ligament.

Humeri- intact, length 32.8cm., giving an estimated body height of 172.8cm. (5'8"). Fairly strong muscle markings.

Forearm bones- slightly damaged. Fairly strong insertions for brachialis and supinator.

Right hand- 7 carpals, 5 metacarpals, 13 phalanges, including 4 terminal phalanges.

Left hand- 7 carpals, 5 metacarpals, 12 phalanges, including 4 terminal phalanges.

Lower limbs. Femora- intact, length 43.4cm., giving estimated body height of 166.2cm. (5'5½"). Vertical diameter of head 4.5cm., of neck 3.35cm. Bicondylar width 7.9cm. Very strong muscle markings of the glutei.

Tibiae- intact, strong soleal line and semimembranosus insertions.

Fibulae- damaged. Patellae- some ossification in the superficial fibres of the quadriceps insertion.

Feet- Nil.

Conclusions

Age. 25yrs. (dental attrition, pubic symphysis, skull sutures)

Sex. Male (cranial and pelvic features)

Height. Averaged at 169cm. (5'7") (the two estimates differ considerably)

Physique. Well developed leg muscles

Congenital. Brachycephalic. Persistent metopic suture.

Socio-economic. Possibly related to 2184, since in the same grave and both had a persisting metopic suture (present in only 2 per cent of most populations). Not a grossly coarse diet.

Pathology. Nil.

CONTEXT No.2179 Find No. 2184 & 2185

General. Fill of grave containing skeletons 2184 and 2185. Contains the partial remains of a number of individuals.

Skulls.

(1) Frontal, right parietal, right temporal, occipital bone. Strong supraorbital ridge. Distance between fronto-zygomatic sutures is 10.7cm. All sutures are unfused. Persistent unfused metopic suture. Cranial index cannot be measured accurately-approximately 76 (dolichocephalic). Large mastoid processes. The root of the zygoma extends over the external auditory meatus. External occipital protuberance is 1cm. thick. Right supraorbital foramen.

Conclusion: Male aged approximately 20yrs (sutures)

(2) Left frontal fragment, fairly large frontal sinuses but no supraorbital ridge (the lateral region is missing).

Conclusion: Adult female

(3) Left parietal bone, very slender, 3mm. thick, appears to have been buried a long time. All sutures unfused.

Conclusion: Juvenile.

(4) Right petrous temporal of a young child ? precise age, probably under 3yrs..

Mandibles

(1) Body and left ramus, right ramus is missing. H1=3.2cm., RB1=3.4cm., Cr.H=6.7cm.

Dental formula:

$$\begin{array}{c} \hline 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \ | \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ \hline \end{array}$$

There is gross loss of the occlusal surface of ll 6. Otherwise the attrition corresponds to an age of about 30yrs. Male.

(2) More fragmented and porous. Right side of the body and molar region of the left side.

Dental formula:

$$\begin{array}{c} \hline 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \ | \ \text{Area missing} \ 6 \ 7 \ 8 \\ \hline \end{array}$$

The teeth are small, attrition indicates approximately 30yrs. Female.

(3) Left side of body and anterior part of right side of body. Fairly robust. H1=3.5cm.

Dental formula:

8 7 6 5 4 3 2 1 Area missing

Attrition is slight, no dentine is exposed. Age about 25yrs. Female

Loose teeth: 1 upper central incisor, 1 upper lateral incisor, 1 upper canine, 2 lower premolars, 2 lower molars. Variable degrees of attrition- from differing bodies.

Vertebrae. 8 cervical, including 1 atlas. 19 thoracic, 12 lumbar. Most of these are of large diameter, and probably male. More than 1 individual is represented.

Note: one specimen comprises 3 fused laminae from the thoracic region (ossification in the ligamenta flava): most interestingly there is ossification in the supraspinous but not in the interspinous ligaments. (Plate 32)

Pelvis. One sacrum: this has sacralisation of the 5th. lumbar vertebra (fusion of the body, laminae and spinous processes, but affecting only the left transverse process and not the right).

Hip bones: all are damaged. 2 right (probably female), 4 left (2 female, 1 male, 1 indeterminate). Sexing was judged primarily by the shape of the sciatic notch, not a totally reliable criterion on its own. Only 1 acetabulum was intact; none of the supposedly female hip bones had a preauricular sulcus..

Ribs. Counting only those fragments with a head and neck, there are 22 right sided, 16 left and 68 other fragments. Note a few have osteoarthritic lipping of the costotransverse joints.

Sternum. 3 manubrium sterni (3 separate individuals) and 1 sternal body.

Upper limbs. Scapulae- remnants of 4 left (2 male, 2 female, 1 indeterminate) and 1 right (female).

Clavicles- 5 right (2 adult male, 1 male aged 25yrs- fusing epiphysis, one child aged about 7yrs. with a clavicle 9.1cm. long, 1 adult fragment, indeterminate).

- 2 left (1 male aged 25yrs., 1 fragmentary)

Humeri- 3 left (adult), 2 right (1 adult, 1 child aged about 7yrs- length between epiphyses is 19.3cm.). Also 3 damaged humeral heads, 2 humeral shafts.

Radii- 3 right (adult), 1 right radius of a child aged about 7yrs.

- 1 left (adult).

Ulnars- 5 right, 2 left, all adult

Hands- 8 carpals, 18 metacarpals, 12 phalanges.

Lower limbs. Two intact right femora- (1)length 44.8cm., giving estimated body height of 169.5cm. (5'7"). Vertical diameter of head 4.7cm., of neck 3.4cm. (2)length 44.5cm., giving estimated body height of 164cm. (5'4½"). Vertical diameter of head 4.1cm., of neck 3cm. Bicondylar width 7.2cm. Also fragments of a left femur.

Tibiae- 5 right, 3 left (one of which is juvenile, aged approximately 7yrs.). One has a squatting facet on the anterior margin of the lower articular surface.

Fibulae- 3 right, 4 left

Patellae- 3 right, 2 left.

Feet- 11 tarsals (3 calcanei, 3 tali, 3 naviculars, 1 intermediate cuneiform, 1 cuboid), 16 metatarsals, 6 phalanges.

Conclusions

Number of individuals represented. Major remains of not less than 6, minor remains of others.

Ages. 5 adults and one child. Dental evidence is that the males were aged 25,30 and 45yrs., the females 25 and 30yrs. There are several bones of a 7yr. old child, and an isolated petrous temporal bone from a child under 3yrs. of age.

Sex. 3 male and 2 female adults, one child

Height. Only 2 estimates (femoral): Male 169.5cm. (5'7"), Female 164cm (5'4½").

Congenital. Sacralisation of a 5th. lumbar vertebra. One male skull is dolichocephalic, has a persistent metopic suture and a right superior orbital foramen.

Socio-economic. Squatting facet of one tibia

Pathology. Atypical fusion of 3 thoracic vertebrae, probably due to D.I.S.H.. Arthritic lipping of some costotransverse joints.
Dental abscess.

CONTEXT Nos.2013 - 2188

General. Miscellaneous partial remains, dealt with in numerical order.

2013- not human, probably talus of a large animal

2017- large animal fragments.

- human: part of left side of a frontal bone; a piece of parietal bone with interparietal suture, fused endosteally, up to 6.5mm. thick; small fragments of sphenoid.

2027- Body of mandible, including midline, moderately robust. H1=3.4cm. Most of the teeth were lost post mortem but the carious root of lr 7 is still in situ. There was probably an apical abscess of lr 5.

CONTEXT 2045

Skull bones- left side of frontal bone, with small frontal sinus, of female type. 3 other small frontal bone fragments.

Parietal fragments: 9 large pieces (3½-7cm.) and 15 smaller pieces: these are from more than one adult: (1)Male- bone very robust, up to 9mm. thick (2) Probably female- bone up to 6.5mm. thick and only 4.5mm. at interparietal suture.

Temporal bones: 1 right petrous, 2 left petrous and 3 squamous fragments. Damaged and not easy to sex but probably all male as judged by size of mastoid processes.

Vertebrae. 1 robust atlas (male). 2 lumbar vertebrae, probably not the same individual since one is more robust than the other.
Lower part of a sacrum with the 3rd. and 4th. sacral vertebrae.

Ribs. 4 small fragments.

Upper limbs. Left scapula, fairly small, glenoid and coracoid only.

Left humerus from an adolescent: the upper epiphysis, capitulum and medial epicondyle are unfused and missing.

Forearms: Left ulna, upper half, porous surface, evidently buried a long time. Right radius, small, female size (more recently buried than the ulna).

Hands: 1st. metacarpal of an adolescent, the epiphysis is only partly fused, aged about 17yrs.. Also adult 4th and 5th. right metacarpals, 5th. left metacarpal

Lower limbs. Right femur, upper 2/3rds. in 3 fragments. Vertical diameter of head is 5cm; very robust, adult male.

Feet- left talus, left navicular, right 1st metatarsal.

Conclusions

Number of individuals and ages. Partial and admixed remains of at least 1 adult male (possibly 2), 1 adult female and 1 adolescent male aged about 17yrs.

2047 Right 3rd. metacarpal. Also a large animal bone.

2049 2 animal bones

2054 Animal vertebrae

2069 Burnt fragment of the end of a long bone, similar in size and shape to the upper end of a human fibula but the cancellous bone is too dense: of animal origin.

2071 Animal skull bone. Also a human fragment of a slender occipital bone with an internal occipital protuberance 8mm. thick.

2091 Animal bone

2093 3 human long bone shaft fragments, probably 2 tibial and 1 radial

2100 Animal bone

2109 (possibly a pre-Friary feature) 6.8cm. x 1.6cm. piece of human cortical bone probably midshaft of a humerus

2188 (possible remains of an in situ burial). A fragment of alveolar margin, probably from the canine region of an upper jaw. Five damaged upper teeth: central and lateral incisors, canine, 1st. and 3rd. molars. Oblique molar attrition, age about 40yrs.

CONTEXT No. 1889 Find No.6722 (Box 2)

General. Four damaged skulls; not always possible to assign individual fragments with certainty. Limb bones from more than one individual.

Skull No. 1.

Vault and mandible. Frontal bone, up to 6mm. thick, left side damaged. Slight supraorbital ridge, small frontal sinuses. Narrow, shallow, sloping forehead of female type. Occipital bone: occipital protuberance is 1.3cm. thick. Right temporal. Fragment of left petrous temporal, part of squamous and greater wing of sphenoid. Fragments of parietal bone, up to 6.5mm. thick.

Mandible: intact - H1=2.8cm., RB1=3.3cm., Cr.H=6.2cm.

The teeth are of small size, probably female, gross periodontal recession and calculus. Only slight molar attrition, eburnation only, no exposure of dentine: corresponds to an age of about 20yrs.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Skull No. 2. Vault only. All sutures are totally obliterated. The bone is unusually thick and heavy, 1 cm. thick in the frontal region. Parietal fragments are up to 8mm. thick.

Skull No. 3. Parts of vault and maxilla. Frontal bone, most of left side missing: persistent metopic suture, sharp supraorbital border, moderately strong supraorbital ridges. Frontal bone is up to 6mm. thick. The basisphenoid and basiocciput are fused. Two other fragments of sphenoid.

Maxilla:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

The unerupted 3rd. molars indicate an age of approximately 17yrs (there is room for eruption) but molar attrition is equivalent to 25yrs. The right upper canine is ectopically placed and unerupted.

Skull No. 4. Vault only: 2 parietals, occipital, left temporal. Partial endosteal fusion of sutures. Thin bones. External occipital protuberance is 1.2cm. thick.

Post cranial remains:

Upper limbs:

Right male humerus, length 34.1cm., equals body height of 176.6cm. (5'9½").

Left female humerus, length 29.9cm., equals body height of 158.4cm. (5'2½").

Lower limbs:

Left male femur, length 43.6cm., equals body height of 166.68cm. (5'5½"). Vertical diameter of head 4.8cm., of neck 3.55cm., bicondylar width 8.2cm.

Left male tibia, length 36.9cm.. Broken fibula. Probably all from the same individual

Right male femur, length 47cm., equals body height of 174.57cm. (5'8½").

The head is damaged. Vertical diameter of neck 3.1cm., bicondylar width 8.1cm.

Right tibia, length 38.7cm.

Right fibula, intact, length 35.25 cm. (does not belong to this tibia)

Right tibia, length 35.2cm.

Hip bones:

all are damaged, pubic regions missing: appear to be from 3 individuals:

1.Right side. Fairly large. Sciatic notch of medium angle. Acetabulum 5.7cm. in vertical diameter. A very small preauricular sulcus. Male.

2.Right side. Small. Wide sciatic notch .Acetabulum 5.3cm. vertical diameter. Female.

3.Left side. Small. Wide sciatic notch. Acetabulum 5.25cm. in vertical diameter. Female.

Conclusions

Skulls:

1. Female, aged about 20yrs. Periodontal disease.

2. Male aged about 50 plus. Early Pagets disease.

3. Male. 17yrs. Persistent metopic suture. Ectopic canine tooth. Excessively coarse diet.

4. Female. Age ? 25 yrs.(cranial suture fusion).

Post cranial remains:

Long bones: at least 2 males (heights 5'8"-5'9" and 5'5½") and 1 female (height 5'2½") all adult, are represented.

Hip bones: 2 females, 1 male, all adult.

CONTEXT No.1886, Find No.6723

General. Incomplete: skull, lower limbs, rib fragments.

Skull. Intact and well preserved, mandible missing. Cranial index 90.8 (brachycephalic). Sutures partly fused. Fairly strong supraorbital ridges. Forehead of medium width, 10.8 cm. between outer margins of fronto-zygomatic sutures. Well developed mastoid processes and occipital muscle markings. Prominent external occipital protuberance. Base intact. Fused basiocciput and basisphenoid.

Dental formula:

$$\frac{8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1}{1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8}$$

Note: Upper 2nd. incisors are unerupted and ectopic. Gross attrition of 1st. molars, moderate of 2nd. molars : corresponds to an age of about 35yrs. Periodontal recession.

Vertebrae. Intact axis. 14 very damaged vertebral body fragments.

Ribs. small fragments only

Upper limbs. left clavicle only; both ends damaged, of medium build.

Lower limbs. Femora: moderately robust, head 46.5 cm., neck 34cm. in vertical diameter. Length 46.5cm., giving a total body height of 173.4cm. (5'8½").

Muscular markings too eroded to evaluate. Tibiae have strong soleal line. Both patellae present.

Feet: left talus, 1 proximal phalanx.

Conclusions

Age. 35 yrs.

Sex. Male

Height. 173.4cm. (5'8½")

Physique. Of medium build

Congenital Brachycephalic. Unerupted, ectopic 2nd. incisors

Socio-economic. Coarse diet

Pathology. Periodontal disease.

CONTEXT No.1902, Find No.6724

General. Incomplete. Consists mostly of right side of body and vertebrae. Cranium is missing.

Skull. Only the mandible is present. Coronoid processes and condyles broken. Very strong mylohyoid line. Torus formation on lingual side of molar regions.

Mandible- H1=3.4cm., RB1=8.1cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
							A									

Note: The lr 7 is orientated very obliquely, due partly to a very early loss of lr 6 combined with gross periodontal recession which made the tooth socket extremely shallow, giving little residual support to the tooth. Both first molars were lost ante-mortem; the root tip on the right was in a small abscess cavity. The crown of lr 3 was broken, as by cracking nuts. The degree of attrition is not marked and corresponds to an age of about 30yrs.: this is surprising considering the degree of other degenerative skeletal change.

Vertebrae. Very large bones. The axis is fused to C3 by the posterior part of the body and the articular facets. Thoracic vertebrae 3 and 4 , also 9, 10 and 11 are fused by osteophytes anteriorly and posteriorly but the intervertebral disc spaces between the bodies remain (Plate 29). This is typical of D.I.S.H..

Pelvis. Left ala of sacrum; the 1st. and 2nd. sacral bodies are not fused centrally.

Right hip bone: large, fairly wide sciatic notch. The acetabulum is 5.8cm. in vertical height. There is DISH-type lipping of the outer border of iliac crest anteriorly, also of the reflected head of rectus femoris. The pectineal line of the superior pubic ramus is very strong.

Ribs. 20 fragments of right ribs. Four have heads intact and these show arthritic lipping of costotransverse and costovertebral joints.

Upper limbs. Right scapula- glenoid, outer border and spine.

Right clavicle- massive build, 16.4 cm. long. Lipping of sternoclavicular and acromioclavicular joints.

Right humerus- massive build, 36cm. long, corresponding with a total body height of 182.14cm, (6'0"). Very strong muscle markings.

Forearm bones- large. ulna 29.5cm. long, radius 26.5cm.. The ulna has a marked olecranon spur, and strong insertions of brachialis ,supinator, and attachment of the interosseous membrane. The radius has lipping at insertion of biceps, pronator teres, and at the lower end, the retinaculum for abductor pollicis and extensor pollicis brevis.

Right hand: capitate, scaphoid, hamate, trapezium carpal bones. 5 metacarpals and 11 phalanges. The tendon insertions of short thenar muscles into the head of the first metacarpal are very strong.

Lower limbs. 7 tarsals, 5 metatarsals, 7 phalanges, 1 metatarsophalangeal sesamoid. All ligament and tendon attachments are strongly marked.

Conclusions

Age. 30yrs. (dental attrition, imperfect sacral fusion)

Sex. Male (massive bones, clavicle, hip bone)

Height. 182cm (6'0")

Physique. Powerfully built

Congenital. Mandibular torus

Pathology. Extensive diffuse idiopathic skeletal hyperostosis, leading to fusion of vertebrae. Periodontal recession. Dental abscess.

CONTEXT No.1905, Find No.6725

General. The skeleton is almost complete and in good condition.

Skull. The vault is intact, of slender build, Cranial index 71.1 (dolichocephalic). All sutures are unfused. Persistent metopic suture. Narrow forehead, 9.5cm. between the outer margins of the fronto-zygomatic sutures. Small supraorbital ridges and frontal sinuses. Muscular markings are not strong. Small mastoid processes. Fused basisphenoid and basiocciput. Maxilla intact, teeth small in size.

Mandible- small, H1=2.7cm., RB1=2.5cm., Cr.H=5.7cm.

Dental formula:

$$\begin{array}{c} 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \ | \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ \hline 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \ | \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ \text{A C} \end{array}$$

Notes: There is a deep abscess cavity in front of lr 7. Small central carious cavity in lr 8. Molar attrition is slight, eburnation only, no exposure of dentine: corresponds to an age of about 25yrs.. Incisor wear is more marked, dentine exposed along cutting edges.

Vertebrae. The atlas is missing. All other vertebrae are present and intact. No arthritis.

Pelvis. The sacrum is fragmented: of female type; alar width is 12cm., width of 1st. sacral vertebra is 5.2cm. There is no central fusion between the bodies of the 1st. and 2nd. sacral vertebrae. The hip bones are of female type with wide sciatic notch, marked preauricular sulcus and wide subpubic angle. The acetabulum is small, 5.3cm. in vertical diameter. The pubic symphyseal faces are ridged anteriorly, giving an age range of 20-29yrs.

Ribs. Almost all the ribs of both sides are represented, but as broken fragments.

Sternum. Reconstructed. All sternabrae are fused, the xiphisternum is fully ossified. Age range 25-30yrs.

Hyoid bone. The left greater horn is ankylosed to the body; the right greater horn is broken off.

Upper limbs. Both scapulae are present, fragmented. The clavicles are intact, of medium build, 14.2cm. in length; moderate marking for ligaments, pectoralis major and deltoid muscles. All major long bones are present. Humerus 30.9cm. long, giving an estimated body height of 161.8cm. (5'3½"). Moderate muscle markings.

Radius and ulna: insertions of biceps and brachialis are strong.

Right hand- 7 carpals, 5 metacarpals, 15 phalanges

Left hand- 5 carpals, 5 metacarpals, 4 proximal phalanges, 2 intermediate, 2 distal phalanges.

Lower limbs. All major long bones are present: robust for a female.

Femora: head is 4.1cm. in vertical diameter, the neck 2.8cm.; bicondylar width is 7.3cm. Length 42.6cm. gives an estimated body height of 159.3cm. (5'3"). Note : the lower part of the intertrochanteric line (attachment of iliofemoral ligament) on the right is very marked, and everted.

Both tibiae and the left fibula are intact, the right fibula is broken. Both patellae are present.

Right foot- 5 tarsals, 5 metatarsals, 5 proximal phalanges.

Left foot- 6 tarsals, 5 metatarsals, 5 proximal phalanges, 1 distal phalanx.

Conclusions

Age. Approximately 28yrs. (dental attrition, sternal fusion, pubic symphysis)

Sex. Female (cranial and pelvic features, femora)

Height. 160cm. (5'3")

Physique. Fairly strong for a female

Congenital. Dolichocephalic. Persistent metopic suture.

Socio-economic. The incisor wear suggest meat eating. Lack of molar attrition indicates that the diet was not excessively coarse.

Probably of good social class.

Pathology. Dental abscess. Periodontal disease. Possibly had an extensor strain of the right hip joint. Ankylosis of body and greater horns of hyoid bone.

CONTEXT No.1914, Find No.6728

General. All regions are represented but often by bones either fragmented or in poor condition.

Skull. Good condition but fragmented. Narrow, shallow sloping forehead of female type. Distance between fronto-zygomatic sutures 10cm. Small supraorbital ridges. Parietal thickness is up to 6.5mm. Vault sutures are fused endosteally but not

externally. Small mastoid processes. External occipital protuberance 1.35 mm. thick. The maxilla and mandible were reconstructed. The mandible is small.

Mandible- H1=3cm., RB1=3cm., Cr.H=6.1cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>									<hr/>							
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Notes: molar attrition is more marked on the left due to functional loss of the lower right molars. Corresponds with an age of about 40yrs.. Severe central incisor wear. 8 ll is situated obliquely and its root is deformed. ll 6 is broken, carious, only its roots remain.

Vertebrae. all are in poor condition. Damaged fragments of atlas, axis and 2 other cervical vertebrae; 12 thoracic, 1 lumbar vertebrae.

Pelvis. The sacrum is damaged, of female type, alar width 10.6cm. , width of 1st. sacral vertebra 4.1cm.; the first two sacral vertebrae are fully fused together. Hip bones damaged, female type, wide sciatic notch, wide subpubic angle, no preauricular sulcus.

Ribs. Damaged fragments only.

Upper limbs. All bones are present but in poor condition.

Scapulae- glenoid, and coracoid only. Clavicles slender, damaged.

Humeri- damaged, estimated length 29.8 cm, giving a body height of 158cm. (5'2½").

Forearm bones- slender, ends damaged.

Right hand-7 carpals, 5 metacarpals, 5 phalanges,

Left hand- 1 carpal, 3 metacarpals, 5 phalanges.

Lower limbs. Femora 44.2 cm. long, giving a body height of 163,2 cm. (5'4½"). Femoral head is 4.25cm, neck 3.15 in vertical diameter. Bicondylar width 7cm. Muscle markings are eburnated. Tibiae intact. Fibulae damaged. Both patellae present.

Right foot- 7 tarsals, 5 metatarsals, 8 phalanges.

Left foot- absent.

Conclusions

Age. 40yrs. (dental attrition, sacral fusion)

Sex. Female (cranial and pelvic features)

Height. 163.2 cm. (5'4½")

Physique. Moderate build.

Socio-economic. Coarse diet

Pathology. Caries, periodontal recession

Note: The left humerus, ulna and radius of another body have been accidentally included under this number

CONTEXT No.1916, Find No.6729

General. Almost complete, well preserved.

Skull. Intact, together with maxilla. Cranial index 71.8 (dolichocephalic). Forehead is of medium width. Distance between outer surfaces of the fronto-zygomatic sutures is 10.7cm.. Very poorly developed supraorbital ridges. Skull sutures not fused externally. Small mastoid processes. Strong external occipital protuberance and moderate muscular markings. Fused sphenoccipital synchondrosis. The hard palate is intact, narrow, 3.6cm. between first molars.

Mandible- H1=3.35cm., RB1=3.24cm., Cr.H=6.6cm.

Dental formula:

$$\begin{array}{c} \begin{array}{cccccccc|cccccccc} 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \end{array} \\ \hline \begin{array}{cccccccc|cccccccc} \cancel{8} & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & \cancel{6} & \cancel{7} & 8 \end{array} \\ \begin{array}{cc} A & A \end{array} \end{array}$$

Notes. Multiple apical abscesses secondary to severe periodontal disease, the corresponding teeth are viable and non-carious. The upper 3rd. molars are congenitally absent. The lr8 is represented by a deep oblique socket in the ramus, representing an impacted and incompletely erupted tooth. Attrition is uneven due to tooth loss but equates with an age of 30-35yrs..

Vertebrae. All vertebrae are present and well preserved, including atlas and axis. The 2nd. and 3rd. thoracic vertebrae are totally fused, bodies, laminae and spines, with no disc space (Plate 30).

Pelvis. Sacrum- damaged, of female type. the 1st and 2nd, sacral bodies are imperfectly fused anteriorly and centrally, fused posteriorly; lateral masses are fused (25-30yrs.). Hip bones- typically female, small, wide sciatic notch and subpubic angle. The acetabulum is of moderate size for a female, 5.2cm. vertically. Deep pre-auricular fossa. Pubic face: some ridging ventrally, smooth dorsally (30yrs.)

Ribs. Both sides are well represented by large fragments. Arthritic lipping of some costotransverse joints.

Sternum. 1 small manubrial fragment.

Upper limbs. Both scapulae are present, right better preserved than left. Clavicles moderately robust, 13cm. long; well developed ligamentous attachments, lipping of the inferior aspect of the sternoclavicular joints. Note: the long bones from the left side were included accidentally under No.1914.

Humeri- length 32.5cm., giving an estimated body height of 167.17cm. (5'6").

Forearm bones- slightly damaged; well developed brachialis and supinator insertions on the ulna.

Right hand- 7 carpals, 5 metacarpals, 8 phalanges.

Left hand- 6 carpals, 5 metcarpals, 8 phalanges.

Lower limbs. Femora- length 45cm., giving estimated body height of 165.25cm. (5'5"). Vertical diameter of head 4.65cm., of neck 3.7cm. Bicondylar width 7.6cm., length of lateral condyle 6cm. (male type measurements). Moderate muscular markings
Tibiae- intact, strong soleal lines. Fibulae- slightly damaged. Left patella present.
Right foot- 7 tarsals, 5 metatarsals, 8 phalanges, including terminal phalanx of great toe.
Left foot- 7 tarsals, 5 metatarsals, 9 phalanges including terminal phalanx of great toe.

Conclusions

Age. 30yrs. (skull, dental attrition, sacral fusion, pubic symphysis)

Sex. Female (cranial and pelvic features)

Height. 165.26cm. (5'5")

Physique. Robust, strong clavicles and large femora

Congenital. Dolichocephalic. Impacted imperfectly erupted lower 3rd. molar, congenitally absent upper 3rd. molars. Total fusion between 2nd. and 3rd. thoracic vertebrae, so complete and isolated that it must be of congenital origin.

Socio-economic. Poor dental hygiene, strong muscle markings, arthritic changes developing at a relatively early age: probably manual worker.

Pathology. Dental abscesses. Periodontal disease. Arthritic lipping costo-transverse joints.

CONTEXT No.1932, Find No.6730

General. Incomplete. Skull, ribs, vertebrae, clavicle, left scapula and left hand are missing.

Skull. Hard palate only.

Dental formula:

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Area								missing							

The degree of attrition is equivalent to an age of about 30yrs, with a coarse diet.

Vertebrae. 4 vertebral arch fragments only.

Pelvis. Part of right hip bone- wide sciatic notch, large acetabulum 5.9cm. in vertical diameter.

Upper limbs. Fragmentary remains of the glenoid and spine of the right scapula.

Damaged right humerus, 35.6cm. long, large head, robust shaft. Midshaft only of left humerus.

Forearm bones- only right ulna is complete, the other bones are in fragments.

Right hand- 3 carpals (capitate, lunate, scaphoid), 5 metacarpals, 2 phalanges.

Lower limbs. Femora- length 49.5cm., giving estimated body height of 180.4cm. (5'11"). Vertical diameter of head 4.8cm., of neck 3.4cm. The surface is too worn to examine muscle markings.

Tibiae- robust, particularly strong soleal line. Fibulae fragmented. Right patella.

Right foot- 7 tarsals, 5 metatarsals, 3 phalanges

Left foot- 7 tarsals, 5 metatarsals, 1 phalanx.

Conclusions

Age. 30yrs. (dental attrition)

Sex. Male (pelvis, femora)

Height. 180.4 cm. (5'11")

Physique. Strong muscles of calf

Socio-economic. Coarse diet.

CONTEXT No.1945, Find No.6731

General. Skull is missing, presumed accidentally separated after excavation and probably included elsewhere. Lower limb long bones are broken.

Skull. Nil.

Vertebrae. Intact bones are: 4 cervical (including atlas and axis), 5 thoracic, 1 lumbar; the rest are fragmented. The bones are of small size.

Pelvis. Sacrum- very badly broken, alae are missing. Note: bodies of the first two sacral vertebrae were fused peripherally but not centrally.

Hip bones- wide sciatic notch, deep pre-auricular sulcus, small acetabulum 4.7cm. vertically. Pubic regions are missing.

Ribs. Counting heads and necks: 12 right, 11 left, also 48 other fragments. Of slender build, maximum vertical diameter 1.4cm. Arthritic lipping of some lower costo-transverse joints.

Upper limbs. Right scapular fragments, the left missing.

Right clavicle is of slender build, female type, 13.7 cm. long. Strongly developed coraco-clavicular ligament attachment. Slight arthritic lipping of the acromio-clavicular joint.

Humeri- length 30.5cm., moderate muscular markings.

Forearm bones- fairly well marked insertions for the brachialis and biceps muscles. Note: there is an old healed fracture of the shaft of the right ulna 3½cm. from its distal end, without deformity.

Right hand- 6 carpals, 5 metacarpals, 12 phalanges including 3 terminal ones.

Left hand- 6 carpals, 5 metacarpals, 11 phalanges, including 3 terminal ones.

Lower limbs. Femora- length 43.3cm., giving estimated body height of 161cm. (5'3½"). Vertical diameter of head 4cm., of neck 2.8cm. Bicondylar width 7cm (typically female measurements). Strong attachment sites for gluteal muscles. Slight arthritic lipping of the articular margins of the condyles and the patellae , i.e. patello-femoral arthritis.

Tibiae- strong semimembranosus insertions. Fibulae damaged.

Right foot- 7 tarsals, 5 metatarsals, 9 phalanges including 4 terminal ones

Left foot- 5 tarsals, 5 metatarsals, 10 phalanges including 3 terminal ones. One sesamoid of metatarso-phalangeal joint of great toe.

Conclusions

Age. 40yrs. (arthritis, sacrum, no cranial or dental evidence)

Sex. Female (pelvis, femora)

Height. 161cm. (5'3½")

Physique. Strong hip and knee muscles

Socio-economic. Much walking/ climbing

Pathology. Arthritis of patello-femoral joint, costo-transverse and acromio-clavicular joints. Old healed fracture lower end of right ulna- due to a direct blow, not a fall.

CONTEXT No.1955, Find No.6732

General. The skull, spine, hands and feet are incomplete; many bones are damaged.

Skull. The vault is fragmented and most of it is missing. The largest fragment is of the frontal bone, including parts of the orbital plates; too damaged to measure width of forehead. The supraorbital ridges are worn away and small frontal sinuses are exposed. Small parietal fragments. The basi-occiput is present, broken at the site of a fused spheno-occipital synchondrosis. Both petrous temporal bones are present; mastoid processes are worn away. By contrast to the fragmented vault, the sphenoid and hard palate are relatively intact. Teeth and palate are of medium size, 3.35cm. between 1st. molars. The mandible is damaged, the rami and posterior parts of the body are missing; H1=3cm..

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>									<hr/>							
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

The occlusal surfaces of some teeth show post mortem abrasion and staining. Attrition age is in the 25-30 year range. Attrition indicates a coarse diet. ll 8 was probably congenitally absent

Vertebrae. Vertebral arches intact of atlas and axis, 6 thoracic and 3 lumbar vertebrae, their bodies damaged, all of medium size. 14 other fragments.

Pelvis. The sacrum is broken, the right side and lower two bodies missing, the alae are damaged and cannot be measured. There is a large central disc space between 1st. and 2nd. sacral bodies, which are only fused peripherally.

Hip bones- both are damaged and the pubic regions and iliac crests missing. The right sciatic notch appears wider than the left. There is the anterior part of a very small pre-auricular sulcus on the left. The acetabulum is of medium size, 5.1cm. in vertical diameter. The ischial tuberosity epiphysis is fused.

Ribs. Counting heads and necks- 6 right and 5 left are present; 23 other fragments. They are of medium build, with a maximum vertical diameter of 1.7cm.

Upper limbs. Scapulae are represented by glenoid surface, its margins eroded, and outer parts of body. The right clavicle is present, very damaged, both ends and the lower surface missing, so it appears slender, but was probably long enough to be of male type.

Humeri- length approximately 32.1cm., slender, the ends damaged: if male it would correspond to a total body height of 170.7cm. (5'7"). Forearm bones- of fairly slender build, damaged

Right hand- 3 carpals, 3 metacarpals, 2 phalanges.

Left hand- 3 carpals, 4 metacarpals, 2 phalanges.

Lower limbs. Femora- length 44.1cm., giving a body height of 167.8cm. (5'6")- actual height was probably slightly more because the edges of the condyles are missing. Vertical diameter of head 4.5cm., of neck 3.1cm..

Tibiae- surfaces too damaged to judge muscle insertions. Fibulae- fragmented. Patellae- 1 small left fragment.

Right foot- 3 tarsal fragments, 1 phalangeal fragment

Left foot- 4 tarsal fragments, 2 phalangeal fragments

Conclusions

Age. In the range 25-30 yrs. by dental attrition, incomplete fusion between the first two sacral vertebrae, fused spheno-occipital synchondrosis, fused secondary epiphyses.

Sex. Male. This was judged mainly from femoral features: length, size of head and neck. The skull, sacrum and hip bones were too damaged to be sexually determinate. Other supportive criteria: teeth, clavicle.

Height. 170.8cm. (5'7") (from humeral length, and adjusting femoral length to compensate for damaged condyles)

Physique: of fairly slight build

Coingenital. Absent lower 3rd. molar tooth

Socio-economic. Dental attrition indicates a coarse diet

CONTEXT No. 1893, Find No. 6733

General. According to records this should comprise a complete skeleton, but only the skull, hands and feet are present. In addition there are other unmarked bones which are assumed to be 6734

Skull. The vault is intact, but without the skull base. No basi-occiput, temporal or sphenoid bones. The lower part of the frontal bone, orbital plates and nasion are missing so the cranial index cannot be measured. Frontoparietal, interparietal and occipitoparietal sutures are completely fused.

The striking feature is the presence of 2 trephine holes in the posterior part of the right parietal bone, one circular the other slightly oval, approximately 1cm. in diameter and 3cm. apart from one another: the edges are quite smooth, probably indicating that the individual survived the operation and some healing took place (Plates 27 and 28).

The frontal bone is up to 6mm. in thickness. The external occipital protuberance is 1.4cm. thick. Strong occipital muscle markings. Two zygomatic bones. The hard palate is mostly intact but almost all the teeth are either broken off, with their root tips still in situ (central incisors) or lost completely.

Mandible- H1=3.1cm., RB1=3.1cm., Cr.H=6.1cm.

Dental formula:

$$\begin{array}{cccccccc|cccccccc} & & C & & & & & & & & C & & & & & \\ 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ \hline 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ & & C & & & & & & & & & & & & \end{array}$$

Attrition of the lower teeth is slight and corresponds to an age of about 20yrs.. Very severe calculus formation. Oblique eruption of the left lower molars.

Vertebrae. Atlas only

Upper limbs. Only the hands are present.

Right hand- 7 carpals, 5 metacarpals, 14 phalanges including 3 terminal phalanges.

Left hand- 7 carpals, 5 metacarpals, 11 phalanges including 4 terminal phalanges.

Lower limbs. Only the feet are present: all bones are of robust build.

Right foot- 7 tarsals, 5 metatarsals, 7 phalanges

Left foot- 7 tarsals, 5 metatarsals, 8 phalanges

Conclusions

Age. 20 yrs. (dental attrition)

Sex. Probably male (mandible, strong occipital muscle markings, robust foot bones)

Socio-economic. Very neglected dental hygiene suggests poor status.

Pathology. Trephine holes in the skull

Dental caries.

Note: It is likely that the skull vault is from an individual older than 20yrs., since there is total obliteration of all sutures. As noted elsewhere there seems to have been some confusion in the excavation of this skeleton.

CONTEXT No. 1893, Find No. 6734

General. A skull, loose teeth and foot bones are boxed together with 6733 and though not individually labelled, are assumed to comprise 6734, according to the box classification.

Skull. The vault and base are intact. Cranial index is 75 (mesocephalic). Distance between outer surfaces of the fronto-zygomatic sutures is 10.2cm.. Moderate supraorbital ridges. Frontoparietal, interparietal and occipitoparietal sutures are partly fused. Strong mastoid processes. Strong occipital muscle markings. Fused spheno-occipital synchondrosis. The right supraorbital notch forms a foramen.

Teeth: Upper l 3 , l 2 , l 1 , r 1 , r 3 ; attrition is slight

Lower limbs. Right foot bones: calcaneum, cuboid, 3 metatarsals.

Conclusions

Age. Adult, approximately 25yrs. (skull sutures, dental attrition)

Sex. Male (cranial features, robust foot bones)

Congenital. Right supraorbital foramen

CONTEXT No. 1527

General. Parts of 3+ skeletons found in an SWEB cable trench (chapter house), also animal bone

Skulls. Broken fragments only.

Right side of frontal bone: medium sized frontal sinuses exposed, up to 7mm. thick, sloping forehead, ? female.

Left side of a different frontal bone, strong supraorbital ridge large frontal sinus, up to 7.5mm. thick: male.

Thin smooth piece of frontal bone, only 4mm. thick, unfused frontoparietal suture, probably adolescent.

1 right zygoma. 5 parietal fragments, fairly robust, up to 6 mm. thick. Left temporal bone, with temporo-mandibular joint surface. Large piece of occipital and posterior parts of parietal bones: fused occipitoparietal and interparietal sutures, strong external occipital protuberance: a male over 30yrs.

Adult teeth: 1 hard palate and mandible, probably from the same individual.

Mandible- H1=2.8cm., RB1=3.2cm., Cr.H=6.1cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>								<hr/>								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Marked incisor and canine attrition. Molar attrition is equivalent to an age of about 30yrs., male
Juvenile teeth: left side of a mandible of a child aged about 6 yrs., the first permanent molar has just erupted. A lower premolar has a crown but no root; deciduous molars are still present.

Vertebrae. right half of an atlas

Upper limbs. All bones are damaged. Right male type clavicle; right scapula, 2 adult humeri, 1 left, 1 right, not a pair; 2 ulnas, 1 radius.

Lower limbs. 1 femoral and 2 tibial shafts and 2 fibulae of a 6yr. old

2 tibial shafts and 2 fibulae of another child aged about 10yrs.

Upper end of tibia and lower end of femur from an adolescent, aged about 15yrs.

1 femoral and 1 tibial shaft, adult.

Animal bones. mostly bovine

Conclusions

Ages. Partial remains of at least 2 adults (1 male 30yrs., 1 female ?20yrs.); 3 juveniles aged 6yrs., 10yrs., 15yrs.

CONTEXT No. 1582.

General. Left leg

Lower limb. Femur- length 45.9cm., equivalent to a body height of 172cm., (5'8"). Vertical thickness of head 4.8cm., of neck 3.4cm., Tibia- intact, robust, strong muscle insertions. Patella. Broken fibula.

Conclusion

Adult male, height 172cm. (5'8")

CONTEXT No.1678

General. Incomplete skeleton ? a reburial.

Skull. Nil., Vertebrae. Vertebral arch fragments only

Pelvis. Sacrum: parts of 4th. and 5th. sacral bodies. Hip bones: 2 small fragments; the sciatic notch is probably of male type. No pre-auricular sulcus.

Ribs. Numerous small fragments from both sides, moderately robust

Upper limbs. 5 phalanges only.

Lower limbs. Large fragments of femora, tibiae and fibulae from both sides; robust.

Conclusions

Adult male

CONTEXT No.1687.

General. Lower limbs of one individual

Lower limbs. Both tibiae, robust , damaged. Left patella.

Right foot- 6 tarsals, 5 metatarsals, 1 phalanx.

Left foot- 6 tarsals,5 metatarsals.

Conclusions

Adult male

Small Finds

1509. Small fragments of temporal bone of skull vault. 5th. right metatarsal. Fragment of iliac crest.

1535 Anterior half of the body of a thoracic vertebra.

1536 Small fragment of skull vault, probably frontal bone. Right ramus of mandible. Foot bones- left navicular, left 1st. and 2nd metatarsals, proximal phalanx. 2 fragments of fibular shaft.

1545 Upper half of shaft of right femur, lower half of shaft of left humerus. Intermediate phalanx of finger. Animal bones.

1587. Right humerus, robust, male type, 33.6cm. long, giving an estimated body height of 175.2cm. (5'9")

1588 Animal bone

1620 3 fragments of skull vault, including parietal up to 8mm. thick and occipital with strong muscle markings and fused parieto-occipital sutures. Conclusion: Male, over 30yrs.

1621 3 fragments of parietal bones up to 8mm. thick. Fused interparietal suture. Conclusion. Male over 30yrs.

1629 Part of right hip bone, probably male. Left 2nd. metatarsal.

1634 Tiny bone shaft ? 1st. metatarsal of a newborn.

1639. Skull bones. Frontal bone has small frontal sinuses, narrow forehead. The frontoparietal suture was fused endosteally. Occipital- external occipital protuberance is 1.5 cm. thick, the parieto-occipital sutures are unfused. Parietal fragments are up to 7mm. thick, fused interparietal suture. Temporal bones - damaged mastoid processes. Hard palate- no teeth in situ, the 6 had an apical abscess. Conclusion- probably female, aged about 30yrs.

Long bones. All are broken. Right radius, left ulna. Upper end right femur, lower end left femur. Left tibia, fibular fragments. All bones are robust, of male type. Conclusion: adult male.
Also juvenile left femur, age about 9 yrs. Animal bone.

1655. Right side of hard palate with ul 4 and ul 6 in situ, only slight attrition, age about 20yrs.

1681 Right lateral cuneiform. Base of right 4th. metatarsal.

1686 Fragments of right leg and foot- lower end of tibia, calcaneum, talus, navicular, cuboid, medial cuneiform; 5 metatarsals, 1 phalanx, all damaged.

Fragments left leg and foot- lower 2/3rds, of tibia, calcaneum, talus, navicular, lateral cuneiform. All are small. Conclusion Female, adult.

1701. Animal bone. Human tooth ul 2 .

1725 Part of right hip bone, male. Midline fragment of mandible, no teeth in situ. Animal bone.

1726 Left side of mandible RB1=3.2cm., Cr.H= 6.6cm.

Dental formula:

Area missing								
	1	2	3	4	5	6	7	8

Attrition of premolars is slight. All lower left molars had been lost ante-mortem.
Animal rib fragments.

1738 Skull. Vault of skull is well represented, though fragmented. Slender bones, parietal thickness is only up to 3.5mm. Unfused sutures throughout. Shallow supraorbital ridges. Small mastoid processes. Incompletely fused spheno-occipital synchondrosis. Conclusion. Female aged about 18yrs.
Animal bone.

1744 3 small slender fragments of skull vault.

1745 Left navicular.

1748. Animal rib fragments.

1750 Right head of femur (female). Fibular shaft fragment. Incisor tooth lr 2. Animal bone.

1757 Immature cervical vertebra. Upper unfused epiphysis of humerus. Right 2nd. metatarsal with unfused head. Conclusion. Juvenile aged approximately 14yrs.
2 rib fragments. Animal bones.

1763 Mostly animal bone fragments.

1765 2 thoracic vertebrae, one with osteophytes. Shaft of fibula. Animal bones.

1795 3 rib fragments.

1798 Right talus, of slight build, female type.

1799 Mandible, robust, male type

Dental formula:

$$\begin{array}{c} \hline 8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1 \ | \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ \hline \end{array}$$

Attrition age is approximately 25yrs.

Cervical vertebra. Base of right 2nd. metatarsal. Left and right ulnas- not a pair, probably right female, left male. Midshaft of radius. Tibial shaft fragment. Left rib fragment. Right small 4th. metatarsal.

CONTEXT 1618

General. Residual bone from a post-medieval pit. Numerous skull fragments. These are partial remains of at least 4 individuals.

1. Vault of skull, including both parietal bones up to 7.5mm. thick, all sutures completely fused. Deep arachnoid pits. Eroded external surface, due to prolonged burial.

Conclusion. Male, probably over 40yrs.

2. Reconstructed frontal bone and left parietal. Strong supraorbital ridges. Frontoparietal and interparietal sutures fused endosteally. Parietal bones up to 7mm. thick

Conclusion. Male aged 30yrs.+

3. Right side of frontal bone, left parietal and part of occipital. Smooth bone surfaces. Shallow supraorbital ridges. Early endosteal fusion of sutures.

Conclusion. Female aged 25yrs.+

4. Parietal fragment up to 13mm. thick

Conclusion. Pathology- Paget's disease

In addition there are 3 occipital bones, 2 temporal bones, 2 sphenoids and numerous vault fragments, mostly parietal which cannot be assigned.

CONTEXT 1664

General. Numerous fragments of skull and long bones.

Skulls

1. Right supraorbital region of frontal bone, strong supraorbital ridge. Numerous vault fragments, mostly parietal, up to 8mm. thick. 2 temporal bones, strong mastoid processes. Occipital- strong muscular ridges, occipital protruberance 1.9cm. thick. Right zygoma. Right maxilla with 2 molars and 2 premolars in situ, attrition age approximately 30yrs. Part of right side of body of mandible.

Conclusion. Male aged 30yrs.

2. Frontal bone. Shallow supraorbital ridges. Narrow forehead, 10.4cm. between outer margins of frontozygomatic sutures. Temporal bones have small mastoid process. Occipital bone with shallow muscular ridges, occipital protruberance 1.15cm. thick. Part of right maxilla with 1st. molar in situ, attrition age about 25yrs. Parietal fragments which appear to originate from 3 different individuals.

Conclusion. Female aged 25yrs.

Long bones

General. All are fragmented.

2 scapulae. Right male hip bone. Animal bone.

Upper limbs. Lower half of right humerus. 3 radii. 3 ulnas.

Lower limbs.

Femora- upper end 4 right (2 male, 2 female), 2 left (male)

- lower end 4 (not sided or sexed)

- 9 shaft fragments.

Tibiae- 3 plateaux, 9 lower ends (3 right 4 left), 7 shaft fragment

Fibulae- 3 shaft fragments

Conclusions At least 4 individuals, 2 male, 2 female.

CONTEXT 1801

Upper limb. Glenoid of right scapula, some arthritic lipping. 2 dissimilar clavicles, ends missing, robust, of male type. 3 ulnas (2 right, 1 left). Midshaft of a radius.

Lower limb. Right hip bone fragment- robust, of male type, the acetabulum is 5.5cm. in vertical diameter, wide sciatic notch.

Right patella. Lower ½ of left tibia. Most of shaft of right fibula. 2 other dissimilar fibular fragments. 6 metatarsals: arthritic lipping of the head of the 1st. metatarsal. 1 proximal phalanx.

Conclusions. Male, aged 40+.

Pathology: arthritis of shoulder and 1st. metatarsophalangeal joint.

Note: it is assumed that this is the same individual as in the other report on Context 1801

CONTEXT 1804.

General- partial remains of 2 juveniles.

(1) Skull. Parietal bones, left temporal, zygoma, right side of the hard palate with 1st. and 2nd. deciduous molars in situ, a cavity for 6 which was probably unerupted

Limbs. Shaft of right femur and right tibia with unfused epiphyses. The femoral shaft measures 17cm. between epiphyseal lines, the tibial shaft is 17cm.

Conclusion. A child aged 5½yrs.

(2) Left petrous temporal bone of skull. A thoracic vertebra of medium size with incomplete fusion between body and vertebral arch. Right scapula. First metacarpal with unfused basal epiphysis. Upper ½ of femoral shaft, upper half of tibial shaft, left talus.

Conclusion. A child aged approximately 10yrs. (size of long bones and vertebra).

CONTEXT 1807

General. Miscellaneous sparse finds of 3 individuals.

(1) Mandible- all deciduous teeth are in situ. The apex of the canine is incompletely developed The permanent 1st. molars have only the crown formed.

Conclusion. A child aged 3yrs.

(2) Upper end of tibia with unfused epiphysis.

Conclusion . Child aged approximately 11yrs.

(3) Adult bones- half of atlas, 2 lumbar vertebrae, midshaft of slender clavicle, right scapula, 2 ulnar shafts, 2 radial shafts of slender build. Bones of hand of an adult- scaphoid, lunate, triquetral, metacarpal of thumb, 5 phalanges. Right patella, 8 phalanges of toes

Conclusion. An adult female.

CONTEXT 1809

General Miscellaneous sparse remains of 4 children and one adult.

(1) 3 thoracic vertebral arches- unfused to bodies. Shaft of humerus with unfused epiphyses, 13cm. long. Upper end of a very small ulna.

Conclusion. A child aged 4½yrs.

(2) Left femur 17cm. long between unfused epiphyses (? the same individual as No.1804). Part of the right hip bone with acetabulum.

Conclusion. A child aged 5½yrs.

(3) Skull- frontal bone, parietal bone and part of sphenoid. Sacrum with 1st. sacral vertebra imperfectly fused to alae, vertebral arch halves unfused in midline posteriorly, no fusion between 1st. and 2nd. vertebrae. 2 thoracic vertebrae with imperfect fusion between arches and bodies. Rib fragments. Shaft of humerus 19cm. long between unfused epiphyses.

Conclusion. A child aged 10yrs.

(4) Basiocciput of skull. 2 hip bone fragments with acetabulae. Right clavicle with an unfused medial end, 9 cm. long (broken lateral end). Proximal phalanx of thumb with a fusing epiphysis. Upper end of tibia with unfused epiphysis. Midshaft of fibula. Rib fragments.

Conclusion. An adolescent aged about 13yrs.

(5) Fragment of frontal bone with a metopic suture, endosteal fusion of frontoparietal suture. Midshafts of humerus and tibia.

Conclusions. Adult female. Persistent metopic suture.

CONTEXT 1813

Minor fragments of vertebra, radius, metacarpal and animal bone.

CONTEXT 1814 Left foot of an adult. 8 tarsals, 5 metatarsals, 6 phalanges.

CONTEXT 1817

Mandible. Robust, H1=2.8cm., RB1=3.2cm., Cr.H.=6.25cm. Full dentition. 8 fully erupted, 8 imperfectly erupted. Attrition age 25yrs. Also a manubrium sterni

Conclusions. Male aged 25yrs.

CONTEXT 1823

2 vertebrae, 1 thoracic, 1 lumbar A fragment of right scapula. 1st. and 2nd. left metacarpals, robust. 1 proximal phalanx. 1 rib fragment. Right fibula.

Conclusion Adult remains, probably male (robust bones)

CONTEXT 1834 Head of a rib

CONTEXT 1838 Rib fragment. Damaged 4th. left metatarsal.

CONTEXT 1801

General. An admixture of bones of a child and an adult.

Child.

Sacrum- 2nd. sacral vertebra, its body and alae unfused to the 1st- similar to but not the same body as 1809.

Conclusion. Age approximately 11yrs.

Adult.

Mostly broken fragments. Body of sternum.

Pelvis. Fragment of left hip bone with a broken sciatic notch. Right acetabulum, fairly capacious, 5.2cm. in vertical diameter. Fragment of iliac crest with marked tendon insertions.

Upper limb. Part of right clavicle- robust, some ossification in coraco-clavicular ligament. Fragment of left scapula with glenoid.

Left hand- capitate, hamate, 4 metacarpals, 6 phalanges. Well marked tendon insertions.

Lower limbs. Fragment of shaft of tibia. Right talus of medium size.

Conclusions. Adult male, probably 40yrs.+.

Pathology- ossification in coracoclavicular ligament and strong tendon insertions indicates probable D.I.S.H.

Note: it is assumed that this is the same individual as in the other Context 1801 report.

CONTEXT 1819

General. An admixture of adult and juvenile remains

Adults

Skull. Both parietal bones and occipital bone of a skull of slender build. The fronto-parietal suture is fused endosteally. Frontal bone, shallow supraorbital ridges, light build, of female type. 2 right temporal bones, small (damaged) mastoid processes. Zygomatic processes do not extend over auditory meatus. Fragment of right parietal, of medium build, up to 6mm. thick. 2 sphenoid fragments.

Three mandibles:

(1) H1=2.8cm., RB1=2.45cm., Cr.H.=6.3cm., of slender build, female type. Only two teeth in situ

Dental formula-

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
A														A		

Attrition age is about 40yrs. Molar root abscesses on both sides.

(2) H1=3cm., RB1=3.3cm., robust, of male type

Dental formula

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

Impacted ll 8. The lr 8 was probably retained within the jaw. Attrition age is about 30yrs.

(3) Small midline fragment of a mandible, no teeth in situ.

Vertebrae 1 cervical, 1 thoracic, 1 lumbar body

Pelvis. Sacrum- probably a male type curvature, alae damaged, the bodies imperfectly fused to one another, the lateral masses are united. 1 hip bone fragment.

Ribs.4 slender fragments.

Limbs. 2nd. metacarpal.1 phalanx of hand, 2 tali from different individuals. 1st. left metatarsal.

Conclusions. 1) Female aged 40yrs., dental abscesses.

2) Male aged 30yrs.

Juveniles

General. In 3 juveniles- limb bones with unfused epiphyses and vertebrae only, no skull bones or teeth. Small rib fragments are not assigned.

(1) 4 immature vertebrae with incomplete fusion between bodies and arches. Left ischium, with an unfused acetabular Y-shaped cartilage. Shaft fragments of humerus, radius and ulna.

Right femur- 25.5cm. between epiphyseal plates.

Conclusion. 10yr. old child.

(2) Femoral shaft, 35.6cm. between epiphyseal plates, of slender build and narrow neck. Fibular fragment. 1 slender clavicle 9.6cm. long, the lateral end missing, the epiphysis unfused at medial end.

Conclusion. 13yr. old adolescent, probably female.

(3) 1 lumbar vertebra, epiphyseal plates of body are unfused. 1st. piece of sacrum, unfused to body and lateral masses of 2nd.sacral vertebra.

2 clavicles, 10.6cm. long, the medial end unfused. Left ulna 24cm. long (allowing for missing epiphysis), giving a body height of 165.8cm. (5'5"). Right radius, its ends damaged.

Upper half of femur, robust, thick neck, lower end of shaft, 2 unfused upper and 2 unfused lower femoral epiphyses. Detached upper and lower tibial epiphyses. Fibula, 28.1cm. between epiphyseal plates.

Conclusion. 15yr. old male height 165.8cm. (5'5").

(4) Occipital bone, slender. Right maxilla, mandible.

Dental formula:

6 E D C B 1	missing
6 E D C B 1	1 B C D E 6

Note: the apices of the central incisors are incomplete. An unerupted lower canine has only 1/3rd. of the root formed.

Vertebrae- atlas, 2 cervical and 1 thoracic vertebrae, all small, the bodies are fused to the arches.

Pelvis. Right ilium, immature acetabulum

Ribs- most ribs are present, fragmented, up to 1cm. in height.

Upper limbs. Both scapulae, coracoid not fused to to body. Right humerus, unfused epiphyses, 18.5cm. between epiphyseal lines.

Conclusion. Child aged about 8 yrs. (teeth, length of long bones.)

Mandible- medium build, sloping ramus, probably female. H1=3.1cm., RB1=2.9cm., Cr.H.=5.8cm.

C

Vertebrae.. Axis, 2 lumbar vertebrae.

1 left hip bone, fairly wide notch, no preauricular sulcus, 5.5cm. acetabulum, robust (male)

Sternum. manubrium and part of body.

Ribs. 10 fragments, slight build, maximum height 1.4cm.

Fragment of left clavicle, slender build. 3 scapular fragments.

Left humerus 30cm. long. Right and left ulnas. Note: there is a healed but grossly misaligned fracture of the lower 1/4 of the left ulna- presumably the radius (which is missing) was also fractured and there was little immobilisation probably by a sling only (Plate 19).

Hands- lunate, two left 5th. metacarpals, one much larger than the other (probably male and female). Right 3rd. and 5th. metacarpals (large, male type). 5 phalanges.

Lower limbs.

Left femur 42,3cm. long, head 4.2cm. in vertical diameter, neck 3cm. Left tibia. Left patella, left talus, right intermediate cuneiform, 1 damaged metatarsal. 1 terminal phalanx of left great toe.

Animal tooth.

Conclusions.

1) 45yr. old female, height 158.5cm (5'2½").

Pathology-healed fracture of lower end of ulna, grossly misaligned.

2) Male adult- sparse remains.

CONTEXT 1829

1) General. Partial remains

Skull. Frontal bone with very large sinuses, supraorbital ridges worn away. Both parietal bones, of medium thickness up to 5.5mm. All sutures fused throughout. Temporal bones with large damaged, mastoid processes, root of zygoma extends over external auditory meatus. External occipital is fairly small, 1.2cm. thick.

Vertebrae. 2 cervical with arthritic lipping of bodies, 1 thoracic.

Ribs. 12 fragments, of slender build.

Upper limbs. Robust left clavicle, 13.3cm. long, moderate arthritic lipping at medial end, gross and unusual lipping in the region of the coraco-clavicular ligament, corresponding to a roughened facet on the base of the coracoid (**Plates 20 & 21**). There is a large suprascapular foramen at the base of the coracoid.

Forearm bones- right radius, 22.55cm. long, equivalent to a body height of 164.7cm. (5'5")

Left hand- 4th. metacarpal.

Lower limbs. Shaft of right femur, both ends broken. Right tibia intact, length 35.2cm. , giving estimated body height of 167.1cm. (5'6").

Right foot- talus, calcaneum, proximal phalanx of great toe.

Left foot- 4th. metatarsal

Conclusions

Age. Probably 40yrs.+ (skull sutures, arthritis)

Sex. Male

Height. 165.9cm. (5'5½")

Congenital. Suprascapular foramen

Pathology. Arthritis cervical spine, ? D.I.S.H causing ossification of coraco-clavicular ligament.

2) Most of the vault of the skull is present, in fragments. Very thick, up to 9mm. Shallow supraorbital ridges. Weak muscular ridging of occiput, external occipital protuberance is 1.4cm. thick. Small mastoid processes. The root of the zygoma does not extend over the external auditory meatus. All sutures are fused endosteally. Most of the hard palate is present.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	missing
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Attrition age 35yrs. Incisor wear +. Periodontal recession.

Atlas vertebra with arthritic lipping of the facet for the dens of the axis. Bodies of 3 thoracic vertebrae. 7 rib fragments. 1st. left metatarsal of medium size with arthritic lipping of the head. Proximal phalanx.

Upper limbs Left humerus, very robust, damaged lower end, of male type, length 35.6cm. (allowing for damage to trochlea), equivalent to a body height of 180.9cm. (5'11").

Conclusions

Age. 35-40yrs.

Sex. Male

Height. 180.9cm. (5'11")

Pathology. Paget's disease. Arthritis in spine, and metatarso-phalangeal joints

CONTEXT 1837

Skull. Parietal fragments of very slender build, up to 2mm. thick. Immature left petrous temporal bone.

Rib. 1st. left rib, immature head

Upper Limbs. Slender left clavicle, 10.8cm. long, damaged.

Lower limbs. Femur with unfused epiphyses, epiphyses missing, robust, 35.8cm. long. Shaft of fibula.

Conclusions. Adolescent male aged about 15yrs.

Also 3 vertebral fragments with arthritic lipping, ? from 1829.

CONTEXT 1840

General. Admixture of adult and adolescent bones.

Juvenile

2 rib fragments. Damaged right ilium

Upper limbs- Shafts of left radius and right ulna, their ends missing.

Lower limbs- left tibia, 29.3cm. between epiphyseal plates.

Conclusions. Adolescent aged about 15yrs. ? the same as 1837

Adult

Occipital bone, robust, of male type. Robust lumbar vertebra. 4 rib fragments.

Conclusions. Adult male.

CONTEXT No. 1870

General. Admixture of one adult and 2 juveniles.

Adult

Skull. Left temporal bone.

Vertebrae. 1 lumbar vertebra with gross arthritic lipping of the articular processes. 1 body of a thoracic vertebra.

Pelvis. Left hip bone, wide sciatic notch, pre-auricular sulcus, small acetabulum 4.9cm. in vertical diameter.

Upper limbs. 2 scapular fragments with base of spines. Very damaged shaft of humerus. Left ulna, its lower end damaged.

Head of radius.

Hands- trapezium, 2 metacarpals, 2 phalanges.

Lower limbs. 2 damaged femora- length 45.4cm. (allowing for damaged condyles), giving estimated body height of 166.2cm.

(5'5½"). Vertical diameter of head 4.25cm., of neck 2.5cm. Midshaft of tibia. Damaged right patella.

Conclusions

Age. Probably over 40yrs. (arthritis)

Sex. Female (pelvis)

Height. 166.2cm. (5'5½")

Pathology. Arthritis of spine

Juveniles

General. 2 children are represented, their ages fairly close.

1) Vertebrae. 9 vertebral bodies- united with the vertebral arches in the cervical region but not yet fused, or with early fusion in the thoracic and lumbar regions.

Pelvis. 1st. piece of sacrum, 6.3cm. wide, the body fused with its alae but not with the second piece(missing). The left hip bone is in its 2 constituent pieces (ischium, ilium, pubis), the right is represented by the ischium only

Upper limbs. Right clavicle, the lateral end missing. Damaged shaft of right radius

Conclusion. Child aged about 6yrs.

2)Skull. Left temporal bone.

Pelvis. 1st. piece of sacrum, 7.6cm. diameter, not united to 2nd. piece (missing). Left ilium, unfused at acetabulum.

Ribs. 11 ribs, mostly intact and from the right side, up to 15cm. in antero-posterior diameter.

Upper limbs Medial end of right clavicle. Right radius, 12.1cm. between unfused epiphyseal plates. 2 metacarpals.

Lower limbs. Lower half of femoral shaft, detached lower epiphysis. Left talus. 6 metatarsals. Note: the 1st. metatarsal head on one side is beginning to fuse.

Conclusions. Child aged about 8½yrs.

CONTEXT No. 1862

General. An admixture of bones of 4 adults, plus a few immature bones.

Skulls. Fragments of 3 frontal bones, one male with large sinuses, one female with a narrow forehead, the third fragmentary. 18 fragments of parietal of two types, either robust up to 7mm. thick, or more slender up to 5mm. Few sutures are present. 5 occipital fragments including 2 occipital protruberances, one more robust than the other. 3 sphenoid fragments. 6 temporal bones (2 right, 2 left, 2 fragments). 1 left zygoma. 2 maxillae and 2 mandibles which can be matched:.

1) Mandible- very robust, H1=3.8cm., RB1=3.6cm., Cr.H=7cm.

Dental formula:

Sternum. 1 body of sternum, of robust build.

Upper limbs. Scapulae: fragments only (4 right, 2 left). 4 clavicles (1 right 3 left), all are robust and probably of male type. One is exceptionally large, 17.4cm. long, the intermediate has a damaged end, the smallest is 13.3cm. long.

Humeri- all are damaged, 1 right, very large, 2 left- one of which has very marked DISH type tendon insertions particularly of biceps and deltoid.

Forearm bones- 6 ulnas (3 right 3 left). The 3 right and 2 of the left are robust, male: lengths are 28.5cm, 27.9cm. and 26.2cm. and these correspond to body heights of 182.7cm. (6'0), 180.4cm. (5'11") and 174cm. (5.8½"). The female ulna is 24.5cm. long, giving a body height of 162.3cm. (5'4").

Radii: 3 left, 1 right (only one is intact)

Hands- 3 carpals, 19 metacarpals, 9 phalanges.

Metacarpals: 1st. (2 left), 2nd. (2 right 3 left), 3rd. (3 right 1 left), 4th. (2 right 1 left), 5th. (1 right); 4 are too damaged to side.

Lower limbs. Femora- 4 heads (2 right 2 left). The 2 left and 1 right are large male type, one right is small female type. The one intact femur is 49cm. long, giving estimated body height of 179.2cm. (5'11"). Tibiae- 2 fragments. 2 damaged fibulae, one very long and robust.

Feet- 9 tarsals: 2 calcanei (1 left 1 right), 2 naviculars (1 left 1 right), 2 cuneiforms (1 left 1 right), 3 cuboids (1 left 2 right).

16 metatarsals: 1st. (1 right 1 left), 2nd. (2 left 1 right), 3rd. (2 left 2 right), 4th. (1 left 1 right), 5th. (1 left 2 right). 2 are too damaged to side. 8 phalanges.

Juvenile bones

1) Infant bones: 1 clavicle 4.1cm. long, 1 radius 5.3cm. , 1 ulna 6cm., 1 rib 6.1cm., upper end of femur)

2) older child: 2nd. piece of sacrum of a child aged about 4yrs.

Conclusions

Number of individuals. at least 6

Ages and Sex. 3 adult males, one 20yrs., one 35yrs (dental attrition), the other indeterminate; 1 female adult. 1 infant aged about 3 months. 1 child aged about 4 yrs.

Heights of adults. Males: 182.7cm. (6'); 180.4cm. (5'11"); 174cm. (5'8½"). Female 162.3cm. (5'4").

Physique. The 20yr. old male was exceptionally robust

Congenital. The 20yr. old male had a 5th. lumbar vertebra with a bifid spine (**Plate 23**): this is of no clinical significance and would not have been associated with the clinical phenomena of spina bifida.

Socio-economic. All have well developed muscular insertions

Pathology. One has severe periodontal disease, one had D.I.S.H., one had arthritis of the costo-transverse joints.

CONTEXT No.1872

General. Admixture of adult and juvenile remains

Adult

Skull. Fragment of frontal bone with endosteal fusion of frontoparietal sutures.

Vertebrae. 2 intact thoracic vertebrae, 2 other fragments

Pelvis. 1st. piece of sacrum, damaged, small, female type. The 1st. and 2nd. bodies were fused peripherally but not centrally.

Upper limbs. 2 scapular fragments. Left ulna, damaged. Right radius intact, slender, 22.6cm. long, equivalent to a body height of 162cm. (5'4").

Hands- 5 metacarpals, 3 phalanges.

Lower limbs. Head of femur. right patella, shaft of left fibula.

Right foot- calcaneum, 2 metatarsals, 1 phalanx

Left foot- 2 cuboids (2 separate individuals), 2 metatarsals, 1 phalanx.

Conclusions

Age.30yrs.+ (sacrum)

Sex. Female (sacrum, slender long bones)

Height. 162cm. (5'4")

Note: minor remains of another individual

Adolescent

Skull. Fragment of sphenoid

Ribs- 4 ribs.

Pelvis.- Left ilium, immature acetabulum

Upper limbs Clavicle 10cm. long. Shaft of radius with damaged upper end.

Lower limbs. Lower epiphysis of a femur, part of calcaneum

Conclusions. Child aged about 12 yrs.

Note: also 1 infant rib 4.5cm. long, age approximately 3 months.
2 animal bones

CONTEXT 1874

General. An admixture of adult and juvenile bones.

Skulls. The various components are not readily separable into separate individuals.

1) Frontal bone with a narrow forehead, shallow supraorbital ridges, small sinuses. Right supraorbital foramen in place of the notch. There is endosteal fusion of frontoparietal sutures. 2 slender parietal bones, up to 4mm. thick. The interparietal suture has endosteal fusion anteriorly but not posteriorly. Damaged fragments of occipital. 2 temporal bones with small mastoid processes. Sphenoid fragments.

Damaged maxilla,

Dental formula:

$$\begin{array}{c} \text{8 7 6 5 4 3 2 1} \quad | \quad 1 \text{ 2 3 4 5 6 7 8} \\ \hline \end{array}$$

Note: The teeth are of small size with minimal attrition. The 3rd. molar was unerupted.

Conclusions. Female aged approximately 17 yrs.

2) Occipital bone with moderately developed external occipital protuberance. Right parietal fragment of medium build, up to 5mm. thick. Some endosteal fusion of the occipitoparietal sutures. 2 temporal bones with medium sized mastoid processes, the root of the zygoma extends over the auditory meatus. Left zygoma and maxilla, no teeth in situ.

Note: the molar teeth had all been lost

Conclusions. Male aged 40yrs. +

3) Occipital bone and both parietals with total fusion of all sutures. The parietal bones are moderately robust, up to 6.5 mm. thick, with well marked arachnoid pitting. A fragment of frontal bone with large sinuses. Damaged left temporal bone.
Conclusions. Male aged 40+.

Hip bones.

1) Left side, adult male type with narrow sciatic notch, the acetabulum is 5.5cm. in vertical diameter.

2) Left and right sides of adult male type with narrow sciatic notch, large acetabulum, 5.6cm. in diameter. The 3 components are unfused in the acetabulum and there are accessory centres of ossification in the rim. The secondary epiphyses of iliac crest and ischial tuberosity are unfused.

Conclusions. Child aged approximately 12yrs., male. The ossification pattern of the acetabulum is abnormal.

3) 2 smaller iliac bones, apparently unfused to the other components.

Conclusion. Child aged about 10yrs.

Ribs. 24 fragments- a mixture of adult and adolescent bones

Upper limbs. 2 left scapulae (1 adult, 1 adolescent), 1 right (adolescent). 1 right clavicle, 12.6cm. long, its medial epiphysis unfused, 1 damaged left clavicle.

Upper half of the shaft of a right humerus of medium build, with unfused upper epiphyses.

Forearm bones: 3 damaged radii (1 right, 2 left), epiphyses unfused. 4 ulnars (2 right 2 left). Of the left ulnars 1 is adult and 1 has a partly fused upper epiphysis (about 17yrs.)

Hands: 3 metacarpals, 3 phalanges, all with unfused epiphyses

Lower limbs. 1 pair of femora with unfused epiphyses, 38.2cm. between epiphyseal plates, detached upper and lower epiphyses. Total length including epiphyses estimated at 42.9cm., giving a body height of 165cm. (5'6") and probable age of about 15yrs. 1 longer right femur with a fused upper and an unfused lower epiphysis. Feet- 1 navicular, 1 cuneiform, 3 metatarsals, 1 phalanx.

General conclusions.

2 adult males each aged 40+ (skulls and vertebrae)

4 juveniles, aged approximately 10, 12, 15 and 17yrs.. The height of the 15yr. old is estimated at 165cm. (5'6"). The ossification pattern of the hip bone of the 12yr. old is abnormal, with accessory centres in the acetabulum, and lack of fusion.

CONTEXT 1885

General. Partial remains of more than one adult.

Skull. Hard palate,

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Moderately severe attrition, age about 35yrs.

Vertebrae. 1 axis, 1 thoracic, 3 large lumbar vertebrae & fragments of others.

Pelvis. 1st. and 2nd. sacral vertebrae are fused

Ribs. 5 fragments, massive build, up to 2.4cm. in vertical thickness: of a very robust male

Upper limbs. Fragment of a shaft of a slender clavicle. 1 damaged shaft of right humerus.

Forearm bones: 4 ulnas (2 left, 2 right), damaged, slender build. 1 pair of robust radii, 26.3cm. long, equivalent to a body height of 179cm. (5'11"). A right radial shaft fragment.

Hands- 2 carpals, 6 metacarpals, 4 phalanges.

Lower limbs. 2 fibular shaft fragments. 1 left patella.

Feet- 2 right tali, 2 calcanei(1 right, 1 left), 5 other tarsals, 4 metatarsals including 2 first metatarsals, 1 robust and 1 slender.

Conclusions

1 male adult height 179cm. (5'11"), of robust physique

1 female aged 35yrs.

CONTEXT 1889

General. Partial remains of more than one adult

Skull. Small fragment of frontal bone. Fragments of both parietal bones, moderately robust, up to 8.2 mm. thick, the arachnoid pits are well marked, endosteal fusion of interparietal and frontoparietal sutures. Occipital fragment, the occipital protruberance 1cm. thick. Left petrous. Both zygomatic bones. Damaged hard palate,

Dental formula:

$$\frac{8 \ 7 \ 6 \ 5 \ 4 \ 3 \ 2 \ 1}{\quad} \quad | \quad \text{missing } 6 \ 7 \ 8$$

Molar attrition is slight and corresponds to an age of about 20yrs.. Note: the teeth are of small size.

Vertebrae. 2 cervical vertebrae of fairly small size, mature bodies, from an adult of 25yrs. or more.

Ribs. 1st. right rib, of medium size; 2 other fragments.

Upper limbs Right scapula, robust, large glenoid. Right clavicle with damaged lateral end, robust, of male type. Midshaft of humerus of medium build. 2 right ulnas, damaged.

Hands- 2 metacarpals, 3 phalanges.

Lower limbs. 2 large diameter shaft fragments, probably femur and tibia. Head of right fibula. Left patella.

Right foot- talus, calcaneum, 5 metatarsals (including two 3rd. metatarsals), 2 phalanges.

Left foot- 4 metatarsals (not all from the same individual)

Conclusions

- 1) Female aged about 20yrs. (teeth)
- 2) Male of 25yrs. or more (skull vault, vertebrae, no arthritis)

CONTEXT 1892 Right and left hip bone fragments with large acetabulum 5.5cm. in diameter

Conclusion: adult male

CONTEXT 1899 Small fragment of a hip bone including part of the acetabulum, adult, not sexed.

CONTEXT 1859 Left 2nd. rib.

CONTEXT 1863 Right rib fragment, slender. Lower 2nd. left molar, the apices of the roots are incomplete and open, and come from an adolescent aged about 12yrs.

CONTEXT 1917

General. Mostly adolescent remains, a few adult bones.

Adolescent

Skull. Both parietal bones and the occipital are present, all with unfused sutures. The parietals are slender, up to 5.3mm. thick. The occipital protuberance is 1.1cm. thick. The spheno-occipital synchondrosis is only partly fused. The hard palate is present, damaged, only 3 teeth in situ.

Mandible- slender build, H1=2.75cm., RB1=3.1cm., Cr.H=5.5cm.

Dental formula:

missing																
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Note: ll 5 is incompletely erupted, the apices of the lr 7 root are not closed, the 3rd. molars are unerupted. Age is about 13yrs.. Attrition is very slight. The size of the teeth is of male type.

Vertebrae. 3 thoracic, 2 lumbar: the body surface epiphyses are unfused and the fusion of bodies with vertebral arches is slightly incomplete

Pelvis. Hip bones: pubis and ischium only; these are fused together at the ischiopubic ramus but the Y-shaped cartilage of the acetabulum is unfused (pre-pubertal) and the pubic symphyseal surface is deeply ridged. Small but narrow, male-type subpubic angle..

Ribs. 5 fragments, slender, up to 1.1cm. in vertical height

Sternum. A small damaged manubrium

Upper limbs. 2 scapular fragments, base of spine only. Shaft of humerus with unfused epiphyses, 24.6 cm. between epiphyseal plates.

Hands- 2 metcarpals, 2 phalanges, all with unfused epiphyses.

Lower limbs. Shaft of right femur is damaged, its length cannot be measured, unfused epiphyses. Lower 2/3rds. of shaft of right tibia with unfused epiphysis.

Feet- left calcaneum, 1st. metatarsal with an unfused basal epiphysis

Conclusions

Age. 13yrs.

Sex. Male

Height. Not determined because long bone epiphyses are missing

Adults

Skull A parietal fragment with endosteal fusion of interparietal and occipitoparietal sutures. Right angle of a mandible, very robust. Cr.H estimated at 7.8cm.: the 6 is in situ, its slight attrition indicates an age of about 20yrs.

Sacrum. Its development is mature, slender, probably female. Width of 1st. sacral vertebra is 4.2cm., total alar width is 11.3cm.

Pelvis Female type left hip bone with small acetabulum, 4.8cm. in height; wide subpubic angle and sciatic notch. Preauricular sulcus.

Ribs. 2 fragments

Upper Limbs. Shaft of right humerus, damaged upper end, moderately robust.

Lower limbs. Right calcaneum, left cuboid. 1st. phalanx of left great toe.

Conclusions

Two adults: One female (pelvis) over 25yrs. of age (sacrum)

1 male (mandible) aged 20yrs. (dental attrition)

Note: also a right tibial midshaft fragment of a child aged about 8yrs.

CONTEXT 1923 Upper right 2nd. premolar tooth

CONTEXT 1941

General. Sparse remains of more than 1 adult

1) Skull Mandible of medium build, probably female, attrition age about 20yrs. H1=3cm., RB1=3.2cm.

Dental formula

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8

Vertebrae. 1 thoracic, 1 lumbar, slightly immature bodies, their upper and lower epiphyses unfused, equivalent to an age range 18-22yrs.

Ribs. 4 fragments of medium build, up to 1.7cm. in vertical height

Upper limbs. Left ulna, its upper epiphysis very recently fused, slender

Lower limbs. Left tibia, slender female type, its upper epiphysis recently fused, its total length 36cm., equivalent to a body height of 165.9cm. (5'5")

Feet. 1 left talus, 1 metatarsal.

1) Vertebrae 1 lumbar vertebral body with severe arthritic lipping

Pelvis. A pair of pubic symphyses with eroded surfaces characteristic of the elderly, wide subpubic angle

Hands 4 robust proximal phalanges

Lower limbs Shaft of left tibia, robust, its ends missing.

Conclusions

1) Female aged about 20yrs., height 165.9cm. (5'5"))

2) Female aged 40yrs.+, arthritis of spine

CONTEXT 1943

General. Skull fragments of 2 adults: it is not always possible to separate the fragments so these will be described together.

Frontal bones:

1) Of slender build, shallow supraorbital ridges, small sinuses, sharp supraorbital border, probably a young individual.

2) Fragment of the right side with part of the orbital plate.

Zygomatic bones- 1 pair, slight build

Parietal bones- a number of fragments but mostly of an elderly individual with fused frontoparietal sutures and deep arachnoid pits, of medium build up to 6.5mm. thick.

A pair of temporal bones with small mastoid process; the zygomatic root does not extend over the auditory meatus; fused occipito-temporal suture.

A pair of occipital condyles of slight build

Sphenoid with fused sphenoccipital synchondrosis

Hard palate.

Mandible- one only, of very slender build with extensive loss of molar teeth and sloping rami. H1=2.4cm., RB1=2.35cm., Cr.H=5.9cm.

Dental formula-

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
<hr/>								<hr/>								
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Note: the few remaining tooth sockets are very shallow. Attrition of ll 6 is difficult to evaluate for ageing because it had no occlusion due to loss of upper molars

Hyoid- body and greater wings are fused (elderly individual)

Conclusions

1) Young adult female

2) Female aged 40yrs.+ (mandible, skull suture fusion, arachnoid pits)

CONTEXT 1943 Body of sternum, its sternebrae fused. Left clavicle 14.2cm. long, of medium build. Scapular fragments.

Conclusion: Adult, probably male of slender physique

CONTEXT 1951 Right hip bone with narrow sciatic notch and large acetabulum , its diameter 5.6cm.

Conclusion: Adult male.

Note also animal bones.

CONTEXT 1953: Small fragments of skull vault and base.

CONTEXT No.1907

General. Partial remains of two children and four adults. The latter will be grouped together regionally since precise segregation of the material into individuals is not always possible.

Children

1) Skull. Right side of frontal bone, metopic suture unfused, both parietals present. Maximum thickness of the parietals is 1.6mm., the diploe is undeveloped. Sphenoid and occipital fragments. A pair of immature petrous temporal bones.

Vertebrae. 2 fragments of vertebral arch, unfused to one another or to the body

Pelvis. Left ilium, height from iliac crest to acetabulum 3.3cm.

Ribs 8 ribs, maximum length undamaged 6.3cm.

Upper limbs. 2 scapulae, height 3,3cm.. Left humerus 6.6cm. between epiphyseal plates. 2 radii 5cm. long. 2 ulnars 6cm. long

Lower limbs. Right femur, 7.95cm. between epiphyseal plates, 2 tibiae 6.7cm.

Conclusions

An infant aged about 10 months.

2) Skull. Maxilla with 1st. molars fully erupted and the only teeth in situ.

Mandible- H1=2.5cm., RB1=2.8cm., Cr.H=4.6cm. Most of the teeth are missing. The 1st. permanent molars are fully erupted, the 2nd. molars unerupted and probably were hardly through the surface bone in life, their roots are only half formed. Canines unerupted and well below the surface.

Vertebrae. A damaged atlas, a small axis, 5 thoracic and 1 lumbar vertebrae with immature bodies, their epiphyseal plates unfused. 1st. and 2nd. pieces of the sacrum, unfused.

Upper limbs. 2 humeri 22.9cm. between unfused epiphyseal plates. Ulnar and radial fragments.

Lower limbs. 2 femoral shafts 32.4cm. long between epiphyses. 1 damaged tibia. 2 fibulae.

Feet- 4 tarsals, 4 phalanges with unfused epiphyses

Conclusions

A child aged about 9yrs.

Adults

General. Four adults are represented

Skulls. 3 vaults are present:

1) Intact vault, all sutures fused endosteally. Cranial index 79 (mesocephalic). Moderate supraorbital ridges, fairly large mastoid processes; occipital muscle markings are strong

2) Right side of vault, strong supraorbital ridges and mastoid processes, endosteal fusion of all sutures. Bilateral supraorbital foramina.

Right side of hard palate with ll 7 in situ, attrition not severe. The ll 6 root socket is very shallow- probably a carious root with apical abscess. Strong arachnoid pits.

3) Vault in fragments. Shallow supraorbital ridges. Slender bones, parietal thickness is up to 4.5mm. only. Slender occipital protruberance, 8.5mm. thick.

Temporal bones- 2 left, 2 right

2 maxillae with hard palate complete (in addition to the 2 above) and 2 mandibles, only one of which matches the maxillary arch.

1) Female type mandible, slender build, H1=2.5cm., RB1=2.6cm., Cr.H=5.9cm.

Attrition is slight, age about 20yrs.. Lower 3rd. molars are fully erupted but the upper 3rd. molars are impacted on the left and congenitally absent on the right.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

2) Maxilla. Gross molar attrition age 40yrs. +

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

3) Mandible H1=3cm., RB1=2.7cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Attrition age is about 25yrs. Note that the 3rd. molars are probably congenitally absent. 12 loose teeth, not assigned..

Vertebrae. 3 atlases, 1 axis, 3 cervical, 9 thoracic, 5 lumbar vertebrae of medium build, no arthritis.

Pelvis. Sacrum- 1 damaged fragment of the 1st. piece, of a female type . Hip bones- 3 right (1 male 2 female), 4 left (1 male, 1 female, 2 indeterminate fragments).

Ribs. Counting heads, 7 right, 15 left, some have arthritis of costovertebral joints. 27 fragments. None is very robust but some are more slender in type than others.

Sternum. 3 manubriums, 1 body

Hyoid bone. One with fused body and greater wings (aged)

Upper limbs. 1 left scapular fragment. Clavicles- 2 right (one 13cm. long, the other damaged)

Humeri- damaged, 2 right, 2 left

Forearm bones- 7 radii (3 right, 4 left). 4 ulnars (2 right 2 left)

Hands- 2 carpals, 10 metacarpals, 16 phalanges.

Lower limbs. Femora- 3 right (2 female 1 male), 2 left (female) and 3 fragments. These comprise 2 pairs and 1 odd one.

1st. pair: length 41.5cm., giving estimated body height of 156.6cm. (5'2"). Vertical diameter of head 4cm., of neck 2.95cm..

Female

2nd. pair: length 43.6cm., giving an estimated body height of 161.8cm. (5'3½"). Head diameter 4cm., neck 3cm. Female

3rd. (single right femur): length 44.5cm., estimated body height 168.7cm. (5'6½"). Head diameter 4.5cm., neck 3.1cm.

Note: all have strong muscle markings.

Tibiae- 3 right, 1 left. Fibulae- 3 fragments. Patellae- 3 right 2 left.

Right feet- 5 tarsals, 9 metatarsals (including 2 1st. metatarsals), 2 proximal phalanges of great toes

Left feet- 7 tarsals, 8 metatarsals (including 2 1st. metatarsals), 1 proximal phalanx of great toe.

6 other phalanges, unsided.

Conclusions

Age and Sex. Male 25yrs., Male 40yrs., Female 20yrs., Female 25yrs.

Height. 3 estimated. Females 156cm. (5'2"), 161cm. (5'3½"). Male 168cm. (5'6½")

Physique. Robust, strong muscle markings throughout.

Congenital. 2 supraorbital foramina. absence of 3rd. molars, one upper, one lower

Pathology. Arthritis of costovertebral joints. Caries, apical abscess.

CONTEXT 1967

General. Partial reidual remains of a number of individuals from grave fill.

Elderly adult male remains:

Skull.

Intact vault, dark colour. Cranial index 76.3 (mesocephalic). Strong supraorbital ridges, mastoid processes and muscle markings. Bilateral supraorbital foramina in place of notches. Fused sutures throughout. Deep arachnoid pits.

Upper jaw, dark in colour and probably from this skull.

Dental formula:

$$\begin{array}{c} \text{8 7 6 5 4 3 2 1} \mid \text{1 2 3 4 5 6 7 8} \\ \hline \end{array}$$

Attrition age 40yrs.+

Vertebrae. Probably belonging to this body, and dark in colour, parts of one vertebral column: 5 cervical vertebrae, including the atlas, 5 thoracic, 1 lumbar, part of 1st. piece of sacrum. Very robust, male type. Gross osteoarthritic lipping of bodies in the lower cervical, thoracic and lumbar regions, also of the joint between odontoid and atlas. Dark colour.

Long bones. The bones are dark in colour and apparently associated with the upper jaw excavation: left humerus, robust, 31.3cm. long, giving an estimated body height of 168.5cm. (5'6½"). Right femur, robust, damaged.

Conclusion.

Male aged 40yrs.+, height 168.5cm. (5'6½"). Mesocephalic. Osteoarthritis of spine. Supraorbital foramina.

Other skulls:

Fragmented vault. Moderate supraorbital ridges. Strong mastoid processes. External occipital protuberance 1.3cm. thick, Deep arachnoid pits. Endosteal and partial external fusion of frontoparietal, interparietal and occipitoparietal sutures.

Conclusions. Male aged 35yrs.+

Mandibles- none of these can be definitely allocated to the vaults

1) Robust. H1=3cm., RB1=3.5cm., Cr.H=6.2cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Attrition age is about 25yrs.

Conclusion. Male aged 25yrs.

2) Slender, small teeth. RB1=3cm.

Dental formula:

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Attrition minimal. Unerupted 3rd. molars.

Conclusion. Female aged about 16yrs.

3) Left half of a mandible, slight build, RB1=3cm.

Dental formula:

missing							1		1	2	3	4	5	6	7	8

The 2nd. molar is only carious roots in a large abscess cavity. Attrition age about 25yrs.

Also associated with this:

Left femur, head 4.3cm in vertical height, neck 2.7cm, bicondylar width 7.4cm., length 45.4cm., giving an estimated body height of 166.2cm. (5'5½"). Shaft of right tibia.

Conclusion. Female aged 25yrs., height 166.2cm., (5'5½"). Dental abscess

4) A juvenile mandible. The only erupted permanent teeth are the 1st. molars. Deciduous 1st. and 2nd. molars are in situ. Other teeth were lost post mortem.
Conclusion. Child aged about 8yrs.

Vertebrae.

1) 7 immature small vertebral bodies, mostly thoracic, the fusion between body and arch imperfect. 1 piece of a small atlas and one of an axis
Conclusion. Adolescent aged 12-14yrs., probably female (small size)

2) Fragments of 3 atlas and 2 axis vertebrae. 3 other adult vertebrae, 1 thoracic, 3 lumbar. 1 small broken sacral fragment.
Conclusion. At least 3 adults represented here

Pelvic bones. 4 right hip bone fragments, all male, 2 have large acetabulae, 5.4cm. and 6.1cm. in vertical diameter. 3 other adult fragments.

1 immature ilium, the acetabulum unfused, about 9 yrs.

1 right hip bone, of male type, the acetabulum 5.5cm. in vertical height, the ischial tuberosity imperfectly fused: male aged about 20yrs..

Conclusions. One 20yr. old male. 3 older adult males. One 8yr. old child.

Ribs. 14 fragments.

Limb bones:

Upper limbs.

1) From an adolescent aged about 16yrs. 1 right scapula, the coracoid unfused. 1 left clavicle, slender, the medial epiphysis unfused, female type. 1 left humerus (unfused head, fused lower end). 1 pair of radii with unfused lower ends. 3 metacarpals with unfused heads.

2) Adult. Scapulae- 1 right, 1 left. Humeri- 1 right, 2 shaft fragments.

Forearm bones: Radii- 2 left, 3 shaft fragments. Ulnas- 2 intact, and 2 shaft fragments.

Hands: 3 mature metacarpals, 2 phalanges.

Lower limbs.

1) From a child aged about 8yrs: 2 damaged femoral shafts.

2) From an adolescent aged about 16yrs.: an unfused lower femoral epiphysis and 2 tibiae with unfused epiphyses.

3) Adult- 2 patellae. 1 cuboid. 1 metatarsal and proximal phalanx of the right great toe. 3 phalanges.

General Conclusions

5 adults. 4 male, aged 40, 35, 25, one not aged. 1 female aged 25yrs.

3 Juveniles. 8yrs. (unsexed), 12-14 yrs. (female), one 16yrs. (female)

1997 Detailed Descriptions

General Note. Body heights are judged from length of femur unless otherwise stated. Occasional presence of animal bones (bovine, sheep) is ignored unless very evident

Burial No.3, Context No.970

General. Small fragments of skull

Sex. Indeterminate

Age. Adult (mature petrous temporal bone)

Burial No.4, Context No.971

General. Redeposited burial. 2 bodies. Mostly broken long bones

1)

Sex. Female (pelvis, sciatic foramen, preauricular notch; small mastoid; slender clavicle.)

Age. 45yrs.+ (dental attrition)

Height. 164.6cm. (5'4½") (radius)

Congenital. Mandibular torus

Pathology. Periodontal disease, dental caries, dental abscess. Loss of 1st. molars

2)

Sex. Male (pelvis)

Age. 35yrs+ (pubic symphyseal surface)

Burial No. 5, Context No. 972

General. 1) One complete male skeleton 2) Bones of 3 other bodies

1) Sex. Male (femora, pelvis)

Age. 35yrs. (molar attrition, endosteal skull suture fusion)

Height. 177.8cm. (5'10")

Congenital. The atlas vertebra has the vertebral artery groove arched over to form a foramen. Mandibular torus

Pathology. Moderate development of DISH (diffuse idiopathic skeletal hyperostosis): marked ossification of tendon insertions in pelvis, femora, & tarsal bones; there is lipping of vertebrae but none are fused together.

2) General. Femora and tibiae from 2 individuals, 2 humeri, 2 left pelvic bones, 1 pair male pelvic bones

Sex. 2 males, 1 female

Age. One male aged 25yrs. (dental attrition); the others adult.

Height.

1) Male 175cm. (5'9")

2) Male 172.4cm. (5'8")

3) Female 164.2cm. (5'4½")

Burial No.6, Context No.974

General. Complete juvenile burial

Sex. Not known.

Age. 2½yrs. (dental development, unfused vertebral components, pelvic and long bones unfused. Femoral length between epiphyses 15.2cm.)

Congenital. Supraorbital foramen on left, groove on right.

Burial No.7, Context No.984

General. Complete male adult. One other left side male pelvis.

Sex. Male

Age. 40yrs. (dental attrition, pubic symphysis, skull sutures)

Height. 176.2cm. (5'9½")

Congenital. Bilateral supraorbital foramina.

Pathology. Early DISH: tendon ossification, vertebral lipping.

Periodontal disease. Dental abscess.

Burial No.8, Context No. 977

General. A admixture of fragments from at least 3 bodies

1) A pair of broken femora, a pair of tibiae, 1 pair of male pelvic bones

Sex. Male

Age. Adult

Height. 178.73cm. (5'10½")

2) Fragments 2 left femora ? 1 male, 1 female, probably adult

2 right side of pelvis ? 1 male, 1 female

Conclusion : probably remains of two bodies, one male one female,

probably adult

Burial No.9, Context No.983

General. Complete female skeleton

Sex. Female (pelvis, skull, long bones)

Age. 40yrs. (slender mandible with loss of lower molars, upper molar attrition not advanced because lacking occlusion, pubic symphyseal surface ridged dorsally and rough centrally, no arthritis, skull sutures are all fused)

Height. 167.6cm. (5'6")

Congenital. Cranial index 73.9, markedly dolichocephalic. Strong preauricular sulcus in pelvis. Unerupted lower 3rd. molars. Absent upper 3rd. molars.

Pathology. Periodontal disease. The lower 1st and 2nd. molars had been lost on both sides and their sockets had healed over.

Additional: 2 sacra, 1 tibia.

Burial No.10, Context No.985

General. Redeposited burial. Mostly long bones

Sex. Male (femora)

Age. 35yrs. (1st. molar has only moderate attrition, but oblique wear

Height. 180.4cm. (5'11")

Extraneous. 3 bovine ribs

Burial No.11, Context No.982

General. Pelvis. incomplete long bones, vertebrae, hands.

Sex. Male (pelvis)

Age. Approximately 23yrs. The secondary epiphyses of the iliac crest and upper and lower surfaces of the vertebral bodies were in the process of fusing. Sacral fusion is slightly immature

Height. Indeterminate

Burial No.13. Context No.987

General. Damaged skull vault, upper jaw with teeth.

Sex. Male. (Thick skull vault, large frontal sinuses, supraorbital ridge, large hard palate)

Age. Approximately 22yrs. (Slight molar attrition, unfused skull sutures)

Pathology. Marked wear of the cutting edge of the upper central incisors

Burial No.14, Context No.988

General. Partial remains, good condition. Note: two right tibiae.

Sex. Male. (Skull mastoid process, Supraorbital ridges, femoral head, large long bones)

Age. 35yrs. (Dental attrition, endosteal fusion of skull sutures)

Height. 171.3cm. (5'7½"). The large tibia gives a height of 175.1cm. (5'9")

Pathology. Schmorl's nodes in centre of vertebrae.

Burial No.15, Context No.989

General. Three individuals are represented.

1)

Sex. Male (moderate supraorbital ridges, suprameatal ridge)

Age. 20yrs. (dental attrition, skull sutures are unfused, vertebral body secondary epiphyses are unfused)

Height. 175.3 cm. (5'9")

Congenital. Bilateral supraorbital foramina.

2)

Sex. Male (femur, vertebrae)

Age. 30yrs. (dental attrition)

Height. 169.7cm. (5'7")

Pathology. Osteoarthritic lipping of thoracic and lumbar vertebral bodies, also of head of the 1st. metatarsal. Periodontal disease with calculus formation.

3)

Sex. Female (slightly built femur, its head and condyle missing, small left patella).

Age. Adult. (fragment of hard palate present but no teeth.)

Burial No.17, Context No.995

General. Almost complete

Sex. Male (Sciatic notch, supraorbital ridges, femora)

Age. 35-40yrs. (Oblique attrition of 1st. molar but only moderate exposure of dentine, presumably the diet was not coarse: endosteal fusion of all skull sutures)

Height. 171.5cm. (5'7½")

Congenital. Cranial index 73.3: dolichocephalic. Absent 3rd. molar teeth.

Pathology. 1) Old fracture lower 1/4 of left tibia which had healed well though with some over-riding, giving ½" of shortening. Note this part of the tibia does not heal quickly and it must have been well rested and splinted. It was associated with an injury of the upper 1/4 of the fibula, probably a fracture but most of the bone here is missing.

2) Arthritis: atlanto-axial (odontoid) joint; right superior radio-ulnar joint; right superior tibio-fibular joint; lipping of 2 adjacent thoracic vertebral bodies. 3) Periodontal disease

Burial No.18 , Context No.998

General. About 70%, moderately damaged

Sex. Female (Sciatic notch, skull)

Age. 17yrs. (unerupted 3rd. molars, minimal dental attrition, unfused skull sutures)

Height. 163.4cm. (5'4½")

Congenital. Unerupted 3rd. molar

Burial No.19, Context No.999

General. Bones from two bodies

1)

Sex. Male (pelvis, very thick skull vault, mandible)

Age. 45yrs. (gross oblique attrition of 1st. molar, loss of teeth)

Height. 181.8cm. (5'11½") (tibia)

Pathology. Loss of upper 2nd. and 3rd. molars. Gross periodontal disease

2)

Sex. Male (skull, mandible)

Age. 15yrs. (The 2nd. lower premolar is only partly erupted and the deciduous 1st. molar is tardily being displaced, but still in situ. The permanent M1 and M2 are fully erupted. The 3rd. molar is totally unerupted. There is full fusion of the radial epiphyses; the vertebral body secondary epiphyses are immature and fusing.

Height. 167.7cm. (5'6")

Burial No.20, Context No.1019

General. About 50% complete. No skull vault. An additional mandibular fragment and radius from another body

Sex. Female (Pelvis, femur)

Age. 25yrs. (dental attrition, first sacral two bodies unfused anteriorly)

Height. 165.3cm. (5'5")

Pathology. Periodontal recession with calculus formation.

Burial No.21, Context No.1024

General. 2 bodies represented; mostly a young female

1)

Sex. Female (Pelvis, skull vault, femora)

Age. 16yrs. (3rd. molar unerupted. The first deciduous upper molar is being displaced by the 2nd. permanent premolar, note: very similar to body 19. Minimal attrition of M1 and M2. Immature vertebral body epiphyses. Unfused skull sutures)

Height. 168.7cm. (5'6½")

2)

Sex. Male (Femur, half of pelvis)

Age. Adult

Height. 174.6cm. (5'9")

Burial No.22, Context No.1027

General. About 30% of total

Sex. Male (acetabulum, long bones)

Age. >25yrs (No skull or teeth, no arthritis)

Height. 173.9cm. (5'8½") (tibia)

Burial No.23, Context No.1030

General. Bones of left leg below knee, foot.

Sex. Female (slender tibia, short foot bones, poor muscle markings)

Age. Adult

Height. 167.3 cm. (5'6")

Burial No.24, Context No.1031

General. Damaged fragments of pelvis, 1 vertebra, lower limb bones

Sex. Female (Sciatic notch of pelvis, head of femur)

Age. >30yrs.

Pathology. Arthritic lipping of lumbar vertebrae, ossification of tendo achilles insertion

Burial No.25, Context No.1034

General. Partial remains, in poor condition

Sex. Male (long bones, skull)

Age. 40+ yrs. (extensive molar attrition with exposure of dentine)

Height. 172.2cm. (5'8") (tibia)

Congenital. Absent 3rd. molars

Pathology. Periodontal disease.

Burial No.26, Context No.1093

General. Well represented. No skull. Also part of pelvis from another body

Sex. Male (long bones)

Age. 18yrs. (epiphysis of the upper end of humerus is incompletely fused)

Height. 174.6cm. (5'8½")

Burial No.27, Context No.1040

General. Good regional representation, skull intact

Sex. Male (skull, femora)

Age. 30yrs. (dental attrition, residual ridging of the pubic symphysis, interparietal suture fusion)

Height. 186cm. (6'1½")

Congenital. An accessory tooth on each side between upper 1st. and 2nd. incisors

Pathology. 1) The left femur has a swelling in the upper half of the shaft, projecting on the anteromedial surface: this was due to syphilitic periostitis. The right femur is normal.

2) Cribra orbitalis - porosity in orbital roof due to iron deficiency

3) Teeth: marked upper central incisor wear; periodontal recession, dental caries in the neck of one molar.

Burial No.28, Context No.1043

General. Skull vault fragments, lower limb long bones, all damaged and incomplete

Sex. Indeterminate

Age. >35yrs. (total fusion of skull sutures)

Pathology. Hyperostosis frontalis interna (Bilateral overgrowth of bone on the inside of the frontal bone : a relatively rare condition of unknown cause)

Burial No.29, Context No.1046

General. Tibia and foot bones

Sex. Male (size of bones)

Age. Adult

Height. 184.5cm. (6'0½")

Burial No.30 , Context No.1049

General. Admixture of parts of 3 individuals

1)

Age. Child aged 8yrs. - loose upper incisors, canine and 1st. molars: these have complete crowns but no roots have developed.

Mandible with erupted 1st. permanent molar; all other permanent teeth are unerupted. Lower ½ of femur

2)

Sex. Male (mandible, long bones)

Age. 30yrs. (dental attrition)

No intact long bones

Pathology. Periodontal recession

3)

Damaged mandible, most teeth had probably been lost

Sex. ? Female (shallow body of mandible)

Age 45yrs.+ (loss of teeth)

Pathology. Crush fracture of lumbar vertebral body. The anterior surface of the body is 1/3rd. the height of the posterior surface.

Burial No.31, Context No.1050

General. Fragmentary partial remains, about 10% only

Sex. Indeterminate. Large foot bones suggest male, but no suprameatal crest in skull suggests female.

Age. Adult

Burial No.32, Context No.1051

General. At least 3 individuals. Possible contamination with WBG5 previously noted.

1) Child

Sex. Indeterminate, but relatively long clavicle for age suggests male

Age. 5-6yrs. (the vertebral bodies are fused to their arches in cervical region, but not in thoracic and lumbar vertebrae, i.e. <6yrs. The clavicle is 8.8cm. long and this would correspond with an age of at least 6yrs. Unfused metatarsal epiphysis and upper tibial epiphysis

2))

Sex. Male (femur, pelvis)

Age. 40yrs. (molar attrition, patellae not worn, no arthritis)

3)

Sex. Male (pelvis)

Age. 50+yrs. (advanced dental attrition, loss of all of right lower molars and some of left; symphyseal wear

Pathology. Gross arthritis lower femur, upper tibia, patellae, sacroiliac and ilio-lumbar joints

Extraneous. Clay smoking pipe. Bovine long bone.

Burial No.33, Context No.1052

General. One adult (80%) with a few bones from 2 others (4 radii, 2 right humeri)

1)

Sex. Male (pelvis, femur)

Age. 40+yrs. (dental attrition)

Height. 164.6cm. (5'5")

Pathology. Some DISH : anterolateral ossification of the longitudinal ligament of 3 adjacent thoracic vertebral bodies, fusing these but not affecting intervertebral disc spaces. Gross arthritic lipping of a lower thoracic body and slight lipping of other vertebrae.

2)

Sex. Male

Age. Adult

Height. 182.14cm. (6'0") (humerus)

3)

Sex. Child

Age. about 7yrs. (Thoracic vertebra with immature surfaces; 2 ulnas 13.4cm. long)

Extraneous. Bovine astragalus

Burial No.34, Context No.1053

General. Possible cross contamination with WBG 3 (32). Note: the adult bone fragments do not articulate with bones from body 32. Mostly adult elderly female but 3 individuals represented.

1) Sex. Female (skull, pelvis)

Age. 45yrs.+ (oblique molar attrition, skull sutures fused)

Congenital. Cranial index 77.3 (mesocephalic)

2) Sex. Male (lower ½ left femur)

Age. Adult

3) Sex. Child

Age. 6-7yrs. (the fibula is 17.6cm. long (see body 32)

Extraneous. 2 bovine vertebrae

Burial No.35, Context No.1054

General. Fragments of long bones, vertebrae, hand bones, pelvis, skull

Sex. Female (pelvic sciatic notch & preauricular sulcus, slender clavicle & humerus

Age. 30yrs. (moderate oblique attrition of 2nd. upper molar, no arthritis)

Pathology. Carious root in upper jaw, periodontal disease.

Burial No.36, Context No.1055

General. 4 individuals, fragments of skull, scapula, long bones

1)

Sex. Male (skull)

Age. >35yrs. (endosteal fusion of skull sutures, very robust humerus and clavicle. Thick skull vault.)

Height. 179.8cm. (5'11") (humerus)

2)

Sex. Child

Age. 3yrs. (humerus is 10.3cm. between epiphyses; vertebrae are immature with unfused arches to bodies; right ulna, upper ½ radius

3)

Sex. Female (upper end left femur)

Age. Adult

4)

Sex. Male (left clavicle is slender, 17.7cm. long)

Age. Young adult

Burial No. 38, Context No.1058

1)

General. Very robust long bones. No skull

Sex. Male (pelvis, femora)

Age. 45yrs.+ (symphyseal surface, extent of arthritis and DISH)

Height. 180.37cm. (5'11")

Pathology. DISH - ossification of tendon insertions, particularly iliac crest and femora. Arthritis very severe in left shoulder joint (glenoid surface of scapula), also costo-vertebral joints.

2) Ilium and scapula of another body, adult, probably male

3) Lower end of femur of a young child aged about 1½yrs.

Burial No. 40, Context No. 1060

General. Mostly a child, 80% complete. A few damaged adult bones

1)

Sex. Not known (child)

Age. 10yrs. (2nd. permanent molar unerupted, 1st. upper incisor root almost complete, femur 30cm. long between epiphyses, sacral bodies all unfused, pelvic bone components unfused)

2)

Sex. Probably female (size of bones, small mastoid process. Note: manubrium is large and possibly from another body)

Age. >25yrs. (some of the vault is adult and has partial endosteal fusion of sutures)

Burial No.41, Context No.1061

General. Skull, long bones, vertebrae, ribs

Sex. Female (skull, long slender bones)

Age. 22yrs. (minimal dental attrition, partial endosteal fusion of fronto-parietal and sagittal sutures)

Height. 172.9cm. (5'8")

Congenital. Cranial Index 77.2 (mesocephalic). Upper 3rd. molars erupted obliquely

Pathology. Dental abscess lower 1st. molar

Burial No.42, Context No.1062

General. Skull vault, fragments of skull base

Sex. Male (supraorbital ridges, large mastoid)

Age. 30yrs.+ (endosteal fusion of all sutures, partially complete fusion of sagittal suture, deep arachnoid granulation pits)

Congenital. Cranial index 81.4 (brachycephalic)

Burial No. 43, Context No. 1063

General. Mostly fragments of an adult male; a small mandible of another body
1)

Sex. Male (femur, tibia)

Age. 45yrs. (total fusion of skull sutures, advanced molar attrition)

Height. 181.15cm. (5'11½") (tibia)

Pathology. Loss of some teeth (jaws are incomplete)

2)

Sex. Female (slender ramus of mandible)

Age. 30yrs. (molar attrition)

Burial No.45, Context No.2014

General. Partial fragments only

Sex. Male (large frontal sinus, large mastoid)

Age. 35yrs. (upper molar attrition)

Burial No.46, Context No.2040

General. Lower limb bones

Sex. Male (bicondylar width of femur 8.1cm.)

Age. 20yrs. (very slight traces of epiphyseal line still visible at upper end of tibia)
Height. 173.6cm. (5'8½")

Burial No. 47, Context No. 2044

General. 80% complete

Sex. Male (pelvis, large mastoid, femora)

Age. 28yrs. (moderate 1st. molar attrition, some tooth loss; ridged symphyseal surface)

Height. 170.8cm. (5'7")

Pathology. Dental abscess

Burial No.49, Context No.2043

General. Lower limb bones

Sex. Male (femora)

Age. 35+yrs. (wear of symphysis pubis, arthritis)

Height. 170.4cm. (5'7")

Pathology. Arthritis of both knee joints

Burial No.50, Context No.2050

General. Foot bones

Sex. Male (size of bones)

Age. Adult

Burial No.51, Context No.2051

General. Two bodies represented, mainly an adolescent, also bones of an adult

1)

Sex. Male (size of bones)

Age. 17yrs. (unfused epiphyses tibiae, metatarsals, calcaneum; tibia is 34,8cm. between epiphyses)

2)

Sex. Male (supraorbital ridges, large frontal sinuses)

Age. 30yrs. (endosteal fusion of sutures)

Pathology. Two lower thoracic vertebrae are fused together at their bodies and articular processes; a lower 3rd. vertebra (now detached) was fused through its body: both adjoining bodies are now deformed as by crushing. This was due to injury, probably a fall from a height.

NOTE: there are two bags in different boxes both with the same numbers (52): they are presumed to be different and are reported upon separately.

Burial No.52, Context No.2055

General. Skull vault and part of base

Sex. Male (supraorbital ridges)

Age. >30yrs. (all sutures show endosteal fusion, sagittal sutures fused throughout; deep arachnoid pits)

Congenital. Too damaged to measure cranial index but appears to be dolichocephalic. Supraorbital foramen on right side.

Burial No.52, Context No.2055

General. Skull fragments only, no teeth (redeposited burial)

Sex. Male (large frontal sinuses, supraorbital ridges)

Age. >25yrs. (partial endosteal fusion fronto-parietal sutures; more complete fusion of sagittal suture)

Burial No.53, Context No.2056

General. Skull, upper jaw & teeth (redeposited burial)

Sex. Female, (no supraorbital ridges, small frontal sinus, small mastoid)

Age. 25yrs. (slight dental attrition, no endosteal fusion of fronto-parietal sutures, partial fusion of sagittal suture)

Congenital. Cranial index 76.9 (mesocephalic). Persistent metopic suture.

Pathology. 1) abnormal flattening of the left frontal bone - a very old injury when the bone was thin, possibly at birth. 2) periodontal disease.

Burial No.54, Context No.2057

General. Skull, jaws, teeth, atlas vertebra, (redeposited burial)

Sex. Male (supraorbital ridges, large frontal sinuses, large hard palate)

Age. 40yrs+ (dental attrition)

Congenital. Large skull

Pathology. 1) Periodontal disease

2) Arthritis atlanto-axial (odontoid) joint.

Burial No.55, Context No.2058

General. Midshafts femora & tibiae (redeposited burial)

Sex. Indeterminate

Age. Probably adult

Burial No. 56, Context No. 2061

General. 3 bodies represented

1)

Child

Sex. Not known

Age. 10yrs. (The 1st. permanent molar is fully erupted, the 2nd. unerupted; the root of upper canine is only half developed; pelvic bones are unfused, femoral length (incomplete) between epiphyses is estimated at 29.6cm. All long bone epiphyses are unfused)

2)

Adolescent: well represented

Sex. Male (Pelvis, length of long bones)

Age. 19yrs. (upper humeral epiphysis is still uniting; upper femoral epiphysis has fused; the secondary epiphysis of the ischial tuberosity is still uniting. All molars are erupted, with minimal attrition)

Height. 181.6cm. (5'11½")

3) Adult (mandible, teeth, few bones)

Sex. Probably male (mandible)
Age. 30yrs. (dental attrition)

Burial No.57, Context No.2066

General. Skull, mandible, loose teeth

Sex. Female (slender clavicle, small mandible, thin skull vault, small teeth, no supraorbital ridge but has large frontal sinus))
Age. 30yrs. (moderate molar attrition, some wear of 3rd. lower molars, gross wear of upper central incisors, no endosteal fusion of sagittal suture)

Burial No.58, Context No.2069

General. Limb bones, mandible, vertebra, ribs

Sex. Male (size of long bones, mandible)
Age. 40+yrs. (dental attrition, arthritis)
Height. 174.6cm. (5'8½")
Pathology. Costovertebral arthritis.
Periodontal disease. Tooth loss of left lower molars and right second premolar.

Burial No.59, Context No.2070

General. Skull and upper limb bones

Sex. Male (supraorbital ridges, femoral head and neck)
Age. 40yrs. (gross attrition of incisors, moderate in molars; skull sutures fused throughout)
Height. 174.6cm. (5'9") (humerus)
Congenital. Slender build
Pathology. Dental caries, dental abscesses

Burial No. 60, Context No.2075 (TWO BOXES)

BOX 1 General. Skull, mandible, damaged upper limb bones

Sex. Male (large frontal sinuses, but small mastoid)
Age. 25yrs. (minimal dental attrition, upper central incisors not worn, early endosteal fusion of sutures))
Height. 172.6cm. (5'8") (humerus)
Congenital. Of slender build

BOX 2 General. Note: a different body. Mandible, skull

Sex. Male (large bones, mastoid & mandible; suprameatal ridge)
Age. 40yrs. (dental attrition is irregular - the 3rd. lower molar is most worn; considerable tooth loss, dental abscess)
Height. 176.3cm. (5'9½") (humerus)
Congenital. Cranial index 73.4 (Dolichocephalic)
Pathology. Periodontal disease, tooth loss; very large dental abscess left side of mandible

Burial No.61, Context No.2077

General. Incomplete long bones of lower limbs, patella, some foot bones

Sex. Male (large bones)

Age. Adult (some ossification of tendon going into patella)

Burial No. 62, Context No. 2080

General. Two bodies are represented

1) Elderly adult

Sex. Male (femora, pelvis)

Age. 40+yrs. (severe symphyseal wear; DISH, arthritis)

Height. 167.8cm. (5'6")

Pathology. DISH (marked tendon insertion ridging in the pelvis, femoral linea aspera, patella, calcaneum, patella). Arthritis - lipping of vertebral bodies and arch joint facets; diminution in the height of some vertebral bodies

2) Young adult.

Sex. Male (supraorbital ridges, mandible)

Age. 20yrs. (minimal (dental attrition), normal vertebrae, early endosteal fusion skull sutures)

Congenital. Irregular dental eruption in maxilla: accessory teeth round an imperfectly erupted canine. The 2nd. upper premolar is probably absent and in its place there appears to be a carious deciduous remnant

Burial No. 63, Context No. 2083

General. Two bodies are represented

1) Femora & right humerus

Sex. Male

Age. >30yrs. (size of tendon insertions in femora)

Height. 175.7cm. (5'9")

2) 2 humeri, right tibia

Sex. Male (robust bones)

Age. >30yrs. (size of tendon insertion development)

Height. 172cm. (5'7")

Burial No. 64, Context No. 2086

General. left tibia, fibula, patella

Sex. Probably male

Age. Adult

Height. 173.4cm. (5'8½")

Burial No. 65, Context No. 2089

General. Lower limb bones, pelvis

Sex. Male (pelvic greater sciatic notch)
Age. Adult
Height. 168.7cm. (5'6½")
Congenital. Slender build

Burial No. 66, Context No. 2092

General. Fragments of long bones of lower limbs, pelvis, foot bones

Sex. Male (pelvis- very large acetabulum)
Age. >30yrs (DISH fairly well marked)
Pathology. DISH - tendon insertions marked on fibula, calcaneum, metatarsals

Burial No. 67, Context No. 2051

General. Right side of mandible, fragments of long bone

Sex. Probably male (size of bone, size of teeth)
Age. 30yrs. (molar attrition)
Congenital. Irregular dental eruption. The lower canine is barely through the bone and probably had not erupted through the gum. The 3rd. molar is only partly erupted. Note: the canine anomaly is unusual but was found in another body, there with accessory teeth - adjacent teeth here are missing so it is not possible to say whether accessory ones were present

Burial No. 68, Context No. 1065

General. Fragments of major long bones and skull
Sex. Male (size of long bones, particularly lower end of humerus)
Age. >25yrs. (fused sagittal suture)
Congenital. Powerful build

Burial No. 69, Context No. 1066

General. Small fragments skull, long bones, vertebrae

Sex. Male (large frontal sinus, vertical thickness of ribs)
Age. 35yrs. (Upper molar attrition, costovertebral arthritic lipping)
Pathology. Costovertebral arthritis. Periodontal disease

Burial No. 70, Context No. 1067

General. Major long bones of lower limbs. Also an additional head of a male left femur

Sex. Male (femora)
Age. Adult
Height. 175cm. (5'9")
Pathology. There is a marked swelling of the subcutaneous (inner) surface of the left tibia. This bone articulates with lower third of left tibia from body No.74 and this has a swelling on the posterior surface. These two pieces come from the same body. The swellings were caused by syphilitic periostitis.

Burial No. 71, Context No. 1068

General. Lower end of tibia, animal bone - sheep humerus

Sex. Indeterminate

Age. Adult

Burial No. 72, Context No. 1069

General. Lower limb long bones. Sheep humerus

Sex. Male (size of long bones)

Age. Adult

Height. 176.3cm. (5'9½")

Burial No. 73, Context No. 1070

General. Fragments of skull, mandible, humerus, tibia, ribs, foot bones

Sex. Male (size of mandibular ramus and humeral head)

Age. 40yrs. (total fusion of skull sutures, arthritis head of rib)

Pathology. Costovertebral arthritis

Burial No. 74, Context No. 1071

General. Fragments lower limb long bones

Sex. Male (femoral head, neck & condyles)

Age. 30+yrs. (skull sutures)

Pathology. The lower part of left tibia articulates with the tibia of burial 70, and was inflamed by syphilitic periostitis.

Burial No. 75, Context No. 1072

General. Fragments of skull, humerus, calcaneum

Sex. Male (size of mastoid process, lower end of humerus)

Age. Adult

Burial No.76, Context No.1073

General. Fragments of long bone, pelvis

Sex. Male (pelvic sciatic notch, acetabulum)

Age. Adult

Burial No.77, Context No.1074

General. Long limb long bone fragments

Sex. Male (femoral head and neck)

Age. Adult

Burial No.78, Context No.1075

General. Long bone fragments

Sex. Probably male (size of 1st. sacral vertebra, diameter of femur)

Age Adult

Burial No.79, Context No.1076

General. Two bodies represented: adult long bones & skull; child pelvis
1)

Sex. Male (femoral diameters, very large foot bones)

Age. >35yrs. (skull sutures, arthritis)

Height. 181.8cm. (5'11½") (tibia)

Pathology. Costo-vertebral arthritis

2)Sex. Child (ilium unfused)

Age. 9yrs.

Burial No.81, Context No. 1078

General. Large pieces of long bone, teeth, pelvis

Sex. Male (pelvic greater sciatic notch, femoral head & neck)
Age. 25yrs. (dental attrition, cutting edge of 1st. upper incisor is worn)

Burial No. 82, Context No.1079

General. Lower limbs, skull, pelvis

Sex. Male (supraorbital ridges, pelvic greater sciatic notch)
Age. 30yrs. (moderate dental attrition lower molars, more marked in left upper 1st. molar; no arthritis)
Height. 176.5cm. (5'9½") (tibia) Pathology. Periodontal disease

Burial No. 84, Context No.1081

General. Fragments in poor condition

Sex. Male (femoral head, large 1st. metatarsal & other foot bones)
Age. Adult

Burial No.85, Context No. 1082

General. Fragments of long bones

Sex. Male (head of femur)
Age. Adult

Burial No. 91, Context No. 1088

General. Very damaged tibiae and other bone fragments

Sex. Indeterminate

Age. Probably adult

Burial No.92, Context No.1089

General. Broken fragments

Sex. Male (size of bones, femoral bicondylar width of 8cm.

Age. Adult

Burial No. 93, Context No. 1090

General. 20% of total body, fragments

Sex. Male (pelvis, femur, mastoid)

Age. 45yrs.+ (complete fusion first and second sacral bodies)

Height. 163.9cm. (5'4½")

Unclassified: WBG 33

Human foot bones from an adult, sex indeterminate

Note. In the heading PRN 35235 , refs. 029, 083, 002 there are animal bones, mostly bovine and sheep, mixed with pottery & tiles.