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Ancient Monuments Laboratory
Report 100/88

THE HUMAN SKELETAL REMAINS FROM ROMSEY ABBEY, HANTS., 1973-1979.

Christine Osborne BTech MSc

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Summary

Inhumed bone representing a minimum of 12 individuals (4 male, 2 possibly male, 1 female and 3 possibly female adults, and 2 children) and a quantity of miscellaneous human bone. One individual showed evidence of diffuse ideopathic skeletal hyperostosis.

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ROMSEY ABBEY, HANTS, 1973 - 1979

This group of inhumations consists largely of fairly small contexts of incomplete and fragmentary skeletons. Many of these remains offer little information, and all that can be done is to list the contents within each context. However, some of the skeletons are fairly complete and in a reasonable condition, and the findings from these are discussed below.

Sexing

Sexing was based on those characteristics of the skull and pelvis which differ in males and females. Also used (though by no means as accurate) were longbone measurements, principally that of femoral head diameter. It should be noted that the characteristics of sexual dimorphism only develop during puberty, so the sexing of immature individuals is not possible. Within this particular group, many of the contexts lacked those parts of the skeleton that make sexing possible, or were too fragmentary. Here it was determined that the group contains at least one female, three possible females, two possible males and four males. The uncertainty arises if only very few of the characteristics survive, or if a skeleton exhibits both male and female characteristics.

Ageing

Ageing is based on attrition of the molar teeth, the fusion or non-fusion of the epiphyses and, in males, the development of the pubic symphysis. The latter is not used for ageing females due to changes in the pubic symphysis which occur with childbirth. The ageing of young individuals is more accurate than the ageing of adults if the dentition is present since age can be gauged from the different stages of tooth development. One individual within this group was aged as 2 years $\pm$ 8 months from tooth development. Unfortunately very little dentition of immatures within the group survived. One individual was aged 17-25 years (based on attrition), one was aged 19-28 years (based on the pubic symphysis), one was aged 25-35 years (based on attrition) and two were aged 35-45 years (again based on attrition). Generally, the different contexts could only be said to be adult or immature (based on epiphyseal union).

Stature

Stature can be calculated from longbone lengths, and in many cases this was not possible due to the fragmentary nature of the

bone. Also, sex has to be known as the stature calculations differ for males and females. The few statures obtained within this group were of an adult male at 1.72m ± 4.66cm, a male of 25-35 years at 1.77m ± 3.91cm, and a male of 35-45 years at 1.71m ± 4.57cm.

Dentition

When present, the dentition is recorded using the following formula for adult teeth.

right side of maxilla 8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8 left side of maxilla
right side of mandible 8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8 left side of mandible

where 1=medial incisor
2=lateral incisor
3=canine
4=1st premolar
5=2nd premolar
6=1st molar
7=2nd molar
8=3rd molar

Deciduous teeth are recorded using the following formula.

right side of maxilla e d c b a | a b c d e left side of maxilla
right side of mandible e d c b a | a b c d e left side of mandible

where a=medial milk incisor
b=lateral milk incisor
c=milk canine
d=1st milk molar
e=2nd milk molar

Any tooth loss, either post mortem or ante mortem is recorded, along with any pathology and dental anomalies, and the following notation is used.

/=tooth lost post mortem
X=tooth lost ante mortem
U=unerupted or congenitally absent
O=tooth erupting
C=caries present
A=abcess

Nine individuals had some surviving dentition (though in only one case was it complete) and of these six had suffered tooth loss ante mortem, two had caries and one had suffered from an abcess.

Pathology

Most of the pathology surviving within this group is degenerative in nature, identified by bony lipping, wearing, pitting and eburnation (or polishing) of the bone. Eight individuals display this to a

greater or lesser degree, and it is found all over the skeleton though more often than not in the spine. One of the skeletons (RA/73/G1) displays diffuse idiopathic skeletal hyperostosis (DISH), also a disease of older individuals and a condition which involves excessive production of bone. The same individual has also suffered a probable rupture of the interosseous ligament of the right ankle, and may have had varicose veins indicated by lumpy areas of periosteal reaction (a thickening of the bone as a result of damage to the periosteum, either from disease or trauma) on the lower legs. Skeleton RA/73/G5 also has some periosteal reaction on its right fibula which may have been caused by the same condition. Four individuals exhibit Schmorl's nodes on the vertebral bodies. These are indentations or lesions on the bodies caused by a herniation of the intervertebral disc and failure of the cartilagenous end plate. One individual has cranial porosity on fragments of its skull. This is a pitting of the bone of the calvarium and is thought to be indicative of iron deficiency anaemia during childhood. Skeletons RA/73/Grave 5 and RA/79/E6 both have probable bunions.

ROMSEY ABBEY, HANTS, SKELETAL INVENTORY

RA/73/A3

1 fragment of longbone, probably radius

RA/73/A7

Skull fragments
1 first metatarsal
1 tarsal
1 metacarpal
Fragments of longbone including femur, fibula and humerus

Other remarks. The bones are in an extremely poor condition, with post mortem lesions on the humerus and fibula.

RA/73/A8

Animal bone

RA/73/Ditch N of LCH

Right humerus
Fragment of clavicle (sternal end)

RA/73/F1

Fragments of skull
Left scapula
Both humeri
Both radii
Both ulnae
2 carpals
4 metacarpals
5 hand phalanges
1 right and 4 left ribs + fragments
4 thoracic vertebrae
1 lumbar vertebra
2 segments of sacrum
Both pelves
Both femora
Both tibiae
Right fibula
7 tarsals
9 metatarsals
3 foot phalanges
animal bone

Also - 1 humeral head
Fragment of left pelvis
1 metacarpal

None of the above are associated with the above individual.

Dentition

R ——— L
——— ✗ ✗ ✗ ✗ ✗ ✗ 3 4 5 ———

There is also one other premolar and a lower molar (6^{th} or 7^{th}). The molar demonstrates wear, but it would be misleading to try to age the skeleton from this as a) it is not clear if the tooth is a 6 or 7 and b) the upper dentition is unknown, and the opposing molar may have been lost ante mortem.

Age Adult

Sex Female

Pathology

The distal condylar articulations of the femora, and the proximal condyles of the tibiae have lipping around their margins. Also, the lateral edges of the anterior articular surfaces of the femora (where articulation with the patella occurs) demonstrates wear, pitting and eburnation of the bone.

RA/73/Grave 1

Skeleton complete, apart from the left femur and some hand and foot bones.

Dentition

R 8 7 6 ✗ ✗ 3 2 1 | 1 2 3 ✗ ✗ ✗ A 7 8 L
(8) 7 ✗ ✗ 4 3 2 1 | 1 2 3 4 ✗ 6 7 8

There is evidence of a possible abcess at upper left 7.

Maxilla - large gaps between the anterior teeth suggest that either the 4's and 5's were lost some time before death, giving time for the other teeth to migrate out of place, or there is a congenital absence of the 4's and/or 5's. The upper left 7 is at a severe angle, leaning inwards in a mesial direction into the space left by the previously lost upper left 6.

The lower left 8 has two main roots and one smaller one (the

norm for lower molars is just two roots). The upper 8's each have three main roots and one smaller one (the norm for upper molars is just three roots).

Age 35-45 years (based on attrition rates M1=5+, M2=5+, M3=3)

Sex Male

Stature 1.71m ± 4.57cm (using length of humerus)

Pathology

This skeleton appears to demonstrate the presence of diffuse idiopathic skeletal hyperostosis (DISH), a degenerative condition which involves the excessive production of bone. This is best observed on the spine where the vertebral bodies of thoracic 4 to thoracic 11 (inclusive) are fused together by a line of bony growth running continuously along the right side of the vertebral bodies (resembling wax running down a candle). The insertions of the patellae ligaments on the tibiae are spurred. The distal articulations of both first metatarsals demonstrate severe lipping and breakdown of the rims. This is matched on the first right phalanx at its proximal end. There are small exostoses on the medial side of the cuboid. The head of the first left metacarpal, and distal end of the first left proximal phalanx show pitting and expansion of the bone. The distal end of the fifth right metacarpal shows remodelling of the bone with lesions. Some of the costal notches of the sternum have bony lipping, matched by the same on some sternal rib ends. The sternal ends of the first ribs have ossified costal cartilages. The femora have slight bony lipping around their distal articulations, as do both patellae around their articular rims. Both scapulae have roughening and pitting on their acromions where the clavicles articulate. The lateral ends of both clavicles are distorted with roughening and pitting, although this is more severe on the left. The spine also has lipping on the odontoid process of the axis, and on the body rims of cervicals 4, 5 and 6, and thoracics 1, 2 and 3. The articulations of the latter are also affected, as are those of thoracic 5. Bony lipping of the vertebral bodies also occurs further down the spine on thoracics 11 and 12. The vertebral bodies of lumbars 2 to 4 (inclusive) and thoracic 11 have Schmorl's nodes. There is a swelling on the mid-shaft anterior crest of the right tibia, and both tibiae have periosteal reaction on their medial shafts. Both fibulae also have areas of periosteal reaction,

distally on the right, and medially and proximally on the left. The left ankle demonstrates severe strain and a probable rupture of the lateral ligaments, resulting in expansion and extra bony growth on the fibula, and much extra bone on the areas of insertion of the interosseous ligament on both fibula and tibia. There is spurring on the area of insertion of the soleus on both tibiae and fibulae. It may be that the periosteal reaction on the fibulae and tibiae, where not associated with ligamentous stress, is due to venous stasis (varicose veins). It could be suggested from the general state of this skeleton that the individual may have been a person of some status and richly overfed.

RA/73/Grave 2

Both clavicles
Both scapulae
Sternum
Manubrium
Both humeri
Both radii
Both ulnae
6 right ribs + fragments
4 thoracic vertebrae
3 lumbar vertebrae
The bones are broken and fragmented.

Age Adult

Sex Unknown

Pathology

The body of the sternum has a lesion perforating the bone near its proximal end. One lumbar vertebra has lipping around the unbroken superior body rim. This also occurs on some of the thoracic vertebral body rim fragments.

RA/73/Grave 3

Fragments of skull
Mandible
Both clavicles
Both scapulae
Sternum
Manubrium

Both humeri
Both radii
Both ulnae
11 carpals
8 metacarpals
3 hand phalanges
1 right rib
6 thoracic vertebrae
5 lumbar vertebrae
Sacrum with all 5 segments
Both pelves
Both femora

Dentition

Loose teeth include 1 lower molar, 1 upper molar, 6 incisors, 4 canines and 5 premolars.

Age 19-28 years

Sex Male

Stature 1.77m ± 3.91cm (Based on femoral length)

Pathology

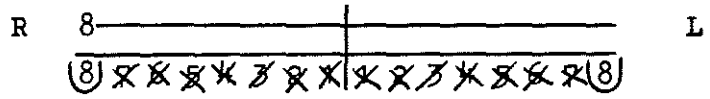
Lipping of the body rims of lumbar 5 and upper sacral segment. Scmorl's nodes occur on the two upper lumbar vertebrae. The thoracic vertebrae present are those from the upper spine, and their bodies are elongated in an anterior direction.

RA/73/Grave 4

Fragments of skull
Mandible
Both clavicles
Both scapulae
Sternum
Both humeri
Both radii
Both ulnae
3 carpals
6 metacarpals

12 hand phalanges
9 left and 7 right ribs + fragments
5 cervical vertebrae
12 thoracic vertebrae
2 lumbar vertebrae

Dentition



Age Adult

Sex Male

Stature 1.72m ± 4.66cm(based on length of radius)

Pathology

The sternal ends of four ribs and both clavicles have wearing, pitting and bony lipping. Many costal pits of the thoracic vertebrae also show this, with vertebral bodies which are elongated anteriorly and have bony lipping. Thoracics 10 and 11 have Schmorl's nodes.

RA/73/Grave 5
Both femora
Both patellae
Both tibiae
Both fibulae
14 tarsals
9 metatarsals
14 foot phalanges
Animal bone

Age Adult

Sex Unknown

Pathology

The right fibula has an area of non-specific periosteal reaction on the medial shaft. The first metatarsal has a large lesion at the distal medial end over the point at which the articulation begins - a probable bunion. There is also some pitting and eburnation on the volar proximal articulation.

RA/74/GA 4

1 fragment of animal bone

RA/74/GA 5A

2 animal bones

RA/74/J 7b

1 fragment of animal bone

RA/74/17

All the bones are immature

Skull fragments

4 right femora, 3 left femora } 2 pairs, 3 unpaired

2 right ulnae

1 left ulna

4 left tibiae, 4 right tibiae } 3 pairs, 2 unpaired

1 pair of radii

1 left humerus, 2 right humeri } 1 pair, 1 unpaired

1 fibula

2 fragments of ?right scapulae

3 right ilea of pelves

1 fragment of vertebral body

4 halves of vertebral arches

7 left and 5 right ribs

2 clavicles - unpaired

3 metatarsals

2 phalanges

Other fragments

These bones represent the remains of at least five individuals. No teeth remain, but the size and general development of the bones suggests that all were extremely young.

RA/75/26

1 fragment of humerus

1 fragment of another longbone

Both are very small, suggesting an immature individual.

RA/75/29

1 immature cervical vertebra
1 fragment of rib
1 fragment of immature longbone - possibly fibula
1 fragment of animal bone

RA/75/30

Fragments of right clavicle
Fragments of scapula
A thin fragment of skull - possibly immature
Small fragments of longbones

RA/75/33

The following are all immature
1 right femur
Both fibulae
4 metatarsals
Fragments of skull
3 vertebral bodies
Longbone fragments
Also A fragment of tibial articulation which comes from a larger individual than the above - either an adult or an older immature individual where the epiphyses are more advanced in development. Therefore this group contains remains from at least two individuals.

RA/75/34

The following are all immature.
Fragments of vertebrae
Fragments of ribs
Fragments of scapulae
Fragments of longbones including humerus and femur
Also A fragment of skull which, from its thickness, seems to be from an older individual. Again, the group contains remains from at least two individuals.

RA/75/41

Fragments of skull
2 left pelves
Fragments of sacrum which articulate with one of the pelves
Proximal end of a left ulna
Proximal end of a left radius
Distal end of a left humerus

Central shaft fragment of femur
Fragment of tibial shaft
Other longbone fragments
6 vertebral bodies + fragments

The presence of two left pelves shows that this group contains the remains of at least two individuals, both adult.

RA/75/59
Fragments of skull
1 cervical vertebra
Fragment of radial shaft
Fragment of calcaneus
Fragment of a first metatarsal
Also Shaft of humerus
Fragments of vertebral arches
Fragments of skull
These are all immature and are smaller than the other bones in this group, and so there are at least two individuals represented here.

RA/75/65
Shaft of right femur
Fragments of animal bone and teeth

RA/75/66
1 fragment of bone (human)

RA/75/70
Fragment of rib
Fragments of humerus and radius or ulna

RA/75/72
Both tibiae
4 tarsals
Fragments of longbone including femur, radius and fibula
The bones are all adult but in very poor condition

RA/75/75
1 metacarpal
Rib fragments
Fragments of scapula
Distal fragment of right humerus
All the bones are adult

RA/75/76

All the bones are fragmented

Skull

Mandible

Both scapulae

Left humerus

Radius

Left ulna

1 hand phalanx

4 left ribs and 1 right

1 cervical vertebra

1 thoracic vertebra

2 lumbar vertebrae

2 segments of sacrum

Pelvis

Both femora

Both tibiae

1 tarsal

Dentition

Mandibular right 3, 4, 5, 6, present, the rest of the jaw is missing.

Age Adult (to note the amount of attrition of the mandibular 6 would be misleading as the opposing dentition is unknown)

Sex ?Male

RA/75/78

These bones are immature

Fragments of skull

Shaft of left tibia

RA/75/81

Shaft of left tibia

2 metatarsals

1 phalanx

All are adult

RA/75/85

Distal fragment of adult left tibia

RA/75/87

2 fragments of skull

1 metatarsal

2 small fragments of longbone, 1 of which is fibula or ulna

All are adult

RA/75/88

2 fragments of adult pelvis

Sex ?Male

RA/75/89

The following are immature

Fragments of skull

Fragments of mandible

Fragments of ribs

1 right clavicle

Dentition - the teeth are all loose and include

3 adult M6's
3 adult incisors } all partly developed
2 adult canines

4 deciduous molars
5 deciduous incisors } not all the roots are fully developed
2 deciduous canines

2 deciduous molars in situ

Age 2 years ± 8 months

RA/75/120

Distal articulation of right fibula

7 right tarsals

8 right metatarsals

1st proximal phalanx

All are adult

RA/75/14

1 adult 1st left matatarsal

Immature fragment of clavicle

Immature rib fragment

1 other fragment

RA/75/B1

All the following are fragmented
Left pelvis
Skull
Left patella
Left scapula
Tibia

Age The bones are large, but both proximal and distal epiphyses of the tibia are unfused, so the age is less than 16 years.

RA/75/B2

All the bones are badly fragmented
Left humerus
Ulna
Right fibula
Right patella
4 metatarsals
7 tarsals
Tibia
Left and right femora
Right pelvis
All are adult

RA/75/B4

Fragments of left and right pelvis
2 right femora and 1 left
Left fibula
Left and right tibiae
Right humerus
Right talus and calcaneus
1 foot phalanx
Other fragments

These bones represent some of the remains of at least two individuals. The left femur is too worn and broken to try to pair with the rights. The only femoral head diameter measurement is on one of the right femora and is 50mm. This indicates a male.

RA/75/a (goes with RA/75/g)
1 skull (no mandible)

Dentition

R 8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8 L

Age 35-45 years (based on attrition rates M1=5+, M2=5, M3=3)

Sex Male

RA/75/g (goes with RA/75/a)
Fragments of right pelvis
Right radius
Right femoral shaft
1 extremely worn incisor or canine

RA/75/b
Fragments of skull
Both clavicles
Both scapulae
Both humeri
Left ulna
7 left ribs and 3 right
6 cervical vertebrae
6 thoracic vertebrae

Dentition

C
R 8 7 6 5 4 3 2 1 | L

Maxillary right 3 has caries on the mesial crown.

Age Adult (the absence of any mandibular teeth means that an age obtained from the two maxillary molars based on attrition might be misleading)

Sex Male

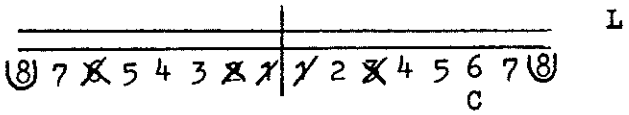
Pathology

There is some stress of the area of insertion of the costo-clavicular ligament on the left clavicle.

RA/75/c

Fragments of skull
Mandible
Left humerus
1 thoracic vertebra
Left pelvis
Left femur

Dentition



There are also 3 loose maxillary molars and 2 loose maxillary molars.

Mandibular left 6 has a large caries cavity on the mesial crown and root.

Age 25-35 years (based on attrition rates M1=5, M2=3+)

Sex ?Male

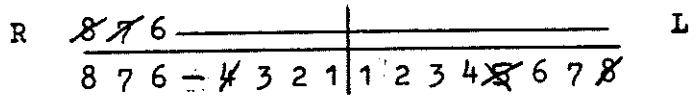
Pathology

There is a large Schmorl's node on the inferior body of the thoracic vertebra (the superior body has broken away).

RA/75/e

Fragments of skull
Mandible
Left clavicle
Left scapula
3 left ribs
4 cervical vertebrae

Dentition



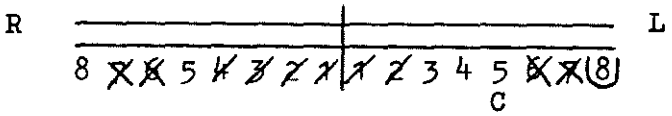
On the right side of the mandible one of the premolars is congenitally absent ie. there was only one premolar, lost post mortem. The left side is normal with two premolars, one of which was lost ante mortem.

Age 17-25 years (based on attrition rates M1=3, M2=2, M3=1)

Sex Unknown

RA/75/f (goes with RA/75/h)
Fragments of skull
Mandible
Right clavicle
Both scapulae
Right humerus
Radius
Left ulna
1 metacarpal
3 phalanges
9 left and 2 right ribs + fragments
Fragments of vertebrae
Sacrum of 5 segments
Both pelves

Dentition



There is a caries cavity on the distal crown and root of mandibular left 5.

Age Adult

Sex ?Female

RA/75/h (goes with RA/75/f)
Right femoral head and neck
Fragment of rib head
1 other

RA/75/j
Fragments of ribs

RA/75/soakaway pit 1
Skull fragments
Both clavicles
Both scapulae

Right humerus
Right radius
Right ulna
1 metacarpal
4 left and 5 right ribs + fragments
Fragments of at least 7 vertebrae
Both pelves
1 metatarsal

Age Adult

Sex Unknown

Pathology

Although broken and fragmented, some of the vertebral articulations display severe pitting and roughening. Some of the vertebral bodies show a breakdown of the rims.

Two vertebral bodies have Schmorl's nodes on both body sides, and one vertebra has one on its inferior body only.

RA/75/soakaway pit 2. Bag 1
Fragments of skull
2 left radii
Right patella
Fragments of scapula
Fragments of calcaneus
2 Metatarsals
1 hand phalanx
Right clavicle
Right pelvis and other pelvis fragments
1 humerus head
Distal fragment of femur
3 right ribs and fragments
This represents the remains of at least two individuals.

RA/75/soakaway pit 2. Bag 2
Fragments of skull
Fragments of longbone including femur
1 metatarsal
Fragments of scapula

Pathology: some of the skull fragments display cranial porosity (the pitting of the surface of the calvarium thought to be associated with iron deficiency anaemia as a child).

RA/79/D3
Proximal shaft of right femur
1st segment of sacrum
Fragment of right pelvis
Fragment of skull

Age Adult

RA/79/E2
3rd left metatarsal

RA/79/E5
Right radius
Both ulnae
3 carpals
6 metacarpals
10 hand phalanges
2 lumbar vertebrae
A sacrum of 5 segments
Both pelves
Right femur
Both patellae
Both tibiae
Both fibulae
12 tarsals
9 metatarsals
11 foot phalanges

Age Adult

Sex ?Female

RA/79/E6
Fragments of scapula
Both humeri
Both radii
Both ulnae
3 carpals

9 metacarpals
10 hand phalanges
8 left and 5 right ribs and fragments
6 cervical vertebrae
9 thoracic vertebrae
5 lumbar vertebrae
Sacrum with 4 segments
Both pelves
Both femora
Both patellae
Both tibiae
Both fibulae
10 tarsals
8 metatarsals
5 foot phalanges

Age Adult

Sex ?Female

Pathology

Both patellae, distal femoral articulations and proximial tibial articulations have bony lipping around some areas of their articular rims, and the patellae exhibit roughening and pitting on their medial articular facets. Similarly, both acetabulae of the pelves have areas of roughening and pitting along their inferior rims. Unfortunately the corresponding areas of the femoral heads are missing.

Degenerative disease also occurs in the spine; all the cervical vertebral bodies and articulations are affected in varying degrees. The symptoms are more slight on the upper thoracics, but increase further down the spine, the lower thoracics also displaying wearing and pitting of the costal pits. The articulations of the lumbar vertebrae are severely distorted in shape, with wear and pitting on their surfaces, as are the vertebral articulations of the sacrum.

The right fibula has an osteophyte on its styloid process, and the radius and ulna have some bony lipping around both distal articulations. The same occurs around the proximal articulations of both 1st metacarpals.

The left 1st metatarsal is distorted with a bony growth at the proximal medial articulation and shaft, a probable bunion.