## Bartlemas Human Bone

## Charnel Pit 1: (1026)

| $\begin{aligned} & \hline 1026 / 1(\mathrm{a}) \\ & 1026 / 1(\mathrm{~b}) \\ & 1026 / 1(\mathrm{c}) \\ & 1026 / 1(\mathrm{~d}) \end{aligned}$ | R femur complete but greater trochanter damage <br> L femur complete but with greater trochanter damage R proximal tibia (75\%) <br> L tibial shaft (65\%) | Rickets A/P bowing; drill holes in femoral neck and distal articular surface; very pronounced linea aspera and striated new bone on posterior surface below it <br> Rickets A/P bowing; drill holes in femoral neck and distal articular surface <br> Rickets; drill holes in proximal and distal articular surfaces; M/L bowing Rickets M/L bowing |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { 1026/2(a) } \\ & 1026 / 2(\mathrm{~b}) \end{aligned}$ | R distal femur (90\%) <br> L femur (missing trochanter) | Very gracile Very gracile |
| $\begin{aligned} & \hline 1026 / 3(\mathrm{a}) \\ & 1026 / 3(\mathrm{~b}) \end{aligned}$ | R proximal femur (75\%) <br> L femur complete | 395 mm ; enthesopathy for medial head of gastrocnemius |
| 1026/4 | Complete L tibia | 370 mm in length |
| 1026/5 | Complete L tibia | Gracile, 321 mm in length; ? recently fused; slight lamellar bone deposition in middle third on lateral surface |
| $\begin{aligned} & \hline 1026 / 6(\mathrm{a}) \\ & 1026 / 6(\mathrm{~b}) \end{aligned}$ | L humerus (damaged head) <br> R humerus complete | Deep depressions above distal articular surfaces bilaterally |
| 1026/7 | L humerus (damaged head) |  |
| 1026/8 | R tibial shaft (80\%) with proximal and distal ends/ shaft fragments | Gracile and from a young adult (proximal recently fused). Striated lamellar bone in distal third of medial surface and mid-third of lateral surface (slight) |
| 1026/9 | R clavicle | Fracture of distal end |
| 1026/10 | R clavicle | Gracile and light in colour with porosity of lateral articular surface and disruption of the bone laterally suggesting trauma to acromioclavicular joint. Flattening of anterior aspect of bone medially |
| 1026/11 | L clavicle | Copper staining on anterior aspect; L 159 mm (M); slight deltoid enthesopathy |
| 1026/12 | R scapula | Eburnation, porosity and osteophytosis (3) of acromioclavicular joint indicative of osteoarthritis. May suggest traumatic subluxation at that joint. Enthesopathy just inferior to glenoid and labrum (1) posteriorly. Robust individual |
| 1026/13 | L os coxa (ilium and ischium); 10 R rib fragments, 10 left rib fragments; 20 miscellaneous rib fragments | From a very gracile young adult, ? F (iliac crest recently fused) |

## Charnel Pit 2

| 1007 | L femur (proximal <br> third), 7 femoral <br> fragments, <br> L ulna (proximal <br> half), L radius |  |
| :--- | :--- | :--- |


|  | (proximal half), <br> L rib shaft and four other fragments, 2 tibial condyles, neural arch fragment |  |
| :---: | :---: | :---: |
| 1007 | L humeral shaft (missing both ends) | Proximal end shows canid grawing; Just above deltoid are 5 score marks from rodent gnawing. Suggests bone was lying around on surface not buried |
| 1007 | L tibia and ?L fibula shafts | Extremely severe periosteal reactions on both tibial and fibular shafts. On the tibia it is mainly lateral and posterior but on the fibula all three surfaces are affected equally |
| $\begin{array}{\|l} \hline \text { 1015/1(a) } \\ 1015 / 1(b) \end{array}$ | R femur complete <br> L femur complete | Poirier's facet; marginal osteophytes (2) surrounding distal articular surface <br> Allen's fossa; marginal osteophytes (1) around distal articular surface |
| 1015/2(a) | R proximal femur (50\%) <br> L proximal femur (60\%) | Craggy deposits of new bone along linea aspera Craggy deposits of new bone along linea aspera |
| 1015/3 | $\begin{aligned} & \text { L femoral shaft } \\ & (90 \%) \end{aligned}$ | Craggy deposits of new bone along linea aspera and smooth just inferior to it posteriorly, indicating severe enthesopathy; gnawing around femoral head fragment |
| 1015/4 | Complete left tibia | Small area of woven bone on posterior surface 1 cm in extent 60 mm above pronounced tibialis posterior insertion |
| 1015/5 | L distal tibia (75\%) and R tibial shaft (50\%) | Severe periosteal reactions affecting both bones. On right it covers all three surfaces, on the left mainly on medial and lateral. Left tibia has pronounced squatting facet. |
| 1015/6 | Distal right tibia $(25 \%)$ | ? from same individual as 1015/4 |
| 1015/7(a) | L fibula distal (90\%) | Woven on lateral aspect of shaft in distal third |
| 1015/8(a) | R humerus complete |  |
| 1015/8(b) | L humerus complete |  |
| 1015/9 | R radius complete | Very gracile; Goodfellow and Bullough lesion on proimal end |
| 1015/10 | R radius (60\%) shaft |  |
| 1015/11 | L ulna complete |  |
| 1015/12 | L proximal ulna (40\%) | From small, gracile individual |
| 1015/13 | L ulna (60\%) proximal fragment |  |
| 1015/14 | R ulna (50\%) shaft |  |
| 1015/15 |  |  |
| 1015/16 | R distal fibula (10\%) | Severe deposits of periosteal reactive bone on all surfaces |
| 1015/17 | Fibula shaft fragments | Thick layers of new bone representing multiple episodes of chronic infection with 'candlewax' appearance |
| 1015/18 | Horse epiphysis |  |
| 1015/19 | Edentulous maxilla | No evidence of leprosy. Sharp edges to nasal margins and sharp nasal spine |
| 1015/20 | R scapula L scapula | Parts of both scapulae including both glenoid cavities and acromions. Small scapular fragments |
| 1015/21 | L os coxa | With shallow sciatic notch. It is very robust and probably male |
| 1015 | R and L zygomatic |  |
| 1015 | $\begin{aligned} & \text { L os coxa } \\ & 2 \mathrm{R} \text { os coxae } \end{aligned}$ | Fragments from L os coxa from small young individual; R ossa coxae from 2 individuals one from older adult. 17 frags. |


| 1015 | Mandible | Canines and molars present. Robust. Male individual. |
| :--- | :--- | :--- |
| 1015 | Vertebrae and sacrum | C4-7 and T1. C7 show intervertebral osteochondrosis. Also C5- <br> C7 from a gracile individual. C6 and C7 show intervertebral <br> osteochondrosis and osteophytosis. Also two lumbar vertebrae <br> with Schmorl's node and intervertebral osteochondrosis. <br> Fragments of two sacral vertebrae; neural arch fragments. |
| 1015 | Hand bones | Five metacarpals, two proximal and one mid hand phalanges. <br> Robust capitate bone. |
| 1015 | Foot bones | Two proximal foot phalanges and cuneiform fragment |
| 1015 | Foot bones | Left first metatarsal fused to proximal phalanx with 'beret' <br> appearance. The bone is porous with erosions at distal end due to <br> septic arthritis due to leprosy. Also metatarsal with knife-edge <br> remodelling and distal metatarsal with porosity. |

## Charnel Pit 3

| Context | Bone | Comment |
| :--- | :--- | :--- |
| 1034 | R talus <br> R cuboid <br> Cranial fragment <br> Mid hand phalanx <br> Rib fragment <br> Non-human fragment | From large individual <br> Fragmentary <br> ? from frontal |
| 1034 | Non-human fragment | ? non-human |
| $1034 / 1$ | L prox femur (80\% inc <br> frags) | Very robust - femoral head diameter 52.23 mm; <br> enthesopathy along linea aspera for adductors |
| $1034 / 2(a)$ <br> 1034 (b) <br> 1034 (c) <br> 1034 (d) | R prox and dis femur (80\%) <br> R proximal tibia (80\%) <br> R proximal tibia (80\%) | Greater trochanter recently fused; head absent ? unfused <br> Smooth swelling on distal lateral surface due to infection <br> Smooth swelling latero-distally due to infection <br> Unfused, gracile, flattened antero-posteriorly; plaque of <br> woven bone on posterior aspect superimposed on porous <br> lamellar bone, swollen by infection <br> Juvenile 16-18 years with chronic infection of both tibiae <br> and right humerus |
| $1034 / 3$ | Mid-shaft fibula fragment | Extensive deposits of woven bone indicating repeated <br> episodes of infection |

## Drain east of chapel: (1053)

| $\begin{aligned} & \hline 1053 / 1 \\ & 1052 / 2 \\ & 1053 / 3 \\ & 1053 / 4 \\ & 1053 \end{aligned}$ | L femur (trochanter and shaft fragments) (30\%), <br> femur mid-shaft(50\%); <br> femur 3 mid-shaft fragments, <br> L distal radius (20\%), L proximal radius (20\%) and mid-shaft fragment R humeral head, $L$ distal ulna ( $60 \%$ ), $2^{\text {nd }}$ metacarpal shaft, L $3^{\text {rd }}$ and $5^{\text {th }}$ metacarpals, <br> pubic symphysis from young adult (ventral rampart not formed); rib fragment |  |
| :---: | :---: | :---: |
| 1053/5 | Shaft fragments from R (50\%) and L (25\%) tibia | Extensive lamellar bone formation, particularly severe on lateral surfaces |
| 1053/7 | R distal fibula (25\%) | Lamellar bone formation on medial surface with patchy deposits superimposed on striated areas |

Soakaway: (1054)
2 cranial fragments (L frontal and parietal), L femur (proximal fragment and 12 other shaft fragments), R patella, humeral ( $25 \%$ mid shaft) and humeral head fragment, R rib fragment; proximal hand phalanx
L humeral shaft fragment (25\%) very robust

Large cortical defect ( 2 cm long) in deltoid insertion Shaft thinned towards it distal end

## Sk 9

Teeth: Maxilla: LI2, both Cs, LPM3 and LPM4, M1 subadult crown; mandible both Cs, both PM3s, both M1s

Enamel hypoplasia of all four canines, possible early carious lesions on R mand M1 and one mandibular PM3

## Cemetery soils

| Context | Bone | Comment (e.g. Pathology) |
| :---: | :---: | :---: |
| Trench 1 |  |  |
| 1000 | L clavicle | Robust lateral third of clavicle with pronounced coracohumeral and Coracoclavicular attachments (area of rugosity antero-inferiorly) |
| 1000C | L parietal, R clavicle, 2 calcanei (incomplete) |  |
| 1000D | R patella, $\mathrm{L}{ }^{\text {st }}$ rib, rib shaft fragment |  |
| 1000E | Ulna Scapula <br> Radius (? Non-human) <br> Rib <br> Rib | Midshaft fragment (40\%) <br> Lateral border <br> Midshaft fragment (very dense for human - modification at distal end) <br> Midshaft fragment |
| 1000F | R femur (distal 25\%); R tibia (distal articular surface), $5^{\text {th }}$ lumbar vertebra | Enthesopathy at insertion of gastrocnemius; very small circular area of eburnation on medial condyle. |
| 1001 | R $1^{51}$ rib frag 2 rib shaft frags Cervical vertebra? 4th 2 lumbar vertebral body fragments $\mathrm{R} 2^{\text {nd }}$ maxillary molar | Head of first rib <br> Gracile, from young adult, endplate fused, no path <br> Both from inferior vertebral body |
| 1002 | Cranial fragment (R frontal), neural arch fragment, cervical vertebra | From juvenile |
| 1010 | 9 cranial fragments (mni 2), including left parietal, frontal (x3), temporal, left zygomatic, cervical vertebra, body fragment and 2 neural arch fragments, facet for dens, lumbar neural arch, 2 R and 1L rib heads, shaft fragments, R distal humerus ( $50 \%$ ) and radius ( $10 \%$ ) |  |
| 1016 | Left maxilla with teeth - LP1, LP2, LM1, | Rounded nasal aperture, resorption of |


|  | LM2, M3 lost PM Cervical vertebra, parietal fragment, 2 rib fragments, bone fragments ( 8 g ) | alveolar bone, calculus, periodontal disease, dental trauma |
| :---: | :---: | :---: |
| 1019F | R radius ? R tibia Foot | Proximal fragment (20\%) <br> Distal fragment (5\%) <br> 2 proximal phalanges; 1 misc bone fragment |
| $\begin{aligned} & \hline \text { 1049/1 } \\ & 1049 \end{aligned}$ | 11 cranial fragments (frontal, parietal, occipital), L distal femur, R proximal humerus fragment, atlas vertebra, L scapula fragment, fibula fragment, rib fragments Midshaft R humeral fragment | 4 fragments of long bone ? from fibula display very severe periosteal reactions with spicules of bone projecting from their surfaces <br> Area of fine microporosity just posterior to deltoid insertion? cause |
| Trench 2 |  |  |
| 2000 | Cranial fragment, distal ulna (?L) |  |
| 2003 | Cranial fragment |  |
| 2006 | Right maxillary I1, left mandibular P1 | Carious lesion in premolar |
| 2034 | Shaft fragment? ulna |  |
| 2052 | Ulna fragments (distal) |  |
| 2057 | Rib midshaft fragments, thoracic vertebral fragments |  |
| Trench 3 |  |  |
| 3000 | R proximal radius (10\%) and tibial shaft fragment | Slight biceps enthesopathy (1) on radius |
| 3000* | Proximal hand phalanx (missing proximal end) |  |
| 3002 | 2 cranial fragments, part of left maxilla with LI1 lost am, LI2 lost pm; LI2, LP3, LP4 present; mandibular RM2 and RC present; L ${ }^{\text {st }}$ proximal hand phalanx | Rounding of nasal aperture and resorption of central alveolar bone; moderate calculus on maxillary teeth and molar, considerable calculus on mandibular canine |
| 3002* | 2 central mandibular fragments, 3 cranial vault fragments? frontal | Possible perimortal injury indicated by curvilinear edge |
| 3003 |  |  |
| 3005 | Cranium <br> L clavicle <br> Hand <br> Femur <br> Rib | 13 fragments including occipital (x3), parietal, zygomatic and frontal bones. Very strong muscle attachment on nuchal crest; L temporal with very robust mastoid suggesting male; lipping of groove posterior to mastoid process Midshaft fragment Large right scaphoid with osteophyte; Left $5^{\text {th }}$ metacarpal |
| 3005* | Maxillary R canine, L m3; mandibular Rm2 and ?Rm3 | Heavy buccal calculus on maxillary teeth; wear minimal |
| 3008 | 2 cranial vault fragments |  |
| 3013 |  |  |
| 3015 | C7 vertebra, cervical vertebral body fragment, thoracic vertebral body | C6 shows slight intervertebral osteochondrosis as does the other vertebral body, thoracic vertebra has a Schmorl's node in its superior endplate |

