A Report on Romano-British Cremated Remains from Doncaster

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</table>
Abstract

This report provides an osteological evaluation of 14 Romano-British cremation burials from Doncaster. The evaluation consists of a summary of the completeness, demography, state of health, crematory attributes and burial attributes of the assemblage, followed by a statement regarding the material’s potential for further analysis. It is recommended that the urns be analysed, the osteological data be compared to that of local contemporary cremation cemeteries, and the bird bones be further examined in order to obtain a better understanding of their significance.
Introduction

The aim of the following report is to provide an osteological analysis of 14 Romano-British cremation burials from Doncaster. These burials were recovered from a Roman cremation cemetery in Doncaster (not dated), which was discovered along the Roman road that connected Doncaster to Lincoln (Atkinson and Cumberpatch, 1995). The burials are currently in the possession of Doncaster Museum and Art Gallery.

In 2004, Christie Cox (University of Sheffield) analysed the cremation burials for her MSc dissertation, and in 2006 the author performed her own analysis of the material using Cox’s weights. The author’s osteological analysis was performed in alignment with the British Association for Biological Anthropology and Osteoarchaeology (BABAO) protocol (McKinley, 2004a), and the resulting report consists of an assessment of the cremation burials’ completeness, demographic attributes, state of health, crematory attributes and burial attributes, followed by a statement regarding the material’s potential for further analysis.
Completeness

Total Weight of Cremated Bone

The total weights of the cremated human remains are listed in Table 1.

Table 1 The Total Weights (in grams) of the Cremated Human Remains Found in Each Doncaster Cremation Burial

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003**</td>
<td>8.43 g</td>
</tr>
<tr>
<td>DHG 1042**</td>
<td>6.58 g</td>
</tr>
<tr>
<td>DHG 1146**</td>
<td>0.82 g</td>
</tr>
<tr>
<td>DHG 94 306*</td>
<td>54.40 g</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>117.81 g</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>244.36 g</td>
</tr>
<tr>
<td>DHG 95 1043**</td>
<td>39.80 g</td>
</tr>
<tr>
<td>DHG 95 1044**</td>
<td>87.00 g</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>245.43 g</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>29.00 g</td>
</tr>
<tr>
<td>DHG 95 1086**</td>
<td>6.32 g</td>
</tr>
<tr>
<td>DHG 95 1136/1/2**</td>
<td>42.7 g</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>351.27 g</td>
</tr>
<tr>
<td>DHG 95 1203**</td>
<td>2.09 g</td>
</tr>
</tbody>
</table>

*indicates a subadult; **indicates individual of undetermined age

As can be seen above, the total weights of the cremated adult human remains ranged from 29.00 g to 351.27 g. In addition, the average total weight of cremated adult human remains was 197.57 g, which is less than what is expected from a modern adult cremation (1625.90 g) (McKinley, 1993). Although one cannot make a direct comparison between modern and ancient populations (e.g. the average weight of a Romano-British adult cremation may have varied slightly from that of a modern adult), it may still be inferred that, on average, the remains of adult Romano-British cremated individuals from Doncaster were not collected in their entirety for burial. This observation is in alignment with findings at other Romano-British cremation cemeteries, such as Baldock Area 15, Low Borrowbridge and Caerleon Lodge Hill Cemetery (McKinley, 2004b).
Skeletal Inventory (skeletal regions present)

Cremation burial is a selective process, as an individual or group of individuals must take responsibility for collecting the cremated remains and depositing them in an urn (McKinley and Bond, 2001). Consequently, cremated remains are rarely (if ever) collected in their entirety for burial. Signs of this selectivity were displayed in the cremation burials from Doncaster (Table 2), as some of the burials did not include elements from every human skeletal region (skull, axial skeleton, upper limb, lower limb).

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Skeletal Region(s) Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>Skull, Axial, Upper Limb</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>Axial, Upper Limb, Lower Limb</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>All skeletal regions missing</td>
</tr>
<tr>
<td>DHG 94  306</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>DHG 95  1027/1</td>
<td>Skull</td>
</tr>
<tr>
<td>DHG 95  1030/1</td>
<td>Axial Skeleton</td>
</tr>
<tr>
<td>DHG 95  1043</td>
<td>All skeletal regions missing</td>
</tr>
<tr>
<td>DHG 95  1044</td>
<td>Axial, Upper Limb, Lower Limb</td>
</tr>
<tr>
<td>DHG 95  1063/2/3</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>DHG 95  1085/1</td>
<td>Axial, Upper Limb, Lower Limb</td>
</tr>
<tr>
<td>DHG 95  1086</td>
<td>Axial, Upper Limb, Lower Limb</td>
</tr>
<tr>
<td>DHG 95  1136/1/2</td>
<td>Axial, Upper Limb, Lower Limb</td>
</tr>
<tr>
<td>DHG 95  1165</td>
<td>Skull, Axial Skeleton</td>
</tr>
<tr>
<td>DHG 95  1203</td>
<td>Upper Limb, Lower Limb</td>
</tr>
</tbody>
</table>

Non-Human Skeletal Elements Present

The non-human bone present in the cremation burials is tabulated in Table 3.
Two of the 14 cremation burials contained traces of cremated non-human bone (bird and bovine). These bones were either the remnants of the funerary feast that were thrown onto the burning pyre or were funerary offerings that were incinerated with the corpse (pyre goods). In addition, one burial (DHG 95 1044) possessed bird vertebrae which were unburned and most likely intrusive.

**Minimum Number of Individuals (MNI)**

A MNI was assigned to each cremation burial after the human skeletal remains were examined for age-related discrepancies in bone size and development as well as duplications of specific skeletal elements. At the conclusion of the examination, it was found that each burial contained at least one individual.
Demography

Age Estimation

The ages of the cremated individuals were estimated using unerupted tooth crowns (Smith, 1991), epiphyseal fusion (Schwartz, 1995), cranial suture closure (Meindl and Lovejoy, 1985), pubic symphyses (Brooks and Suchey, 1990) and auricular surfaces (Lovejoy et al., 1985).

Table 4 Estimated Ages (in years) of the Cremated Individuals from Doncaster

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Estimated Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>Subadult 2-4 years</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>Unable to Estimate</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>Unable to Estimate</td>
</tr>
</tbody>
</table>

As shown in Table 4, one of the Doncaster individuals was a subadult, five were adults, and the ages of eight individuals could not be estimated due to a lack of diagnostic skeletal material.
Sex Estimation

In general, the sexes of cremated individuals are assigned (where possible) using morphological observations (Bass, 2005). Unfortunately, the difficulties that are inherent in assigning sex to cremated remains (i.e. the differential shrinkage of metric variables allows for the misclassification of cremated material) (Thompson, 2002) complicate the determination of sex, and sex ultimately cannot be estimated without the presence of diagnostic skeletal material. Since the Doncaster burials did not contain any remnants of diagnostic material, the sexes of the cremated individuals could not be determined.
Health and Disease

Skeletal (non-dental) Health

The pathological lesions present on the cremated remains reveal the state of the individuals’ health at the time of death, and are not accurate indicators of the individuals’ entire medical histories (Roberts and Cox, 2003). Hence, the conclusions drawn here focus on the diseases’ perimortem presence or absence and not on their severity or duration. Furthermore, because cremated remains are incomplete and heavily fragmented, it is difficult to detect all instances of pathological lesions; therefore, it is probable that the total number of affected individuals is under-represented, and that some of the affected individuals were afflicted with additional pathologies (McKinley, 2004a).

With that in mind, the cremated human skeletal remains were examined for evidence of trauma and infection as well as joint, congenital, metabolic and neoplastic diseases. The results of the pathological analyses (Table 5) revealed that at the time of death one individual was afflicted with periostitis of the radius and degenerative joint disease of a distal foot phalanx, and an additional individual was afflicted with periostitis of an unidentified long bone.
Table 5 Inventory of the Skeletal Health of the Cremation Burials from Doncaster

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Skeletal Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>None</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>Periostitis on unidentified long bone</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>Periostitis (radius), DJD (distal foot phalanx)</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>None</td>
</tr>
</tbody>
</table>

DJD= Degenerative Joint Disease

Dental Health

None of the cremated individuals displayed lesions indicative of dental pathology. As is the case with skeletal health, it is probable that the total number of affected individuals is under-represented (McKinley, 2004a).
Crematory Attributes

Efficacy of Cremation

Colour is a macroscopic indicator of oxidization, as brown or orange bones are unburned and black ones are charred (c. 300°C), while hues of blue and grey are indicative of incomplete oxidization (up to c. 600°C), and white bones are completely oxidized (c. >600°C) (McKinley, 2004a). Therefore, based on its range of colours, the burials were assigned an efficacy of cremation score on a scale of 0-4, which included increments of 0.5 to indicate when a burial’s level of oxidization fell between two established categories (e.g. a score of 2.5 would mean that the oxidization of the burial was between categories 2 and 3). The scoring system was devised by the author and is described in Figures 1-5.
The colour scores of the cremation burials can be seen in Table 6. The Doncaster scores ranged from 2 to 3 with an average of 2.5. These scores indicate that the assemblage was incompletely oxidized. Incomplete oxidization (which is typical of Romano-British cremation burials) is caused by the restriction of a cremation’s burning time, oxygen supply or temperature (McKinley, 2004b).
Table 6 Colour Scores of the Doncaster Cremation Burials

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Colour Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>2</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>2</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>3</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>3</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>3</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>3</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>3</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>2.5</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Dehydration

Dehydration during the process of cremation causes bones to shrink, fissure and warp in characteristic patterns (McKinley, 2004a: 11). Since this generally happens in a uniform way, it is only necessary to record abnormal cases of each (Table 7).

Table 7 Dehydration Abnormalities Found in Cremated Remains from Doncaster

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Shrinkage</th>
<th>Fissuring</th>
<th>Warping</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>None</td>
<td>None</td>
<td>Cranial, Long Bones</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
No instances of abnormal shrinkage or fissuring were observed in the cremation burials, and even though many of the burials contained exceptionally warped remains, it is common to find examples of such warping. Therefore, the dehydration patterns of the burials were normal and unremarkable.

Degree of Fragmentation

Degree of fragmentation, represented by the percentage of bone sieved into a 10 mm fraction, was recorded in Table 8 along with the length of the largest bone fragment.

Table 8 Degree of Fragmentation and Length of the Largest Bone Fragment of the Doncaster Cremation Burials

<table>
<thead>
<tr>
<th>Burial #</th>
<th>DoF (%)</th>
<th>LLBF (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>100%</td>
<td>38.9 mm</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>63%</td>
<td>34.8 mm</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>0%</td>
<td>8.7 mm</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>13%</td>
<td>17.1 mm</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>63%</td>
<td>49.4 mm</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>57%</td>
<td>75.2 mm</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>26%</td>
<td>43.8 mm</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>33%</td>
<td>48.0 mm</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>47%</td>
<td>68.5 mm</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>26%</td>
<td>34.3 mm</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>12%</td>
<td>19.4 mm</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>3%</td>
<td>27.9 mm</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>61%</td>
<td>90.0 mm</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>0%</td>
<td>31.9 mm</td>
</tr>
</tbody>
</table>

The average degree of fragmentation of the Doncaster cremation burials was 36% and the average length of the largest bone fragment was 42.0 mm. However, as McKinley cautions, post-depositional contact with soil will cause additional fragmentation due to...
the soil’s moisture levels and freeze/thaw cycles (2004b) and the ‘fragment sizes presented in reports should be regarded as *post-excavation* fragment sizes, rather than a reliable indicator of the size of bone fragments at time of deposition’ (1994b: 339). Consequently, it is probable that the cremation burials experienced further fragmentation not only while they were still buried, but also during excavation and post-excavation handling; therefore concrete conclusions cannot be drawn from this data.
Burial Attributes

*Type of Cremation Burial/Deposit*

As Table 9 shows, half (7 of 14) of the Doncaster cremation burials were unurned deposits. In addition to that, three of the burials were urned and the context of four were unknown.

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Type of Cremation Burial/Deposit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>Unknown?</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>Unknown?</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 95  1027/1</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>DHG 95  1030/1</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>DHG 95  1043</td>
<td>Unknown?</td>
</tr>
<tr>
<td>DHG 95  1044</td>
<td>Unknown?</td>
</tr>
<tr>
<td>DHG 95  1063/2/3</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 95  1085/1</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 95  1086</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 95  1136/1/2</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>DHG 95  1165</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>DHG 95  1203</td>
<td>Unurned Burial</td>
</tr>
</tbody>
</table>

*The Presence of Pyre Debris*

Pyre debris is commonly recovered from Romano-British burials (McKinley, 2004b), and it was present, in the form of slag and charcoal, in nine cremation burials from this assemblage (Table 10).
Table 10 Pyre Debris Present in the Doncaster Cremation Burials

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Type of Pyre Debris Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>None</td>
</tr>
<tr>
<td>DHG 94  306</td>
<td>Charcoal, Slag</td>
</tr>
<tr>
<td>DHG 95  1027/1</td>
<td>Charcoal, Slag</td>
</tr>
<tr>
<td>DHG 95  1030/1</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1043</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1044</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1063/2/3</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1085/1</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1086</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1136/1/2</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1165</td>
<td>Charcoal</td>
</tr>
<tr>
<td>DHG 95  1203</td>
<td>None</td>
</tr>
</tbody>
</table>

The Presence of Pyre Goods

Table 11 lists the pyre goods present in the cremation burials.

Table 11 Types of Pyre Goods Present in the Doncaster Cremation Burials

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Type of Pyre Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>None</td>
</tr>
<tr>
<td>DHG 94  306</td>
<td>Nail</td>
</tr>
<tr>
<td>DHG 95  1027/1</td>
<td>Nail</td>
</tr>
<tr>
<td>DHG 95  1030/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1043</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1044</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1063/2/3</td>
<td>White Slipped Flagon</td>
</tr>
<tr>
<td>DHG 95  1085/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1086</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1136/1/2</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1165</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95  1203</td>
<td>None</td>
</tr>
</tbody>
</table>
Pyre goods are offerings to and personal belongings of the corpse which are placed on the pyre and burned along with the body. These objects range from perishable (e.g. wooden objects, amber or foodstuffs) to non-perishable goods (e.g. ceramic, glass, metal, stone, worked animal bone). Non-perishable pyre goods are identifiable because they show signs of exposure to heat (e.g. charring, melting), whereas perishable goods are generally destroyed by the fire. As a result, the amount of pyre goods is typically underestimated because it does not account for the presence of perishable pyre goods (McKinley, 1994a). Therefore, even though the individuals were most likely burned with additional goods that were not preserved in the archaeological record, the Doncaster cremation burials contained a fire-shattered white-slipped flagon (DHG 95 163/2/3) and nails (DHG 94 306, DHG 95 1027/1) which may have come from shoes or a wooden box.

*The Presence of Grave Goods*

The grave goods found with the cremation burials are recorded in Table 12.

**Table 12 Type of Grave Goods Present in the Doncaster Cremation Burials**

<table>
<thead>
<tr>
<th>Burial #</th>
<th>Type of Grave Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHG 1003</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1042</td>
<td>None</td>
</tr>
<tr>
<td>DHG 1146</td>
<td>None</td>
</tr>
<tr>
<td>DHG 94 306</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1027/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1030/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1043</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1044</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1063/2/3</td>
<td>Copper Ring (Brooch)</td>
</tr>
<tr>
<td>DHG 95 1085/1</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1086</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1136/1/2</td>
<td>Um Fragment?</td>
</tr>
<tr>
<td>DHG 95 1165</td>
<td>None</td>
</tr>
<tr>
<td>DHG 95 1203</td>
<td>None</td>
</tr>
</tbody>
</table>
Grave goods are objects that are buried with the cremated remains either inside or outside of the urn. Of the cremation burials that displayed signs of grave goods, only one (DHG95 1063/2/3) possessed an intact object (a copper ring-shaped brooch), while the other contained a piece of unburned ceramic (which may be a fragment of the urn).
Potential for Further Analysis

Although this report provides a complete osteological analysis of the assemblage, the research potential of the cremation burials has not been exhausted. First, because the author did not analyse the vessels that the burials were interred in, it is recommended that these urns be analysed so that the assemblage may be dated. Also, it would be useful to compare the data presented in this report to that of local contemporary cremation cemeteries. This would be beneficial because it would not only increase our understanding of Romano-British cemeteries, but also allow us a further glimpse into the lives (and deaths) of the people who inhabited Doncaster. Finally, the bird bones found commingled with the human remains could be examined more closely by an archaeozoologist in order to fully grasp their significance. What are their genus and species names? Are the bones from edible body parts? Did these birds have a specific function in Roman funerary rites? Further research is required in order to answer these questions.
Conclusion

In conclusion, the Doncaster cremation burials were mostly unurned and possessed traces of charcoal and slag (pyre debris); a white-slipped flagon and nails (pyre goods); ceramic and a copper ring-shaped brooch (grave goods); as well as bird and bovine bones. Each burial contained at least one individual, but did not include elements from all human skeletal regions. One individual was a subadult, five were adults, and the ages of eight individuals could not be determined. The same problem that affected age estimation (lack of diagnostic skeletal material) prevented the determination of the individuals’ sexes.

At the time of death, only two individuals had discernable pathological lesions; the first (DHG 95 1027/1) possessed signs of degenerative joint disorder of a distal foot phalanx and periostitis of a radius, while the second (DHG 94 306) possessed signs of periostitis of an unidentified long bone. Furthermore, all of the burials were incompletely oxidized, had an average degree of fragmentation of 36%, and the average length of the largest bone fragment found amongst them was 42.0 mm. Finally, the average weight of the adult cremated remains was 197.57 g, which was less than what is expected from a modern adult cremation.

On the whole, the assemblage displays characteristics that are typical of Romano-British cremation burials and provides important information regarding the lifeways and funerary customs of the Romano-British individuals inhabiting Doncaster.
Appendix

Cremation Recording Forms

<table>
<thead>
<tr>
<th>Site: DHG 1003</th>
<th>Date: 19/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: ----</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

Context: Unknown?

Total weight of cremated materials: 8.43 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 8.43 g  Dimensions of largest fragment: 38.9 x13.4 mm

Weight fractions:  >10mm: 8.43 g  10-5mm: 0 g  5-2mm: 0 g  2-1mm: 0 g

Colour ranges: Bones are primarily white; patches of light grey on the trabecular bone of the distal femur

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: None

Axial Skeleton: None
Upper Limb: None

Lower Limb: >10 mm—distal femur

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
Materials Found in Each Sieve Fraction

> 10 mm: Lower limb: distal femur
Unidentified human long bone
Site: DHG 1042  
Date: 19/6/06  
Observer: Carrie Sulosky

| Estimated Sex: ---- | Estimated Age: ---- | Estimated MNI: 1 |

Context: Unknown?

Total weight of cremated materials: 6.58 g  
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 6.58 g  
Dimensions of largest fragment: 34.8 x 27.8 mm

Weight fractions:  
>10mm: 4.15 g  
10-5mm: 2.30 g  
5-2mm: 0 g  
2-1mm: 0.13 g

Colour ranges: Very dark grey trabecular bone in the long bones and skull; 1 long bone fragment is all dark grey; 1 long bone fragment is half dark grey and half white

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on cranial fragments and long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—1 cranial fragment

Axial Skeleton: None

Upper Limb: None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
### Materials Found in Each Sieve Fraction

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Unidentified, <em>unburnt</em> bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified, <em>unburnt</em> bone</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue, traces of human bone</td>
</tr>
</tbody>
</table>
Site: DHG 1146  Date: 17/6/06  Observer: Carrie Sulosky
Estimated Sex: ----  Estimated Age: ----  Estimated MNI: 1

Context: Unurned cremation burial

Total weight of cremated materials: 0.82 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 0.82 g  Dimensions of largest fragment: 8.7 x 2.3 mm

Weight fractions: >10mm: 0 g  10-5mm: 0 g  5-2mm: 0.82 g  2-1mm: 0 g

Colour ranges: Primarily white cortical bone with dark grey trabecular bone; some of the cortical bone is light grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: No instances of warping

Identifiable Fragments Present in Each Sieve Fraction:

Skull: None

Axial Skeleton: None

Upper Limb: None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
Materials Found in Each Sieve Fraction

2 mm: Unidentifiable human bone
Site: DHG 94 306  
Date: 19/6/06  
Observer: Carrie Sulosky

<table>
<thead>
<tr>
<th>Estimated Sex: ----</th>
<th>Estimated Age: Subadult 2-4 years</th>
<th>Estimated MNI: 1</th>
</tr>
</thead>
</table>

**Context:** Unurned cremation burial

**Total weight of cremated materials:** 67.31 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 54.4 g  
**Dimensions of largest fragment:** 17.05 x 13.25 mm

**Weight fractions:**  
>10mm: 7.2 g  
10-5mm: 34.08 g  
5-2mm: 10.41 g  
2-1mm: 2.71 g

**Colour ranges:** Primarily white, some trabecular bone is dark grey

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on cranial fragments and long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
> 10 mm—2 eye orbit fragments  
10-5 mm—eye orbit fragments, 1 sphenoid-occipital synchondrosis,  
2 mm—tooth crowns, cranial fragments, tooth root fragments

**Axial Skeleton:**  
> 10 mm—unfused vertebrae (no body), ribs  
10-5 mm—vertebral arches, rib  
2 mm—vertebral arches, rib
Upper Limb: 10-5 mm—unfused humeral head, unfused proximal humerus

Lower Limb: > 10 mm—unfused calcaneus epiphysis, unfused distal femoral diaphysis
10-5 mm—pelvis, proximal femoral diaphysis
2 mm—fovea capitis (femur)

Duplicated elements: None

Age Indicators: Unfused vertebrae
10 mm—unfused calcaneus epiphysis, unfused distal femoral diaphysis
10-5 mm—unfused humeral head (2 years), unfused proximal humerus

Sex Indicators: None

Pathological Data: 10-5 mm—unidentified long bone with possible? periostitis

Pyre goods: > 10 mm—nail

Grave Goods: None

Pyre Debris: > 10 mm—charcoal
10-5 mm—slag, charcoal
2 mm—slag, charcoal

Identifiable non-human bone: None
Materials Found in Each Sieve Fraction

> 10 mm:  
Nail  
Cranial:  eye orbit fragments, sphen-o-occipital synchondrosis  
Unidentified human long bone  
Charcoal  
Lower limb: unfused calcaneus epiphysis, unfused distal femoral diaphysis  
Axial: unfused vertebrae, rib

10-5 mm:  
Unidentified human long bone (fragment with periostitis?)  
Slag  
Unidentified human bone  
Cranial:  eye orbit fragments, cranial vault  
Lower limb: pelvis, proximal femoral diaphysis  
Upper limb: unfused humeral head, unfused proximal humerus  
Axial: vertebral arches  
Charcoal

2 mm:  
Slag  
Unidentified human bone  
Charcoal  
Rocks  
Axial: ribs, vertebral arches  
Cranial: tooth crown, tooth root fragments, cranial vault  
Unidentified human long bone  
Lower limb: femoral fovea capitis

< 2 mm:  
Residue, traces of human bone
** When I got it, the bag said:  HIGH RISK OF CONTAMINATION OF THE FINDS IN BAG 3

**

<table>
<thead>
<tr>
<th>Site: DHG 95 1027/1</th>
<th>Date: 17/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: Adult</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

Context: Urned cremation burial, greyware E2 C

Total weight of cremated materials: 118.53 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 117.81 g Dimensions of largest fragment: 49.4 x 18.0 mm

Weight fractions: >10mm: 73.69 g  10-5mm: 35.28 g  5-2mm: 7.41 g  2-1mm: 1.43 g

Colour ranges: Primarily white; some cortical bone charred (black), femur fragments have white cortical and black trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: None

Axial Skeleton: > 10 mm—1 vertebrae fragment (Cox records it as having periostitis, however, the bone shows no evidence of this pathology, rather what is observed is within the variation of normal pitting)
Upper Limb:  > 10 mm—radius

Lower Limb:  > 10 mm—femur fragment
10-5 mm—distal phalanx of foot (exhibits lipping indicative of degenerative joint disease)

Duplicated elements: None

Age Indicators: Size and fusion of bones

Sex Indicators: None

Pathological Data:  > 10 mm—radius with periostitis? (see note above)
10-5 mm—distal phalanx of foot with lipping (degenerative joint disease)

Pyre goods:  2 mm—nail

Grave Goods: None

Pyre Debris:  2 mm—slag, charcoal

Identifiable non-human bone: None
**Materials Found in Each Sieve Fraction**

> 10 mm: Unidentified human long bone  
Lower limb: femur  
Unidentified human bone

10-5 mm: Unidentified human long bone  
Unidentified human bone  
Lower limb: distal foot phalanx with lipping

2 mm: Unidentified human bone  
Unidentified human long bones  
Nail (from pyre)  
Rocks  
Slag  
Charcoal
Site: DHG 95 1030/1  Date: 17/6/06  Observer: Carrie Sulosky

Estimated Sex: ----  Estimated Age: Adult  Estimated MNI: 1

Context: Urned cremation burial, grey cooking pot LI-E2 C

Total weight of cremated materials: 246.92 g  Total weight of non-human bone: 2.56 g

Total weight of cremated human bone: 244.36 g  Dimensions of largest fragment: 75.2 x 14.0 mm

Weight fractions: >10 mm: 139.83 g  10-5 mm: 83.08 g  5-2 mm: 18.42 g  2-1 mm: 3.04 g

Colour ranges: Primarily white; radius with black and white cortical bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and cranial fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—cranial pieces

Axial Skeleton: None

Upper Limb: 10-5 mm—distal radius (1003 associated with 1030)

Lower Limb: None
Duplicated elements: None

Age Indicators: Size and fusion of bones

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: 10-5 mm—charcoal (1003 associated with 1030)

Identifiable non-human bone: > 10 mm—bovine horn, bovine tooth
Materials Found in Each Sieve Fraction

> 10 mm: Unidentified human long bone
  Bovine horn
  Bovine tooth
  Cranial
  Unidentified human bone

10-5 mm: Unidentified human long bone (1003 associated with 1030)
  Unidentified human bone
  Upper limb: distal radius (1003 associated with 1030)
  Charcoal (1003 associated with 1030)

2 mm: Unidentified human bone
  Unidentified human long bones
  Cranial

< 2 mm: Residue
Site: DHG 95 1043  Date: 19/6/06  Observer: Carrie Sulosky

Estimated Sex: ----  Estimated Age: ------  Estimated MNI: 1

Context: Unknown?

Total weight of cremated materials: 41.18 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 39.8 g  Dimensions of largest fragment: 43.8 x 14.1 mm

Weight fractions:  >10mm: 10.39 g  10-5mm: 16.78 g  5-2mm: 12.11 g  2-1mm: 0.52 g

Colour ranges: Primarily white; some of the trabecular bone of the long bones is dark grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: None

Axial Skeleton: None

Upper Limb: None

Lower Limb: None
Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: 10-5 mm—charcoal
2 mm—charcoal

Identifiable non-human bone: None
**Materials Found in Each Sieve Fraction**

> 10 mm: Unidentified human long bone

10-5 mm: Unidentified human long bone
        Unidentified human bone
        Charcoal

2 mm: Unidentified human bone
      Charcoal

< 2 mm: Residue and traces of human bone
Site: DHG 95 1044  
Date: 19/6/06  
Observer: Carrie Sulosky

Estimated Sex: ----  
Estimated Age: ------  
Estimated MNI: 1

Context: Unknown?

Total weight of cremated materials: 87.6 g  
Total weight of non-human bone: 0.48 g

Total weight of cremated human bone: 87.0 g  
Dimensions of largest fragment: 48 x 23.1 mm

Weight fractions:  
>10mm: 28.51 g  
10-5mm: 30.38 g  
5-2mm: 25.79 g  
2-1mm: 2.36 g

Colour ranges: Primarily white; skull has grey trabecular bone, some long bones have dark grey trabecular bones

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and cranial fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  
> 10 mm—cranial fragments  
10-5 mm—tooth roots  
2 mm—tooth fragments

Axial Skeleton: None

Upper Limb: None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: 2 mm—unburnt bird vertebrae (intrusive?)
## Materials Found in Each Sieve Fraction

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Materials Found</th>
</tr>
</thead>
</table>
| > 10 mm  | Unidentified human bone  
           | Cranial |
| 10-5 mm  | Unidentified human long bone  
           | Unidentified human bone  
           | Tooth roots |
| 2 mm     | Unidentified human bone  
           | Charcoal  
           | Rock  
           | Tooth fragments  
<pre><code>       | Unburnt bird vertebrae |
</code></pre>
<p>| &lt; 2 mm   | Residue and traces of human bone |</p>
<table>
<thead>
<tr>
<th>Site:</th>
<th>DHG 95 1057</th>
<th>Date:</th>
<th>19/6/06</th>
<th>Observer:</th>
<th>Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex:</td>
<td>----</td>
<td>Estimated Age:</td>
<td>------</td>
<td>Estimated MNI:</td>
<td>------</td>
</tr>
</tbody>
</table>

**NOT CREMATED!!!  NOT HUMAN!!!**

6 Animal Bone fragments (at least one bird bone)  0.68 g
Context: Unurned cremation burial

Total weight of cremated materials: 249.68 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 245.43 g  Dimensions of largest fragment: 68.5 x 33.9 mm

Weight fractions: >10mm: 114.62 g  10-5mm: 95.95 g  5-2mm: 31.23 g  2-1mm: 3.63 g

Colour ranges: Primarily white; some cortical bone is light grey, the trabecular bone of some long bones is light grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and cranial fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—cranial fragments
      10-5 mm—cranial fragments
      2 mm—tooth roots

Axial Skeleton: > 10 mm—rib fragments

Upper Limb: None
Lower Limb: > 10 mm—pelvic, femoral head

Duplicated elements: None

Age Indicators: Size and fusion of bones

Sex Indicators: None

Pathological Data: None

Pyre goods: White slipped, fire-shattered flagon

Grave Goods: Copper ring (brooch)

Pyre Debris: 10-5 mm—charcoal

Identifiable non-human bone: None
Materials Found in Each Sieve Fraction

> 10 mm: Unidentified human bone
  Cranial
  Lower limb: femoral head, pelvic
  Axial: rib

10-5 mm: Unidentified human long bone
  Unidentified human bone
  Rocks
  Cranial
  Charcoal

2 mm: Unidentified human bone
  Rocks
  Tooth roots

< 2 mm: Residue and traces of human bone
Site: DHG 95 1085/1
Date: 17/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult
Estimated MNI: 1

Context: Unurned cremation burial

Total weight of cremated materials: 29.32 g
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 29.0 g
Dimensions of largest fragment: 34.3 x 11.3 mm

Weight fractions:
>10mm: 7.55 g
10-5mm: 15.83 g
5-2mm: 5.46 g
2-1mm: 0.16 g

Colour ranges: Primarily white; some trabecular bone is light grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and cranial fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—cranial fragments
      10-5 mm—cranial fragments

Axial Skeleton: None

Upper Limb: None

Lower Limb: None
Duplicated elements: None

Age Indicators: Size and fusion of bones

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: None
Materials Found in Each Sieve Fraction

> 10 mm: Unidentified human bone
   Cranial

10-5 mm: Unidentified human long bone
   Unidentified human bone
   Cranial
   Rock

2 mm: Unidentified human bone
   Unidentified human long bone
   Charcoal
   Rock
**Context:** Unurned cremation burial

**Total weight of cremated materials:** 6.32 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 6.32 g  
**Dimensions of largest fragment:** 19.4 x 15.6 mm

**Weight fractions:**  
>10 mm: 0.741 g  
10-5 mm: 2.68 g  
5-2 mm: 2 g  
2-1 mm: 0.9 g

**Colour ranges:** Primarily white; some black cortical bone, light grey trabecular bone

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

- **Skull:**  
  > 10 mm—cranial fragments  
  10-5 mm—cranial fragments

- **Axial Skeleton:** None

- **Upper Limb:** None

- **Lower Limb:** None
Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
### Materials Found in Each Sieve Fraction

<table>
<thead>
<tr>
<th>Size</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm:</td>
<td>Cranial</td>
</tr>
<tr>
<td>10-5 mm:</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Cranial</td>
</tr>
<tr>
<td>2 mm:</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td>&lt; 2 mm:</td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
Site: DHG 95 1136/1/2  Date: 17/6/06  Observer: Carrie Sulosky

Estimated Sex: ----  Estimated Age: ------  Estimated MNI: 1

Context: urned cremation burial

Total weight of cremated materials: 44.18 g  Total weight of non-human bone: 0.12 g

Total weight of cremated human bone: 42.7 g  Dimensions of largest fragment: 27.9 x 11.4 mm

Weight fractions: >10mm: 1.15 g  10-5mm: 20.65 g  5-2mm: 19.73 g  2-1mm: 1.17 g

Colour ranges: Primarily white; light grey trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: 10-5 mm—cranial fragments

Axial Skeleton: None

Upper Limb: None

Lower Limb: None
Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: > 10 mm—urn fragment

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: 2 mm—bird bone
**Materials Found in Each Sieve Fraction**

> 10 mm: Unidentified human long bone
   Urn fragment

10-5 mm: Unidentified human bone
   Cranial

2 mm: Unidentified human bone
   Charcoal
   Rocks
   Bird bone

< 2 mm: Residue and traces of human bone
NOT INCLUDED IN ANALYSIS

<table>
<thead>
<tr>
<th>Site: DHG 95 1157 (hearth)*</th>
<th>Date: 19/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: Adult 20-23 years (1156)</td>
<td>Estimated MNI: **</td>
</tr>
</tbody>
</table>

*contains 1138, 1135, 1208, 1156, (1132—should be included, but unable to locate)

**no duplicated elements present, but excavation records state that the human remains were found in different deposits

Context: Unurned cremation burial

Total weight of cremated materials: 518.33 g  Total weight of non-human bone: 0.07 g

Total weight of cremated human bone: 516.55 g  Dimensions of largest fragment: 59.4 x 30.5 mm

Weight fractions:  
>10mm: 266.07 g  10-5mm: 141.05 g  5-2mm: 91.33 g  2-1mm: 18.1 g

Colour ranges: Primarily white; some bone fragments are completely black, some are white with patches of grey cortical bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and cranial fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  
> 10 mm—cranial fragments, petrous (1208), cranial (1138), cranial (1156)  
10-5 mm—cranial (1135)  
2 mm—tooth roots (1138)
**Axial Skeleton:** None

**Upper Limb:** 2 mm—hand phalanges (1138)

**Lower Limb:** > 10 mm—distal femur condyle (1156)

**Duplicated elements:** None

**Age Indicators:** Fused femoral condyle (1156) 20-23 years (Schwartz, 1995)

**Sex Indicators:** > 10 mm—petrous (1208) (unable to estimate sex using this)

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** None

**Pyre Debris:** 2 mm—charcoal (1138)

**Identifiable non-human bone:** 2 mm—unfused bird bone (1138)
Materials Found in Each Sieve Fraction

> 10 mm: Unidentified human long bone (1208), (1138), (1156)
    Unidentified human bone (1156)
    Skull: petrous, cranial (1208); cranial (1138), (1156)
    Lower limb: femoral condyle (1156)

10-5 mm: Unidentified human long bone (1135), (1138), (1156)
    Unidentified human bone (1135), (1208), (1138), (1156)
    Cranial (1135)

2 mm: Unidentified human bone (1156), (1135), (1208), (1138), (1156)
    Unidentified human long bone (1138), (1156)
    Upper limb: hand phalanges (1138)
    Charcoal (1138)
    Rock (1138)
    Tooth roots (1138)
    Unfused bird bone (1138)

< 2 mm: Residue and traces of human bone
Site: DHG 95 1165  |  Date: 19/6/06  |  Observer: Carrie Sulosky
Estimated Sex: ----  |  Estimated Age: Adult  |  Estimated MNI: 1

**Context:** urned cremation burial, urn a light cream/brown color

**Total weight of cremated materials:** 353.46 g  |  **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 215.83 g  |  **Dimensions of largest fragment:** 90 x 26.5 mm

**Weight fractions:**
- $>10\text{mm}$: 215.83 g
- 10-5mm: 53.61 g
- 5-2mm: 65.9 g
- 2-1mm: 15.93 g

**Colour ranges:** Primarily white; most of the trabecular bone is black (especially on long bones), but some of it is all white

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

- **Skull:** None
- **Axial Skeleton:** None
- **Upper Limb:** $>10\text{ mm}$—distal radius, distal humerus, distal ulna
- **Lower Limb:** $>10\text{ mm}$—fibula, patella, right proximal femur, proximal tibia
**Duplicated elements:** None

**Age Indicators:** Fused proximal and distal epiphyses

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** None

**Pyre Debris:** 2 mm—charcoal

**Identifiable non-human bone:** None
Materials Found in Each Sieve Fraction

> 10 mm: Unidentified human long bone
    Unidentified human bone
    Upper limb: radius, humerus, ulna
    Lower limb: fibula, femur, tibia, patella

10-5 mm: Unidentified human bone
    Unidentified human long bone
    Rock

2 mm: Unidentified human bone
    Unidentified human long bone
    Charcoal
    Rocks

< 2 mm: Residue and traces of human bone
Site: DHG 95 1203  Date: 17/6/06  Observer: Carrie Sulosky
Estimated Sex: ----  Estimated Age: ------  Estimated MNI: 1

Context: unurned cremation burial

Total weight of cremated materials: 2.09 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 2.09 g  Dimensions of largest fragment: 31.9 x 6.8 mm

Weight fractions: >10mm: 0 g  10-5mm: 1.77 g  5-2mm: 0.21 g  2-1mm: 0.11 g

Colour ranges: Primarily white; patches of light and dark grey trabecular bone, a rib fragment features some light grey cortical bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: No instances of warping

Identifiable Fragments Present in Each Sieve Fraction:

Skull: 10-5 mm—cranial fragments

Axial Skeleton: 10-5 mm—rib

Upper Limb: None

Lower Limb: None
Duplicated elements:  None

Age Indicators:  None

Sex Indicators:  None

Pathological Data:  None

Pyre goods:  None

Grave Goods:  None

Pyre Debris:  None

Identifiable non-human bone:  None
Materials Found in Each Sieve Fraction

10-5 mm:  Unidentified human bone
Unidentified human long bone
Axial: rib
Cranial

2 mm:  Unidentified human bone

< 2 mm:  Residue and traces of human bone
Bibliography


