

A REPORT ON  
ROMANO-BRITISH  
CREMATED REMAINS FROM  
MANTON

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## **Abstract**

This report provides an osteological evaluation of 7 Romano-British cremation burials from Manton in North Lincolnshire. 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 animal 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 7 Romano-British cremation burials from North Lincolnshire. These burials were recovered from a Roman cremation cemetery in Manton (1<sup>st</sup> to 4<sup>th</sup> century A.D.). The cemetery was discovered along a Roman road, and the burials were transferred to the North Lincolnshire Museum (formerly Scunthorpe Museum) after the initial excavation (Arrand, 1951). 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 Cremation Burial (burials listed by urn designation)**

Urn Designation	Total Weight
Urn 1A	124.64
Urn A2*	697.52
Urn B	749.48
Urn C	534.66
Urn D2	953.81
Urn H	380.56
Group*	331.91

\*indicates a subadult

As can be seen above, the total weights of the cremated adult human remains ranged from 124.64 g to 953.81 g. In addition, the average total weight of cremated adult human remains was 548.63 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 North Lincolnshire 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 Manton (Table 2), as some of the burials did not include elements from every human skeletal region (skull, axial skeleton, upper limb, lower limb).

**Table 2 Skeletal Regions Missing from the Manton Cremation Burials**

<b>Urn Designation</b>	<b>Skeletal Region(s) Missing</b>
Urn 1A	Upper Limb
Urn A2	None
Urn B	Upper Limb, Lower Limb
Urn C	Lower Limb
Urn D2	None
Urn H	Upper Limb, Lower Limb
Group	None

*Non-Human Skeletal Elements Present*

The non-human bone present in the cremation burials is tabulated in Table 3.

**Table 3 The Non-Human Bone Present in Each Manton Cremation Burial**

<b>Urn Designation</b>	<b>Non-Human Bone Present</b>
Urn 1A	Bird
Urn A2	None
Urn B	None
Urn C	Bird and Unidentified Animal
Urn D2	None
Urn H	Bird
Group	None

Three of the seven cremation burials contained traces of non-human bone (bird and unidentified animal). 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).

*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 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 Manton**

<b>Urn Designation</b>	<b>Estimated Age</b>
Urn 1A	Adult 21+ years
Urn A2	Subadult < 14 years
Urn B	Adult 21+ years
Urn C	Adult 21+ years
Urn D2	Adult 21+ years
Urn H	Adult 21+ years
Group	Subadult 13-20 years

As shown in Table 4, two of the Manton individuals were subadults while the rest were adults.

### *Sex Estimation*

The sexes of the individuals were 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) complicated the determination of the sex of most of the burials. Therefore, the possible (not definite) sexes of only three individuals could be ascertained (Table 5).



**Table 5 Estimated Sexes of the Cremated Individuals**

<b>Urn Designation</b>	<b>Estimated Sex</b>
Urn 1A	Undetermined
Urn A2	Undetermined
Urn B	?M
Urn C	Undetermined
Urn D2	?M
Urn H	?M
Group	Undetermined

**Key: Table 5**

<b>Sex</b>	<b>Meaning</b>
?M	Possible Male

## 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 analysis (Table 6) revealed that at the time of death one individual was afflicted with degenerative joint disease and one additional individual was afflicted with periostitis of an unidentified long bone.

**Table 6 Inventory of the Skeletal Health of the Cremation Burials from Manton**

<b>Urn Designation</b>	<b>Skeletal Pathology</b>
Urn 1A	None Visible
Urn A2	None Visible
Urn B	Degenerative Joint Disease (vertebrae)
Urn C	None Visible
Urn D2	Periostitis on unidentified long bones
Urn H	None Visible
Group	None Visible

### *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.



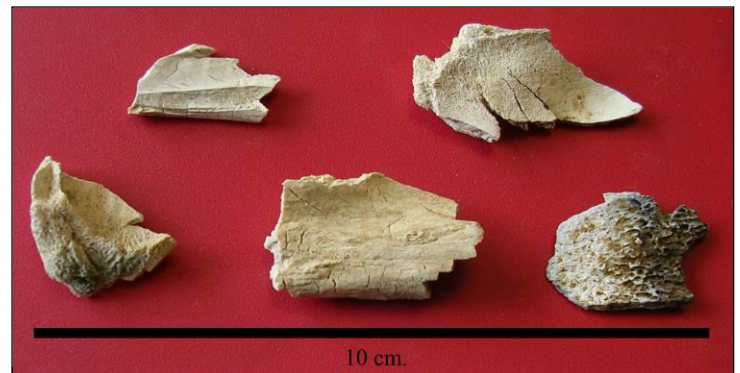
**Figure 1 Colour Score 0:**  
Unburned bone ranging from brown to orange (distal femur from the University of Sheffield's osteology teaching collection) (Photography by Carrie Sulosky)



**Figure 2 Colour Score 1:**  
A high percentage of the cortical and trabecular bone is black, although some bones may be white or hues of blue and grey (remains from a Lincoln cremation burial, brown residue is encrusted soil) (Photography by Carrie Sulosky)



**Figure 3 Colour Score 2:**  
 Cortical bone is mostly white with patches exhibiting shades of grey, while the trabecular bone is primarily black or hues of grey (remains from a York cremation burial)  
 (Photography by Carrie Sulosky)



**Figure 4 Colour Score 3:**  
 Cortical bone is white and trabecular bone is mostly white with grey patches (remains from a Lincoln cremation burial)  
 (Photography by Carrie Sulosky)



**Figure 5 Colour Score 4:**  
 Cortical and trabecular bone are completely oxidized and white in colour, trabecular bone is often very fragile (British Bronze Age cremation burial, the dark hues are caused by soil staining)  
 (Photography by Carrie Sulosky)

The colour scores of the cremation burials can be seen in Table 7. The Manton scores ranged from 2 to 3.5 with an average of 3. 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 7 Colour Scores of the Manton Cremation Burials**

Urn Designation	Colour Score
Urn 1A	2.5
Urn A2	2.5
Urn B	2.5
Urn C	3
Urn D2	3.5
Urn H	3
Group	3

*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 8).

**Table 8 Dehydration Abnormalities Found in Cremated Remains from Manton**

Urn Designation	Shrinkage	Fissuring	Warping
Urn 1A	None	None	Long Bones
Urn A2	None	None	Long Bones, Cranial
Urn B	None	None	Long Bones, Skull
Urn C	None	None	Long Bones, Cranial
Urn D2	None	None	None
Urn H	None	None	Long Bones, Skull
Group	None	None	Long Bones, Cranial

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 9 along with the length of the largest bone fragment.

**Table 9 Degree of Fragmentation and Length of the Largest Bone Fragment of the Manton Cremation Burials**

**[DoF= Degree of fragmentation (a percentage);  
LLBF= Length of the largest bone fragment (in millimetres)]**

<b>Urn Designation</b>	<b>DoF (%)</b>	<b>LLBF (mm)</b>
Urn 1A	35%	43.39 mm
Urn A2	51%	69.83 mm
Urn B	33%	59.96 mm
Urn C	40%	69.95 mm
Urn D2	40%	69.71 mm
Urn H	24%	59.96 mm
Group	39%	59.90 mm

The average degree of fragmentation of the Manton cremation burials was 38% and the average length of the largest bone fragment was 61.81 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*

All of the cremated remains recovered from Manton were urned, which is typical of Romano-British cremation burials (McKinley, 2004a).

### *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 six cremation burials from this assemblage (Table 10).

**Table 10 Pyre Debris Present in the Manton Cremation Burials**

Urn Designation	Pyre Debris Present
Urn 1A	None
Urn A2	Slag
Urn B	Charcoal
Urn C	Slag
Urn D2	Slag, Charcoal
Urn H	Slag, Charcoal
Group	Slag, Charcoal

### *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 Manton Cremation Burials**

Urn Designation	Pyre Goods Present
Urn 1A	Grey ceramic
Urn A2	Metal?
Urn B	None
Urn C	None
Urn D2	Nail, Brown glazed ceramic
Urn H	None
Group	None



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 Manton cremation burials contained traces of ceramics and metal (including a nail that 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 Manton Cremation Burials**

<b>Urn Designation</b>	<b>Grave Goods Present</b>
Urn 1A	None
Urn A2	Glass, Urn fragments?
Urn B	Urn fragments?
Urn C	Trajan coin, Urn fragments?
Urn D2	Urn fragments?
Urn H	Clear glass, Urn fragments?
Group	Urn fragments?, orange ceramic

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 (Urn C) possessed an intact grave good (a Trajan coin that was listed in the site report, but was not kept with the remains), while the rest contained fragments of unburned ceramic (some of which may have been urn fragments) and glass. Although it is likely that these fragments are the remnants of grave goods, it is also possible that they are intrusive.

## **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 ceramic data may be combined with the osteological data to create a more complete picture of Romano-British burial in North Lincolnshire. Also, a close analysis of the urns may lead to the discovery of the Trajan coin, which is currently missing. Before the coin can be properly discussed, one must know whether it was burned with the corpse or deposited in the urn just prior to burial.

Furthermore, it would be useful to compare the data presented in this report to other osteological data from 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 North Lincolnshire.

Finally, the animal 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 animal parts? Did these animals have a specific function in Roman funerary rites? Further research is required in order to answer these questions.

## **Conclusion**

In conclusion, the Manton cremation burials were urned and possessed traces of charcoal and slag (pyre debris); metal and ceramic (pyre goods); ceramic, glass and a Trajan coin (grave goods); as well as bird and unidentified animal bone. Each burial contained at least one individual, but did not include elements from all human skeletal regions. Two of the individuals were subadults and five were adults. Three of those five were estimated to be possible males, while the sexes of the other adults were unascertainable.

At the time of death, only two individuals had discernable pathological lesions; they respectively possessed signs of degenerative joint disorder of the vertebral bodies and periostitis of an unidentified long bone. Furthermore, all of the burials were incompletely oxidized, had an average degree of fragmentation of 38%, and the average length of the largest bone fragment found amongst them was 61.81 mm. Finally, the average weight of the adult cremated remains was 548.63 g, which was less than what is expected from a modern adult cremation.

On the whole, the Manton 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 North Lincolnshire.

## Appendix

### *Cremation Recording Forms*

<b>Site:</b> Manton Urn 1A	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ----	<b>Estimated Age:</b> Adult 21+ years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 124.64 g      **Total weight of non-human bone:** 0.19 g

**Total weight of cremated human bone:** 122.88 g      **Dimensions of largest fragment:** 43.39 x 17.75 mm

**Weight fractions:** >10mm: 42.49 g    10-5mm: 39.25 g    5-2mm: 34.47 g    2-1mm: 6.67 g

**Colour ranges:** Long bones primarily have white cortical bone with black trabecular bone—very small amount of bones are pure 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:* 10-5 mm—12 cranial fragments

2 mm—5 cranial fragments

*Axial Skeleton:* 10-5 mm—12 vertebral fragments, 6 ribs

*Upper Limb:* No identifiable upper limb fragments

*Lower Limb:* > 10 mm—1 pelvis fragment (iliac crest)  
10-5 mm—2 pelvis fragments (iliac crest)

**Duplicated elements:** None

**Age Indicators:** Size and fusion of the bones

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** 10-5 mm—grey ceramic (charred?)  
2 mm—grey ceramic (charred?)

**Grave Goods:** None

**Pyre Debris:** None

**Identifiable non-human bone:** 10-5 mm—1 bird bone

**Materials Found in Each Sieve Fraction**

- > 10 mm: Lower limb: pelvis  
Unidentified human long bone
- 10-5 mm: Axial skeleton: rib, vertebrae  
Unidentified human bone  
Unidentified human long bone  
Lower limb: pelvis  
Cranial  
Bird bone
- 2 mm: Unidentified human bone  
Cranial  
Unidentified human long bone  
Rocks
- < 2 mm: Residue, rocks, traces of human bone, grey ceramic

<b>Site:</b> Manton Urn A2	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ----	<b>Estimated Age:</b> Juvenile <14 years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 697.52 g      **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 649.22 g      **Dimensions of largest fragment:** 69.83 x 24.21 mm

**Weight fractions:** >10mm: 333.08 g    10-5mm: 189.95 g    5-2mm: 96.2 g    2-1mm: 29.99 g

**Colour ranges:** Mostly white; trabecular bone of the long bones was black

**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—cranial fragments, mandible fragments  
               10-5 mm—1 tooth root, cranial fragments  
               2 mm—1 tooth root, cranial fragments

*Axial Skeleton:*    > 10 mm—rib fragments, vertebrae fragments



*Upper Limb:* > 10 mm—humerus fragments, ulna fragment (coronoid process), radial fragments  
10-5 mm—humerus fragments, ulna fragments, radius fragments

*Lower Limb:* > 10 mm—femur fragments, patella, tibia fragments, pelvis fragment (ilium)  
10-5 mm—fibula fragments, femur fragments

**Duplicated elements:** None

**Age Indicators:** Unfused right tibial tuberosity-- < 14 years

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** Metal?

**Grave Goods:** > 10 mm—urn fragments  
10-5 mm—urn fragments  
2 mm—urn fragments, glass shards

**Pyre Debris:** < 2 mm—slag

**Identifiable non-human bone:** None

### **Materials Found in Each Sieve Fraction**

> 10 mm:	Cranial Axial: vertebrae, rib Upper limb: humerus, radius, ulna Lower limb: femur, pelvis, patella, tibia Unidentified human bone Unidentified human long bone Urn fragments
10-5 mm:	Rocks, pebbles Unidentified human bone Tooth root Lower limb: fibula, femur Upper limb: humerus, ulna Cranial Urn fragments
2 mm:	Unidentified human bone (some completely oxidized) Tooth roots Cranial Glass Rocks
< 2 mm:	Residue, rocks, traces of human bone, iron nail (intrusive)

<b>Site:</b> Manton Urn B	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ?M	<b>Estimated Age:</b> Adult 21+ years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 749.48 g      **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 744.07 g      **Dimensions of largest fragment:** 59.96 x 14.98 mm

**Weight fractions:** >10mm: 248.42 g    10-5mm: 301.65 g    5-2mm: 150.05 g    2-1mm: 43.95 g

**Colour ranges:** Mostly white; some with white cortical and dark grey trabecular, some skull bones exhibited dark grey patches on the cortical bone

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones and skull

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

*Skull:* 10-5 mm—mandible/maxilla? with tooth root  
2 mm—tooth fragment

*Axial Skeleton:* 10-5 mm—1 vertebra fragment

*Upper Limb:* None

*Lower Limb:* None

**Duplicated elements:** None

**Age Indicators:** Size, fusion and pathology of bone fragments

**Sex Indicators:** ??-- Sex estimated by Christie Cox

**Pathological Data:** 10-5 mm—1 vertebral fragment with horizontal osteophytes (lipping) on the body

**Pyre goods:** None

**Grave Goods:** 10-5 mm—urn fragments  
2 mm—urn fragments

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

**Identifiable non-human bone:** None

**Materials Found in Each Sieve Fraction**

\*\* 1 large bag of unidentified bone, sieve fraction not identified

10-5 mm:        Charcoal  
                    Urn fragments  
                    Mandible/maxilla? fragment with tooth root  
                    Rock  
                    Unidentified human bone

2 mm:            Tooth fragment

< 2 mm:         Residue, rocks

Debris:          Ceramic fragments (intrusive), rocks/pebbles

<b>Site:</b> Manton Urn C	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ----	<b>Estimated Age:</b> Adult 21+ years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 534.66 g      **Total weight of non-human bone:** 8.53 g

**Total weight of cremated human bone:** 521.08 g      **Dimensions of largest fragment:** 69.95 x 14.97 mm

**Weight fractions:** >10mm: 214.97 g    10-5mm: 180.65 g    5-2mm: 90.98 g    2-1mm: 34.48 g

**Colour ranges:** Mostly white; some grey trabecular bone

**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—cranial fragments  
               10-5 mm—mandible/maxilla?

*Axial Skeleton:*    > 10 mm—vertebral fragments

*Upper Limb:*        > 10 mm—humerus fragments

*Lower Limb:* None

**Duplicated elements:** None

**Age Indicators:** None

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** Coin picturing Emperor Trajan (some bones stained a copper color—residue from the coin?)

10-5 mm—urn fragments

2 mm—urn fragments

**Pyre Debris:** 2 mm—slag

**Identifiable non-human bone:** 10-5 mm—bird and other animal bone

2 mm—bird bone

> 2 mm—bird bone

**Materials Found in Each Sieve Fraction**

- > 10 mm:       Cranial  
                  Axial: vertebrae  
                  Upper limb: humerus  
                  Unidentified human long bone
- 10-5 mm:       Unidentified human bone  
                  Rock  
                  Urn fragments  
                  Bird and other unidentified animal bones  
                  Maxilla/mandible? fragment
- 2 mm:           Unidentified human bone  
                  Unidentified human long bone  
                  Slag  
                  Bird bone  
                  Urn fragments  
                  Rock  
                  \*some fragments completely oxidized  
                  \*\*some fragments have copper stains—from coin?
- < 2 mm:        Residue, bird bone, traces of human bone



<b>Site:</b> Manton Urn D2	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ?M	<b>Estimated Age:</b> Adult 21+ years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 953.81 g      **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 934.01 g      **Dimensions of largest fragment:** 69.71 x 18.02 mm

**Weight fractions:** >10mm: 373.82 g    10-5mm: 325.7 g    5-2mm: 184.03 g    2-1mm: 50.46 g

**Colour ranges:** Mostly white; some grey trabecular bone—no charring

**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 mm—cranial fragments

2 mm—1 tooth fragment

*Axial Skeleton:* > 10 mm—9 rib fragments, 1 clavicle fragment (acromial), vertebral fragments

10-5 mm—rib fragments

*Upper Limb:* > 10 mm—humerus fragments (1 distal epiphysis), 2 radius fragments(including 1 distal epiphysis), 5 ulna fragments (shaft)

*Lower Limb:* > 10 mm—femur fragments (1 distal epiphysis, rest shaft), 1 patella, 4 tibia fragments, 1 fibula fragment, 7 pelvis fragments  
10-5 mm—fibula fragments

**Duplicated elements:** None

**Age Indicators:** Size and fusion of bones

**Sex Indicators:** Prominent linea aspera, indicating a possible male

**Pathological Data:** 2 mm—bone fragments with periostitis

**Pyre goods:** 10-5 mm—1 ceramic fragment (brown glazed), charred  
Nail

**Grave Goods:** 10-5 mm—urn fragments  
2 mm—urn fragments

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

**Identifiable non-human bone:** None

### **Materials Found in Each Sieve Fraction**

- > 10 mm: Lower limb: femur, pelvis, tibia, patella, fibula  
Axial skeleton: rib, clavicle, vertebrae  
Unidentified human long bone  
Unidentified human bone  
Upper limb: humerus, radius, ulna  
Cranial
- 10-5 mm: Axial skeleton: rib  
Unidentified human bone  
Rock  
Slag  
Lower limb: fibula  
Urn fragments
- 2 mm: Unidentified human bone  
Unidentified human long bone  
Long bone with periostitis  
Tooth root  
Urn fragments  
Charcoal  
Rock
- < 2 mm: Residue, traces of human bone

<b>Site:</b> Manton Urn H	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ?M	<b>Estimated Age:</b> Adult 21+ years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 380.56 g      **Total weight of non-human bone:** 2.18 g

**Total weight of cremated human bone:** 366.3 g      **Dimensions of largest fragment:** 59.96 x 14.98 mm

**Weight fractions:** >10mm: 86.87 g    10-5mm: 153.73 g    5-2mm: 110.29 g    2-1mm: 15.41 g

**Colour ranges:** Mostly white; some trabecular bone tinged grey

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on skull and long bones

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

*Skull:*    > 10 mm—mastoid process  
               2 mm—cranial fragments

*Axial Skeleton:*    3 rib fragments

*Upper Limb:*        None

*Lower Limb:* None

**Duplicated elements:** None

**Age Indicators:** Size and fusion of bones

**Sex Indicators:** > 10 mm—Prominent mastoid process

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** 10-5 mm—urn fragments  
2 mm—urn fragments  
< 2 mm—clear glass (intrusive?)

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

**Identifiable non-human bone:** 2 mm—bird bones

**Materials Found in Each Sieve Fraction**

\*\* large bag of unidentified human bones

> 10 mm:        Mastoid process  
                     Slag

10-5 mm:        Slag  
                     Urn fragments

2 mm:            Rocks, pebbles  
                     Bird bones  
                     Cranial  
                     Slag, charcoal  
                     Urn fragments

< 2 mm:         debris, clear glass (intrusive?)

\*\* rib fragments also found, unsure of proper fraction

<b>Site:</b> Manton Group	<b>Date:</b> 16/6/06	<b>Observer:</b> Carrie Sulosky
<b>Estimated Sex:</b> ----	<b>Estimated Age:</b> Older Adolescent 13-20 years	<b>Estimated MNI:</b> 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 331.91 g      **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 325.97 g      **Dimensions of largest fragment:** 59.9 x 19.19 mm

**Weight fractions:** >10mm: 128.4 g    10-5mm: 104.58 g    5-2mm: 77.07 g    2-1mm: 15.92 g

**Colour ranges:** Mostly white; some trabecular bone exhibited grey tinges, some femoral cortical bone was black (charred)

**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—cranial fragments  
              2 mm—cranial fragments, tooth root

*Axial Skeleton:*    > 10 mm—vertebral fragments  
                          10-5 mm—vertebral fragments  
                          2 mm—vertebral and rib fragments

*Upper Limb:* > 10 mm—humerus fragments, ulna fragments, radius fragments  
10-5 mm—ulna (proximal—coronoid) fragment, humerus fragments

*Lower Limb:* > 10 mm—femur fragments, patella fragments, tibia fragments  
10-5 mm—fibula fragments, femur fragments

**Duplicated elements:** None

**Age Indicators:** Unfused epiphysis

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** 10-5 mm—urn fragments, 1 orange ceramic fragment  
2 mm—urn fragments

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

**Identifiable non-human bone:** None



**Materials Found in Each Sieve Fraction**

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

10-5 mm:       Axial skeleton: vertebrae  
                  Unidentified human bone  
                  Unidentified human long bone  
                  Urn fragments  
                  Orange ceramic fragment  
                  Lower limb: femur, fibula  
                  Upper limb: humerus, ulna, radius  
                  Slag  
                  Unfused epiphysis  
                  Cranial

2 mm:           Charcoal  
                  Axial skeleton: rib, vertebrae  
                  Tooth root  
                  Unidentified human bone  
                  Unidentified human long bone  
                  Slag  
                  Rocks

< 2 mm:        Residue, traces of human bone

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