A Report on Romano-British Cremated Remains from Lincolnshire

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Abstract

This report provides an osteological evaluation of 14 Romano-British cremation burials from 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 assemblage be dated, that more research be devoted to the cemetery along Nettleham Road and that the skull fragments from burial 217.76 be compared to other cremation burials to determine what caused their incomplete oxidization.

Introduction

Lincoln, originally called *Lindum,* was founded by the Romans. It owes its beginnings to the Ninth Legion, as its members inhabited a fortress which was built there *circa* 61 A.D. When the Ninth Legion moved to York approximately ten years later, the Second Adiutrix took its place until the Second's own departure in 77 A.D. At that point, a civilian settlement, which would later become a provincial capital, was founded at the site (Wilson, 1975).

The aim of the following report is to provide an osteological analysis of 14 Romano-British cremation burials from Lincoln and its surrounding areas. Eleven of the cremation burials were found in Lincoln in the vicinity of the modern Newport Cemetery, and are presumed to have been a part of a Roman cemetery that lined Nettleham Road (Goodburn *et al.*, 1976). Of the remaining burials, two were found in areas surrounding Lincoln (Waddington and Ancaster), and one was recovered from the bottom of a Roman burial cist that is without provenience. All 14 cremation burials are housed at The Collection in Lincoln and have yet to be dated (Lee, pers. comm.).

The 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 burial location and LCNCC#)

Burial Location and LCNCC #	Total Weight
Wragby Road 11.35	125.60 g
Wragby Road 12.40	342.59 g
Newport Cemetery 59.75	1622.75 g
Nettleham cist 67.61	1685.06 g
Waddington 168.78	342.91 g
Ancaster 217.76	281.84 g
Rasen Lane 269.12	1766.60 g
Rasen Lane 270.12	336.27 g
Monks Road 275.12	644.06 g
St Peter-at-Gowts 390.08	982.82 g
Newland 677.09*	631.26 g
Lincoln 9637.07	890.26 g
43 Broadway (no LCNCC)	370.77 g
Roman stone cist (no LCNCC)	366.51 g

* indicates a subadult

As can be seen above, the total weights of the cremated adult human remains ranged from 125.60 g to 1766.60 g. In addition, the average total weight of cremated adult human remains was 742.09 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 because 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 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)

Although cremated remains are rarely (if ever) collected in their entirety for burial, bone fragments from every human skeletal region (skull, axial skeleton, upper limb, lower limb) were present in each cremation burial. This is typical because cremation burials usually contain a random selection of bone from each skeletal region (McKinley, 2002).

Non-Human Skeletal Elements Present

The non-human bone present in the cremation burials is tabulated in Table 2.

Table 2 The Non-Human Bone Present in Each Cremation Burial

Burial Location and LCNCC #	Non-Human Bone Present
Wragby Road 11.35	None
Wragby Road 12.40	Bird
Newport Cemetery 59.75	None
Nettleham cist 67.61	None
Waddington 168.78	None
Ancaster 217.76	None
Rasen Lane 269.12	Bird and Unidentified Animal
Rasen Lane 270.12	Archaeological Shrew (intrusive)
Monks Road 275.12	None
St Peter-at-Gowts 390.08	None
Newland 677.09	None
Lincoln 9637.07	Unidentified Animal
43 Broadway (no LCNCC)	None
Roman stone cist (no LCNCC)	None

Four of the 14 cremation burials contained traces of non-human bone. Of those four, one cremation burial (270.12) possessed non-human bone that was not cremated. Specifically, the non-human remains of burial 270.12 were intrusive and consisted of only the jaws and long bones of shrews. Since the colour of these remains (brown) revealed that the bones were archaeological, it is likely that the lid of the urn was disturbed in the past, which allowed the shrew bones (possibly from an owl pellet, as the long bones and jaws of rodents are typically found in them) to fall into the urn and become commingled with the human remains.

Furthermore, the three burials that contained cremated non-human bone possessed traces of bird (12.40 and 269.12) and unidentified animal (9637.07 and 269.12) bones. These bones were either the remnants of the funerary feast that were thrown on 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, and for 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 3 Estimated Ages (in years) of the Cremated Individuals

Burial Location and LCNCC #	Estimated Age
Wragby Road 11.35	Undetermined
Wragby Road 12.40	Adult 25-30 + years
Newport Cemetery 59.75	Adult 25 < years
Nettleham cist 67.61	Adult 20 + years
Waddington 168.78	Undetermined
Ancaster 217.76	Young Adult 20-35 years
Rasen Lane 269.12	Old Adult 50 + years
Rasen Lane 270.12	Adult 25 ≤ years
Monks Road 275.12	Adult 20 + years
St Peter-at-Gowts 390.08	Adult 18-20 ≤ years
Newland 677.09	Subadult 6-16 years
Lincoln 9637.07	Adult 20 + years
43 Broadway (no LCNCC)	Adult 20 + years
Roman stone cist (no LCNCC)	Undetermined

As Table 3 shows, only one of the cremated individuals (677.09) was a subadult, 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 four individuals could be ascertained (Table 4).

Table 4 Estimated Sexes of the Cremated Individuals

Burial Location and LCNCC #	Sex
Wragby Road 11.35	Undetermined
Wragby Road 12.40	Undetermined
Newport Cemetery 59.75	F?
Nettleham cist 67.61	M?
Waddington 168.78	Undetermined
Ancaster 217.76	Undetermined
Rasen Lane 269.12	Undetermined
Rasen Lane 270.12	M?
Monks Road 275.12	Undetermined
St Peter-at-Gowts 390.08	Undetermined
Newland 677.09	Undetermined
Lincoln 9637.07	M?
43 Broadway (no LCNCC)	Undetermined
Roman stone cist (no LCNCC)	Undetermined

Key: Table 4

Sex	Meaning
F?	Possible Female
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 5) revealed that at the time of death four cremated individuals were afflicted with degenerative joint disease and two additional individuals were afflicted with periostitis of the tibia.

Table 5 Inventory of the Skeletal Health of the Cremation Burials (DJD= degenerative joint disease)

Burial Location and LCNCC #	Skeletal Pathology
Wragby Road 11.35	None visible
Wragby Road 12.40	DJD on cervical vertebrae
Newport Cemetery 59.75	None visible
Nettleham cist 67.61	None visible
Waddington 168.78	None visible
Ancaster 217.76	Periostitis on tibia
Rasen Lane 269.12	DJD throughout body
Rasen Lane 270.12	Periostitis on tibia
Monks Road 275.12	DJD throughout spine
St Peter-at-Gowts 390.08	None visible
Newland 677.09	None visible
Lincoln 9637.07	DJD throughout spine
43 Broadway (no LCNCC)	None visible
Roman stone cist (no LCNCC)	None visible

Dental Health

Only one of the cremated individuals (43 Broadway) displayed lesions indicative of dental pathology (dental abcess) (Table 6). As is the case with skeletal health, it is probable that the total number of affected individuals is under-represented, and that the affected individual was afflicted with additional dental pathologies (McKinley, 2004a).

Table 6 Inventory of the Dental Health of the Cremation Burials

Burial Location and LCNCC #	Dental Pathology
Wragby Road 11.35	None visible
Wragby Road 12.40	None visible
Newport Cemetery 59.75	None visible
Nettleham cist 67.61	None visible
Waddington 168.78	None visible
Ancaster 217.76	None visible
Rasen Lane 269.12	None visible
Rasen Lane 270.12	None visible
Monks Road 275.12	None visible
St Peter-at-Gowts 390.08	None visible
Newland 677.09	None visible
Lincoln 9637.07	None visible
43 Broadway (no LCNCC)	Possible dental abcess
Roman stone cist (no LCNCC)	None visible

Crematory Attributes

Efficacy of Cremation

Colour is a macroscopic indicator of oxidization, as brown or orange bones are unburnt 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: Unburnt 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)**

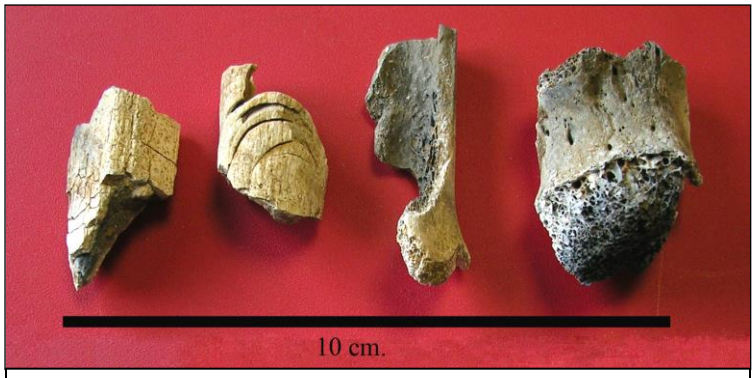

Figure 3 **Colour Score 2:**
Cortical bone is mostly white with patches exhibiting shades of grey, while the trabecular bone is primarily black or hues of grey (remains from a York cremation burial) (Photography by Carrie Sulosky)

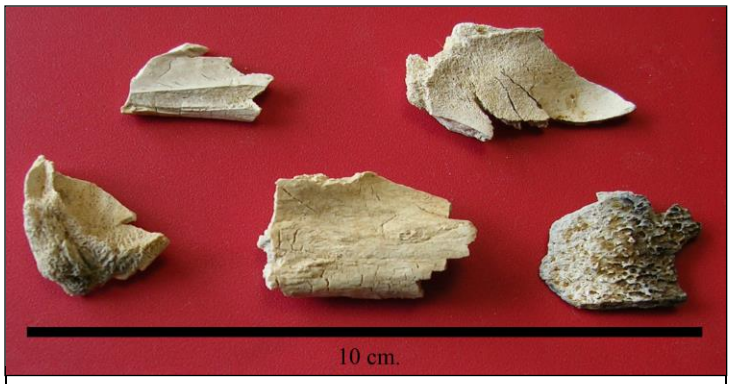

Figure 4 **Colour Score 3:**
Cortical bone is white and trabecular bone is mostly white with grey patches (remains from a Lincoln cremation burial) (Photography by Carrie Sulosky)

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 scores ranged from 1 to 3.5, and the average colour score was 2.5, indicating that all of the cremation burials were 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 Cremation Burials

Burial Location and LCNCC #	Colour Score
Wragby Road 11.35	2.5
Wragby Road 12.40	2
Newport Cemetery 59.75	1.5
Nettleham cist 67.61	2
Waddington 168.78	2
Ancaster 217.76	1
Rasen Lane 269.12	3
Rasen Lane 270.12	2
Monks Road 275.12	3.5
St Peter-at-Gowts 390.08	2.5
Newland 677.09	3
Lincoln 9637.07	3.5
43 Broadway (no LCNCC)	2.5
Roman stone cist (no LCNCC)	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 Dehydration Abnormalities Found in the Cremated Remains (LB= long bones)

Burial Location and LCNCC #	Shrinkage	Fissuring	Warping
Wragby Road 11.35	None	None	Tibia, long bones
Wragby Road 12.40	None	None	Long bones
Newport Cemetery 59.75	None	None	Pelvis, hand phalanges, LB
Nettleham cist 67.61	None	None	Long bones, mandible
Waddington 168.78	None	None	Tibia
Ancaster 217.76	None	None	None
Rasen Lane 269.12	None	None	Long bones
Rasen Lane 270.12	None	None	Tibia, long bones
Monks Road 275.12	None	None	Long bones
St Peter-at-Gowts 390.08	1/2 of mandible larger than other	None	Long bones, metatarsal
Newland 677.09	None	None	Cranial fragments
Lincoln 9637.07	None	None	Long bones, ribs
43 Broadway (no LCNCC)	Hand phalanges less shrunken	None	Proximal hand phalanx
Roman stone cist (no LCNCC)	None	None	None

As Table 8 shows, there were two abnormal cases of shrinkage. In the first case (390.08), one half of the mandible displays a higher degree of shrinkage than the other half. This indicates that half of the mandible (the one exhibiting more shrinkage) was burned at a higher temperature than the other half. This is a common occurrence with elements from the skull, as it is easy for the skull to fall back into the pyre and burn unevenly due to airflow restriction.

The second abnormal case of shrinkage (43 Broadway) is not as straight-forward. Three hand phalanges (proximal, intermediate, distal) do not display the same degree of shrinkage as the rest of the bones. In addition, these same phalanges are the only elements present from the upper limbs, and are a different colour (dark grey) than the rest of the cremated remains. Together, these findings imply that one finger was not only less oxidized than the other bones, but also burned separately from the rest of the body.

It is probable that this finger represents the *os resectum* of the cremated individual (Figure 6). Before an individual was cremated, the Romans cut off a part of the body (usually a finger) for burial (Cicero *De Leg.* 2.22.55-56). This particular rite, the rite of *os resectum*, may have varied, as there is evidence to suggest that the *os resectum* was not always buried and may have been burned separately. In that case, the burnt finger would be placed inside the urn with the rest of the cremated remains (like 43 Broadway) or inside its own accessory vessel that would be interred next to the main cinerary urn (Graham, 2006).

Figure 6 **Probable *os resectum* from a Lincoln cremation burial (43 Broadway) exhibiting signs of being individually burned Photography by Andrew Chamberlain**

Furthermore, the fissuring and warping

displayed by the cremation burials were not out of the ordinary. First, none of the cremation burials exhibited any abnormal instances of fissuring. Additionally, even though many of the burials contained warped remains, it is common to find examples of abnormal warping within any given cremation burial.

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

Burial Location and LCNCC #	DoF (%)	LLBF (mm)
Wragby Road 11.35	89%	66.5 mm
Wragby Road 12.40	54%	65.7 mm
Newport Cemetery 59.75	52%	70.1 mm
Nettleham cist 67.61	45%	74.7 mm
Waddington 168.78	43%	51.3 mm
Ancaster 217.76	77%	53.7 mm
Rasen Lane 269.12	32%	81.1 mm
Rasen Lane 270.12	66%	52 mm
Monks Road 275.12	61%	100.8 mm
St Peter-at-Gowts 390.08	47%	52.6 mm
Newland 677.09	48%	53.7 mm
Lincoln 9637.07	21%	32.8 mm
43 Broadway (no LCNCC)	48%	41.6 mm
Roman stone cist (no LCNCC)	4%	27.7 mm

The average degree of fragmentation of the cremation burials was 49%, while the average length of the largest bone fragment was 58.9 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 10 shows, the majority of the cremation burials (9 of 14) were urned. In addition, two burials were recovered from cists, while two were unurned and the context of one burial (43 Broadway) was unknown.

Table 10 Type of Cremation Burial/Deposit of Each Burial

Burial Location and LCNCC #	Type of Cremation Burial/ Deposit
Wragby Road 11.35	Urned Burial
Wragby Road 12.40	Urned Burial
Newport Cemetery 59.75	Urned Burial
Nettleham cist 67.61	Cist Burial
Waddington 168.78	Urned Burial
Ancaster 217.76	Urned Burial
Rasen Lane 269.12	Urned Burial
Rasen Lane 270.12	Urned Burial
Monks Road 275.12	Urned Burial
St Peter-at-Gowts 390.08	Urned Burial
Newland 677.09	Unurned Deposit
Lincoln 9637.07	Unurned Deposit
43 Broadway (no LCNCC)	Unknown
Roman stone cist (no LCNCC)	Cist Burial

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 11).

Table 11 Pyre Debris Present in the Cremation Burials

Burial Location and LCNCC #	Pyre Debris Present
Wragby Road 11.35	None
Wragby Road 12.40	Charcoal
Newport Cemetery 59.75	Charcoal and Slag
Nettleham cist 67.61	Charcoal and Slag
Waddington 168.78	None
Ancaster 217.76	None
Rasen Lane 269.12	Charcoal
Rasen Lane 270.12	None
Monks Road 275.12	Charcoal
St Peter-at-Gowts 390.08	None
Newland 677.09	None
Lincoln 9637.07	None
43 Broadway (no LCNCC)	None
Roman stone cist (no LCNCC)	Charcoal and Slag

The Presence of Pyre Goods

Table 12 lists the pyre goods present in the cremation burials.

Table 12 Pyre Goods Present in the Cremation Burials

Burial Location and LCNCC #	Pyre Goods Present
Wragby Road 11.35	None
Wragby Road 12.40	Ceramic
Newport Cemetery 59.75	Ceramic
Nettleham cist 67.61	Ceramic
Waddington 168.78	Glass
Ancaster 217.76	Ceramic
Rasen Lane 269.12	Glass
Rasen Lane 270.12	Glass
Monks Road 275.12	None
St Peter-at-Gowts 390.08	Glass
Newland 677.09	Glass
Lincoln 9637.07	None
43 Broadway (no LCNCC)	Metal
Roman stone cist (no LCNCC)	Glass, Metal

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). With that being said, the cremation burials contained traces of glass, metal, and ceramic pyre goods, but the individuals were most likely burned with additional goods that were not preserved in the archaeological record.

The Presence of Grave Goods

The grave goods found with the cremation burials are recorded in Table 13.

Table 13 Grave Goods Present in the Cremation Burials

Burial Location and LCNCC #	Grave Goods Present
Wragby Road 11.35	None
Wragby Road 12.40	None
Newport Cemetery 59.75	None
Nettleham cist 67.61	Sea Shell
Waddington 168.78	None
Ancaster 217.76	None
Rasen Lane 269.12	None
Rasen Lane 270.12	Sea Shell
Monks Road 275.12	Sea Shell
St Peter-at-Gowts 390.08	Sea Shell
Newland 677.09	Ceramic
Lincoln 9637.07	None
43 Broadway (no LCNCC)	Ceramic
Roman stone cist (no LCNCC)	Sea Shell

Grave goods are objects that are buried with the cremated remains either inside or outside of the urn. The Lincolnshire cremation burials did not possess any intact grave goods; on the contrary, there were only fragments of unburned ceramic and sea shell. Although it is very likely that these are the remnants of grave goods, it is also possible that they were 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 assemblage may be dated. Furthermore, there is strong evidence to suggest that a Roman cemetery was located along Nettleham Road. If further excavation could recover more cremation burials, a demographic profile of the cemetery could be created. This would be useful 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 Lincolnshire. Additionally, the skull fragments from burial 217.76 were charred and not as oxidized as the rest of the burial. Therefore, it would be interesting to compare the fragments to those from similarly oxidized cremation burials to determine whether the lack of oxidization was caused by the corpse's head falling into the pyre or by the presence of a hat.

Conclusion

In conclusion, the Lincolnshire cremation burials were mostly urned and possessed traces of charcoal and slag (pyre debris); glass, metal, and ceramic (pyre goods); ceramic and seashell (grave goods); as well as bird and unidentified animal bone. Each burial contained at least one individual, and elements from all human skeletal regions were present. Eleven of the individuals were adults, while one was a subadult and two were undetermined. The sexes of the individuals were difficult to ascertain, but of the four that could be estimated, three were possible males and one was a possible female. Seven individuals did not have any discernable pathological lesions, but the rest of these individuals were afflicted with either degenerative joint disorder, periostitis of the tibia, or a dental abcess at the time of death. Furthermore, all of the burials were incompletely oxidized, had an average degree of fragmentation of 49%, and the average length of the largest bone fragment found amongst them was 58.9 mm. Finally, the average weight of the adult cremated remains was 742.09 g, which was less than what is expected from a modern adult cremation.

On the whole, the Lincolnshire 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 Lincolnshire.

Appendix

Cremation Recording Forms

LCNCC: 11.35 Wragby Road	**Date:** 2/6/06	**Observer:** Carrie Sulosky
Estimated Sex: ----	**Estimated Age: ----**	**Estimated MNI:** 1

Context: Urned cremation burial—it's possible that the bone analysed is only part of the total deposit

Total weight of cremated materials: 125.6 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 125.6 g **Dimensions of largest fragment:** 66.5 mm x 13.5 mm

Weight fractions: *>10mm:* 112.08 g *10-5mm:* 12.44 g *5-2mm:* 0 g *2-1mm:* 1.08 g

Colour ranges: Mostly white; dark grey on the cortical and trabecular bone of the tibiae, also inside some long bone shafts

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on tibiae and other unidentified long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—3 cranial fragments

Axial Skeleton: > 10 mm—1 rib fragment
10-5 mm—1 vertebra fragment

Upper Limb: > 10 mm—1 humerus fragment, 1 ulna fragment

Lower Limb: > 10 mm—2 femur fragments, 1 patella, 3 tibia fragments, 1 pelvis fragment

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

Inventory of Finds Bags

> 10 mm:	Cranial
	Axial: vertebrae, rib
	Humerus (fused head in separate bag)
	Lower limb: femur, pelvis, fibula, tibia
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Axial skeleton: rib
	Unidentified human bone
	Unidentified human long bone
	Lower limb: tibia, femur, patella, pelvis
	Upper limb: humerus, ulna
	Cranial
2 mm:	None
< 2 mm:	Residue, rocks, traces of human bone

LCNCC: 12.40 Wragby Road	**Date:** 2/6/06	**Observer:** Carrie Sulosky
Estimated Sex: ----	**Estimated Age:** Adult 25-30 + years	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 792.26 g **Total weight of non-human bone:** 0.39 g

Total weight of cremated human bone: 342.59 g **Dimensions of largest fragment:** 65.7 mm x 20.2 mm

Weight fractions: *>10mm:* 183.4 g *10-5mm:* 103.36 g *5-2mm:* 23.36 g *2-1mm:* 32.63 g

Colour ranges: Mostly white; dark grey trabecular bone of long bones; patches of cortical bone of skull black

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on unidentified long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—13 cranial fragments
10-5 mm—17 cranial fragments

Axial Skeleton: > 10 mm—1 rib fragment, 2 vertebrae fragments (with lipping on bodies of cervical vertebrae), 1 sternal end of a clavicle, 1 sacrum fragment
10-5 mm—4 vertebrae fragments, 9 rib fragments

Upper Limb: > 10 mm—2 humerus fragments

Lower Limb: > 10 mm—1 fibula fragment, 3 pelvis fragments, 1 navicular, 1 femur fragment

Duplicated elements: None

Age Indicators: Fused femoral head—no fusion line: 25 < years (Schwartz, 1995)
Fused sternal head of clavicle—25-30 ≤ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: > 10 mm—horizontal osteophytes on surface of cervical vertebral body

Pyre goods: > 10 mm—ceramic
10-5 mm—ceramic
2 mm—ceramic

Grave Goods: None

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: > 10 mm—cremated bird bone

Inventory of Finds Bags

> 10 mm:	Rocks
	Ceramic
	Cranial
	Axial: sacrum, vertebrae (pathology in separate bag), clavicle
	Upper limb: humerus
	Lower limb: femur, pelvis, fibula, navicular
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Soil
	Ground snail—intrusive
	Axial skeleton: Vertebrae, rib
	Bird bone
	Rock
	Ceramic
	Unidentified human bone
	Unidentified human long bone
	Cranial
2 mm:	Soil and traces of human bone
	Unidentified human bone
	Charcoal
	Intrusive ground snail
	Star-shaped fossil (star stone, an isocrinid)
	Rock
< 2 mm:	Residue, traces of human bone

LCNCC: 59.75(2) pot 1a Newport Cemetery	**Date:** 30/5/06	**Observer:** Carrie Sulosky
Estimated Sex: F?	**Estimated Age:** Adult 25 < years young to mid–based on pathology	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 1524.74 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 1622.75 g **Dimensions of largest fragment:** 70.1 x 18.3 mm

Weight fractions: *>10mm:* 841.59 g *10-5mm:* 277.75 g *5-2mm:* 181.98 g *2-1mm:* 321.43 g

Colour ranges: Mostly white; light grey on cortical bone of skull, femora and tibiae; black on cortical and trabecular bone of skull and pelvis, and on the tibial trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones, pelvis and hand phalanges

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—103 cranial fragments (including mastoid, midlambdoid suture, skull with molten slag)
10-5 mm—61 cranial fragments

Axial Skeleton: > 10 mm—1 clavicle fragment (sternal end), 21 vertebrae fragments (no lipping), 37 rib fragments
10-5 mm—3 vertebrae fragments, 33 rib fragments

Upper Limb: > 10 mm—8 humerus fragments, 1 phalanx, 1 distal metacarpal
10-5 mm—3 hand phalanges

Lower Limb: > 10 mm—6 pelvis fragments, 1 fibula fragment, 4 tibia fragments, 8 femur fragments, 1 foot phalanx, 1 metatarsal, 1 tarsal

Duplicated elements: None

Age Indicators: Parietal/occipital suture fused (midlambdoid)—fuses at 15-19 years (Schwartz, 1995)
Distal epiphyses of metacarpal and metatarsal completely fused—fuses at 18-20 years
Complete fusion of humeral head—fuses at > 25 years
Lack of degenerative pathological lesions may suggest young to mid adult

Sex Indicators: Possible female— small mastoid process

Pathological Data: None

Pyre goods: > 10 mm—Ceramic
10-5 mm—Burnt? mortar, ceramic
2 mm—Ceramic

Grave Goods: None

Pyre Debris: > 10 mm—slag, skull with molten slag?
10-5 mm—slag, skull with molten slag?
2mm—slag, skull with molten slag?, charcoal

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial (mastoid and midlambdoid in separate bags)
	Axial: vertebrae, rib, clavicle
	Upper Limb: hand phalanx, metacarpal, humerus
	Lower limb: femur, pelvis, fibula, tibia, foot phalanx, tarsal, distal metatarsal
	Unidentified human bone
	Slag
	Ceramic
	Soil, rock, and traces of human bone
	Unidentified human long bone
10-5 mm:	Soil and rocks
	Burnt? Mortar
	Axial: ribs, vertebrae
	Unidentified human bone
	Unidentified human long bone
	Slag
	Ceramic
	Upper limb: hand phalanges
	Cranial
2 mm:	Soil with traces of human bone
	Unidentified human bone
	Slag
	Charcoal
	Ceramic
< 2 mm:	Residue and traces of human bone

2 bags

LCNCC: 67.61 Nettleham cist	**Date:** 31/5/06	**Observer:** Carrie Sulosky
Estimated Sex: M?	**Estimated Age:** Adult	**Estimated MNI:** 1

Context: Cist cremation burial

Total weight of cremated materials: 1747.05 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 1685.06 g **Dimensions of largest fragment:** 74.7 x 31.2 mm

Weight fractions: *>10mm:* 759.31 g *10-5mm:* 310.12 g *5-2mm:* 290.78 g *2-1mm:* 324.85 g

Colour ranges: Mostly white; dark grey on patches of cortical and trabecular bone of long bone shafts and on cortical bone of tibiae, patella, articular facets, and a thoracic vertebral process

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on shafts of long bones and mandible

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—31 cranial fragments
10-5 mm—112 cranial fragments, 2 tooth roots
2 mm—1 tooth root

Axial Skeleton: > 10 mm—11 rib fragments, 22 vertebrae fragments, 1 clavicle
10-5 mm—12 vertebrae fragment, 64 rib fragments

Upper Limb: > 10 mm—15 humerus fragments, 4 ulna fragments, 4 radius fragments (right and left proximal, 2 shaft)
10-5 mm—2 hand phalanges

Lower Limb: > 10 mm—12 pelvis fragments, 8 tibia fragments, 33 femur fragments, 1 patella

Duplicated elements: None

Age Indicators: All epiphyses present are fused—adult

Sex Indicators: Possible male— based on robust MSMs (mandible, linea aspera), and degree of gonial (mandibular) angle

Pathological Data: None

Pyre goods: > 10 mm—charred ceramic
10-5 mm—charred ceramic
2 mm—charred ceramic

Grave Goods: > 10 mm—ceramic, intrusive belemnite (fossil), sea shell
10-5 mm—ceramic
2 mm—ceramic

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

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Ceramic
	Belemnite
	Slag
	Rock
	Cranial, mandible
	Axial: vertebrae, rib, clavicle
	Sea shell
	Upper limb: ulna, radius, humerus
	Lower limb: femur, pelvis, patella, tibia
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Rocks/pebbles
	Slag
	Soil with traces of human bone
	Charcoal
	Ceramic
	Axial: Vertebrae, ribs
	Unidentified human bone
	Unidentified human long bone
	Lower limb: femur, pelvis
	Cranial, tooth roots
	Upper limb: hand phalanges
2 mm:	Soil with traces of human bone
	Charcoal
	Ceramic
	Tooth root
< 2 mm:	Residue and traces of human bone

LCNCC: 168.78 Waddington	**Date:** 27/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ----	**Estimated Age: ----**	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 378.58 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 342.91 g **Dimensions of largest fragment:** 51.3 x 22.5 mm

Weight fractions: *>10mm:* 148.52 g *10-5mm:* 97.62 g *5-2mm:* 69.83 g *2-1mm:* 26.94 g

Colour ranges: Mostly white; gray visible on the cortical and trabecular bone of femur and skull

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on tibiae

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—17 cranial fragments
10-5 mm—32 cranial fragments

Axial Skeleton: > 10 mm—2 rib fragments

Upper Limb: > 10 mm—1 radial fragment, 4 humerus fragments, 8 scapula fragments

Lower Limb: > 10 mm—2 fibula fragments, 6 tibia fragments, 5 femur fragments
10-5 mm—5 femur fragments

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: 2 mm—green glass

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial
	Rock
	Upper limb: humerus, radius, scapula
	Lower limb: femur, fibula, tibia
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Rocks/pebbles
	Unidentified human bone
	Unidentified human long bone
	Lower limb: femur
	Cranial
2 mm:	Green glass
	Unidentified human bone
	Intrusive ground snail
	Rocks
< 2 mm:	Residue and traces of human bone

LCNCC: 217.76 Ancaster	**Date:** 26/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ----	**Estimated Age:** young adult	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 286.81 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 281.84 g **Dimensions of largest fragment:** 53.7 x 34.1 mm

Weight fractions: *>10mm:* 215.64 g *10-5mm:* 53.33 g *5-2mm:* 8.52 g *2-1mm:* 4.35 g

Colour ranges: Mostly white; navy blue on cortical bone of tibiae, gray on femur, tibia, skull; black on cortical bone of skull, tibiae, trabecular bone of femur

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: No warping/abnormal warping visible

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—26 cranial fragments
10-5 mm—20 cranial fragments
2 mm—1 cranial
*overrepresentation of skull—the pieces are large and mostly black on the cortical bone (charred)

Axial Skeleton: > 10 mm—4 rib fragments

Upper Limb: > 10 mm—3 humerus fragments, 2 radius fragments, 2 ulna fragments
10-5 mm—3 humerus fragments, 2 ulna fragments

Lower Limb: > 10 mm—4 pelvis fragments, 3 fibula fragments, 5 tibia fragments
10-5 mm—10 femur fragments, 1 fibula fragment

Duplicated elements: None

Age Indicators: Epiphyseal fusion line visible on proximal radial head—young adult (Bass, 2005)

Sex Indicators: None

Pathological Data: Lesions indicative of periostitis visible on the tibia fragments

Pyre goods: > 10 mm-- ceramic
10-5 mm—ceramic

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial (basio-occipital in separate bag)
	Axial: rib
	Upper limb: distal radius, proximal radius with fusion line, ulna, humerus
	Lower limb: femur, pelvis, fibula, tibia
	Rock
	Ceramic
	Unidentified human long bone
10-5 mm:	Upper limb: ulna, humerus
	Unidentified human bone
	Unidentified human long bone
	Lower limb: femur, fibula
	Ceramic
2 mm:	Femoral or humeral head fragment
	Unidentified human bone
	Soil
	Cranial
< 2 mm:	Residue and traces of human bone

2 bags

LCNCC: 269.12 Rasen Lane	**Date:** 2/6/06	**Observer:** Carrie Sulosky
Estimated Sex: ----	**Estimated Age:** Older adult	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 2206.59 g **Total weight of non-human bone:** 12.98 g

Total weight of cremated human bone: 1766.6 g **Dimensions of largest fragment:** 81.7 x 11.7 mm

Weight fractions: *>10mm:* 565.58 g *10-5mm:* 506.3 g *5-2mm:* 70.45 g *2-1mm:* 624.27 g

Colour ranges: Mostly white; dark grey on some trabecular bone; light grey on some trabecular bone and some cortical bone of the skulls and ribs

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—107 cranial fragments, mandible fragment
10-5 mm—cranial fragments and tooth roots

Axial Skeleton: > 10 mm—9 rib fragment, 23 vertebrae fragments (with pathology), 2 sacrum fragments
10-5 mm—18 vertebrae fragments, 40 rib fragments

Upper Limb: > 10 mm—2 metacarpal heads, 1 hand phalanx, 3 humerus fragments, 1 ulna, 1 radius
10-5 mm—7 metacarpals, 7 hand phalanges

Lower Limb: > 10 mm—2 talus fragments, 3 pelvis fragments, 2 fibula fragments (proximal and distal epiphyses), 5 tibia fragments, 8 femur fragments
10-5 mm—1 foot phalanx

Duplicated elements: None

Age Indicators: fused epiphyses
Most joint surfaces display signs of severe degenerative joint disease—possible old adult

Sex Indicators: None

Pathological Data: > 10 mm—lipping of 2 vertebral rib ends, posterior talus with osteophytes, lipping of radial head, lipping on proximal end of fibula, horizontal osteophytes on body of S1 (sacrum), severe horizontal osteophytes on vertebral bodies

Pyre goods: None

Grave Goods: None

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

Identifiable non-human bone: >10 mm—unidentified animal bone
10-5 mm—unidentified animal bone, some bird bones

Inventory of Finds Bags

> 10 mm:	Cranial, mandible
	Animal bone
	Charcoal
	Axial: vertebrae, rib, sacrum
	Upper limb: metacarpal, phalanges, humerus, ulna, radius
	Lower limb: femur, pelvis, fibula, tibia, talus
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Charcoal
	Upper limb: hand phalanges, metacarpals
	Animal bone, bird bone
	Axial: ribs, vertebrae
	Unidentified human bone
	Unidentified human long bone
	Lower limb: foot phalanx
	Cranial, tooth roots
2 mm:	Rocks
	Unidentified human bone
	Charcoal
< 2 mm:	Residue and traces of human bone

LCNCC: 270.12 Rasen Lane	**Date:** 28/5/06	**Observer:** Carrie Sulosky
Estimated Sex: M?	**Estimated Age:** Adult 25≤ years	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 336.27 g **Total weight of non-human bone:** 0.71 g

Total weight of cremated human bone: 336.27 g **Dimensions of largest fragment:** 52 mm x 26.8 mm

Weight fractions: *>10mm:* 221.14 g *10-5mm:* 81.46 g *5-2mm:* 33.67 g *2-1mm:* rocks and residue

Colour ranges: Mostly white; light grey on cortical bone of skull, femora and tibiae; black on cortical bone of humeri and the trabecular bone of tibiae, fibulae and humeri

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on tibiae and other unidentified long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—14 cranial fragments
10-5 mm—31 cranial fragments

Axial Skeleton: > 10 mm—1 rib fragment, 3 vertebrae fragments
10-5 mm—1 vertebrae fragment

Upper Limb: > 10 mm—4 humerus fragments (1 with visible, robust bicipital groove)

Lower Limb: > 10 mm—1 pelvis fragment, 2 fibula fragments, 6 tibia fragments, 15 femur fragments
10-5 mm—6 femur fragments, 3 tibia fragments, 5 fibula fragments
(one of the femoral fragments bears a robust linea aspera)

Duplicated elements: None

Age Indicators: Fused humeral head—no fusion line: 25 ≤ years (Schwartz, 1995)

Sex Indicators: Possible male—based solely on robust muscle attachments

Pathological Data: Lesions indicative of periostitis visible on the tibia fragments

Pyre goods: 10-5 mm—Burnt? mortar
< 2 mm—Glass

Grave Goods: 2 mm—Sea shell

Pyre Debris: None

Identifiable non-human bone: 2 mm and > 2 mm—intrusive, archaeological shrew bones (mostly jaws and long bones)

Inventory of Finds Bags

> 10 mm:	Cranial
	Axial: vertebrae, rib
	Humerus (fused head in separate bag)
	Lower limb: femur, pelvis, fibula, tibia
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Rocks/pebbles
	Burnt? Mortar
	Vertebrae
	Unidentified human bone
	Unidentified human long bone
	Lower limb: femur, tibia, fibula
	Cranial
2 mm:	Rocks
	Unidentified human bone
	Sea shell
	Intrusive ground snail
	Burnt? Mortar
	Archaeological, intrusive shrew bone
	Star-shaped fossil (star stone, an isocrinid)
< 2 mm:	Residue, rocks, traces of human bone
	Archaeological, intrusive shrew bone
	Glass

LCNCC: 275.12 Monks Road	**Date:** 30/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ---	**Estimated Age:** Mid to late adult	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 1054.71 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 644.06 g **Dimensions of largest fragment:** 100.8 mm x 26.4 mm

Weight fractions: *>10mm:* 221.14 g *10-5mm:* 81.46 g *5-2mm:* 33.67 g *2-1mm:* rocks and residue

Colour ranges: Mostly white; light grey on cortical bone of some ribs and the trabecular bone of many bone fragments; dark grey on cortical and trabecular bone of the skull

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—33 cranial fragments
10-5 mm—30 cranial fragments

Axial Skeleton: > 10 mm—10 rib fragments, 24 vertebrae fragments
10-5 mm—20 rib fragments, 5 vertebrae fragments

Upper Limb: > 10 mm—1 distal portion of Metacarpal 1, 1 proximal portion of a radius, 2 humerus fragments

Lower Limb: > 10 mm—1 talus, 2 fibula fragments, 2 tibia fragments, 11 femur fragments, 9 pelvis fragments, 1 patella

Duplicated elements: None

Age Indicators: Radial head fused—no fusion lines visible > 15-18 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: > 10 mm—lipping of vertebral bodies (horizontal osteophytes) and articular facets

Pyre goods: None

Grave Goods: 2 mm—sea shell

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial
	Axial: vertebrae (pathology in separate bag), rib
	Rocks and soil
	Lower limb: femur, pelvis, fibula, tibia, talus, patella
	Upper limb: MC 1, radius, humerus
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Rocks/pebbles, soil, traces of human bone
	Axial: vertebrae, ribs
	Vertebrae
	Unidentified human bone
	Unidentified human long bone
	Cranial
2 mm:	Soil with traces of human bone
	Unidentified human bone
	Sea shell
	Charcoal
< 2 mm:	Residue and traces of human bone

LCNCC: 390.08 St. Peter-at-Gowts	**Date:** 29/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ---	**Estimated Age:** Adult 18-20 ≤ years	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 1007.16 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 982.82 g **Dimensions of largest fragment:** 52.6 mm x 21.5 mm

Weight fractions: *>10mm:* 456.82 g *10-5mm:* 105.02 g *5-2mm:* 29.13 g *2-1mm:* 398.85 g

Colour ranges: Mostly white; light grey on some trabecular bone; dark grey on cortical of femoral shaft, trabecular bone of mandible, cortical bone of maxilla, trapezium and some unidentified long bone

Shrinkage: One half of mandible white and shrunk, other half of mandible dark grey and much bigger

Fissuring: No instances of abnormal fissuring

Warping: Some shafts of long bones, a metatarsal

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—49 cranial fragments, 3 mandible fragments
10-5 mm—69 cranial fragments

Axial Skeleton: > 10 mm—8 rib fragments, 1 vertebra fragment
10-5 mm—43 rib fragments

Upper Limb: > 10 mm—1 trapezium, 1 humerus fragment
10-5 mm—2 hand phalanges

Lower Limb: > 10 mm—1 metatarsal, 5 hand phalanges, 1 distal fibula fragment, 2 tibia fragments, 7 femur fragments, 3 pelvis fragments, 1 talus

Duplicated elements: None

Age Indicators: Vertebral arch fused to body—3-6 years (Schwartz, 1995)
Distal epiphysis of metacarpal fused—18-20 ≤ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: > 10 mm—glass
2mm—glass

Grave Goods: > 10 mm—sea shell
2 mm—sea shell

Pyre Debris: None

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Upper Limb: trapezium, humerus
	Cranial, mandible
	Axial: vertebrae, ribs
	Lower limb: talus, metatarsal, phalanges, fibula, femur, tibia, pelvis
	Sea shell
	Glass
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Rocks/pebbles
	Axial: ribs
	Phalanges
	Unidentified human bone
	Unidentified human long bone
	Cranial
2 mm:	Glass
	Unidentified human bone
	Sea shell
	Rock
< 2 mm:	Residue and traces of human bone

LCNCC: 677.09 Newland	**Date:** 28/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ---	**Estimated Age:** Juvenile 6-16 years	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 634.61 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 631.26 g **Dimensions of largest fragment:** 53.7 mm x 44.6 mm

Weight fractions: *>10mm:* 304.41 g *10-5mm:* 62.73 g *5-2mm:* 33.16 g *2-1mm:* 230.96 g

Colour ranges: Mostly white; light grey on cortical bone (mostly pelvic cortical bone) and throughout the trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Cranial fragments exhibit warping

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—38 cranial fragments, 2 mandible fragments
10-5 mm—62 cranial fragments

Axial Skeleton: > 10 mm—10 vertebrae fragments
10-5 mm—15 rib fragments, 3 vertebral pedicles

Upper Limb: > 10 mm—1 radius fragment, 2 humerus fragments

Lower Limb: > 10 mm—1 patella, 3 tibia fragments, 5 femur fragments, 14 pelvis fragments

Duplicated elements: None

Age Indicators: Unfused distal epiphysis of radius < 17 years (Schwartz, 1995)
Unfused proximal epiphysis of tibia < 16 years (Schwartz, 1995)
Vertebral arch fused to body 3-6 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: 2mm—glass

Grave Goods: 2 mm—unburned ceramic

Pyre Debris: None

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Upper Limb: humerus, radius (unfused distal epiphysis)
	Cranial, mandible
	Axial: vertebrae (age indicator in separate bag)
	Lower limb: patella, tibia, femur
	Pelvis
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Axial: ribs, vertebrae pedicles
	Unidentified human bone
	Unidentified human long bone
	Cranial
2 mm:	Glass
	Unidentified human bone
	Unburned ceramic
	Rock and soil
< 2 mm:	Residue and traces of human bone

LCNCC: 9637.07 Lincoln	**Date:** 29/5/06	**Observer:** Carrie Sulosky
Estimated Sex: M?	**Estimated Age:** mid to late adult	**Estimated MNI:** 1

Context: Urned cremation burial

Total weight of cremated materials: 967.5 g **Total weight of non-human bone:** 1.55 g

Total weight of cremated human bone: 890.26 g **Dimensions of largest fragment:** 32.8 mm x 26.1 mm

Weight fractions: *>10mm:* 186.79 g *10-5mm:* 206.4 g *5-2mm:* 108.59 g *2-1mm:* 388.48 g

Colour ranges: Mostly white; light grey found throughout the trabecular bone; dark grey found in the trabecular bone of some long bone shafts and an intermediate hand phalanx

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Some warping on ribs and shafts of long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—29 cranial fragments
10-5 mm— ~149 cranial fragments

Axial Skeleton: > 10 mm—10 vertebrae fragments, 6 rib fragments
10-5 mm—52 rib fragments, 11 vertebrae fragments

Upper Limb: > 10 mm—1 radius fragment, 4 humerus fragments, 1 metacarpal fragment
10-5 mm—2 hand phalanges (1 intermediate, 1 distal)

Lower Limb: > 10 mm—6 femur fragments (prominent linea aspera), 3 pelvis fragments
10-5 mm—1 foot phalanx

Duplicated elements: None

Age Indicators: All epiphyses fused
Mid to late adult based on pathology

Sex Indicators: Possible male based on prominent MSM (linea aspera)

Pathological Data: >10 mm—vertebral lipping (horizontal and vertical osteophytes)
10-5 mm—vertebral lipping (horizontal and vertical osteophytes)

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: > 10 mm—distal epiphysis of an unknown animal bone

Inventory of Finds Bags

> 10 mm:	Cranial
	Axial: vertebrae (pathology in separate bag), ribs
	Lower limb: pelvis, femur
	Upper limb: humerus, radius, metacarpal
	Unidentified human bone
	Unidentified human long bone
	Rock
	Unidentified animal bone
10-5 mm:	Axial: vertebrae (pathology in separate bag), rib
	Unidentified human bone
	Unidentified human long bone
	Cranial
	Soil with traces of human bone
	Foot phalanx
	Hand phalanx
2 mm:	Intrusive insects
	Unidentified human bone
	Rock and soil with traces of human bone
< 2 mm:	Residue and traces of human bone

LCNCC: 43 Broadway 16-18.53	**Date:** 27/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ---	**Estimated Age:** Adult 20 ≤ years	**Estimated MNI:** 1

Context: Unknown?

Total weight of cremated materials: 375.88 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 370.77 g **Dimensions of largest fragment:** 41.6 mm x 16.5 mm

Weight fractions: *>10mm:* 178.18 g *10-5mm:* 109 g *5-2mm:* 19.08 g *2-1mm:* 64.51 g

Colour ranges: Mostly white; some light grey on cortical and trabecular bone of tibiae and skull; dark grey on three hand phalanges (proximal, intermediate, distal)

Shrinkage: 3 hand phalanges exhibited less shrinkage than the rest of the bone fragments

Fissuring: No instances of abnormal fissuring

Warping: Proximal hand phalanx exhibited warping

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—33 cranial fragments, 1 mandible fragment
10-5 mm—20 cranial fragments

Axial Skeleton: > 10 mm—31 vertebrae fragments (look mostly thoracic, no visible lipping), 15 rib fragments (1 with molten metal residue)
10-5 mm—8 vertebrae fragments

Upper Limb: > 10 mm—1 hand phalanx (proximal)
10-5 mm—2 phalanges (intermediate and distal)
Taken together, these may be an *os resectum*

Lower Limb: > 10 mm—2 fibula fragments, 12 tibia fragments, 4 femur fragments, 14 pelvis fragments
10-5 mm—1 pelvis fragment

Duplicated elements: None

Age Indicators: Mandible with postmortem loss of M3—adult (Schwartz, 1995)
Distal epiphysis of fibula with no fusion lines—adult 20 ≤ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: Possible dental abcess on maxilla

Pyre goods: > 10 mm—metal (perhaps bronze?) melted to a bone (perhaps a rib?)

Grave Goods: > 10 mm—ceramic sherds

Pyre Debris: None

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial, mandible
	Axial: vertebrae (age indicator in separate bag)
	Lower limb: patella, tibia, femur
	Pelvis
	Upper limb: humerus, radius (with unfused distal epiphysis)
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Unburned ceramic
	Axial: Vertebrae
	Pelvis
	Unidentified human bone
	Unidentified human long bone
	Cranial
	Upper limb: hand phalanges (*os resectum*?)
2 mm:	Unidentified human bone
< 2 mm:	Residue and traces of human bone

2 bags

LCNCC: from the bottom of a stone Roman burial cist—Lincoln	**Date:** 31/5/06	**Observer:** Carrie Sulosky
Estimated Sex: ---	**Estimated Age: ----**	**Estimated MNI:** 1

Context: Stone burial cist

Total weight of cremated materials: 445.07 g **Total weight of non-human bone:** 0 g

Total weight of cremated human bone: 366.51 g **Dimensions of largest fragment:** 27.7 mm x 11.3 mm

Weight fractions: *>10mm:* 16.06 g *10-5mm:* 10.22 g *5-2mm:* 90.23 g *2-1mm:* 250 g

Colour ranges: Mostly white; patches of dark grey on cortical bone of long bones, some black trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: No instances of warping/abnormal warping

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—3 cranial fragments
10-5 mm—40 cranial fragments

Axial Skeleton: > 10 mm—2 vertebrae fragments
10-5 mm—1 vertebra fragment

Upper Limb: 10-5 mm—2 fragments of hand phalanges

Lower Limb: 10-5 mm—2 fragments of foot phalanges

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: 10-5 mm—2 bits of molten metal (lead?)
2 mm—glass

Grave Goods: 2 mm—sea shell fragments

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

Identifiable non-human bone: None

Inventory of Finds Bags

> 10 mm:	Cranial
	Axial: vertebrae
	Rock
	Unidentified human bone
	Unidentified human long bone
10-5 mm:	Lower limb: foot phalanges
	Slag
	Soil with traces of human bone
	Axial: Vertebrae
	Rock
	Molten metal (lead?)
	Unidentified human bone
	Unidentified human long bone
	Cranial
	Upper limb: hand phalanges
2 mm:	Unidentified human bone
	Soil with traces of human bone
	Slag
	Charcoal
	Glass
	Sea shell
	Simulated pearl—modern intrusion
< 2 mm:	Residue and traces of human bone

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