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Environmental evidence from
Castle Car Park, York
(YAT/Yorkshire Museum sitecode: 1992.5)

by

J. B. Carrott, K. Dobney, A. R. Hall and H. K. Kenward

Summary

A series of ten samples of sediment from excavations on the Castle Car Park, York were examined for plant and animal remains but they were effectively barren and there are no implications for further biological analysis on these particular deposits. In some cases, however, the presence of bone and artefactual material in sediments thought by the excavator perhaps to be 'natural' indicated that this was not so.

The modest amount of hand-collected animal and human bone has limited interpretative value, though it would be important to secure material of 15th-17th date from this area if suitable deposits were at risk from building operations.

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Introduction

This report discusses the results of analyses of invertebrate animal and plant remains and of hand-collected bone from deposits excavated from the Castle Car Park, York site (YAT/Yorkshire Museum sitecode: 1992.5).

Methods

Subsamples of raw sediment were examined in the laboratory for plant and invertebrate animal remains. A 'rapid assessment' was carried out on seven of the samples. A 'test' subsample (Kenward *et al.* 1986) of 1 kg was taken and processed by paraffin flotation (Kenward *et al.* 1980) to extract insect remains. Plant remains were recorded from the flot from paraffin flotation and from the residue. The remaining three samples were described and their sedimentary characteristics recorded, but no further analysis was performed.

The samples and results of the analyses

The analyses carried out on each sample, and the remains recovered, are described below, together with a laboratory description of the sediment. A brief archaeological description and/or interpretation of the context is given in brackets where available. The samples are presented in context order.

Context 1001

Sample 1: light orange, moist, crumbly (unconsolidated) sand with traces of wood and brick/tile fragments. No further analysis was carried out.

Context 1002 [Sample from the base of a machine cut trench. Is it natural?]

Sample 2: Dark grey, moist, plastic, silty clay. White flecks and charcoal were present in the sample which also had a slight sulphurous smell.

The minute flot comprised a few fragments of charcoal <1 mm and a tiny fragment of elder (*Sambucus*) seed. The small residue consisted of sand, gravel (to 20 mm) with a little charcoal <5 mm, some brick/tile, a piece of metallic slag and a little mammal bone. This is clearly not a 'natural' deposit.

Context 4012 [Sample taken to determine form of deposition—?river silts]

Sample 5: Mid to dark grey-brown, moist, crumbly becoming plastic when worked, heterogeneous, slightly sandy silty clay. Pieces of limestone (greater than 10 mm) and mid orange-brown patches (on a cm scale) were present in the sample. There were also 'crisp' patches in the sediment (?post-deposition mineralisation).

There was a minute flot comprising a few fragments of charcoal <5 mm. The small residue of sand and gravel to 20 mm included a modest amount of charcoal and a little brick/tile to 10 mm, and some mammal bone and glassy/vesicular slag to 20 mm. It is evidently not natural sediment.

Context 4013

Sample 6: Mid to dark grey, moist, crumbly working plastic, sandy silty clay. Small stones (6-20 mm) and white and orange flecks were present in the sample. The sediment had a distinctly 'riverine' (redeposited) feel—possibly indicating that it was waterlain.

The minute flot comprised a trace of charcoal <2 mm; the small residue was of sand and gravel to 20 mm, with a modest proportion of charcoal to 10 mm, a little brick/tile to 5 mm and a trace of mammal bone to 10 mm.

Context 4014 [Is this a river silt?]

Sample 9: Mid to dark grey, moist, slightly brittle crumbly becoming plastic when worked, sandy clay, heterogeneous with clear variations in internal lithology—some parts more sandy or clayey than others, some parts almost brittle. The sample had millimetre scale, brownish mottling and pieces of limestone (greater than 10 mm) and lumps of light to mid brown clay were present as inclusions.

The minute flot comprised a trace of charcoal <2 mm, with a few fragments of *Sambucus* (elder) seed. The very small residue of sand and gravel to 15 mm included traces of mammal bone to 15 mm, a little charcoal to 5 mm and a few tiny fragments of brick/tile. It is possible, from the lithology, that this deposit was waterlain but it cannot be confirmed positively that it is river silt.

Context 4015 [Backfill of a pit; sample taken to ascertain nature of deposition]

Sample 7: Mid to dark grey-brown, moist to wet, sticky plastic, sandy silty clay. Localised patches of the sediment were more orange or more grey and pieces of limestone (greater than 10 mm) were present as inclusions.

There was a minute flot of charcoal to 5 mm. The small residue was of sand and gravel to 15 mm, with a little daub to 40 mm, mammal bone to 20 mm (including some burnt material), a little charcoal to 10 mm and a trace of brick/tile.

Context 4018 [Backfill of ?Roman pit; sample taken to determine method of deposition]

Sample 8: Dark brownish grey, waterlogged (the sample was completely under water in the tub making it very difficult to describe), sticky plastic to thixotropic when soaked, clay sand or sandy clay. Very small and small stones (2-20 mm) and coal were present in the sample.

The flot was minute; there were traces of charcoal and herbaceous plant detritus (?root epidermis) all <2 mm. The small residue was of sand and gravel to 25 mm, with a little mammal bone to 30 mm (including some burnt material), charcoal to 10 mm, and a little brick/tile to 10 mm. The few biological remains present do not indicate how this deposit formed.

Context 4023 [Is this a naturally deposited sediment?]

Sample 10: Light to mid, orange (slightly greyish in places), wet, slightly plastic when worked, sand. Lumps of orange-brown clay were present within the sand matrix. Some of the lumps of clay have internal structure possibly indicative of their redeposition within the sand.

The minute flot included a trace of charcoal <1 mm; the small residue of sand with a few stones to 15 mm also included a little brick/tile to 15 mm and some charcoal to 5 mm. The presence of brick/tile and charcoal suggests that if deposition were 'natural' some material derived from human occupation was incorporated into it.

Context 5007 [Sample of natural deposit]

Sample 4: Mid orange-brown, moist, sticky plastic, sandy clay. Very small and small stones (2-20 mm) were common and patches of olive, rotted sandstone, ?decayed limestone and black ?root traces were present in the sample. No further analysis was carried out; it is likely that this is natural sediment.

Context 6001 [Sample from the base of a machine cut trench—is the deposit natural?]

Sample 3: Mid slightly grey brown, moist, plastic, sandy clay. Very small and small stones (2-20 mm) were common in the sample and greenish and reddish rotted sandstone was present. No further analysis was carried out. This appears to be a ?fluvioglacial deposit.

Animal bones from Castle Car Park

Three standard boxes of animal bones were recovered by hand-collection from the Castle Car Park excavations. A large proportion of the material derived from 19th and 20th century dumps with a smaller proportion representing material from post-medieval and 10th/11th century deposits. Although all the bones were inspected, only those deriving from these latter phases were recorded in any detail and these constitute the basis of the zooarchaeological evaluation. Thus nine contexts provided material of post-medieval date and only two were 10th/11th century in date.

Preservation of the material varied considerably, with bones from 19th/20th century and 10th/11th century deposits generally being poorly preserved and fragmented. Conversely, all bone from post-medieval deposits (particularly those interpreted as dumps), exhibited good preservation and included a high proportion of measurable fragments.

From all periods cattle appeared to dominate, as calculated by total fragment counts. Pig bones were also common (in general more so than sheep remains), but this may reflect recovery bias in favour of larger fragments. Also present, but represented by only a few fragments, were two worked antler pieces of red deer (*Cervus elaphus*), as well as a small number of what are probably domestic horse, chicken, duck and goose fragments.

Of the 23 measurable bones identified, 20 derived from post-medieval deposits, whilst only three were present in Anglo-Scandinavian contexts. Most represented distal limb elements, i.e. metapodials and phalanges.

Although most skeletal elements were represented, the assemblage is dominated by skull, rib, vertebrae and distal limb elements with the major meat-bearing bones less well represented. The bones from all periods therefore appear to represent both butchery waste and domestic refuse.

Some of the material from 19th and 20th century deposits, particularly from contexts 2003, 2004 and 3002, may well have been redeposited. This assertion is based on the following observations:

1) none of the fragments appeared substantially different in preservation to those noted from earlier periods;

2) the size of both cattle and sheep, although variable, remained relatively small;

3) a 'toggle,' made from a pig metacarpal, and similar to others found in deposits of early medieval date in York, was recovered from context 2004.

The human remains from Castle Car Park

Some very poorly preserved remains of mostly disarticulated human skeletons were recovered from the Castle Car Park excavation. All derived from 19th and 20th century contexts but were obviously disturbed and redeposited. A proportion of the human remains were also mixed in with the animal bones and have now been identified and bagged separately. All were from fully mature adults.

Context 5000 contained the partial and mixed remains of at least two individuals. These included two distal femur fragments of different size, two femur shaft fragments (one with a pronounced linear aspersa, possibly male), clavicle, pelvis, mandible and scapula fragments and 12 skull fragments (including the right petrous temporal and basi-occipital bone, left and right parietals, fragments of maxilla and isolated upper molars, premolars and canine. All were very poorly preserved. Unfused cranial sutures, plus the presence of unworn second and third molars indicated an individual of perhaps 18-21 years of age.

Context 5002: a large complete femur associated with a distal tibia fragment (possibly male), a small clavicle fragment and a complete thoracic vertebra.

Context 4008: one femur shaft fragment.

Context 2004: an almost complete fibula.

Context 5006: a large humerus fragment (possibly male).

Context 4012: a single cranial vault fragment.

Context 3002: a tibia shaft fragment.

Context 3028: a femur and humerus shaft fragment.

Context 5002: a proximal femur fragment.

Context 5005: two humerus fragments (a shaft and small distal fragment).

There was no evidence of pathology on any of these remains.

Implications

The animal remains from the Castle Car Park excavations have limited value in terms of future zooarchaeological research. The majority derived from deposits of late date which had certainly been mixed and redeposited. Preservation of material from 10th/11th century deposits was poor to fair and the very limited numbers of bones rendered any interpretation futile.

However there appear to be quantities of very well preserved material from post-medieval dumps available in this area of the city and a larger assemblage from 15th, 16th and 17th century deposits could prove to be extremely valuable. Few large post-medieval zooarchaeological assemblages have been studied in this country, most having been discarded as worthless. However the opportunity of documenting regional changes in the city's provisioning, associated with the selective improvements in domestic livestock which occurred in this period, would prove invaluable.

There is little academic value in the human material recovered from this site and the prospect for useful information from analysis of plant and invertebrate remains is effectively nil, though the identification of deposits as containing artefactual material and therefore not being 'natural' may be of some importance in interpreting the past history of this area of York.

References

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