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Evaluation of biological remains from excavations at the site of the former Presto supermarket, York (site code: 2000.624)

by

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Summary

A series of sediment samples and two boxes of hand-collected bone, from deposits ranging in date from the 2nd to the 19th century, revealed by excavations at the site of the former Presto supermarket, York, were submitted for an evaluation of their bioarchaeological potential.

The few biological remains, other than bone, recovered from the samples were of no interpretative value beyond that given in the text.

A small but well-preserved assemblage of vertebrate remains totalling 233 fragments from two trenches was evaluated for its potential for further analysis. Bone was examined from 33 contexts grouped into nine periods, with the majority of material falling into the 2nd century, 11th century and 11th-12th century groups. Within these groups, the amounts of material were too small to make the results of any specific analysis particularly valid, but the material has great value as a closely dated and contextualised assemblage that can be fitted into the larger body of material from York.

No further investigation of the biological remains (other than bone) from the sediment samples is warranted. However, any remaining sediment should be sieved for the recovery of small bones and this material considered in conjunction with any additional study of the hand-collected vertebrate assemblage.

KEYWORDS: FORMER PRESTO SUPERMARKET; YORK; EVALUATION; 2ND TO 19TH CENTURY; PLANT REMAINS; CHARRED PLANT REMAINS; SHELLFISH; VERTEBRATE REMAINS; HUMAN REMAINS

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Introduction

An archaeological evaluation excavation was carried out by York Archaeological Trust at the site of the former Presto supermarket, York.

A series of sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) and two boxes (totalling approximately 30 litres) of hand-collected bone, were recovered from the deposits. The deposits ranged in date from 2nd to 19th century.

All of the material was submitted to the EAU for an evaluation of its bioarchaeological potential.

Methods

Sediment samples

The sediment samples were inspected in the laboratory. Six of the samples were selected for evaluation and their lithologies were recorded, using a standard *pro forma*, prior to processing, following the procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils. The washovers and residues were examined for plant remains. The washovers were also examined for invertebrate remains, and the residues were examined for other biological and artefactual remains.

Two of the samples were examined for the eggs of parasitic intestinal nematodes using the 'squash' technique of Dainton (1992).

Table 1 shows a list of the processed samples and notes on their treatment.

Hand-collected vertebrate remains

For the hand-collected vertebrate remains that were recorded, data were entered directly into a series of tables using a purpose-built input system and *Paradox* software. Subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Additionally, for the larger assemblages, notes were made concerning fragment size, dog gnawing, burning, butchery and fresh breaks.

Where possible, fragments were identified to species or species group, using the reference collection at the Environmental Archaeology Unit, University of York. Fragments not identifiable to species ('B' bones *sensu* Dobney *et al.* forthcoming) were grouped into categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal 1 (assumed to be caprovid, pig or small cervid), unidentified bird, and completely unidentifiable.

Results

Sediment samples

The results are presented in context number order. Archaeological information, provided by the excavator, is presented in square brackets.

In no case were more than heavily decayed scraps of invertebrate cuticle recorded and these are not considered further.

Context 1041 [Backfill of large 11th-12th century rubbish pit containing residual Roman and 11th century pottery]
Sample 2 (Microfossil 'squash')

A mixture of mid to dark grey and mid to dark reddish-brown, moist, soft (working plastic), sandy clay silt with patches of ?very decayed concretion.

A 'squash' of the ?concretion gave eggs of intestinal parasitic nematodes (both *Trichuris* and *Ascaris*) indicating the presence of a faecal component in this deposit.

Context 1057 [?late 11th century fill of large robber cut]

Sample 6 (Description only)

Moist, mid to dark grey-brown, crumbly (working more or less plastic and slightly sticky), sandy silty clay (to clay silt). Rotted oyster (*Ostrea edulis* L.) shell and stones (20 to 60 mm) were present in the sample.

No further investigation of this sample was undertaken.

Context 1066 [massive dump, 2nd-3rd century]

Sample 5 (Description only)

Moist, mid grey (locally somewhat yellowish-brown), crumbly (working more or less plastic), silty clay sand. Stones (20 to 60 mm), brick/tile, mortar and traces of charcoal were present in the sample.

No further investigation of this sample was undertaken.

Sample 8/T (2 kg sieved to 300 microns with washover)

Just moist, varicoloured (light brown to mid to dark brown to dark grey to black), crumbly (working thixotropic and locally slightly plastic), sandy silty ash (or ashy silt). Rotted mortar was present and charcoal common in the sample.

This subsample yielded a large residue of about 450 cm³ of sand, grit and gravel (to 30 mm in maximum dimension), with a little bone (to 40 mm, mostly mammal bone but including a single unidentified bird distal phalanx and an unidentified fish bone) and charcoal (to 10 mm). There were also traces of metallic slag, mortar and shellfish (two tiny fragments of mussel (*Mytilus edulis* L.) shell and three of oyster). The small washover of a few cm³ was mainly charcoal, with perhaps some 'ash concretion' (to 10 mm), the latter probably formed by the burning of organic material.

Context 1068 [2nd century or later fill of a small robber cut; burnt deposit]

Sample 4/T (3 kg sieved to 300 microns with washover)

Just moist, mid red-brown to mid grey, crumbly ?ash.

The large residue of about 500 cm³ consisted of sand, gravel (to 60 mm), and brick/tile (to 20 mm), with fragments of oolitic limestone (to 60 mm), 'ash beads' (pale-coloured, glassy vesicular material, to 15 mm in this case, probably formed from fusion of silica from burning plant material) and ?burnt peat (to 25 mm). There were also some bone fragments (mostly unidentified mammal bone to 30 mm, approximately half of which were either burnt or calcined) and traces of pottery, mortar and mussel shell. The small washover consisted of a few cm³ of charcoal and more ash beads.

Context 1078 [?late 11th century fill of large robber cut]

Sample 7/T (3 kg sieved to 300 microns with washover)

Moist, dark grey-brown, crumbly (working soft and plastic), ?slightly humic, slightly sandy silty clay (to clay silt). Stones (2 to 60 mm) were common and rotted ?mortar was present in the sample.

The large residue of about 600 cm³ consisted of sand and gravel (to 70 mm), with some mortar, pottery (to 10 mm), bone (to 30 mm, mostly fragments of unidentified mammal bone but also including a few remains of fish, bird and amphibian), oyster shell (to 20 mm) and metallic slag (to 15 mm). The small washover comprised a few cm³ of charcoal (to 10 mm), with some very decayed and mostly fragmentary seeds of elder (*Sambucus nigra* L.) in modest amounts, with traces of hemlock (*Conium maculatum* L.), henbane (*Hyoscyamus niger* L.) and a few other taxa likely to have grown as weeds of disturbed places or damp ground, though the assemblage was really too small for confident interpretation; it seems unlikely that examination of a larger subsample would provide enough material for this—the remains probably represent seeds accumulating in a well-aerated soil under scrub on waste ground.

Context 1079 [2nd century dump]

Sample 9 (Description only)

Moist, mid reddish-brown and mid grey, somewhat indurated to crumbly (working plastic), sandy silty clay in a matrix of moist, mid grey-brown sandy clay.

No further investigation of this sample was undertaken.

Context 1085 [massive dump, 2nd-3rd century]

Sample 10/T (3 kg sieved to 300 microns with washover and microfossil 'squash')

Moist, mid grey-brown to somewhat olive, crumbly and brittle (working more or less plastic and slightly sticky) and locally concreted, sandy clay silt. Slag/concretion was common and stones (20 to 60 mm) were present in the sample.

There was a very large residue of about 850 cm³ of sand and gravel (to 60 mm), with some concreted material (some clasts with a greenish cast: these proved to be calcareous on addition of dilute mineral acid, but a single sample checked for parasitic worm eggs was barren). There were also traces of bone (mostly unidentified mammal bone fragments to 50 mm, but including a single fragment of fish bone), brick/tile (to 20 mm), metallic slag (to 5 mm), a single small oyster shell fragment, and pottery (to 20 mm).

The very small washover consisted of a little fine (<10 mm) charcoal and some poorly preserved rush seeds; the latter proved on close inspection to be mud rush, *Juncus gerardi* Loisel., a species characteristic of the upper parts of salt-marsh plant communities, though widely recorded from Roman and medieval York.

Context 2006 [?trample from hearth; ?14th century], Sample 1/T (3 kg sieved to 300 microns with washover)

A just moist, varicoloured (very pale grey to mid red-brown to black), heterogeneous mix of crumbly burnt soil/ash and patches of grey-brown silty clay with some charcoal.

There was a large residue of about 450 cm³ of rather clean sand and a little gravel (to 15 mm), with traces of bone (to 20 mm, mostly unidentified mammal bone fragments, some of which were burnt or calcined, with a large gadid vertebra and three other unidentified fish bone fragments), brick/tile (to 40 mm), and metallic slag (to 40 mm). The very small washover was of charcoal (to 10 mm) with scraps of poorly preserved plant and insect material. Amongst the former were identified traces of seeds of duckweed (*Lemna*) and oogonia of the stonewort *Chara*, together with charred cereal grains and uncharred seed fragments of elder and henbane. The first two indicate an origin in a body of fresh water, though clearly some ash from occupation and weeds from waste ground also formed part of this deposit.

The cereals comprised single grains of rye (*Secale cereale* L.) and ?oats (cf. *Avena* sp.).

Context 2026 [12th century dump deposit]

Sample 3/T (2 kg sieved to 300 microns with washover)

Moist, dark grey to dark grey-brown, crumbly (working plastic), sandy clay silt with some mortar present.

There was a very large residue of sand and gravel (to 70 mm) with some bone (mostly unidentified mammal bone fragments to 15 mm, some of which were charred or calcined, with a few fish remains, including eel (*Anguilla anguilla* L.), and a single mouse (cf. *Mus domesticus* (L.)) upper incisor), mortar (to 30 mm), metallic slag (to 10 mm) and coal (to 5 mm). There were also a few badly eroded charred cereal grains. The very small washover was of fine charcoal with a few more poorly preserved charred cereal grains: the residue and washover together yielded a few oat grains, some giving evidence of having started to germinate or decay before being charred, plus single barley (*Hordeum*) and ?bread/club wheat (cf. *Triticum 'aestivocompactum'*) grains.

Hand-collected vertebrate remains

Trench 1 (Groups 1 and 2 - 2nd century AD; Group 3 - 2nd century AD or later; Group 4 - Roman or later; Group 6 - late 11th century; Group 7 - 11-12th century; Group 8 - uncertain date)

Of the 27 bone bearing contexts from this trench, eight were of Roman date, all from, or postdating, the 2nd century. Deposits were described mainly as dumps (Contexts 1045, 1059, 1066, 1079 and 1085), with a single levelling layer (Context 1047), cut fill (Context 1060) and post hole of rather uncertain date (Context 1049). Preservation was described as either 'good' or 'excellent', the latter bones tending to retain sharper edges, and were more 'gingery' in colour. Fragmentation was not particularly high, with most bones from the richer contexts falling between 50 and 200 mm. The overall nature of the bones in each context was similar enough to suggest a homogenous origin, with the exception of Context 1060, where preservation, angularity and colour were all described as 'variable'. Burning, dog gnawing and fresh breakages were present but affected few bones, although butchery was particularly high in Contexts 1047 and 1066. Of the 48 fragments assigned to Roman contexts, twenty were identified—the majority as cattle, but pig, caprovid,

fowl, and swan were also present. Nine fragments were measurable and there were no mandibles.

Fifteen contexts were assigned medieval dates, all of the late 11th (Group 6) or 11th-12th centuries (Group 7). All Group 6 bones were recovered from dump contexts, while those from Group 7 were described either as 'demolition debris' (Context 1041), or pit backfills (Contexts 1044 and 1052). Preservation was described as 'good', or occasionally 'excellent', and the angularity of the bones was generally 'rounded', but was at times 'variable'. Colour was much more variable within contexts. Fragmentation was not particularly high, but fresh breakages were more prevalent among the medieval material than the Roman. There was some dog gnawing, and butchery was high in one or two contexts. It is likely therefore, that many of the late 11th century contexts, assigned as they are to robbing episodes, contain material from a mixture of origins and dates. This seems particularly apparent from Contexts 1040 and 1057 (Group 6) and Context 1041 (Group 7), all of which contained rather battered, and presumably reworked, human remains. Of 123 fragments, fifty were identifiable, and included hare, dog, pig, cow, caprovid, mallard, goose, chicken, and human. Ten fragments were measurable and there was a single ageable mandible.

Four contexts assigned to Group 8 were of uncertain date and were only scanned. A human tibia was present in Context 1004, and Context 1039 contained a red deer (*Cervus elaphus* L.) radius and four cow left scapulae, one of which bore perpendicular cut marks. There were nine measurable bones.

Trench 2 (Group 13 - 12th century; Group 14 - 12th-14th century; Group 15 - 14th/15th century; Group 17 - 19th century)

With the exception of a single 19th century deposit (Context 2001), all material from the remaining nine contexts was divided into three period groups dating to between the 12th and 15th centuries. Material was more homogenous than the medieval bones from Trench 1, preservation being described as 'good', and angularity as 'rounded' with the exception of the single 'spiky' fragment from Context 2011. Although colour varied a little between contexts, within deposits it remained consistent. Only 62 fragments were recovered from Trench 2, 32 of which were identified to species, including pig, cow, caprovid, goose and domestic fowl. Twenty identified fragments were measurable, and there were three mandibles to which ages could be assigned.

Although the assemblage is too small to make any skeletal element distribution very meaningful, it is

interesting that Trench 2 contained a high number of horncores—nine (five cow and four goat) were recovered, five (two cow and three goat) from Context 2014 and the remainder distributed evenly between the other period groups.

Discussion and statement of potential

The few biological remains, other than bone, recovered from the samples were of no interpretative value beyond that given in the text. Some further study to pursue the nature of the material being burnt (e.g. in Context 1068) via studies of, for example, XRD on burnt material and ash/slag residues could perhaps be attempted if such information were thought to be of archaeological value.

The vertebrate assemblage, although small, does provide one or two interesting hints regarding the lives of the inhabitants of York over nearly two millennia. The presence of wild game exemplified by deer and hare in the Trench 1 medieval deposits imply that individuals of perhaps high status were dumping their rubbish in these areas, while the occurrence of so many horncores in Trench 2 is of interest in understanding the industrial processes that were carried out in later medieval York, and particularly it seems, in the peripheral areas of the city. As such, the assemblage could be analogous to material from both Skeldergate (O'Connor 1984) and Tanner Row (O'Connor 1988) and other, as yet unpublished sites in York (e.g. Swinegate, Carrott *et al.* (1994); North Street, Carrott *et al.* (1998); St Saviourgate, Dobney and Jaques (1993)), where large numbers of horncores were found in material of 11th-12th century date. There were hints that some change in land use, or the status of the area, had occurred between the high and later middle ages, but, in isolation, the current evidence is insufficient to substantiate such a hypothesis.

On its own, the vertebrate assemblage is too small and divided into too many disparate periods, to be of much value. However, there

is much closely dated and spacially contextualised vertebrate remains from York and this assemblage would make a valuable contribution to the data set. This is particularly true of the metrical data, with a high proportion of identified fragments being measurable.

Recommendations

No further investigation of the biological remains (other than bone) from the sediment samples is warranted (unless further study of the material being burnt is considered to be of value). Any remaining sediment should be sieved for the recovery of small bones and this material considered in conjunction with any additional study of the hand-collected vertebrate assemblage, however.

It is recommended that the vertebrate assemblage be recorded in detail, and an archive of the metrical data made—particularly in the case of the Roman and later medieval period groups, which are less likely to contain reworked material.

Retention and disposal

All of the current material should be retained for the present.

Archive

All material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

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Table 1. List of examined sediment samples from excavations at the site of the former Presto supermarket, York, with notes on their treatment.

Context	Sample	Notes
1041	2	Microfossil 'squash'
1057	6	Sediment description only
1066	5	Sediment description only
1066	8	2 kg sieved to 300 microns with washover
1068	4	3 kg sieved to 300 microns with washover
1078	7	3 kg sieved to 300 microns with washover
1079	9	Sediment description only
1085	10	3 kg sieved to 300 microns with washover and microfossil 'squash'
2006	1	3 kg sieved to 300 microns with washover
2026	3	2 kg sieved to 300 microns with washover

Table 2. Summary of the hand-collected vertebrate remains able to provide biometrical and age-at-death information, from the former Presto supermarket, York, by period group.

Trench	Period Group	Date Span	Measurables	Mandibles	Total no. of Fragments	Total Weight (g)
Trench 1	1	2nd C	7		41	915.4
	2	2nd C+	1		6	112.5
	3	Roman+	1		1	2
	4	11th C	14	1	72	1831.5
Total for Trench 1			23	1	120	2861.4
Trench 2	12	11-12th C	6		51	1395.7
	13	12th C	3		7	114.5
	14	12-14th C	11		30	467.5
	15	14/15th C	6	1	14	554.3
	17	19th C	1		11	78
Total for Trench 2			27	1	113	2610
Grand Total			50	2	233	5471.4

Table 3. Summary of hand-collected vertebrate remains from the former Presto supermarket, York, by taxon and period group.

Taxon	Period									Total Fragments	Total Weight (g)	
	2 nd C	2 nd C+	Roman+	11 th C	11-12 th C	12 th C	12-14 th C	14/15 th C	19 th C			
<i>Lepus</i> sp				1							1	2.5
<i>Canis</i> f. domestic				1							1	7.5
<i>Sus</i> f. domestic	1			5	6	1	1				14	192.5
<i>Bos</i> f. domestic	11			11	9		4	5			40	2317.8
<i>Ovis</i> f. domestic					2						2	88
<i>Capra</i> f. domestic	1					1	3				5	160.8
Caprovid	1			4	1	2	8	1	1		18	248
<i>Homo sapiens</i> (L.)				4	1						5	531
<i>Cygnus ?olor</i>	1										1	5.5
<i>Anser</i> sp.						1	1	1	1		4	14.5
? <i>Anas platyrhynchus</i> L.						1					1	1.5
<i>Gallus</i> f. domestic	2	1	1	2	1			2			9	20.9
Subtotal	17	1	1	28	22	4	17	9	2		101	3590.5
Unidentified bird	1	1				3		1			6	8
Medium mammal 1	4			11	6		4	1	5		31	147.3
Large mammal	19	4		33	20	3	9	2	4		94	1709.6
Unidentified								1			1	2
Total	41	6	1	72	51	7	30	14	11		233	5469.9