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**Assessment of biological remains from excavations
at 37 High Street, Hull (sitecode: HHS94)**

by

John Carrott, Allan Hall, Brian Irving, Michael Issitt, Deborah Jaques,
Harry Kenward, Frances Large and Annie Milles

Summary

Samples of medieval and post-medieval occupation deposits and some hand-collected bone have been examined from excavations at 37 High Street, Hull.

Preservation of biological remains was generally poor, but two contexts gave assemblages (of plant and insect remains in one case, and of insect and small mammal remains in the other) worthy of further investigation.

Authors' address:

Environmental Archaeology Unit
University of York
Heslington
York YO1 5DD

Telephone: (0904) 433843-51
Fax: (0904) 433850

Prepared for:

Humberside Archaeology Unit
Property Services Department
County Hall
Beverley
North Humberside
HU17 9BA

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Introduction

Five general biological analysis (GBA, *sensu* Dobney *et al.* 1992) samples from a second phase of excavations at High Street, Hull, were submitted for an assessment of their content of biological remains and their potential for further bioarchaeological analysis. A standard-sized box of hand-collected bone was also supplied for examination. This material is additional to that recovered from an earlier phase of excavation to the rear of 39 High Street, the biological remains from which were reported on by Carrott *et al.* (1994). Sample numbers were assigned to the samples whilst at the EAU (for internal use).

Methods

GBA samples

All of the samples were inspected in the laboratory and a description of their lithology recorded using a standard *pro forma*. Subsamples of 1 kg were taken for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986), except for sample 24201, context 242 (for which 2.25 kg was used—i.e. all of the sample apart from a few grammes retained for examination of microfossils). Paraffin flotation was employed to extract arthropod remains from all samples except 21701, where a ‘washover’ was used.

All of the samples were examined for the eggs of parasitic nematodes using the ‘squash’ method of Dainton (1992). Other microfossils (e.g. phytoliths, diatoms, pollen and fungal spores) were also noted if present.

A 1 kg voucher was retained from each of the samples, other than 24201, and the remaining sediment bulk-sieved to 1 mm,

primarily to recover small bones and artefacts (the latter to be returned to the excavator). The residues from the processing of this excess material are recorded as BS samples in the text below.

Bone

A very small assemblage of hand-collected animal bones, consisting of a single box (40 x 30 x 15 cm) was recovered from these excavations. Of a total of sixteen bone-bearing contexts, three (contexts 206, 207 and 209) were modern and therefore have not been included in this report. The remainder, assigned to three phases, 1 (?14th century), 2 (late medieval?) and 3 (late medieval/post-medieval) have been recorded in detail.

Remains of small mammals, birds and fish were also identified from the four GBA samples for which excess material was bulk-sieved.

Results

GBA samples

The results of the investigations are presented in context number order, with information from the excavator concerning context types in square brackets. Samples where bulk-sieving was used to process the remainder of the GBA samples are designated ‘BS’ below.

Context 217 [Floor silts. ?Late medieval/?post-medieval]

Sample 21701: Dry, mid grey-/brown, soft sediment, mostly ash with slightly sandy silt. Stones in the range 2-6 mm were present and 6-20 mm stones were common. ?Mortar/cement, brick/tile, a nail, charcoal and mammal bone were present.

GBA (1 kg tested) washover: The washover was barren of plant remains but contained quite large numbers of very poorly preserved insect remains. Most of the latter could be regarded as 'house fauna' in the sense of Hall and Kenward (1990, 398-9). There were some storage pests, including the grain beetles *Oryzaephilus surinamensis* and *Sitophilus granarius*, species likely to have occurred in small numbers in domestic premises. There was no evidence for foul decaying matter. The burrowing beetle *Aglenus brunneus* may have lived within the building but may equally have been a post-depositional invader. A small number of plant-feeding beetles may have been introduced by human activity, with plants used within the building, for example, although all may have strayed in as 'background fauna'. Overall, this assemblage was rather typical of late medieval/early post-medieval groups from within buildings of moderately good quality.

The residue consisted largely of sand and mortar fragments (to 30 mm), with moderate amounts of brick/tile (to 30 mm) and traces of chalk (to 40 mm), charcoal (to 10 mm), rounded marine shell (to 10 mm) and bone, including fish and ?bird (to 20 mm).

BS (17 kg): Some nails and a small lead ring were present in the residue. Much brick/tile and mortar/plaster, some stone, a small quantity of coal fragments, charcoal, cinders and fragments of a clay pipe were recovered. Two species of freshwater mollusca (*Bithynia tentaculata* and ?*Lymnaea peregra*) were found embedded in some mortar. Eggshell was also present. The bones recovered from the residue are discussed below.

The microfossil 'squash' was mostly inorganic with some organic detritus.

Context 236 [?occupation rubbish deposit. ?14th century]

Sample 23601: Moist, very heterogeneous, grey/green clay lumps (to 10 mm) and mid grey/brown plastic, clay. Pebbles in the range 2-6 mm were abundant and stones in the range 6-60 mm were present; some of these were either chalk or chalk-coated flint. Brick/tile, charcoal, marine molluscs and land/water molluscs were present

GBA (1 kg tested): The flot included a few scraps of unidentifiable plant detritus and a few small fragments of charcoal. There was a single poorly preserved insect fragment. The residue was primarily of rounded chalk gravel to 30 mm, with moderate amounts of brick/tile (to 35 mm) and sand, and traces of charcoal (30 mm), coal and cinder (both to 15 mm) and rare fragments of cockle and oyster shell.

BS (4 kg): A large number of small fragments of brick/tile, some fragments of mortar, large amounts of cinder, some small fragments of coal, small amounts of bone, charcoal and shellfish, three fragments of pottery and a worked bead were recovered from this sample. The bone recovered is discussed below.

The microfossil 'squash' was mostly inorganic with a moderate amount of organic detritus, two *Trichuris* sp. eggs and a few fungal spores.

Context 240 [post-use infill of cess pit 231. ?14th century]

Sample 24001: Moist, moderately heterogeneous buff-coloured fine clay in lumps to 50 mm with mm-scale orange mottles and mid grey/brown plastic silty clay. Flint, 2-6 mm stones and mortar/plaster were present and brick/tile (to approximately 60 mm) was common. Charcoal, mammal bone and marine molluscs were also present.

GBA (1 kg tested): There were a few scraps of unidentifiable plant detritus and a single rush (*Juncus* sp.) seed in the flot, together with a small group of poorly preserved insect fragments of no clear interpretative significance. The residue consisted of moderate amounts of gravel and sand, the former including some rounded chalk fragments. For the rest there were traces of brick/tile (to 35 mm) and of coal, cinder and oyster and mussel shell.

BS (9 kg): The residue was mostly mortar/plaster and limestone with some brick/tile, coal and shellfish and a little coke/cinder, charcoal, bone, shellfish, a few burnt twigs and pottery. The bones recovered are discussed below.

The microfossil 'squash' was very organic with large amounts of organic detritus, many fungal

spores and a single *Trichuris* sp. egg. A single live soil nematode was also seen.

Context 242 [similar to 236. ?14th century]

Sample 24201: Moist, very heterogenous mid grey/brown clay and dark buff, crumbly, working plastic, clay. Mortar/plaster, brick/tile, mammal bone and marine molluscs were present and charcoal was abundant.

GBA (2.25 kg tested): There were only a few fragments of coal and/or cinder in the flot, together with some fragmentary invertebrate remains of no interpretative value. The residue was dominated by cinder to 30 mm, with a little coal, but also included moderate amounts of sand and oyster shell and traces of bone (to 40 mm, some of it burnt), brick/tile (to 50 mm) and mortar/plaster (to 10 mm).

The microfossil 'squash' was very organic with a large amount of plant detritus and a few fungal spores, ?pollen grains and insect fragments (including one fragment of ?*Ptinus* sp. elytron).

Context 244 [fill of cess pit 231. ?14th century]

Sample 24401: Moist, very heterogeneous mid buff, fine clay and orange clay with mid-dark grey/brown, crumbly, working plastic, sandy silty clay. Stones in the range 2-6 mm, mortar/plaster and brick/tile were present. Charcoal and mammal bone were also present.

GBA (1 kg tested): The flot, although small, was rich in seeds of rush (*Juncus* sp(p).), not identified further at this stage, but perhaps indicative of material used in flooring. There were remains of about ten beetle taxa, but these had no ecological consistency and thus provide little useful information. There were moderate amounts of sand in the residue, together with coal and cinder (to 25 mm). Traces of stone (to 20 mm), bone (to 35 mm), brick/tile and mortar/plaster (both to 15 mm) were also present.

BS (9 kg): The residue was mostly flint, chalk, coal, cinder and charcoal with some brick/tile, mortar, nails, plant material (including ?seeds), bone, shellfish, ?insect fragments and eggshell. the bone recovered is discussed below.

The microfossil 'squash' was mostly organic detritus with many seeds (probably rush seeds, in view of the results of paraffin flotation).

Bone

Hand collected

Overall preservation was fair to good; most of the bones were fawn in colour. Only a small number of bones were found to give evidence of butchery, including some bird bones with knife marks. Fresh breakage, although present, never reached frequencies of over 10%; rodent gnawing, however, was quite frequent, particularly on the bird bones.

Although only 70 bone fragments (weighing 901 g in total) were recorded from the thirteen medieval/post-medieval contexts, a wide range of species was represented. These included cattle (4 fragments), sheep (6), pig (3), chicken (3), goose (1) and duck (2). In addition, there were also single fragments of rabbit and cod, whilst three fallow deer elements (a metacarpal and two phalanges) were recovered from context 223. There were no mandibles with teeth. Only seven bone fragments from which useful measurements could be made were present.

BS samples

The results of the investigations are presented in context number order, with phasing information from the excavator concerning in square brackets.

Context 217 [phase 3]

Only two identifiable large mammal fragments were recovered from this sample, the rest being mostly unidentifiable but including a number of caprovid (sheep/goat) rib, vertebrae and shaft fragments. Bird remains were also mostly unidentifiable, those which could be named being domestic fowl.

Small mammal remains were more numerous. Two fragments (a scapula and an upper incisor) were

identified as black rat (*Rattus cf. rattus*) and *Rattus* sp. respectively. Thirty-five fragments (representing at least six individuals) were identified as mouse. One mandible was identified as house mouse (*Mus musculus*) and two mandibles as cf. *Mus musculus*; the remainder could not be identified to species. Fish species present included perch, herring, flatfish and Gadidae.

Context 236 [phase 1]

A few unidentifiable fragments of large mammal bone and some fish bones (herring and Gadidae) were recovered from this context.

Context 240 [phase 1]

The bone remains from this sample were mostly unidentifiable fragments with the exception of two fish vertebrae identified as gadid.

Context 244 [phase 1]

The sample from this context included, approximately, twenty unidentifiable fragments of mammal and bird bone. Fish remains were more numerous, and included bones of whiting, herring, saithe and flatfish.

Discussion and statement of potential

Preservation of plant and invertebrate macrofossils was generally very poor, although the sample from context 217 gave an insect assemblage of modest size which could be interpreted. The accumulation of organic material on this floor indicates some neglect, although nothing inconsistent with occupation. The abundance of small mammals suggests infestation of this building; again, not inconsistent with normal domestic or business life at this period.

The abundance of rush seeds in the sample from 244 are of interest; such large numbers, in the absence of other plant remains, suggest the deliberate use of rushes, perhaps as litter for floors (although the species concerned needs to

be established to be sure that it is a type which could have been used in this way), and this may indicate that a component of this pit fill deposit was reworked floor sediment. The absence of food remains and parasite eggs, and the lack of a distinctive insect assemblage, moreover, militate against the interpretation of the fill examined as having a faecal origin.

The two contexts mentioned above have potential for further investigation, to elucidate the archaeological interpretation and, in the case of 217, to provide a quantitatively recorded insect assemblage for inclusion in species association analyses designed to facilitate future interpretation of such material.

The hand-collected animal bone assemblage and the bone material recovered from sieving are of limited potential for interpretation or research in view of their small size and the small numbers of fragments providing biometrical or age-at-death data. These factors, together with the uncertain dating, render the material of little interpretative value.

Bones from a single sieved sample (context 217) do, however, provide interesting interpretative information regarding this floor deposit.

Recommendations

The rush seeds from context 244 should be examined further to establish their specific identification. Additional work on the insects remains from this deposit may provide some understanding of its origin; although assigned priority 2 in isolation, their importance is enhanced in view of their association with the rush seeds.

The insect remains from context 217 should be studied in more detail in order to enhance interpretation and provide a useful reference assemblage.

The environmental evidence from this site, although limited, includes aspects worthy

of publication, particularly the results from contexts 217 and 244. It should be considered together with material already examined from deposits to the rear of 39 High Street (Carrott *et al.* 1994).

Retention and disposal

All the material should be retained pending decisions regarding further work.

Archive

All extracted fossils from the test subsamples, and the residues and flots, are 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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Appendix:

Table 1. Times required for further processing and for recording plant and invertebrate remains from samples from HHS94. These times do not include data entry, analysis and report writing; they are provided as a guide only. Key: P1—top priority...P3—low priority. P0—no remains.

Context	Sample	Tech. time for further processing	Priority and recording time:				
			plants	parasites	insects	snails	bone
217	21701	4 hrs	P0	P0	P1, 2 hrs	P0	P3
236	23601	1 hr	P0	P2, 1 hr	P0	P0	P3
240	24001	2 hrs	P0	P2, 1 hr	P3, 2 hrs	P0	P3
242	24201	0 hrs	P0	P0	P0	P0	P3
244	24401	4 hrs	P1, 2 hrs	P0	P2, 2 hrs	P0	P3