MRH

An assessment of biological remains from excavations at the Methodist Church, St Saviourgate, York

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Summary

A series of samples of dumps, demolition levels and pit fills were examined in the laboratory and a small number selected for analysis. They contained very small numbers of mostly poorly preserved biological remains of no interpretative value other than a little bone. Further excavation would have only limited financial implications so far as 'environmental' investigations are concerned, although bulk-sieving should be employed and especial care should be taken to ensure that no deposits with 'waterlogged' preservation are overlooked.

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28-5-91

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Methods

Fifteen subsamples of raw sediment were examined in the laboratory and their sedimentary characteristics recorded. It was agreed in advance that samples from contexts 22 and 24, both pit features, would be processed as GBA (general biological analysis) samples and that two would be bulk-sieved (BS; Kenward *et al.* 1980). Two of the remaining samples, chosen as the most likely to have preservation of biological remains, would also be examined in more detail, one as a GBA, one a BS. Eight of the samples were judged to be unworthy of any further action.

A 'rapid assessment' was carried out on three 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 sought from the flot from paraffin flotation and from the dried residues.

Four of the samples (two of these were from the same context and were combined prior to processing, so that there were only three residues) were processed by bulk-sieving, the samples being sieved to 1 mm after being described. This resulted in residues, retained on the mesh, which were dried prior to examination. The residues were examined for the larger animal and plant remains and for artefacts (the latter being bagged separately and returned to the excavator).

The samples and results of the analyses

The analyses carried out on each sample, and the remains recovered, are noted 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.

Sample numbers were assigned in the EAU in order to distinguish between samples from the same context. These sample numbers are related to the context numbers (provided by the excavator) in the following way: the first sample described from a given context has a sample number which is the same as the context number but prefixed by the number 1, the second sample will have the prefix 2 etc. Hence the first sample described from context 16 has sample number 116, the second has sample number 216 and so on.

The samples are presented in context number order.

Context 11 [demolition/levelling]

Sample 111: Dark, grey-brown, moist, crumbly, silty sand. Brick/tile was common in the sample and charcoal and pieces of clay pipe were also present. The charcoal was present in a more granular form than in the other samples. When rubbed the sediment produced brown staining this differs from many of the other samples which produced a black stain. No further analyses were undertaken.

Context 15 [dump]

Sample 115: Mid to dark, purplish grey-brown, moist, brittle and crumbly sediment. This appears to be coal ash with a sandy texture. Small particles of mortar were present in the sample. No further analyses were undertaken.

Context 16 [dump]

Sample 116: Very dark, grey-brown, moist, crumbly, silty sand. Brick/tile and flecks of ?mortar were present, stones in the range 2-20 mm were common and fine charcoal or soot was abundant in the sample.

Sample 216: Dark, somewhat purplish brown, moist, crumbly, silty sand. Mortar, brick/tile and coal cinder were present in the sample which also produced a black, 'charcoal' smear when rubbed.

A 4 kg subsample of sample 216 was bulk-sieved. The residue was mainly composed of coal, cinder and clinker, with small stone fragments, traces of brick/tile and a little bone (including burnt fragments); there were artefacts in the form of a fragment of clay-pipe bowl, glazed pot, glass, a copper alloy pin and lumps of iron corrosion, apparently derived from iron objects. Apart from bone (three unidentified mammal fragments), no biological remains were recorded.

Context 20 [dump]

Sample 120: Dark, yellow-grey-brown, moist, crumbly, silty sand. Charcoal, brick/tile, burnt soil and coal cinder were present and mortar was common in the sample.

Sample 220: Essentially the same as sample 120 above.

The two samples were combined and a total of 9 kg was bulk-sieved. The residue was mostly brick/tile, with large amounts of clinker, cinder and mortar/plaster. There were smaller amounts of bone and shellfish (mussel shell) and some stones, including chalk and limestone. Artefacts were present; these included a corroded iron object, some glass and a copper alloy pin. The bone consisted of an unfused proximal epiphysis of the right first phalange of *Bos*, a calcined sheep- to roe deer-sized right calcaneus fragment, a bird tibiotarsus fragment of domestic fowl size, a small mammal rib and various unidentifiable fragments, some calcined.

Context 22 [pit fill in cut **23**]

Sample 122: Dark, grey-brown, moist, crumbly and plastic, slightly heterogeneous, slightly sandy, clay with more or less 'earthy' components. Mortar and traces of charcoal were present in the sample.

A 2 kg 'test' subsample was washed to 300 µm. The flot from paraffin flotation was minute and consisted mainly of charcoal/coal and vesicular 'char', presumably derived from bituminous exudates from coal. There were a few scraps of plant tissue, and a very small number of seeds, including a single elderberry seed (*Sambucus nigra*) and several toad-rush seeds (*Juncus bufonius*). Invertebrate remains were very rare and poorly preserved; they included a mite, the mould-feeding 'plaster beetle' *Lathridius minutus* group, and a leg, tentatively identified as *Sitophilus granarius*, the grain weevil. There were a few other unidentifiable scraps of insect cuticle.

The dried residue contained quite large amounts of sand, brick/tile and mortar/plaster, with traces of coal, clinker, cinder, and small bone fragments. Iron corrosion was also present. The bone consisted of a few fragments of fish and two bird fragments: a distal humerus fragment of a large species, probably domestic goose, and an unidentified skull fragment.

It is difficult to determine whether the biological remains recorded represent all that is left of a larger assemblage, most of which has decayed, or whether input of organic matter was very low. Bearing in mind the nature of the bulk of the material, the latter explanation appears the more likely.

Context 24 [pit fill in cut **25**]

Sample 124: Mid yellow-grey-brown, moist, plastic and crumbly, sandy, silty, clay. The sediment had a slightly heterogeneous appearance caused by some parts being in a 'pure' form whilst others had become 'earthy'. Large bone fragments (greater than 20 mm), mortar, brick/tile and coal (some partly burnt) were present in the sample.

Sample 224: Broadly like sample 124 above. Small bone fragments (less than 20 mm) were present in the sample.

A 2 kg 'test' subsample of 124 was processed and the resultant flot was tiny and consisted mostly of small fragments of carbonised material. There were a few poorly preserved seeds of the cornfield poppy *Papaver argemone* and a mineralised seed of a member of the Boraginaceae, possibly another segetal, *Anchusa arvensis*. A few fragmentary seeds of other taxa, not securely identified, were also present. Invertebrates were poorly preserved and rare. There were a few unidentifiable scraps of insect cuticle, a leg tentatively identified as the beetle *Trox scaber*, a species frequently recorded from urban archaeological deposits, and a single sac which appeared to be a badly rotted earthworm egg capsule.

The dried residue from this subsample consisted mainly of sand, brick/tile, mortar/plaster and coal, with a little bone, clinker, cinder and pottery and iron corrosion. The bone included single fragments of *Bos* (cow; proximal fragment of left metatarsus) and large bird (a goose-sized tracheal ring) and some unidentifiable fish and mammal fragments, including a fish scale.

Bulk-sieving of a 5 kg subsample of 224 gave a residue containing much brick/tile, mortar/plaster and cinder, with some sand, gravel, coal and clinker. There were also small amounts of bone, including fish, shellfish (mussel shell), bird eggshell,and artefacts (a copper alloy pin, iron corrosion and glazed pot). The bone comprised ten fragments of unidentifiable fish and nine of mammal, with a single fragment of bird.

Context 29 [demolition]

Sample 129: Mid yellow-brown, moist, plastic, slightly heterogeneous, silty, clay with a minor matrix component of yellow-brown clay. Mortar was common in the sample and charcoal and brick/tile were present.

Sample 229: Mid grey-brown, moist, plastic, slightly heterogeneous, slightly sandy, clay with minor matrix components of more sandy and more pure clay areas. Small pieces of limestone (less than 10 mm), brick/tile and charcoal were present in the sample.

No further analyses were undertaken on either of these samples.

Context 31 [demolition]

Sample 131: Black and red-orange (iron oxidation), very hard, indurated, burnt clay. Blue-green metallic slag (copper or copper alloy) was present in the sample. It seems likely that some of this material originated in, or at least beneath, a hearth.

Sample 231: Dark grey-brown, moist, plastic and crumbly, slightly heterogeneous, clay with minor matrix components of crumbly, 'earthy' material and patches of more sandy deposit. Indurated burnt soil was present in the sample and charcoal was common.

No further analyses were undertaken on either of these samples.

Context 41 [demolition]

Sample 141: Mid yellowish grey-brown, moist, plastic and crumbly, silty, clay with minor matrix components of more clayey and more 'earthy' deposit. Burnt earth was present, large pieces of limestone (greater than 20 mm) were common and mortar was abundant in the sample.

Sample 241: Mid to dark, grey-brown, moist, stiff to plastic, slightly sandy, clay. Charcoal, mortar, brick/tile and streaks of reddish-yellow clay were present in the sample.

A 2 kg 'test' subsample from 241 gave a minute flot of very decayed woody plant fragments. There was a single *Sambucus nigra* seed. Invertebrate preservation was extremely poor; there were a few unidentifiable scraps of cuticle, a barely recognisable *Daphnia* ephippium (water-flea resting egg) and tiny pieces of at least two beetle taxa.

The dried residue contained large amounts of sand, some small limestone, brick/tile and mortar/plaster fragments, and traces of cinder and coal and a little bone. The latter comprised a rib fragment of a large mammal (horse or cow), a cervical vertebra of a bird of pigeon to bantam size, and some unidentified fragments of fish and mammal.

Implications

If the material described here is typical of that at the site there is no need for investigation of most plant and invertebrate remains. There would be a need, however, to ensure that no deposits containing charred seeds, or calcareous remains such as mollusc shell and bone were overlooked, implying the need for a regime of bulk-sieving, essential in any case to recover small artefacts and to assess the general nature of the deposits. Even bone was sparsely represented and poorly preserved, although useful groups might be obtained by bulk-sieving sufficient quantities of sediment. The generally poor preservation also has the implication that any deposits with waterlogged preservation would be of particular value.

References

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