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**An evaluation of biological remains from excavations
at York Minster Library (site code: YML95)**

by

Allan Hall, Michael Issitt, Deborah Jaques, Harry Kenward and Frances Large

Summary

Five samples of sediment and three 'spot' samples were submitted for an evaluation of their potential for bioarchaeological analysis. Only traces of plant and animal remains were recovered.

The material has little interpretative value and no further biological analyses are recommended.

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Authors' address:

Environmental Archaeology Unit
University of York
Heslington
York
YO1 5DD

Telephone: (01904) 433843-51
Fax: (01904) 433850

Prepared for:

Derek Phillips
The Old Cottage
New England Lane
Cowlinge
Newmarket Suffolk
CB8 9HP

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Introduction

Five sediment samples ('GBAs' *sensu* Dobney *et. al.* 1992) from excavations at York Minster library were submitted for an evaluation of their bioarchaeological remains. The samples were taken from two sections within the trench subsequent to the completion of the excavations. In addition there were three small 'spot' samples recovered during excavation, as well as part of a wooden stake uncovered during the following watching brief.

Methods

GBA samples

The samples were inspected in the laboratory and their lithology recorded using a standard *pro forma*. Subsamples of 2 kg were taken from all the samples for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986). As the organic content of the samples was negligible 'washovers' were taken rather than flots.

The washovers and residues resulting from processing were examined for plant and invertebrate macrofossils.

'Spot' samples

The samples were scanned and a brief description or identification of the material was made.

Results

The results of the investigations of the sediment samples are presented in sample number order.

Sample 1/T Context ZE3 [8th century]

Moist, dark grey, plastic sandy, silty clay with fragments of limestone, brick/tile, charcoal and mammal bone present. The deposit had the appearance of 'dark earth'.

The small washover consisted mostly of charcoal and fragments of elder (*Sambucus nigra* L.) seeds. A few seeds from other species were present: *Aethusa cynapium* L. (fool's parsley), *Hyoscyamus niger* L. (henbane), and *Conium maculatum* L. (hemlock), forming an assemblage of plants from disturbed places. Several earthworm capsules were also present.

The residue consisted almost entirely of stones and sand with a little brick/tile and some charcoal (to 5 mm). A few fragments of unidentifiable mammal bone, one small mammal bone, and a fragment of oyster shell were also present.

Sample 2 Context ZE4 [8th century]

Moist, mid-dark grey, plastic (with hints of a lost crumb structure), sandy clay, with traces of localised mineralisation. Medium (20-60 mm) and large-sized stones (>60 mm) and mammal bone were present in the sample. As with Sample 1, the deposit looked like 'dark earth'.

The washover was composed mainly of very fine charcoal (but with one or two larger pieces) and sand, with many fragments of elder seeds (*Sambucus nigra* L.). The latter are preservationally very robust and to have survived differentially. A very small and badly preserved piece of ?weevil elytron was present.

In addition to stones and sand the residue contained a few fragments each of: brick/tile; charcoal (to 1 cm); oyster shell; and mammal bone.

Sample 3 Context ZE9 [4th century]

Moist, mid grey, crumbly (working plastic), sandy, silty clay, with medium-sized stones (20-60 mm) and small fragments of limestone. Also included in the sample was an iron object, possibly a nail.

Charcoal (to 5 mm) and sand were predominant in the small washover. In addition there was a little plant detritus, some fragments of elder seed (*Sambucus nigra* L.) and a few earthworm capsules.

The only remains in the residue, other than sand and stones, were a few small pieces of charcoal, some fragments of mammal bone, and a pig tooth.

Sample 4 Context ZE10/11 [no date]

Moist, mostly light grey (with white, orange/brown and red/brown patches), plastic, slightly sandy clay. Stones, varying in size from 2 mm to >60 mm, were abundant in the sample.

The main component of the small washover was charcoal (to 5 mm). Sand and traces of plant debris were also present (including fragments of the seeds of *Sambucus nigra* L.). Several cysts of a soil-dwelling nematode (*Heterodera* sp.), a ?bug nymph and an ant (possibly a modern contaminant) were also recorded.

The residue yielded only a few pieces of charcoal (to 1 cm) and a fragment of oyster shell in addition to sand and stones.

Sample 5 Context ZE9 [4th century]

Light yellowish-brown plastic and slightly sticky (working sticky), slightly sandy clay with limestone fragments being common. Brick/tile, pot, charcoal and mammal bone were present.

The moderate-sized washover consisted largely of charcoal (to 1 cm) and sand. Some plant debris (including fragments of moss), many cysts of *Heterodera* sp., and

a few, very tiny, pieces of mammal bone were also present.

Stones, sand and a few pieces of charcoal (to 5 mm) were the only components of the residue.

The spot samples

All three small 'spot' samples were taken from Context ZE14. Two samples contained fragments of charcoal identified as oak, the third, a cupule (fruit) reminiscent of a beech (*Fagus sylvatica* L.) nut. Further work would be necessary to secure this identification. The timber stake from the watching brief was also identified as oak.

Discussion

The few remains that were recovered from these samples are insufficient for any conclusive interpretations to be made. The presence of *Heterodera* cysts in the washovers from contexts ZE9 and ZE10/11 suggests that these deposits were not permanently waterlogged and may have been soils at some time.

The seeds from context ZE3 indicate an assemblage of plants typical of disturbed ground, but have no other interpretative value.

It is possible that these deposits accumulated gradually and were at least occasionally cultivated.

Statement of potential

None of the GBA samples yielded remains of interpretative value and therefore indicate little potential for future development.

Recommendations

No further biological analysis of the material in hand is recommended. It is

likely that sedimentological study, including field inspection and perhaps thin sectioning, of any deposits revealed in future interventions would cast light on the development of the 'dark earth'-like deposits.

Retention and disposal

These samples are not considered to be worthy of retention for further biological analyses but may have value in other 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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