

Reports from the Environmental Archaeology Unit, York 95/38, 4 pp.

**Evaluation of biological remains from excavations at The Vivars,
Selby, North Yorkshire**

by

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Summary

Four samples of sediment were submitted for an evaluation of their potential for bioarchaeological analysis.

The small number of biological remains recorded from subsamples of the material gave only limited information. Plant and invertebrate macrofossils, where present in appreciable numbers, indicated natural aquatic conditions - compatible with the natural infilling of an artificial basin but presenting no clear evidence for its origin or nature. No vertebrate remains were found.

Keywords: SELBY; THE VIVARS; BIOLOGICAL ANALYSES; PLANT REMAINS; INVERTEBRATE REMAINS

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22 May 1995

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Introduction

Samples of sediment from excavations by MAP Archaeological Consultancy Ltd. at The Vivars, Selby were submitted for an evaluation of their potential for bioarchaeological analysis.

Methods

Four samples of sediment ('GBAs' *sensu* Dobney *et al.* 1992) were submitted. The samples were inspected in the laboratory and their lithology recorded using a standard *pro forma*. Subsamples of 1 kg were taken from the samples for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986). Plant macrofossils were examined from the 'flots', the washover, and from the residues resulting from processing. The flots and washover were also examined for invertebrate remains. None of the samples were thought suitable to be examined for the eggs of parasitic nematodes.

Results

The results of the investigations of the sediment samples are presented in context number order. Context information provided and questions posed by the excavator are presented in brackets.

Context 2005 [?Post-medieval silting or 'build-up' in top of pond. *Reason for sampling?*: Could this deposit represent 'colonisation' of the Abbey pond, or was it deposited in standing water?]

Sample 1

Moist, mid grey-brown with mm-scale orange mottling, crumbly and sticky (working plastic), silty clay with freshwater molluscs present.

The small washover was mostly plant detritus (abundant roots and monocotyledonous plant rhizome and stem fragments) with some charcoal

(to 5 mm). Fragments of two unidentified weevils and of a few unidentified freshwater molluscs were also noted.

Exceptionally, there was no residue from processing; grain sizes were thus uniformly small (less than 300:µm) and deposition in (still or slow-flowing) water appears likely.

It is likely that, because of poor preservational conditions, the robust fragments of weevils and snails are all that remains from a larger invertebrate death-assemblage.

Context 2006 [?Uppermost of pond silts. *Reason for sampling?*: Was this deposit laid down in standing water? Compare with Context 2007.]

Sample 2

Moist, mid to dark grey with mm-scale orange mottling, stiff and slightly crumbly (working plastic), slightly sandy clay.

The tiny flot was mostly roots with some other plant detritus (including the aquatic taxa *Ranunculus* Subgenus *Batrachium* and *Alisma* sp.).

The tiny residue was mostly roots and rootlets and clasts of undisaggregated iron-rich sediment (to 2 mm). Again, the particle size range was uniformly below 300:µm.

Context 2007 [?Intermediate pond silt. *Reason for sampling?*: Was this deposit laid down in standing water? Compare with Context 2006.]

Sample 3

Moist, grey with mm-scale orange mottling, stiff (working plastic), clay.

The small flot was fine plant detritus with fragments of an adult fly and a ?modern beetle (*Meligethes* sp.).

The tiny residue was very similar in composition to that from Sample 2 (above).

There was thus little evidence as to conditions of deposition, although, once more, the particle size range suggests quiet aquatic conditions.

Context 2008 [Siltng into base of pond. *Reason for sampling?*: If this is the base of the Abbey fishpond is there any indication of the local environment (?any fish bones)? Was this deposit laid down in standing or running water?]

Sample 4

Wet, mid grey-brown, sticky and slightly crumbly (working plastic), silty clay with some herbaceous detritus, modern roots and charcoal.

The small flot was mostly plant detritus and rootlets. A small assemblage of poorly preserved beetles and other invertebrate remains was present. This was dominated by 'outdoor' forms with an appreciable component of aquatic species and decomposers typical of natural habitats (e.g. moss).

The tiny residue consisted of abundant tiny flakes of bark and other non-woody plant detritus, with no trace of a coarse mineral component

The biological remains provide no clear evidence of water condition but, subjectively, are indicative of still or slow-moving water.

Discussion and statement of potential

These aquatic deposits appear to be natural or to represent the natural recolonisation and infilling of an artificial basin. There was some aquatic and marginal vegetation, and growth of roots from vegetation above into the clays; these may indicate reedswamp or carr in the later stages. The insect remains are compatible with such an interpretation, suggesting still or sluggish water with natural vegetation at the margins. If the laboratory description of the sediments as 'clay' with only traces of coarser particles, are correct (no particle size analyses could be made within project constraints), then static or near-static conditions are indicated.

No vertebrate remains were recovered.

Other than its perhaps representing gradual natural infilling of an artificial basin, little useful comparison may be made with the

series of aquatic infill deposits at the rear of Gowthorpe, Finkle Street and Micklegate in Selby town centre (Carrott *et al.* 1993).

Recommendations

No further work is recommended on the material in hand.

Retention and disposal

The samples recovered during this exercise are not thought worthy of retention.

Archive

All extracted fossils from the test subsamples, and the residues, flot and washover, are currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to Anne Finney of MAP Archaeological Consultancy Ltd. for making this material available and to English Heritage for allowing Allan Hall, Harry Kenward and Annie Milles to contribute to this work.

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