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**Assessment of biological remains from further samples
from excavations in Crankleys Lane, on the Easingwold by-pass
(YAT/Yorkshire Museum sitecode 1993.5000)**

by

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Summary

A second group of samples from excavations along the line of the by-pass for Easingwold, North Yorkshire, have been assessed for their bioarchaeological value. This series includes samples obtained during a watching brief after the main phase of excavation and some samples from contexts not examined during the first phase of assessment.

Useful biological remains in these samples were limited to those in a single sample in a ditch fill observed during the watching brief. This gave evidence of both an aquatic flora and remains of hemp (*Cannabis*) and flax (*Linum usitatissimum*) indicative of retting of these fibre crops in a body of water.

More work on the ditch fill with remains of fibre plants is also suggested, to make a proper record.

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Assessment of the biological remains from further samples from excavations in Crankleys Lane, on the Easingwold by-pass (YAT/Yorkshire Museum sitecode 1993.5000)

Introduction

Twenty-two general biological analysis (GBA, *sensu* Dobney *et al.* 1992) samples were submitted by the excavator, so that a subset could be selected for analysis of animal and plant remains. These comprised material obtained during a watching brief at the site, following the main phase of excavation (Series 1), together with eight samples (Series 2) not examined during the first phase of assessment (Carrott *et al.* 1993).

Methods

All of the 22 samples were inspected in the laboratory. Twelve of them were selected for processing on the basis of their apparent content of organic matter. 'Test' subsamples of 1 kg were employed for the eight Series 2 samples, and the whole of each of four of the Series 1 samples was processed, following the methods of Kenward *et al.* (1980), as modified by Kenward *et al.* (1986). Invertebrates were extracted by paraffin flotation where it was evident that organic material preserved by anoxic waterlogging was present; in other cases, charred material and any other undense material was extracted by means of a 'washover'.

Results

The sediment descriptions and results of the analyses of biological remains are given in the appendix.

Discussion

Only one of the samples examined yielded useful assemblages of plant and invertebrate remains. It gave evidence for deposition in water and of probable retting of fibre plants.

Statement of potential

The single productive sample may, on further examination, offer a little more bioarchaeological information. However, there is no further material available so the residue and flot to hand would need to be used for any further work. This limits the interpretative potential of the insect assemblage, but some information concerning the depositional regime and the nature of the surrounding terrestrial habitats could be obtained.

Recommendations

It is recommended that the material from sample 183 should be recorded fully providing a date can be secured.

The implications of this for resources are as follows:

Recording plant remains: 3 hours RF2;
sorting for insect remains: 8 hours technician; identifying insect remains: 16 hours RF1; report preparation (additional to time costed by Carrott *et al.* 1993): 4 hours RF1+2.

Retention/disposal

All material should be retained until a decision about further post-excavation work can be made.

Archive

All processed material and paper and electronic archives relating to it are currently stored at the EAU, University of York.

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References

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Appendix

The analyses carried out on each sample, and the remains recovered, are reported below, together with a laboratory description of the sediment. The Series 2 samples are presented in the groups assigned by the excavator. 'Core' contexts for a group are presented before those which may be associated with it; within this the ordering is by context number then sample number. A brief archaeological description and/or interpretation of contexts within each group is given where available and a reason for sampling, if known, is given in brackets following the sample type heading.

Series 1: Material retrieved during watching brief

Context: 702

Sample: 186 (silts from basal ?ditch fill 702)

Sample type: GBA (1.19 kg processed)

Mid/dark grey/brown with an orange cast, plastic to crumbly sandy silt to silty sand with a little clay throughout.

The moderately large washover was mostly plant detritus with traces of arthropod cuticle of no interpretative potential; there were moderate numbers of *Sambucus nigra* seeds, mostly in fragments. A trace of charcoal <2 mm was also present.

Context: 712

Sample: 183

Sample type: GBA (0.48 kg processed)

Moist, mid to dark grey/brown, layered, compressed, fine/coarse/woody herbaceous detritus (with locally sandy partings) and amorphous organic sediment.

There was a very large flot from this subsample, examined for insects but not plant remains. There were numerous invertebrate fossils, including abundant immature insects and a substantial group of adult beetles and bugs. Aquatics were important, but all those which could be identified within the scope of an assessment were eurytopic (of wide

ecological amplitude). Terrestrial forms were present in small numbers, just sufficient to provide a basis for tentative reconstruction of the surrounding environment. The flot would require 8 hours for sorting and the insect remains 2 days for identification. It is regrettable that more of this material could not be collected.

Plant macrofossils were abundant and well preserved in the large residue, which consisted mainly of herbaceous plant detritus and twig fragments, the former including many tree leaf fragments. Most frequent amongst the fruits and seeds were pyrenes of *Potamogeton* spp. (pondweeds) and *Menyanthes* (bog-bean), representing the local aquatic flora, but there were occasional achenes of *Cannabis* (hemp) and seeds and capsule fragments of *Linum usitatissimum* (linseed/flax), suggesting that the body of water in which these deposits formed had been used at some point for retting these fibre crops. Time required to make a proper record of this material is estimated as 3 hours.

Context: 744

Sample: 185

Sample type: GBA (0.96 kg processed)

Mid to dark grey and yellowish/brown, crumbly, more and less layered silty sand to clay sand to sandy clay with some herbaceous detritus.

The very small flot included some plant detritus and root bark and root/rootlet fragments but no identifiable plant or invertebrate remains; the small residue was of white sand with some unidentifiable plant detritus.

Context: 848

Sample: 191

Sample type: GBA (1 kg processed)

Moist, mid/dark grey/brown (with a purplish cast), very slightly plastic, slightly 'rubbery' to crumbly, working plastic, clay, sandy silt (in almost equal amounts).

The tiny flot contained traces of plant detritus and moderate numbers of *Juncus* (rush) seeds and no more than a trace of invertebrate remains; the residue was of white sand.

Other samples in this series

The remaining samples were not assessed by means of a 'test' subsample. They were all very small and/or completely dry. Most contained at least a little charcoal, much of it small (<5 mm) and are probably not worth further examination unless there is a specific question to be addressed.

Series 2: Further samples from main excavation

Group D

Context type: Core [ditch and backfill]

Context: 1166

Sample: 13

Sample type: GBA (1 kg processed)

Moist, light/mid pinkish grey, crumbly and soft, silty sand with ?concreted lumps to 30 mm (squash suggests iron oxides are coating some grains) and hints of clay. Burnt sandstone in the >60 mm range was present.

The very small washover contained a few weed seeds, perhaps modern, and a trace of charcoal <2 mm; there were no invertebrate remains. The residue was mostly clean white sand with a trace of brick/tile or daub and charcoal to 10 mm. There was also a little iron-concreted sand.

Context: 1169

Sample: 16

Sample type: GBA (1 kg processed)

Moist, mid yellowish crumbly, soft, silty sand.

The very small washover contained a few probable weed seeds (perhaps modern), with some very fresh earthworm egg capsules and some rootlet fragments, with no more than a trace of unidentifiable invertebrate remains. The small residue was of white sand with about 30% by volume of iron-concreted sand and a trace of charcoal <5 mm.

Context type: Associated [boundary ditches]

Context: 1125

Sample: 81

Sample type: GBA (1 kg processed)

Moist, light to mid orange/brown, crumbly, silty clay with burnt sandstone in the 2-20 mm range and local patches of more or less silty and sandy parts. Local patches were more stiff and brittle.

The very small washover contained uncharred probable weed seeds in very small numbers and in a poor state of preservation. There was also a single ?contaminant *Atomaria* sp., but otherwise no more than a trace of unidentifiable invertebrate remains. The residue was small and consisted of white sand with traces of charcoal <10 mm and of iron-concreted sand.

Group E

Context type: ?Associated [sub-circular enclosure]

Context: 1130

Sample: 66

Sample type: GBA (1 kg processed)

Moist, light/mid grey with patches of more purple, brown, orange and yellowish cast, crumbly, soft silty sand. A modern millipede was present.

The washover was very small and included some ?modern weed seeds and rootlet fragments, together with a single *Lathrobium* sp. sclerite. The latter was yellow in colour and quite possibly a post-depositional contaminant.

The small residue was about 60% by volume white sand with 40% of iron-concreted sand.

Context type: ?Associated [palisade slots]

Context: 1273 (from cut 1309)

Sample: 76

Sample type: GBA (1 kg processed)

Moist, light grey/brown (with reddish- brown and yellowish patches), crumbly and slightly stiff silty sand with millimetre scale patches that were more or less sandy. A very curious deposit in which the sand is distributed in an irregular fashion through finer, apparently ped-like, sediments. Germinated seedlings were present.

There was a very small washover containing a small range of rather poorly preserved ?modern weed seeds. No more than a trace of invertebrate remains was present. The small residue was of white sand with a little iron-concreted sand.

Group F

Context type: ?Associated [metalworking furnaces]

Context: 1350

Sample: 104

Sample type: GBA (1 kg processed)

Moist, light/mid yellowish/grey (with yellowish, orangish and greyish patches), generally crumbly, silty sand with charcoal present.

The very small washover was mainly of charcoal <10 mm, with traces of root/rootlet fragments and root bark and two modern or ?modern seeds. Traces of insect cuticle were observed, but the material had no interpretative value. The small residue was about 60% by volume white sand and 40% iron-concreted sand, with a trace of charcoal to 20 mm.

Context type: ?Associated [(metalworking) round-house wall slot]

Context: 1351

Sample: 105

Sample type: GBA (1 kg processed)

Moist, light/mid, slightly crumbly, slightly brittle and slightly stiff silty sand. There were more local patches of paler sand and some were more clayey.

The very small washover included some modern and ?modern weed seeds and modern earthworm egg capsules and moss shoots; no more than a trace of invertebrate remains was present. The small residue was about 90% by volume white sand with some iron-concreted sand and a trace of charcoal to 10 mm.

Context type: ?Associated [palisade slots]

Context: 1364

Sample: 114

Sample type: GBA

Moist, light/mid pinkish grey, crumbly and soft, silty sand with ?concreted lumps of pan material to 30 mm (squash suggests iron oxides are coating some grains). Locally slightly biscuity from 'panning'. Burnt sandstone in the >60 mm range and rotted charcoal were present.

The very small washover was mostly unidentifiable plant detritus <5 mm, with a little charcoal of similar size. ?Modern seeds of *Atriplex* and *Sambucus nigra* were present, together with a very poorly preserved ?*Raphanus raphanistrum* (wild radish) seed pod fragment. There was no more than a trace of invertebrate remains was present

The residue was small and consisted of about 60% by volume of white sand with 40% fused sand (?slag), a stone to 30 mm and traces of charcoal and burnt bone (both to 15 mm).