

Palaeoecology Research Services

**Evaluation of biological remains from excavations at
Barmby-on-the-Marsh, East Riding of Yorkshire
(site code: BOM2001)**

by

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Summary

Six sediment samples, a small box of hand-collected vertebrate remains and a single oyster shell were recovered from excavations at High Street, Barmby-on-the-Marsh, East Riding of Yorkshire. The excavated deposits provided evidence for six phases of activity, dating from the medieval period through to the present day. All the material was submitted for analysis to determine its bioarchaeological potential.

Plant and invertebrate remains from pre-occupation deposits indicated the presence of occupation in the vicinity. Nettle and hemp seeds, together with flax capsule fragments, from Context 1037 suggest that the channel may have been used for retting hemp, flax and nettle for fibre, though no vegetative material was observed which might support this. Invertebrate remains from the same context were abundant and are worthy of further investigation to amplify local ecology.

A very small vertebrate assemblage was recovered, which included remains of the major domestic mammals, cattle, horse, caprovid and pig. There were too few fragments to be of interpretative value and no further work is recommended.

Additional work on samples from Context 1037 (if it can be sufficiently well dated) would be of use for investigating the local environment and human activity in more detail.

KEYWORDS: BARMBY-ON-THE-MARSH; EAST RIDING OF YORKSHIRE; EVALUATION; MEDIEVAL; POST-MEDIEVAL; PLANT REMAINS; MARINE MOLLUSCS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

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Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology at Barmby-on-the-Marsh, East Riding of Yorkshire (NGR SE6903 2856), in August 2001.

Six sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), a small box (approximately 10 litres) of hand-collected animal bone and a single shell were recovered from the deposits. Preliminary evidence suggested six phases for the deposits.

Phase 1	pre-occupation
Phase 2	14-16 th century
Phase 3	Early 18 th century
Phase 4	Late 18 th century
Phase 5	Late 18 th -early 19 th century
Phase 6	Mid-late 19 th century

All the material was submitted for an evaluation of its bioarchaeological potential.

Methods

The sediment samples were inspected in the laboratory and descriptions of their lithologies were recorded using a standard *pro forma*. Samples 1 and 2 (Contexts 1037 and 1029 respectively) were processed, following the procedures of Kenward *et al.* (1980; 1986), whilst 8.1 kg of sediment from Sample 3 (Context 1034) was bulk-sieved to 300µm. The remaining samples did not warrant further examination.

The flots, washover and residues resulting from processing were examined for plant and invertebrate macrofossils and the residues were sorted for bone, and other biological and artefactual remains.

Insect preservation was recorded using the scale of Kenward and Large (1998).

All of the hand-collected bone was recorded; subjective records were made of preservation, angularity (i.e. the nature of the broken surfaces) and colour, whilst quantities and identifications were noted where appropriate. Additionally, notes were recorded for each context concerning fragment size, dog gnawing, burning, butchery and fresh breakage.

Results

Sediment samples

The results of the investigations are presented in context number order by phase. Archaeological information supplied by the excavator is given in square brackets.

Phase 1: pre-occupation

Context 1034 [silt sealing natural sand and fill 1037]

Sample 3/BS (8.1 kg): light -mid grey-brown, crumbly (working soft and sticky), slightly clay sand (with some modern rootlets).

The large residue of about 1250 cm³ was of clean quartz sand with some iron-rich concretions to about 10 mm, of which some seems to be root-moulds. Some may have been iron pan.

The washover of about 60 cm³ was rich in well-preserved uncharred elder (*Sambucus nigra* L.) seeds with some herbaceous detritus and a few charred cereal grains: oats (*Avena*), wheat (*Triticum*) and ?barley (*Hordeum*), a trace of charcoal and some fragments of charred culm node (probably cereal or reed). Two specimens were found to be charred rush (*Juncus*) seed capsules, though their identification could not be pursued. Preservation of the uncharred material was variable, suggesting a mixed origin for the material which included some weeds, other plants typical of occupation sites, and some wetland indicators. The only

invertebrates were a trace of earthworm egg capsules and three snails (one *Vallonia* sp., one *Carychium* sp., and one unidentified fragment).

Context 1037 [primary fill of channel/hollow]

Sample 1/T (3 kg): grey-brown (internally black with rotted sulphide-rich organics), slightly sandy clay silt with fine herbaceous detritus and traces of mortar/plaster, ?straw and twigs (and a smell of hydrogen sulphide).

There was a moderate-sized residue of about 400 cm³ of which barely 150 cm³ comprised clean quartz sand, the rest being granular and twiggy woody detritus. The largest twig (about 70 mm long and 10 mm in diameter) was strongly sulphide-blackened and from a section appeared to be *Prunus* (there were in addition some thorns, presumably of sloe, *P. spinosa*). The rather abundant wood fragments included a few which seemed to be chips from woodworking. Apart from the woody detritus (typical of a deposit formed in a ditch or pond near trees) there were abundant nettle (*Urtica dioica* L.) seeds and a rather wide range of other taxa preserved by waterlogging, some aquatics or marsh plants but others likely to have grown in the vicinity of human occupation. Indicators of human activity included hemp (*Cannabis sativa* L.) seeds, flax (*Linum usitatissimum* L.) capsule fragments and a single seed of opium poppy (*Papaver somniferum* L.). With the abundant nettle seeds there is a temptation here to speculate whether the body of water was used for retting hemp, flax and nettle for fibre, though no vegetative material was observed which might support this and the crop plant remains may simply have arrived as processing waste from a nearby settlement. Other possible waste in this category were the leaves of bog moss (*Sphagnum imbricatum*) from peat imported as fuel and a single fragment (to 5 mm) which may have been charred peat.

There were abundant, and generally well preserved, invertebrates (E2.0-3.5, mode 2.5, weak; F 1.5-3.5, mode 2.5, weak). Aquatic deposition was testified to by the abundant *Daphnia* ephippia (water flea resting eggs), and a range of water beetles. There were traces of waterside forms, too, and a distinct terrestrial component. The latter included indicators of human occupation. At least two bark beetles, provisionally identified as *Leperisinus varius* (Fabricius), were present. *L. varius* is generally found in moribund branches of living ash trees, perhaps suggesting another component of the local vegetation. Two snails were also noted (including one *Pupilla muscorum* (Linnaeus)). These invertebrates are worthy of further investigation to amplify local ecology; a larger subsample would be desirable.

Phase 2: 14th-16th century

Context 1029 [floor]

Sample 2/T (5 kg): light-mid grey-brown (to mid orange-brown, locally), unconsolidated to crumbly (working just soft and somewhat sticky when wet) sandy silty clay with white flecks and ?charcoal (and some modern rootlets and arthropods).

There was a small residue of about 250 cm³ of which about 200 cm³ comprised clean quartz sand with a trace of brick/tile (to 5 mm). The washover was of modern woody roots and some coal (to 15 mm) with a little charcoal and a fragment of aluminium foil. Other modern material included the bulk of the small number of seeds (some of which retained their embryos). There was no evidence of ancient invertebrate remains. A single flatfish (Pleuronectidae) vertebra was identified from this residue.

Marine molluscs

A single, poorly preserved oyster shell (right valve) was recovered from Context 1036.

Vertebrate remains

The hand-collected vertebrate remains (representing seven contexts) from the site amounted to only 13 fragments (Table 1). Most fragments were reasonably well-preserved and mainly brown in colour. Some fragments were a little battered in appearance and bones from Contexts 1009 and 1048 showed evidence of dog gnawing.

The major domestic species were present and included the remains of cattle, caprovid, pig and horse. A range of elements, representing both butchery and domestic refuse, were recorded. Fragments of use for providing biometrical and age-at-death data amounted to 2 measurable fragments and a single mandible with teeth. Details of the material recovered from each context can be found in Table 1.

Discussion and statement of potential

It is clear from the presence of remains of cultivated plants in the samples from Phase 1 contexts, that the 'pre-occupation' deposits either formed once occupation began in the vicinity (in the case of fill 1037, which seems to be a waterlain deposit) or were contaminated by subsequent occupation materials (1034).

The medieval floor (1029) was certainly contaminated with much more recent material.

As suggested by the archaeological information, the pre-occupation vertebrate remains were probably dumped in the marsh, it being a convenient location for the disposal of rubbish. Evidence of dog gnawing on the bones and the slightly battered appearance of some fragments suggests that some of the vertebrate remains must have been exposed prior to being incorporated into the deposits.

A mix of domestic and butchery waste was present, but insufficient fragments were recovered for meaningful interpretation to be undertaken.

Recommendations

It may be worth examining more material from Context 1037 *if it can be dated sufficiently closely*, to investigate the local environment and human activity in more detail. Any further intervention at this site should be accompanied by a programme of sampling of suitable deposits for the study of plant and invertebrate remains.

No further work is recommended for the present vertebrate assemblage. However, if further excavation should take place a moderate assemblage of reasonably preserved vertebrate remains is likely to be recovered. Provision should be made for the full post-excavation analysis and publication of material recovered.

Retention and disposal

All the material should be retained for the present.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

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Table 1. Hand-collected vertebrates recovered from deposits from excavations at Barmby-on-the-Marsh, East Riding of Yorkshire.

Phase	Context	Nos. of fragments	Notes
?Phase 5	1004	2.00	Preservation: good; Colour: brown; Angularity: spiky. Pig: 1 pig canine (female), 1 pig maxilla fragment. Weight: 11 g
Phase 2	1009	3.00	Preservation: good; Colour: brown; Angularity: mostly spiky, but bit battered in appearance. Pig: 1 pig radius (dog gnawed), 1 pig femur shaft fragment. ?Horse: 1 maxilla fragment, pathological. Weight: 91 g
Phase 2	1029	1.00	Preservation: good; Colour: brown; Angularity: spiky. Medium-sized mammal: 1 rib fragment. Weight: 2 g
Phase 1	1033	2	Preservation: Fair/good; Colour: dark brown; Angularity: spiky. Large-sized mammal: 2 cranium and maxilla fragments (probably cow). Weight: 95 g
Phase 1	1034	1	Preservation: fair; Colour: brown; Angularity: spiky. Medium-sized mammal: 1 vertebra fragment (unfused). Weight: 7 g
Phase 2	1036	2	Preservation: good; Colour: brown; Angularity: spiky. Large-sized mammal: 1 humerus shaft fragment. Caprovid: 1 mandible P3-M3. Tooth wear: P4 = 14S; M1 = 15A; M2 = 11A; M3 = 11G. Weight: 40 g
?Phase 1	1048	2	Preservation: good; Colour: brown; Angularity: battered. Cow: 1 humerus, distal articulation fused, proximal articulation damaged by dog gnawing. Measurements: BT = 68.7 mm; HT = 39.3 mm; HTC = SD = 28.1 mm. Horse: 1 tibia, distal articulation fused, proximal articulation fused but mostly destroyed, ? by dog gnawing. Measurements: Bd = 79.9 mm; Dd = 52.4 mm; SD = 42.5 mm. Weight: 822 g