

**An evaluation of the bioarchaeological value
of deposits from excavations at Glebe Farm,
Barton-upon-Humber, S. Humberside, 1992**

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Summary

A series of twenty samples from excavations of a Romano-British ?farmstead at Glebe Farm, Barton-upon-Humber, S. Humberside were examined for plant and animal remains. Most proved barren or nearly so. Deposits associated with timbers in a feature interpreted as a possible well or waterhole provided small assemblages of plant and invertebrate remains of diverse origins evidently deposited in standing water.

It is not felt that further investigation of biological remains from samples of the kind examined here would yield sufficient information to justify the cost unless specific simple problems were being addressed.

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An evaluation of the bioarchaeological value of deposits from excavations at Glebe Farm, Barton-upon-Humber, S. Humberside, 1992

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A series of 20 samples from those taken during excavation of the Romano-British 'farmstead' site at Glebe Farm, Barton-upon-Humber, were selected by the site director for an evaluation of their potential as sources of information about past environment and activity through analysis of plant and animal remains.

In the laboratory, all 20 samples were examined and their lithology described using a standard *pro-forma*. Eleven were then selected for further analysis, being chosen to represent the range of context and sediment types present. In most cases, a 1 kg subsample was processed following methods outlined by Kenward *et al.* (1980), in which disaggregation and sieving to 300 μm were followed by a 'washover', where lighter organic material was decanted from the disaggregated sediment. Paraffin flotation (to concentrate insect remains) was performed on subsamples of samples 364 and 377, whilst in the case of sample 408 (where it was thought that evidence might be obtained for the fuel used to fire a possible oven) the whole sample (9.1 kg) was washed to 300 μm and paraffin flotation carried out on the resulting residue.

Both washovers and 'flots' (from paraffin flotation) were examined for insect and plant remains and, in the case of the three samples noted above, washovers were obtained from the residues subsequent to the initial stages of processing, these residues having been kept wet to avoid damage to delicate organic remains preserved by waterlogging.

The results of the analyses are presented in order of context number. Brief context information is given in brackets.

Context 8, sample 70 [upper fill of ditch 51 at E. end]: mid grey-brown (mottled greyer and browner), moist, stiff (to just crumbly, working plastic) clay with root traces, small numbers of stones 2-6 mm, including chalk, some reddish specks and a trace of charcoal. No further analysis was carried out.

Context 33, sample 93 [fill of beam slot/fence slot 32]: mid grey-brown (mottled browner and greyer on mm-scale), indurated clay with root fragments, mm-scale charcoal and red fragments. No further analysis was carried out.

Context 52, sample 60 [main fill of ditch 51]: light/mid grey-brown (with mm-scale mottling of more grey and more brown hues), moist, stiff (working plastic) sandy clay with traces of ?modern rootlets and mm-scale reddish material (?burnt soil).

There was a small washover of modern roots/rootlets with a trace of charcoal <1 mm. The small residue of sand and gravel (to 15 mm) included a trace of rounded brick/tile (to 10 mm) and some ironstone.

Context 66, sample 78 [lower fill of ditch 37]: light/mid grey-brown (mottled browner and greyer), moist, stiff (plastic when worked) clay with root fragments, chalk flecks on mm-scale and some poorly preserved unidentifiable non-marine molluscan shell fragments.

The small washover included modern roots/rootlets, a single rush (*Juncus gerardi/compressus*) seed and some snails.

The modest residue of undisaggregated clay pellets and some sand and gravel included flint and chalk (to 15 mm), a trace of coal, and a little ironstone. There were also small numbers of snails. These, together with those from the washover, comprised single specimens of *Discus rotundatus* and *Oxychilus cellarius*, with two specimens of *Vallonia costata* (and a further shell identified as *Vallonia* sp.). These molluscs suggest damp grassy vegetation but cannot be used to make a more detailed interpretation.

Context 68, sample 128 [fill of slot 67]: mid grey-brown (mottled on mm-scale browner and greyer, and with some orange mottlings and paler patches, too), moist, crumbly (rubbing to somewhat plastic), sandy clay with root traces/burrows, traces of stones 2-6 mm, and a trace of charcoal. No further analysis was carried out.

Context 82, sample 83 [fill of post-pit 81]: mid grey-brown (with mm-scale mottles), moist, stiff (working plastic) clay with root fragments and traces of possible burnt soil. No further analysis was carried out.

Context 92, sample 123 [fill of ditch 91]: mid grey-brown (somewhat mottled greyer/browner on mm-scale), just moist, just crumbly (sticky when wet), sandy clay silt or sandy silty clay with a porosity reflecting invertebrate burrows or root traces.

The very small washover gave a trace of charcoal <2 mm, but mostly consisted of modern roots/rootlets. There was also a single poorly preserved charred barley (*Hordeum* sp.) grain.

The small residue of sand and gravel included flint and ironstone, with brick/tile or daub to 20 mm and a little very fragmentary burnt and unburnt mammal bone (including tooth fragments) to 5 mm, with traces of charcoal and coal.

Context 110, sample 111 [fill of small pit 109]: mid grey-brown, just moist, stiff (working to plastic), slightly sandy clay with root fragments and traces of stones 2-20 mm and flints to 10 mm.

Modern roots/rootlets predominated in the small washover, but there was a trace of charcoal <2 mm and two charred seeds (one cf. *Scirpus lacustris* and one cf. *Rumex* sp(p).) and one uncharred (*Stellaria media*), of no interpretative value.

The small residue was of sand and gravel to 15 mm, including ironstone and flint.

Context 151, sample 166 [fill of E. boundary ditch]: mid grey-brown (mottled greyer or browner on cm-scale), moist, stiff (to just crumbly, working to plastic), clay with ?modern roots/rootlets frequent and traces of stones 2-6 mm, including chalk.

But for a quantity of modern roots/rootlets (including some woody root fragments to 3 mm diameter), the washover was small and consisted of traces of wood fragments <10 mm, charcoal <5 mm, with a rush (*Juncus gerardi/compressus*) seed, a charred ?henbane (cf. *Hyoscyamus niger*) seed and some tiny charred grass fruits.

The small residue was of sand and gravel (mostly flint and ironstone) to 20 mm, with a little chalk, coal and charcoal and a single fragment of burnt bone.

Context 175, sample 344 [fill of slot 174]: mid grey-brown, moist, crumbly (working plastic when wet), slightly sandy clay with root fragments and a trace of ?burnt earth or brick/tile. No further analysis

was carried out.

Context 179, sample 499 [fill of pit 178]: mid grey-brown, dry to moist, indurated clay with traces of stones 2-60 mm (including chalk), moderate amounts of mm-scale charcoal, traces of bone fragments >20 mm and bright red sediment (probably burnt soil).

The small washover consisted mostly of roots/rootlets with a single charred sedge (*Carex* sp.) nutlet and two seeds of *Juncus gerardi/compressus*, and a few woody or herbaceous stem fragments <10 mm. The only insect remains were of an *Atomaria* species and were probably modern.

The small residue of sand and gravel included large amounts of undisaggregated clay pellets, a little mammal bone (to 40 mm), a potsherd (to 25 mm), flint (to 25 mm), sandstone (to 20 mm) and a trace of small coal and charcoal fragments.

Context 204, sample 286 [fill of post-hole 203]: mid grey-brown (mottled on mm-scale browner and greyer, and with some orange mottlings and paler patches, too), moist, crumbly (rubbing to somewhat plastic), sandy clay with root traces/burrows, traces of stones 2-6 mm, and a trace of charcoal. No further analysis was carried out.

Context 209, sample 210 [backfill/robbing of construction trench 208]: mid grey-brown (with light orange-brown mottles on mm-scale), just moist, stiff (working plastic), clay with root fragments, traces of stones 2-60 mm (including chalk) and perhaps a trace of charcoal. No further analysis was carried out.

Context 215, sample 395 [?ancient topsoil and stone spread]: mid/dark grey-brown, moist, crumbly (working plastic), slightly sandy silty clay.

The small washover comprised modern roots/rootlets with one fragment of coal <5 mm; the small residue of sand and gravel included flint to 30 mm, coal and a trace of charcoal. There was a single charred barley grain, a small mammal tooth and a little unidentifiable burnt and unburnt mammal bone.

Context 278, sample 478 [fill of ?beam slot 277]: strongly variegated, from bright orange, through brick red to mid brown, greyish and black, moist, stiff (working plastic) clay with root fragments and moderate amounts of charcoal, and some ?ash. No further analysis was carried out.

Context 357, sample 364 [fill of pit 148, above timbers 373]: light grey-brown (mottled greyer and browner on mm-scale), moist, plastic to slightly sticky, sandy clay with a trace of fine rootlets, stones 2-6 mm, modest amounts of charcoal (in patches) and patches of ?very rotted wood.

The very small flot included some dark rootlet fragments and a number of seeds and invertebrate remains. The seeds were mostly of weeds of cultivated soil or waste places, with the exception of rough chervil, *Chaerophyllum temulentum*, a species now commonly associated with grassy roadside verges and hedegrows (and regularly recorded from Roman rural deposits). There were also two taxa likely to be associated with standing water, and a single hemp (*Cannabis*) achene, perhaps locally cultivated. There were modest numbers of ostracods and *Daphnia ephippia* (water-flea resting eggs) indicating deposition in standing water. There was a small group of insects including aquatic and waterside beetles, a few 'natural habitats' terrestrial forms, and some species favoured by human dwellings. Insect preservation was quite good but it would probably be necessary to process at least 10 kg of sediment to obtain an interpretable assemblage. The two snails recovered were a *Lymnaea truncatula*, and an *Aegopinella nitidula*, both typical of damp or intermittently wet places.

The small residue (examined wet) of sand and gravel to 30 mm (including flint and ironstone) was

about 20% by volume plant detritus and charcoal.

Context 374, sample 377 [fill of pit 148, within timbers 373]: light/mid grey-brown, wet, soft, plastic, sticky sandy clay to clay sand, with traces of stones 6-20 mm, charcoal and fine (mm-scale) chalk.

The small flot gave some dark root fragments (as in sample 364) with three species of weed taxa and two seeds of a rush (*Juncus* cf. *gerardi*). There were *Daphnia* ephippia (and a single example of a second water-flea) and some insect remains. The latter included an assortment of cuticular scraps apparently from larvae and a few fragments of beetle. There were insufficient insect remains for interpretation.

The small residue (examined wet) was about 30% by volume of wood fragments (to 15 mm) and herbaceous detritus, the remainder sand and gravel (including flint to 30 mm), and some coal. Most of the 'seeds' present were stinging nettle (*Urtica dioica*), with a few seeds of other weedy plants and single specimens of parsnip (*Pastinaca sativa*) (perhaps from calcareous grassland rather than cultivation) and coriander (*Coriandrum sativum*).

In addition, a 4.7 kg subsample was 'bulk-sieved' (kenward *et al.* 1980) to 1 mm; the residue comprised sand and gravel to 30 mm (including chalk, flints and some coal), with a little charcoal. Other biological remains included traces of fly puparia, a dock (*Rumex*) flower fragment and earthworm egg capsules.

Context 402, sample 408 [lower fill of possible oven pit 387]: varicolored (pale yellowish-orange to vert dark grey), just moist, brittle to just crumbly (yellower, more sandy parts are more friable), clay sand with rootlets and patches of fine charcoal and bright orange-red mm-scale patches.

A 9.1 kg subsample was washed to 300 µm, primarily to check for charred plant remains. The flot from paraffin flotation was very small (given the size of the subsample) and included a few charred seeds (amongst them three flax, *Linum* sp., three rush, *Juncus* sp., and one fumitory, *Fumaria* sp. and a small number of unidentifiable 'seeds'). There were traces of insect cuticle but no remains of interpretative value.

The small residue was of sand and gravel with a little charcoal to 25 mm.

Context 594, sample 602 [fill of slot 603]: mid grey-brown (with faint darker and lighter brown and grey hues), moist, stiff (to just crumbly, working plastic), clay, with rootlet fragments, traces of stones 2-20 mm and a trace of charcoal and orange-red ?burnt soil. No further analysis was carried out.

Context 647, sample 659 [fill of pit 646]: mid/dark grey-brown, moist, crumbly (working plastic), clay with rootlets, traces of stones 2-20 mm (including chalk), burnt and unburnt flint (to 5 mm) and reddish mottles, perhaps a result of burning.

The small washover was dominated by modern roots/rootlets, but there were also a few scraps of charcoal <2 mm, and three seeds (one *Chenopodium* cf. *album*, one charred *Anthemis cotula*, and a charred *Potentilla* cf. *reptans*), of no interpretative value. There were no recognisable archaeological insect remains, although a modern beetle larval head capsule was noted.

The small residue of sand and gravel included chalk to 40 mm, flint to 35 mm, mammal bone to 40 mm, sandstone to 25 mm, with a trace of charcoal and some unidentifiable charred herbaceous stem or rhizome fragments.

Implications

This assessment indicates that, although some of the 'general biological analysis' samples have a small content of identifiable plant, insect, mollusc and other invertebrate remains, further investigation would be unjustifiable in terms of returns in information for time and funding invested. It should be borne in mind, however, that where there are specific interpretative problems (e.g. 'was this deposit waterlain?') which might be solved by inspection of small amounts of fossils and their matrix, limited investigation might be justified.

Reference

Kenward H. K., Hall A. R. and Jones A. K. G. (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.