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**Evaluation of biological remains from excavations at Welton Low Road,
Elloughton, near Brough (site code: WLE96)**

by

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

Summary

Eleven samples of sediment from Roman deposits revealed by excavations at Welton Low Road, Elloughton, near Brough, were submitted for an evaluation of their bioarchaeological potential. Three selected samples were processed.

Small numbers of generally rather poorly preserved plant and invertebrate remains (mostly insects and snails) were recovered from the Romano-British east ditch. Conditions in the ditch were certainly wet at the point of deposition of these deposits, and the surrounding vegetation, at least close to the ditch, was probably mostly herbaceous 'weeds'. There was little evidence of a more direct human influence.

It is recommended that further work be carried out on insect remains from Context 50 and that these deposits should not be destroyed without appropriate excavation and sampling.

Keywords: WELTON LOW ROAD; ELOUGHTON; BROUGH; EVALUATION; ROMAN; ROMANO-BRITISH; PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS; MOLLUSCS

Authors' address:

Environmental Archaeology Unit
University of York
Heslington
York
YO1 5DD

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

Prepared for:

Humberside Archaeology Unit
The Old School
Northumberland Avenue
Hull
HU2 0LN

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Introduction

Excavations were carried out by Humberside Archaeology Unit at Welton Low Road, Elloughton, near Brough, during 1996. Eleven General Biological Analysis samples ('GBAs' *sensu* Dobney *et al.* 1992), nine fragments of animal bone, and three small bags of hand-collected molluscs, were submitted for an evaluation of their biological remains. The material came from ditches of Romano-British date, associated with a Roman road and with field boundaries.

Methods

All of the GBA samples, the bone, and the residue, were inspected in the laboratory; subsamples of 1 kg were taken from three of the GBAs for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986).

The flots, washover and residues resulting from processing were examined for their content of plant and invertebrate macrofossils. Notes were made on the quantity of fossils, principal taxa, and main ecological groups.

Results and Discussion

The results are presented in trench and sample number order. Context information provided by the excavator is given in square brackets.

Sediment samples

Trench 1. Roman road

Sample 8/T, Context 32

[Primary fill, north ditch of road]

The residue was very small and consisted almost entirely of comminuted land and freshwater mollusc shell fragments. Identifiable remains included representatives of *Discus ?rotundatus* (Müller), *Cochlicopa ?lubrica* (Müller), *Vallonia* sp., *?Cepaea* sp., *Succinea* sp., *Bithynia tentaculata* (L.), *?Valvata* sp., *Pisidium/Sphaerium* sp. and planorbid snails.

The very small washover contained traces of seeds of several weed taxa, together with a trace of charcoal (to 2 mm), an earthworm egg capsule and some modern root fragments. There were no arthropod remains present.

Trench 6. Organic deposits

Sample 14/T, Context 50

[Fill of initial west ditch]

Both the very small residue and the small flot contained moderately abundant plant remains preserved by anoxic 'waterlogging'. For the most part they were plants of wetland habitats, notably the rather frequent fruits of fool's watercress (*Apium nodiflorum* (L.) Lag.), a species typical of ditches. Also present were a few weeds likely to indicate disturbance in the vicinity.

The flot yielded a modest-sized insect assemblage, though preservation was rather poor. The dominant beetle and bug

taxa were those associated with short, probably weedy vegetation (mainly weevils, such as *Apion* spp., *Alophus triguttatus* (Fabricius) and ?*Gymnetron* sp.), and water (*Hydraena* sp., *Anacaena* sp., Dytiscidae sp.). There were also waterside taxa (e.g. *Lesteva* sp., *Dryops* sp., *Saldula* sp.). The insects are thus in accord with the evidence from the plant remains.

A few decomposers were noted, but all may have come from natural or semi-natural habitats including dung and plant litter. Only *Oxytelus sculptus* Gravenhorst (one individual noted) is regarded as particularly favoured by human activity.

Sample 15/T, Context 50

[Fill of initial east ditch]

The plant remains in the small flot and tiny residue (the latter consisted mainly of sand) were a diluted subset of those seen in the subsample from Sample 14. The insect assemblage recovered from the flot was also very small, and rather poorly preserved. There were several weevil taxa (*Sitona* sp., *Gymnetron* spp. and ?*Alophus* sp.) indicative of short vegetation and two beetles associated with water and water margins (including *Dryops* sp.). A very large subsample (at least 10 kg) should give an assemblage of beetles and bugs of considerable interpretative value.

Bone

The very small collection of animal bones represented material from six separate contexts. A total of only nine fragments was recovered, most not being identified to species (see Table 1). Preservation of the material was recorded as poor, and colour as being ginger/brown. A large proportion of the bone was very brittle and eroded.

Hand collected molluscs

The hand-collected material from Context 3 included a small assemblage of highly fragmentary and eroded snail shells - mostly ?*Cepaea* sp. with a single ?*Succinea putris* (Linné). Additionally, there was a single unidentified snail from Context 4.

Recommendations

It is unlikely that very much more useful information would be obtained from the plant remains by processing larger subsamples of samples from Context 50 or by a more detailed analysis of the material already processed. However the samples from Context 50 will produce interpretable insect assemblages from very large subsamples, providing a reconstruction of conditions in the ditch and of the local vegetation and land use. This material would also be of value in a wider investigation of the relationship between insect death assemblages in ditches and nearby human activity.

The animal bone assemblage is of little interpretative value because of its extremely small size. If further excavation is undertaken, it is doubtful whether any animal bone recovered would be worthy of further, more detailed, study in view of its likely poor preservation.

The hand-collected molluscs are of no interpretative value. Processing of a larger subsample from Sample 8 (Context 32) may yield a moderately large assemblage, but this is likely to be of only limited interpretative value - determination of such factors as water quality would require quantification of the remains at species level, which would be extremely difficult (or impossible) because of the extensive surface erosion and breakage of the shells.

If further excavations do take place on this site then every effort should be made to sample and investigate any revealed deposits. The deposits certainly should not be damaged by development without proper excavation and sampling, and commensurate funding for post-excavation analysis should be made available.

Retention and disposal

The samples from Trench 1 do not need to be retained for bioarchaeological purposes but the samples from Context 50 should be retained for their research potential. All flots and residues should be retained in the longer term.

Archive

All extracted fossils 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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Table 1. Archive of the animal bone from Welton Low Road, Elloughton

Context number	Preservation/ colour	Notes
3	Poor	<i>Unidentified</i> - 1 cow-sized shaft fragment
4	Poor Rounded Ginger/brown	Very eroded and pitted bone surface <i>Unidentified</i> - 1 cow-sized shaft fragment
5	Poor Rounded Ginger/brown	<i>Unidentified</i> - 3 cow-sized shaft fragments
20	Poor	<i>Caprine</i> - 1 M1/M2 <i>Unidentified</i> - 1 sheep-sized shaft fragment
39	Poor Rounded Ginger/brown	<i>Horse</i> - 1 distal metacarpal; possibly chopped
48	Fair Ginger/brown	<i>Cattle</i> - 1 metacarpal (measurable)