

P<sub>alaeoecology</sub> R<sub>esearch</sub> S<sub>ervices</sub>

**Assessment of biological remains from  
excavations at 6 St John Street, Beverley, East  
Riding of Yorkshire (site code: SJB03)**

*PRS* 2003/71

**Assessment of biological remains from excavations at 6 St John Street,  
Beverley, East Riding of Yorkshire (site code: SJB03)**

by

Allan Hall, Deborah Jaques, Harry Kenward and John Carrott

**Summary**

*One sediment sample, one box of hand-collected bone, and a small quantity of hand-collected shell, recovered from deposits encountered during excavations at 6 St John Street, Beverley, East Riding of Yorkshire, were submitted to PRS for an assessment of their bioarchaeological potential. The deposits were associated with a sequence of four walls and were early medieval to late post-medieval in date.*

*Ancient plant macrofossils recovered from the sample included a mixture of remains; some originating in peat, some associated with straw and a small 'food' component. The insect remains were dominated by species associated with decomposing matter of various kinds. Both assemblages are typical of urban occupation deposits of the early medieval period. Clearly deposits at this site have the potential to provide useful plant and insect assemblages, even though the present material is of somewhat limited interest beyond providing a time/space datum for synthesis. A single Trichuris egg suggests that the deposit from which the sample was taken had, at least, a small faecal component.*

*Most of the hand-collected shell fragments were identified as oyster, cockle or mussel, and were most likely remains deriving from human food waste. Their poor condition and small number renders the assemblage of little value. The vertebrate remains formed too small an assemblage for much useful interpretation but mostly appeared to derive from domestic refuse, with a small component of butchery waste. The main domesticates, cattle, caprovids, pig and horse, were all recorded, whilst chicken and goose bones were also present. Fish bone, noted within the assemblage included the remains of both cod and ling, representing fish of over a metre in total length. Although the small size of the recovered bone assemblage precludes any further detailed recording and interpretation, it is clear that most of the material was well preserved and from deposits which were tightly dated. This should be borne in mind in the event of further interventions in the vicinity of this site.*

**KEYWORDS:** 6 ST JOHN STREET; BEVERLEY; EAST RIDING OF YORKSHIRE; ASSESSMENT; MEDIEVAL; POST-MEDIEVAL; PLANT REMAINS; CHARRED PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

Contact address for authors:

Prepared for:

Palaeoecology Research Services  
Unit 8  
Dabble Duck Industrial Estate  
Shildon  
County Durham DL4 2RA

East Riding Archaeological Society  
c/o Rod Mackey  
4 St John Street  
Beverley  
East Yorkshire HU17 8HT

10 November 2003

## Assessment of biological remains from excavations at 6 St John Street, Beverley, East Riding of Yorkshire (site code: SJB03)

### Introduction

An archaeological excavation was carried out by Rod Mackey and Kate Dennett on behalf of the East Riding Archaeological Society at 6 St. John Street, Beverley, East Riding of Yorkshire (NGR TA036392) in February 2003. Excavations revealed a sequence of four walls, built directly on top of each other, and their associated floors. Four main phases of activity were identified: Phase 2 – 11<sup>th</sup>/12<sup>th</sup> century; Phase 3 – 12<sup>th</sup>/13<sup>th</sup> century; Phase 4 – 14<sup>th</sup>/16<sup>th</sup> century; Phase 5 – 17<sup>th</sup>/18<sup>th</sup> century.

One sediment sample ('GBA'/'BS' *sensu* Dobney *et al.* 1992), one box (of approximately 25 litres) of hand-collected animal bone and a small quantity of hand-collected shell were recovered from the deposits, and all were submitted for an assessment of their bioarchaeological potential.

### Methods

#### *Sediment sample*

The sediment sample was inspected and its lithology recorded using a standard *pro forma* prior to processing, following the procedures of Kenward *et al.* (1980; 1986), for the recovery of plant and invertebrate macrofossils.

The flot resulting from processing was examined for plant and invertebrate macrofossils. The residue was examined for larger plant macrofossils and other biological (and artefactual) remains. Insect preservation was recorded using the scheme of Kenward and Large (1998).

The sample was also examined for the eggs of intestinal parasites using the 'squash' technique of Dainton (1992). The assessment

slide was scanned at 150x magnification with 600x used where necessary. Although primarily for the detection of intestinal parasitic nematode eggs, the 'squash' technique routinely reveals other microfossil remains, and, if present, these were also noted.

#### *Hand-collected shell*

Brief notes were made on the preservational condition of the hand-collected shell and the remains identified to species where possible. For oyster (*Ostrea edulis* L.) shell additional notes were made regarding: numbers of left and right valves; evidence of having being opened using a knife or similar implement; measurability of the valves; damage from other marine biota (polychaet worms and dog whelks); encrustation by barnacles. Preservation was recorded subjectively on two four-point scales for erosion and fragmentation as: 0 – none; 1 – slight; 2 – moderate; 3 – severe.

#### *Vertebrate remains*

For the hand-collected vertebrate remains that were recorded, data were entered directly into a series of tables using a purpose-built input system and *Paradox* software. Records were made concerning the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

Fragments were identified to species or species group using the PRS modern comparative reference collection. The bones which could not be identified to species were described as the 'unidentified' fraction. Within this fraction fragments were grouped into a number of categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal (assumed to be

caprovid, pig or small cervid), unidentified bird and totally unidentifiable. These groups are represented in Table 2 by the category labelled 'Unidentified'.

## Results

### *Sediment sample*

Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample number.

#### **Context 68** [peaty loam]

Sample 6801/T2 (3 kg processed to 300 microns with paraffin flotation; approximately 1 litre of unprocessed sediment remains)

Moist, dark grey to dark grey-brown, brittle to crumbly (working soft), humic, very slightly sandy, slightly clay silt. Stones (2-20 mm), fragments of wood and twigs were present.

The subsample yielded a rather large residue of about 800 ml, of which about 500 ml was woody debris, the rest sand and gravel, including chalk and oolitic limestone and a little flint. The wood was rather worn but preservation was mostly good. There were several distinct components within the assemblage of plant remains:

- plant originating in peat (with a few fragments which may have been peat itself) or cut wetland vegetation—the modest numbers of seeds of bog bean (*Menyanthes trifoliata* L.) and nutlets of sedge (*Carex*) nutlets, the traces of marsh pennywort (*Hydrocotyle vulgaris* L.) and gipsywort (*Lycopus europaeus* L.), and probably also the nutlets of saw-sedge (*Cladium mariscus* (L.) Pohl.; the charred fragments of *Cladium* leaf perhaps represent material burnt through deliberate use of such material as fuel or by a fire which destroyed saw-sedge used for roofing;
- plants arriving with straw—cornfield weeds such as wild radish (*Raphanus raphanistrum* L.) and shepherd's needle (*Scandix pecten-veneris* L.);
- a woodland component perhaps from brushwood or litter—especially thorns of hawthorn/blackthorn (*Crataegus* sp./*Prunus spinosa* L.) and buds/scales

of hazel (*Corylus avellana* L.), but also several other taxa;

- a small 'food' component (the remains especially well preserved and presumably not far-transported), principally blackberry (*Rubus fruticosus* agg.) seeds, but also one very well preserved seed of black mulberry (*Morus nigra* L.), traces of apple (*Malus sylvestris* Miller) endocarp ('core') and of charred grain (oats, *Avena*, and bread/club wheat, *Triticum 'aestivo-compactum'*).

Such mixtures of remains are typical of urban occupation deposits of the early medieval period and the material is entirely typical of assemblages from Beverley. In particular, remains of charred *Cladium* leaf have been found at a number of sites in the town, especially in the area just to the north of the Minster, centred on Lord Roberts Road. The only unusual taxon, black mulberry, was recorded from later medieval deposits at Eastgate (McKenna 1992); a record from this early part of the Middle Ages in Britain is rare—most records are Roman or late medieval/early post-medieval.

The paraffin flot was fairly small and contained a large proportion of insect remains, together with woody debris. Preservation was generally rather good (E 2.0-3.0, mode 2.5 weak; F 2.0-3.0, mode 2.5 weak, following the scheme of Kenward and Large 1998). The insect assemblage was very typical of well-established occupation sites of early medieval date, dominated by species associated with a range of kinds of decomposing matter (from fairly dry to foul, neither being predominant). The woodworm (*Anobium punctatum* (Degeer)) was rather common, and there were traces of species from aquatic and waterside habitats.

The 'squash' was approximately half organic detritus and half inorganic, with some spores/pollen grains and a few ?phytolith fragments. A single *Trichuris* egg (lacking both polar plugs) was also noted.

A small assemblage of vertebrate remains, amounting to 78 fragments (18g), was recovered from this sample. Most fragments were small (mostly less than 15 mm in any dimension) and unidentifiable. However, 21 of the bones were fish and included the remains of eel (*Anguilla anguilla* (L.)) and herring (*Clupea harengus* L.). A single small mammal tooth was present which was of a size and morphology consistent with that of a rat (*Rattus* sp.).

### *Hand-collected shell*

Most of the small quantity of shell was of oyster, cockle – *Cerastoderma edule* (L.), and mussel – *Mytilus edulis* L., recovered from nine contexts (3 from Phase 2, 1 from Phase 3, 4 from Phase 4, and 1 from Phase 5). Individual context assemblages were of only a few grammes (at most 26 g, Context 68) of poorly preserved remains—average erosion and fragmentation scores for the oyster valves were 3 and 2.75, respectively.

Approximately 58% of the oyster valves could be identified as either left or right valves but none were measurable. Evidence of the oysters having been opened using a knife or similar implement (as shown by ‘V’- or ‘W’-shaped notches on the shell margins) was noted on only one oyster valve. There was no evidence of damage to the valves (e.g. polychaet worm burrows, dog whelk holes) or encrustation (e.g. by barnacles) by other marine biota. None of the oyster valves showed any fresh breakage.

The land snail remains (from Contexts 7 and 52) were of the common snails *Helix aspersa* Müller and *Cepaea/Arianta* sp. These were very well preserved (particularly in comparison with the marine shell) and seem most likely to be modern specimens accidentally trapped in the excavation trench. As has been noted at other sites (e.g. Coppergate, York, Kenward and Hall 1995) records of *H. aspersa* must be treated with caution.

Summary information for the hand-collected shell assemblage is presented as Table 1.

### *Hand-collected vertebrate remains*

The assemblage of bones recovered from this site amounted to 541 fragments, representing 27 deposits. Vertebrate material from most deposits was scored as good, whilst four deposits contained fragments that were slightly less well preserved (Contexts 44, 68 [east end], 69 and 72). Colour was not particularly varied and most fragments were fawn or brown, however, it was noted that bones from the Phase 2 deposits were dark brown. The deposits that were at a lower level in the stratigraphic sequence, such as those assigned to Phase 2, are likely to have been subject to some degree of waterlogging and hence the darker coloration of the bone. Material from Context 61 was robust, but the nature of the broken edges varied (from spikey to rounded and battered) as did the colour of the fragments. Fragmentation was quite high for several deposits (Contexts 25, 40, 61). This damage had largely occurred in antiquity and was not a result of fresh breakage, which was negligible. Dog gnawing was recorded but only at very low frequencies.

Evidence of butchery, chopping in particular, was quite high throughout. A common feature within the assemblages from Phase 4 and 5 was the presence of both cattle and caprovid vertebrae which had been split longitudinally. This demonstrates the practice of splitting carcasses into ‘sides’, which is characteristic of medieval assemblages. A single horse metapodial fragment had been sawn across the shaft, with only the distal epiphysis remaining. It is possible that the rest of the bone had been removed to be used for the manufacture of bone tools.

Given the general absence of dog gnawing, and the overall good preservation of the remains, it is likely that most of the bones were quickly incorporated into the deposits. Some of the fragmentation, however, may have been the result of trample (in the past).

Not surprisingly, the remains of the major domesticates formed the greatest proportion of the vertebrate assemblage (Table 2). Cattle and caprovid remains were identified in all phases, together with pig from Phases 2, 4 and 5. Other mammal species represented included horse, hare (*Lepus* sp.) and one bone from a juvenile individual, tentatively identified as cat. Fragments of duck (*Anas* sp.), goose (*Anser* sp.) and wader (Charadriidae) were recorded, together with chicken bones which were particularly numerous in Phase 4. Fish bones were recovered from deposits of Phases 2 to 4, most of the fragments representing gadids including cod (*Gadus morhua* L.), ling (*Molva molva* (L.)) and haddock (*Melanogrammus aeglefinus* (L.)). Comparison of the ling and cod bones with those of modern reference specimens of known size indicated the presence of large fish of over a metre in length. A single flatfish spine was identified from Context 52.

Observations regarding skeletal element representation suggest that, overall cattle remains were dominated by distal limb elements, whilst a wider range of skeletal elements was present for caprovids including a larger proportion of major and minor meat-bearing bones. A mixture of refuse is suggested with both butchery and domestic waste present. The bird and fish remains are indicative of occupation debris associated with the preparation and consumption of food.

## **Discussion and statement of potential**

Both the plant and insect remains are characteristic of urban occupation deposits of early medieval date and consistent with the results from other deposits of the same period excavated elsewhere in Beverley. Clearly deposits at this site have the potential to provide useful plant and insect assemblages,

even though the present material is of somewhat limited interest beyond providing a time/space datum for synthesis.

The presence of the single *Trichuris* egg in the sample from Context 68 indicates that this deposit had at least a small faecal component but was not composed primarily of faeces.

The hand-collected shell was mostly of poorly preserved edible marine shellfish, from deposits of medieval and post-medieval date. The small quantity of remains recovered and their poor condition renders the assemblage of little value. However, it seems most likely that these remains derive primarily from human food waste. The three land snails recovered were of no interpretative value.

The vertebrate assemblage from St John Street is well dated, and mostly well preserved, but, unfortunately, it is somewhat small to provide much interpretative information, particularly once divided up by phase group. However, the bulk of the remains are likely to represent kitchen or table refuse, with a small component of butchery waste. The cod and ling fragments, from the Phase 2 deposits, which represent fish of over 1 metre in length suggest a fairly affluent household as the supply of fish, such as large gadids, particularly fresh, may have been restricted to those who could afford them (Woolgar 1999). It is clear from the fish remains from the sample that smaller fish such as herring and eel also formed part of the diet.

## Recommendations

No additional work on the current plant and insect remains is necessary, nor is further examination of the sample for the eggs of intestinal parasites required. An assessment of some other deposits (e.g. floor layers) at this site (if sampled) would be worthwhile, however. No further study of the hand-collected shell and animal bone recovered during this intervention is warranted.

This assessment shows the potential for the preservation of biological remains within the excavated area, and the deposits should, therefore, be protected, or studied if threatened.

## Retention and disposal

All of the remaining sediment, together with the fossils extracted from the processed subsample, and the hand-collected remains 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.

## Acknowledgements

The authors are grateful to Rod Mackey for providing the material and the archaeological information.

## References

- Dainton, M. (1992). A quick, semi-quantitative method for recording nematode gut parasite eggs from archaeological deposits. *Circaea, the Journal of the Association for Environmental Archaeology* **9**, 58-63.
- Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* **9** (for 1991), 24-6.
- Kenward, H. K. and Hall, A. R. (1995). Biological evidence from Anglo-Scandinavian deposits at 16-22 Coppergate. *The Archaeology of York* **14** (7), 435-797 + xxii + loose figures. York: Council for British Archaeology.

Kenward, H. and Large, F. (1998). Recording the preservational condition of archaeological insect fossils. *Environmental Archaeology* **2**, 49-60.

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.

Kenward, H. K., Engleman, C., Robertson, A. and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* **3**, 163-172.

McKenna, W. J. B. (1992). The environmental evidence, pp. 227-33 in Evans, D. H. and Tomlinson, D. G. Excavations at 33-35 Eastgate, Beverley, 1983-86. *Sheffield Excavation Reports* **3**. Sheffield.

Woolgar, C. M. (1999). *The great household in late Medieval England*. New Haven and London: Yale University Press.

Table 1. Summary information for the hand-collected shell from excavations at 6 St John Street, Beverley, East Riding of Yorkshire, by context. A '?' before numbers indicates possible numbers (e.g. '3/?4 = definitely 3, possibly 4). Key: 'Cn' = Context number; cockle = number of cockle valves; mussel = number of mussel valves; 'left' = number of left (or lower) valves; 'right' = number of right (or upper) valves; 'in' = number of valves of indeterminate side; 'meas' = estimated number of valves intact enough to be measured; 'e' = average erosion score for valves; 'f' = average fragmentation score for valves; 'kn' = number of valves showing damage characteristic of the oyster having been opened using a knife or similar implement; 'worm' = number of valves showing damage by polychaet worms; 'barn' = number of valves with barnacles; 'dog' = number of valves showing damage from dog whelk boring; 'fr' = number of valves showing fresh breakage; 'wt' = total weight of shell in grammes.

Cn	Phase	land snails	cockle	mussel	Oyster valves										wt	
					left	right	in	meas	e	f	kn	worm	barn	dog		fr
7	5	2 x <i>Helix ?aspersa</i>	-	1	-	2	1	0	3	3	1	0	0	0	0	20
9	4	-	8	4	-	-	-	-	-	-	-	-	-	-	-	16
25	4	-	-	1	1	-	-	0	3	2	0	0	0	0	0	21
42	4	-	-	-	-	-	1	0	3	3	0	0	0	0	0	3
52	4	1 x <i>Cepaea/Arianta</i> sp.	-	?1	-	-	1	0	3	3	0	0	0	0	0	6
56	3	-	-	-	1	1	-	0	3	2	0	0	0	0	0	20
68	2	-	-	-	1	-	?1	0	3	3	0	0	0	0	0	26
68/76	2	-	-	-	-	-	1	0	3	3	0	0	0	0	0	5
72	2	-	-	-	-	1	-	0	3	3	0	0	0	0	0	20



Table 2. Hand-collected vertebrate remains from excavations at 6 St John Street, Beverley, East Riding of Yorkshire.

Species		Phase 2	Phase 3	Phase 4	Phase 5	Total
<i>Lepus</i> sp.	hare	-	2	1	-	3
cf. <i>Felis</i> f. domestic	?cat	-	-	1	-	1
<i>Equus</i> f. domestic	horse	-	-	-	1	1
<i>Sus</i> f. domestic	pig	11	-	4	2	17
<i>Bos</i> f. domestic	cow	5	10	6	3	24
Caprovid	sheep/goat	8	4	8	4	24
<i>Anser</i> sp.	goose	1	-	7	1	9
cf. <i>Anser</i> sp.	?goose	-	-	-	1	1
<i>Anas</i> sp.	duck	-	-	-	1	1
cf. <i>Anas</i> sp.	?duck	1	1	-	-	2
<i>Gallus</i> f. domestic	fowl	1	3	11	4	19
cf. <i>Gallus</i> f. domestic	?fowl	-	-	2	-	2
<i>Plover</i> sp./ <i>Vanellus vanellus</i> (L.)	plover/lapwing	-	-	1	-	1
Gadidae	cod family	1	1	17	-	19
<i>Gadus morhua</i> L.	cod	1	-	4	-	5
cf. <i>Gadus morhua</i> L.	?cod	2	-	-	-	2
<i>Melanogrammus aeglefinus</i> (L.)	haddock	-	1	-	-	1
<i>Molva molva</i> (L.)	ling	3	-	-	-	3
Pleuronectidae	flatfish	-	-	1	-	1
Unidentified fish		-	2	4	-	6
Unidentified		119	81	167	32	399
<b>Total</b>		<b>153</b>	<b>105</b>	<b>234</b>	<b>49</b>	<b>541</b>