

*Reports from the Environmental Archaeology Unit, York 99/16, 8 pp.*

**Evaluation of bioarchaeological remains from Church Farm, Lily Lane,  
Flamborough, East Riding of Yorkshire (site code: LLF99)**

by

John Carrott, Allan Hall, Cluny Johnstone, Frances Large,  
Helen Speight and Darren Worthy

**Summary**

*Excavations at Church Farm, Lily Lane, Flamborough revealed deposits associated with a former medieval village and a possible prehistoric ditch. Fourteen sediment samples and a small volume of hand-collected bone were examined for their bioarchaeological potential. Further work on the present material is not recommended, but if additional excavations were to occur, then provision should be made for recovery of, and work on, a moderate-sized mammal and fish bone assemblage.*

**Keywords:** EVALUATION; CHURCH FARM; LILY LANE; EAST YORKSHIRE; MEDIEVAL; PREHISTORIC; DITCH; PLANTS; CHARRED GRAIN; VERTEBRATES; BONE; FISH; INVERTEBRATES

Authors' address:

Palaeoecology Research Services  
Environmental Archaeology Unit  
Department of Biology  
University of York  
PO Box 373  
York, YO10 5YW

Prepared for:

Humber Field Archaeology  
The Old School  
Northumberland Avenue  
Kingston Upon Hull  
HU2 0LN

Answerphone: (01904) 433846

Fax: (01904) 433850

Website: [www.york.ac.uk/inst/eau](http://www.york.ac.uk/inst/eau)

4th March 1999

## **Evaluation of bioarchaeological remains from Church Farm, Lily Lane, Flamborough, East Riding of Yorkshire (site code: LLF99)**

### **Introduction**

Excavations were undertaken during 1998 by Humber Field Archaeology on land at Church Farm, Lily Lane, Flamborough, East Riding of Yorkshire. The site yielded remains of, and deposits associated with, a former medieval village and what may have been a prehistoric ditch. Fourteen General Biological Analysis samples ('GBAs' *sensu* Dobney *et al.* 1992) and a single small box of bone (approximately 9 litres) were presented for evaluation of their bioarchaeological potential.

### **Methods**

#### *Sediment samples*

All the material was initially inspected in the laboratory and described using a standard *pro forma*. Samples from three contexts were selected for analysis; three subsamples were bulk-sieved for extraction of bone, and three were processed for extraction of plant and invertebrate macrofossils following procedures of Kenward *et al.* (1980; 1986).

All invertebrate macrofossils were recorded semi-quantitatively using the scale described by Kenward *et al.* (1986) and Kenward (1992). Records were made on a paper *pro forma* for later transferal to a computer database (using Paradox software) for analysis and long-term storage.

#### *Vertebrate remains*

Data for the hand-collected vertebrate remains were recorded electronically directly into a series of tables using a purpose-built input system and *Paradox* software. For contexts

containing more than five fragments subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). In addition, semi-quantitative records were made of fragment size, and of burning, butchery, fresh breakage and dog gnawing.

Where possible, fragments were identified to species or species group, using the reference collection at the Environmental Archaeology Unit, University of York. Weights of identified and unidentified fragments were also recorded. Measurements for mammals were taken (where appropriate), according to von den Driesch (1976), with additional measurements following those outlined by Dobney *et al.* (forthcoming).

For the vertebrate remains recovered from sediment samples, fragments were identified where possible as for the hand collected material. Weights of identified and unidentified fragments were also recorded where enough material was present.

### **Results**

#### *Sediment samples*

Context information provided by the excavator is given in square brackets.

#### **?Prehistoric (Late Bronze Age/Early Iron Age), Context 17**

**Sample 4/BS** [ditch fill] 12 kg processed.

*Laboratory description:* just moist, mid-dark grey/brown, crumbly to unconsolidated (working soft), clay silt. Stones in the size range 2-60 mm, and modern rootlets, were

present.

A few poorly preserved (blistered and/or eroded) charred cereal grains were present in the washover and residue, perhaps 30-40 in all; they included the characteristically short, plump, squarish ?bread/club wheat (*Triticum ?aestivo-compactum*), oats (*Avena* sp.) and some grains which may have been wheat or barley (*Hordeum* sp.). There was a little charcoal, up to 4 mm in maximum dimension. Many earthworm egg capsules and several *Cecilioides acicula* (Muller) (a modern burrowing snail, almost certainly intrusive to the deposit) were also present in the washover. Vertebrate remains recovered from the residue included a single rather battered fish vertebra and eight unidentified scraps (including a single burnt fragment).

**Sample 5/BS** [ditch fill] 12 kg processed  
*Laboratory description:* as for Sample 4/BS.

The residue and washover yielded about 20 poorly preserved charred cereal grains amongst which were ?bread/club wheat, barley and wheat/barley, plus a trace of charcoal to 10 mm. Several earthworm egg capsules, one fly puparium and several *Cecilioides acicula* (Muller) were also recorded from the washover. Vertebrate remains from the residue consisted of two tiny, unidentified fragments, one of which was burnt.

#### Medieval, Context 74

**Sample 11/T** [floor silt] 3 kg processed.  
*Laboratory description:* just moist, mid-dark grey/brown (locally more gingery and more grey), brittle (working crumbly and slightly sticky when wet), slightly sandy, slightly clay silt. Modern roots, stones in the size range 2-6 mm and 20-60 mm, and charcoal, were present.

A small fragment of partly mineralised conifer wood, probably pine (*Pinus* sp.) was

recovered from the residue; its maximum dimension was 10 mm. The washover gave small numbers of charred ?bread/club wheat grains, together with a trace of barley and some (presumably modern) uncharred seeds of stinging nettle (*Urtica dioica* L.), poppy (*Papaver* sp., perhaps *P. dubium* L.) and fat-hen (*Chenopodium album* L.). One mite, a single ?*Oxychilus* sp. land snail and several earthworm egg capsules were noted. Vertebrate remains consisted of three unidentified fragments and a ?spurdog (cf. *Squalus acanthias* (L.)) vertebra.

#### Medieval, Context 94

**Sample 12/T** [ashy fill of Context 95] 3 kg processed.

*Laboratory description:* just moist, mid brown and mid grey, brittle to crumbly (working soft, then unconsolidated when wet), slightly sandy silt. Mammal bone, fish bone and stones in the size range 2-6 mm, 20-60 mm and >60 mm were all present. Charcoal was common. A few modern roots were also noted.

Approximately 50 poorly preserved charred cereal grains, mostly ?bread/club wheat were recovered in the washover, along with traces of ?rye (*Secale cereale*), ?oats, and wheat/barley, and a few uncharred (presumably modern) weed seeds. There was also a little charcoal to 10 mm and several earthworm egg capsules. The residue contained a similar bone assemblage to the BS residue, including gadid vertebrae, bird phalanges, and many unidentified fish and mammal fragments.

**Sample 12/BS** 6 kg processed.

The residue contained 218 fragments of bone (weighing 16.4 g), mostly fish remains. Species present included cod (*Gadus morhua* L.; 6 fragments - 5 vertebrae and 1 quadrate), gadid (4 vertebrae), herring (*Clupea harengus* L.; 20 vertebrae), bird (two phalanges), a

single small mammal vertebra and three other fish vertebrae. A further 115 unidentified fish and 67 mammal fragments were also recovered. The residue also contained three charred grains of ?bread/club wheat and three of wheat/barley. In addition, there were traces of charcoal to 10 mm, and two uncharred (?modern) seeds of the weed goosegrass (*Galium aparine* L.).

**Sample 13/T** [ashy fill of Context 95] 3 kg processed.

*Laboratory description:* just moist, dark grey (locally somewhat brown), brittle (working crumbly and slightly sticky when wet), slightly sandy clay silt with stones present in the size range 2-20 mm. Fine charcoal was abundant and flecks of chalk were noted.

The washover and residue yielded approximately 50 poorly preserved charred cereal grains of which the bulk were ?bread/club wheat, with a few ?barley, ?oats and wheat/barley. Also present was a single small fragment of charred hazel (*Corylus avellana* L.) nutshell and some uncharred (?modern) weed seeds: stinging nettle, poppy and fat-hen. Also recovered from the washover were many earthworm egg capsules and an unidentified landsnail.

Vertebrate remains from the residue consisted of 147 fragments of bone (weighing 7.2 g), mostly fish bones. Taxa represented included gadid (7 vertebrae and a single premaxilla), and a single herring (*Clupea harengus* L.) vertebra. Nine other fish vertebrae were recovered, mostly fragmented. The unidentified fraction contained 11 mammal and 118 fish fragments (including two broken fish scales). Five fragments of unidentified marine shell were also recovered.

### *Hand-collected vertebrate remains*

Material was recorded from 11 contexts of which all but one were dated to the medieval period. Only three contexts yielded more than five fragments and preservation was only recorded for these.

The material was generally well preserved, fawn in colour and with 'spiky' broken surfaces. However, a scattering of darker coloured, less well-preserved, or 'battered' fragments was noted and these may indicate the presence of reworked material. Dog gnawing, butchery and fresh breakage were observed on only a few fragments.

Table 1 shows the numbers of fragments recorded by species, together with the numbers of subadult bones, mandibles and teeth (providing ageing or sexing information), and weights. The 11 contexts recorded yielded a total of 51 fragments (weighing 839.6 g) of which 18 (weighing 516.1 g) were identified to species. The vertebrate remains included caprovid (seven fragments), cattle (3), pig (2) and fish (3). Single fragments of cat, horse and duck were also recovered. The duck ulna was consistent in size with reference specimens of the mallard (*Anas platyrhynchos* L.) at the EAU, but was more robust. The fragment possibly represents a small domestic duck. Six of the 18 identified bones were measured (Table 2). The unidentified fraction contained both large and medium-sized mammal fragments, and a single bird bone.

### **Discussion and statement of potential**

All the samples yielded some charred cereal grains, though none was well-preserved and all might be reworked or perhaps even of modern origin if the archaeological deposits were just beneath modern ploughsoil. In the

absence of chaff, further identification is not possible. The cereal remains are of even more limited interpretative value unless they can be securely dated.

The extremely small size, broad dating, and mixed appearance of the hand-collected bone assemblage mean that it has little interpretative significance. However, the medieval samples (Context 74, Sample 12 and Context 94, Sample 13) produced a moderate amount of fish bone, indicating that bone preservation was generally good. Given the reasonable preservation of the current material, a large-scale excavation might produce a moderate-sized hand-collected bone assemblage and a useful quantity of fish remains from a more extensive sieving programme. Reports on medieval fish bone assemblages are scarce and are mostly based on inland, urban assemblages. Useful comparisons could be made between a coastal fish assemblage and those from urban sites. However, unless a tighter dating framework can be achieved the information gained would be of little use from either a zooarchaeological or interpretative perspective.

### Recommendations

It is not recommended that further work be carried out on the plant remains so far recovered or on the other samples from the excavation which have not so far been examined bioarchaeologically. However, if a large scale excavation were to take place at this site, an extensive sieving programme should be employed to recover fish remains. Adequate provision should be made for retrieval, analysis and publication of a potentially large fish bone assemblage and a moderate-sized mammal bone assemblage.

### Storage requirements

The remaining sediment, residues and washovers do not need to be retained but all of the bone should be preserved.

### Archive

All material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

### Acknowledgements

We are grateful to Ken Steedman of Humber Field Archaeology for providing the material and archaeological information and to English Heritage for enabling AH to work on this material.

### References

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.

Dobney, K., Jaques, D. and Johnstone, C. (forthcoming). [Protocol for recording vertebrate remains from archaeological sites].

Driesch, A. von den (1976). A guide to the measurement of animal bones from archaeological sites. *Peabody Museum Bulletin* **1**, Cambridge Mass., Harvard University.

Kenward, H. K. (1992). Rapid recording of

archaeological insect remains - a reconsideration. *Circaea, the Journal of the Association for Environmental Archaeology* **9** (for 1991), 81-8.

Kenward, H. K., Engleman, C., Robertson, A., and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* **3** (for 1985), 163-72.

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.

Table 1. The vertebrate remains from Church Farm, Lily Lane, Flamborough, East Riding of Yorkshire. Key: No. unfused = number of unfused (i.e. not adult) fragments; No. mandibles = number of mandibles with teeth in situ; No. teeth = number of isolated teeth of use for providing age-at-death; No. fragments = total number of fragments. Numbers in brackets refer to material from Context 59 (post medieval).

<b>Taxa</b>		<b>No. teeth</b>	<b>No. mandibles</b>	<b>No. unfused</b>	<b>No. fragments</b>	<b>Weight (g)</b>
Cat	<i>Felis f. domestic</i>	-	-	-	1	1.5
Horse	<i>Equus f. domestic</i>	-	-	-	(1)	159.2
Pig	<i>Sus f. domestic</i>	-	-	(1)	1 (1)	70.0
Cow	<i>Bos f. domestic</i>	1	-	-	2 (1)	177.6
Sheep/goat	Caprovid	1	(1)	(1)	3 (4)	103.3
Duck	<i>Anas sp.</i>	-	-	-	1	1.0
Fish		-	-	-	3	3.5
<b>Subtotal</b>		<b>2</b>	<b>(1)</b>	<b>(2)</b>	<b>11 (7)</b>	<b>516.1</b>
Bird		-	-	-	1	
Unidentified		-	-	-	27 (5)	323.5*
<b>Subtotal</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>28 (5)</b>	<b>323.5</b>
<b>Total</b>		<b>2</b>	<b>(1)</b>	<b>(2)</b>	<b>39 (12)</b>	<b>839.6</b>

\* = Combined weight of all unidentified material

Table 2. Measurements of bones from Church Farm, Lily Lane, Flamborough, East Riding of Yorkshire.

Conte xt	Species	Element	Sid e	Measurement
77	Sheep	Humerus	r	BT=28.39 HT=18.60 HTC=14. 99
77	Sheep	Tibia	r	Bd=25.4 Dd=19.35 SD=11.98
59	Sheep	Humerus	l	BT=26.62 HT=15.62 HTC=12. 68
59	Sh/g	Tibia	r	Bd=23.32 Dd=19.18 SD=9.86
83	Duck	Carpometacarp us	l	Gl=56.14 Did=7.86 Bp=14.02
75	Pig	Humerus	r	BT=32.12 HTC=20. 11