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## **Evaluation of biological remains from excavations at Wakeman's House, Ripon, North Yorkshire (site code: HARGM 10486)**

by

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### **Summary**

*A series of sediment samples and two boxes of hand-collected bone, from deposits of 11<sup>th</sup> to 14<sup>th</sup> century date, revealed by excavations at Wakeman's House, Ripon, North Yorkshire, were submitted for an evaluation of their bioarchaeological potential.*

*The few biological remains, other than bone, recovered from the samples were of no interpretative value beyond that given in the text.*

*A small, but well dated assemblage of bones was recovered from the excavations. The bulk of the vertebrate remains, mainly identified as the major domestic species, cattle, caprovids and pigs, were recovered from 11<sup>th</sup>/12<sup>th</sup> century deposits. Skeletal element representation for cattle and caprovids from these deposits suggested the presence of both primary butchery waste and domestic refuse. A squirrel metatarsal may suggest the inclusion of waste from specialist craft activities. Additionally, remains of a sparrowhawk may provide evidence for high status activities such as hawking and hunting.*

*No further investigation of the biological remains (other than bone, and the ?charred amorphous organic component of Context 1018) from the sediment samples, is warranted. However, any remaining sediment should be sieved for the recovery of small bones and this material considered in conjunction with any additional study of the hand-collected vertebrate assemblage. A basic archive should be made of all well dated vertebrate material from the current excavations.*

*The deposits show the potential for producing a moderately large vertebrate assemblage of use for providing information for archaeological and zooarchaeological interpretation, and may yield useful concentrations of charred and uncharred plant remains, should further excavation be undertaken.*

**KEYWORDS:** WAKEMAN'S HOUSE; RIPON; NORTH YORKSHIRE; EVALUATION; 11<sup>TH</sup> TO 14<sup>TH</sup> CENTURY; MEDIEVAL; PLANT REMAINS; CHARRED PLANT REMAINS; CEREALS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS; ?HAWKING; ?HUNTING; ?PELT PREPARATION

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## Evaluation of biological remains from excavations at Wakeman's House, Ripon, North Yorkshire (site code: HARGM 10330)

### Introduction

An archaeological evaluation excavation was carried out by York Archaeological Trust at the site of Wakeman's House, Ripon, North Yorkshire.

A series of sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) and two boxes (each of approximately 20 litres) of hand-collected bone, were recovered from the deposits. Spot dating of recovered artefacts gave a date range from the 11<sup>th</sup> to the 14<sup>th</sup> century for the deposits

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

### Methods

#### *Sediment samples*

The sediment samples were inspected in the laboratory. Four of the samples were selected for evaluation and their lithologies were recorded, using a standard *pro forma*, prior to processing, following the procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils. The washovers and residues were examined for plant remains. The washovers were also examined for invertebrate remains, and the residues were examined for other biological and artefactual remains.

Table 1 shows a list of the processed samples and notes on their treatment.

#### *Hand-collected 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. Subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Additionally, for the larger assemblages, notes were made concerning fragment size, dog gnawing, burning, butchery and fresh breaks.

Where possible, fragments were identified to species or species group, using the reference collection at the Environmental Archaeology Unit, University of York. Fragments not identifiable to species were described as the 'unidentified' fraction.

### Results

#### *Sediment samples*

The results are presented in context number order. Archaeological information, provided by the excavator, is presented in square brackets.

**Context 1018** [Possible upper fill of pit, consisting of mixed lenses of ash, charcoal and burnt clay. 11<sup>th</sup>/12<sup>th</sup> century spot date]

Sample 1/T (3 kg sieved to 300 microns with washover)

A moist, crumbly and soft (working slightly plastic), jumbled mixture of light reddish-brown sand or ash and black ?charcoal rich ?ash (or ?charcoal rich ?ashy humic silt. Stones (20 to 60 mm) were present in the sample.

This subsample yielded a large residue of about 350 cm<sup>3</sup> of sand and gravel (to 40 mm in maximum dimension) with some charcoal (to 20 mm). The rather large washover of about 125 cm<sup>3</sup> was of charcoal (including hazel, *Corylus*, roundwood fragments), with a trace of charred cereal grains (barley, *Hordeum*, and bread/club wheat, *Triticum 'aestivo-compactum'*). There were also quantities of an unusual material consisting of small granules of

what appeared to be charred amorphous organic matter. It was perhaps burnt peat, but could not be identified with certainty and requires further examination. Other charred plant remains comprised hazel nutshell and at least one achene of corn marigold, *Chrysanthemum segetum* L. There was also a little bone, pottery and uncharred wood.

Fifteen fragments of bone were recovered from this sample including a number of burnt fragments and three unidentified fish bones. A single caprovid sesamoid was the only identifiable fragment.

**Context 1022** [Pit fill (below Context 1018). 11<sup>th</sup>/12<sup>th</sup> century spot date]

Sample 3/BS (11 kg sieved to 300 microns with washover)

Moist, mid to dark grey-brown, crumbly and soft (working plastic), sandy clay silt. Stones (20 to 60 mm), ?mortar, ?pot, ?charcoal and mammal bone were present in the sample.

The large residue of about 2 litres was sand and coarse gravel (to 80 mm), including gritstone and a chalk-like rock. The small washover of about 75 cm<sup>3</sup> was of charcoal (to 10 mm) with some charred bread/club wheat grains and many uncharred toad rush (*Juncus bufonius* L.) seeds and a trace of beetle remains. Other identifiable remains were charred hazel nutshell and traces of elder (*Sambucus nigra* L.) seed fragments. Also in the residue were modest amounts of pottery (to 25 mm) and a little bone (to 120 mm).

The vertebrate remains from this sample totalled 94 fragments. Few fragments were larger than 30 mm and most were unidentifiable. Identified remains included a cod (*Gadus morhua* L.) vertebra, and two pig bones.

**Context 1044** [Backfill/use deposit within pit. 11<sup>th</sup>/12<sup>th</sup> century spot date]

Sample 7/T (3 kg sieved to 300 microns with washover)

Moist, minutely mottled red-brown, grey-brown and light grey, crumbly and soft (working somewhat plastic and sticky), slightly sandy clay silt. A ?ash component, a trace of charcoal and mammal and fish bone were present in the sample.

The moderate- to large-sized residue of about 350 cm<sup>3</sup> was of sand and gravel with a little charcoal (to 15 mm). The small washover of about 30 cm<sup>3</sup> was of charcoal with some uncharred plant detritus and many toad rush seeds and moderate numbers of

spike-rush (*Eleocharis palustris* s.l.) nutlets, together with a small range of other plant remains (charred and uncharred) probably all either cornfield weeds or plants of waste ground. The rush and spike-rush remains point, perhaps, to traffic from wet tracks or pond margins. The residue also yielded traces of dog coprolite, bone and pottery.

Most of the 63 bone fragments from this sample were less than 20 mm and few were identifiable. A third of the remains were fish, but of these only a herring (*Clupea harengus* (L.)) premaxilla and a gadid (?cod) vertebra could be identified to family or species. A number of the unidentified fragments were of bird bone and caprovid remains were also identified.

**Context 1057** [Backfill of pit. 11<sup>th</sup>/12<sup>th</sup> century spot date]

Sample 9/BS (11.5 kg sieved to 300 microns with washover)

Moist, mid ginger-brown to light grey (highly oxidised), crumbly and somewhat brittle (working plastic), sandy silty clay (to clay silt). Stones (20 to 60 mm) and mammal bone were present and ?iron pan was abundant in the sample.

There was a large residue of about 1900 cm<sup>3</sup> of sand and coarse gravel (to 90 mm). The very small washover of about 25 cm<sup>3</sup> consisted of charcoal (to 15 mm, including ash, *Fraxinus*), with traces of uncharred plant detritus, including a few toad rush seeds and traces of a few other types with decay-resistant propagules and probably of little or no interpretative significance. The residue also yielded a little pottery and bone, whilst there were traces of fly puparia and beetle fragments in the washover.

Forty-nine fragments of bone were recovered from this sample, most of which were less than 20 mm in maximum dimension and unidentifiable. A few bird rib fragments were noted, along with a caprovid mandible fragment and a single herring vertebra. A small number of burnt fragments were present.

### *Hand-collected vertebrate remains*

Deposits from this site produced two boxes (each box approximately 20 litres) of hand-collected bone. Pottery spot dates provided by the excavator dated the bones mainly to the medieval period, with the bulk of the remains being recovered from deposits of 11<sup>th</sup>/12<sup>th</sup> century date. Almost half of the entire assemblage was recovered from a single pitfill, Context 1044 (11<sup>th</sup>/12<sup>th</sup> century). No information was available for four contexts (1000, 1001, 1008 and 1011) and the material (amounting to only seven

fragments) from these deposits has been excluded from this report.

Preservation of the vertebrate remains was mainly good, but some contexts did contain a small component of fragments that were poorly preserved, with some erosion of the bone surfaces and with a slightly battered appearance. A number of associated pitfills, Contexts 1031 and 1044 in particular, produced fragments which showed evidence of heat damage. This did not appear to suggest direct burning of the fragments, but rather secondary damage consistent with the bones being dumped amongst hot ash. Colour, for the most part, was recorded as brown, but bones from some of the pitfills (Contexts 1031, 1043, 1044 and 1057) were a rather distinctive gingery-brown in colour. Evidence for butchery was noted, but was not extensive. The most commonly recorded practice was the longitudinal chopping of both cattle and caprovid vertebrae, indicating the splitting of carcasses into sides of meat. Cranial fragments of pig and sheep which had been chopped in half were also noted.

A total of 656 fragments were recorded, of which 218 were identified to species. Fifty-nine of these fragments were measurable and nineteen were mandibles with teeth *in situ* of use for providing age-at-death data.

As can clearly be seen from Table 2, caprovid remains predominated, with cattle and pig also present, but in fewer numbers. Nine of the caprovid fragments, chiefly horncores (3) and metapodials (5) were identified as goat. Preliminary observations of the skeletal element representation for cattle from the 11<sup>th</sup>/12<sup>th</sup> century deposits suggests that these remains, dominated by head (maxillae, mandibles and isolated teeth) and distal limb (metapodials and phalanges) elements, may largely represent butchery waste from initial carcass preparation. Caprovid remains (from deposits of the same date), on the other hand, showed a greater range of elements, with roughly equal numbers of meat-bearing (such as humerii, radii, femora and pelvis) to non-meat-bearing bones suggesting a larger component of kitchen waste. More 'domestic' refuse was indicated by the prevalence of rib and vertebra fragments from large and medium-sized mammals within the 'unidentified' fraction. Numbers of fragments from the later deposits (and for pigs) were too few for any meaningful interpretations to be made.

Chicken and geese were also identified, including a juvenile goose tarsometatarsus. The latter suggests that geese were probably being bred in the vicinity and that the recovered remains represent domestic individuals rather than those caught by wild fowling. Context 1038, the fill of a cobble lined pit, yielded a

vertebrate assemblage dominated by the remains of duck. The 27 fragments, representing at least four birds, could not be confidently identified morphologically as wild or domestic, but were slightly larger than the mallard specimens in the EAU reference collection, perhaps indicating that they were from domestic stock.

Wild birds were represented by three bones identified as sparrowhawk (*Accipiter nisus* L.) from Context 1044. The single tarsometatarsus and two femur fragments were almost certainly the remains of one individual. Deposits of a similar date from two sites in York (the former Davygate Centre site and Coppergate) have also produced fragments of sparrowhawk (Carrott *et al.* 1998; O'Connor 1989). The sparrowhawk is not known as an urban scavenger and it seems likely, as has been suggested at both the York sites, that the bones represented a bird used for hawking.

Red deer (*Cervus elaphus* L.) and roe deer (*Capreolus capreolus* L.) remains were also identified from the slightly later deposits, Contexts 1032 and 1048 (12<sup>th</sup>/13<sup>th</sup> century), although a red deer tibia was also recovered from Context 1031 (11<sup>th</sup>/12<sup>th</sup> century). Additionally, a red squirrel (*Sciurus vulgaris* L.) metatarsal was recovered from Context 1031. Squirrel remains, mainly metapodials and phalanges, have been recovered from medieval deposits from a number of sites in York (Carrott *et al.*; O'Connor 1988, 1989; Bond and O'Connor 1999). At The Bedern, the large concentration of squirrel bones was interpreted as waste from the processing of pelts (Bond and O'Connor 1999). The bone from Ripon may hint at a similar craft activity.

A small number of fish bones were recovered by hand-collection, mostly consisting of unidentified finrays and ribs, however, a single cod (*Gadus morhua* L.) vertebra was identified.

## Discussion and statement of potential

Plant and invertebrate remains were sparse and of limited interpretative value. The sediment samples examined here require no further analysis except, perhaps, in pursuit of the nature of the ?charred amorphous organic component of Context 1018. However, further excavation at this site may yield material with useful concentrations of charred and uncharred plant remains and

deposits likely to be productive should certainly be watched for.

The vertebrate assemblage recovered from this site is rather small, however, most contexts produced moderately well-preserved bone, with little indication of reworked or residual material. Most of the bones came from deposits which could be assigned to a tight dating framework, with the bulk of the current assemblage dated to the 11<sup>th</sup> and 12<sup>th</sup> centuries. The fills from one pit produced a mix of refuse which included both primary butchery and domestic waste. A single squirrel fragment may suggest that waste from specialised craft activities was also being dumped in this pit. Additionally, the presence of the sparrowhawk remains and the cervid bones, possible indicators of activities such as hawking and hunting, in deposits at this site may perhaps hint at high status occupation in the vicinity, although numbers of fragments were extremely limited.

Few vertebrate assemblages of this date have been recovered from Ripon and those that have remain largely unpublished. The well-preserved and well dated material from this site shows some potential for the useful investigation of human activities in this area and, on the evidence of the current assemblage, further excavation could produce a moderately large and well dated animal bone assemblage, the data from which could provide important information for the investigation of medieval Ripon and its relationship with other sites in the region.

## Recommendations

No further investigation of the biological remains (other than bone, and the charred amorphous organic component of Context 1018) from the sediment samples, is warranted. However, any remaining sediment should be sieved for the recovery of small bones and this material considered

in conjunction with any additional study of the hand-collected vertebrate assemblage.

As the dating framework produced for this site appears to be quite tight, it is recommended that a basic archive of the vertebrate remains, including biometrical and age-at-death data, should be produced. Ideally, this material should be considered together with archives of vertebrate material from other recent excavations in Ripon which may provide a wider understanding of the activities being undertaken in the city during the medieval period.

## Retention and disposal

All of the current material should be retained for the present.

## 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.

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Table 1. List of processed sediment samples from excavations at Wakeman's House, Ripon, with notes on their treatment.

| Context | Sample | Notes                                       |
|---------|--------|---|
| 1018    | 1      | 3 kg sieved to 300 microns with washover    |
| 1022    | 3      | 11 kg sieved to 300 microns with washover   |
| 1044    | 7      | 3 kg sieved to 300 microns with washover    |
| 1057    | 9      | 11.5 kg sieved to 300 microns with washover |

Table 2. Recorded hand-collected vertebrate remains from deposits at Wakeman's house, Ripon.

| Species                         |              | 11/12 <sup>th</sup> C | 12/13 <sup>th</sup> C | 12-14 <sup>th</sup> C | 13/14 <sup>th</sup> C | Total      |
|---------------------------------|--------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| <i>Sciurus vulgaris</i> L.      | red squirrel | 1                     | -                     | -                     | -                     | 1          |
| <i>Felis f. domestic</i>        | cat          | 1                     | -                     | 2                     | -                     | 3          |
| <i>Equus f. domestic</i>        | horse        | 4                     | -                     | -                     | -                     | 4          |
| <i>Sus f. domestic</i>          | pig          | 15                    | 5                     | 2                     | -                     | 22         |
| <i>Cervus elaphus</i> L.        | red deer     | 1                     | -                     | -                     | -                     | 1          |
| cf. <i>Cervus elaphus</i> L.    | ?red deer    | -                     | 1                     | -                     | -                     | 1          |
| <i>Capreolus capreolus</i> (L.) | roe deer     | -                     | 2                     | -                     | -                     | 2          |
| <i>Bos f. domestic</i>          | cattle       | 28                    | 8                     | -                     | 6                     | 42         |
| Caprovid                        | sheep/goat   | 76                    | 10                    | 1                     | 5                     | 92         |
| <i>Anser</i> sp.                | goose        | 7                     | 2                     | 3                     | -                     | 12         |
| <i>Anas</i> sp.                 | duck         | -                     | -                     | 27                    | -                     | 27         |
| <i>Accipiter nisus</i> L.       | sparrowhawk  | 3                     | -                     | -                     | -                     | 3          |
| <i>Gallus f. domestic</i>       | chicken      | 9                     | 1                     | -                     | -                     | 10         |
| Unidentified                    |              | 358                   | 56                    | 13                    | 9                     | 436        |
| <b>Total</b>                    |              | <b>503</b>            | <b>85</b>             | <b>48</b>             | <b>20</b>             | <b>656</b> |