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**Evaluation of biological remains from
excavations at Countess Close, Alkborough,
North Lincolnshire (site code: CCA2003)**

PRS 2004/13

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by

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Summary

An archaeological evaluation excavation was carried out at Countess Close, Alkborough, North Lincolnshire, during October 2003. Four sediment samples, a small assemblage of hand-collected bone and a little hand-collected shell, recovered from deposits of medieval and modern date, were evaluated for their bioarchaeological potential. Additionally, a box of shell and animal bone from field walking nearby was also examined.

*Ancient plant remains comprised charred material, mainly rather poorly preserved charred cereals grains, with a little wood charcoal and the charred seeds of cornfield weeds. 'Silicified' material, including chaff, was also present in two of the samples. The small assemblages of snails recovered from the samples indicated an open, lightly vegetated landscape—probably short-turfed calcareous grassland with areas of exposed rock. The hand-collected snails were all well-preserved common garden snails (*Helix aspersa*) and most likely of modern origin.*

The vertebrate remains formed a rather small assemblage of little interpretative value. Dog bones were prevalent in Trench 1 deposits, representing at least three different animals; some slight evidence for the processing of animal skins was noted. Two fragments identified as sparrowhawk could represent a bird used for hawking. There is no evidence from the bones for the use of this area of the site for the disposal of large accumulations of domestic rubbish or butchery refuse. Shell and bone from field walking suggested that domestic refuse was disposed of in the vicinity of the moated site but repeated ploughing had, in all probability, spread the remains throughout the investigated area.

Preservation of the bone and shell suggests that material of a more interpretative nature may be recovered should further excavations be undertaken. However, dating of the remains is crucial and further assemblages would only be of value if a tight chronological framework could be achieved.

KEYWORDS: COUNTESS CLOSE; ALKBOROUGH; NORTH LINCOLNSHIRE; EVALUATION; MEDIEVAL; MODERN; PLANT REMAINS; CHARRED PLANT REMAINS; CHARRED GRAIN; INVERTEBRATE REMAINS; LAND SNAILS; MARINE SHELL; VETEBRATE REMAINS

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Evaluation of biological remains from excavations at Countess Close, Alkborough, North Lincolnshire (site code: CCA2003)

Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology at Countess Close, Alkborough, North Lincolnshire (NGR SE 8795 2160 to SE 8791 2140), during October 2003. Field-walking of the site was undertaken in advance of the excavation at the end of September 2003.

The Countess Close moated site is a scheduled monument (No. 32622) comprising a main enclosure, defined by a bank and external moat, with a second enclosure on the south-western side. Two trenches were excavated and three phases of activity, all apparently medieval, were identified. Trench 1 was located to investigate a possible southern entrance to the main enclosure, and Trench 2 the ploughed out ditch and bank at the south-eastern corner of the site.

Fifteen sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), representing six contexts, and a very small quantity of hand-collected shell and bone, were submitted to PRS for an evaluation of their bioarchaeological potential.

Methods

Sediment samples

The sediment samples were inspected in the laboratory. Four 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 the recovery of plant and invertebrate macrofossils.

The washovers resulting from processing were examined for plant and invertebrate macrofossils. The residues were examined for

larger plant macrofossils and other biological and artefactual remains.

For the two washovers with larger quantities of plant remains, their general nature was recorded briefly by 'scanning', identifiable taxa and other components being listed directly to a PC using *Paradox* software. Notes on the quantity and quality of preservation were made for each fraction.

Approximately 1 g of charred grains from Sample 5 (Context 1014) were submitted to Beta Analytic Inc. for dating by Accelerator Mass Spectrometry (AMS). The results are expected in April 2004.

Hand-collected shell

A very small quantity of hand-collected shell was submitted. Most of the remains were recovered during field-walking, with a little additional material from three contexts in Trench 1 of the excavation.

Brief notes were made on the preservational condition of the hand-collected shell and the remains identified to species where possible.

Hand-collected vertebrate remains

Records were made of the hand-collected vertebrate remains 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) and totally unidentifiable. These groups are represented in Table 1 by the category labelled 'Unidentified'.

Results

Sediment samples

The results are presented in context number order. 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 1014 [fill of enclosure ditch 1013]

Sample 5/T (3 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Just moist, light brown to very dark grey-brown, crumbly to unconsolidated, ashy, slightly clay silt, with lumps of black ash and white flecks. Stones (6 to 60 mm) were present.

The small washover consisted of about 70 ml of charcoal (to 20 mm in maximum dimension), charred cereal grain, and snails, with a few fragments of very decayed wood (perhaps from recent roots, to 30 mm), plus plant ash and charred and 'silicified' chaff, the whole clearly representing the burning of a concentration of grain and chaff, perhaps most likely unthreshed material. The grain was mostly bread/club wheat (*Triticum 'aestivo-compactum'*), the grains mostly blistered or puffed through charring but not giving the appearance of having been reworked. There were a few barley (*Hordeum*) grains and some oats (*Avena*). The charred chaff comprised a single well-preserved fragment of rachis (with three nodes) from a free-threshing wheat, plus a few single rachis nodes. There were also a few charred cotyledons of field bean (*Vicia faba* L.). Amongst the remaining macrofossils, charred seeds of the weed corn gromwell, *Buglossoides arvensis* (L.) I. M. Johnston, were moderately common and there were a few other taxa all likely to have been collected with harvested cereals. A trace of charred hazel (*Corylus avellana* L.) nutshell was also noted.

The snail assemblage was mostly of the burrowing, and probably intrusive, *Cecilioides acicula* (Müller) and unidentifiable shell fragments. Other taxa more likely to

be contemporary with the deposit were present including *Pupilla muscorum* (L.) (5 adults and some juveniles), *Vallonia ?excentrica* Sterki (6), *Vertigo ?pygmaea* (Draparnaud) (1) and *Trichia ?hispidata* (L.) (3).

The small residue (dry weight 0.55 kg) was largely composed of sand and stones (to 35 mm), with a little brick/tile (14 g, to 45 mm), pot (~1 g, to 15 mm), cinder, fine charcoal (<1 g), and fragments of charred grain (<1 g) and bone (4 g). Thirteen small fragments of bone were recovered, ten of which were burnt. One fragment was identified as a bird phalanx. A few additional, mostly fragmentary, snail remains were seen including one *Cochlicopa ?lubricella* (Porro).

Context 1017 [dump against causeway]

Sample 1/T (3 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Just moist, light brown to very dark grey-brown, crumbly or unconsolidated, slightly ashy, clay silt, with lumps of black ash. Burnt bone and modern rootlets were present.

The small washover of about 70 ml again consisted of charcoal (to 10 mm), charred cereal grain, snails and a little bone (5 fragments of amphibian bone, probably all from one individual). The grain was mostly very much damaged by charring but otherwise 'fresh'-looking and consisting largely of short, squarish bread/club wheat caryopses. There was one field bean seed and some lumps (to 10 mm) of charred organic material looking somewhat like peat but maybe dense concentrations of 'chaffy' material. 'Silicified' material was again present. Other grains (in trace amounts) were oats and barley, and there was a single well-preserved fragment of free-threshing wheat rachis. There were a few weed seeds, only those of corn gromwell being moderately frequent.

The snail assemblage was very similar to that from Context 1014 (above) being mostly of *C. acicula* and unidentifiable fragments. Identified remains included *P. muscorum* (3 adults and 3 juveniles), *V. ?excentrica* (7), *T. hispidata* (3) and *C. ?lubricella*.

The small residue (dry weight 0.49 kg) was of sand and stones (to 70 mm), with a little cinder (<1 g), charcoal (<1 g) and unidentifiable land snail fragments (<1 g). Additionally, 26 fragments (20 g) of bone were recovered from this sample; most were burnt. Several small mammal bones were very pale in colour and appeared to be of modern origin. A large mammal metapodial shaft fragment was identified, together with part of a pig calcaneum (burnt).

Context 1024 [primary fill of enclosure ditch (1013)]
Sample 16/T (3 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Just moist, light to mid orange-brown to light to mid grey-brown, crumbly (working more or less plastic), slightly silty clay. Stones (60+ mm) and ?land snails were present.

There was a tiny washover (of only a few ml) mostly of sand grains, with a trace of fine charcoal (to 2 mm), a few fragments of modern invertebrates (including beetle cuticle and earthworm egg capsules) and a few snails. The latter included *Vallonia ?costata* (Müller) (1), *V. ?excentrica* (3), *T. hispida* (1) and some unidentified fragments.

The medium-sized residue (dry weight 1.3 kg) was again mostly of sand and stones (to 130 mm), with a few unidentified land snail shell fragments (<1 g).

Context 2015 [primary fill of enclosure ditch 2030]
Sample 7/T (3 kg sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Just moist, light to mid orange-brown to light to mid grey-brown, crumbly (working more or less plastic), slightly silty clay. Land snails were present.

There was a tiny washover (of a few ml) of sand, with traces of fine charcoal (to 2 mm) and some modern contaminants/intrusions (plant detritus, mite and beetle cuticle and *C. acicula*). Identified land snails included *V. ?excentrica* (3), *Vertigo ?pygmaea* (1), *?T. hispida* (1 fragment) and *Cochlicopa ?lubricella*.

The residue was small (dry weight 0.71 kg) and mostly of sand and stones (to 45 mm), with some Devil's toenails (*Gryphaea* fossils), a single fragment of pot (<1 g, to 15 mm) and some snail shell (unidentified fragments except for one additional *V. ?excentrica*).

Hand-collected shell

All of the shell (0.89 kg) recovered during field-walking was of oyster (*Ostrea edulis* L.) from Areas A-H and Area P. Most of the valves were very poorly preserved being both highly eroded and fragmented; the exception to this being the remains from C16-C19, F12 and P16, where preservation was significantly better. The amounts of shell per area were usually extremely small (often only fragments of a single valve), but C17, F17 and F18 each gave slightly larger quantities (together accounting for about half of the total weight recovered). Some of the better preserved valves showed evidence of having been opened using a knife or similar

implement. Fresh breakage of some of the remains was also noted.

The shell recovered from the excavation was from three contexts. All the remains were of the garden snail *Helix aspersa* Müller; single individuals from Contexts 1020 and 1024 and thirteen from Context 1010.

Hand-collected vertebrate remains

Eleven deposits, six from Trench 1, and five from Trench 2, produced a small assemblage of bone, amounting to 82 fragments. A number of these deposits were of modern date, e.g. buried topsoil, subsoil, or unstratified and, although bones from the latter were examined, they were not included in the fragment counts or detailed in Table 1. Preservation of the remains was, on the whole, quite good, but with a fairly high degree of fresh breakage noted.

Most of the remains from Trench 1 were recovered from fills of enclosure ditch 1013. Some of the bones from the different fills were clearly related. One of the four dog bones from Context 1014 was associated with a part skeleton of a medium-sized dog from Context 1020, whilst this deposit also included several fragments from a smaller individual. Context 1024 produced yet more dog bones (3), again from a medium-sized dog, which may be related to the individual from Context 1020. Several possible knife and chop marks were noted on a dog femur and a dog ulna from Context 1024. Bones (a tibiotarsus and an ulna) identified as sparrowhawk were recovered from two of the fills, Contexts 1014 and 1020, whilst a humerus from an immature pigeon was recorded from Context 1020. Fragments representing the main domesticates were not particularly numerous, but most of the 'unidentified' fraction were rib and shaft fragments which, although not identified to species, represented large and medium-sized mammals.

Material of medieval date from Trench 2 was recovered from two fills of ditch 2030. This assemblage amounted to 13 fragments, most of which were large mammal shaft, rib and vertebra fragments. Identified remains were restricted to a cow scapula fragment and two rabbit tibiae (representing two different individuals). The latter, recovered from the secondary fill, Context 2028, may be an intrusive component within this deposit. The assemblage of modern date was dominated by rabbit remains, including a part skeleton from Context 2027.

In addition to the hand-collected remains from the excavation, several bags of bone were recovered from field-walking in the same field (north field) and in an adjacent field (south field). The latter produced very few fragments. The north field produced small

concentrations of bone, particularly from Area C, with slightly smaller amounts from Areas D, E, F, G and H. Preservation was mainly quite reasonable, although many of the identifiable fragments were teeth which generally have a better survival rate in poorer conditions. Species represented included cattle, caprovid and pig.

Discussion and statement of potential

Each of the two more substantial washovers comprised charred material, mainly rather poorly preserved (puffed, blistered and sometimes broken) charred cereals grains and some other charred propagules, with a little wood charcoal. Most of the grains were bread/club wheat and there were traces of rachis (ear stalk) of a free-threshing wheat, consistent with this. Otherwise most of the remains were charred seeds of cornfield weeds, although the finest fractions included small fragments of 'silicified' chaff (typically awns) whose presence probably points to the burning of a localised concentration of chaff. To judge from some other examples of deposits with such silicified remains, this may point to an origin of the ash in a kiln or corn-drier.

The small assemblages of snails recovered from the samples indicated an open, lightly vegetated landscape—probably short-turfed calcareous grassland with areas of exposed rock. The hand-collected snails were all well-preserved common garden snails (*Helix aspersa*) and most likely of modern origin—this species will rapidly colonise areas of disturbed ground and the remains probably represent individuals from the surrounding area moving into the open section of the excavation.

Hand-collected bones recovered from the excavation of Trenches 1 and 2 formed a rather small assemblage of little interpretative value. There seemed to be little refuse that represented waste from either carcass or food preparation. The various dog remains from Trench 1 seemed to be from several skeletons and may derive from the processing of animal

skins. However, only slight evidence provided by traces of possible knife and chop marks on two of the bones supports this hypothesis. The sparrowhawk bones, given that this is a moated site, perhaps of some standing, could represent a bird used for hawking.

There is no evidence from the bones for the use of this area of the site for the disposal of large accumulations of domestic rubbish or butchery refuse.

Field walking within the same field (as the excavation) showed that small amounts of bone and marine shell were distributed throughout this locality, with no one area producing large quantities of remains. The vertebrate species identified all represented the main domesticates, whilst all the shell was that of oyster, suggesting that disposal of rubbish was carried out in the vicinity. Repeated ploughing of the field has, in all probability, spread the bones and shell around the area under investigation.

Recommendations

There is probably little to be gained by further examination of the plant material in hand or the processing of larger subsamples unless a closer identification of the very small amounts of wheat rachis is desired—perhaps not worthwhile for such a low concentration.

The current animal bone and shell assemblages do not warrant further consideration. Preservation of the material recovered during the recent exercise, however, is quite good and there is the potential that larger assemblages of material of a more interpretative nature may be recovered should further excavations be undertaken. However, dating of the remains is crucial and further assemblages would only be of value if a tight chronological framework could be achieved.

Retention and disposal

All of the current material 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.

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Table 1. Hand-collected vertebrate remains from excavations at Countess Close, Alkborough, North Lincolnshire (excluding unstratified and modern material).

Species		Trench 1	Trench 2	Total
<i>Oryctolagus cuniculus</i> (L.)	rabbit	-	2	2
<i>Canis</i> f. domestic	dog	16	-	16
<i>Equus</i> f. domestic	horse	1	-	1
<i>Sus</i> f. domestic	pig	3	-	3
<i>Bos</i> f. domestic	cow	1	1	2
Caprovid	sheep/goat	1	-	1
<i>Accipiter nisus</i> (L.)	sparrowhawk	2	-	2
Columbidae	pigeon family	1	-	1
Unidentified		20	10	30
Total		45	13	58