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**Biological remains from excavations at Aylesby, Humberside
(Humber bank strategic works, sitecode: HBS94)**

by

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Summary

Twenty-five sediment samples and a single box of hand-collected bone were submitted for examination. All of the sediment samples were assessed visually and eleven were then processed to recover biological remains. The hand-collected bone was quickly assessed and then recorded to an appropriate level.

Very few biological remains were recovered from the samples and the hand-collected bone assemblage was of little interpretative value.

The land snail assemblage provided a general interpretation of the site as having been set in grassland with some variation from dry, open to moist, shaded areas represented by remains from different contexts.

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Introduction

Twenty-five general biological analysis samples (GBA, *sensu* Dobney *et al.* 1992) from excavations at Aylesby, Humberside, were submitted for analysis of their content of biological remains. One standard-sized box of hand-collected bone was also supplied for examination.

Methods

GBA samples

All of the samples were inspected in the laboratory and a description of their lithology recorded using a standard *pro forma*. Subsamples of 1 kg were taken from three of the samples for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986). A 'washover' was performed on two of these subsamples (context 180, sample 15 and context 477, sample 16) and paraffin flotation was used on the third (context 143, sample 10).

None of the samples were deemed suitable for examination for the eggs of parasitic nematodes.

A 1 kg voucher was retained from each of eleven of the samples and the remaining sediment bulk-sieved to 1 mm, primarily to recover small bones and artefacts (the latter to be returned to the excavator). The residues from the processing of this excess material were all mostly chalk and flint with some gravel and sand. Other components of these residues, if any, are recorded in the text below.

No further analysis was undertaken on the fourteen remaining samples, which were regarded on the basis of inspection as unlikely to produce useful biological remains. Their sediment descriptions as given in Table 1 of the Appendix.

Bone

The animal bones recovered represent a very small hand-collected assemblage. All of the forty-six bone-bearing contexts have been recorded, but not in great detail, as most contained too few fragments.

Results

GBA samples

The results of the investigations are presented in context number order, with information from the excavator concerning context types in square brackets. Bone recovered from sieving of excess material from GBA samples is recorded in the relevant text sections below.

Context 143

Sample 10 [ditch]: Moist, mid to dark grey-brown, soft, very stony, very slightly silty sand. Very small and small stones (2-20 mm) were abundant, medium-sized stones (20-60 mm) common and fragments of burnt mammal bone present in the sample. The stones were mostly chalk and flint with some other pebbles.

The flot was very small and contained only a small group of invertebrate remains. There were fragments of ?larval/pupal cases, mites, a single ?modern pseudoscorpion (*Pseudoscorpionida* sp.) and a large number of earthworm egg capsules. Beetle remains were represented by a pselaphid right elytron, an *Aleochara* sp. underside and an unidentified abdominal segment. Snail species represented were several *Vallonia* sp., many *Cecilioides acicula* and fragments of *Trichia hispida*. Three seeds (*Chenopodium* spp.) and large numbers of modern rootlets were also noted.

The GBA residue was mostly chalk and flint gravel and sand with a few snails - two *Pupilla muscorum* and a single individual of each of *Cecilioides acicula* and *Helicella itala*.

The residue from sieving of excess material contained some snails, one fish bone (a cyprinid urostyle) and an indeterminate small mammal vertebra. The snails were mostly *Cecilioides acicula* with some *Trichia hispida* and single representatives of *Cochlicopa lubrica*, *Oxychilus cellarius* and *Vallonia* sp..

Context 144

Sample 8 [ditch]: Just moist, mid to dark grey-brown, soft, very stony, slightly silty sand. Very small stones (2-6 mm) were abundant and small and medium-sized stones (6-60 mm) were common in the sample. The stones were all chalk and flint.

The residue from sieving of excess material contained some snails and three unidentified bone fragments. The snails present were mostly *Cecilioides acicula* and *Trichia hispida* with some incomplete *Vallonia* sp..

Context 152

Sample 4 [ditch]: Just moist, mid grey-brown, soft, very stony sand. Very small and small stones (2-20 mm) were abundant and medium-sized stones (20-60 mm) were common in the sample. The stones were mostly chalk and flint with some other pebbles.

The residue from sieving of excess material contained no biological remains.

Context 164

Sample 20 [ditch]: Moist, mid orange-brown, very soft sand. Very small, small and medium-sized stones (2-60 mm), mostly chalk and flint with some pebbles, were common in the sample.

The residue from sieving of excess material contained two small fragments of burnt bone and a few snails - *Vallonia excentrica*, *Pupilla muscorum*, *Helicella itala*, *Trichia hispida* and an incomplete *Cochlicopa lubrica*.

Context 180

Sample 15 [ditch]: Dry to just moist, mid to dark slightly orange grey-brown, unconsolidated, very

slightly silty sand. Very small, small and medium-sized stones (2-60 mm), leached chalk and flint, were common in the sample.

The small washover contained only a small group of invertebrate remains (mostly snails), abundant modern rootlets, a few fragments of charcoal (less than 5 mm) and a single ?modern seed (*Stellaria* sp.). Beetle species were represented by a pselaphid head, three *Atomaria* sp. fragments, a single fragment of *Tachyporus* sp. and a larval head capsule. Three mites, a few soil nematodes, two indeterminate insect legs, a ?wasp head and thorax and large numbers of earthworm egg capsules were also present. The snails were all terrestrial species - mostly *Cecilioides acicula*, with two *Vallonia excentrica* and a single *Trichia hispida*.

The GBA residue was mostly sand with some gravel and larger fragments of chalk and flint.

Context 207

Sample 2 [ditch]: Dry, mid yellow-brown, soft sand. Very small stones (2-6 mm) were abundant and small and medium-sized stones (6-60 mm) were common in the sample. The stones were mostly chalk and flint with some other pebbles.

The residue from sieving of excess material contained some land snails and a fragment of ?cockle shell (*Cerastoderma* sp.). The land snail species represented were *Cochlicopa lubrica*, *Pupilla muscorum*, *Vallonia costata*, *V. excentrica*, *Aegopinella pura*, *A. nitidula*, *Cecilioides acicula* and *Trichia hispida*.

Context 232

Sample 3 [ditch]: Just moist, mid yellow-brown, soft sand. Very small, small and medium-sized stones (2-60 mm) were abundant and large stones (60+ mm) present in the sample. The stones were mostly chalk and flint with some other pebbles.

Context 477

Sample 16 [ditch]: Just moist, mid orange-brown, soft sand. Very small and small stones (2-20 mm) were common and medium-sized stones (20-60 mm), ?iron slag and land-snails were present in the sample. The stones were all chalk and flint.

The very small washover contained only a small group of invertebrate remains (mostly snails), some modern rootlets, a few tiny fragments of charcoal (less than 5 mm), one ?*Carex* sp. seed and two indeterminate seed fragments. A single pselaphid fragment and some earthworm egg capsules were also present in the washover. Snail species represented were *Vallonia excentrica*, *Trichia hispida*, and lesser numbers of *Cecilioides acicula*.

The GBA residue was mostly chalk and flint with some gravel and sand and a few snails - mostly *Cecilioides acicula*, with *Discus rotundatus* and incomplete representatives of *Vallonia excentrica*, *Cochlodina laminata* and *Helicella itala* also present.

The residue from sieving of excess material contained a broken vole (microtine) tooth and a few snails. The snails were again mostly *Cecilioides acicula*, with *Trichia hispida*, *Vallonia excentrica*, *Cepaea* sp. and incomplete *Cochlicopa lubrica* also represented.

Context 498

Sample 7 [ditch]: Just moist, mid yellow-brown, soft, very stony sand. Very small and small stones (2-20 mm) were abundant and medium-sized stones common in the sample. The stones were mostly chalk and flint with some other pebbles.

The residue from sieving of excess material contained some snails, three frog (*Rana temporaria*) fragments (two identifiable as scapulae) and tiny fragments of charcoal. The snails were mostly terrestrial - two *Vallonia excentrica*, two *Trichia hispida* and an incomplete *Cochlicopa lubrica* - with a single operculum of the freshwater species *Bithynia tentaculata*.

Context 1069

Sample 24 [pit]: Dry, slightly heterogeneous, mid orange-brown, crumbly to soft, slightly silty sand with some patches of mid orange-brown silty clay sand and some patches of orange sediment (up to 20 mm). Very small and small stones (2-20 mm) were common and large and very large stones (20-60+ mm) were present in the sample. The stones were mostly chalk and flint with some other pebbles.

The residue from sieving of excess material contained a few land snails - single representatives of *Lymnaea* sp., *Vallonia excentrica* and *Trichia hispida* - and a fragment of ?cockle shell (*Cerastoderma* sp.).

Sample 25 [pit]: Dry, mid orange-brown, crumbly to soft, slightly silty sand. Very small and small stones (6-20 mm) were common and medium-sized stones (20-60 mm) and a ?iron object were present in the sample. The stones were mostly chalk and flint with some other pebbles.

The residue from sieving of excess material contained a single *Cecilioides acicula*.

Bone

Details of the recorded hand-collected bone are given in Table 2 of the Appendix.

Discussion

GBA

The samples contained very few biological remains, only snails being sufficiently abundant to allow a general interpretation of the site.

Worm egg capsules and modern rootlets were frequently recorded, and it may be that the deposits had been much disturbed by post-depositional biological processes. The material apparently preserved by anoxic waterlogging may all be modern, having entered too recently to have decayed yet.

The snail species, though present in only modest numbers within any one context, together suggest grassland with some variation from dry, open to moist, shaded areas represented in the assemblages from different contexts. The presence of frog and freshwater snail remains within context 498 (sample 7) may indicate that this ditch contained water for long enough to allow limited colonisation. The ?marine mollusc fragments from contexts 207 and 1069 (samples 2 and 24 respectively) and

the fish bone from context 143 (sample 10) seem likely to be remains of food items transported to the site.

Bone

Most of the medieval material is fairly well preserved, ranging from fawn to brown in colour. However, the Iron age/Romano-British bone (only 10 identifiable fragments) is very poorly preserved, all fragments being heavily eroded. Butchery and dog gnawing is evident on the remains in most contexts but not extensive. Fresh breakage is also evident on many of the bones.

The identifiable animal bone, from both phases, includes remains of cattle (16 fragments), sheep/goat (21 fragments), pig (2 fragments), horse (16 fragments), dog (3 fragments) and fowl (2 fragments). Most of the horse remains are teeth, the remainder comprising metapodials, astragali and carpals. Only 8 fragments from the entire assemblage are measurable (although there is no purpose in making such a record) and only five mandibles and four loose teeth are represented.

A heavily eroded antler fragment, tentatively identified as red deer (*Cervus elaphus* L.), was recovered from context 1009, and there was a human femur shaft from context 1069.

Determining the range and relative frequencies of species is problematic because of the small numbers of bones and the lack of systematic quantitative recovery procedures. Similarly, little information concerning site activity can be reconstructed; most of the bones were doubtless remains from food, while the antler may represent waste from a craft process.

Recommendations

GBA

No further analysis of these samples is

considered worthwhile.

Bone

The animal bone assemblage recovered from this site is limited in its potential research value by its small size, and the extremely low numbers of fragments providing biometrical and age at death data. These factors, combined with the broad and uncertain dating information and the very poor preservation of the material of Iron age/Romano-British date, render the assemblage of low zooarchaeological priority. However, should further excavation be undertaken, the possibilities of recovering a regionally important Iron age/Romano-British assemblage should be considered.

Retention and disposal

There appears to be no justification for retaining this material in the longer term.

Archive

All extracted fossils from the test subsamples, and the residues 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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Appendix:*Table 1. Sediment descriptions of unprocessed samples.*

Context	Sample	Description
156	9	Dry to moist, mid to dark orange-grey-brown, unconsolidated to brittle in places, sand. Small stones (6-20 mm) were abundant and very small, medium-sized and large stones (2-6 and 20-60+ mm) were present in the sample. The stones were all chalk and flint.
164	19	Just moist, mid orange-brown, soft sand. Very small and small stones (2-20 mm) were abundant and medium-sized stones (20-60 mm) common in the sample. The stones were mostly chalk and flint with some other pebbles.
177	5	Dry to moist, mid to dark slightly orange grey-brown, unconsolidated working plastic, sandy clay. Very small and small stones (2-20 mm) were abundant and medium-sized and large stones (20-60+) were common in the sample. The stones were mostly chalk and flint with some other pebbles.
223	1	Just moist, mid to dark grey-brown, soft, slightly humic, slightly silty sand. Very small and small stones (2-20 mm) were abundant and medium-sized and large stones (20-60+ mm) and small fragments of brick/tile were present in the sample. The stones were all chalk and flint.
279	11	Dry, orange-grey-brown, unconsolidated sand. Very small, small and medium-sized stones (2-60 mm) were abundant and large stones (60+ mm) were common in the sample. The stones were all leached chalk and flint.
446	14	Just moist, mid to dark orange-brown, soft, very slightly silty sand. Very small, small and medium-sized stones (2-60 mm), all chalk and flint, were abundant in the sample
472	12	Just moist, mid yellow-brown, soft, very stony, very slightly silty sand. Very small and small stones (2-20 mm), all chalk and flint, were abundant in the sample.
491	13	Dry to moist, slightly heterogeneous, slightly mottled internally (on mm-scale), mid to dark grey-brown, crumbly sand with some mid to dark brown-grey slightly sandy clay. Small stones (6-20 mm) were abundant and very small and medium-sized stones (2-6 and 20-60 mm) were common in the sample. The stones were all strongly leached chalk and flint.
492	6	Moist, mid to dark grey-brown, soft, slightly silty sand. Very small and small stones (2-20 mm) were abundant in the sample and large stones (60+ mm) were present. The stones were all chalk and flint.
1009	17	Dry, mid orange-brown, soft sand. Very small and small stones (2-20 mm), all chalk and flint, were abundant in the sample.
1009	18	Just moist, light to mid orange-brown, unconsolidated sand. Small stones (6-20 mm) were abundant and very small and medium-sized stones (2-6 mm and 20-60 mm) were common in the sample.

1045	21	Just moist, mid orange-brown, unconsolidated, very slightly silty sand. Very small, small and medium-sized stones (2-60 mm) were common and a trace of charcoal was present in the sample. The stones were mostly limestone, chalk and flint. Some of the calcareous pebbles were clearly leached and internally zoned.
1045	23	Just moist, heterogeneous, mid orange-brown, soft sand with lumps (to 20 mm) of orange sand, darker sediment. Very small and small stones (2-20 mm), mostly chalk with some flint, were common in the sample.
1095	22	Just moist, mid orange-brown, brittle working unconsolidated, slightly clay sand. Very small and small stones (2-20 mm) were abundant and medium-sized and large stones (20-60+) stones were common in the sample. The stones were all leached chalk and flint.

Table 2. Hand collected bone from both phases.

SPECIES	TOTAL FRAGMENTS	TOTAL WEIGHT in g	TOTAL MEASURABLE	MANDIBLES WITH TEETH	LOOSE TEETH
CATTLE	16	-	2	1	1
SHEEP/GOAT	21	-	1	3	3
PIG	2	-	-	1	-
HORSE	16	-	4	-	-
FOWL	2	-	1	-	-
DOG	3	-	-	1	-
RED DEER	1	-	-	-	-
HUMAN	1	-	-	-	-
SUB TOTAL	62	2412	8	6	4
UNID	130	746	-	-	-
TOTAL	192	3158	8	6	4