

**Investigation of plant and invertebrate remains  
from the Anglian Cemetery at Castledyke,  
Barton-on-Humber, S. Humberside (site code CS89-90)**

by

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**Summary**

A variety of samples from ditches and from deposits associated with Anglian burials at the Castledyke cemetery have been examined for plant and invertebrate remains. Most were barren of identifiable fossils, although some pot fills were found to contain small concentrations of charred cereal grains, perhaps indicating 'burnt offerings', and some modest assemblages of snails, largely indicative of grassland habitats.

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A series of samples from ditch fills, deposits associated with burials or fills of pots was submitted for analysis of snails and—if preserved—other biological remains. They can be categorised as follows:

(i) Small samples of sediment associated with burials: these samples were mostly too small and the sediment too well-oxidised to warrant more than inspection in the laboratory and most have not been analysed further. The following notes were made during inspection of the samples:

These are all small samples of sediment, now desiccated, usually with at least some chalk gravel up to about 30 mm maximum dimension

and occasionally with a little unidentifiable bone. The matrix is friable to somewhat indurated sandy silt or sandy clay silt with a colour varying from light yellow-brown to somewhat reddish-brown.

Most are too small for useful analysis of snails (and, indeed, no molluscs have been noted during inspection of the samples); from what can be seen with the naked eye, there seems to be no future in performing any other biological analysis since the samples comprise sediments that are very well oxidised and therefore unlikely to have preserved any organic material.'

The samples examined were as follows:

Context/ Skeleton	Sample	Comments
-	dark soil around find 65	S
-	dark soil around find 66	S
45	dark soil around find 46	S
103	under left femur	S
103	stomach	CS
106	stomach	CS
108	stomach	BS
111	under left femur	A
117	from left femur	S
136/137	from grave fill	S*
228	stomach	CS
235	?pigment from near finger ends	S*
235	burnt substance, right toe region	S*
262	stomach	S
301	stomach	CS
301	under femur	CS (label almost illegible)

Context/ Skeleton	Sample	Comments
310	stomach	AS
310	under femur	AS
315	soil with corroded metal from sword 331	C
315	soil beneath find 337	C
324	under femur	CS
333	under skeleton	-
333	under right femur	A
364	under femur	ACS
364	under right tibia and fibula	CS
364	under left tibia and fibula	CS
451	stomach	CS
451	under femur	CS
455	stomach	CS
455	under femur	CRS
460	under femur	CS
460	stomach	C
636	under right tibia/fibula	AS
636	under right femur	AS
636	stomach	CS
650	under left femur	CS
650	stomach	CS
690	stomach	CS
693	stomach	AC

720	stomach	AS
725	under right leg	C
<del>725</del>	<del>stomach</del>	<del>C</del>
743	under left tibia and fibula	CS
743	under left femur	CS
743	stomach	CS
769	from W edge of cruciform brooch beneath chin	CS
769	under left femur	CS
769	organic matter on pelvis	BCS, no organic matter observed
769	under pelvis	CS
793	soil under find 796	S
850	stomach	CS
850	under left leg	S
850	under right leg	CS
870	stomach	CS
870	under left leg	CS
870	under right leg	CS
953	fill	S
995	stomach and pelvis	AB*
995	left leg	A
1094	under left leg	AS

Context/  
Skeleton

Sample

Comments

1094	under right leg	S
1098	hair/textile? from fill 1099	S, no organic matter observed
1098	under stomach	ABS
1106	stomach	-
1106	under left leg	C
1106	under right [leg]	A
1113	under femur	CS
1133	under right femur	CS
1133	stomach	S
1155	under leg	CS
1155	under stomach	C
1177	left leg	S
1177	right leg	C
1177	pelvis and stomach	AB*
1236	leg	A
1236	stomach	S
1291	under right leg	-
1291	stomach	CS
1376	stomach	AS
1422	left leg	A
1422	right leg	A
1422	stomach	AC
1431	stomach	A
1445	charcoal sample	S*
1468	stomach	CS
1485	stomach	CS
1488	stomach	S

Key to `Comments':

A = sample very sandy, strongly oxidised  
B = (?human) bone observed  
C = sample mostly chalk gravel  
R = traces of (?modern) roots present  
S = sample very small, usually only a few grammes

\* = discussed in more detail below, in context number order, with the excavators' comments in brackets:

**Skeleton 137** [carbonised material] from grave fill 136]: mid/dark grey-brown, slightly damp silty sand or sandy silt with orange-brown oxidised patches and occasional patches of pale grey material and a few small fragments of ?charcoal. The sample, of 240 g was disaggregated and sieved to 300  $\mu$ m. There was a single charred ?*Vicia* seed and a small fragment of charred ?grass stem in the light fraction washed from the residue. The latter consisted of sand and gravel to 15 mm, with an estimated 50 very poorly preserved charred wheat grains, with the short, plump, squarish shape of bread/club wheat, *Triticum aestivo-compactum*. There were also rather a lot of amorphous lumps of compressed whitish/greyish ash to 10 mm (maximum 5 mm thick), containing small fragments of charred plant detritus. In addition, there was a little charcoal to 10 mm.

**Skeleton 235** [burnt substance, right toe region]: a small fragment (20 x 10 x 5 mm) of light greyish ?burnt shale, perhaps from coal.

**Skeleton 235** [?pigment from near finger ends]: the sample comprised two small fragments of chalk up to 5 mm, two of brick/tile to 7 mm and a little sand and silt.

**Skeleton 995** [stomach and pelvis area]: mid grey-brown to more or less orange-brown, dry, crumbly, sandy silt with angular and rounded chalk to 15 mm and a human carpal.

**Sample from 1445** [charcoal from grave fill]: a sample of about 20 g of dry, more or less reddish-brown sandy silt, with a little charcoal to about 10 mm maximum dimension which included ?oak (?*Quercus*), ash (*Fraxinus*) and conifer (perhaps pine, *Pinus*).

**Skeleton 1177** [pelvis and stomach region]: mid brown, dry, crumbly sandy silt with much angular chalk to 25 mm and a human carpal.

(ii) Bulk samples of sediment, mostly from grave fills and ditch fills: these were mostly samples of about 5-15 kg taken for bulk-sieving for molluscs. In all cases, bulk-sieving was carried out on 1 mm meshes with 1 mm washover ('flot') sieves.

**Context 502** [base of beaded ditch, NE part of site]: 270 g of chalk gravel with a very little yellow-grey clay matrix; on disaggregation and sieving to 300  $\mu$ m a residue consisting of angular chalk gravel to 25 mm was obtained in which there were abundant small (<4 mm) fragments of ?calcite with a columnar crystalline structure, perhaps shell fragments from chalk fossils.

**Context 680** [roughly circular path of clay]: no sample with this context number was submitted.

**Context 689** [ditch fill]: there were three samples labelled 'from area A on plan 118' (given EAU sample number 6892), 'area B on plan 118' (6893) and 'near base of ditch' (6891).

Sample 6891 was a mid brown, moist, plastic to sticky silty clay with abundant angular chalk from 2-200 mm. The residue from bulk-sieving of 10 kg comprised angular chalk to 120 mm and flint to 70 mm, with some rounded ironstone to 40 mm and a single fragment of shaft bone to 30 mm.

Sample 6892 was light buff, dry to moist, crumbly angular chalk (2-200 mm) with a very small matrix of plastic silt or silty clay. On bulk-sieving the 13 kg sample, a residue of rather rounded to sub-angular chalk to 70 mm, flint to 50 mm and sandstone to 25 mm was obtained, the washover consisting of a few fragments of ?modern root.

Sample 6893 comprised mid yellow to orange-grey-brown, moist, crumbly (plastic when worked), slightly sandy silt with rather a lot of angular chalk 2-200 mm and some other stone. There was a tiny washover of charcoal (<2 mm) and some ?modern root/rootlet fragments from the 5 kg sample, whilst the residue consisted of angular chalk to 80 mm, with a little flint and ironstone and a little bone <2 mm.

**Context 726** [fill associated with skeleton 725]: mid grey-brown, dry, crumbly silt with abundant angular chalk 2-60 mm (but especially in the range 5-10 mm) and some flint. A 2.25 kg sample was bulk-sieved, and it gave a very small washover containing about 10 very poorly preserved charred wheat grains, probably bread/club wheat, *Triticum aestivo-compactum*, and a little charcoal to 5 mm. Also present was a modern dock (*Rumex*) nutlet and several shells of the burrowing snail *Cecilioides acicula*. The residue was of angular chalk to 80 mm and flint to 60 mm, with some rounded sandstone to 35 mm. There was quite a lot of brick/tile in the 205 mm fraction, the largest fragment being 7 mm; also present was a trace of bone to 10 mm.

**Context 777** [fill associated with skeleton 776]: mid yellow-grey-brown, dry, crumbly, slightly sandy silt with abundant angular chalk 2-60 mm and some red/orange ?burnt soil.

The 25 kg processed by bulk-sieving gave a small washover with a little charcoal and coal to 5 mm, about 20 charred cereal grains (all very damaged, but including ?bread/club wheat, cf. *Triticum aestivo-compactum*, hulled barley, *Hordeum vulgare* and a single oat, *Avena* sp.), two barley rachis fragments and a modest assemblage of snails, most of them (50-100) *Cecilioides acicula*, but with *Cochlicopa lubrica* (9), *Trichia hispida* (9), *Pupilla muscorum* (1), *Discus rotundatus* (1), *Vitrea* sp. (26), *Oxychilus cellarius* (6), *Vallonia excentrica* (15), *V. costata* (6) and *Vallonia* sp. (31). There were also fragments of a ?amber bead, a fragment of ?modern woodlouse exoskeleton and a whole modern ground beetle, *Pterostichus* sp., a fish dermal denticle and a proximal femur of a vole-sized small mammal. The residue comprised angular to subrounded chalk to 60 mm, flint to 20 mm, and a little rounded ironstone to 20 mm, with some very rounded worn fragments of baked clay/brick/tile/?daub, a little human bone and a tooth.

Apart from *C. acicula*, which is likely to have burrowed into the deposit, most of the snails are rather catholic grassland species; however, the presence of *Vitrea* in this context may reflect its carnivorous habit.

**Context 840** [grave fill]: light/mid yellow-brown, dry to moist, crumbly clay silt with abundant angular chalk 2-600 mm. A 30 kg sample was bulk-sieved. The tiny washover included four charred cereals identified as ?barley (*Hordeum* sp.) and ?bread/club wheat (*Triticum aestivo-compactum*), a little charcoal and coal to 5 mm and some snails, which included *Cecilioides acicula* (26), *Pupilla muscorum* (1), *Cochlicopa lubrica* (1), *Vallonia excentrica* (8), *Vallonia* sp. (10), and Helicidae (1), and a proximal femur of a vole-sized small mammal. The residue was of angular chalk to 70 mm, with a little flint to 50 mm, and some rather rounded clasts of sandstone and igneous rock to 100 mm. A further sample from this fill is discussed below. As in the sample from 777, the snail assemblage consists of taxa of grassland habitats.

**Context 928** [ditch fill]: Three samples were available, labelled in the EAU 9281, 9282 (?from southern base in Trench 2') and 9283. All three consisted of light buff, moist, plastic to sticky silty clay with abundant angular chalk 2-600 mm. The sieved samples were, respectively, 8, 11 and 11 kg. There were traces of small charcoal fragments (maximum 7 mm in any sample) in the washovers from all three, with some ?modern roots in 9281 and two *Cecilioides* shells in 9283. The residues were of angular chalk gravel to 130 mm, with flints to 70 mm, rounded sandstone to 80 mm and with a rounded granite pebble in 9282 and an angular limestone fragment in 9283. Sample 9283 also yielded a single rounded pot fragment to 15 mm.

**Context 994** [ditch fill]: Three samples were submitted, of which two were conflated and labelled in the EAU 9941 (?lower fill'), the third being labelled 9942.m Sample 9941 comprised mid buff, moist, plastic silty clay with abundant angular chalk fragments 2-60 mm, whilst 9942 was a light/mid brown, moist, plastic to sticky silty clay with abundant angular chalk 2-60 mm and traces of larger (60-200 mm) chalk fragments. Both samples, in each case 12 kg, were bulk-sieved. Sample 9941 gave a tiny washover consisting of a few fragments of charcoal to 3 mm, with a residue of angular chalk to 100 mm, flint to 30 mm and a few rounded pebbles of ironstone and a piece of rounded pot to 15 mm. The tiny washover from 9942 included charred plant material to 5 mm, about 8 charred ?bread/club wheat (*T. aestivo-compactum*) and some ?modern roots. The residue was of rounded and angular chalk to 50 mm, with flint to 30 mm and rounded ironstone to 40 mm.

**Context 1445** [organic above skeleton 1444]: The sediment here consisted of mid red-brown, moist, crumbly to unconsolidated sandy silt with some chalk fragments 2-20 mm, but no obvious inclusions and no organic material. The 2.5 kg sample was bulk-sieved and it gave a very small washover of charcoal to 15 mm (mostly much smaller), a trace of coal, one very worn charred ?bread/club wheat grain and an otic bulla of a fish. The residue was of angular chalk and flint to 25 mm with (mostly rounded) ironstone to 50 mm (mostly much smaller) and a few fragments of ?Cretaceous mollusc shell 2-4 mm; there were also a few *Cecilioides* shells, a single badly eroded shell that may have been *Aegopinella nitidula*, and slug granules.

(iii) Samples associated with pots:

(a) fill of pot 286: separate samples from base, middle and top of fill, each consisting of mid/dark brown, dry, crumbly to indurated sandy clay silt with abundant chalk gravel. The sample of the lowest fill (390 g) processed by desegregation and sieving to 300  $\mu$ m, and it gave

a residue of angular to rounded chalk to 20 mm, ironstone to 20 mm and a trace of flint to 10 mm.

(b) fill of pot 290: light yellow-brown, dry, sandy silt with abundant chalk gravel. The 250 g sample was sieved to 300  $\mu\text{m}$ ; it gave a residue of sand with angular chalk to 20 mm, with flakes of purplish-brown ?pot to 8 mm and a single snail, *Pupilla muscorum* (a species typical of short turf or bare ground).

(c) fill of pot 321: three separate samples, from top, middle and bottom of pot, each consisting of slightly reddish mid-brown, dry or just moist, crumbly sandy silt or silty sand with a little chalk gravel, especially in the lowermost sample. The latter (240 g) was washed to 300  $\mu\text{m}$ ; it yielded a residue of sand and gravel (of rounded ironstone), including angular chalk and flint to 20 mm and a trace of ?modern rootlets.

(d) fill of pot 336: slightly reddish or yellowish brown, (just) moist, crumbly, sandy silt with abundant small chalk gravel. The 0.56 kg sample was washed to 300  $\mu\text{m}$ , and a residue was obtained which consisted of angular chalk and flint gravel and sand, with fragments of pot to 25 mm (mostly smaller).

(e) fill of pot 472: light yellowish-brown, dry, sandy silt with abundant chalk gravel, with a trace of ?wood. The 1.32 kg sample was washed to 300  $\mu\text{m}$ ; it gave a residue rich in angular chalk gravel to 50 mm with some sand, rather a lot of pot to 15 mm (but mostly flakes <10 mm) and a few shells of *Ceciloides*. The small washover included a very few further shells of this snail, one specimen of *Vallonia* sp., one of *Oxychilus cellarius* and two of *Trichia hispida*, together with ?modern root fragments, earthworm egg capsules, a trace of bone (including a bird scapula fragment from a species smaller than swallow, perhaps wren- or warbler-sized) and modest amounts of charcoal to 5 mm. More very low-grade pottery was observed and two fragments of ?mineralised legume testa (seed coat). The small snail assemblage is consistent with grassland habitats.

(f) fill of pot 479: light grey-brown, dry, sandy clay silt with abundant chalk gravel. The 330 g sample, washed to 300  $\mu\text{m}$ , gave a residue of angular chalk and a little flint to 30 mm, with some sand, together with traces of ?modern roots, a trace of burnt cancellous bone, snail shell (including *Ceciloides*), ?small mammal bone and slug granules. The gravel seemed rather well sorted (much in the 5-10 mm fraction), perhaps by worms. The tiny washover gave further *Ceciloides*, together with more earthworm egg capsules, *Heterodera* cysts, a modern *Carduus/Cirsium* (thistle) achene and traces of small bone fragments. There was also a mite, a little charcoal to 5 mm, and one or two very eroded charred cereal grains, perhaps bread/club wheat.

(g) fill of cremation urn 839, context 840: light yellowish-brown, dry, sandy silt with a little burnt bone and abundant angular chalk gravel; there was a small amount of charcoal (2.1 g) from the base of the urn, of which the largest fragments (10 mm maximum dimension) were identified as oak, *Quercus* sp. The remaining sediment (2.05 kg) was washed to 300  $\mu\text{m}$  and it gave a small washover containing a little charred plant material, mostly charred wood to 5 mm, a little charred cancellous bone, a few snails (including *Ceciloides* (4), *Vallonia excentrica* (3), *Vallonia* sp. (2), *Cochlicopa* sp. (1), consistent with grassland habitats), and a very fresh, modern seed of opium poppy, *Papaver somniferum*, perhaps a contaminant. The residue was of angular chalk and flint to 80 mm, with quite a high proportion of cremated bone, mostly <25 mm, and a piece of pot to 20 mm.

## Discussion

It is not, perhaps, surprising that so little biological material other than bone and shell was preserved in these largely free-draining deposits. Given the abundance of chalk in the deposits, on the other hand, it might have been expected that snails would have been more common. It is difficult to explain why, apart from *Ceciloides* (burrowing from above) and perhaps also *Vitrea* (attracted by buried corpses?), the majority of the snails were found in pot fills.

The charred cereals, too, are largely recorded from pot fills and it may be that these were part of a burnt food offering. Otherwise, no *biological* evidence for the original contents (if any) of the pots is forthcoming, except for the cremated human remains in urn 839.