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**An assessment of biological remains from excavations
at the Anglian site at Cottam, North Humberside (site code COT93)**

by

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Summary

Samples of unprocessed sediment and washovers from wet-sieving of Anglian deposits at Cottam have been examined to determine their bioarchaeological value.

The sediment samples yielded very few ancient biological remains and the charred cereal grains and land-snails present were too sparse to warrant further, more detailed, examination.

Large, wet-sieved samples gave some assemblages of land-snails indicative of grassland habitats and small numbers of charred cereal grains, including wheat and barley, were also present. It is recommended that further on-site work should target deposits where contamination from later layers is thought to be at a minimum.

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An assessment of biological remains from excavations at the Anglian site at Cottam, North Humberside (site code COT93)

Introduction

Selected samples of sediment ('GBAs' *sensu* Dobney *et al.* 1992) and washovers from on-site sieving from an Anglian site at Cottam, near Sledmere, on the Yorkshire Wolds were supplied by University of York Archaeology Department for assessment of their bioarchaeological potential.

Methods

Sediment samples

Two sets of samples were available: GBAs (*sensu* Dobney *et al.* 1992) of up to 10 l. (approx. 15-20 kg) and BSs (sieved on site to 1 mm).

For the GBAs, 'test' sub-samples of 1 kg were employed in each case (with one subsample of 2 kg), following methods of Kenward *et al.* (1980) as modified by Kenward *et al.* (1986). In all cases, 'washovers' rather than 'flots' were taken, since the content of insect remains appeared to be, at best, extremely low. The washovers were quickly examined for their content of invertebrate remains, especially insects. Plant remains were examined in both washovers and dried residues

The washovers from wet-sieving were checked for their content of plant remains, mollusc shell and bone.

Results

The sediment samples

The nature of the sediments for the GBA samples from the two areas is described in phase, group and context order.

Area 1

Phase 1, Group 1 (possible natural features)

Context 1019 (fill of irregular feature 1047)

Sample 104

GBA (1 kg tested)

Mid-dark orange-brown, crumbly (working plastic when wet), moderately stony silty clay, with chalk fragments common in 2-20 mm range and present in 20-60 mm range. Charcoal and bone present in trace amounts, together with modern root/rootlet fragments.

Context 1034 (fill of irregular feature 1035)

Sample 110

GBA (1 kg tested)

Mid orange-brown, crumbly (working plastic when wetted), slightly stony, slightly silty clay with moderate numbers of chalk fragments 2-6 mm and fragments 20-60 mm present. A trace of charcoal also present, as well as modern root/rootlet fragments.

Context 1036 (fill of irregular feature 1037)

Sample 111

GBA (1 kg tested)

Mid yellowish-brown, crumbly (working plastic), moderately stony silty clay with chalk fragments in 2-20 mm range common and in 20-60 mm range present. Modern root/rootlet fragments also present.

Context 1040 (fill of irregular feature 1041)

Sample 112

GBA (1 kg tested)

Light/mid yellow-brown, crumbly to brittle (working plastic and sticky when wet), clay with chalk fragments in the 2 - >60mm range present.

Phase 2, Group 3 (demolition of building 1)

Context 1082 (backfill of post-holes)

Sample 116

GBA (1 kg tested)

Mid brown, crumbly to brittle (working plastic and sticky when wet) clay with traces of chalk fragments 2-60 mm, and of bone.

Phase 2, Group 4 (filling of north-south gullys)

Context 1002 (backfill of gullys)

Sample 200

GBA (1kg tested)

Mid/dark brown crumbly to sticky (when wet), working plastic, moderately stony slightly silty clay with chalk fragments common between 2-60 mm. Some modern rootlets were observed.

Phase 3, Group 2 (filling of main N-S ditch)

Context 1028

Sample 109

GBA (1 kg tested)

Mid brown, crumbly to brittle (working plastic and sticky when wet) clay with traces of chalk fragments in 2-60 mm range and modern cereal straw contaminant.

Phase 3, Group 4 (circular pit and associated features)

Context 1003C (backfill of circular pit 1073, overlying 1086)

Sample 102

BS (6 tubs sieved)

Context 1003C

Sample 103

GBA (2 kg processed)

Mid-dark yellowish-brown, crumbly (working plastic when wet), very stony, slightly silty clay, with abundant chalk fragments 2-6 mm, and moderate numbers of chalk fragments 6-60+ mm; traces of charcoal and bone present.

(Sediment description for material labelled 1003A, similar, except colour orange-brown, and land-snails, pot and modern root/rootlet fragments present, but bone lacking; sample labelled 1003B was like 1003A but with charcoal as the only inclusion.)

Context 1086 (slumped deposit of fragmented chalk overlying 1087)

Sample 118

GBA (1kg tested)

Mid brown crumbly (working plastic when wet) very stony silty clay with chalk fragments abundant in the 2-20 mm range and common between 20-60 mm and >60 mm. Modern rootlets were present.

Context 1087 (fill of circular pit 1073 above 1090)

Sample 119

GBA (1 kg tested)

Mid/dark orange-brown, crumbly (working plastic) when wet), very stony silty clay, with chalk fragments 2-20 mm abundant, 20-60 mm common and >60 mm present. Traces of charcoal also observed as well as modern root/rootlet fragments.

Context 1090 (basal fill of circular pit 1073)

Sample 120

GBA (1 kg tested)

Mid brown (with a yellowish tinge and mottling of more orange and more grey colours at mm scale), crumbly to brittle (working plastic and sticky when wet) clay with traces of chalk fragments 2-60 mm and of charcoal. This material had the appearance of agricultural soil, with modern root/rootlet fragments present.

Context 1091 (weathered chalk at base of circular pit 1073)

Sample 121

GBA (1 kg tested)

Light yellow-brown, crumbly (working plastic), very stony, slightly silty clay (mostly chalk in range 2-60+ mm) with a trace of charcoal. Modern root/rootlet fragments also present.

Context 1043 (fill of cut 1044)

Sample 114

GBA (1 kg tested)

Dark orange-brown, crumbly (working plastic), moderately stony, slightly silty clay, with chalk fragments in 2-20 mm range common and in 20-60 mm range present; traces of charcoal and bone present, together with modern root/rootlet fragments.

Context 1086 (slumped deposit of chalk overlying 1087)

Sample 117

BS (3 tubs sieved)

Phase 3, Group 5 (filling of main N-S ditch)

Context 1026 (middle fill of ditch)

Sample 105

GBA (1 kg tested)

Mid grey-brown, crumbly to brittle (working sticky and plastic when wet) clay with traces of chalk

fragments 2-20 mm and modern root/rootlet fragments; it had the appearance of agricultural soil.

Context 1077 (upper fill of ditch)

Sample 115

GBA (1 kg tested)

Mid brown, crumbly to brittle (working plastic and sticky when wet) clay with traces of chalk fragments 2-60+ mm and of charcoal and bone.

Context 1027 (primary fill of ditch)

Sample 106

BS (3 tubs sieved)

Sample 107

GBA (1 kg tested)

Mid orange-brown, crumbly (working plastic), moderately stony, slightly silty clay, with chalk fragments 2-20 mm common and 20-60+ mm present; charcoal present in traces, as well as modern root/rootlet fragments.

Phase 4, Group 2 (general ploughsoil)

Context 1001 (general layer of clay loam)

Sample 202

Mid/dark brown crumbly (working plastic when wet), very stony, silty clay with chalk fragments in the 2-20 mm range abundant, 20-60 mm common and >60mm present.

Area 3

Phase 2, Group 2 (major pit or sunken feature)

Context 3027

Sample 127

GBA (1 kg tested)

Mid/dark grey-brown (with yellowish tinge), crumbly (working plastic), slightly silty clay with traces of chalk fragments 2-20 mm and modern root/rootlet fragments.

Phase 2, Group 3 (post-hole grouping associated with building 2)

Context 3090 (fill of irregular cut 3089)

Sample 131

GBA (1 kg tested)

Mid/dark orange-ish brown, crumbly (working plastic when wet), slightly silty clay with abundant chalk fragments 2-20 mm and common in range 20-60+ mm; modern root/rootlet fragments present.

Context 3098 (fill of irregular cut 3097)

Sample 132

GBA (1 kg tested)

Mid/dark yellowish-brown, crumbly (working plastic when wet), very stony, slightly silty clay, with abundant chalk fragments 2-60+ mm and a trace of charcoal.

Phase 2, Group 4 (irregular cut grouping)

Context 3086 (fill of irregular cut 3091)

Sample 128

GBA (1kg tested)

Mid orange-brown crumbly (working plastic when wet) moderately stony silty clay with chalk fragments in the 2-20 mm range common and 20-60 mm present. Modern rootlets were present.

Phase 2, Group 6 (demolition of building 2)

Context 3127 (backfill of post-hole)

Sample 138

GBA (1 kg tested)

Mid yellowish-brown, crumbly (working plastic when wetted), moderately stony, slightly silty clay with chalk fragments in range 2-60 mm common, and some flint present. Modern root/rootlet fragments also present.

Context 3004

Sample 125

GBA (1 kg tested)

Light/mid brown, crumbly to brittle (working plastic and sticky when wet), clay with traces of chalk 2-60 mm and of land-snails; it had the appearance of agricultural soil, with modern root/rootlet fragments.

Phase 3, Group 3 (building 3 and associated gulleys)

Context 3160 (fill of post-hole 3161)

Sample 139

GBA (1 kg tested)

Mid yellowish-brown, crumbly (working plastic when wetted), very stony, slightly silty clay, with

abundant chalk fragments in 2-60 mm range.

Context 3087 (fill of ?gully/ditch cut 3088)

Sample 130

GBA (1 kg tested)

Mid yellowish-brown, crumbly (to plastic when wetted), very stony, slightly silty clay with abundant chalk fragments 2-60 mm and some >60 mm, traces of land-snails and some modern root/rootlet fragments and seedlings.

Context 3100 (fill of ?gully/ditch cut 3099)

Sample 133

BS (3 tubs sieved)

Sample 134

GBA (1 kg tested)

Mid-dark grey-brown, crumbly (working plastic when wet), very stony, slightly silty clay, with chalk fragments abundant in the 2-20 mm range and common in the 20-60 mm range; trace of ?brick/tile present and modern root/rootlet fragments.

Context 3114 (fill of ?ditch/gully cut 3117)

Sample 136

BS (3 tubs sieved)

Sample 137

GBA (1 kg tested)

Dark orange-brown, crumbly (working plastic), moderately stony, very silty clay, with chalk fragments 2-20 mm moderately common and also present in 20-60 mm range. Traces of bone present together with modern root/rootlet fragments.

Context 3142 (fill of cut ?3143)

Sample 201

GBA (1kg tested)

Mid/dark brown crumbly (working plastic when wet), moderately stony, slightly silty clay with chalk fragments common in the range 2-60 mm.

Phase 3, Group 5

Context 3002 (back-fill of post-holes associated with corn-drying oven)

Sample 123

GBA (1 kg tested)

Mid orange-brown, crumbly to brittle (working plastic and sticky when wet) clay with traces of chalk fragments 2-60 mm; it had the appearance of agricultural soil with germinating seeds and modern root/rootlet fragments.

Discussion

The GBA 'test' subsamples all yielded rather similar results and can be considered together as a group. All produced small or very small washovers of up to about 20 cm³, in which the largest components were modern root/rootlet fragments and sometimes also charcoal (to about 10 mm in maximum dimension). There were at most one or two poorly preserved charred cereal grains and occasionally also a land-snail shell in any one washover—many contained no recognisable remains. There were a few modern seeds (e.g. of the cornfield weed, fumitory, *Fumaria* sp.) and occasionally fragments of modern grass flowers and culm material.

Insect remains were sparse. The washover from context 1001 yielded single specimens each of two species of beetle; *Aleocharinae* sp. and *Cryptophagus* sp. The single individuals of beetles from context 1002 (one individual of ?Staphylinidae sp.) and context 3142 (*Philonthus* sp.), appeared to be modern contaminants. Diptera sp. (1) and Collembola sp. (1) were also present in context 3142. Context 1087 also contained a single Collembola sp.

The washovers from wet-sieving were rather more productive of land-snails (see Table 1) and the taxa recorded generally indicate grassland habitats of the kind which would be expected to have developed on the chalk Wolds. *Cecilioides acicula* is likely to be intrusive. Small amounts of charred cereals were present in some of these samples, though usually no more than a few tens of specimens, representing very low concentrations in the deposits. No chaff was recorded.

Statement of potential: implications for further work

Potential for site interpretation

The few and poorly preserved charred cereal remains offer small potential for information about site activity and economy; the possibility of reworking and contamination from recent crops cannot be ruled out, though most of the grains were small and none of the wheat grains were of the size and shape typical of 'modern' bread wheats.

There is probably no advantage in making further examination of the land-snails.

Recommendations

Further work

No further work on the GBA/BS from this round of work is recommended, but future excavation may yield more and better preserved evidence and this should be watched for carefully.

Retention and disposal

All the sediment recovered to date could be disposed of if there are no pressing archaeological reasons for retaining it.

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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References

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Table 1. Biological remains from BS samples (washovers only).

| Context | |
|---------|--|
| 1000 | The mollusc <i>Cepaea</i> sp. was abundant |
| 1001 | Mollusca quite abundant: <i>Cochlicopa</i> sp., <i>Vertigo pygmaea</i> (Draparnaud), <i>Vallonia excentrica</i> Sterki, <i>Vitrea</i> sp., <i>Oxychilus alliarius</i> Miller, <i>Cecilioides acicula</i> Müller, <i>Cepaea</i> sp. and <i>Trichia hispida</i> (L). Charcoal, bone and iron object fragments present, with uncharred (modern) chenopod seeds. |
| 1002 | Several specimens of the mollusc <i>Cepaea</i> sp. |
| 1003A | Single specimen of the mollusc <i>Trichia hispida</i> , some charcoal and charred cereal grain. |
| 1003B | <i>Cochlicopa lubrica</i> Müller and <i>Trichia hispida</i> present. Several fragments of iron ?ore, some modern seeds, charcoal and charred grain. |
| 1003C | Mollusca not abundant: <i>Cochlicopa</i> sp., <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , <i>Punctum pygmaeum</i> (Draparnaud), <i>Cecilioides acicula</i> , and <i>Trichia</i> sp. Small fragments of bone, moderate amounts of charcoal, charred cereals, including barley and wheat and either tail-grain/large grass caryopses, and iron ?ore. |
| 1004 | Nine specimens of <i>Cepaea</i> sp. |
| 1011 | Two specimens of <i>Cepaea</i> sp. |
| 1020 | Single specimen of <i>Cepaea</i> sp. |
| 1027 | Mollusca abundant: <i>Cochlicopa lubrica</i> , <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , <i>Vitrea</i> spp. <i>Oxychilus alliarius</i> , <i>Trichia hispida</i> and <i>Cepaea</i> sp. Some modern seeds and a few bone fragments. |
| 1028 | Abundant mollusca included <i>Cochlicopa lubrica</i> and <i>Cepaea</i> sp. Some charcoal also present. 1043 Some snails, charred grain and charcoal present. Abundant charcoal. |
| 1074 | <i>Cochlicopa</i> sp. and <i>Vertigo pygmaea</i> present; also Limacidae (slug) 'plates', <i>Cecilioides acicula</i> , <i>Trichia hispida</i> and many <i>Cepaea</i> sp. More bone fragments than in other samples; some charcoal and charred grain and modern seeds. |
| 1086 | <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , <i>Vitrea</i> sp., <i>Oxychilus alliarius</i> , <i>Cecilioides acicula</i> and <i>Trichia hispida</i> all present. Few uncharred seeds, a little charcoal, charred barley and cereal indet. |
| 3000 | Several specimens of the mollusc <i>Cepaea</i> sp. |

| | |
|------|---|
| 3005 | Mollusca present: <i>Cepaea</i> sp. |
| 3007 | Mollusca present: <i>Cepaea</i> sp. Fragment of iron object. |
| 3009 | Mollusca present: <i>Cepaea</i> sp. |
| 3018 | Mollusca present: <i>Cepaea</i> sp. |
| 3022 | Several specimens of the mollusc <i>Cepaea</i> sp. and 3 oyster valves |
| 3027 | Some snails, flint and cereal grain present . |
| 3087 | <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , ? <i>Aegopinella nitidula</i> (Draparnaud), <i>Cecilioides acicula</i> , <i>Trichia hispida</i> and <i>Cepaea/Arianta</i> , with charred barley, small bone fragments and modern uncharred seeds. |
| 3098 | Single oyster valve present. |
| 3100 | <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , <i>Punctum pygmaeum</i> , <i>Oxychilus alliarius</i> (L), <i>Cecilioides acicula</i> , <i>Helicella itala</i> and <i>Cepaea</i> sp. Also iron object fragment, bone, charred cereal grains oyster valves. |
| 3114 | <i>Cochlicopa lubrica</i> , <i>Vertigo pygmaea</i> , <i>Vallonia excentrica</i> , <i>Oxychilus alliarius</i> , <i>Cecilioides acicula</i> , and <i>Trichia hispida</i> ; uncharred insect and moderate numbers of charred cereals also present. |

Table 1. continued