2561

Ancient Monuments Laboratory
Report 7/96

ORCHARD LANE, HUNTINGDON, CAMBRIDGESHIRE. PLANT MACROFOSSILS AND INVERTEBRATES FROM LATE SAXON CONTEXTS.

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Summary

Bulk samples from Late Saxon pits and other features produced charred and mineral-replaced plant material. Charred cereal grains, pulse seeds and hazel nutshell were thought to represent domestic food waste. Mineral-replaced assemblages (concretions, plant macrofossils, fly puparia etc.) were typical of urban latrine pits. Marine mollusc shells from the site included very immature specimens, possibly material discarded from shellfish catches

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Introduction

Excavations were undertaken by the Archaeological Field Unit, Cambridgeshire County Council in July and October-November 1994 at this site on terrace deposits of the River Great Ouse at Huntingdon (Oakey *et. al.* 1995). Very little archaeological work had previously been undertaken in the town, and the objectives of the excavation were to provide information on its mid- to late-Saxon origins and subsequent development. The archaeological sequence at Orchard Lane comprised: pits and a linear cut including ceramics of *c.* 900-1150 AD (Period 1); a cemetery, in use from *c.* 900 AD to the late 14th century (Period 2); quarrying and back-filling, between the late 14th and 16th centuries (Period 3), and later use of the site as gardens, orchards and a builder's yard (Periods 4-5).

The terrace deposits forming the sub-soil were relatively well-drained clay and sand, overlying gravel and clay. There were no permanently waterlogged deposits, and preservation of plant macrofossils was by charring and mineral-replacement.

Methods

Duncan Schlee collected and processed 15 bulk samples, mainly from features of Period 1, in the first phase of excavation, (nos. 1-16) and a further 4 in November 1994 (nos. 102-5). Samples were from Period 1 pits, apart from no. 10 (ditch fill, Period 1) and nos. 1, 102 and 103 (grave fills, Period 2). The samples were processed in a bulk sieving/flotation tank, using 0.5mm. collecting meshes. The dried flots and residues were sorted, extracting artefacts, concretions, plant macrofossils, mineral-replaced arthropods, molluscs and bones of fish, amphibians and mammals. The latter have been sent to Umberto Albarella (University of Birmingham) for analysis. Schlee undertook an outline assessment of other biological material (in Oakey *et. al.* 1994) and on the basis of this, bearing in mind the paucity of information from Huntingdon, he recommended full analysis of this small sample set.

Plant macrofossils

Charred and mineral-replaced macrofossils are listed in Table 1. Modern plant contaminants included root and fruits/seeds of *Atriplex* spp., *Carex* sp., *Chenopodium album, Polygonum aviculare, Sambucus nigra* and *Urtica dioica.*

Charred cereal grains were present in most samples, but in small quantities. Preservation was, in general, poor: most grains had porous and abraded surfaces. There was a high proportion of unidentifiable fragments. Several samples included slag-like fused siliceous concretions and globules, formed from silica-containing plant material burnt at high temperatures.

Wheat grains (*Triticum aestivum* s.l.) generally predominated: they were of the very short rounded hexaploid form characteristic of early medieval contexts. The barley grains (*Hordeum* sp.) were generally deformed. Some median grains were present, but preservation was too poor to characterise ear and row form. Grains of rye (*Secale cereale*) showed the variability of size and slenderness characteristic of this species. Oats were represented mainly by naked grains, though sample 1 included a floret of *Avena sativa*, with its characteristic broad basal fracture. No chaff fragments were noted, though there were some large Poaceae

culm nodes, possibly cereal straw. Seeds and cotyledon fragments of large Fabaceae occurred sporadically. Surface preservation was very poor and hilums had not survived. The seeds are most likely to be of peas (*Pisum sativum*), though large-seeded vetches (e.g. *Vicia sativa*) or small horsebeans (*Vicia faba* var. *minor*) could also be represented. Charred fragments of hazel-nut shell (*Corylus avellana*) were frequent.

The samples also included small numbers of charred seeds of weeds and grassland plants. The taxa represented are mainly segetals, commonly associated with medieval cereal crops. The record of *Beta vulgaris* (beet) is more unusual, having hitherto only been reported in East Anglia from medieval deposits at Fishergate, Norwich (Murphy 1994, 57). The charred material from Orchard Lane comprised a seed and fruit fragments, so it could represent either cultivated beet (ssp. *vulgaris*) or the wild sea beet (ssp. *maritima*). The latter is perhaps more probable and, if so, would represent an accidental import from a coastal area.

Sample 13 included fruits of saw-sedge (*Cladium mariscus*) associated with unidentified monocotyledonous stem and leaf. This material could be derived either from sedge peat, imported as fuel, or from thatching material.

In view of the generally poor preservation of grains, the absence of cereal chaff could be an artefact of differential preservation during charring. However, there is no evidence for on-site crop processing, and no reason to think that the charred assemblages represent anything other than domestic consumption of foodstuffs and use of other plant materials.

Sample 7 included fragments of phosphatic concretions with impressions of testas of corn cockle (*Agrostemma githago*), but mineral-replaced plant material was most common in the pit fills 1093 and 1114 (Samples 104, 105). 104 contained large platey concretions containing abundant monocotyledonous plant material, and sub-spherical hollow phosphatic 'globules'; 105 produced lesser amounts of such material. Macrofossils of edible fruits included internal casts of *Prunus* fruitstones (probably *Prunus spinosa*, sloe, and *P. domestica* s.l., plum/bullace), internal casts probably of bramble (*Rubus fruticosus*), seeds of apple (*Malus sylvestris*) and elder (*Sambucus nigra*). A single mineral-replaced oat grain came from 105. Identification of small seeds/fruits of wild taxa proved difficult, for most specimens were incomplete or were internal pseudomorphs with little or no surface detail, but weeds, grassland and wetland plants were represented. Both samples indicate use of these pits for disposal of human sewage, together with other types of refuse.

Arthropods

Mineral-replaced arthropod remains were abundant in the latrine pit fills (samples 104, 105). Most of the material consisted of fly puparia with occasional Isopods (wood-lice). A charred insect fragment came from sample 7. Other samples from the site produced beetle remains, but these were frequently articulated or near-complete animals, and are undoubtedly recent contaminants.

Molluscs

Shells of terrestrial snails occurred in small numbers. Taxa comprised *Aegopinella* sp., *Carychium* sp., *Cecilioides acicula, Cepaea* sp., *Helix aspersa, Oxychilus* sp., *Pupilla muscorum, Succinea* sp., *Trichia hispida* gp., *Vallonia costata, Vallonia excentrica, Vertigo*

sp. and indeterminate Zonitidae. *Trichia* and *Vallonia* spp. predominated, indicating, as would be expected, open habitats in the vicinity.

Freshwater species were much less frequent. Sample 2 included *Lymnaea truncatula* and a juvenile Sphaeriacea valve; sample 13 a very weathered shell of *Theodoxus fluviatilis*, possibly a derived Pleistocene fossil; sample 16 a shell of *Armiger crista*. These presumably reached the site by accidental importation with reeds, sedges etc., and are unlikely to represent a resident fauna.

Some shells were clearly recent contaminants, (e.g. *Trichia* spp. with hairs), introduced presumably via root channels and animal burrows. Others were possible contaminants, relatively fresh and unweathered. In view of this, full quantitative analysis of land and freshwater snails was not undertaken.

Marine mollusc shell was thought less likely to include intrusive material, for there was no significant domestic activity at the site after Period 1. Shells from the samples are listed in Table 2. *Mytilus edulis* (mussel), represented mainly by non-hinge fragments was most frequent, but cockle (including *Cerastoderma edule*), oyster (*Ostrea edulis*) and winkle (*Littorina* sp.) were also represented. The intact valves and shells included a high proportion of very immature specimens. The *Littorina* shell from sample 14 was only 7mm in height; the paired articulating valves of *C. edule* from 104 14mm long; and *Mytilus* shells from sample 104 had a height range of 12-39mm (mean 24mm). This might indicate that the shell refuse from the site was not simply domestic food refuse, for very small shellfish are not, practically speaking, edible. The small shells could perhaps represent unsaleable material separated by riddling from a shellfish catch shipped up-river.

Scraps of avian eggshell were noted in samples 2, 12, 14 and 104.

Conclusions

The assemblages of charred plant material from this site represent little more than a low-density 'background scatter' of cereal grains, pulses, nutshells and weed seeds, in all probability related to domestic activities. There was no evidence for crop processing or storage. Assemblages of this general type are commonplace at late Saxon to medieval urban sites in East Anglia and, at sites more extensively excavated and sampled (e.g. Castle Mall, Norwich: Murphy, *in prep.*), would not have been selected for full analysis. However, these are the only data currently available from Huntingdon. Assemblages of mineral-replaced macrofossils from latrine pits, including food residues, are similarly commonly encountered at urban sites of this period.

The mollusc shells are likewise probably mainly domestic refuse, though there is some evidence to suggest that shellfish catches were being processed on site.

References

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Plant macrofossils, in Ayers, B.S. (1994) Excavations at Fishergate, Norwich, 1985. East Anglian Archaeology 68, 54-8. Field Archaeology Division, Norfolk Museums Service.

Oakey, N. *et. al.* 1995
Orchard Lane, Huntingdon. Updated Project Design and Assessment Report. Cambridgeshire County Council.

Table 1. Orchard Lane, Huntingdon. Charred and mineral-replaced plant macrofossils etc.

Sample number	1	2	3	4	5	7	8	9	10
Context number	19 (20)	42 (5)	61 (7)	8 (9)	30 (31)	32 (31)	127 (33)	21 (22)	27 (28)
Charred plant material									
Cereals									
Indeterminate cereal (ca)	18	19	13	11	27	21	1	6	10
Avena sativa L. (flo)	1								
Avena sp. (ca)			13		2	6		1	4
Hordeum sp. (ca)	1	3	1	2	5	4		1	4
Secale cereale L. (ca)	2	3	4	1	9	8			2
Triticum aestivum s.l. (ca)	15	6	4	18	23	8	1	10	15
Pulses									
Vicia/Pisum sp(p)	1					1+1fr			1+1co
Herbs (weeds/grassland plants)									
Agrostemma githago L.	1								
Anthemis cotula L.			2						
Avena/Bromus sp.	4	3	2	2	2	2		1	3
Beta vulgaris L.					1s (a)				
Brassica sp.			1 c.f.						
Bromus mollis/secalinus	1			2	2	1			
Centaurea sp.					1				
Galium aparine L.		1							
Medicago lupulina-type									
Poaceae indet. (small)									
Polygonaceae indet.			1	1					
Raphanus raphanistrum L.	1								
Rumex sp.				1	1				
Sherardia arvensis L.									
Vicia/Lathyrus sp.				2 + 1co					
Wetland taxa									
Cladium mariscus (L.) Pohl.									
Trees/shrubs									
Corylus avellana L. (ns. fr.)	x	x	x		x	x			x
Indeterminate seeds etc.				1	1	1			
Vegetative material									
Cyperaceae indet. (st. fr.)									
Poaceae indet. (cn)						1			
Monocot. stem/leaf									
Thorn		x							
Mineral-replaced plant material									
Cereals									
Avena sp									
Fruitstones/seeds									
Malus sylvestris L.									
Prunus c.f domestica s.l.									
Prunus spinosa-type									
Rubus fruticosus agg									
Sambucus nigra L.									
Herbs (grassland/weeds)									
Agrostemma githago L.									
Apiaceae c.f Conium maculatum L.									
Centaurea sp.									
Chenopodiaceae indet.			1						
Fallopia convolvulus (L.) A. Love									
Ranunculus sp.									
Rumex sp.									
Stellaria media-type									
Wetland plants									
Eleocharis sp.									
Indeterminate seeds etc									
Other mineral-replaced material									
Arthropods									
Faecal concretions						1 (b)			
Poaceae indet. (cn)									
Sub-spherical 'globules'									
Thorn									
Sample volume/wt.	3 kg.	6 kg.	6 kg.	6 kg.	20 l.	10 l.	10 l.	10 l.	10 l.

Notes: (a) seed and fruit fragments. (b) Including impressions of Agrostemma testa.

Table 1. Orchard Lane, Huntingdon. Charred and mineral-replaced plant macrofossils etc.

Sample number	11	12	13	14	15	16	102	103	104	105
Context number	68 (70)	71 (31)	34 (35)	57 (53)	153 (160)	154 (155)	1073	1094	1093	1114
Charred plant material										
Cereals										
Indeterminate cereal (ca)	2	8	1	2	1	3	1	2	19	9
Avena sativa L. (flo)										
Avena sp. (ca)		3							20	4
Hordeum sp. (ca)	1					1	2		3	1
Secale cereale L. (ca)	1	8				1			5	5
Triticum aestivum s.l. (ca)		6		10	2	8	8	3	12	7
Pulses										
Vicia/Pisum sp(p)										
Herbs (weeds/grassland plants)										
Agrostemma githago L.										1
Anthemis cotula L.						1				
Avena/Bromus sp.				1		2				
Beta vulgaris L.										
Brassica sp.										
Bromus mollis/secalinus				1					2	
Centaurea sp.										
Galium aparine L.						1				
Medicago lupulina-type						1				
Poaceae indet. (small)						1				
Polygonaceae indet.										
Raphanus raphanistrum L.		1								
Rumex sp.									1	
Sherardia arvensis L.				1						
Vicia/Lathyrus sp.				1			f r		2 co	
Wetland taxa										
Cladium mariscus (L.) Pohl.			2							
Trees/shrubs										
Corylus avellana L. (ns. fr.)	x	x		x		x		x	x	
Indeterminate seeds etc.				1	1					1
Vegetative material										
Cyperaceae indet. (st. fr.)					x					
Poaceae indet. (cn)					1					
Monocot. stem/leaf			x							
Thorn										
Mineral-replaced plant material										
Cereals										
Avena sp										1
Fruitstones/seeds										
Malus sylvestris L.									4	7
Prunus c.f domestica s.l.									2	
Prunus spinosa-type									15	2
Rubus fruticosus agg									5	
Sambucus nigra L.									1	1
Herbs (grassland/weeds)										
Agrostemma githago L.									1 c.f.	
Apiaceae c.f Conium maculatum L.									7	1
Centaurea sp.									1 c.f.	
Chenopodiaceae indet.									4	
Fallopia convolvulus (L.) A. Love										1
Ranunculus sp.									1 c.f.	
Rumex sp.										2
Stellaria media-type									1 c.f.	
Wetland plants										
Eleocharis sp.									1	
Indeterminate seeds etc									26	6
Other mineral-replaced material										
Arthropods									xxx	x
Faecal concretions									xxx	x
Poaceae indet. (cn)									4	
Sub-spherical 'globules'									x	x
Thorn									1	
Sample volume/wt.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.

Notes: (a) seed and fruit fragments. (b) Including impressions of Agrostemma testa.

Table 2. Orchard Lane, Huntinggdon. Marine molluscs.

Sample number	1	2	3	4	5	9	10	11	13	14	15	16	102	103	104
Context number	19(20)	42(5)	61(7)	8(9)	30(31)	21(22)	27(28)	68(70)	34(35)	57(530	53(160)	54(155)	1073	1094	1093
Cerastoderma sp.												x		x	2 *
Cerastoderma edule (L.)															1
Mytilus edulis L.	x	x	1	x	x	x	1	1	x	x	x	x	8	5	31
Ostrea edulis L.						1			x				1		
Littorina sp										1					
Gastropod whorl fragments.														x	
Sample volume/wt.	3 kg.	6 kg.	6 kg.	6 kg.	20 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.	10 l.

x = non-hinge or non-apical fragments. * = paired articulating valves.