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**Assessment of biological remains from excavations at Old Abbey Farm,
Risley, Cheshire (site code: OAF 95)**

by

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Summary

Five samples of sediment and a small group of hand-collected bones from excavations of a farmhouse platform and associated moat at Old Abbey Farm, Risley, Cheshire, have been assessed for their interpretative potential.

A sample from a surface within the house and another from the fill of a linear feature within a barn were effectively barren. Three others, from the fills of the moat adjacent to the house platform, gave well preserved assemblages of plant and insect remains with considerable value in reconstructing conditions in and around the moat. Insects had additional interest as a source of information in research into the relationships between occupation areas and death assemblages in nearby infilling ditches and ponds.

Individual contexts produced very limited quantities of bone, with few measurable fragments. The research potential of this assemblage is severely restricted by its small size and variable preservation, and the rarity of fragments providing biometrical or age-at-death data. As a consequence, the vertebrate remains are of little interpretative value and no further detailed work is recommended.

Keywords: OLD ABBEY FARM; RISLEY; CHESHIRE; ASSESSMENT; MOATED SITE; PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

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Introduction

Excavations were carried out by Lancaster University Archaeological Unit at Old Abbey Farm, a medieval and later moated farmhouse near Risley, in Cheshire, during 1995.

Five General Biological Analysis samples ('GBAs' *sensu* Dobney *et al.* 1992) were submitted for an assessment of their biological remains. Three of the samples came from a section across the moat, along the line of a causeway; one sample was from a floor/surface within the house; and the remaining sample was from the fill of a linear feature located beneath a barn.

Most of the small corpus of hand-collected bone came from the excavations in Areas B, C and D, although 32 of the 46 fragments from Area D are from deposits described by the excavator as topsoil.

Methods

Sediment samples

All of the five GBA 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 four of the GBAs and 2 kg from sample 8394 (which was particularly rich in organic material), for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986).

The flots, washovers and residues resulting from processing were examined for their content of plant and invertebrate

macrofossils. Notes were made on the quantity of fossils, principal taxa, and main ecological groups.

Bone

The hand-collected bone assemblage consisted of two boxes (approximately 44 x 24 x 18 cm) containing bones from 36 separate contexts. All of the material was scanned, and, as there were very small numbers of fragments, only brief notes were made (Table 1).

Results

GBA samples

The results are presented by area, and the samples from Area G are considered in stratigraphic order. Context information provided by the excavator is in square brackets.

Three of the 'test' subsamples examined yielded moderate to substantial amounts of well-preserved plant and invertebrate material; these were all from contexts within the moat.

Area B - the farmhouse

Context 4767 [?early floor/surface in 'room' 4003; central cell of house. Above natural clay and below a make-up/levelling layer which contained modern finds.]

Sample 8438/T (1 kg; washover)

Just moist to dry, mid grey brown (with orangeish 1 mm scale patches of oxidation), brittle (working crumbly), slightly sandy, clay silt. Stones in the

size-range 2-20 mm, coal (to 5 mm), ?charcoal, and rootlets, were present.

Very little of the 1 kg subsample remained after disaggregation and sieving; there was a little sand and gravel (to 20 mm) in the residue and the washover consisted of a very few cubic centimetres of detritus consisting of charcoal, including oak (to 10 mm), coal (to 5 mm) and ?modern root fragments. No invertebrate remains were recovered.

Area G - the moat

Context 4747 [deposit of lenses (reflecting natural silting?) at base of moat; maximum depth 0.3 m]

Sample 8397/T (1 kg; flot)

Wet, light brown to mid/dark grey, soft (working soft and slightly sticky), sandy clay with 2-6 mm scale stones present. Very rotted wood and twigs, and seeds, were also present.

The rather large residue consisted mainly of sand with traces of gravel; there were also some lumps of charred low-density plant material, perhaps peat, up to about 25 mm in maximum dimension. Identifiable plant remains from the residue and flot were present at a low concentration, but preservation was good. They included a modest range of annual and perennial weeds of disturbed places, including cultivated soils (though there were no good indicators of arable cultivation). The only woody plant recorded was willow (*Salix*), present as fruits, and the only plant likely to have been cultivated was flax (*Linum usitatissimum*), of which there was a capsule fragment. Amongst the plant remains, a single aquatic taxon was noted (a pondweed, *Potamogeton* sp.), suggesting that no well-developed plant communities were present in the moat at this stage.

The remains of some aquatic beetles, and moderate numbers of the resting eggs of *Daphnia* sp., indicate the presence of water, but a larger subsample would have to be processed for a more detailed interpretation of aquatic conditions. Small numbers of synanthropes suggest possible links with human activity. Plant-feeding insects were an appreciable component in the assemblage and provide additional evidence for a flora, locally, of disturbed ground.

Context 4746 [above 4747 and below a concentration of branches, suggesting break in deposition of silt; maximum depth 0.58 m]

Sample 8394/T (2 kg; flot)

Moist, mid brown, sticky (working soft and sticky), humic silty clay with fine, coarse and woody herbaceous detritus and orange 1 mm to 1 cm scale patches of reduction/oxidation. Some of the sediment was slightly layered, with patches that were black internally (probably very rotted organic matter). Coal (5-6 mm), leaves, very rotted wood, and monocotyledon stems, were also present.

The fairly large residue consisted almost entirely of coarse and fine woody and herbaceous detritus. There were moderate numbers of twig fragments up to about 30 x 10 mm in maximum dimension, together with some wood fragments to 20 mm (including a few ?chips), and abundant small (mostly <5 mm) fragments of tree leaves, probably including willow. Other remains of woody plants included buds and bud-scales of oak (*Quercus*) and large and very distinctive scales of another taxon (so far unidentified), together with seeds of elder (*Sambucus nigra*), blackberry and raspberry (*Rubus fruticosus* and *R. idaeus*), a fruitstone of hawthorn (*Crataegus monogyna*), a few nutshell fragments of hazel (*Corylus avellana*) and an endocarp fragment of apple (*Malus sylvestris*). These edible fruits may simply

have originated in wild-growing plants in the vicinity—here were clearly trees and shrubs close by, to judge from the abundant leaf fragments.

Other plant remains represented by fruits and seeds were abundant, and very well preserved. They included large numbers of aquatics of two taxa (*Potamogeton* and water crowfoot, *Ranunculus* Subgenus *Batrachium*), most of the remainder being terrestrial plants of damp grassland or fen, of waste or disturbed ground (especially stinging nettle, *Urtica dioica*); achenes of buttercup (*Ranunculus* Section *Ranunculus*) were abundant and many were rather eroded, perhaps suggesting they had undergone some decay before being deposited in the moat. Evidence for plants likely to have originated from human occupation—other than the edible plants listed above—was restricted to traces of seed capsules and seed fragments of flax and moderately common vegetative remains of cotton-grass (*Eriophorum vaginatum*). The latter, together perhaps with a single capsule of heather (*Calluna vulgaris*), is likely to have arrived with peat (blocks of *Sphagnum* peat were recovered from the roof of the standing medieval barn close to the moat).

Evidence from the insect remains, again, strongly supports that from the plant macrofossils; the range of phytophages suggesting rich herbaceous vegetation and a well-developed ditch flora, and a notable aquatic component clearly indicating standing water. Synanthropes were not strongly evident in this assemblage; a larger subsample may yield a recognisable group. It is recommended that a further, small, subsample (2 kg) is processed for detailed recording and a that a larger subsample (5 kg) is processed to identify the presence of any woodland species and to recover more of the synanthropes.

Context 4569 [above branches and below clay capping; maximum depth 0.35 m]

Sample 7581/T (1 kg; flot)

Moist, light grey to mid-dark grey and light brown, crumbly to unconsolidated, clay sand, with some patches more sandy or more clayey. Twigs, and stones in the size range 2-20 mm, rootlets, and some white mould, were also present.

The very large flot was rich in fine herbaceous detritus amongst which there were many achenes of stinging nettle and smaller numbers of achenes of stinking mayweed (*Anthemis cotula*) and corn marigold (*Chrysanthemum segetum*), nutlets of sedges (*Carex* spp.), mericarps of cow parsley (*Anthriscus sylvestris*) and unknown bud-scales similar to those from Sample 8394. Preservation of plant remains was mostly very good though the concentration of identifiable material was fairly low. Although evidently waterlain, the subsample from this deposit yielded no archaeobotanical evidence for aquatic deposition, and only a little for waterside or damp ground habitats. Most taxa were weeds in the broad sense, though there were some hints of the presence of grassland in the vicinity (or of the deposition into the moat of cut grassland vegetation, such as hay, possibly via herbivore dung). ‘Useful’ plants were restricted to traces of flax seed fragments and a single fig (*Ficus carica*) seed. Besides the bud-scales already mentioned, a few of the other woody plants noted from Sample 8394 were present here, too.

The invertebrates were also very well-preserved and included a small range of aquatics (but with appreciable numbers), a scatter of facultative synanthropes, and, as with Sample 8394, beetles of a plant-feeding community. The vegetation was probably ‘weedy’ and very disturbed. Artificial accumulations of decaying matter may also have been present nearby.

Area J - trench cut across foundations of barn

Context 4566 [fill of linear feature, pre-dating barn]

Sample 7583/T (1 kg; washover)

Moist, mid to dark grey/brown, sticky to brittle (working plastic), clay, with some patches that were lighter brown, pale yellow, orange, and pale grey. Stones (including quartz) were present in the size ranges 2-6 mm and 20-60 mm. Fragments of rotted mollusc shell were also present.

The residue and washover were both very small, the former consisting of sand and gravel (to 15 mm), the latter of traces of plant detritus, charcoal (to 10 mm), a fragment of a weevil elytron, and moderate numbers of the sclerotia (resting bodies) of *Cenococcum*, a soil-dwelling fungus. These are of little interpretative significance other than to indicate that the linear feature filled by natural inwash or dumping of soil.

Bone

Overall, preservation of the bone was rather variable, although the material from the moat fill deposits in Area C appeared to be generally better preserved and darker in colour than the remainder—characteristics associated with waterlogging. Much of the remaining material was rather poorly preserved and variable in colour (between contexts), with a small number of contexts (4227, 4239, 4240) containing very pale, ‘whitish’ fragments, considered to be of recent origin. However, the nature of the broken surfaces was, on the whole, scored as ‘spikey’, with few bones being recorded as ‘battered’ or ‘eroded’. Dog gnawing and butchery were noted from most of the assemblage at approximate frequencies of 20-50%.

Most contexts yielded only small numbers of bone fragments (i.e. less than 20; Table 1), and contained few identifiable or measurable fragments. For the assemblage as a whole a total of 57 identifiable and 70 unidentifiable fragments were recorded. Of these, four were measurable and the only mandible containing teeth was that of a medium- to large-sized dog.

Overall, cattle fragments predominated and included a well-preserved skull (from Context 4748) which had been heavily butchered. Both sides of the skull had been chopped through, as had the posterior portion, whilst the premaxilla and the nasal bones had largely been destroyed by dog gnawing. The purpose of this rather extreme butchery practice is unclear, although it may have been undertaken purely for the removal of the cheek meat. Sawn cow-sized rib and shaft fragments were also noted throughout the assemblage and a few of the cattle fragments showed evidence of scorching. Additional species present in the assemblage included caprine (sheep/goat), pig, horse, rabbit and hare. A part skeleton of a dog was also recovered from Area F (Context 4180). Birds were represented by five fowl bones and the carpometacarpus of a goose. Two of the chicken fragments and the single goose bone had all been gnawed by rodents.

Discussion and statement of potential

The moat fills offer a good opportunity to reconstruct the local ecology and perhaps, if large enough samples are examined, a little about occupation nearby, though the botanical evidence for this is sparse. The insects, however, may allow a more detailed interpretation of human activity to be made if sufficiently large samples are processed, and may also give a clearer

impression of water quality in the moat. The synanthropic insects have research interest in that they come from a moat fill adjacent to a structure which was presumably occupied; the question of how strongly occupation is represented by insects in nearby infilling cuts is one which urgently needs to be addressed.

The other deposits probably do not warrant any further analysis.

The small size of the bone assemblage, variable preservation, and the very few identifiable and measurable fragments, render this material of extremely limited zooarchaeological potential. Lack of detailed dating information further restricts the usefulness of the material.

Recommendations

A small-scale, intensive, piece of work should be carried out on the plant and invertebrate remains from the moat-fill samples. Dating of these samples by radiocarbon assay would be highly desirable if it cannot be achieved by other means.

No detailed work on the bone material is warranted, although the production of a basic archive may aid further archaeological interpretation, particularly with regard to contextual information.

Retention and disposal

Samples from the moat fills should be retained for further analysis, and subsequently for at least three years after publication to allow for further investigation. The remaining samples do not need to be retained for bio-archaeological purposes. Flots and residues should be retained in the longer term.

The bone should be retained if required for archive purposes but there are no other reasons for long-term retention.

Archive

All extracted fossils 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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Table 1. Notes on the vertebrate remains from Old Abbey Farm, Risley.

Area	Context type	Context no.	Record no.	Notes
B	structure	4061	8096	<i>Unidentified</i> - sheep-sized shaft fragment
B	structure	4061	8097	<i>Sheep/goat</i> - metapodial fragment
B	debris below floor	4176	7131	<i>Rabbit</i> - femur <i>Hare</i> - scapula <i>Unidentified</i> - 1 sheep-sized rib fragment
B	floor make-up	4177	7120	<i>Fowl</i> - carpometacarpus and coracoid, both rodent-gnawed <i>Unidentified</i> - sheep-sized rib fragment
B	layer, room 4000	4236	8017	<i>Unidentified</i> - 3 fragments
B	trample	4239	8047	? <i>Pig</i> - humerus, modern appearance <i>Unidentified</i> - 1 sheep-sized rib fragment
B	make-up	4240	7857	<i>Fowl</i> - humerus, white in colour (measurable) <i>Unidentified</i> - 2 cow-sized rib fragments; 1 sawn
B	layer	4255	7910	<i>Unidentified</i> - 3 cow-sized rib fragments, all sawn
B	make-up	4306	8310	<i>Goose</i> - carpometacarpus, greylag-sized, rodent-gnawed
B	feature fill	4384	7865	<i>Bird</i> - 3 unidentified fragments <i>Unidentified</i> - cow-sized rib fragments, sawn
B	surface	4461	7792	<i>Unidentified</i> - cow-sized shaft fragment
B	layer	4616	8109	<i>Unidentified</i> - 3 burnt fragments
B	layer	4710	8361	<i>Pig</i> - incisor
B	layer	4710	8367	<i>Unidentified</i> - 2 burnt fragments
C	hardcore	4227	7569	<i>Cattle</i> - pelvis fragment (sawn) ? <i>Pig</i> - tibia shaft <i>Unidentified</i> - 2 cow-sized rib fragments, 1 white, eroded and sawn
C	moat fill	4569	7577	<i>Unidentified</i> - 1 fragment
C	moat fill	4721	8364	<i>Cattle</i> - tibia, 2 radius fragments (1 measurable), pelvis fragment
C	moat fill	4721	8385	<i>Cattle</i> - ulna, chopped <i>Horse</i> - lateral metapodial <i>Sheep/goat</i> - distal humerus
C	base of moat	4747	8406	<i>Fowl</i> - tibiotarsus, juvenile <i>Dog</i> - radius (measurable) <i>Unidentified</i> - 1 cow-sized vertebra, chopped
C	moat fill	4748	8409	<i>Cattle</i> - skull, with both sides chopped through and most of the premaxilla and nasal bones chewed by dog; several teeth damaged by the butchery
C	moat fill	4748	8421	<i>Cattle</i> - tibia fragment, chopped

Area	Context type	Context no.	Record no.	Notes
C	moat fill	4751	8353	<i>Cattle</i> - scapula fragment, juvenile
C	moat fill	4751	8420	<i>Sheep/goat</i> - scapula, measurable
C	moat fill	4751	8460	<i>Cattle</i> - femur shaft, sawn
D	topsoil	4122	7047	<i>Unidentified</i> - 4 cow-sized rib and shaft fragments
D	topsoil	4122	7051	<i>Unidentified</i> - cow-sized rib fragment
D	topsoil	4122	8226	<i>Cattle</i> - 4 teeth fragments
D	fill?	4147	8170	<i>Unidentified</i> - 2 cow-sized ribs, both sawn
D	midden?	4166	8307	<i>Unidentified</i> - 1 cow-sized rib, chopped and possibly scorched
D	topsoil	4170	8138	<i>Unidentified</i> - 1 cow-sized vertebra
D	topsoil	4170	8216	<i>Fowl</i> - coracoid, chopped
D	topsoil	4182	7953	<i>Pig</i> - M3
D	topsoil	4242	7844	<i>Hare</i> - tibia shaft <i>Unidentified</i> - mainly cow-sized rib and shaft fragments; 1 sawn rib
D	topsoil	4242	7890	<i>Pig</i> - 1 proximal tibia fragment, 1 tibia shaft, sawn <i>Unidentified</i> - 6 cow and sheep-sized rib and shaft fragments
D	topsoil	4242	7928	<i>Unidentified</i> - 3 fragments
D	garden soil	4289	7971	<i>Cattle</i> - atlas, sawn
D	layer	4323	8125	<i>Rabbit</i> - femur <i>Unidentified</i> - cow-sized shaft
D	layer	4469	8309	<i>Unidentified</i> - 2 sheep-sized rib fragments
D	layer - C17th?	4584	7705	<i>Unidentified</i> - 1 burnt fragment
D	layer	4585	7782	<i>Unidentified</i> - cow-sized tibia shaft, scorched/burnt and sawn
D	layer	4670	8299	? <i>Pig</i> - tibia shaft, sawn
D	layer	4742	8381	<i>Unidentified</i> - cow-sized rib fragment, sawn
E	topsoil	4117	7776	<i>Sheep/goat</i> - astragalus (measurable) <i>Unidentified</i> - cow-sized rib fragment
E	topsoil	4117	7823	<i>Unidentified</i> - 3 cow-sized ribs, 2 sawn
E	moat fill	4119	8179	? <i>Pig</i> - femur shaft <i>Unidentified</i> - 5 fragments
F	plough soil	4180	7153	<i>Dog</i> - 13 fragments from the same individual, including mandible, 1 scapula, 2 humeri, 2 radii, 2 ulnae, 1 pelvis, 1 tibia <i>Unidentified</i> - 1 cow-sized rib fragment
G	moat fill	4138	8078	<i>Unidentified</i> - 2 cow-sized shaft fragments
J	make-up	4383	7795	<i>Cattle</i> - M3 stained purple (possibly by modern antibiotic spray)