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Report 48/86

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Samples were taken for charred plant remains from Roman and Medieval contexts. The Roman samples produced evidence for cultivation of beet (Beta vulgaris), a sample that was nearly pure hemlock (Conium maculatum) and a sample of grain, some of which resembled club wheat (Triticum cf. aestivo-compactum). The other samples contained small amounts of cereals and weeds.

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Charred plant remains have been investigated from several Roman and Medieval sites in Alcester. In 1978 rescue excavations at Coulter's Garage, adjacent to the present International site excavations, uncovered a patch of burned material rich in cereal remains presumed to be associated with the Roman stone building.[1] In another area of Alcester, samples from the excavation of Medieval pottery kiln debris (AL 13) produced the remains from two species of free-threshing wheat, including a free-threshing tetraploid (*Triticum turgidum/durum*), and other cereal and arable weed remains.[2] Samples from a mainly Roman site at Tibbet's Close (AL 12) produced evidence for third century gardening in the form of seeds of asparagus (*Asparagus officinalis*) and columbine (*Aquilegia* cf. *vulgaris*) as well as cereals and weeds.[3] These small rescue sites have all proved to be very different from each other in the types of their remains, and it was felt to be of value to continue botanical investigations to add to the growing patchwork of evidence for economic plants in the Roman and Medieval town.

The International Supermarket site was mainly an investigation of the town defenses and it had few contexts with occupation material that might have been expected to produce charred plant remains, but such contexts as did seem likely were sampled (on a 'judgment' basis) for botanical evidence that might relate either to nearby occupation or to the use of the stone building uncovered at Coulter's Garage. A total of seventeen contexts from all the areas was sampled and ten of these produced charred remains.

The samples were processed by wet sieving the soil through 9mm and 1mm mesh sieves to remove the larger stones and potsherds, and the fine sticky clay particles which otherwise adhered to the charred material and impeded flotation. The material retained on the 1mm sieve was dried and bucket floated, the floating fraction being decanted onto a 1mm mesh. This flot was then dried and sorted under a binocular microscope for charred plant remains.

The samples covered a range of dates, from circa AD 200 to Medieval/post Medieval. Most of samples appeared to contain residual material, with small amounts of cereals and associated weeds, and this was true of all the Medieval/post Medieval samples. Three of the Roman samples from areas D and E, however, stand out as containing substantially more material than the others. Two of these, 473/1/1 and 452/0/1, are Phase I deposits tentatively interpreted as occupation deposits or dumps

(see p.**) and the third, 805/1/1 from Phase IIb, also had evidence for occupation in the form of a considerable amount of bronze debris (p. **). These three samples will be considered separately below.

Little can be said about the thinly scattered residual material except that it indicates the presence of emmer (*Triticum* cf. *dicoccum*) and wheat (*Triticum* sp.) in the Roman period, and the presence of wheat, hulled barley (*Hordeum sativum*), oat (*Avena* sp.) and a leguminous weed (*Vicia* cf. *tetrasperma*) in the Medieval or post-Medieval. It is possible that some of the material in the later deposits could have been reworked from the Roman phases, but there is no indication of this. In fact, given that seven of the samples contained no charred remains at all, it is possible that both the deposition and the reworking of charred material in this area was fairly minimal.

One of the possible occupation deposits, 452/0/1, contained approximately 50 fruit clusters of beet (*Beta vulgaris*). The fruits and seeds of cultivated beet are not distinguishable from those of its wild relative (*Beta vulgaris* ssp. *maritima*). Wild beet, however, is a plant of coastal habitats and would not have occurred natually anywhere near Alcester. The plant represented here is almost certainly cultivated beet (ssp. *vulgaris*). Beet as a cultivated potherb was a familiar plant in the Classical world. Columella[4] mentions beet in his poetic section on gardening, and Pliny the elder[5] also mentions beet as a vegetable and as a remedy (possibly not an efficacious one) for a variety of ills. The beet referred to was probably something similar to what we know as spinach beet. Theophrastus[6] states specifically that the beet root is not bulbous, describing it as long and straight, but he also says that the root is fleshy, sweet and pleasant to eat, and that some people ate it raw. Clearly, people were aware of beet root as a desirable food, even if the red beetroot we know today had not yet been developed. None of the above authors refers to beet either as a field crop or as a fodder crop but rather appear to consider it as a garden herb for human consumption.

The beet fruit clusters, which contain the seeds, would normally be collected to propagate the next year's crop. Some, however, may have been overlooked and burned with the burning off of general garden debris. It is also possible that an individual plant or plants 'bolted' and ran to seed too early. Such plants would be uprooted as being of no further use, and their seeds would probably not be collected, as gardeners in the third century would have been quite as well aware as their modern counterparts of the undesirability of propagating from plants with unwanted characteristics.

Beet has been found on Roman urban sites on the Continent at Novaesium[7] and Butzbach,[8] and also occurs on several Medieval sites.[9] In Britain there are fewer records so far. Beet was found in a Roman well at Denton[10] and in late Medieval rubbish pits at Hull.[11] The chances of garden vegetable seeds or remains being preserved by charring or waterlogging,

and under circumstances where they can be distingushed from their wild relatives, are generally quite rare, and these plants are undoubtedly very much under-represented in the archaeological record.

The weeds associated with the beet in this sample are plants characteristic of cultivated and disturbed ground. Most of them will grow in cornfields as well as gardens and some of them therefore may be associated with the cereals in the sample rather than the beet fruits, though the Malvaceae family and hemlock tend to be found more as ruderals than as segetals. It is possible that some of the hemlock seeds may be derived form the deposit directly underneath (473/1/1, see below) but there is no other indication from the plant remains of any mixing between these two contexts. The general picture this assemblage presents is one of mixed arable and horticultural rubbish, though the cereal element may not have been so much deliberately burned rubbish as accidentally burned in processing.

The sample from context 473/1/1 is peculiar in consisting almost entirely of charred hemlock (*Conium maculatum*) seeds (botanically the fruits). This was clearly not a casual charring of a few seeds incorporated in a fire by accident - a one litre sample produced over 730 seeds. Hemlock prefers to grow in damp and disturbed ground, and is likely to have been naturally occurring near the site, especially just above the marshes, and on the borders of the river and any wet ditches. It has long been known for its medicinal and poisonous properties, the main active principle being the alkaloid coniine, which is contained in all parts of the plant and most concentrated in the seeds.[12] It is possible that the plant was collected deliberately for medicinal purposes, though this would not explain how the seeds came to be charred. However, hemlock is often found as a weed of cultivation, and in light of the possible evidence for gardening somewhere nearby, it is perhaps more likely that someone regarded this poisonous invader as a nuisance and decided to dispose of it. Hemlock will grow luxuriously in favourable circumstances, and the number of seeds could easily be accounted for by one or two plants.

The third sample, 805/1/1, consists of an almost pure crop of wheat. Some of the grains look distinctly free-threshing and resemble a club wheat (*Triticum aestivo-compactum*). There is considerable overlap in morphology between club wheat and common bread wheat (*Triticum aestivum* s.l.), and because of this and the poor state of preservation of the grains, it is not possible to tell if there was more than one type of wheat present. This deposit appears to be a fully threshed and cleaned product ready to be prepared for consumption. It does not resemble in composition the spelt and emmer chaff-dominated assemblage from Coulter's Garage[13] (Colledge, *op. cit*, Note 1) and is probably too late in date to be related to the supposed granary.

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TABLE OF CHARRED PLANT REMAINS FROM AREA B

Sample no.:	163/3/1	145/1	142/1/1	133/1/1
Soil sample size in litres:	10	7	8	10
Type of context:	'ditch' fill	well	pit	pit
Phase:	A	C	C	C
CEREALS				
Triticum sp. grains	1	5	1	-
Hordeum sativum hulled grains	-	-	1	-
Avena sp. grains	-	-	1	-
Cereals indet. grains	-	-	1	-
WEEDS				
cf. Chenopodiaceae indet.	1	-	-	-
Vicia cf. tetrasperma	-	-	1	-
Vicia/Lathyrus	-	-	1	1

TABLE OF CHARRED PLANT REMAINS FROM AREAS D AND E

Sample no.:	473/1/1	452/0/1	520/1/1	818/1/1	805/1/1	418/1/1
Soil size of sample in litres:	1	17	8	11	12	10
Phase:	I	I	IIa	IIb	IIb	IV
CROP PLANTS						
Beta vulgaris (fruit clusters)	-	50	-	-	-	-
Triticum cf. dicoccum grains	-	-	1	-	-	-
T. dicoccum/spelta spikelet forks	-	3	-	-	-	-
T. dicoccum/spelta glume bases	-	9	-	-	-	-
T. spelta glume bases	-	5	-	-	-	-
T. cf. aestivo-compactum grains	-	-	-	1	68	-
Triticum sp. grains	-	12	2	2	108	-
Hordeum sativum hulled grains	-	-	-	-	1	-
Avena sp.	-	1cf.	-	-	1cf.	-
Cereal indet.	-	21	2	3	65	1
Coleoptiles	-	1	-	-	-	-
OTHER PLANTS						
Brassica/Sinapis arvensis	-	-	-	-	-	1
Raphanus raphanistrum	-	1	-	-	-	-
Atriplex sp.	-	2	-	-	-	-
Malvaceae indet.	-	2	-	-	-	-
Vicia/Lathyrus	-	6	-	-	-	-
Lathyrus pratensis	-	1cf.	-	-	-	-
Conium maculatum	736	23	-	1?	-	-
Polygonum convolvulus	1	-	-	-	-	-
Rumex sp.	-	5+4cf.	-	-	-	-
Anthemis cotula achenes	-	305	-	-	-	-
Anthemis cotula flower heads	-	9	-	-	-	-
Centaurea sp.	-	1	-	-	-	-
Gramineae indet.	-	2	-	-	1	-
Gramineae culm bases and nodes	1	2	-	-	1	-

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Dear Mrs. Savory,

Please find the enclosed report which I am submitting for inclusion in the A. M. Lab. series.

Sincerely,

Lisa Moffett