Ancient Monuments Laboratory
Report 203/87

TWO ROMAN PITS FROM WORCESTER, BLACKFRIARS.

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Summary

This is a brief interim report on the results from two mid 2nd century pits in Roman Worcester. One pit was a large rubbish pit containing a dump of charred material and located beside a Roman road. It may have been used by the road builders. The second pit was a possible cess pit. The composition of the charred dump in the roadside pit was primarily of spelt chaff and wheat (Triticum sp.) grains, more than half of which had germinated. The cess/ rubbish pit assemblage was dominated by large grass seeds with a few residual cereals and weed seeds.

Author's address :-

Department of Plant Biology
University of Birmingham
P.O. Box 363
Birmingham
B15 2TT

021 472 1301 x2666

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by Lisa Moffett

Several of the contexts from the Blackfriars site were sampled for charred plant remains. Work is still continuing on the analysis of the recovered plant material, but the results of two Roman pits are discussed in the following short report.

Context 2411 (Sample no. 882)

This context was a layer in a rubbish pit of about 700 ml. (3300 grammes) of pure charred material, which was simply extracted by excavation without flotation. The amount of material was far too large to analyse in detail, and the sample was divided by coning until a manageable subsample size was obtained. This subsample size was 28 ml. (about 4 % of the total sample). Both the absolute numbers and the approximate total numbers for each type of item are given in the table.

The main component of the sample was chaff fragments of spelt (*Triticum spelta*), with some chaff fragments of emmer (*T. dicoccum*) and six-row barley (*Hordeum sativum*). Some grains of wheat which could not be identified to species were present, and of these at least 54% had germinated. Detached coleoptiles (the sprouted embryos) were also present and in fact outnumbered the total number of cereal grains in the sample. The weed seeds were primarily grasses, but included other segetal and ruderal plants such as corncockle (*Agrostemma githago*), hemlock (*Conium maculatum*), knotgrass (*Polygonum aviculare* agg.), dock (*Rumex* sp.), scentless mayweed (*Tripleurospermum maritimum*) and a thistle (*Carduus/Cirsium*).

In societies without paper, cereal chaff is often the handiest source of tinder and is sometimes kept and stored for this purpose. The use of glume wheat (emmer and spelt) chaff for tinder and fuel has been discussed by Hillman in his ethnographic studies of glume wheat crop processing in Turkey (Hillman 1984). A number of Iron Age and Romano-British botanical assemblages dominated by spelt chaff have been interpreted as indicating the use of chaff for fuel (e.g. Hillman 1982, Monk and Fasham 1980, Moffett forthcoming). It seems likely that the assemblage in 2411 was derived from an oven or kiln where chaff had been used in this way.

It is more difficult to place an interpretation on the function of the hypothetical oven/kiln. It has been suggested that Romano-British 'corndriers' were used for malting (Reynolds and Langley 1980), and there is some evidence for this from site such as Mucking (van der Veen 1983), Catsgore (Hillman 1982) and Tiddington, (Moffett 1986). No 'corndriers' were uncovered during the Blackfriars excavation, but the presence of coleoptiles and a relatively high percentage of germination among the grains in 2411

suggests that malting could be one interpretation of the evidence. However, it is not uncommon for a damp crop to start sprouting in the ear before it is harvested, and it is possible that part of such a crop became charred while being dried to prevent further spoilage. There is always the possibility of mixed assemblages in a secondary deposit (even if the deposit is not mixed from an archaeological point of view), so it is also possible that the chaff and grains are derived from different sources, though Hillman (1981) considers that mixing of assemblages is less frequent than was once thought.

Context 2460 (Sample no. 865)

The assemblage from this possible cess pit is quite different. Only a few chaff fragments and small weed seeds were found in this sample. Recovery of the charred material was also by hand excavation, but in this case the charred items were distributed in a soil matrix and picked out one by one, instead of being in a pure charred layer. This means that the large items such as grass seeds and cereal grains may be very much over-represented relative to small items that may originally have been in the assemblage. Interpretation, therefore, is extremely tentative.

Some wheat and rye grains were found, with just a few of the wheat grains germinated, but the main component of this sample was large grass seeds. The large-seeded grasses are extremely difficult to identify from their charred seeds, and only some of the seeds could be identified as belonging to the *Bromus secalinus/mollis* group (rye brome/soft brome and related species). *Bromus secalinus*, though now rare, was once a successful crop weed sometimes thought to have been particularly associated with spelt (Smith, 1973). Other large-seeded grasses, however, such as *Festuca* and *Agropyron* will also invade the edges, and sometimes the middle, of cereal fields. Large grass seeds could be waste contaminents removed by hand-sorting a batch of cereals just prior to consumption. Hand-sorting is usually the final stage in crop processing after winnowing and sieving, as there will always be contaminents roughly the same size and weight as the crop seeds which cannot be removed by any other means (Hillman, 1981). There were, however, no other grain-sized weeds found in this sample.

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WORCESTER, BLACKFRIARS
Table of charred plant remains
Two Roman Pits

Context number:	2411	2411	2460
Volume of charred material:	700 ml	(approx.	14 ml
% of material analysed:	4	total	100
Date:	mid 2C	items,	mid 2C
	sub-	subsample	
g= germinated	sample	x 25)	
Triticum dicoccum rachises	1	25	-
T. dicoccum spikelet forks	15	375	-
T. dicoccum glume bases	14	350	-
T. dicoccum/spelta rachises	172	4300	-
T. dicoccum/spelta sp. fks.	43	1075	-
T. dicoccum/spelta glm. bs.	1483	37075	6
T. spelta rachises	325	8125	1
T. spelta sp. fks.	33	825	-
T. spelta glm. bs.	1439	35975	11
T. spelta/aestivum grains	1	25	3
Triticum sp. grains	28+33g	784+825g	54+6g
Secale cereale grains	-	-	5
Hordeum sativum 6-row rachises	38	950	-
H. sativum indet. rachises	15	375	-
H. sativum hulled grains	1+1g	25+25g	-
Cereal indet. grains	10	250	21
Coleoptiles	93	2325	9
Agrostemma githago	1	25	-
A. githago calyx tips	4	100	-
Medicago/Melilotus/Trifolium	2	50	-
Trifolium sp.	-	-	1
Vicia hirsuta (immature)	-	-	1
Conium maculatum (immature)	2	50	-
Polygonum aviculare agg.	1	25	-
Rumex sp.	3	3	11
Tripleurospermum maritimum	2	50	1
Carduus/Cirsium	1	25	-
Lolium sp. rachises	4	100	-
Lolium sp. grains	9	225	-
Bromus secalinus/mollis group	8	200	71+5g
Avena fatua/ludoviciana pedicels	4	100	-
A. fatua/ludoviciana lemma bases	2	50	-
Avena sativa grains	-	-	1
Avena sp. grains	-	-	3
Avena/large Gramineae grains	-	-	10
Gramineae panicle nodes	4	100	-
Gramineae pedicels (not Avena)	14	350	-
Gramineae culm nodes	2	50	-
Gramineae indet. seeds	218	5450	267
Unidentified	3	75	-