From the *Transactions* of the
Bristol and Gloucestershire Archaeological Society

Organic matter from medieval deposits outside St Nicholas Church, Gloucester

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1985, Vol. 103, 223-226

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ORGANIC MATTER FROM MEDIEVAL DEPOSITS OUTSIDE ST NICHOLAS CHURCH, GLOUCESTER

The comprehensive programme of archaeological watching-briefs carried on in Gloucester often produces sections of superimposed streets representing a long sequence of time. It is argued elsewhere (Garrod and Heighway 1984, 1) that these deposits represent a close approximation to 'primary deposits', in other words they are unlikely to contain much residual material and can be approximately dated even from a few finds. It would be of great interest to examine a number of such deposits with regard to the environmental evidence they contain, to compare conditions in different areas of the town at different dates.

The samples from St Nicholas' Church were examined as a first step in this process. The samples are from organic material (contexts 16 and 19) above a street metalling (Garrod and Heighway 1984, 56, fig. 46, site 14/81: organic layer (19) filled a hollow in the street surface (20); layer (16) sealed both layers). Three sherds of 11th-century pottery (TF41B) came from (16) and 12th- and 13th-century pottery respectively from the next two layers above. The depth of the deposits – more than 3 m below pavement level – can be compared with the similar depth of known 10th/11th-century streets at Berkeley Street nearby (Garrod and Heighway 1984, 47-48, fig. 40).

The samples appear to derive from stable sweepings or animal dung and it is likely that the street deposits represented here accumulated partly from the clearing of nearby stables and from dung and other stable debris, perhaps shed by passing horse-drawn traffic. There are few cultivated plants in the deposits, suggesting that only a small proportion of domestic refuse was thrown out onto the street, however, the excavator reports the presence in both layers of quantities of food-bones and hazel nuts. As these did not appear in the samples, sampling was selective.

500-gram sub-samples were wet-sieved using a minimum mesh size of 250 microns. Only 50 per cent of the smallest fraction obtained was examined, though all the larger material was analysed. The samples were found to contain abundant cereal straw, some cereal chaff and seeds, and a few insect remains and moss fragments preserved by waterlogged conditions. The seeds were extracted and identified; the species recorded are listed in Table 2 and their ecological preferences are noted. All habitat information is taken from Clapham, Tutin, and Warburg 1962.

Table 2 Waterlogged seeds and cereal remains

FAMILY AND LATIN NAME	COMMON NAME	LAYER 16	LAYER 19	ECOLOGICAL PREFERENCE
CAPRIFOLIACEAE				
Sambucus nigra	elder	1+	–	W, D
CARYOPHYLLACEAE				
Cerastium sp.	chickweed	–	1	Da, G
Lychnis flos-cuculi	ragged robin	–	1	M, wet G & W
Stellaria media agg.	chickweed	3	1	Da
gen. et sp. indet.		+	+	
CHENOPODIACEAE				
Atriplex/Chenopodium	orache/fat hen	2	–	Da
Atriplex sp.	orache	–	3+	Da
Chenopodium sp.	fat hen etc.	–	20+	Da

FAMILY AND LATIN NAME	COMMON NAME	LAYER 16	LAYER 19	ECOLOGICAL PREFERENCE
COMPOSITAE				
Achillea millefolium	yarrow	1	2	G
Anthemis cotula	stinking mayweed	50	111	Da (esp. base rich)
Carduus sp.	thistle	–	16	D
Centaurea sp.	knapweed	+	2	Da
Chrysanthemum segetum	corn marigold	–	6+	Da (acid)
cf. *Chrysanthemum segetum*	cf. corn marigold	–	1	Da
Lapsana communis	nipplewort	–	8	D, W (margins)
Leontodon sp.	hawkbit	1	12	G (basic)
Sonchus asper	sow thistle	5	1	Da
CYPERACEAE				
Carex sp.	sedge	1	2	M, V (wet)
Eleocharis S. *Palustres*	spike rush	20	124	A (shallow), G (wet), M
gen. et sp. indet.		3	–	
GRAMINEAE				
gen. et sp. indet. (waterlogged)	grasses	30	33	G, (V)
gen. et sp. indet. (carbonized)	grasses	1	–	G, (V)
JUNCACEAE				
Juncus spp.	rushes	31	57	M, G (wet)
LABIATAE				
Prunella vulgaris	self heal	1	3	G, W, D
PLANTAGINACEAE				
Plantago major	great plantain	–	3	Da, G
POLYGONACEAE				
Polygonum sp.	knotgrass	+	6	V
Polygonum aviculare agg.	knotgrass	–	9	D
Rumex sp. (nutlets)	dock	3	6	V
Rumex sp. (perianths)	dock	–	7	V
Rumex acetosella	sheep's sorrel	3	–	Da, G, H (mostly acid)
RANUNCULACEAE				
Caltha palustris	marsh marigold	–	1	M, W (wet)
Ranunculus acris/repens/bulbosus	buttercups	12+	5	Da, G (damp)
Ranunculus flammula	lesser spearwort	3	–	M
ROSEACEAE				
Aphanes cf. *microcarpa*	parsley piert	1	–	Da, G (acid)
Fragaria vesca	wild strawberry	1	–	W
Rubus sp.	blackberry/raspberry	+	–	D, W
SCROPHULARIACEAE				
Euphrasia sp./*Odontites verna*	eyebright/red bartsia	–	7	Da, G
SOLANACEAE				
Hyoscyamus niger	henbane	1	–	D
Solanum nigrum	black nightshade	3	–	D
UMBELLIFERAE				
cf. *Torilis* sp.	hedge parsley	1	–	Da
Torilis sp.	hedge parsley	–	+	Da
cf. *Oenanthe* sp.	dropwort	–	+	A, M
gen. et indet.		–	1+	

FAMILY AND LATIN NAME	COMMON NAME	LAYER 16	LAYER 19	ECOLOGICAL PREFERENCE
URTICACEAE				
Urtica dioica	stinging nettle	4	–	D, W
Urtica urens	small nettle	10	1	Da
VALERIANACEAE				
Valerianella rimosa	corn salad	–	2	Da (basic)
unidentified seeds		–	20	
CEREALS				
Hordeum sp. racbis internodes	barley	–	3	C
cf. *Triticum* sp. rachis fragments	wheat	–	36	C
cereal straw		+	+	C

Key

A – aquatic; D – disturbed habitats (roadsides, waste places); Da – disturbed habitats including arable land; G – grassland; H – heaths; M – marshes, fens, ditches; W – woods, scrub, hedgerows; V – varied; C – cultivated; + – fragments.

It is evident from Table 2 that some plants will colonize more than one habitat. Most of the species colonize waste places and arable fields and many of the grassland plants, another well-represented group, will also tolerate disturbed conditions. The presence of cereal straw is noted in both samples, though wheat and barley rachis internodes only from context 19. It is likely that many of the weed species such as chickweed, stinking mayweed, the Chenopodiaceae, sheep's sorrel, sow thistle, small nettle, and corn salad were introduced with the cereals as weeds of cultivated land. As far as the cereal remains are concerned, only rachis fragments and straw are represented, not cereal grain or other chaff, which implies that the straw debris probably represents stable sweepings or animal dung containing cereal-processing waste fed to animals or used as bedding. The other weeds of disturbed ground such as elder, self heal, knotgrass, stinging nettles, and black nightshade are commonly found in urban situations as they are able to colonize rapidly patches of waste ground, which may be nitrogen enriched owing to the addition of domestic waste. Some of the grassland plants, notably buttercups, are often associated with damp meadows whereas others, such as spike rush, bulrushes, sedges, marsh marigold, and lesser spearwort with marshy conditions or, in the case of spike rush, sometimes standing water.

If the St Nicholas' Church assemblage does include stable sweepings or animal dung, then the animals may have been pasturing on wet meadow land, which would account for the presence of the grassland plants and some of those associated with damp conditions.

Some other ecological information is afforded by the arable weeds. Members of the Chenopodiaceae flourish particularly on nitrogen-rich soils, and corn marigold and parsley piert have a preference for acid soil-conditions. Corn salad and stinking mayweed are found on base-rich soils and indeed the soils of the Gloucester area would have been predominantly calcareous. Stinking mayweed is an interesting species as it grows profusely on heavy, base-rich soils and is widely found in archaeological assemblages from Roman, and more particularly medieval sites. This plant is, however, very rare today and whether this is as a result of the use of pesticides or other changes in farming practice is not certain.

In his analysis of several medieval pits from Westgate Street, Gloucester, Green (1979) noted that waterlogged and carbonized cereal grains and chaff were present, notably of bread wheat (*Triticum aestivum s.l.*) and spelt wheat (*T. spelta*). The presence of spelt in 10th- or 11th-century contexts is unusual as it is generally regarded as gradually dying out in Britain after the Roman

period. Green (1979, 188) attributed the prolonged cultivation of spelt in this area to the cultivation of a different type of land, climatic conditions, or even rural conservatism in this part of Gloucestershire. He also noted the absence of any remains of barley. In the present samples the opposite is the case; barley is identified by the presence of some rachis internodes, whereas the wheat remains are not well-enough preserved to suggest whether spelt or more likely bread wheat forms part of the assemblage. Green (1979) also suggests that waterlogged cereal remains from some of the 11th- and 12th-century pits represent discarded animal fodder of redeposited stable litter such as animal dung from a stable floor.

A similar deposit was recently examined from 14th–century Baynard's Castle, City of London, which was considered to consist of stable sweepings, and many of the same plant species were identified as in the Gloucester samples. Yarrow, stinking mayweed, buttercups, sedges, bulrushes, knapweed, and docks were among the plants represented as well as straw, grass, and rush stems (Davis 1982). The Baynard's Castle deposit also contained a curry comb which was useful supportive evidence for the stable-sweepings hypothesis.

The plant macrofossils from the Gloucester street surfaces are, therefore, likely to represent dung of herbivores such as horses or cattle and/or stable sweepings and refuse consistent with continuous horse-drawn traffic.

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January 1985 VANESSA STRAKER and CAROLYN HEIGHWAY

A WALL-PAINTING OF THE ARMS OF THE APOTHECARIES COMPANY FROM STOW-ON-THE-WOLD

During 1981/2 the former premises of solicitors Francis, Wickens, and Hill in The Square, Stow-on-the-Wold were converted for use as a new branch office for the Cheltenham & Gloucester Building Society. Early in July 1981 during the stripping of plaster in a front downstairs room a wall-painting representing the arms of the Society of Apothecaries was uncovered by contractor's workmen and duly reported both to the Society and subsequently to the Corinium Museum at Cirencester. After investigation and discussion as to the best form of preservation of the plasterwork and painting, it was conserved in the studio of Mrs E. Baker near Banbury and was restored as a panel for permanent exhibition in the new office which opened in April 1982 (see *Glos Chronicle* 24 April 1982).

When discovered the panel formed a roughly square fragment; clearly it had not been destroyed during earlier remodellings of the room in which it was found, and particularly had not been damaged when it was hidden from view by the plasterwork removed in 1981. The panel as now restored and framed measures 0.59 × 0.75m within the frame and is a considerable