



making sense of heritage

Site 7
A453 Widening Scheme
M1 Junction 24 to A52 Nottingham
Nottinghamshire

Charred Plant Remains
By Sarah F. Wyles



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Introduction

A total of 15 samples were taken from features of Middle Iron Age date during the excavation and were processed for the recovery of charred plant remains. Four of these samples were selected for full analysis on the basis of the assessment. These were samples from pits 7062, 7067 and 7035 and enclosure ditch 7135.

Methods

The samples were processed using standard flotation methods with the flot collected on a 0.5mm mesh. For the nine samples selected for analysis samples all identifiable charred plant macrofossils were extracted from the flots, together with the 2mm and 1mm residues. Identification was undertaken using stereo incident light microscope at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) for wild species and the traditional nomenclature as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals. The results are presented in Table 1.

Results

The samples from pits 7062 and 7067 were dominated by cereal remains while weed seeds were more numerous in the assemblages from pit 7035 and enclosure ditch 7135. In all the assemblages, the cereal remains were predominantly chaff elements, in particular glume bases of hulled wheat, emmer or spelt (*Triticum dicoccum/spelta*). Glume bases identifiable of being those of spelt wheat (*Triticum spelta*) were recorded in all the samples as were those identifiable as being those of emmer wheat (*Triticum dicoccum*). A few grains of barley (*Hordeum vulgare*) were noted in the assemblages from pits 7067 and 7035 and an awn of oat (*Avena* sp.) also from pit 7035.

The largest weed seed assemblage was recovered from pit 7035 and was dominated by the smaller weed seeds of stitchwort (*Stellaria* sp.), fathen (*Chenopodium album*) and goosefoots (*Chenopodium* sp.), and the larger weed seeds of oats and brome grass (*Bromus* sp.). Other weed seeds present in smaller numbers included the smaller weed seeds of orache (*Atriplex* sp.), blinks (*Montia fontana* subsp. *chondrosperma*), brassica (*Brassica* sp.), medick/clover (*Medicago/Trifolium* sp.) and meadow grass/cat's-tails (*Poa/Phleum* sp.), the medium sized seeds of docks (*Rumex* sp.), and the larger seeds of knotgrass (*Polygonum aviculare*), black bindweed (*Fallopia convolvulus*) and vetch/wild pea (*Vicia/Lathyrus* sp.).

The weed seed assemblage from enclosure ditch 7135, which also outnumbered the cereal remains, was again dominated by the smaller weed seeds, though less markedly than in that from pit 7035. As a contrast, the larger weed seeds were more numerous in the small assemblages recorded within pits 7062 and 7067. A few seeds of sheep's sorrel (*Rumex acetosella* group), bedstraw (*Galium* sp.), sedge (*Carex* sp.) and stinking mayweed (*Anthemis cotula*) were noted in some of these samples.

Other remains in the assemblage from pit 7035 included a fragment of hazelnut (*Corylus avellana*) and a hawthorn/sloe (*Crataegus monogyna/Prunus spinosa*) type thorn fragment, which may represent the exploitation of local hedgerow environments, possibly for fuel. Grass stem/rootlet fragments were present in the assemblages from pit 7035 and ditch 7135 and grass culm nodes in that from pit 7067.

Discussion

The dominant cereal within these samples was hulled wheat, with spelt being more numerous than emmer. This pattern has been seen in assemblages from other Iron Age deposits in the area (Monckton 2006), such as from Middle Iron Age deposits at Cropwell Wolds (Stevens 2014), Iron Age deposits at Saxondale (Stevens 2014) and Late Iron Age deposits at Gamston (Moffett 1992).

Glumes were more numerous than grains in all of the assemblages, typical of assemblages of processing waste (Hillman 1981; 1984, Stevens 2003). The assemblages recovered from pits 7062 and 7067 may be indicative of waste from processing hulled wheat which had been stored in the spikelet, semi cleaned. The assemblages from pit 7035 and ditch 7135, where the small weed seeds outnumbered the larger weed seeds and grains, may be due to the hulled wheat being less well cleaned prior to storage as was suggested for a number of the assemblages at Cropwell Wolds (Stevens 2014). Again as at Cropwell Wolds, it could be argued that the absence of culm nodes in these assemblages may provide an indication that the hulled wheat had been stored as sheaves rather than in spikelets (Fuller and Stevens 2009). Some caution in interpreting the assemblages where the smaller weed seeds were dominant must be taken, as these were the assemblages where grass stem/rootlet fragments were also recovered. It is possible that some of the smaller weed seeds together with the grass stem/rootlet fragments represent the burning of turfs. However, at Margidunum Hinterland where the burning of turf burning was strongly suggested by the composition of a number of assemblages, in these instances the assemblages were dominated by grass stem/rootlet fragments, heather stem fragments and tubers (Stevens 2014). On this site it seems most likely that these assemblages represent the processing of less well cleaned stored spikelets.

The weed seeds are generally those recovered from field margins, grassland and arable environments. The presence of low-growing weeds, including blinks, clover, medick and stitchwort, is indicative of the low cutting of the hulled wheat, as was also suggested by the assemblages from Gamston (Moffett 1992) and Cropwell Wolds (Stevens 2014).

The range of weed seeds recovered is indicative of the exploitation of a number of different soil types for cultivation. In addition to those typical of drier lighter soils, some, such as blinks and sedge, were more typical of wetter environments, some of heavier clay soils, such as stinking mayweed, and others of sandier soils, such as sheep's sorrel. Stinking mayweed is normally found in deposits of a later date but was also recorded in a few assemblages at Gamston (Moffett 1992).

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Table1 Charred Plant Remains of Site 7

Area		7			
Phase		Middle Iron Age			
Feature type		Pits			Ditch
Cut		7062	7067	7035	7135
Context		7063	7068	7034	7133
Sample		7	9	5	14
Vol (L)		10	10	10	30
Flot size		25	55	100	40
Cereals	Common Name				
<i>Hordeum vulgare</i> L. <i>sl</i> (grain)	barley	-	1	3	-
<i>T. cf. dicoccum</i> (Schübl) (glume base)	emmer wheat	2	2	2	1
<i>Triticum spelta</i> L. (glume bases)	spelt wheat	2	7	4	1
<i>Triticum dicoccum/spelta</i> (grain)	emmer/spelt wheat	cf. 1	2	2	1
<i>T. dicoccum/spelta</i> (spikelet fork)	emmer/spelt wheat	1	5	3	-
<i>T. dicoccum/spelta</i> (glume bases)	emmer/spelt wheat	24	32	27	5
Cereal indet. (grains)	cereal	-	3	6	1
Cereal frag. (est. whole grains)	cereal	2	5	4	1
Other Species					
<i>Corylus avellana</i> L. (fragments)	hazel	-	-	1 (<1 ml)	-
<i>Chenopodium</i> sp.	goosefoot	1	1	15	8
<i>Chenopodium album</i> L.	fathen	-	-	20	4
<i>Atriplex</i> sp. L.	oraches	1	1	3	3
<i>Montia fontana</i> subsp. <i>chondrosperma</i> (Fenzl) Walters	blinks	-	-	4	2
<i>Stellaria</i> sp. L.	stitchwort	-	-	29	1
<i>Polygonum aviculare</i> L.	knotgrass	-	-	2	-
<i>Fallopia convolvulus</i> (L.) Å. Löve	black bindweed	-	1	1	1
<i>Rumex</i> sp. L.	docks	-	1	2	4
<i>Rumex acetosella</i> group Raf.	sheep's sorrel	-	-	-	2
<i>Brassica</i> sp. L.	brassica	-	-	1	1
<i>Prunus spinosa</i> / <i>Crataegus monogyna</i> (thorns/twigs)	hawthorn/sloe thorns	-	-	1	-
<i>Vicia</i> L./ <i>Lathyrus</i> sp. L.	vetch/pea	-	1	4	5
<i>Medicago/Trifolium</i> sp. L.	clover/medick	1	4	1	2
<i>Galium</i> sp. L.	bedstraw	1	1	-	-
<i>Anthemis cotula</i> L. (seeds)	stinking mayweed	-	1	-	-
<i>Carex</i> sp. L. flat	sedge flat seed	-	-	-	1
Poaceae culm node	grass	-	4	-	-
<i>Lolium/Festuca</i> sp.	rye grass/fescue	-	-	-	1
<i>Poa/Phleum</i> sp. L.	meadow grass/cats'-tails	-	1	1	-
<i>Avena</i> sp. L. (grain)	oat grain	-	2	3	-
<i>Avena</i> sp. L. (awn)	oat awn	-	-	1	-
<i>Avena</i> L./ <i>Bromus</i> L. sp.	oat/brome	2	2	12	1
<i>Bromus</i> sp. L.	brome grass	-	3	3	-
Monocot. Stem/rootlet frag		-	-	3	10
Parenchyma/Tuber		-	-	-	2



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