

APPENDIX 1 - MACROSCOPIC PLANT REMAINS AND CHARCOAL

1.1 Charred Plant Remains and Charcoal

by Ruth Pelling

Introduction

- 1.1.1 Samples were taken during excavation works at South of Snarkhurst Wood for the recovery of charred plant remains and charcoal.
- 1.1.2 Features sampled included ditches, postholes forming a circular structure and four-post structures and pits. All features sampled were of late Iron Age to Early Roman date (1st century BC to 1st century AD). Samples were processed using bulk water flotation and the flots collected onto 250µm mesh sieves. Flots were air dried slowly before being submitted for assessment. All residues were processed.
- 1.1.3 The samples were taken in accordance with the Fieldwork Event Aims for the project, which are set out in section 2 of the main report, above. The purpose of sampling was to investigate economic activity at the site and to refine understanding of the development of the settlement.

Methodology

- 1.1.4 Samples were taken from each class of archaeological feature, focussing on secure contexts. In total 26 samples were taken for the recovery of charred plant remains, 25 from the main excavation site and one sample during the watching brief. The volume of deposit processed for each sample ranged from 2 to 40 litres. All the samples were processed and submitted for assessment. Each flot was first put through a stack of sieves (2mm, 1mm and 500µm) in order to break them into manageable fractions. Each fraction was then scanned under a binocular microscope at a magnification of x10. Any charred seeds and chaff were provisionally identified and an estimate of abundance was made. Fragments of charcoal were randomly fractured and examined in transverse section at x10 and x20 magnification.

Quantification

- 1.1.5 A total of 26 samples were assessed. The results are shown in Table 8.1 below. Flots were generally quite small and contained frequent rootlets. Charred seeds and chaff were absent from 11 samples. One sample contained between 11 and 50 charred items. The remaining 11 samples contained only low levels of cereal grain and chaff with occasional weed seeds (0-10 items). Both cereal grain and chaff were present in the samples. *Hordeum vulgare* grain was noted in 9 samples. Hulled wheat grains were recorded in 8 samples while glume bases were noted in 9 samples. In most cases the preservation of both grain and glume bases was poor and identification was not possible to species. Both *Triticum spelta* and *Triticum dicoccum* were noted amongst the occasional better preserved remains. Weeds were generally only rarely observed and included *Rumex* sp. (docks), *Vicia/Lathyrus* sp. (vetch/tare/vetchling) and small seeded Gramineae (grasses). In addition, nutshell fragments of *Corylus avellana* (hazel) were noted in one sample (sample 100).

- 1.1.6 Charcoal was present in low numbers in 12 samples. Three samples contained moderate quantities while six samples contained quite frequent amounts. *Quercus* sp. (oak) dominates the charcoal assemblages. Pomoideae (apple/pear/hawthorn etc) and *Prunus spinosa* (sloe) were occasionally noted. The identification of the non-*Quercus* charcoal is tentative.

Provenance

- 1.1.7 The richer of the samples was derived from a ditch (context 126). Low levels of remains and charcoal were recovered from the full range of features. There appears to be no relationship between the quantity and quality of the remains and feature type. The preservation of material is poor to moderate. In part this is the result of damage during charring. Some abrasion may have occurred as the result of post-depositional damage. The preservation is such that there is little potential to take the identifications of cereal remains any further.

Conservation

- 1.1.8 The flots are in a stable state and can be archived for long term storage. It is recommended that the flots are retained until completion of the CTRL post-excavation report.

Comparative material

- 1.1.9 The range of material noted in the samples is generally typical of the late Iron Age and Roman periods throughout southern Britain, with spelt wheat the dominant cereal and hulled barley also cultivated. The role of emmer wheat (*Triticum dicocum*) is less well known than spelt for this period. There is good evidence of its cultivation in the late Iron Age from Wilmington in Kent (Hillman 1982) and from outside the region from Hascombe in Surrey (Murphy 1977) and Ham Hill in Somerset (Ede 1991). In the Romano-British period, evidence from sites such as Tiddington (Moffet 1986) or Barton Court Farm (Jones and Robinson 1984) suggest emmer to be a minor crop compared to spelt; possibly even present as a weed of the spelt crop. More recently much larger assemblages were recovered from a site at Mansfield College in Oxford (Pelling, unpublished).

Potential for further work

- 1.1.10 The samples offer only limited information about the economic activities at the site and do not refine understanding of the development of the settlement. The samples do provide some useful data in terms of the development of the archaeobotanical dataset for the region as a whole. Barley and hulled wheat, including both spelt and emmer, are represented. There is no evidence of cereal processing, and it is not possible to establish if the cereals were locally produced or were imported into the site. There is no potential for more detailed analysis of these samples. The quantity and range of material is such that detailed analysis will not provide any additional information to the assessment. However, the results of the assessment are useful and should be included in the final reports. Of particular importance is the presence of emmer wheat, albeit in low numbers. The role of emmer wheat in the cereal economy of the Iron Age and Romano-British period is not well understood at present, and this assemblage provides further evidence for its cultivation on a small scale.

Bibliography

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Table One: the Charred Plant Remains

Context	Type	Period	Sample No.	Sample size (l)	Flot size (ml)	Grain	Identified grain	Chaff	Identified chaff	Weed seeds	Other	Charcoal	Comments
10		LIA	1		20	+	Hor	-		+	-	+	
126	Ditch	LIA - 50	100	35	150	++	Hor T.spt/dic	++	T.dic T.spt/dic	+	+	+++	
132	Ditch	0 - AD50	102	13	10	-		-		-	-	-	
143	Posthole	40 - 70	103	16	10	-		-		-	-	+	
152	Posthole		104	20	10	-		-		-	-	-	Roots
153	Posthole		105	21	10	+	indet	-		-	-	+	
157	Posthole	c.AD43 - 70+	106	4	50	-		+	T.spt/dic	-	-	+	
158	Posthole	c.AD50 - 180+	107	20	50	+	indet	+	T.spt/dic	-	-	+	
165	Posthole		108	15	100	+	Hor T.spt/dic	+	T.cf dic	+	-	++	
166	Posthole		109	11	10	-		-		-	-	+	
173	Pit	AD40 - 70	111	40	150	+	T.spt Hor	+	T.spt/dic	+	-	+++	
173	Pit	AD40 - 70	112	40	150	+	T.sp	+	T.spt/dic	+	-	+++	
186	Ditch	LIA	113	20	10	-		-		-	-	-	Roots
183	Ditch		116	40	50	-		-		-	-	+	Roots
127	Pit		119	40	150	-		-		-	-	+++	Roots
259	Ditch		120		10	-		-		-	-	+	
261	Ditch	AD40 - 70	121	40	150	+	T.spt/dic Hor	+	T.spt/dic	+	-	+	
125	Ditch	AD40 - 70	122	2	10	-		-		-	-	-	Roots
233	Pit	LIA - 43+	123	40	100	-		+	T.spt/dic	+	-	++	
268	Pit		124		10	-		-		-	-	+	
266	Pit		125	26	10	-		-		-	-	-	
269	Pit	LIA - 70	126	30	10	+	T.spt/dic	-		-	-	+	
237	Other	AD30 - 70	127	40	100	+	Hor	-		-	-	+	
238	Other	AD40 - 50+	128	40	250	+	Hor	+	T.spt/dic	+	-	+++	
280	Other	LIA - 50+	129	26	250	+	T.spt/dic Hor	-		-	-	+++	
252	Other	LIA - 50	130	40	100	+	Hor T.spt/dic	-		+	-	++	Roots

+ = 1-10 items/charcoal present; ++ = 11-50 items/charcoal moderate; +++ = 51-100 items/charcoal common

Hor *Hordeum vulgare*; T. spt *Triticum spelta*; T. dic *Triticum dicoccum*; T. sp *Triticum sp.*; Cory *Corylus avellana*