1.1 Assessment of the Charcoal

by Dana Challinor

Introduction

1.1.1 A total of seventeen samples were taken during the excavation from the deposits of seven burnt pits and two cremation pits. Fourteen were from the excavation at Hurst Wood and three were from the watching brief at East of Newlands. The purpose in sampling was to examine the evidence for change and continuity in burial practices, and to consider the function of the pits.

Methodology

1.1.2 The samples were processed by flotation in a modified Siraf-type machine, with the flots collected onto a 250µm mesh. All seventeen of the samples taken were processed and assessed. The volume of soil processed ranged from 4 to 44 litres. The flots were air-dried and divided into fractions using a set of sieves. Fragments of charcoal were randomly extracted, fractured and examined in transverse section under a binocular microscope at x10 and x20 magnification. Fragments caught in the >2mm sized sieves were quantified as identifiable. In the case of large flots, a sample of *c* 20% was examined, although any quantification given is based on estimates of the entire flot. The flots were also scanned for the presence of any other charred plant remains.

Quantification

1.1.3 A total of seventeen samples were assessed, of which sixteen produced identifiable wood charcoal. Three taxa were provisionally identified - *Quercus* sp. (oak), *Alnus/Corylus* (alder/hazel) and Maloideae (hawthorn, apple, pear etc.). A possible fourth taxa was present in pits 104 and 122 at Hurst Wood; small round fragments with very large pores, wide rays and a distinctive ridged stem, which potentially could be charred rootwood. Superficially, the charcoal looked like *Clematis vitalba* (clematis), but could equally be *Vitis vinifera* (vine) as the growth rings were not wide enough for the full anatomical characteristics to be displayed. Further work is required to identify this charcoal.

1.1.4 The two middle-late Bronze Age cremation pits at East of Newlands differed in taxonomic composition (pit 3 containing *Quercus* and pit 7 containing *Alnus/Corylus*), but the concentration of charcoal was low in both (Table 37).

1.1.5 All of the burnt pits at Hurst Wood produced medium to large assemblages dominated by *Quercus*, some with smaller quantities of Maloideae and the possible rootwood fragments (Table 38).Other charred plant remains were scarce and limited to a single glume base from context 22 and a couple of weed seeds from pit 140. Context 143 produced two immature grape seeds, which appeared to be charred although further tests will be needed to confirm this. Roots and modern seeds were present in most flots.

Provenance

1.1.6 The apparent dominance of a single taxon in the cremation deposits at East of Newlands is appropriate for cremation burials of this period and provides evidence for the local practice of deliberate selection of fuelwood.

1.1.7 The fact that the burnt pits at Hurst Wood are also dominated by a single taxon suggests deliberate selection of fuelwood for a specific purpose. Consequently, it is

possible that the function of these pits was for making charcoal. Preservation was generally very poor; most of the charcoal fragments were infused with sediment, hindering examination of the anatomical patterns. The preservation status of the grape seeds requires elucidation. If contemporary with the dated pits, it could suggest evidence for vine-growing on the site, although the dating of these features is very uncertain and there is little potential for further analysis.

Conservation

1.1.8 The flots are in a stable condition and present no problems for long-term storage.

Comparative Material

1.1.9 The predominance of a single taxon in prehistoric cremation assemblages, indicating the use of a single tree or specifically selected species in ritual activities, has been noted at Radley Barrow Hills (Thompson 1999, 352) and at Rollright Stones (Straker 1988). It has also been suggested that the abundance of oak or ash in cremation deposits, compared to other species, is a result of the pyre structure, the timber from these trees providing the supports in a central position, less likely to have been totally reduced to ash (Gale 1997, 82).

1.1.10 Traditional methods for making charcoal may shed light on the possiblility that the pits at Hurst Wood were used to make charcoal. Traditional charcoal burners do utilise shallow pits but the dimensions are generally larger than those at Hurst Wood (Edlin 1949, 160). Moreover, there was no real evidence for the layers of straw, grass or bracken traditionally used to shut out the air, although this may be a bias of preservation. Indeed, there are other taxa which make better charcoal than *Quercus*, such as *Frangula alnus* (alder buckthorn), *Alnus glutinosa* (alder) and *Salix* sp. (willow) (Edlin 1949, 165). In fact, *Quercus* has such good burning properties as a wood fuel, it hardly seems necessary to make it into charcoal, although this would depend upon the purpose of the charcoal burning.

Potential for Further Work

1.1.11 Detailed analysis on these samples is unlikely to contribute greatly to our understanding of the site. However, the *Clemtis/Vitis* charcoal should be properly identified and time should be allotted to an examination of the grape seeds. Radiocarbon dating of the grape seeds may be appropriate. The presence of this material suggests wine growing in the vicinity, and the suggested late Saxon date for this is of considerable interest as an indicator of when this was taking place. It would be of value to confirm both the species identification, and the radiocarbon date with the dating of a second sample. This would contribute to CTRL research priorities at Landscape Zone Level concerning changes in agricultural practice over time.

1.1.12 The results from the cremation pits provide a few further details of the practice of cremation which appear to conform to wider patterns along the CTRL and may thus make a small contribution to our understanding of burial practices.

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Table 37: East of Newlands: summary of charcoal

Sample details					**Flot details**		
Feature	**Context**	**Period**	**sample no.**	**Sample size (l)**	**Flot size (ml)**	**Charcoal**	**Taxa**
3	2	MBA	1	14	45	++	*Quercus* Stone plinth or machine base.
7	6	MBA	2	4	1	+	*Alnus/Corylus*

+ = 1-10; ++ = 11-50; +++ = 51-100; ++++ = 101-1000; 1000+ = >1000

Table 38: Hurst Wood: summary of charcoal

Sample details					**Flot details**		
Feature	**Context**	**Period**	**sample no.**	**Sample size (l)**	**Flot size (ml)**	**Charcoal**	**Taxa**
23	22	M-LIA	3	40	200	+++	*Quercus* sp.
27	28	M-LIA	1	30	25	++	*Quercus* sp.
	29	M-LIA	2	19	110	+++	*Quercus* sp. Maloideae
49	50	MIA	3	13	8	++	*Quercus* sp.
	51	MIA	4	4	45	+	*Quercus* sp.
	52	MIA	5	18	30	+	*Quercus* sp.
104	105	undated	7	8	220	+++	*Quercus* sp.
	106	undated	8	13	25	++	*Alnus/Corylus Quercus* sp. cf. *Clematis/Vitis*
	107	undated	9	30	40	++	*Quercus* sp. cf. *Clematis/Vitis*
102	103	undated	10	20	200	+++	*Quercus* sp. *Alnus/Corylus*
122	124	undated	11	20	700	1000+	*Quercus* sp.
	125	undated	12	21	110	+++	*Quercus* sp. cf. *Clematis/Vitis*

Sample details					Flot details		
Feature	**Context**	**Period**	**sample no.**	**Sample size (l)**	**Flot size (ml)**	**Charcoal**	**Taxa**
140	142	MIA	13	30	325	+++	Maloideae *Quercus* sp.
	143	MIA	14	44	60	++	Maloideae *Quercus* sp.

+ = 1-10; ++ = 11-50; +++ = 51-100; ++++ = 101-1000; 1000+ = >1000