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Assessment of charred plant remains from prehistoric features from Interventions 41, 48 and 55 at Sutton Hoo, Suffolk

by

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Summary

Charred plant remains from wet-sieved samples from deposits exposed during three periods of excavation (Interventions 41, 48 and 55), and isolated finds of charred plant material from two of these (Interventions 41 and 55) have been assessed for their archaeobotanical potential.

Most of the sieved samples produced at least a little charcoal, though the amount was usually very small and the individual fragments rarely larger than 10 mm. Charred hazelnut shell was frequently recorded, again usually in rather small amounts, but the charred cotyledons of oak (from acorns) were quite frequent, especially in some post-hole fills from one area of Intervention 41, and were often complete or present as large fragments. Charred cereal grains were almost absent and no cereal chaff was observed.

A small amount of further work is recommended to identify a subsample of the charcoal and to place the nutshell and acorn remains in the context of other prehistoric sites.

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Assessment of charred plant remains from prehistoric features from Interventions 41, 48 and 55 at Sutton Hoo, Suffolk

Introduction

Charred plant remains from wet-sieved samples from deposits exposed during the execution of Interventions 41, 48 and 55, and isolated finds of charred plant material from Interventions 41 and 55 were submitted for assessment of their archaeobotanical potential. All the material was from prehistoric (Neolithic-early Bronze Age or Iron Age) features, mainly post-hole fills and pit fills.

The wet-sieved material consisted of the 'flots' from sieving 1 bucketful of sediment (approx. 10 l) in each case. Sieving had been carried out on site using a 1 mm mesh; residues had not been retained.

Methods

All the material submitted was examined under a binocular microscope and brief notes made about the charred remains and any modern contaminants present. The maximum size of charred material in each category (charcoal, nutshell, acorn cotyledon) was also noted, to the nearest 5 mm. Quantification was as follows: for the flots, a three-point scale was adopted in which 1 indicates that less than an estimated 10 cm^3 of the component was present, 2 indicates 10-50 cm^3, and 3 indicates >50 cm^3. For the 'spot' finds, there were only ever single specimens or a very few fragments and these have therefore always been scored as '1'.

Results

The results of the assessment are shown in the appendix. In all, 139 flots or spot finds were examined. Table 1 gives scores for the amount (by volume) of four common components of the flots, together with an indication of the size of the largest specimen or fragment for charcoal, charred hazelnut shell and charred acorn cotyledons.

The sieved samples showed considerable variation in their content of ancient plant remains, but most gave at least a little charcoal, usually as rather small fragments.
For Intervention 41, charcoal was most abundant (scores of 2 or 3) in a hearth deposit, a post-hole fill and four scoop fills from the area of Mound 2, and three post-hole fills from the area of Mound 5. A single pit fill from Intervention 48 and six pit fills from Intervention 55 also gave moderate or large quantities of charcoal. Perhaps not surprisingly, there was strong correlation between the amount of charcoal and its maximum size.

Nineteen samples contained at least traces of charred hazelnut shell and eleven of the spot finds were of this taxon. The only two moderately high concentrations were from two post-hole or pit fills (F223, F333) from the Mound 2 area of Intervention 41.

Charred acorn seed-leaves (cotyledons) were recorded from eight flots and 19 of the spot finds comprised this material; it is also probable that some of the material recorded as charcoal may have included cotyledon fragments. All the moderate or high concentrations were from post-hole fills in the centre of the area of Mound 5 (features F466, F543, F544 and F545).

Other charred plant remains were very scarce; there were only two barley grains, one ?oat, 1 ?wheat and a further unidentified grain which may have been a cereal. A single sloe (*Prunus spinosa*) was also recorded. It is possible that the paucity of cereal remains reflects methodology since charred grain often remains with the residue rather than the flot or washover during wet-sieving. Ideally, unless the residues for these samples were screened on site for charred material and found to be barren, they should have been retained for examination with the flots.

A few modern contaminants, inevitable in material sieved on-site, were observed and there was a variable content of roots and rootlets, most of which are presumably of recent origin.

Discussion

The remains recovered offer some modest insight into the use of wild resources by the prehistoric inhabitants of this area and also point to the probability that cereals were only exploited in a limited way (assuming that at least some of the deposits formed in the vicinity of domestic occupation). The comment above concerning the possibility that cereals remained in the wet-sieved residues means, however, that a definitive statement cannot be made.

An interesting taphonomic aspect of the results is the contrast between the preservation of the *shell* of hazelnut and the *seeds* of acorns. The absence of acorn 'shells' may well be a function of their rather flimsy nature (compared with the much more substantial, woody, shells of hazelnut); the absence of hazel kernels might reflect a difference in the way the two kinds of seeds were used. Acorns would require some kind of treatment by roasting or leaching to make them less unpalatable, whilst hazelnuts (once shelled) could be consumed without any form of preparation.

Statement of potential and recommendations for further work

The larger charcoal assemblages will provide some information about the types of wood used, though it is doubtful whether a distinction can be made between structural timber and brushwood used for fuel, for example. Certainly some or all of the 16 samples with moderate or large amounts of charcoal could be re-examined to establish for the species present (during this assessment, oak or ?oak was noted from several samples but no attempt was made to identify the charcoal systematically).

Very little more work seems appropriate for the charred hazelnut and acorn remains, though some attempt should be made to put them into their archaeobotanical and archaeological contexts by undertaking a literature search for comparanda. Individual nutshell or cotyledon fragments would also provide ideal material for dating by radiocarbon assay (using AMS), if this was thought appropriate.

Retention/disposal

All material should be retained pending a decision about further work.

Archive

Paper and electronic archives relating to the work described in this report are currently lodged in the Environmental Archaeology Unit, University of York.

Acknowledgements

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Appendix

The full catalogue of samples examined is shown below, ordered by intervention and feature number.

Remains recorded are presented in Table 1 in order of feature number.

I. Intervention 41 (1986), excavations of Mounds 2 and 5

A. Flots from wet-sieved samples

(i) from the far NW corner of Int. 41, not associated with Mounds 2 or 5

Feature	Context	Sample/Find no.
F68 (gully in F)		
	1145	26753
F70 (PH in F)		
	1149	26751
	1148	26752

(ii) Area of Mound 2

F195 (Ploughmarks in R/S)		
	1574	29952
F216 (IA ?gully through Mound 2)		
	1576	40481
		41008
F218 (hearth, N platform of Mound 2)		
	1951	41630
F220 (hearth, centre of 'roundhouse')		
	1640	33590
F222 (PH of Beaker 'roundhouse' porch)		
	1582	33596
	1626	33595
F223 (PH/pit S of Beaker pit)		
	1583	37754
F235 (pit, N platform of Mound 2)		
	1602	41007
F238 (PH, N platform of Mound 2)		
	1605	41347
F258 (Slot in O, E of Beaker pit)		
	1627	33594
F226 (PH to E of Beaker pit)		
	1593	33296
	1746	33297
F264 (PH of Beaker 'roundhouse')		
	1639	33593
F265 (PH of Beaker 'roundhouse')		
	1634	33589
	1750	33591
F267 (PH of Beaker 'roundhouse')		
	1748	33592
F270 (cremation? in YO, centre of Beaker 'roundhouse')		
	1641	37752
	1767	37751
F289 (PH, W platform of Mound 2)		
	1934	41348
F294 (scoop/pit, W platform of Mound 2)		
	1822	40258
F311 (Pit in N, S of Beaker pit)		
	1682	34420
F313 (Pit in N, Beaker pit)		
	1684	37753
	1788	37749
F330 (Pit in N, Beaker pit)		
	1701	37750
	1783	37646
	1795	37647
F333 (PH in S, S of Beaker pit)		
	1800	37644
F342 (PH/pit in S, next to Beaker pit)		
	1713	37645
F356 (PH of BA fence)		
	1727	41610
F383 (PH in H, BA fence)		
	1760	34416
F502 (scoop in quarry ditch SW of Mound 2)		
	1929	41346
F506 (scoop in quarry ditch NE of Mound 2)		
	1933	41409
F511 (PH of BA fence)		
	1950	41631

(iii) Area of Mound 5

F117 (ditch system)		
	1217	43523
F122 (IA gully)		
	1238	41809
	1960	41808

F466 (PH in R, centre of Mound 5)
1882 42625

F532 (scoop in H)
1999 42015

F543 (PH in R, centre of Mound 5, cuts pit F468)
2014 42630

F544 (PH in R, centre of Mound 5, ?cuts Beaker ?pit F468)
2012 42626

F545 (PH in R, centre of Mound 5, cuts pit F468)
2016 42629

F551 (PH, centre of Mound 5, cuts pit F468)
1915 43092

F552 (PH, centre of Mound 5, cuts pit F473)
2030 43094

F561 (gully of ditch system)
2045 43469

F562 (gully of ditch system)
1222 43438

F571 (gully of ditch system)
2048 43524

F583 (gully of ditch system)
2070 43525

(iv) Buried soils in areas of Mounds 2 and 5

Mound 2

(a) oval roundhouse

F158 (Horizon 4)
32167
32168

F206 (Horizon 5)
32221
32222

F213 (Horizon 6)
32303
32304

(b) Western feature complex

F158 (Horizon 4)
32138
32139

F206 (Horizon 5)
32189
32190

F213 (Horizon 6)
32275
32276

Mound 5

F224 (Horizon 2/4)
37985
37986
37987
37988

F412 (Horizon 6)
38491
38492
38493
38494

F391 (Horizon 5)
38821
38822
38823
38824

B. Spot finds from prehistoric features

F137 (Mound 2, Horizon 2)
41153

F223
34421
34422
34423
35063
35064

F226
34379

F391 (Mound 5, Horizon 5)
36165
36181
36184
36188
36211

	36219	
	36239	
	36242	
	39453	
	39461	
F460	42889	
F468	42634	
	42865	
F473	43106	
F521	42623	
F571 (ditch system)		43488

II. Intervention 48 (immediately W of Mound 5)

A. Flot samples

F29 (Beaker? pit in central part of area), context 1049		3232
		3234
		3235
		3236
		3237
		3238
		3239
		3240
		3241
		3242
		3243
		3244
		3245
		3246
F90 (Beaker? pit)	1411	4314
	1413	4313

III. Intervention 55 (southernmost area examined 1983-92)

A. Individual finds from Beaker pit complex

F6		
	1015	630
		682
F63		
		1351
		1352
F67		
		1585
F71		
	1124	1786
F72		
	1126	1362
F85		
	1133	1790

B. Flot samples from Beaker pit complex

F7	1017	2075
	1102	2076
F16	1036	2077
F41	1067	2078
	1104	2079
F62	1022	2080
	1112	2081
F63	1105	2082
F67	1110	2083
F70	1119	2084
F71	1123	2085
F72	1125	2086
F78	1120	2087
F82	1121	2088
F83	1142	2089
	1132	2090
F85	1133	2091
F86	1134	2092

Table 1. Results of examination of flot samples and individual finds. Key: Int.—Intervention no.; Ftr.—Feature no.; Con.—Context no.; CA—charcoal abundance; CT—charcoal type (gr=granular, fl=flaky); CS—charcoal max. size; HA—hazelnut abundance; HS—hazelnut max. size; AA—acorn abundance; AS—acorn max. size; R—rootlet abundance.

Int.	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other items
41	F117	1217	43523	F	1	gr	10	-	-	-	-	2	-
41	F122	1238	41809	F	1	gr/fl	15	-	-	-	-	1	-
41	F122	1960	41808	F	1	fl	5	-	-	-	-	-	-
41	F137	-	41153	S	-	-	-	-	-	1	20	-	-
41	F158	-	32138	F	1	gr/fl	5	-	-	-	-	-	-
41	F158	-	32139	F	1	gr	10	-	-	-	-	-	1 Hordeum sp.
41	F158	-	32167	F	1	gr	10	-	-	-	-	-	-
41	F158	-	32168	F	1	gr	10	-	-	-	-	-	-
41	F195	1574	29952	F	1	gr	5	-	-	-	-	-	-
41	F206	-	32189	F	1	gr	10	-	-	-	-	2	mod. conifer needles; ?sml mammal tooth fgt
41	F206	-	32190	F	1	gr/fl	10	-	-	-	-	2	-
41	F206	-	32221	F	1	gr	10	-	-	-	-	-	-
41	F206	-	32222	F	1	gr	10	-	-	-	-	-	-
41	F213	-	32275	F	1	gr	10	-	-	-	-	-	-
41	F213	-	32303	F	1	gr	10	-	-	-	-	-	-
41	F213	-	32304	F	1	gr/fl	10	-	-	-	-	-	-
41	F213	-	32276	F	3	gr/fl	20	-	-	-	-	-	modern birch fr
41	F216	1576	40481	F	1	gr	10	-	-	-	-	1	-
41	F218	1951	41630	F	2	gr/fl	10	1	10	-	-	-	1 Prunus spinosa
41	F220	1640	33590	F	1	gr	5	-	-	-	-	-	-
41	F222	1582	33596	F	1	gr	10	-	-	-	-	-	-
41	F222	1626	33595	F	1	gr	10	-	-	-	-	-	-
41	F223	-	34421	S	-	-	-	1	10	-	-	-	-
41	F223	-	34422	S	-	-	-	1	10	-	-	-	-
41	F223	-	34423	S	-	-	-	1	15	-	-	-	-
41	F223	-	35063	S	-	-	-	1	10	-	-	-	-
41	F223	-	35064	S	-	-	-	1	10	-	-	-	-
41	F223	1583	37754	F	1	gr	5	2	20	-	-	-	-

41	F224	-	37985	F	1	gr	10	-	-	-	-	-	?mod. elder seed fgts; 2 mod. ?clover seeds
41	F224	-	37986	F	1	gr	10	-	-	-	-	-	-
41	F224	-	37987	F	1	gr	10	-	-	-	-	-	-
41	F224	-	37988	F	1	gr	10	-	-	-	-	-	-
41	F226	-	34379	S	-	-	-	1	10	-	-	-	-
41	F226	1593	33296	F	1	gr	10	-	-	-	-	-	-
41	F226	1746	33297	F	1	gr	5	-	-	-	-	-	-
41	F235	1602	41007	F	1	gr	5	1	5	1	15	-	-
41	F238	1605	41347	F	1	gr	10	-	-	-	-	-	-
41	F258	1627	33594	F	1	gr	10	-	-	-	-	-	-
41	F264	1639	33593	F	1	gr	5	-	-	-	-	-	1 Hordeum sp.
41	F265	1634	33589	F	1	gr	5	-	-	-	-	-	-
41	F265	1750	33591	F	1	gr	10	-	-	-	-	-	-
41	F267	1748	33592	F	1	gr	15	-	-	-	-	-	modern insect fragments

Int.	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other items
41	F270	1641	37752	F	1	fl	5	-	-	-	-	-	-
41	F270	1767	37751	F	-	-	-	-	-	-	-	1	-
41	F289	1934	41348	F	2	gr/fl	15	-	-	-	-	-	-
41	F294	1822	40258	F	2	gr/fl	25	-	-	-	-	-	-
41	F311	1682	34420	F	1	gr	5	-	-	-	-	-	?1 charred cereal grain
41	F313	1684	37753	F	1	gr	5	1	10	-	-	1	-
41	F313	1788	37749	F	1	gr	5	1	10	-	-	-	-
41	F330	1701	37750	F	1	gr	5	1	10	-	-	-	-
41	F330	1783	37646	F	1	gr	5	1	15	-	-	-	-
41	F330	1795	37647	F	1	gr	5	1	20	-	-	-	-
41	F333	1800	37644	F	1	gr	10	2	15	-	-	-	-
41	F342	1713	37645	F	1	gr	5	1	10	-	-	-	-
41	F356	1727	41610	F	1	gr	10	1	5	-	-	-	1 ?Avena; 1 ?Triticum and ?other ch fgts
41	F383	1760	34416	F	1	gr	5	-	-	-	-	1	-
41	F391	-	36165	S	-	-	-	-	-	1	20	-	-
41	F391	-	36181	S	-	-	-	-	-	1	15	-	-
41	F391	-	36184	S	-	-	-	-	-	1	20	-	-

41	F391	-	36188	S	-	-	-	-	-	1	20	-	-
41	F391	-	36211	S	-	-	-	-	-	1	20	-	-
41	F391	-	36219	S	-	-	-	-	-	1	15	-	-
41	F391	-	36239	S	-	-	-	-	-	1	15	-	-
41	F391	-	36242	S	-	-	-	-	-	1	10	-	-
41	F391	-	38821	F	1	gr	10	-	-	-	-	-	-
41	F391	-	38822	F	1	gr	15	-	-	-	-	-	-
41	F391	-	38823	F	1	gr	15	-	-	-	-	-	-
41	F391	-	38824	F	1	gr	10	-	-	-	-	-	modern insect fgts
41	F391	-	39453	S	-	-	-	-	-	1	20	-	-
41	F391	-	39461	S	-	-	-	-	-	1	10	-	-
41	F412	-	38491	F	1	gr	5	-	-	1	10	-	-
41	F412	-	38492	F	1	gr	10	-	-	1	10	-	-
41	F412	-	38493	F	1	gr	10	-	-	-	-	3	-
41	F412	-	38494	F	1	gr	5	1	5	-	-	-	-
41	F460	-	42889	S	-	-	-	-	-	1	15	-	-
41	F466	1882	42625	F	-	-	-	-	-	2	25	1	-
41	F468	-	42634	S	-	-	-	-	-	1	20	-	-
41	F468	-	42865	S	-	-	-	-	-	1	15	-	-
41	F473	-	43106	S	-	-	-	-	-	1	20	-	-
41	F502	1929	41346	F	2	gr	25	-	-	-	-	-	modern birch frs and insect fgts
41	F506	1933	41409	F	3	gr	30	-	-	-	-	-	-
41	F511	1950	41631	F	1	fl	10	-	-	-	-	-	-
41	F521	-	42623	S	-	-	-	-	-	1	20	-	-
41	F532	1999	42015	F	2	gr	25	-	-	-	-	2	-
41	F543	2014	42630	F	-	-	-	-	-	3	25	1	-
41	F544	2012	42626	F	2	gr	25	-	-	2	20	2	-
41	F545	2016	42629	F	2	gr	25	-	-	2	20	2	-
41	F551	1915	43092	F	3	fl	30	-	-	-	-	2	-
41	F552	2030	43094	F	1	gr/fl	15	-	-	1	20	-	-
41	F561	2045	43469	F	1	gr	5	-	-	-	-	-	-
Int.	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other items	
41	F562	1222	43438	F	1	gr	10	-	-	-	-	-	-

41	F571	-	43488	S	-	-	-	-	-	1	20	-	-
41	F571	2048	43524	F	1	gr	10	-	-	-	-	-	modern grass spikelet fgts
41	F583	2070	43525	F	1	gr	5	-	-	-	-	-	-
41	F68	1145	26753	F	1	gr	10	-	-	-	-	-	-
41	F70	1148	26752	F	1	fl	15	-	-	-	-	-	mod earthworm egg caps
41	F70	1149	26751	F	1	fl	15	-	-	-	-	-	-
48	F29	-	3232	F	1	gr	10	-	-	-	-	-	-
48	F29	-	3234	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3235	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3236	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3237	F	1	gr	5	-	-	-	-	-	-
48	F29	-	3238	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3239	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3240	F	1	gr	15	-	-	-	-	2	-
48	F29	-	3241	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3242	F	1	gr	5	-	-	-	-	2	-
48	F29	-	3243	F	1	gr	10	-	-	-	-	-	-
48	F29	-	3244	F	1	gr	10	-	-	-	-	3	-
48	F29	-	3245	F	1	gr	10	-	-	-	-	3	-
48	F29	-	3246	F	1	gr	10	-	-	-	-	3	-
48	F90	1411	4314	F	2	gr	25	-	-	-	-	-	modern moss shoots
48	F90	1413	4313	F	1	gr	5	-	-	-	-	1	modern moss shoots
55	F16	1036	2077	F	1	gr	10	-	-	-	-	2	-
55	F41	1067	2078	F	1	gr	5	1	10	-	-	-	-
55	F41	1104	2079	F	1	gr	10	1	10	-	-	2	-
55	F6	1015	630	S	-	-	-	-	-	1	25	-	-
55	F6	1015	682	S	-	-	-	-	-	1	10	-	-
55	F62	1022	2080	F	1	gr	5	-	-	-	-	3	-
55	F62	1112	2081	F	2	gr	15	-	-	-	-	2	-
55	F63	-	1351	S	-	-	-	1	15	-	-	-	-
55	F63	-	1352	S	-	-	-	1	10	-	-	-	-
55	F63	1105	2082	F	2	gr	10	1	10	-	-	2	-

55	F67	-	1585	S	-	-	-	1	15	-	-	-	-
55	F67	1110	2083	F	2	gr	20	1	15	-	-	2	-
55	F7	1017	2075	F	2	gr	10	-	-	-	-	3	-
55	F7	1102	2076	-	1	gr	10	-	-	-	-	2	-
55	F70	1119	2084	F	1	gr	10	1	10	-	-	3	-
55	F71	1123	2085	F	1	gr	10	1	10	-	-	2	modern moss shoots
55	F71	1124	1786	S	-	-	-	1	10	-	-	-	-
55	F72	1125	2086	F	2	gr	10	-	-	-	-	2	-
55	F72	1126	1362	S	-	-	-	-	-	-	-	-	bark fragment approx. 20 x 10 mm
55	F78	1120	2087	F	2	gr	10	-	-	-	-	3	-
55	F82	1121	2088	F	1	gr	15	-	-	-	-	3	-
55	F83	1132	2090	F	1	gr	10	1	10	-	-	2	-
55	F83	1142	2089	F	1	gr	10	-	-	-	-	3	-

Int.	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other items
55	F85	1133	1790	S	-	-	-	1	10	-	-	-	-
55	F85	1133	2091	F	1	gr	10	-	-	-	-	3	tree root bark? 2
55	F86	1134	2092	F	1	gr	15	1	10	-	-	3	-