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SNETTISHAM BY-PASS, NORFOLK: PLANT MACROFOSSILS FROM ROMAN CONTEXTS

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Summary

Limited sampling was undertaken to investigate two wells, a 'corn-drier' and other features including domestic cotexts. Carbonised plant remains from the 'corn-drier' indicate that it had been used to dry spelt malt and was fuelled with wood and crop-processing by-products. The wells produced assemblages dominated by weeds, indicating that the lower layers formed by natural infilling after areas surrounding them had been abandoned and become overgrown. Other features produced low-density scatters of crop-processing and domestic wastes.

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Snettisham By-Pass, Norfolk (1555 1NG) : Plant remains

Sampling at this Roman site was on a small scale, and was confined to the investigation of the lower, waterlogged fills of Wells I and II, the fills of two ovens/'corn-driers', round-house ring-ditch fills and a few other pits and ditches. Macrofossils preserved by waterlogging were extracted from samples of the well fills using the methods of Kenward et al (1980). Carbonised plant remains were retrieved from fills of dry features by manual water flotation, using a 0.5mm collecting mesh.

The wells

From Well I a short column sample, 38cm deep, through the basal layers 654, 651, 645 and 640 was collected and from Well II individual samples from layers 678 and 690 were taken. The samples were of predominantly mineral sediments, mainly dark greyish-brown silty sand to sandy clay with fragments of carstone, variable degrees of iron-panning, clay inclusions and small wood fragments. Plant macrofossils extracted are listed in Table 1.

The assemblages were all characterised by abundant nutlets of Urtica dioica (nettle). In all samples this species vastly predominated and, indeed, was so abundant that only the other taxa were counted. These are almost entirely weed species, the most abundant plants represented being chickweed (Stellaria media), fat-hen (Chenopodium album), hemlock (Conium maculatum) and docks (Rumex spp). The assemblages as a whole indicate a local vegetation with a dense cover of nettles and tall perennial and biennial weeds, bramble and elder bushes, and an annual weed flora in more disturbed areas. In short the well fills seem to relate to a period of abandonment of this part of the site, during which it became overgrown. There are also a few fruits and seeds of wetland plants and two of Triglochin maritima (sea arrow-grass), which must have come from salt-marsh bordering The Wash, though the means of dispersal is uncertain. There is no evidence for intentional disposal of plant food wastes in the disused wells. The single seed probably of opium poppy (Papaver somniferum) could easily have come from an escape, growing as a weed, and the low densities of charred and uncharred cereal remains could just represent wind-blown material from nearby cereal processing areas.

Well no.	I	I	I	I	II	II
Sample depth (cm)	20-25	25-30	30-35	35-38	-	-
Context no.	645	647	647	654	678	690
Papaver cf.somniferum L	-	1	-	-	-	-
cf.Chelidonium majus L	-	fr	-	-	-	-
Reseda sp.	-	-	-	-	-	1
Capsella bursa-pastoris (L) Medic	2	-	1	-	-	-
Stellaria media-type	34	4	6	-	9	29
Silene sp.	1	-	-	-	-	1
Agrostemma githago L (c)	1	-	-	-	-	-
Montia fontana L.ssp.chondrosperma	2	-	-	-	-	-
Chenopodium album L	14	3	4	1	2	5
Chenopodium cf.ficifolium Sm.	-	-	-	-	-	2
Chenopodiaceae indet	1	5	-	1	3	1
Malva sylvestris L	-	-	fr	-	-	-
Prunus sp.	fr	-	-	-	-	-
Rubus fruticosus agg.	-	-	-	-	3	-
Rubus sp.	1	-	-	-	-	2
Hydrocotyle vulgaris L	-	-	-	-	-	1
Torilis japonica (Houtt)DC	1	-	-	-	-	1
Conium maculatum L	51	5	2	-	9	5
Aethusa cynapium L	-	fr	-	-	-	-
Polygonum aviculare agg.	-	-	-	-	-	2
Polygonum sp.	-	-	-	-	-	1
Rumex sp(p)	46	27	2	4	1+1(c)	-
Urtica dioica L	+++	+++	++	+	+++	+++
Urtica urens L	-	-	-	-	8	11
Corylus avellana L	-	-	fr	-	-	-
Hyoscyamus niger L	1	-	-	-	-	-
Solanum nigrum L	-	-	-	-	-	8
Solanum sp.	3	-	-	-	2	-
Ballota nigra L	-	-	-	-	3	-
Lamium sp.	1	-	-	-	-	1
Labiatae indet	-	2	-	-	-	-
Sambucus nigra L	12	2	1	2	8	5
Lapsana communis L	-	-	-	-	1	-
Sonchus asper (L) Hill	19	1	1	-	-	-
Triglochin maritima L	2	-	-	-	-	-
Juncus spp.	+	+	+	+	+	-
Carex spp.	1	1	-	-	6	10
Eleocharis palustris/uniglumis	-	-	1	-	-	-
Gramineae indet	27	5	-	1(c)	-	-
Bromus mollis/secalinus (c)	2	-	-	-	-	1
Triticum sp.(caryopses:c)	7	3	1	2	1	-
Triticum sp.(glume bases:c)	1	-	-	-	-	1
Triticum spelta L (glume bases)	1+9(c)	2(c)	3(c)	-	-	-
Triticum spelta L (ri)	2	-	-	-	-	-
Indeterminate seeds etc.	-	6	-	-	6	6
Sample wt (kg).	0.5	1.0	1.0	1.0	0.5	0.4

Table 1 : Plant macrofossils from Wells I and II

All taxa represented by fruits, seeds etc., except where indicated. Counts in some cases (eg Rumex) are partly estimated from fragments. Abbreviations: c-carbonised; fr-fragments; ri-rachis internodes.

Other macrofossils present include amphibian bone, beetles and fly puparia. Additional samples from 0-11cm and 11-20cm in Well I were scanned over but proved to contain very similar assemblages.

'The Corn-drier'

Carbonised plant remains from flue deposits of the 'corn-drier', context 144, are listed in Table 2. A further sample, 21 from 535, consisted almost entirely of well-fired clay which would not disaggregate : consequently plant material could not be extracted from it. The clay fragments in this sample did not include any significant amounts of plant material as tempering, and no identifiable impressions of plant material were noted. Sample 29 from the 'bread oven' 641 was similarly of fired clay resistant to disaggregation but this included a few impressions of monocotyledonous stem fragments.

The function of so-called 'corn-driers' has been much disputed, but in a forthcoming paper, reviewing the available evidence, Van der Veen (forthcoming) concludes that they were multi-purpose structures, used at least for drying grain prior to storage and also for parching malt. Defining particular activities at any given site depends upon sample composition and on the proportion of germinated or 'sprouted' grains. From this particular feature two samples of quite different composition were obtained. 22 consisted largely of spelt chaff with traces of emmer, barley and oats, a few wheat grains and some seeds of common weed plants mixed with wood charcoal. The predominance of chaff implies that this sample was largely composed of a mixture of cereal by-products and wood, used as fuel. Sample 38 was different, including a higher proportion of grains, mainly of wheat, most of which had sprouted prior to charring. Although differential combustion resulting in preferential preservation of grains cannot be entirely excluded, the predominance of sprouted wheat grains does indicate that this sample was a residue from malt-drying.

Context		528	535
Sample		22	38
Cereal indet.	ca fr	+	+
	ca	3	6
	spr	20	19
Triticum sp(p)	ca	9(inc7g)	56(inc.44g)
	ca.a	-	21
	gb	132	14
	spb	18	3
	tspf	1	-
	afr	+	-
Triticum spelta L	gb	262	34
	spf	-	4
	tspf	1	-
	ri	26	8
Triticum dicoccum	Schubl.gb	2	-
Hordeum sp.	ca	3	-
	ri	1fr	-
Avena sp	ca	-	1
	afr	+	-
Agrostemma githago L		-	1g
Atriplex sp		2	fr
Chenopodium sp		1	-
Chenopodiaceae indet		1	-
Vicia/Lathyrus sp		1co	1co
Polygonum convolvulus L		1	-
Rumex sp		1	-
Sambucus nigra L		1	-
Bromus mollis/secalinus		3	9g
Indet		1	-
Sample volume (litres)		3.9	0.8
% flot sorted		12.5	25

Table 2 : Carbonised plant remains from the 'corndrier', context 144

Abbreviations : a-awn; ca-caryopsis; ca.a-apex of caryopsis; co-cotyledon; fr-fragment; g-germinated; gb-glume base; ri-rachis internode; spb-spikelet base; spf-spikelet fork; spr-'sprouts'; tspf-terminal spikelet fork.

Context		636	638	635	637	167	168	221	224	112
Sample		25	26	27	28	30	31	32	33	34
Cereal indet	ca	1	3	5	1	-	2	1	2	-
	cafr	+	+	+	+	+	+	-	-	+
Triticum sp.	ca	5	-	-	-	-	-	-	-	-
	gb	2	-	2	-	-	-	-	-	-
	spb	2	-	-	-	-	-	-	-	-
Triticum spelta L	gb	5	1	3	-	-	-	-	-	-
Hordeum sp.	ca	-	-	1	-	-	-	-	-	-
Silene sp.		-	1	-	-	-	-	-	-	-
Chenopodiaceae indet		1	1	-	-	-	-	-	-	-
Polygonum persicaria/lapathifolium		-	1	-	-	-	-	-	-	-
Rumex sp.		-	2	1	-	-	-	-	-	-
Polygonaceae indet		-	3	-	-	-	-	-	-	-
Calluna-type	st.fr	+	-	-	-	+	-	-	-	-
Ericaceae	ch.	-	+	+	+	+	+	+	+	-
Corylus avellana L	ns.fr.	+	+	+	+	-	-	-	-	-
Eleocharis palustris/uniglumis		4	-	-	-	-	-	-	-	-
Carex sp		2	-	-	-	-	-	-	-	-
Bromus mollis/secalinus		2fr	fr	-	-	-	-	-	-	-
Gramineae indet		8	4	-	3	-	-	-	-	1
Indet seeds etc		3	1	1	-	-	-	-	-	-
Root/rhizome frags		+	+	+	+	-	-	-	-	-
Mammal bone frags.(some burnt)		+	+	+	+	-	+	-	-	-
Fish bone		-	-	+	-	-	-	-	-	-
Slag		-	-	+	-	-	-	-	-	-
Sample volume(litres)		8.0	10.0	6.0	6.0	5.7	7.0	6.8	6.0	6.5

Table 3 : Carbonised plant remains and other materials from the ring-ditch fills.

Abbreviations:ca-caryopsis; ch-charcoal; fr-fragments; gb-glumebase; ns-nutshell; spb-spikelet base; st-stem.

Context		254	264	534	783	2075
Sample		13	14	23	34	36
Feature-type		Pit	'Pond'	Grave	Ditch	Pit
Cereal indet	ca.	-	1	-	2	1
	ca.fr.	-	-	+	-	+
Triticum sp	ca.	-	-	-	-	1
	gb.	-	-	-	1	-
Triticum spelta L	gb	1	-	-	-	-
Hordeum sp.		-	-	-	2	-
Avena sp		-	1	-	-	-
Vicia/Lathyrus sp.		-	-	-	-	1co
Plantago lanceolata L		1	-	-	-	-
Quercus sp.	ch.	-	-	-	++	-
Ericaceae	ch.	-	-	-	-	+
Root/rhizome frags.		-	-	+	-	-
Indet seeds etc.		1	-	-	-	-
Bone fragments		-	-	-	-	+
Mytilus shell frags.		-	-	-	-	+
Avian eggshell frags.		-	-	-	-	+
Slag		-	-	-	-	+
Sample volume (litres)		5.6	6.1	4.9	-	3.5
% flot sorted		100	100	100	100	25

Table 4 : Carbonised plant remains and other materials from other contexts.

Abbreviations as in previous Tables.

Ring-ditches and other contexts

In Table 3 carbonised plant remains and other macrofossils from the round-house ring-ditch fills are listed. The samples produced very sparse assemblages of cereals, weed seeds, hazel nutshell fragments and charcoal, often associated with bone fragments (some burnt). This material seems to represent a low-density scatter of charred debris derived from domestic hearths, although the presence of slag probably relates to industrial activity as well. Charcoal of the Ericaceae is consistently present, and includes some shoots/stem fragments of Calluna vulgaris-type (ling). This could indicate the use of fuel collected in nearby heathland areas.

Other contexts (Table 4) produced very small, uninterpretable, assemblages.

Conclusions

Archaeological evidence from the site indicates low-status domestic activity associated with iron-working. The botanical results establish that malting, using spelt as the raw material, was another economic function of the site. For both of these processes ample water supplies would have been required, hence the provision of at least two wells. The association of tentative or definite evidence for Roman malting with wells or low-lying locations close to streams is a recurrent pattern in Eastern England. Recently-excavated sites producing such evidence include Fengate Farm, Weeting, Stebbing, Essex and Boxfield Farm, Stevenage, Herts (all Murphy, in prep.). The macrofossils from the well fills point to periodic abandonment of some areas of the site. No significant quantities of domestic food wastes (as opposed to crop processing waste) were present in the samples examined.

References

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Van der Veen, M. (forthcoming). Charred grain assemblages from Roman-period corn driers in Britain. Arch. J.