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CARBONISED PLANT REMAINS FROM THE SAXON SITE AT MORRISON HALL, HARTLEPOOL, CLEVELAND.

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Summary

Excavations at the Hartlepool Morrison Hall site (HMH 87) uncovered a series of post holes and negative features dated to the Saxon and Medieval periods.

The site was dry and therefore only carbonised preservation was expected. Bulk sampling, followed by manual floatation, produced limited evidence for usage of crops - principally bread wheat but with some barley, oats and peas. Arrhenatherum tubers and wild radish fragments could have been food sources although could, equally, have been part of the local weedy vegetation. Few other ruderals were represented.

Heather charcoal indicated that some plant communities from further afield were being exploited.

Too few remains were present to offer an archaeological interpretation. The plant material indicates simply what was being used in the near vicinity.

Although the results were somewhat disappointing they are a valuable addition to an otherwise very sparse dataset from this period, in the north of England.

Author's address :-

J P Huntley

Biological Laboratory, Archaeology II University of Durham Science Laboratories, Woodside Building South Road, DURHAM DH1 3LE Carbonised plant remains from the Saxon site at Morrison Hall Hartlepool, Cleveland.

## J.P. Huntley

Excavations at the Hartlepool Morrison Hall site (HMH 87) uncovered a series of tenuous features dated to the Saxon and Medieval periods. These features consisted principally of post holes and building slots. They probably formed part of the monastic community of Hartlepool which had previously been excavated at the adjacent Church Close site (Daniels, 1988). This latter had produced little botanical material other than mineralised faecal remains and therefore an environmental sampling programme was undertaken at the Morrison Hall site. The aim was to investigate plant remains used by the monks.

This was a dry site and therefore carbonised preservation was expected. Consequently bulk samples were taken during excavation and subjected to flotation at the laboratory in order to concentrate any plant material present. Both flots and residues were sorted to 500 microns. All biological material was removed and identified by comparison with modern reference material held in the Biological Laboratory at Durham. Nomenclature follows Clapham, Tutin and Moore (1987).

Thirty two samples were analysed (Table 1), of which nine contained no identifiable seeds although charcoal was present in all.

The bulk of the flots consisted of a glassy charcoal-like material some of which may, or may not, have originally been plant material. It is extremely characteristic of material from Hartlepool sites and considered, in some contexts, to represent burnt food. The temperature at which the original material was burnt is obviously critical as is, perhaps, the fuel in the case of oven/hearth debris.

Carbonised fruits and seeds were present in the remaining 23 samples (Table 2) although in very low numbers, particularly so since the volumes floated were not insignificant. As a result the data cannot be statistically analysed.

Cereal grains and associated weeds with a little cereal chaff were the only types of material recovered. This indicates that we are dealing with food crops only with no evidence of local, naturally occurring vegetation. This is not surprising given that preservation is by carbonisation which relies predominantly upon human activity, particularly in northern Britain where naturally occurring fires are rare.

Bread wheat (*Triticum aestivum*), either securely or tentatively identified, was the most abundant cereal grain. Preservation was rather poor with many grains having a glassy, 'puffed

wheat' appearance. Oats (*Avena* species) were present in about half of the samples. Barley (*Hordeum* species) was also recovered, a few grains were from hulled barley and some showed the twisted embryo found in 6-row barley (*Hordeum vulgare*). Cereal chaff was rare - a few wheat floret bases and culm nodes only. Whilst this may indicate that the grain was not of local origin it could simply mean that the temperature of the fires were such as to completely destroy chaff or that chaff was disposed of elsewhere. All of the cereal types recovered could have been grown locally and probably were.

Peas (*Pisum sativum*) and unidentified, but large, legumes were recovered from a few samples. These would also have been a food source and may well have been local produce. Very few weed seeds were found. Again this may be due to a thorough cleaning at an earlier stage in crop processing but is perhaps more likely to be as a result of fire temperature.

Tubers of false oat grass (*Arrhenatherum elatius*) and seed pod fragments from the wild radish (*Raphanus raphanistrum*) could also be the remains of food. The former is rich in starch and can reach considerable sizes. The leaves of the radish may have been used as a salad vegetable or its seeds for their oil.

Charcoal fragments were abundant in most of the samples. They were commonly from oak but several were from a fine-grained wood such as alder, birch or hazel. All of these would be found locally and may represent either deliberate collection as fuel or the remains of the building feature, such as a post, burnt *in situ*.

The occurrence of burnt wood from heather (*Calluna vulgaris*) is interesting since the plant does not grow very close to Hartlepool today although it is abundant upon the moors inland from the coast. Its presence indicates that some plant communities from further afield were being exploited although whether the heather was used as bedding, thatching or fuel is impossible to determine.

With respect to an archaeological interpretation, little may be offered. Of the two Medieval samples, one was barren and the other contained only bread wheat, a culm node and a bindweed seed. They were both from plough soils.

All of the remaining material was Saxon in date and was associated with post holes, pit fills and negative features. There is a slight suggestion that either barley <u>or</u> oats are present in any one sample, but rarely both. This may simply be due to the small numbers of seeds present. It may be related to a particular phase of activity or specific area of post-holes - the higher context numbers tend to have the barley. The features are, however, sufficiently tenuous for this to remain unproven.

All that may really be said is that there is little evidence of activities specifically related to plant material from these features. That a variety of cereals and pulses were used, or available, at this site is certain. Bread wheat was apparently a staple but oats, barley and peas were eaten. It would appear that the area was for purposes other than the preparation or disposal of food and that the monks, or their associates, probably did not live in these buildings. The plant remains may be seen as background evidence for activities being carried out elsewhere upon the headland of Hartlepool. Table 1: Sample details - Hartlepool - Morrison Hall (HMH 87)

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Lab	sample	context	vol	fill	feature	period				
code			(I)							
761	1	30	30		plough soil	early-Med.				
760	2	180/181	11	179	house slot	Saxon				
770	3	182	2	179	house slot	Saxon				
759	4	287	28	286	?house slot	Saxon				
757	5	288	4	288	post hole	Saxon				
752	6	27 <del>9</del>	26	278	post hole	Saxon				
749	7	290	3 <del>9</del>	289	ditch	Saxon				
748	8	295	8	295	hollow	Saxon				
751	9	298	18	297	building slot	Saxon				
750	10	300	22	299	post hole	Saxon				
744	11	301	2	299	post hole	Saxon				
743	12	307	21	306	post hole	Saxon				
745	13	311	11	310	feature	Saxon				
747	14	313	3	312	post hole	Saxon				
746	15	315	3	314	feature	Saxon				
741	16	316	14	308	post hole	Saxon				
740	17	326	26	325	feature	Saxon				
742	18	320	21	319	feature	Saxon				
767	19	322	20	321	post hole	Saxon				
769	20	318	9	317	post hole	Saxon				
768	21	324	13	323	post hole	Saxon				
766	22	328	21	327	slot	Saxon				
765	23	330	9	329	post hole	Saxon				
763	24	334	4	333	post hole	Saxon				
758	25	336	3	335	post hole	Saxon				
756	26	338	24	337	feature	Saxon				
755	27	340	2	339	post hole	Saxon				
753	28	341	1	341	stake hole	Saxon				
764	29	348	27	347	post complex	Saxon				
754	30	121	26		plough soil	Med/P.M.				
762	31	136	12	125	gulley	Saxon				
771	32	137	20	125	gulley	Saxon				

## **References:**

Clapham, A.R., Tutin, T.G. and Moore, D.M. (1987) <u>Flora of the British Isles</u>. Third Edition, Cambridge University Press.

Daniels, R. (1988) The Anglo-Saxon Monastery at Church Close, Hartlepool, Cleveland. <u>The</u> <u>Archaeological Journal</u>, 145, 158-210.

Lab. code	761	759	752	749	748	751	750	743	745	746	741	740	742	767	769	768	766	765	763	756	764	762	771
Context number	30	286	278	289	295	298	300	307	310	315	318	325	320	322	318	324	328	330	334	338	348	136	137
Sample number	1	4	6	7	8	9	10	12	13	15	16	17	18	19	20	21	22	23	24	26	29	31	32
Litres floated	30	28	26	39	8	18	22	21	11	3	9	26	21	20	9	13	21	23	4	24	27	12	20
Triticum aestivum grain	2	1	2		1	2	4						2	3	1	11	2	4		2	2	3	1
Triticum cf. aestivum				7	1		1	5	2	2	1	3											
Triticum (hexaploid)				1																			
Avena grain		1		1		1	1	1		1		2				1				1			
Hordeum indet.			1	4	З				1				1					1	1	1	3		
Hordeum hulled																		1			1		
Cerealia undiff.														1			1						
Triticum floret base				1																			
Culm nodes	1											1	1										
Pisum sativum																							2
Legume >4mm		1		1						1			1		1								2
Arrhenatherum elatius - tuber				1		1					1						1					1	
Raphanus raphanistrum pod frag.								1															
Fallopia convolvulus	1																						
Rumex sp. perianth													1										
Corylus avellana nut frag.																							1
Betula/Corylus/Alnus charcoal				++																			
Calluna vulgaris wood												+											
Quercus charcoal				+				+															

## Table 2: Hartlepool Morrison Hall (HMH 87)

Numbers = items counted; charcoal scored as + scattered, ++ abundant fragments