

ARCHAEOBOTANICAL REPORT

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INTRODUCTION

A total of 17 bulk environmental samples taken during the course of archaeological excavations at Futurists Theatre, Scarborough (FTS18), revealed charred plant remains and charcoal.

METHODS

The 17 bulk environmental samples were processed at NAA with 0.5mm retention meshes using the Siraf method of flotation (Williams 1973). The plant remains and charcoal were identified to species as far as possible using Schweingruber (1990), Hather (2000), Cappers *et al.* (2006), Jacomet (2006) and the NAA reference collections.

RESULTS

Eight of the 17 bulk samples contained a total of 58.4g of charcoal from 6 taxa (Table 1). Seven samples contained a total of 67 charred seeds (Table 2). All species identified were native to the British Isles. The charred plant remains included hulled barley (*Hordeum vulgare*), unidentified wheat (*Triticum* sp.) and bread wheat (*Triticum aestivum*). Though no cereal chaff remains were recovered, identification of the latter species was based on its overall squat morphology (average width was greater than average length). One garden pea (*Pisum* sp.) and a small collection of at least three different types of unidentifiable grass between 2 and 5 mm in length were recovered. One charred seed of swamp saw-grass (*Cladium mariscus*), one unidentifiable legume (*Fabaceae*) and the fragments of a hazelnut shell (*Corylus avellana*) were also identified.

Sample **404** contained mineralised daub remains with preserved unidentifiable grass culms and blades. Samples **403** and **552** contained mineralised earth due to the oxidation of degraded metal. It was not possible to ascertain what kind of metal object caused this process. Sample **552**, possibly the remains of an iron nail or bolt, had oak charcoal fragments encrusted to the mineralised hollow structure that was 4mm thick and 1 cm in overall.

		Context							
		201	203	206	501	519	521	522	555
Taxa	Weight (g)	0.3	0.1	26.8	4.5	7.9	4.5	7.4	6.9
Common name									
hardwood fuels									
<i>Fraxinus</i>	Ash						30%		
<i>Quercus</i>	Oak			60%	100%	50%	40%	40%	100%
forest margin & hedgerows									
<i>Corylus</i>	Hazel		100%			50%	20%	30%	
<i>Euonymus europaeus</i>	European spindle						10%		
fruit & scrub									
Maloideae	Apple subfamily							30%	
damp woodland									
<i>Populus / Salix</i>	Poplar/willow			40%					

Table 1: Percentage representation of charcoal taxa recovered from bulk environmental samples at Futurists Theatre, Scarborough.

<i>Taxa</i> Common name	Context							Total
	201	206	519	521	522	552	555	
cereals								
<i>Hordeum vulgare</i> hulled barley	4			3	1			8
<i>Triticum</i> sp. wheat	25	2	1	3				31
<i>Triticum aestivum</i> bread wheat	3							3
indetermined cereal					2			2
pulses								
<i>Pisum</i> sp. pea			1					1
fruit and nuts								
<i>Corylus avellana</i> hazelnut shell			1				1	2
meadow								
Fabaceae <3mm legume								
Poaceae indet 2-5mm	12			6	1			19
damp ground								
<i>Cladium mariscus</i> swamp saw-grass						1		1
Total	44	2	3	12	4	1	1	67

Table 2: Count of charred plant remains recovered from bulk environmental samples at Futurists Theatre, Scarborough.

DISCUSSION

The eight barley grains are of the hulled, or free-threshing, variety. Like the three bread wheat grains, they do not require parching and pounding to release the kernels from the husks. In contrast with the 31 indeterminate wheat grains – more likely spelt (*Triticum spelta*) or emmer (*Triticum dicoccum*), than bread wheat, which do require this additional processing – due to their lower likelihood of preservation they are normally archaeologically less visible. Recovery therefore suggests they were remnants of cooking or domestic waste disposal, rather than crop processing. Similarly, as peas are not processed by exposure to fire, it is probably also a residue from cooking or domestic waste disposal. The swamp saw-grass seed has no clear association with food or as a resource in construction and manufacturing. It represents the natural flora surrounding the site and became accidentally charred and incorporated in the site's sediment.

Though the charcoal assemblage was dominated by oak (*Quercus*), five other tree species: poplar/willow (*Populus/Salix*), hazel (*Corylus*), ash (*Fraxinus excelsior*), European spindle (*Euonymus europaeus*) and pomaceous wood (*Maloideae*) were identified. This narrow diversity implies an opportunistic exploitation of the surrounding woodland for tinder, rather than a dedicated foraging

for more efficient hardwood fuel. No clear signs of wood working were recognised, nor were the charcoal fragments large enough to differentiate between construction timber or fuel debris.

FURTHER WORK

All the charred plant remains should be retained in case any radiocarbon dating is required during the project. On completion of the project all plant remains from these excavations may be discarded.

REFERENCES

Cappers, R. T. J., Bekker, R. M. and Jans, J. E. A. (2006) *Digitale Zadenatlas Van Nederland: Digital Seed Atlas of the Netherlands*. Groningen: Barkhuis Publishing.

Hather, J. G. (2000) *The Identification of the Northern European Woods: A Guide for Archaeologists and Conservators*. London: Archetype.

Jacomet, S. (2006) *Identification of Cereal Remains from Archaeological Sites*. 2nd Edition. Archaeobotany Lab. Basel: IPAS, Basel University.

Schweingruber, F. H. (1990) *Microscopic Wood Anatomy*. 3rd Edition. Swiss Federal Institute for Forest, Snow and Landscape Research.

Williams, D. (1973) Flotation at Siraf. *Antiquity* **47**, 198-202.