Technical report

Analysis of plant remains from Scartbarry, Co. Cork (E2118)

By Penny Johnston

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By Penny Johnston

Introduction

This report details the analysis of charred seeds and plant remains from samples taken during excavation of a burnt mound found at Scartbarry, Co. Cork. Two types of samples were taken; material with charred plant remains from burnt contexts and samples where the organic material was preserved in the anoxic conditions caused by waterlogging. Seeds were only preserved in the waterlogged contexts.

Methodology

The samples with charred plant remains were processed using a simple flotation method. Each sample was saturated in water to allow carbonised plant material to float; this "flot" (the floating material) was then poured into a stack of geological sieves and trapped in the sieve meshes (the smallest measured 250μm). When all the carbonised material was collected the flot was then air-dried in paper-lined drying trays prior to storage in airtight plastic bags. All the samples were initially scanned under low magnification (using a binocular microscope with magnification x10 to x40) to identify the samples with most potential for analysis, the scanning results are listed in Table 1. None of the samples contained the remains of charred seeds.

The waterlogged samples were processed by washover, through a stack of sieves measuring 1mm, 500μm and 250μm whereby all the adhering sediment was cleaned away. The residues were kept waterlogged in sealed plastic bags in order to prevent degradation of the organic remains. These samples were also scanned and the results are included with those from the charred samples in Table 1. Sorting and identification of material from the suitable residues was carried out using a low-powered binocular microscope (magnification x10 to x40) and identified seeds were separated and stored in sealed glass phials. Nomenclature and taxonomic order follows Stace (1997), although in order to facilitate easy reading of this text the scientific names are included only in the table of identified seeds presented at the end of this report (Table 2).

Results

Nine samples were examined for the remains of seeds, both charred and waterlogged. No charred seeds were found in the burnt samples but this is not surprising as there is a consistent absence of charred seeds in samples from burnt mounds. The only samples where seeds were found were two

deposits taken from waterlogged contexts; C25 and C22. These were the both taken from around the plank lining of the trough.

The waterlogged plant remains included the remains of hazel nut shell fragments, which may have been imported onto the site either as food or with wood that was collected to fuel the fires of the burnt mound. Alternatively, hazel trees may have grown in the nearby area. Many of the other seeds do appear to reflect the local environment, for example there are seeds of wild plants that are common in damp places (in particular sedges and members of the buttercup family). Other plant remains such as bramble, dock and nettle, essentially reflect relatively open conditions, as would be expected in an area of marshy land where tree canopy was limited.

Non-Technical Summary

Samples from Scartbarry were taken from contexts with carbonised and waterlogged preservation. No charred seeds were present, this negative evidence is consistent with studies of other charred samples from burnt mounds. Seeds were present only when preserved by waterlogging. Most of the seeds from this site reflect local environmental conditions, suggesting an open area of damp ground, the ideal location for a burnt mound.

Penny Johnston
Thursday, 15 December 2005

References

Stace, C. A. 1997 *New Flora of the British Isles* (2nd edition) Cambridge, Cambridge University Press.

Table 1: Scanning Results for Soil Samples from Scartbarry, Co. Cork (A014/002)

Context	S.S. No.	Fraction Scanned	Charred cereals	Charcoal	Waterlogged seeds	Wood fragments
5	1	100%		Present		
3	8	100%		Present		
26	?	100%		Present		
29	7	100%		Present		
25	5	100%		Present	Present	Present
9	2	50%		Present		Present
19	3	33%		Present		Present
22	IV	50%		Present	Present	Present
22	III	33%		Present		Present

Table 2: Identified Plant Remains from Scartbarry, Co. Cork (A014/002)

Context	**25**	**22**
Sample	**5**	**IV**
Half nut shell of hazel (*Corylus avellana*)	2	
Hazel nut shell fragments (*Corylus avellana*)	3	
Buttercup type *(Ranunculus* species)	1	
Common nettle (*Urtica dioica*)	2	
Indeterminate seeds from the Knotgrass/Dock family (Polygonaceae)	1	1
Bramble/Raspberry (*Rubus fructicosus/idaeus*)	1	
Cinquefoils (*Potentilla* species)	1	
Possible Selfheal (cf *Prunella* species)	1	
Indeterminate seeds from the sedge family (Cyperaceae)	3	
Indeterminate weed seeds	2	