

The Charred Plant Remains in a soil sample from Burgi Geos, North Shetland (BG03)
ENV/BOT/REP/02/04

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N.B. The information contained within this report is preliminary assessment data, and may be modified in the light of detailed analytical work

Introduction

During excavations at Burgi Geos in north Shetland, a soil sample was collected from a domestic context [209] (provisionally dated to the Iron Age) from a building in Trench 2, for the potential recovery of charred botanical remains and possible dietary information.

Sampling, recovery and identification methods

The volume of the sample was 10 litres and was processed by a combination of flotation and wet-sieving using sieve sizes of 0.25mm and 1mm respectively. The residue was dried and sorted for the recovery of any biological and artefactual remains while the flot was also dried and examined using a binocular microscope for the retrieval of any botanical remains.

Results

The botanical remains in the sample consisted mainly of very fragmented charcoal and a small assemblage of cereal grains and weed seeds. There were also occasional uncharred seeds, for

example, goosefoots (*Chenopodium* spp.), which are probably intrusive. There were also a small number of very fragmented bones, most of which were too poorly preserved for identification; however, one bone was identified as the posterior phalange of a large bird (Kevin Rielly, pers. comm.). A large amount of granite and mica was present in the residue (volume 900g.).

The charred botanical remains are listed in Table 1. Identifiable cereal grains consisted entirely of barley (*Hordeum sativum*) with the well-preserved grains including twisted and hulled seeds indicating the presence of six-row hulled barley. There was also a small range of the seeds of other plants from mainly grassland habitats including ribwort plantain (*Plantago lanceolata*), which grows in grassy places on neutral or basic soils, as well as several grasses, eg. cat's tail (*Phleum* spp.), ?poa (cf. *Poa* spp.) and sedges etc. (Cyperaceae). Heather (*Calluna vulgaris*) was represented by a few charred capsule fragments.

Discussion

The charred plant remains show that barley was being used at the site with the charred grains probably being accidentally burnt while either being dried before storage or milling, or during cooking of whole grains over an open fire. The domestic context from which the sample was recovered suggests the latter. Barley may have been grown not only for human consumption but also for animal fodder and beer; the cleanliness of the grain sample in this instance, however, means that the barley was probably destined for human consumption.

Barley is a hardy crop and can grow in a wide range of latitudes from the arctic to the sub-tropics on both heavy and light soils and therefore would have been well suited to the soils and climatic conditions of north Shetland. Hulled barley is the most frequent cereal found to date from Iron Age sites in Scotland (Greig 1991).

The wild plants in the sample are more difficult to interpret and may have originated as arable weeds or from the residues of discarded flooring materials, with the remains being used as tinder. Heather may have also been collected for fuel as well as possibly for bedding and thatching.

Bibliography

Greig J. 1991 The British Isles, in W. van Zeist, K. Wasylikowa, K-E. Behre (eds) *Progress in Old World Palaeoethnobotany*, Rotterdam, 229-334.

Table 1: BG03: The Charred Plant Remains

	Trench	2
	context	209
	Sample vol. (l)	10
	Flot vol (ml)	350
species		
Cereal grains		
<i>Hordeum sativum</i> L.	barley	59
cf. <i>H. sativum</i>	?barley	12
indeterminate cereals	grains (est.)	27
Other plants		
<i>Chenopodium/Atriplex</i> spp.	goosefoots etc./oraches	2
<i>Rumex</i> sp.	dock	1
<i>Calluna vulgaris</i> (L.) Hull	ling, heather capsule	+
Ericaceae	-	1

<i>Plantago lanceolata</i> L.	ribwort plantain	19
cf. <i>P. lanceolata</i>	?ribwort plantain	12
Cyperaceae	sedges etc.	2
cf. <i>Poa</i> spp.	?poa	4
<i>Phleum</i> spp.	cat's-tail	7
Poaceae indet	indet grasses (small and large seeds)	31
indet seeds	-	++
charcoal fragments(small)		+++
total quantified plant items		