

10 FLOTATION SAMPLES, *by Timothy G Holden, with contributions by Stephen Carter and Jennifer Miller*

10.1 Introduction

Thirty-five flotation samples were received for the purpose of assessing the potential of the charred and other remains for palaeoenvironmental and palaeoeconomic analysis (Table 32). The samples were rapidly scanned under the binocular microscope and the composition of each recorded. The >4mm fraction, containing the larger fragments of charcoal, was then separated for charcoal analysis. Twenty randomly chosen charcoal fragments from each of thirty different contexts were used to provide a record of the species composition. An additional scan of each sample was also undertaken in order to determine whether there were any obvious fragments of other species that may only have been present in small quantities. During scanning, apical fragments of terrestrial snail shells were removed and identifications of these made by Stephen Carter.

10.2 Uncharred remains

Low levels of uncharred plant and insect remains were noted in a high proportion of samples (Table 32). These included beetles, insect pupae, leaves, stem fragments from mosses and higher plants, bud scales and occasional roots. In most samples, they are present in only small quantities, indicating a low level of contamination, which would be compatible with the activities of invertebrates. However, C36 had one uncarbonised animal dropping, possibly rabbit or ovicaprine, and C4 contained large quantities of leaf fragments. These two samples would

therefore appear to have been contaminated, possibly through small mammal burrows.

The low level of contamination observed in most samples is not expected to affect significantly the interpretation of the remains. It should, however, be taken into account wherever particularly low numbers of small artefacts or ecofacts were recovered from contaminated contexts.

10.3 Charred plant remains

With the exception of wood charcoal (see below), the plant remains are dominated by two categories of material, hazel-nut shell (*Corylus avellana*) and cleavers (*Galium aparine*) (Table 32). The first of these is likely to represent a wild food resource, deliberately collected and brought to the site for processing and consumption. Discarding of the nut shells into the fire is an obvious means of disposal and must account for the high proportion of these encountered amongst the wood charcoal, although charred hazel-nut shells have also been associated with the deliberate roasting of nuts (e.g. Duvensee 6, Bokelmann 1983, Abb. 41–42). The second taxon – cleavers – is a common plant of modern hedgerows, scree and maritime shingle (Clapham et al 1962). It is of no use as a food plant and is more likely to have arrived at the site incidentally. The hooked fruits, stems and leaves of cleavers readily adhere to hair and clothing and they are likely to have grown close to the site.

The remaining plant material consists of a low concentration of small fruits and seeds. Restricted numbers of these were removed for assessment and

Table 32 Material recovered from the flotation samples

Context	Seeds	Cleavers fruits	Hazel shell	Charcoal quantity	Charcoal AMS	Modern plant	Vesicular material
3				++	*	+	
4		+++		++++	*		+
31	+	+++	+++	++++	*	+	+
34	+			++++	*		
36	+	+	+	++++	*	+	+
37			+	+	*		
38				++	*		
39				++	*		
40	+	+	+	++++	*		

Legend: + = rare; ++ = occasional; +++ = common; ++++ = abundant; * = sufficient for an AMS date

identified as somewhat eroded labiates (dead-nettle family) and other common weedy genera.

10.4 Terrestrial snail shell

As can be seen from **Table 33**, snail shell was recovered from 17 samples, including all of those from Column 1. This pattern may, however, be partially due to the different ways in which samples were processed. Eleven different taxa were recovered. The taxa recorded in **Table 33** represent a group of terrestrial molluscs that would be typical of moist rubble habitats on generally acid soils. An assemblage such as this is very similar to that which might be expected from the modern fauna at An Corran. This represents a potentially well-dated early assemblage of snails. Such assemblages are very rare in Scotland and therefore provide important information regarding the evolution of the modern fauna.

10.5 Vesicular fragments

Seventeen samples contained carbonised material that was vesicular in character (**Table 32**). These could represent either the burnt remains of a mixed organic material, such as faeces or well-processed food remains, or a material that does not readily survive charring, either because it has a delicate structure, it was wet when charred, or it is oil-rich – this might include materials such as seaweed, plant roots and tubers or animal products.

10.6 Charcoal

The results of the charcoal analysis are presented in **Table 34**. Although a high proportion of the charcoal fragments are much smaller than those ideally used for identification purposes, it proved possible to identify the majority from a single longitudinal section. Considering the small sample size, the assemblage is relatively diverse, with

Table 33 Terrestrial snail species*

<i>Aegopinella pura</i>
<i>Carychium tridentatum</i>
<i>Clausilia bidentata</i>
<i>Cochlicopa lubrica</i>
<i>Discus rotundatus</i>
<i>Lauria cylindracea</i>
<i>Nesovitrea hammonis</i>
<i>Oxychilus sp.</i>
<i>Spermodea lamellata</i>
<i>Vitrea contracta</i>
<i>Zonitoides excavatus</i>

*Terrestrial snails were present in contexts C2, C3, C4, C31, C34, C36, C39 and C40.

four genera positively identified. Willow (*Salix* sp.), hazel (*Corylus avellana*) and birch (*Betula* sp.) are well represented in the majority of samples. Lesser quantities were also identified from the Pomoideae, a sub-family which includes rowan, hawthorn, apple and pear, and *Prunus*, a genus which includes the cherry and blackthorn. The small size of many fragments precluded a more specific identification, apart from two fragments that could be blackthorn (*Prunus cf spinosa*).

The taxa represented do not indicate the selection of any particular species and, in view of this, they are likely to provide a reasonably representative picture of the local environment. Pollen analyses on the Trotternish peninsula, primarily on cores from Loch Cleat, have already enabled Birks & Williams (1983) to postulate the presence of a birch and hazel scrub vegetation with willow, rowan and cherry between the 9th and 7th millennia BP (cf Green & Edwards 2007; Lowe & Walker 1991). This scrub cover is entirely consistent with the charcoal results from An Corran. If the Loch Cleat data can be extrapolated further to the area around An Corran, then localised areas of more open grassland and tall herbs may also have been present.

Table 34 List of charcoal identifications (J. Millar)

Context	<i>Betula</i>	<i>Corylus</i>	<i>Corylus nutshell</i>	<i>Pomoideae</i>	<i>Prunus</i>	<i>P cf spinosa</i>	<i>Salix</i>	<i>cf Prunus</i>	<i>cf Pomoideae</i>	Indet.
3	1	9			2		8			
4	15	2					3			
31	49	65	5	36	16	2	42	2		4
34		12		8						
36	29	67	1	33	12		84			
37	3	10	3							4
38	4	2		1						13
39									1	19
40	6	1		10						

10.7 Conclusions

The flotation samples from An Corran provided a number of valuable pieces of information. The charcoal data place the site within, or close to, areas of birch, hazel and willow scrub. Areas of rocky disturbed ground close to the cliff are also indicated by the snail fauna and the limited seed identifications undertaken to date. Birks (**Birks & Williams 1983**) has commented that the post-glacial forest history of Skye corresponds to present-day distribution of woodland fragments on the island. The evidence presented here tends to support this, indicating that the environment

around An Corran in the 8th millennium BP and later was not very different from that found in the wooded valleys and sheltered areas of the coast below 200m today.

Addendum. Small numbers of fish otoliths were also recovered from the flotation samples as follows:

C31 gadid 1; cod 2; pogue (bullhead) 1; pollack 1;
saithe 8
C34 cod 1; pollack 1, saithe 1
C36 pollack 1; saithe 10
C37 pollack 1; saithe 2
C39 saithe 1