Scotland's First Settlers: Work on the early settlement of the Inner Sound of Skye.

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Introduction

The Scotland's First Settlers Project was set up in 1998 with the objective of investigating the early settlement of the lands around the Inner Sound. The project is designed to be a small scale regional study of the area of the Inner Sound, from the eastern coast of Skye, to the western shore of the mainland. The principal chronological focus of the project is on the Mesolithic and the earliest evidence for the Neolithic. The regional approach is considered to be most suited to studying this period, a period where mobility was important, and where the examination of isolated sites is likely to result in a very partial picture. The approach has been kept small scale however, as it is important to address issues of local mobility and resource exploitation, rather than look at this stage at larger regional patterns and social networks. The seascape defined by Skye and the mainland provides a contained space for the study and allows the project to concentrate on the relationship between people and the sea. All Mesolithic studies so far have been terrestrially based, even where the sites examined have been on small islands, and this is considered a weakness, perhaps best reflecting archaeological attitudes to landscapes.

The West coast of Scotland is well known for the preservation of a series of shell middens dating to the later Mesolithic. These preserve a set of artefacts often referred to as "Obanian". Few archaeologists would now argue that such a distinct cultural entity exists, and most prefer to consider the remains as part of a single mesolithic culture, possibly representing a functional grouping of artefacts and environmental material. Dating programmes have been used to infer that the organic artefacts preserved in the middens are chronologically indistinct from the microlith rich lithic scatters that are the most common type of site from this period. The organic material, which includes artefacts, economic and environmental data, means that these middens remain important as one of the best resources for studying the Mesolithic and the mesolithic environment within Europe. Nevertheless, much of the dating evidence suggests that the middens appear late in the mesolithic sequence, indeed recent research at Carding Mill Bay (Connock *et al* 1992) and at Ulva Cave (Bonsall *et al* 1994) has shown that the middens apparently continue to be formed into the Neolithic. Furthermore, many of these sites show evidence of use as burial sites in the Bronze Age.

One of the most striking features of the early midden excavations was the complete absence of microliths, despite the intensive sieving for environmental data. The absence of Obanian type organic artefacts from the lithic scatters is more easily explained as a result of preservation conditions. Recent work has, however, highlighted possible exceptions to the microlith distribution:

- The lower layers at Ulva Cave contain a few blades and associated lithics, indicating a technology similar to that of the microlith makers (Bonsall *et al* 1994).

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- Early accounts of work at Risga indicated that a microlith might have been found in the midden. Recent excavations have located a microlithic lithic scatter beside the original location of the midden (Pollard *et al* 1996). The relationship between the midden and the lithic scatter is not clear, however, - nor is it clear whether enough now survives for excavation to determine this.
- Recent rescue excavations at An Corran discovered microliths within a midden. Unfortunately the circumstances of the excavation mean that only a small sample of the relevant layers was excavated, and the interpretation of their stratigraphy is difficult (Hardy, Miket & Saville forthcoming).

The relationship of the microliths to the midden sites clearly needs further work for clarification.

Part of the problem is certainly an absence of modern research excavation conducted to answer modern research questions. The most famous excavations on the midden sites, those on Oronsay, were conducted against a background of little other Mesolithic research in Scotland. Their excavation was undertaken with the specific goal of recovering economic data, so that questions concerning some of the artefactual content, the immediate context of the sites, and their relationship with other Mesolithic facies were largely left unexplored (Mellars 1987). In nearly all other cases excavations of middens have been either carried out before the development of modern archaeological methods (most of the Oban sites and Risga), by amateur projects (Raschoille Cave, Carding Mill Bay, Connock *et al* 1992), or where little survived of the midden (Carding Mill Bay 2).

A number of basic problems therefore exist with the archaeological resource and it is hoped to address these:

- The cultural relationships of the middens remain problematic, both within the Mesolithic and with later periods.
- The dating of the middens remains simplistic, generally assuming that they are a single phenomenon lasting throughout the Mesolithic.
- If they are a later Mesolithic phenomenon, is this the result of changing economics (as the result of intensification or new strategies) or is it because changing shorelines have removed earlier midden sites?
- The relationship of middens to the shoreline is interesting, they nearly all appear to lie just above the old shore line, suggesting transport to a central midden site, but not away from the coast.
- This is a time of significant climate change, is this reflected within the middens, and if so can information be derived on how it affected the mesolithic population.
- If the middens continue into the Neolithic, are they evidence of continuity with the Mesolithic, or are there detectable changes in the resources represented by the middens?

Related to these questions are a number of associated issues. Arguments have been made regarding the skill of Mesolithic seamanship. Was travel between the Hebrides confined to the good months of the year, and did it represent a major undertaking? Or were the mesolithic seafarers competent year round navigators? This has important ramifications for our understanding of mobility, regionalisation, and social behaviour.

Furthermore, the project has identified a major management problem relating to the mesolithic resource in this area. While the site of An Corran and other recently found sites (D&E 1998) highlighted the presence of mesolithic sites in the area they are, in general

poorly documented and understood. Preliminary work in 1998 revealed that many are under threat and so it is hoped that by providing detailed information on the resource it will be possible to work with Historic Scotland and other relevant bodies to ensure the well-being of the sites into the future. Sites relating to the early settlement of Scotland are not so numerous that we can afford to loose them.

Methods

Work in 1999 included field survey, trial trenching and preliminary environmental and finds analysis and it was carried out on Skye, Raasay, the Crowlin Isands, and the Applecross peninsula.

Results

Field Survey

Due to adverse conditions it was necessary to effect a two stage survey: preliminary survey from the sea to identify ground conditions, caves, rockshelters and old shorelines; detailed survey on foot. The areas which were subject to preliminary survey include the islands of Longay and Pabbay and the coastline from Breakish to Kyleakin.

The detailed survey concentrated on three small distinct zones within the study area:

- Trotternish. The first area of intensive survey started at the northernmost tip of the Trotternish peninsula on Skye and continued down the eastern side, including the area around the only known Mesolithic site within the survey area, An Corran.
- Toscaig. The second area began at Toscaig, Wester Ross, and ran north towards the village of Applecross.
- Crowlin Islands. The third area consisted of the entire coastline of the Crowlin Islands.

Prior to August 1999, a total of 17 sites had been identified. Some are known mesolithic sites, some known middens of uncertain date and others were found during preliminary work between 1998 and 1999. During the field season in August 1999, a further 26 sites were identified (table 1).

Known Mesolithic sites	4
Known sites of unknown date	7
Potentially Mesolithic sites found by SFS prior to August 1999	6
Potentially Mesolithic sites found by SFS during August 1999	26
Total at end August 1999	43

Table 1: Location of sites by Scotland's First Settlers to end August 1999.

The 26 sites found during the field season in August 1999 are mostly located in the three areas of intensive survey. Table 2 identifies the sites that were found by SFS prior to and during 1999.

Date found	Site No.	Site Name.	Location	Type
1998	SFS 2	Crowlin 1	Crowlin Isles	Rockshelter +
1998	SFS 3	Crowlin 2	Crowlin Isles	Rockshelter +
early 1999	SFS 8	Loch a Sguirr 1	Raasay	Rockshelter +
early 1999	SFS 18	Loch a Sguirr 2	Raasay	Rockshelter +
early 1999	SFS 4	Sand 1	Applecross	Rockshelter +
early 1999	SFS 5	Sand 2	Applecross	Rockshelter +
early 1999	SFS 11	Sand 3	Applecross	Sand dune +
August 1999	SFS19	Toscaig 1	Applecross	Rockshelter +
August 1999	SFS 20	Toscaig 2	Applecross	Rockshelter +
August 1999	SFS 21	Strollamus 3	Skye	Open Midden +
August 1999	SFS 22	Crowlin 3	Crowlin Isles	Boulder shelter+
August 1999	SFS 23	Crowlin 4	Crowlin Isles	Rockshelter
August 1999	SFS 24	Crowlin 5	Crowlin Isles	Rockshelter +
August 1999	SFS 25	Crowlin 6	Crowlin Isles	Old sea cave
August 1999	SFS 26	Crowlin 7	Crowlin Isles	Rockshelter +
August 1999	SFS 27	Longay 1	Longay	Sea Cave
August 1999	SFS 28	The Aird	Aird	Rockshelter
August 1999	SFS 29	An Corran B	Staffin	Lithic scatter+
August 1999	SFS 30	An Corran C	Staffin	Lithic scatter+
August 1999	SFS 31	An Corran D	Staffin	Lithic scatter+
August 1999	SFS 32	Brogaig	Staffin	Lithic scatter+
August 1999	SFS 34	Toscaig 3	Applecross	Rockshelter +
August 1999	SFS 35	Toscaig 4	Applecross	Rockshelter +
August 1999	SFS 36	Staffin Island	Staffin	Lithic scatter +
August 1999	SFS 37	Toscaig 5	Applecross	Cave
August 1999	SFS 38	Toscaig 6	Applecross	Rockshelter +
August 1999	SFS 39	Toscaig 7	Applecross	Rockshelter
August 1999	SFS 40	Toscaig 8	Applecross	Rockshelter
August 1999	SFS 41	Toscaig 9	Applecross	Rockshelter +
August 1999	SFS 42	Toscaig 10	Applecross	Rockshelter
August 1999	SFS 43	Toscaig 11	Applecross	Cave

Table 2. Sites found by the Scotland's First Settlers project.

NB + = sites with visible archaeological remains

Excavation at Crowlin 1

The rockshelter at Crowlin consists of a large overhang sheltering a small level platform with evidence for numerous previous rock falls. The rockshelter is visible from Skye, showing as a dark shadow on the island. Past rock falls have clearly reduced the size of the shelter. Midden material was abundant on the surface, mostly comprising loose material with apparent clusters of limpets and in some places oysters. In 1998 some chipped stone was recovered from the surface of this loose material. Some shelly material could be seen between and below some of the larger rock fall elements. Towards the back of the shelter more consolidated material could be seen, almost exclusively made up of limpets.

Three test pits were opened at this site. Trench 1 was opened at the back of the cave to investigate what was thought likely to be the best preserved part of the midden. Trench 2 was opened at the front of the cave to expose a section in the talus material in an area rich in

oyster shells. Trench 3 was opened in the area where chipped stone pieces had been recovered in 1998.

The evidence suggested that the visible remains of midden here post-date the rock fall events. This midden was clearly a complex accumulation of material with periods of abandonment, and the different episodes of use have apparently left different traces, suggesting that the rockshelter has not had a single function over time. It was impossible within the time, resources, or safety issues to remove the substantial quantities of rockfall material that would have been required to demonstrate any earlier use of the site.

Excavation at Sand 1

The rockshelter at Sand lies above what appears to be a late glacial coastline. It consists of a shallow, but wide overhang, with a large terrace in front. The limited areas of bare soil within the overhang contained a number of shells, while the terrace was entirely obscured by bracken and grass. In this area a mole hill had previously been found to contain much shell and lithics, including one microlith. The mole hill disturbance was still visible, as were an area of nettles and an area of yellowed bracken. A series of test pits were excavated to sample the midden, locate its extent and determine whether there was any evidence for activity beyond the midden limits. A small number of additional test pits were also excavated in front of a nearby shallow rockshelter, and between the two shelters.

Work here showed that while there appear to be no deposits surviving within the shallow rockshelter, the terrace in front of the shelter has a discrete midden deposit preserved up to 0.70m thick, containing well preserved organic remains. In addition there appears to be evidence for activity around the midden in the form of a lithic scatter and fire shattered rocks.

Excavation at Loch a Sguirr, Raasay

This is a substantial rockshelter with a large platform above the sea cliff at the north-western tip of Raasay. The shelter is cut into a vertical rock face, made quite distinctive by the coloured bands running through it. Inside the shelter the floor is very level, with some shell visible towards the back of the cave. The entrance to the shelter has a lip of large boulders, in front of which is a talus covered with nettles. A number of test pits were excavated within the shelter, within a small immediately adjacent shelter, on the talus slope, and on the platform in front of the shelter.

The only trench to produce significant anthropogenic material was located in a small area almost entirely surrounded by boulders. This material appears to be a surviving fragment of the evidence of former occupation. The very level surface in the large cave suggests that water action may have repeatedly scoured out any deposits accumulating there. The rock lip to the cave is only deep enough to retain the current dung layer. However, the absence of significant quantities of shell midden material from the trench excavated in the talus suggests that, surprisingly for such a good rockshelter, the occupation of the site was never particularly major.

Excavation at Ashaig, Skye

There is a substantial shell midden associated with the ancient cemetery at Ashaig. This lies both outside the cemetery wall and within it. A small trench was opened to obtain a sample for dating and determine the depth of midden deposits at the base of the escarpment on the east side outside the Ashaig cemetery wall where shell was locally exposed by cattle erosion.

This trench exposed a shell midden immediately below the turf-line down to a section depth of c.0.35m. The deposit overlay a series of large sub-rounded boulders of varying size. These boulders appear to have been displaced from further up the slope and may have originated from a collapsed revetment from earlier structures pre-dating the present cemetery.

Environmental Work

Finds Analysis

Worked bone.

Eight pieces of worked bone and one fragment of bone with cut marks were found during the 1999 season. All of these artefacts came from excavated contexts (table 3). Five pieces of worked bone are both bevel ended and pointed, two are indeterminate pointed pieces and there is one broken off point fragment. Bevel ended tools are common in Western Scottish coastal mesolithic sites, though it is not clear for what they were used (Finlayson 1992).

Artefact No	Type	Site	Trench	Spit
N11	Point	Crowlin 1	1	5
N 25	Bevel ended & pointed	Loch a Sgurr 1	1	2
N 14	Bevel ended	Sand 1	2	1
N 15	Bevel ended & pointed	Sand 1	2	1
N23	Point	Sand 1	7	1
N24	Cut marked fragment	Sand 1	7	1
N 20	Point	Sand 1	9	6
N 18	Bevel ended & pointed	Sand 1	9	7
N19	Bevel ended & pointed	Sand 1	9	8

Table 3: Scotland's First Settlers 1999 The Bone Tools

Flaked Lithics

A total of 667 pieces of flaked stone were recovered. These came from a number of sites (table 4), some of which have been excavated while others relate to surface scatters.

Site Name	Total Lithic Assemblage
An Corran	1
An Corran B	60
An Corran C	14
An Corran D	5
Brogaig	17
Crowlin 1 *	31
Flodigarry +	1
Loch a Sguirr 1 *	79

Ob Gavscavaig +	2
Sand 1 *	450
Staffin Island 1	7

Table 4: Lithic Quantity by Site

NB: * = excavated site; + = raw material sample.

A variety of raw materials are represented in the assemblage (table 5), and all are relatively local. The most common stone used is a Baked Mudstone first recognised during work on the site at An Corran (Hardy & Saville forthcoming). It is probable that the outcrops in the cliffs at An Corran, above the original archaeological site, were the main source in the area. Quartz is the second most common raw material and is likely to be common throughout the study area, though this has yet to be documented. The next material is a Chalcedonic Silica that is superficially similar to flint, but it has been related to pebble nodules of volcanic silicas that are found along the course, and at the mouth, of the Stenscholl River in the Staffin area (Hardy, Miket & Saville forthcoming). There are other sources of pebble silica in the area such as the silicified limestones of western Eigg (Wickham-Jones 1990) and local pebble sources of chert have also been recorded (Wickham-Jones & Collins 1978). It is therefore possible that some genuine pebble flint and chert has been included in this class as noted by Hardy Miket and Saville (*op cit*). The marine movement of pebbles of flint and other materials is well attested and it is clear that more work is needed in this field.

There are also some artefacts of Bloodstone, presumably derived from Rum (Wickham-Jones 1990), and a number of other raw materials all occur in very small quantity. The Rock Crystal is likely to be associated with outcrops of quartz, and the Quartzites and Agates are also fairly common and likely to be found generally throughout the study area. Jasper is another chalcedonic silica that may be associated with the bloodstone though it could occur elsewhere.

Finally, there is a single artefact identified as Flint which deserves special mention. This is the gunflint (F12) picked up from surface cleaning at the Crowlin 1 rockshelter. Although it adopts the same principals, gunflint working is much more recent than prehistoric flintknapping and the two are quite unrelated. This piece is of an orange flint that was likely to have been imported from elsewhere in recent times. Sources of orange flint are well documented in the east of Scotland and elsewhere in Britain (Wickham-Jones & Collins 1978).

Even at this preliminary stage, that there are notable differences between the sites. It is important to remember that they differ greatly in the way they have been treated: some assemblages result from excavation while others result from surface collection, but they do have individual characteristics. The three sites where trial excavations took place produced lithic assemblages that vary greatly in size (table 6) and character. Sand 1 yielded an assemblage of over 400 lithics, made from a wide variety of raw materials. This assemblage included evidence of both tool manufacture and use. In addition there were several bone tools. Among the retouched pieces there were eight microliths, thus confirming this as a mesolithic site. Loch a Sguirr 1, in contrast, yielded a smaller lithic assemblage, mainly of quartz, and only one bone tool. Crowlin 1, also yielded a small assemblage with much less variation of raw material, and comprising mainly the evidence for tool manufacture. Again only one piece of worked bone was recovered. Of the surface collections, only An Corran B produced a lithic assemblage of any size, and this was very mixed. It is, of course, likely that

	Chalcedonic Silica	Baked Mudstone	Bloodstone	Quartz	Quartzite	Flint	Agate	Jasper	Rock Crystal	Coarse Stone	Unknown
An Corran	1										
An Corran B	31	28		1							
An Corran C	10	4									
An Corran D	3	2									
Brogaig	10	6		1							
Crowlin 1	25	1		3	1	1					
Flodigarry	1										
Loch a Sguirr 1	5	22		52							
Ob Gavscaivaig	2										
Sand 1	70	192	31	140	3		4	4	2	3	1
Staffin Island	6	1									
TOTAL	164	256	31	197	4	1	4	4	2	3	1

Table 5: Raw Material by site, absolute numbers.

each site relates to different periods of time, but even at this stage the work demonstrates that a detailed picture of the sophisticated network of the use of the Inner Sound seascape throughout early prehistory is to be expected.

Coarse Stone Tools

A total of seventeen pieces of coarse stone were collected during the project. These came from four different sites and they comprised a variety of artefacts and manuports (table 7). These tools are made of a variety of raw materials, though sandstone predominates. The six manuports were collected because they stood out dramatically from the angular pieces of rock which provided the background material in the rockshelters and middens. This assemblage is very diverse. Hammerstones, are ubiquitous on archaeological sites, but it is interesting to note that bevel ended tools are commonly associated with mesolithic sites, thus confirming the general period indicated by the microliths at Sand 1.

ENVIRONMENTAL STUDIES

The environmental studies fall into two main categories: preliminary work on the geomorphological context of the various sites, in particular their relationship to sea level change; and on site studies, based on the environmental data, especially the ecofacts recovered from the middens. Geomorphological work indicates that xxxxx. Large samples of ecofacts were recovered, especially from Crowlin 1 and Sand 1…….

Discussion

The survey work initiated by the project has demonstrated the great value of the seascape of the Inner Sound as a resource for the study of the mesolithic and subsequent periods. Preliminary assessment suggests a density of sites around the coastline that was much higher than anticipated. In the brief and limited survey work undertaken ten new midden sites were located as well as four lithic scatters. While the age of the surveyed sites is still unknown, their nature suggests that many are early prehistoric, quite possibly mesolithic. Few areas of Scotland have such a density of sites and this is particularly important for an understanding of the way in which sites operated as part of a network, something that is crucial to the Mesolithic.

The assessment excavations showed that in general the sites have good organic preservation and some stratification thus increasing their value as an archaeological resource, though as threats were identified to most of the sites this resource may be at risk (table 8). The early occupation of Scotland took place at a time of dynamic environmental change, and preliminary analysis of the environmental samples shows that……

Type of threat	Number of Sites Threatened
Animals	10
Wind	1
Humans	3
Natural Erosion	4
Sea	2

Table 8. Threats to sites.

	Pebbles	Bipolar Cores	Platform Cores	Debitage Flakes	Chunks	Regular Flakes	Blades	Microliths	Edge Retouched	Scrapers	Gunflint	Barbed and Tanged Point	Misc. Retouch	*TOTAL*
An Corran									1					***1***
An Corran B		1	1	7	23	26	1			1				***60***
An Corran C				4	5	5								***14***
An Corran D				3	1	1								***5***
Brogaig				4	3	8			2					***17***
Crowlin 1 *		1		16	6	7					1			***31***
Flodigarry +	1													***1***
Loch a Sguirr 1*				9	45	20	5							***79***
Ob Gavscavaig +	2													***2***
Sand 1 *	11	6	1	67	121	210	18	8	4	2		1	1	***450***
Staffin Island 1			1			6								***7***

Table 6: Assemblage Content by Site

NB: * = excavated sites; + = isolated raw material sample

	Rounded hammerstone	Long hammerstone	Hammerstone flake	Ground edge tool	Bevel ended tool	Smoothed stone	Rubbing stone	Anvil	Manuport	*TOTAL*
Ashaig	1									*1*
Crowlin 1	1			1	1	1		1	2	*7*
Sand 1			2		1		1		4	*8*
Toscaig 1		1								*1*
TOTAL	*2*	*1*	*2*	*1*	*2*	*1*	*1*	*1*	*6*	***17***

Table 7: Coarse stone tools.

The initial studies of the artefactual material demonstrate its great value as an archaeological resource in terms of both the richness and variety of material present. Good organic preservation means that a range of bone tools have been preserved as well as the lithics. This affords the possibility to study the interrelationship of these two materials which should help to shed light on the interpretation of previously excavated sites. Particularly exciting is the presence of classic narrow blade microliths in the midden at Sand 1 together with bevel ended bone tools. In recent years microliths have generally been regarded as scarce in midden contexts, especially in association with bone tools. The recent work at An Corran (Hardy, Miket & Saville forthcoming) suggests that this view might have to be refined and in this light the work at Sand 1 is particularly important. The role of the microlith is still poorly understood and it is only through the excavation of sites with extensive preservation, such as Sand 1, that it can be better understood.

With regard to the lithics one of the most noteworthy factors is the wide range of materials in use. Some of these, such as the bloodstone, are likely to have been brought in from outside the study area, while others are more locally sourced. The Mesolithic has traditionally been regarded as a period of high mobility and networking between individual sites, though this is generally hard to prove. Detailed identification of the lithic materials and their sources is an important way in which human movement may be inferred. This will obviously be an important contribution of the project to mesolithic studies in Scotland.

It is now clear that there was no overall Mesolithic culture across Scotland. Recent work has moved towards the identification of cultural areas in the European Mesolithic and, though the situation in Scotland is still unclear, work in the Southern Hebrides has started to address the problem (Mithen forthcoming). In order to establish the pattern of regional variation a programme of excavation and dating within one well defined area is particularly important. In this respect, identification of a suite of artefacts, lithic and otherwise, in use around the Inner Sound throughout the Mesolithic will be a valuable addition to this field. The presence in the middens of material suitable for radiocarbon determination becomes of great importance here and more specific dates are awaited.

Finally, the presence of the gunflint and the barbed and tanged point highlight the use of rockshelters such as these in more recent times. These are locations that must have stood out in the landscape at any period, and many offered shelter and other benefits such as fresh water. Information on the more recent use of the sites will be an important part of the project.

The Future

The quantity and concentration of sites which have emerged from the 1999 work suggest that around the Inner Sound lies a vast and valuable resource for the understanding of the Mesolithic and subsequent periods. Nevertheless many of the sites are at risk. Good management of this resource is jeopardised because of the lack of knowledge of the resource. Further survey work is clearly important together with an assessment of threat in order to assure the well-being of the resource. In order to understand the sites concerned some assessment by excavation of certain sites is planned. Three strands of information are important: dating material; artefactual material; and environmental material. In this way the full value of all the sites for the interpretation of the early settlement of the Inner Sound seascape may be released.

In addition, the project plans some detailed excavation as a long term objective. Detailed information on environmental change, dating ranges and artefactual developments will be invaluable for a full understanding of the study area and the part it plays in Mesolithic Scotland.

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