

The archive version of the text can be obtained from the project archive on the Archaeology Data Service (ADS) website, after agreeing to their terms and conditions: ads.ahds.ac.uk/catalogue/resources.html?sfs_ba_2007 > Downloads > Documents > Final Reports. From here you can download the file 'W-J,_SFS_Final_discussion.pdf'.

9.1 Introduction

Scotland's First Settlers (SFS) was set up to look for evidence of the earliest foragers, or Mesolithic, settlement around the Inner Sound, western Scotland. Particular foci of interest included the existence and nature of midden sites, the use of rockshelters and caves, and the different types of lithic raw material (including especially baked mudstone) in use. In order to implement the project a programme of survey and test pitting, together with limited excavation was set up (see [Illustration 568](#), right). Along the way information on other sites, both Prehistoric and later was collected, and this has also been covered in this report. In addition, a considerable amount of information on the changing nature of the landscape and environment has been presented. Fieldwork has finished, data has been analysed. There will always be scope for further work (and this will be discussed later), but the first stages of the project have definitely come to a close. How well has it achieved its aims?



Illus 568: SFS survey work in progress. Much of the work had to be carried out by boat

9.2 The major achievements of the project

9.2.1 Fieldwork

SFS fieldwork was conducted over a period of five years between 1999 and 2004. During this time the entire coastline of the Inner Sound together with its islands was walked. Survey comprised a range of techniques including walkover and surface recording, test pitting and shovel pitting both of caves and open air locations. The topography and the seascape vary considerably and survey and testing methods were adapted to accommodate this.

One hundred and twenty nine new archaeological sites were recorded, 36 of which were shovel pitted and 44 test pitted. Although SFS began as a Mesolithic project, sites from other periods were also identified and knowledge of human occupation across the survey area, but most notably in the Applecross peninsula and the Crowlin islands, can now be viewed from a genuinely multi-period perspective from the earliest times up to the present day. Survey work has also served to highlight the broad nature of the sites which included many caves and rockshelters.

9.2.2 Post excavation

Specialist analysis included detailed environmental work (Austin, Cressey, Green & Edwards, Shiel), early Holocene sea-level fluctuation and geomorphology (A Dawson, S Dawson), a review of the radiocarbon dates (Ashmore & Wickham-Jones), artefacts (Ashby, Clarke, Hardy, Heald & Hunter, Isbister, MacSween, Wickham-Jones) and ecofacts (Milner, Mulville, Parks & Barrett, Schulting), pumice (Newton), and geophysical work (Finlay & McAllan), all of which set the human record into both local and broader contexts.

9.3 The Mesolithic

Evidence relating to Mesolithic settlement has been found in two different ways. Excavation at the midden site of Sand has yielded important assemblages of artefacts and ecofacts dated to early in the Mesolithic of Scotland, while finds and dates from other survey sites suggest Mesolithic activity elsewhere around the Inner Sound.

Aside from the radiocarbon dating evidence (which came after fieldwork), sites were determined as being Mesolithic from the complex of lithic material present. Microliths provide a well attested Mesolithic type-fossil and there is no evidence for their continued use into later Prehistory. Microliths were thus used as an indicator of the Mesolithic, and they could usually be identified in the field. Miscellaneous microlithic retouch on the other hand was not regarded reliable enough to indicate Mesolithic activity when it occurred by itself (for example at Scalpay 3, SFS 33). Blades and the use of specific blade technology (for example blade cores) were also regarded as indicators of Mesolithic activity, in line with work by Wickham-Jones elsewhere (Wickham-Jones & Firth 2000), but in the event there were few SFS sites with many blades (see Table 189, below). As blades may be accidentally produced, the occurrence of one or two blades on a site was not taken as conclusive evidence for Mesolithic activity unless there were other indicators. For blades to be regarded as indicative of Mesolithic activity a criteria of abundance thus operates: that is more than one or two have to be present. Given the varying size and nature of the assemblages concerned, it is not possible to specify precisely how many blades need to be present, but it needs to be enough to suggest that the knappers were deliberately aiming to make blades rather than accidentally producing the odd blade-like piece.

Table 189

Site	Work undertaken	Microliths	Blades	Platform (blade) cores	Total Lithics
*An Corran A (SFS 1)	Excavation	Present	Present	Present	5229
An Corran B (SFS 29)	Surface collection		1	1	76
An Corran C (SFS 30)	Surface collection	3	19	2	529
An Corran D (SFS 31)	Surface collection		2		58
An Corran E (SFS 101)	Surface collection	3	36		555
An Corran F (SFS 193)	Surface collection	1			26

Applecross Manse (SFS 75)	Shovel pits	1	2		97
Brogaig (SFS 32)	Surface collection		2	2	102
Fearnmore 1 (SFS 104)	Test pits	3	3		754
*Loch a Sguirr (SFS 8)	Test pits		5		79
Port Earlish (SFS 94)	Surface collection		1		6
Redpoint (SFS 9)	Previous excavation, surface collection and test pits	4	29	Present	>847 from field collection, 1356 from previous work
*Sand (SFS 4)	Excavation	167	253	20	14,840 from excavation
Scalpay 3 (SFS 33)	Test pits	1 possible	2		152
Scalpay 5 (SFS 118)	Surface collection		3		202
Scalpay 6a (SFS 198)	Test pits	5	27	1	660
Scalpay 7 (SFS 196)	Surface collection	1			30
Scalpay 8 (SFS 197)	Surface collection	1		1	2
Sheildaig (SFS 15)	Excavation	Present	Present	Present	>6000 from excavation
Torridon Mains (SFS 186)	Shovel pits		1		3
Uags (SFS 105)	Test pits		1		10

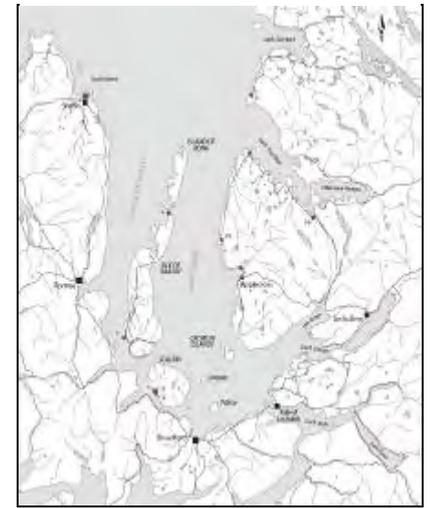
Table 189: SFS Sites with Mesolithic-type artefacts. SFS 29, 31, 32, 33, 94, 105, & 186 are included for completeness though they do not meet the criteria of abundance (see text, [Section 9.3](#)) and are thus not certainly Mesolithic

* = Sites with radiocarbon dates indicative of Mesolithic activity; definite Mesolithic sites in red

Sites that contained lithic evidence suggestive of early activity, but where there were no microliths or blades were put into either the early Prehistory (Mesolithic and Neolithic) or Prehistory (Mesolithic, Neolithic, Bronze Age, Iron Age) categories, unless there was radiocarbon confirmation for the Mesolithic.

In addition to the three known Mesolithic sites of An Corran, Sheildaig and Redpoint, another 18 sites located by SFS survey can be defined as potentially Mesolithic (see [Illustration](#)

569, right). One, (Loch a Sguirr, SFS 8) yielded a combination of radiocarbon dates and blades but no microliths; the remainder produced microliths and/or blades (see [Table 189](#), above). Microliths thus occurred on 12 sites, though generally in small quantity. Blades occurred on 17 sites, but usually in small quantity (ten sites had three blades or fewer). Interestingly, there were eight sites with both blades and microliths, and this included all of the four sites which had blades in larger amounts (An Corran C, An Corran E, Redpoint, and Scalpay 6a).



Illus 569: Location of SFS Mesolithic sites mentioned in text

Loch a Sguirr is worth noting for the presence of radiocarbon dates indicating activity in the Mesolithic while there are no microliths. Given the small area investigated it is possible that microliths may still be recovered here by further work, but it shows that the absence of microliths should not be taken as an indication that a site is not Mesolithic. This is discussed below ([Section 9.5](#)) in relation to the problems of identifying later Mesolithic sites; all in all it is clear that there is still no certain way to identify a Mesolithic site from the artefacts alone.

Sites with two blades or less, and no microliths, (8 in total) were not regarded as certainly Mesolithic, though they are definitely worthy of further archaeological examination as projects such as the Southern Hebrides Mesolithic Project (SHMP) have demonstrated the value of repeated visits to a site ([Mithen 2000](#)). An additional six sites contained artefactual material considered to be early Prehistoric (Mesolithic/Neolithic) and a further 25 sites were considered to be Prehistoric but without artefacts diagnostic of a specific period (see [Tables 13](#), below & [189](#), above; [Section 2.1](#); [Appendix 1](#)). Although one has to be careful of creating a circular argument, it is interesting to note that those sites identified as Mesolithic include most of the sites that yielded sizeable lithic assemblages, given that the existence of a sizeable lithic assemblage was included in the SHMP list of criteria of Mesolithic traits ([Mithen 2000](#)). The only exceptions to this would be some of the other An Corran sites and Scalpay sites where larger lithic assemblages were also recovered, though these assemblages are likely to have been biased in comparison to those from other sites by repeated collection on a number of occasions.

Table 13

Location	Number of microlithic sites	Number of early prehistoric sites	Number of indeterminate prehistoric sites	Total number of prehistoric sites
Trotternish	4	1	5	10
South Skye			3	3
Loch Carron			5	5
South Applecross			2	2
Mid Applecross	2		4	6
North Applecross				
Loch Torridon	4		2	6
Islands	4	5	4	13
Totals	14	6	25	45

Table 13: Prehistoric sites by sub-area (repeated from [Section 2.1.13](#))

The SFS work provided only a brief glimpse of most of the sites. Very few sites were revisited, though where this took place further lithics and other material was usually found. A good example is SFS 10 Allt na Uamha where lithics were not visible at the time of the first visit and none were recovered from the test pits made at that point, though a second visit yielded eight pieces. In general, sites were visited once only, perhaps for a couple of days to include test pitting, and most of the lithic assemblages are small. This should be borne in mind when comparing SFS results with those of other projects. Not only may the criteria for period recognition differ (see above for a discussion of the criteria used by SFS), but they may also be applied using more or less rigorous standards (SFS sites with isolated blades were not regarded as definitely Mesolithic, nor were sites with a single piece that showed miscellaneous microlithic retouch), and the assemblages may result from different methods of field work. If the problems inherent in comparing assemblages made of different raw materials are taken into consideration (quartz assemblages are unlikely to yield many blades for example) it is obvious that there are many drawbacks to constructing global pictures from the work of different projects, especially those undertaken at different seasons and by different people. This is not to suggest that an overall picture of, say, west coast Scotland, cannot be drawn from the work of the various different projects that have taken place there, but rather that simple one-to-one comparisons of data are not appropriate.

It is very interesting to note that the Mesolithic and early Prehistoric sites are not, by and large, rockshelter sites. Ten of the 13 Mesolithic sites are open-air scatters as are five of the six early Prehistoric sites and 19 of the 27 undiagnostic Prehistoric sites, a total of 74% of all Prehistoric sites. This has implications both for our understanding of the Mesolithic and for the ways in which we set about locating other sites. It is also interesting to note the presence of two major groupings of sites in the list: those at An Corran and those in Scalpay. These undoubtedly owe their existence both to the visibility (and density) of Mesolithic material in these areas and to the local presence of enthusiastic and dedicated field workers who were able to return on many occasions and monitor the erosion of lithics. It is worthwhile noting that, in Scalpay at least, these sites do indeed appear to represent discrete scatters, though the mechanisms by which they were created will remain vague without detailed excavation.

Before looking in general at the pattern of Mesolithic activity around the Inner Sound it is worth looking in detail at the site of Sand, in order to understand the specifics of Mesolithic activity at a single location.

9.4 SFS 4 Sand

9.4.1 The site

Although Sand is highly visible in the landscape as a rockshelter (see [Illustration 23](#), right), there was no archaeological evidence within the rockshelter itself. There is a lack of deposits of any sort there, natural or otherwise; bedrock is simply too close to the ground surface so that any material that might have been present has long since eroded away or fallen downslope to join the deposits on the terrace below. The rockshelter is clearly visited from time to time today, but there was no build up of modern material either. It is likely, therefore, that the rockshelter was used to provide shelter during the Mesolithic, though the surviving Mesolithic deposits indicate that activity also took place in front of the shelter.



Illus 23: Sand – general view of the rockshelter

9.4.2 The midden

The main archaeological information at Sand has come from the



Illus 348: Sand – excavation of the midden deposits

midden which survives up to one metre thick in a discrete deposit immediately in front of the shelter (see [Illustration 348](#), left). Accumulation of midden seems to have started in a natural hollow outside of the shelter and preservation was assisted both by the high calcium content of the Applecross Sandstones, and by the conditions created by the deposits themselves as they built up. The midden covers a relatively small area, roughly eight metres by eight metres, and the existence at its top of a worn layer which perhaps indicates a pathway, and was particularly notable at the western edge of the midden nearest the rockshelter, suggests that it never extended much above the current ground surface. Downslope of the shelter the midden becomes much thinner. The total volume of midden can therefore be estimated at not more than 50m³, of which approximately 16% was excavated.

Artefacts were an important part of the midden make up, though the bulk of the material comprised ecofacts. There were four types of Mesolithic artefact: flaked lithics; coarse stone tools; worked bone; and worked shell. All of these seemed to have accumulated in the midden as a result of casual discard; there was no evidence of specific deposits or dumps.

9.4.3 Away from the midden

In addition to the midden deposits excavation was carried out across other areas of the site (see [Illustration 357](#), right). Although there was no surviving evidence of built or cut features there was ample indication in the form of artefacts that activity had taken place across the terrace in front of the rockshelter. The majority of the lithic assemblage came from the deposits away from the midden. In general there was nothing to distinguish the stone tools away from the midden from those within the midden, but retouched pieces tended to be found away from the midden. Slopewash affected the deposits here, but there were hints in the grouping of material that discrete deposits, or activity areas, had once existed. Area A, running downslope away from the midden, also contained great quantities of burnt and heat-fractured stone.



Illus 357: Sand – excavation in Area B3 looking towards the midden

9.4.4 Flaked lithic tools



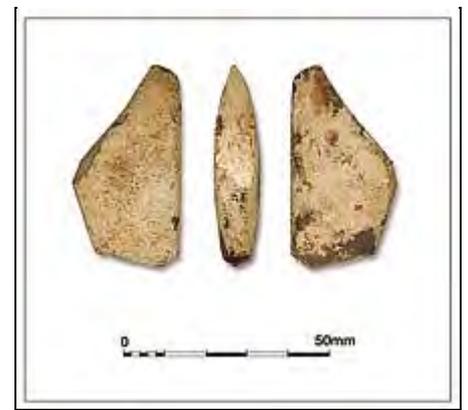
Illus 365: Sand – a selection of the raw materials from which the flaked stone tools were made

The lithic tools from Sand are classically Mesolithic in type (see [Section 3.3](#); [Illustration 365](#), left), though the range of tools is limited in comparison with some sites. There are characteristic narrow blade microliths of varying types, though crescents and fine points dominate, and other types such as backed bladelets and scalene triangles are relatively scarce, though common elsewhere. Larger retouched pieces also occur, including scrapers and edge retouched pieces. Interestingly, the scrapers are different from some other west coast Mesolithic sites in that there are none of the angled scrapers that were so common, for example, at Kinloch ([Wickham-Jones 1990](#)). There were no specific dumps of knapping debris, but the assemblage does contain evidence for on-site manufacture as well as for the use and repair of tools. The knappers were using a mix of materials

including local chalcedonies and quartzes as well as baked mudstone and Rùm bloodstone from further afield across the Inner Sound.

There was little indication among the flaked lithics of any

material that might be more recent in date. A single piece, the barbed and tanged point (1999/1), is characteristic of more recent periods (Bronze Age) and this was found prior to excavation in up-cast from a mole hill so that there is no secure link to the Mesolithic site below. There was, however, one piece at the base of the midden that is conventionally out of place in a Mesolithic setting. This is the small ground stone axe (27/1; see [Illustration 346](#), right) which would be more at home in the Neolithic. The radiocarbon determinations have clarified the situation by confirming that immediately downslope of the midden there is a deposit of material with slightly later dates. Although this is early for the Neolithic, it does include the axe. There were no other specifically Neolithic artefacts here, however, and it has been overlain by material from the midden which slumped across it, thus inverting the stratigraphy (see below). This would seem to be an indication of activity on site in the Early Neolithic.



Illus 346: Sand – the ground stone axe

9.4.5 Cobble tools

In addition there was an assemblage of 28 cobble tools from Sand, both in the midden and away from it. This is a small assemblage of limited tool types, mostly facially pecked pebbles, and it is perhaps most notable for what is lacking rather than for the tools that are present. There were no stone bevelled pebbles of the type so common on some other west coast Mesolithic sites such as Kinloch ([Clarke 1990](#)). In general the cobble tools suggest that a limited range of activities was taking place.

9.4.6 Bone tools



Illus 570: Sand – worked bone, bevel-ended tools and the harpoon fragment

The worked bone assemblage comprises 53 tools (see [Illustration 570](#), left). In addition there was a small amount of possible flaked bone and several pieces of antler with scratch marks that may indicate the manufacture and maintenance of tools. As with the lithic assemblage, the bone tool assemblage also comprised a limited range of types. Eighty three percent (44) of the tools are bevel ended tools and there are only nine other tools, of which seven are points. This assemblage is less diverse than that from many other Mesolithic midden sites such as the Oronsay middens and Risga, and may be suggestive of a limited number of activities (possibly adding weight to the suggestion by other specialists that Sand may have been a specialised site). The quantity of bevel ended bone tools in comparison to the lack of stone bevelled pebbles adds

support to the argument that the two are not directly related and are unlikely to have served similar purposes despite their similar appearance ([Clarke *pers comm*](#)).

Ethnographic evidence, the results of experimental work and functional analyses, both macro and microscopic, have all combined to suggest that the bevel ended bone tools are closely linked to hide working. As discussed in [Section 3.4](#) it has been possible to make a tentative correlation between a specific aspect of hide working (tanning and colouring) and the use of these tools.

9.4.7 Worked shell

In addition to the worked bone there was a small assemblage of worked shell preserved within the midden at Sand. Some pieces such as the



Illus 571: Sand – perforated cowrie

perforated limpets may be natural, but they still remain enigmatic in terms of human activities as they suggest, at the least, the collection of empty perforated shells. A small number of cowrie shells was recovered, some of which are also perforated (see



Illus 459: Sand – cut scallop

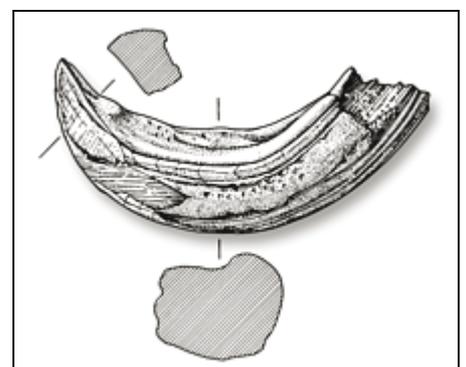
Illustration 571, left), mirroring cowries from other Mesolithic sites such as Cnoc Coig in Oronsay. Ethnographic studies suggest a wide range of uses to which either of these might have been put, from ornaments to fertility objects, or currency. Scallop shell was also worked at Sand (see Illustration 459, right), and the artefacts of worked scallop are more substantial, though perhaps no less enigmatic in that they are equally difficult to interpret today. There were four pieces of scallop: one has had a piece cut out of it, and two are artefacts of which one is a pointed fragment with marked use-wear. Shell has been an important raw material for tools such as knives in many societies around the world and it is not surprising to find that the inhabitants of Mesolithic Scotland made use of it.

9.4.8 Pigment

The extent of pigment use in the Scottish Mesolithic is unclear but pigments were in use well before the Mesolithic in many areas of the world ([Bednarik 1994](#), [Wadley et al 2004](#)). At Sand evidence for the use of pigments has come from three potential sources. Two nodules, one of haematite and one of ochre had working marks on their surfaces that may well relate to the extraction of pigment (see [Section 3.7](#)). In addition, several bevel ended bone tools contained residual traces of iron or manganese oxide (see [Section 3.4](#)) both of which are an integral part of hide processing in many societies. Not only do they serve to preserve and soften the hide, they can also be used to add colour. Finally, there have been suggestions from elsewhere that dogwhelk were used for the extraction of dye, even as far back as the Mesolithic ([Gibbons & Gibbons 2004](#); [Cerón-Carrasco 2005](#)) and this species was among those recovered from the midden at Sand, though not in large quantity. The study of pigments in the Mesolithic is as yet in its infancy, but it is hardly surprising to find that the Mesolithic inhabitants of Scotland used colour, and gratifying to start to recognise physical evidence of this.

9.4.9 Zooarchaeology

Complementing the artefacts there is a large assemblage of ecofacts. The bone assemblage is an important one for Mesolithic Scotland and though it includes animals, the bird and fish assemblages are larger. Red deer dominate the animal bone assemblage, together with some wild boar (see Illustration 572, right) and small numbers of other species such as badger. All of these are indicative of woodland and they add interesting weight to the vegetational history of the area (see below). The most common elements of the deer and boar were metapodials and phalanges suggesting that the removal of hides was an important part of the activities at Sand, though cut marks indicate that butchery was also carried out. The bird remains are dominated by razorbills and guillemots, suggesting both late spring and early summer activity on site, or late summer and autumn, and cut marks on several of these suggest wing removal. Interestingly, while only 2% of the bird bone was visibly burnt, 30% of the mammal bone had evidence of burning, though whether this relates to



Illus 572: Sand – boar's tusk

different practices in the treatment of meat, or to the differential treatment of mammal bone refuse remains to be ascertained. These two possible seasons of activity are supported by the fish remains which are dominated by the cod and wrasse families. The small size of the fish, together with the species present suggests coastal fishing; there is no evidence for deep sea fishing from boats, and stationary traps and nets are likely to have been the main methods of capture employed.

9.4.10 Shellfish

The shell assemblage is physically both large and diverse, though it is not likely to have resulted from intensive shell fish gathering. Limpets predominate but significant numbers of periwinkle, mussel, and dogwhelk are also present. Shellfish were obviously an important resource to the inhabitants of Sand and it is likely that they were not just eaten. Some shell (especially scallop) was used as a raw material for tools. Ethnographically documented uses of shellfish range from their use as bait for both fish and crustacea, to jewellery and even to the use of dogwhelk for dyestuff; any or all of these may have taken place at Sand. Shellfish would have been available on a year round basis, but it is interesting to note that the shell midden at Sand is not large in a Scottish context. Any exploitation of shellfish results in the rapid accumulation of large amounts of debris. The midden at Sand could have built up in the space of a few visits to the site.

9.4.11 Marine exploitation

Fish and shellfish were not the only marine species exploited at Sand. There is a small but significant assemblage of crustacea suggesting that two main species of crab (*Cancer pagurus* and *Carcinus maenas*) were harvested, presumably for eating but also possibly for use as bait. Given the apparent interest in seabirds, fish, crustacea, and shellfish at Sand, one element of the marine ecosystem is under-represented; there was only one seal bone and one whale bone in the midden at Sand. This is in sharp contrast with the evidence from sites such as Cnoc Coig on Oronsay where seal appears to have been intensively exploited.

The marine exploitation that has left its trace is interesting because it provides an alternative view of the Mesolithic, a time for which tasks assumed to be male, notably hunting, have predominated in the literature. This is a common archaeological problem, and indeed it extends to the study of many hunter-gatherer societies where women and children tend to carry out the more archaeologically invisible tasks. It is important to try and provide a rounded view of society, however, and even if women and children were archaeologically invisible in the Mesolithic (itself a moot point), we can be sure that they were around. Elements like the crustacea and the shellfish help to provide an added dimension to our view of Mesolithic life. Although we can never be sure who did what, there is ample ethnographic evidence to suggest that women and children were largely responsible for the secure and constant food supply, such as the collection of shellfish. For the Scottish Mesolithic we cannot be sure who did what, but it is only if we have as wide as possible a view of appropriate tasks that we can approach a balanced interpretation. In this respect, it is important to remember other resources such as seaweed, birds' eggs and plants, which, while potentially useful and with plenty of ethnographic parallels, would leave little archaeological trace.

9.4.12 Vegetational history



Other ecofactual information includes hazelnut shells, a small assemblage of charcoal, the contribution of related pollen studies in the area, and a soil and vegetation survey. Fortuitously, all combine to suggest that at the time of the occupation at Sand woodland



Illus 573: Native birch woodland in Applecross

was more common across the Applecross peninsula (see [Illustration 573](#), left). This comprised open woodland

Illus 574: Remains of *Pinus sylvestris* in a local bog

dominated by mixed birch/pine and hazel communities (see [Illustration 574](#), right) and it must have served as an important resource in itself, not only for food resources such as nuts, berries and tubers, but also for elements such as firewood which were vital to the needs of every day life, not to mention the wide role of wood-related materials such as bark in the material culture ([Clark 1952](#); [Wickham-Jones et al 1986](#); [Bridges 1949](#)). Once again we are prompted to remember the more archaeologically invisible work of women and children.

The charcoal remains suggest that the range of species may have been limited, and the inclusion of poor fuel woods suggests that material for fires may have been short. Fuel gathering trips would be a daily necessity for the occupants at Sand and they may well have had to venture further and further afield as the immediate environs of the site quickly became denuded. Interestingly, the majority of the charcoal remains derive from inland species. A lack of firewood may well have been an important factor determining the life-span of individual stays at the site and this is something that has been seen ethnographically ([Wickham-Jones et al 1986](#)). Nevertheless, human predation had little long-term effect on the woodland at this stage and the impact of the early woodland still reverberates in the area today – stands of bluebells are a common feature of Applecross in the spring, in the open moorland as well as in the recent woods.

There was little on-site pollen, and, though the midden did have enhanced levels of microscopic charcoal, there was little macroscopic charcoal present, suggesting that domestic fires did not take place in, or on, the midden itself. The charcoal present would be consistent with the disposal of ash and other hearth waste into the midden area. In this respect the presence of large quantities of fire cracked stone on the terrace downslope of the midden adds weight to the possibility of activities involving fire taking place away from the midden.

9.4.13 Specialisation at Sand?

The preceding summary shows that many of the strands of evidence relating to the site at Sand can be drawn neatly together and suggest some form of specialisation, though precise interpretation in terms of function, duration, and social aspects of activity are still lacking. The composition of artefacts suggests that a limited range of activities took place at the site, and the size of the shell midden suggests that occupation (or occupations) was short.

Although the artefacts from Sand comprise standard Mesolithic types, in many cases the suite of tools is limited in comparison to other Mesolithic sites such as those on Rùm and Oronsay. Common lithic elements, such as some microlith types (backed bladelets and scalene triangles) are rare, while some specific scraper types found elsewhere (for example Kinloch, Rùm) are missing. In contrast to some Mesolithic sites there were very few artefacts of coarse stone and no stone bevel ended pieces. The coarse stone assemblage is small and dominated by facially pecked cobbles. The bone tools are also limited in range, being almost exclusively dominated by two types (points and bevel ended tools) of which bevel ended tools form over 80% of the assemblage.

Specialisation is a complex state to recognise archaeologically and the interpretation of Sand still lacks refinement. Limited activities, and the small size of the site, might suggest short term occupation/s (perhaps themselves a form of specialisation), or they might suggest longer but closely targeted activity. With regard to the activities carried out at Sand, shell fish processing and some fishing are clear. In addition, a possible relation between bone bevel ended tools and hide processing is beginning to emerge, supported by both experimental work and archaeological evidence (see above & [Section 3.4](#)) and this is fascinating in light of the suggestion that parts of the animal bone assemblage have resulted from an emphasis on hide processing (see [Section 3.11](#)). Detailed function work on the lithic assemblage is lacking, though a limited range of

activities is indicated here too.

9.4.14 Seasonality at Sand

Seasonality is crucial to many elements of the interpretation of life in Mesolithic Scotland. It has been assumed to tie in closely with aspects such as mobility, though mobility itself is now under discussion, as are the ways in which it has been interpreted in the past ([Wickham-Jones forthcoming](#)). Not only is there a wealth of archaeological work on mobility, ethnographic work shows that it is not at all a simple concept and existing assumptions of a simple direct relationship between mobility and seasonality can be challenged. Although there is a body of ethnographic work suggesting that movement was carried out on a seasonal basis ([Grøn & Kuznetsov 2003](#); [Manker 1975](#)) it is now clear that the environment formed only one of many interacting elements of life. Recent ethnographic work in Tierra del Fuego, for example, shows a society (the Yamana) where movement was due to a complex interaction of factors including social, environmental, resource based and seasonal aspects ([Estévez & Vila pers comm](#)). Conditions here vary from those of the northern hemisphere, because the southern Oceanic conditions are not subject to the same seasonal fluctuations, but Tierra del Fuego does broaden the accepted wisdom of the north of Europe.

The fish and bird bones recovered from Sand suggest that there may have been two main periods of activity: one from late summer into autumn and the other encompassing the late spring. Neither would be out of place with hide working, for which there is evidence on site. The autumn is a traditional time for the kill, and hide working also took place at this time in many cultures ([Manker 1975](#)); the beasts are in prime condition to provide meat for the winter along with good quality hides. Elsewhere, hides are worked in the spring ([Beyries 1999](#)) and it is at this time that some cultures kill mature bull deer for meat as they can be tainted during the rut. Autumn is the time to consider the needs of winter in other ways – clothing is prepared, shelters repaired and many other tasks undertaken as the nights start to draw in. Spring, however, is also a time for repair and preparation for the activities of summer, and spring kills can provide an important celebration for those who have survived the rigours of winter. At both times shellfish would provide a vital resource to supplement the diet of those who were involved in hide processing and other work, and also to use as bait for other types of fishing. At Fife Ness in eastern Scotland the predominance of crescents among the microliths has been tentatively linked to the exploitation of marine resources in the autumn ([Wickham-Jones & Dalland 1998a & b](#)), suggesting that the high quantity of crescents at Sand may be noteworthy in this respect. Activity in the autumn is also supported by the recovery of burnt hazelnut shells which would themselves have formed an important food resource (suitable for storage and providing fats vital to the lean hunter-gatherer diet). No doubt other woodland products such as roots and berries also supplemented the diet at this time.

9.4.15 The wider site at Sand

It is important to remember that this information comes by and large from the rubbish deposits at Sand and it may, thus, be biased. Information away from the midden confirms that activity took place across the small open apron in front of the rockshelter, but it only hints at its nature. Large quantities of heat-fractured rock attest to the importance of fire (see [Illustration 362](#), right) – useful both for cooking and processing, as well as to provide light and heat.

The nature of the site away from the midden is important when the rarity of midden sites is considered. Although new midden deposits are still being discovered, the majority of Scottish Mesolithic sites do not have preserved midden and their lack of organic preservation provides a restricted view of material culture. Sites like Sand are a timely reminder of the detail that may be missing in non-midden settings. Sand also provides strong support for the abandonment of the argument that midden sites might represent a quite different

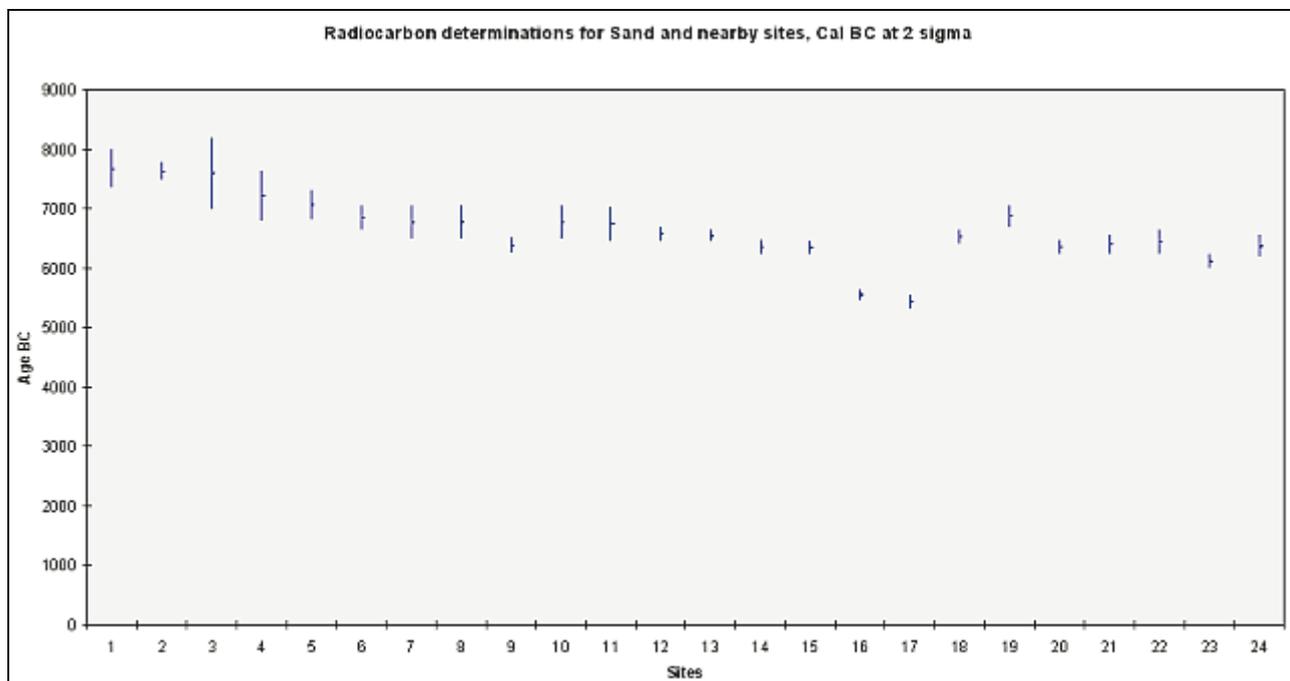


Illus 362: Sand – Area A during excavation of heat-fractured rock

cultural development to non-midden sites. Although there are minor specific differences, the lithic assemblage from Sand is broadly similar to the stone tools from open-air sites like Kinloch in Rùm (Wickham-Jones 1990). It is likely that the differences that do exist reflect other, 'less-cultural', factors such as task or gender orientation, seasonal bias, or some form of specialisation – or a combination of factors.

9.4.16 Date

Another dimension to the evidence from Sand lies in the radiocarbon determinations. The site at Kinloch shows that Mesolithic settlement was established in the area by the end of the 8th millennium, and Camas Daraich and An Corran provide supporting evidence of increasing activity into the 7th millennium, but the Sand dates are still surprisingly early (see [Illustrations 575](#), below & [569](#), above). It is, to date, one of the earliest dated midden sites in Scotland. Sand extends midden deposits back, but perhaps that is not surprising if one is to argue that midden material is partly an accident of preservation. Seven of the ten radiocarbon determinations from Sand suggest a relatively contained period of Mesolithic activity in the early-mid 7th millennium BC, perhaps divided into two: between 7050–6440 BC; and 6470–6240 BC. Three relate to later activity and are discussed below. It is interesting that the separate counts provided such similar dates and perhaps this supports the argument for short term activity.



Illus 575: Radiocarbon determinations relating to the Mesolithic from Sand and nearby sites
 Sites: 1–9 = Kinloch, Rùm (Wickham-Jones 1990);
 10–17 = Sand, Applecross;
 18–21 = Camas Daraich, Skye (Wickham-Jones & Hardy forthcoming);
 22–23 = Loch a Sguirr, Raasay;
 24 = An Corran, Staffin, Skye (Hardy *et al* forthcoming a)

9.5 Midden sites in a Mesolithic context

The argument for relatively short term, specialised activity at Sand is an interesting one in view of the discussion over the role of the midden in the Mesolithic. Cultural differences apart, middens have been interpreted under various guises including famine sites, specialised sites for the exploitation of coastal resources, and feasting sites. They have been regarded as home to part of a community, a whole community, and more than one community (Bailey & Milner 2002; Bonsall 1996; Russell *et al* 1995; Mellars 2004). Perhaps we can only be certain that there are different types of midden and no fixed interpretations.

Sand sheds unusual light on this because though there is evidence to suggest that it may have been a specialised site, that specialisation is not wholly coastal, and it may well not be entirely economic. It is indeed unlikely that the economic, social, and ritual elements

of life (to name but a few) were clearly separated, though they certainly form convenient pigeon holes for the archaeologists of the 21st century. The ecofact and artefact evidence combines to suggest that the main tasks at Sand included both hide processing and marine exploitation, but specialisation is a complex process that involves more than simple functional explanation. Exploitation at Sand concerned both coastal and terrestrial resources and may have been short term. The coastal location of the site may well have provided the key to facilitate this – access to marine and littoral resources would provide an easily accessible and reliable source of food while people were preoccupied with other tasks.

At the same time, the proximity of the sea means that in the autumn fish, shellfish, and seabirds were on hand to process and build up for winter supplies, while the coastal woodlands provided a good source of nuts and other vital fats and carbohydrates, these could be easily stored. It is all too easy to fall into the trap of considering a site only in terms of a single use, when simple human nature suggests that this is unlikely. In the same way the population may well have fluctuated throughout one occupation, and from year to year.

The midden site at Sand would thus seem to represent not the specific result of some ancient famine or feast, but rather a normal part of life that could be revisited from time to time. In this respect it is interesting that Mesolithic middens like Sand are still relatively rare in the area, and also that activity at Sand as indicated by the presence of shell middens did not apparently continue beyond the later 7th millennium.

Only two other midden sites with Mesolithic dates have been recorded in the area of the Inner Sound, An Corran (SFS 1), and Loch a Sguirr (SFS 8). Further afield on the west coast knowledge is limited by a lack of research on the scale of SFS, but midden sites become even sparser (see [Illustration 576](#), right). To the north there are no known sites (though they presumably wait to be found). To the south Risga, on Loch Sunart, is well documented if as yet not properly interpreted ([Pollard *et al* 1996](#)). Ulva cave, on the small island of Ulva, off the coast of Mull, contains a midden site dated to between 7100 BC and 4100 BC ([Russell *et al* 1995](#)). There is a cluster of midden sites in the caves around Oban, of which Carding Mill Bay in a rockshelter ([Connock *et al* 1992](#)) and Lón Mór, an open-air site ([Bonsall *et al* 1993](#)) have most recently been examined. In Oronsay the five open midden sites stand out by virtue of their great size though again publication remains incomplete ([Mellars 1987](#)). If midden sites were merely a part of the annual cycle surely one might expect more of them over the four thousand years or more that constituted the Scottish Mesolithic? Several mitigating factors might come into play: a low population; unfavourable preservation conditions, including sea-level change; archaeological invisibility; and a lack of modern survey work. Midden sites have often been seen as a defining characteristic of the Scottish Mesolithic ([Lacaille 1954](#); [Saville 2004](#)), but there are two problems with this. Firstly, it is increasingly clear that there are many different types of midden: they do not represent a uniform phenomenon. Secondly, it seems that, in Scotland, middens may well be rare – fortuitous survivors that have served to flesh out the bare bones provided by most sites.



Illus 576: Location of non-SFS Mesolithic sites mentioned in text

Any comparison of Sand with other sites is clearly hampered by the state of knowledge of some of them, but a trawl of the literature provides some interesting information. In Oronsay the bone specialist concluded that some of the differential bone representation might be the result of the working of deer hides ([Grigson & Mellars 1987:254](#)). Carding Mill Bay produced only a very small bone assemblage and though fish, birds and mammals were present the specialists felt unable to be certain that they related to human activities ([Hamilton-Dyer & McCormick in Connock *et al* 1992:34](#)). The bone assemblages from Risga and An Corran have yet to be published, though analysis of the material from An Corran indicates that while the fish and mammal remains are very

similar to Sand the bird assemblage is dominated by puffin, which are not present at Sand ([Bartosiewicz forthcoming](#)). Loch a Sguirr, SFS 8, yielded very few bones, and they do not seem to relate to the Mesolithic deposits. Although there are some similarities, it seems that each midden site is quite different to the others. Furthermore, there is great chronological variation between them (see [Table 190](#), below). Across the span of the Mesolithic the rarity of midden sites is reinforced.

Table 190

Site	7500 – 7000 BC	7000 – 6500 BC	6500 – 6000 BC	6000 – 5500 BC	5500 – 5000 BC	5000 – 4500 BC	4500 – 4000 BC	4000 – 3500 BC
Sand		x	x		x			
Loch a Sguirr			x					
An Corran		x	x		x			x
Risga					x	x		
Druimvargie	x	x	x					
MacArthur				x				
Lon Mor			x		x		x	
Raschoille		x	x	x	x			x
Carding Mill Bay							x	x
Ulva		x	x			x		x
Cnoc Sligeach						x	x	x
Cnoc Coig						x	x	x
Caisteal nan Gillean					x	x	x	
Caisteal nan Gillean 2							x	x
Priory Midden						x	x	

Table 190: Date spans for midden sites in the west of Scotland (information from [Ashmore 2004b](#))
NB: dates are based on a variety of raw materials, and some were taken several years ago

The Mesolithic in Scotland spans a period of at least four thousand years. Recent research has shown that not only did it cover an extensive time span, but also that there was considerable complexity within the Mesolithic – both between different geographical areas, and between different chronological episodes within the period. So far, the majority of dated sites, of any type, fall into the first half of that period and in the study area there is currently a complete lack of dated sites for the thousand year period between 5000–4000 BC. Superficially there is little as yet to distinguish earlier Mesolithic sites from later Mesolithic sites in Scotland so that it is impossible to predict whether a site will fall into the earlier or later period, except that most new information turns out to add to our knowledge of the earlier Mesolithic while the later part of the period remains a bit of a desert. There are, of course, exceptions. To the south of the study area, sites like Risga and the Oronsay middens provide important information regarding settlement between 5000–4000 BC ([Ashmore 2004a & b](#)), but the fact remains that it seems to be hard to identify the later sites. One possibility is that a change in artefact styles took place, thus affecting our rate of recognition. One of the most telling indications of

Mesolithic activity is still the presence of blades and microliths on a site. If they were absent in the later period sites might well go unrecognised. This cannot be quite the whole picture, however, because there are sites where the microliths are associated with later dates, as the example of the Sands of Forvie shows ([Section 4](#); [Warren forthcoming](#)). Knowledge of the Mesolithic in Scotland is increasing, but it is clear that our understanding is limited. There are still many problems to be resolved. We need yet more sites... and more ways of studying them.

Although the majority of dates suggest a fairly contained lifespan for the midden at Sand in the early/mid 7th millennium, there is a small amount of evidence suggesting some activity at the rockshelter in the earlier 6th millennium. There was little excavation in this area, but the matrix of the deposits is quite different to that of the shell midden, it comprises an organic deposit without shells (see [Illustration 343](#), right). The finds here comprised lithics and, with the exception of the small ground stone axe, there is nothing to distinguish them from the rest of the site. Axes such as this would generally be associated with the Neolithic, albeit from the earliest Neolithic onwards, but the date for these deposits precedes recognised Neolithic activity in Scotland (see [Sections 3.1 & 4](#)). This may well be another example of the limitations of the conventional 'three age system' by which artefacts, life-style and culture all apparently changed simultaneously at specific points in time (see [Section 4](#)). Small axes such as this are rare but not unknown. Whatever its role, it seems that some 500 years after the cessation of activity related to the midden, people were once again making use of the shelter afforded by the rockshelter at Sand. It is likely that the midden was still visible and these later occupants may well have been responsible for treading the path that lay across its surface. They seem to have brought with them a similar suite of tools to those used by the previous inhabitants, but they were concentrating on different tasks and less dependent on shellfish. Someone lost, or deposited, an axe. Not long after they left, the old midden collapsed downhill, burying and mixing with their remains.



Illus 343: Sand – Area A at the end of excavation, the dark shell free organic deposits can clearly be seen below the slumped midden

Finally, though there was no obvious sign during excavation, there are a few finds that indicate even later activity at Sand. This took place below the rockshelter, apparently making use of the stabilised surface of the midden which served to level the ground. The finds comprise small fragments of pottery, metal finds including slag and a hearth bottom, copper alloy droplets, four glass beads and, handily, a couple of human teeth. One of the latter has been dated to 2150–1770 BC. Interestingly there was no disturbance of the midden surface visible to the eye. The artefacts had all percolated down into the midden, not surprisingly given its loose matrix, though most remained in the upper spits of the midden material (see [Table 98](#), below). The small amounts of material found suggest that several short lived episodes were involved, some of which were based around the working of bronze and/or iron. Luckily, none resulted in substantial disturbance to the midden.

Table 98

Find	Area/square	Spit/Context	Associated Date if present	Period
pathway	B1	Surface Context 12		Post Midden
Polished stone axe	A/A2B	Spit 8 Context 27	5630 to 5470 BC	Early Neolithic?
human upper left incisor	B2/B1A	Spit 3 Context 13	2150–1770 cal BC	Bronze Age

Barbed and tanged arrowhead		Surface		Bronze Age
Casting waste	A/A2B A/A1B	Spit 6 Context 17 Spit 2 Context 1/2		Bronze/Iron Age
Glass beads	A/A4B B3/B5B B3/B8B	Spit 2 Context 17 Spit 4 Context 1/2 Spit 2 Context 1		Iron Age – post Roman
Slag	A/A2B B2/B2A B3/B5B B3/B21A	Spit 3 Context 29 Spit 4 Context 13 Spit 3 Context 1 Spit 2 Context 1		Iron Age?
Coarse pottery	A B1 B2 B3	Spits 2–6 Contexts 1/17/28/29 Spits 2–4 Contexts 11/12/13 Spits 1–4 Contexts 1/13/24 Spits 1–7 Contexts 1/7/8		?post-Medieval
Glass sherds	A/A5B A/A6B A/A6B	Spit 1 Context 1 Spit 2 Context 17 Spit 1 Context 1		post-medieval
Glass bead	B1/B25A	Spit 3, Context 13		15th–18th century AD
Fragments of metal	B1/B24B B3/B5B & B21B	Spit 6 Context 13 Spits 3 & 1 Context 1		?
Nails	A/A2B & A6B B2/B1B B3/B4B	Spits 3 & 2 Contexts 17/29 Spit 4 Context 24 Spit 1 Context 1		?
Knife tip	A/A6B	Spit 1 Context 1		?

Table 98: Summary of later material from the shell midden at Sand (repeated from [Section 3.2.4](#))

9.6 First foragers: the Mesolithic around the inner sound

9.6.1 Dates

The nature of the remains at Sand meant that in some ways it came to dominate the project in 2000. But the excavations here were only a part of SFS, and, ironically, though it is important for its early dates, the Mesolithic forms only a small part of the rest of the survey. Before considering the later sites, however, it is useful to look at the Inner Sound in the Mesolithic.

SFS confirmed a human presence in the Inner Sound from the earliest period of activity in the region. Not surprisingly, the dates for the very earliest human settlement in Scotland are slightly earlier and come from further south and east (see [Section 4](#)). Within 500 years, however, people were apparently settled across Scotland and there is good evidence that they were active in and around the Inner Sound. There are dates from this period from Kinloch ([Wickham-Jones 1990](#)), SFS 1 An Corran A ([Hardy *et al* forthcoming](#)), SFS 8 Loch a Sguirr (see [Illustration 209](#), right), and SFS 4 Sand. Dated sites are only part of the picture, however. SFS survey work revealed other sites with Mesolithic artefacts: SFS 30, 101, 193, An Corran C, E, & F; SFS 75 Applecross Manse; SFS 104 Fearnmore 1, SFS 196–8 Scalpay 6–8; SFS 15 Shildaig and SFS 9 Redpoint.



Illus 209: SFS 8, Loch a Sguirr, Raasay – rockshelter high in the cliff

9.6.2 Types of site

The rest of the SFS sites with Mesolithic material are open lithic scatters with no midden. Although the lack of midden is likely to relate partly to local preservation conditions it also suggests that a suite of different activities took place around the Inner Sound, though this could only be confirmed by excavation. It is supported, however, by the emerging evidence that in later times midden and rockshelter sites were but one facet of a complex pattern of human activity across the area. Even with the small amount of evidence that we have, it is clear that this is reflected in the Mesolithic. So far the Mesolithic evidence indicates exploitation of a range of locations from caves and rockshelters, to sheltered coves (SFS 104, Fearnmore 1, [Illustration 43](#), below left), wide rocky bays (SFS 9, Redpoint, [Illustration 577](#), below centre), sheltered bays (An Corran), inland sea lochs (SFS 15, Shildaig), old terraces (SFS 75, Applecross Manse, [Illustration 25](#), below right), and open coastal ridges (Scalpay).



Illus 43: SFS 104, Fearnmore 1 – general view, site lies just above the small cove in the centre of the photo



Illus 577: SFS 9, Redpoint – testpitting team in the dunes



Illus 25: SFS 75, Applecross Manse – shovelpitting on the terrace

The Mesolithic lasted for several millennia, however, and it must be admitted that the evidence is spread pretty thinly across time. We have either to postulate periods of abandonment, or accept that most Mesolithic sites have either not survived or are yet to be found. It is unlikely that the population of west coast Scotland was ever large, but given the fertility of the area (both on land and sea), long periods of human exodus seem unlikely. Given the transitory nature of many sites, Mesolithic remains are known to be fragile and it seems likely that some sites may simply have disappeared. The project

recorded active erosion in numerous places. Equally, the problems of locating sites with no obvious remains such as midden were also highlighted, and many sites could well be awaiting discovery. Both this and other survey work have shown how the visibility of sites today is variable and dependent largely on weather conditions (Mithen 2000).

9.6.3 Mobility in the Mesolithic of the Inner Sound

One of the avowed interests of the project lay in an examination of mobility in the Mesolithic. Can we shed further light on this? In some ways the lack of Mesolithic sites is frustrating as it limits our ability to consider the possible relationship of one site to another. There are other ways of approaching the problem, however (Wickham-Jones 2005). One increasingly mentioned approach to mobility is to look at the material culture for elements that must have been brought to site from further afield. The resource of choice is often lithics because not only do they tend to survive, but also it is often possible to identify specific source locations.

Around the Inner Sound the lithic raw materials do indeed offer an interesting picture of procurement (see Section 5). Some, like quartz and the many pebble chalcedonies, are ubiquitous; they occur around the Inner Sound and were used on most sites, though they were probably locally obtained and thus offer little information regarding mobility. Others such as the baked mudstone and Rùm bloodstone have sources that are specific and limited. Wherever they are found, therefore, they have to have been transported. The most likely method of transportation involves people – the Mesolithic inhabitants of the Inner Sound, and interestingly the two stones do not provide quite the same picture. Both are good quality raw materials but whereas Rùm bloodstone is found in small quantities on most sites, baked mudstone is found in larger quantity on a few sites while it is almost absent from others. It may be relevant that the source of Rùm bloodstone lies outside the Inner Sound, though not far away, on the island of Rùm some 70km to the south. Baked mudstone, however, is to be found at Staffin on the north-west shores of the Inner Sound. Wherever Rùm bloodstone was used it all had to be bought in to the area and we know that it was a favoured resource that assisted the production of both microliths and blades. Baked mudstone was also a quality knapping material but though it is an important part of the blade assemblage at some sites such as SFS 104 Fearnmore 1, it is almost completely lacking elsewhere, for example in the Scalpay sites. This is even more unusual when one considers the proximity of Scalpay to the baked mudstone source at Staffin.

Another approach is to look at the physical conditions of an area and consider how it might have facilitated or hindered the mobility of the human population. The importance of water, particularly sea, transport in the Mesolithic, is widely recognised (Warren 1997 & 2000, Fischer 1995) and this is reinforced by ethnographic work from around the world. The Inner Sound offers a confined, sheltered, area where transport would usually be facilitated (see Illustration 8, right) even though managing small craft here does require skilled seamanship. There are strong currents in parts of the Inner Sound and weather conditions and visibility can both deteriorate quickly, though it is important not to underestimate the skills in weather prediction and marine knowledge of those who live in close contact with the sea (Steel 1988; Towsey 2002). At the same time there are numerous sheltered bays and this combined with the variety of resources available around the shores of the Sound must have created favourable conditions for a mobile hunter-gatherer population. Easy access into a highland hinterland should not be forgotten. Applecross and Skye, as well as Torridon, all provide a variety of routes to access different resources elsewhere.



Illus 8: View to the west across the Inner Sound

At present it is impossible to explain the distribution of lithic raw materials in detail, but it clearly shows that people were moving around the Inner Sound in the Mesolithic, and weight is added by the favourable conditions of the Sound itself. There are not enough sites, and too little is known about most of them, to suggest whether they fulfilled

different roles in the annual cycle, or whether there are other explanations for the differences observed between sites. As seen above, each offers very different settings and types of remains; though the picture has still to be rounded out by excavation and the addition of information from inland sites.

The available suite of archaeological and ethnographic evidence would suggest that the Mesolithic population of the Inner Sound was mobile. The community may well have been small; we cannot yet say whether the sites result from the movement of a single extended group or from several groups. Given the size of the area, however, and what we know of the resource base, the former is perhaps more likely. Even had various groups existed, ethnographic work shows that the interpretation of territories is unlikely to be simple. Both clearly defined territories and a fluid system of overlap have been recorded in different high latitude coastal areas (see [Ackerman 2003](#); [Piana et al 1992](#); [Orquera & Piana 1999](#) for ethnographical and archaeological work in similar marine terrain; and [Smith 1992](#) has looked at carrying capacity in Scotland). It is also interesting to note that evidence for contacts and mobility furth of the Inner Sound is limited. The wider distribution of Rùm bloodstone has been well discussed, but this is, at present, the only hint. There are few positive identifications of baked mudstone further afield, and no other exotic materials in the Inner Sound. It is thus possible that, from the point of view of the sea at least, the Inner Sound offered a self contained niche within which the Mesolithic hunter-gatherer-fisher community could thrive. Added value would of course be provided by the upland hinterland which should clearly be a focus for further research.

Interestingly, the picture of a limited movement of raw materials provided by Rùm bloodstone and by the baked mudstone from Staffin is mirrored by the distribution of pitchstone from Arran in the Mesolithic ([Wickham-Jones 1986](#)). A general picture seems to be emerging of small areas, up to some 70km in diameter, within which the Mesolithic groups of western Scotland were mobile. This is contrasted by work elsewhere where larger areas are suggested such as in southern England, or parts of Ireland, or indeed on continental Europe ([Wickham-Jones 2005](#)).

9.7 Later periods around the Inner Sound



Illus 578: Location of SFS sites mentioned in text – sites dating to later than the Mesolithic

Some of the survey sites around the Inner Sound clearly relate to activity in the earliest times (see [Section 2.2](#)). Some are more recent (see [Illustration 578](#), left). Other sites were used on and off up to the modern period (see [Illustration 579](#), right). Indeed the indications are that at some sites activity is on-going.

9.7.1 Early Farmers

The emerging Neolithic in the area is attested by dates from both bevel ended bone tools and human bones in the midden at SFS 1 An Corran A. In addition there are the early dates associated with the small ground stone axe from SFS 4 Sand, and the later human tooth from the top of the Sand midden. It is likely that some of the other lithic scatter sites at An Corran belong to this period, as may some of the lithic scatter material from Scalpay. The lithic material from the scatter site at SFS 147 Cnoc na Celpairein looks Neolithic, and there was also evidence of activity at this



Illus 579: SFS surveyors make use of a well maintained shelter at SFS 40, Toscaig 8



Illus 144: SFS 89, Coire Sgamhadail

time from two radiocarbon determinations on material from the midden in the large cave at SFS 89, Coire Sgamhadail 1 (see [Section 4](#) & [Illustration 144](#), right).

9.7.2 The First Bronze Workers



Illus 119: SFS 77, Camusteel 2

By the start of the 2nd millennium BC metal working had become established across Scotland. The evidence of a brief episode of metal working from the top of the midden at Sand provides a reminder of this early smithing activity. The number of dated sites from this period in the area is small, however, until the last centuries BC when the rockshelters at SFS 77 Camusteel 2 (see [Illustration 119](#), left), SFS 20 Toscaig 2, SFS 49 Creag-na-h-Uamha, SFS 68, Allt na Criche, SFS 8 Loch A Sguirr, and SFS 1, An Corran all provide dates. Open-air sites at this time are lacking, but archaeologically they would be almost invisible due to the fall off in lithic use and the friability of other evidence.

9.7.3 Iron Working

The 1st millennium AD is similarly dependent on radiocarbon dates from middens in rockshelters and caves: SFS 2 Crowlin 1; SFS 41, Toscaig 9; and SFS 77, Camusteel 2 all have dates from this period. The general paucity of evidence for activity at this time is interesting but once again the material culture is not conducive to archaeological investigation.

9.7.4 The Historic Period

After AD 1000 the information level picks up. Radiocarbon determinations relating to this later period come from eight cave and rockshelter sites, seven of which are shell middens inside rockshelters (SFS 26 is a rockshelter with a partly bare rocky floor with some soil covering): SFS 41, Toscaig 9; SFS 49, Creag-na-h-Uamha (see [Illustration 47](#), below left); SFS 114, Fergus' Shelter; SFS 2, Crowlin 1; SFS 66, Ard Clais Salacher 2; SFS 68, Allt na Criche; SFS 22, Crowlin 3; and SFS 26, Crowlin 7. In addition there are two dates from open-air middens: SFS 6, Ashaig 1; and SFS 99, Clachan Church (see [Illustration 51](#), below centre). The material culture has survived better from these more recent times and consequently there are other sites with evidence that suggests later activity: cave and rockshelter sites with later material include SFS 76 Camusteel 1; SFS 77, Camusteel 2; SFS 17, Church Cave; SFS 89 Coire Sgamhadail 1; SFS 90, Coire Sgamhadail 3–6; SFS 23, Crowlin 4; SFS 58, Rubha Chuaig (see [Illustration 46](#), below right); SFS 19, Toscaig 1; SFS 20, Toscaig 2; SFS 35, Toscaig 4; SFS 38, Toscaig 6; and SFS 63, a cave in north Applecross, of which nine sites are also shell middens (SFS 76, SFS 23 and SFS 63 are all rockshelters with no visible midden).



Illus 47: SFS 49, Creag-na-h-Uamha



Illus 51: SFS 99, Clachan Church – Test Pit 2 lies in the central foreground



Illus 46: SFS 58, Rubha Chuaig – general view, the site lies in the centre of the picture



Illus 48: SFS 96, Meallabhan – site lies halfway down this dune

There are also two open-air sites with evidence from this period: SFS 11, Sand 3; and SFS 96, Meallabhan (see [Illustration 48](#), left). The latter is particularly interesting as it has considerable evidence of metal working (see [Illustration 233](#), right). Metal and metal working remains came from several sites and provided a general picture of short term activities in many of the sites. In general the evidence suggests that this comprised expedient craftwork; that is repair rather than manufacture. It is particularly indicated



Illus 233: SFS 96, Meallabhan – metal pin

by unused rivets and small scale smithing. There were only four sites that produced clear evidence of iron working and, where it could be characterised, this was blacksmithing. At SFS 6 Ashaig 1, SFS 22 Crowlin 3 and SFS 96 Meallabhan this was minimal, indicating iron working somewhere in the vicinity. SFS 89 Coire Sgamhadail 1 might also be associated with iron working but only SFS 4 Sand produced significant slag remains, including a hearth bottom. Even so, the small quantities and tight distribution at Sand suggest a single short lived episode, and this would be supported by the lack of other physical evidence from this time. There was no sign of disturbance to the earlier deposits. The melted copper alloy droplets in the same area of the midden suggest that limited bronze working may have been involved as well. Elsewhere, isolated metal objects on some sites are likely to have accumulated from accidental discard and breakage.

9.7.5 Biases in the Historical record

For the more recent part of this period the relative scarcity of level fertile land around the Inner Sound means that many sites may lie under modern settlement. In this respect the bias of recent archaeological evidence towards the eastern shores of the Inner Sound is noteworthy. The abundance of cave and rockshelter sites here is likely to have influenced perceptions of past activity (see [Illustration 6](#), right). The lack of information relating to the western, Skye, shores of the Inner Sound, and indeed to many of the islands is likely to relate to the methods of survey, which did not for example record upstanding remains of recent buildings, rather than to an actual lack of past activity.



Illus 6: SFS 2, Crowlin 1 – site is prominent in the seascape

9.8 Targetting areas and themes for further study

During the course of work there were, of course, a number of times when it would have been nice to go on and find out more. Additionally, other possibilities for further work arose as specialist work unfolded. The Inner Sound is a large area, but several locations stood out as worthy of further exploration.

Staffin Bay, with its numerous lithic scatter sites is one obvious area worthy of further study. The SFS fieldwork suggested that there was a large amount of archaeology preserved here, but active erosion means that this resource is under serious threat (see [Illustration 57](#), right). Despite the quantity of lithics recovered, it was not possible to be certain about the nature of these sites, nor of their precise date, though activity in both the Mesolithic and Neolithic is suggested and this would obviously be supported by the radiocarbon determinations that came from the nearby midden at SFS 1 An Corran. It is possible that the sites in Staffin Bay might shed light on the mysterious lack of later Mesolithic sites in the area. If later Mesolithic sites do not



Illus 57: SFS 29, An Corran B – active erosion at the edge of the cliff in 1999

usually comprise the microlithic assemblages that we have come to expect, then 'nondescript' lithic assemblages such as those from Staffin may well fill the gap. Blanket shovel pitting would provide a good starter to approach the problem of characterising and understanding the sites at Staffin.



Illus 100: General view of An Corran from the north, the site lies below the rocky cliff in the centre of the picture

To the south end of Staffin Bay lies the site of An Corran A (see [Illustration 100](#), left). Here excavation in the 1990s yielded a long-lasting midden site with activity that stretched from the Mesolithic into the Neolithic ([Hardy et al forthcoming](#), [Saville & Miket 1994a & b](#)). An Corran A is a complex site with a lot to offer regarding different periods of Mesolithic activity, as well as Neolithic activity and burial. Although it is not easily accessible today, some of the midden at An Corran A has been preserved and would clearly repay more considered excavation, particularly in the context of the increased information that is now available regarding the Inner Sound in general.

Another concentration of lithic scatter sites was revealed in Scalpay. Here reduced rates of erosion mean that the sites are under less threat, though in the long term attrition is still ongoing. The Scalpay sites highlight their own questions about past activities around the Inner Sound. Once again they seem to relate to both Mesolithic and Neolithic activity, though the SFS brush was very broad. Perhaps most unexpected was the almost complete lack of baked mudstone at these sites, though they do not lie far from the source of mudstone at Staffin. Only further work, including excavation, could put this in its wider context.

The three lithic scatter sites of SFS 9 Redpoint, SFS 15 Shildaig and SFS 104 Fearnmore 1 occupy key locations around Loch Torridon. Each offers considerable potential for further work. In the case of Shildaig the site has been destroyed but it was excavated and the finds, though prolific, have never been properly studied ([Clarke & Griffiths 1990](#)). This is now on-going as part of an investigation into the use of quartz in prehistory around the west coast of Scotland ([Saville & Ballin 2000](#)) and the results are keenly awaited. Redpoint is a large sand dune site that is subject to active erosion. New flaked lithic material is revealed every year, suggesting that the site is both large and under considerable threat. This includes Mesolithic and more recent material. Redpoint would not be an easy site to approach for detailed excavation, but serious monitoring and the detailed study of the lithics that can be collected would add greatly to our understanding of the area. Sand dune sites like this may not be easy to study but work at the Sands of Forvie ([Warren forthcoming](#)) has highlighted the fact that it is possible to recover valuable archaeological information through the use of painstaking excavation and analysis. SFS 104, Fearnmore 1, in contrast, lies under consolidated turf and is not seriously threatened apart from a small amount of erosion due to the existence of a foot path that crosses the site. Nevertheless, Fearnmore 1 did yield an interesting lithic assemblage including Mesolithic material and it occupies a strategic location at the head of a sheltered inlet of the sea. Excavation at Fearnmore 1 has much to offer our understanding of the Inner Sound in the Mesolithic.



Illus 142: SFS 144, Clachan Old Harbour, Raasay – general view from the north-

The one inter-tidal site, SFS 144 Clachan Old Harbour (see [Illustrations 142](#), left & [66](#), right) suggests that the possibility of further archaeological deposits in the inter-tidal zone of the Inner Sound should be explored. As sea-level change is very dependent on various local conditions (see [Section 7.1](#)) it is not possible to extrapolate precisely the height of sea-



Illus 66: SFS 144, Clachan Old Harbour, Raasay – preserved timbers in the mud

east level at different dates, even from one area of the Inner Sound to the next. But the remains at Clachan Old Harbour show that there is potential for inter-tidal sites and a combination of a likely early date with good preservation conditions (see [Section 7.2](#)) means that they would be particularly important if found. The history and rarity of the site at Clachan Old Harbour, itself, means that though the survival of much archaeological material here is doubtful, there is still a place for further work to check this.

Down the centre of the Inner Sound lies a chain of rocky islands whose commanding position must have made them crucial to both the Mesolithic and later populations. Several sites have been discovered here, including some that have been dated to the Mesolithic, such as SFS 8, Loch a Sguirr. Many of the middens are large and would repay further work. Many of these sites are undergoing active erosion, adding urgency to the interest of archaeological examination.

The study of the individual artefacts and ecofacts from Sand also suggests several directions for further examination. There was, for example no detailed use-wear study of the lithic assemblage, though the techniques for this work and the benefits that it brings are both well established ([Finlayson 2004](#); [Hardy forthcoming b](#)). Further work on the technology of both bone and shell tools is another direction, as is more detailed comparison of aspects of the ecofacts.

Turning to themes rather than sites or artefacts *per se*, one theme that had to be abandoned by the project concerns the procurement and use of the various individual lithic raw materials around the Inner Sound (see [Illustration 365](#), right). This requires detailed co-operation between geologists and archaeology, and it is clearly a theme of some importance to our understanding of the prehistoric population of the area. Not only would it be useful to pinpoint the precise source areas and the spread of individual rocks, but it would be useful to look at any possible preference for the use of different materials for different types of tool. Other aspects include a study of extraction techniques, as well as any change in the exploitation of the different stones through time. SFS has built up a considerable database of raw material information as a basis for work of this kind.



Illus 365: Mixed lithic raw materials

Another theme must concern examination of the missing pieces of the Mesolithic picture. SFS targeted the coastlands, what about the inland sites? Detailed fieldwork, including perhaps shovel pitting on a large scale, is necessary to fill out the exploitation of other resources.

The search for later Mesolithic sites in the area is obviously another theme that has been touched on above. We need to characterise the later Mesolithic remains and build up a picture of sites that relate to this period. Did the population decline in the years leading to the adoption of farming? The brief glimpse of an axe and later activity at Sand suggests that the transition to farming and other changes of lifestyle into the Neolithic is also a theme worthy of examination.

The role of midden sites is another theme that we have only just begun to tackle. The information from Sand is obviously a step in the right direction. The midden at An Corran is one potential source of information, but one of the important lessons of SFS has been the fact that middens do not just comprise a Mesolithic resource. The SFS survey work has resulted in a considerable database of midden sites that comes right up to recent times. Many were test pitted, but further work on the changing role of midden sites through time would provide its own rewards. In particular it would be interesting to set the middens from more recent periods into their wider context by including in the study the historical built remains that were ignored by SFS.

Elsewhere midden material was buried by rockfall and was thus inaccessible for SFS test pitting. As much of the rockfall in the area occurred in the early Holocene these sites are worthy of further examination. Our picture of the very early settlement of Scotland is still hazy, but we can be fairly certain that most known sites relate to the time by which people had become established in this new land. Any sites that might relate to those tentative earlier periods of colonisation should be prioritised for study.

One aspect of life in the Inner Sound that is conspicuously absent from the SFS record is death and burial. Apart from a couple of teeth at Sand, actual people and their burial monuments do not figure in our records. One clear explanation for this lies in the sites targeted for study – we did not record later burial monuments. The lack of any evidence from the caves and rockshelters is interesting, however, as this type of location does figure in the burial record elsewhere in periods such as the Neolithic and Bronze Age (for example around Oban; [Pollard 1990 & 1996](#)). There is only one site in the SFS area where burial in a rockshelter seems to be attested in the Neolithic: SFS 1 An Corran ([Hardy et al forthcoming a](#)). Prior to that, information relating to burial in the Mesolithic is almost entirely absent from Scotland as a whole (the scant remains from Oronsay being the obvious exception; [Conneller 2006](#); [Mellars 1987](#)). It is important to remember that the disposal of the dead may not necessarily have led to permanent remains, nor have followed a single pattern. The changing face of disposal of the dead is one theme that would well repay further study.

The quality of archaeological preservation around the Inner Sound is generally high. In this respect it offers great potential for a study of the changing emphasis on local resources with the introduction of farming and other historical developments. The use of shellfish in historical times (see [Table 191](#), below) is a matter of interest and is now the subject of on-going research in the Southern Hebrides. Although it has been little researched in a Scottish context, recent work in Islay ([Hardy 2004](#)) suggests that numerous limpet middens were formed here in early historic times, adding weight to the value of the record from the Applecross peninsula. It is not clear why limpets suddenly became popular at this time though it is possible that some widespread cause, for example climatic deterioration or social pressure, may have forced a change in the subsistence routine. Although historical references suggest very much that shellfish were a famine food, today they are promoted very much as quality goods (though not limpets) that serve to attract tourists and thus add outside capital to the local economy.

Mesolithic	Unidentified prehistoric	Iron Age	Historic	No/few Artefacts
4	5	2	20	15

Table 191: Shell middens around the Inner Sound by rough chronological type (NB: some have evidence for more than one period of activity)

Another of the surprises that came out of the project was the number of sites that yielded information relating to metal working, in particular local craft-repair work. Self sufficiency has obviously been a matter of great importance through the ages. The development and change of metal working, and the use of metal goods through time, is an unexamined field where archaeology has much to offer.

As primarily Mesolithic specialists it is difficult for us to identify themes that relate to the later, historic periods, though we have tried to be faithful in our treatment of the later evidence. There are groupings of later sites that would repay further study. What, for example, was the role of the caves and rockshelters in Crowlin? What was the attraction of the Toscaig caves? (See [Illustration 580](#), right).



There are management issues that result from the project as well. It is interesting to note, for example, that the most

productive site, that at Sand, was not visible prior to excavation. The presence of lithics within a molehill indicated the existence of a site, but it was not possible to quantify the extent or preservation of the site in advance of intrusive investigation. Geophysics may offer a way through here as Finlay's work suggests ([Section 3.17](#)), but it is salutary to recognise that other, equally rewarding sites are likely still to lie hidden. The project also highlighted the value of intensive and repeated fieldwork. The potential of the An Corran sites around Staffin Bay was only revealed by repeated visits to the area, while the many sites on Scalpay owe their discovery to the fact that one of the team lived locally, literally 'on the doorstep'. The Scalpay sites, in fact, appeared to appear and disappear with local conditions such as rainfall – there is no doubt that they were only discovered and recorded in detail because it was possible to make repeated walks across the area. Factors such as these combine with the effects of erosion and local developments to influence our understanding of the Prehistory of an area. They suggest that, it is important to maintain a local presence if we are to fully reveal archaeological potential especially of those early sites that may only be represented by scatters of worked stone.

Illus 580: SFS 42, Toscaig 10
– one of the many sites at
Toscaig

Another factor to influence archaeological survival is of course the way in which the local environment has developed through time. Around the Inner Sound, Holocene sea-level rise, though it has taken place ([Dawson, Section 7.1](#)) seems not to have topped five or six metres, though Selby's work at Braes in eastern Skye (1997) shows how local variation is still important. This will, of course, have had an impact on the survival of earlier archaeological material, and it is a good example of how we have to understand the natural environment in order to be able to interpret the archaeological record properly. Another example lies in the presence of midden material below rockfall on some sites.

Management decisions are partly influenced by the dates assigned to remains, and here again there are important lessons to be learned from the project. The problem of recognising Mesolithic sites has been discussed. This has management implications as it can mean that Mesolithic material will tend to be underrepresented in the archaeological record in areas where test pitting and radiocarbon dating has not been possible. Furthermore, though the survey work recorded a large number of sites, radiocarbon dating has been necessary to refine our understanding of the human use of the area, and it is worth noting that the radiocarbon determinations did not always agree with the diagnostic material from a site (for example SFS 66, Ard Clais Salacher 2).

Scotland's First Settlers has revealed a wealth of information pertaining to the past settlement of the Inner Sound. This is very rewarding for those of us who took part. However, it is only the tip of the iceberg regarding our understanding of the human population of this particular niche of Scotland through time.

9.9 Conclusion

Scotland's First Settlers has been very successful not only at providing information relating to its primary aim, that of looking at the Mesolithic settlement of the Inner Sound, but also at filling out the picture of human activity in the Inner Sound up to the present day. The midden site at the rockshelter of Sand has proved to be one of the earliest midden sites in Scotland, yielding a wealth of information on the material culture, activities and environment of its inhabitants. Other Mesolithic sites broadened the picture. Yet more sites yielded information right up to the present day and they provide a formidable database which we hope will play an important role in future studies of human settlement in the area.

Scotland's First Settlers was perhaps ambitious in the global survey methods applied. To walk the entire coastlines of the Inner Sound, both modern and ancient, took dedication on the part of our survey team (see [Illustration 581](#), below left), together with considerable logistical back-up both to ensure field safety and the validity of information, and to process that information afterwards (see [Illustration 582](#), below centre). This

publication is the result of intensive post-fieldwork study over several years on the part of many specialists and their helpers. We think that it has been well worthwhile. There are many other stretches of Scottish coastlands that would benefit from this level of study and we hope that similar projects may take place elsewhere to add to the emerging picture of complexity in the remains of the past (see [Illustration 583](#), below right).



Illus 581: Considerable dedication was called for from all who took part



Illus 582: The logistics of sorting and processing all the material were great



Illus 583: Final view across the Inner Sound

[prev](#) [home](#) [next](#) [print](#)

Files cited in the text

All files start from ads.ahds.ac.uk/catalogue/resources.html?sfs_ba_2007 > Downloads > ...

```
... > Documents > Final Reports > W-J,_SFS_Final_discussion.pdf
... > Images > Scanned Slides > 1999 > 1999-354.jpg [Illustration 568]
... > Images > Maps > Map_of_local_meso_sites.pdf [Illustration 569]
... > Images > Artefacts > Lithics > lithic_raw_materials_photo.jpg [Illustration 365]
... > Images > Artefacts > Coarse and ground stone tools > Axe_photo.jpg [Illustration 346]
... > Images > Artefacts > Worked bone > bone_tools_from_Sand_1999_-_photo.jpg [Illustration 570]
... > Images > Artefacts > Worked shell > Sand_cowrie_shell_bead.jpg [Illustration 571]
... > Images > Artefacts > Worked shell > cut_scallop_shell_photo.jpg [Illustration 459]
... > Images > Artefacts > Worked bone > boars_tusk_drawing.jpg [Illustration 572]
... > Images > Maps > map_of_various_sites.pdf [Illustration 576]
... > Images > Maps > later_sites_mentioned_in_final_discussion.pdf [Illustration 578]
... > Images > Artefacts > Metal and glass > pin_from_Meallabhan.jpg [Illustration 233]
... > Images > Scanned Slides > 1999 > 1999-325.jpg [Illustration 583]
```