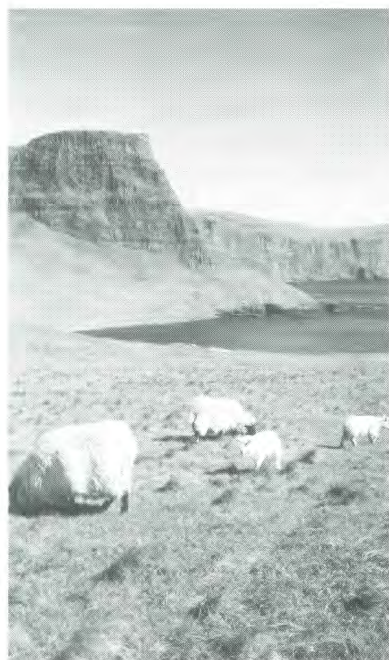


Skye



A Hunter-Gatherer Landscape: Searching for Evidence of the Earliest Settlers of the Scottish West Coast

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General Background

SCOTLAND is well known for the quality of its surviving archaeological remains. These have attracted the interest of antiquarians and archaeologists from many countries over the years and the evidence of the past continues to inspire survey, excavation and new interpretations. However, when we think of archaeology in Scotland, and the type of sites that continue to inspire and impress, we are constantly reminded of monuments like ruined castles, churches, Atlantic round-houses or Brochs, the large burial cairns and stone circles of the prehistoric period, and the later industrial sites. Archaeological sites of this type are usually visible in the landscape and provide accessible avenues of interpretation, while the investigation of sites rooted in the historic period can sometimes be supplemented by valuable documentary sources. In contrast, searching for the evidence of the earliest settlers of Scotland is a very different proposition.

Evidence for the latter is often very ephemeral in nature and usually comprises a few flakes of chipped stone, a factor that makes the study of the Scottish Mesolithic a rather dull affair for many archaeologists and researchers. In addition, the landscape has changed significantly during the past 10 000 years and studying the Mesolithic hunter-gatherers of Scotland poses an immense challenge. However, for any researcher studying the earliest settlers on these shores, it is this very challenge that inspires research. We can attempt to reconstruct some aspects of Mesolithic life – their technology, their subsistence, their mobility patterns, the manner in which they manipulated their

environments, the time of their demise and the rise of Neolithic farming communities.

Nevertheless, before looking at the physical evidence these communities left behind in the archaeological record a survey of the time framework during which these people roamed the Scottish landscape and navigated the seaways is needed to provide a basic picture of the changing environments in which they had to live and adapt. Such criteria are critical in enabling us to search for, and helping to understand the earliest settlement of Scotland.

Setting the Scene: The Ever-Changing Landscape

In order to get closer to the early settlers of the Scottish west coast, and to predict where we may find their habitation sites and how they used the land around them, we must have some understanding of both the past and present landscapes and how they have evolved.

If we go back in time to the last major glaciation of our islands, that of the Devensian between 18 000 and 15 000 years ago, we would find severe arctic conditions with a major ice sheet some one to two kilometres thick covering Scotland (McLeish, 1992:268-69; Smith, 1992:52-53). The Devensian actually began some 110 000 years ago with the ice reaching its maximum extent around 17 000 years ago. The ground free of the ice sheet comprised a tundra landscape and because the oceanic water was locked up in the ice, sea levels were reduced by some 120 metres on those of today. Besides the lowlands of England, Ireland and Wales being free of ice, it is also thought that the North Sea Plain also constituted a major tract of open tundra landscape. Indeed, these North Sea Lowlands may have extended as far north as Shetland (Idem: 53-58).

Compared with the tens of thousands of years during which the climate was deteriorating during the Devensian period, the amelioration was rapid and the British Isles was free of ice within less than 8 000 years. Conditions would still have been harsh for year-round Human settlement at this time with the landscape dominated by open, fairly barren ground, with temperatures still much colder than today. Nevertheless, between 15 000 and 13 000 years ago, with rising temperatures, the northern oceans started to warm and sea levels rose as water was released from the ice. Soils started to accumulate, vegetation developed and animals would have returned to browse with elk, reindeer and giant fallow deer present on the arctic-like grasslands. Human settlement would now have been possible (Wickham-Jones, 1994:32-47).



Left – The extent of the Devensian Ice Sheet about 17,000 years ago, showing the general direction of localised ice movements (after McLeish, 1986)

Below – An artist's impression of the relationship between Ice Sheets and Landmass at this stage during the Devensian, showing an open corridor over the North Sea Plain (after Ellery, SNH Publications)



Fig.1: The extent of the Devensian Ice Sheet around 17 000 years ago, including the direction of ice flow and areas interpreted as being free of ice. (After McLeish, 1986 & Ellery, 1996)

However, deglaciation was not constant and was interrupted on several occasions by increases in precipitation associated with movements of the Polar Front, which led to renewed ice accumulation, particularly in Scotland. These events are marked by glacial moraines where the stationary or re-advancing ice sheets left accumulations of eroded debris, many of which can be seen in the Scottish landscape today. The best known event is the 'Loch Lomond Readvance', or Stadial, dated mainly to the period between 11 400 and 10 800 years ago, though ice accumulation may have been under way by 12 000 BP (Roberts, 1998:70-72). Although the main ice sheet at this time was centred on the main mountain mass of central Scotland, smaller ice sheets are known to have been present on the mountains of offshore islands like Skye. In addition, smaller individual corrie glaciers are thought to have been active in Skye in places like the eastern corries of the Trotternish Ridge (Merritt & Stephenson, 2000:16-17). During the 'Loch Lomond Readvance' temperatures dropped once again, the oceans cooled, and tundra conditions would have reshaped the flora and fauna of the area. Birch woodland would have become restricted to locally favourable habitats, to be replaced by open-habitat taxa able to survive on disturbed and seasonally frozen soils. The climate would have been cold and generally dry. It is interesting to speculate what may have happened to the animals and any human populations in western Scotland during this cold snap. The animals would most likely have shifted their grazing to where the vegetation was still accessible, while any people living in the area would have been forced to adjust their lifestyle and movements in association with animal movements. One only has to look at the Arctic environments of more recent times to see how people have adapted to these cold and changeable conditions, and have been able to eke out a living (McGhee, 1996). Also, one can draw some comparisons with the hunter-gatherer communities who inhabited the limestone caves of France and Spain some 18 000 to 12 000 years ago, people who were living to the south of the major ice sheets then covering most of the British landmass. Closer to home, the caves of Cresswell Crags in Derbyshire have produced Upper Palaeolithic material dating back to over 12 000 years ago, while other sites in Kent and Somerset have produced dates of a similar age (Smith, 1992:76-109). These sites, especially the Cresswell caves, would have been virtually on the margin of the ice sheets that spread out to the north.

It is possible that the hunter-gatherers of these Late Glacial times would have made use of plant resources where they could be found. However, existence would not really have been possible for these early settlers without the

exploitation of animals. Animals were important not only as sources of food and raw materials but also as competitors. A number, like wolves, bears and foxes, hunted many of the same species as humans and there would also have been competition for accommodation in that wolves and bears also tend to use natural shelters in the landscape. The major animal resources exploited by humans during these Late Glacial periods would have been Mammoth, Woolly Rhino, Bison, Wild Cattle, Horse and Reindeer, with other smaller mammals and birds supplementing the diet. Any hunter-gatherer groups based nearer to the coast would also have exploited the marine biomass, with marine mammals, fish and possibly shellfish playing an important role in sustaining the population (Idem, 1992; Wickham-Jones, 1994).

By around 10 000 years ago, the ice sheets and glaciers that had formed during the 'Loch Lomond Readvance' had all but wasted away and this date is conventionally taken as marking the end of the Devensian, and with it the end of the Pleistocene Epoch. The Holocene Epoch that followed, the period in which we live today, signalled the end of major glacial events and a return to improving climatic conditions. A climatic optimum was reached some 8 500 years ago when Scotland offered an attractive base for year-round human occupation. Post-glacial Scotland provided habitats to support a broad range of animals, while some of the earlier species such as Mammoth, Woolly Rhinoceros and Reindeer, did not survive in these changing environments (Smith, 110-38).



Fig.2: Artist's impression of a coastal hunter-gatherer camp during the Mesolithic (Courtesy of the National Museums & Galleries of Wales.)

The recovery of mean temperature values and increased precipitation provided an improving environment for colonisation by both flora and fauna. Our main source of evidence for the Late-glacial and Post-glacial flora consists of fossil pollen grains from cave deposits, former lake sediments and peat (Edwards & Ralston, 1984 & 1997; Roberts, 1998:29-40). Trees, particularly birch, became increasingly dominant during the ameliorating climate of the Early Holocene and boreal forests were responsible for the initial closing of the landscape. However, the period of the birch forests was relatively short-lived, with mixed deciduous woodland becoming established on the Scottish west coast by around 9000 years ago. These woodlands comprised pine, hazel, oak and elm, although birch remained an important component in this area (Birks, 1973).

The early Post-glacial period would have provided a challenging and ever-changing landscape for the earliest settlers of these lands. The melting of the ice sheets would have produced a land dotted with numerous lakes and melt streams, but as time passed these would have begun to dry out and became progressively overgrown with reed swamp, peat and fen, to be followed by the incoming plants and trees. Other factors would also have had an important impact on the landscape. For example, the melting ice sheets released huge amounts of water back into the oceans sparking a rapid rise in sea level.

These changes in sea level were not constant but proceeded in an irregular fashion. There were periods during which the rising sea levels, or transgressions, were separated by episodes when levels were simply maintained or fell (regressions). The Post-glacial maximum transgression, which occurred some 7 000 years ago in western Scotland, produced sea levels approximately 10 metres above those of today, which resulted in the relatively rapid drowning of significant areas of low-lying land (Smith, 1992:168-80; McLeish, 1992:268-70). The rising sea formed the Straits of Dover, the land bridge between north-east Ireland and south-west Scotland was breached, and the North Sea land bridge was inundated. This resulted in the British Isles becoming isolated from the remainder of mainland Europe at this time.

This sequence of transgressions and regressions which has affected the coasts of the British Isles since the Late-glacial is complex, but for the coasts of western Scotland a further complexity is added by movement of the land relative to the sea. This is known as isostatic recovery or rebound. When the British ice sheet was at its maximum extent and thickness, its enormous weight was sufficient to depress the underlying portions of the earth's crust by an

appreciable amount. As the ice melted this pressure and weight was removed and so the surface began to recover and lift.

However, the process of melting and recovery was not simultaneous and recovery of the land surface continued long after the final melting of the ice sheets. Indeed, parts of Scotland are still rising by as much as a few centimetres per century, while those areas further away from the main ice loading centres are gradually sinking below the surface of the sea. The Western and Northern Isles are particularly vulnerable to these latter events. The combined effects of sea level change and isostatic recovery have resulted in many of the raised beaches and other shoreline features, so characteristic of the Scottish west coast, that remain important when considering the locations of possible hunter-gatherer camps of the earliest settlers in the region (Lacaille, 1954:39-45).

Therefore, by around 8 000 years ago, the landscape of western Scotland was a rich and varied one. The woodlands and moorlands would have been home to a wealth of large and small mammal species including red deer, aurochs, bear, wild boar, beaver, hare, marten, otter and fox, while birds would also have been abundant (Smith, 1992). The freshwater lakes and rivers would have been rich in salmonids and other species of fish, while marine resources would have produced sea mammals, fish and shellfish. Archaeological investigations of early settler sites have shown that all of these species would have been exploited during these optimum conditions.

However, these optimum conditions were not static and further change continued throughout the early Holocene. Most of these changes would have been barely discernable throughout the life of an individual, but the combined memory of generations must have revealed constant flux in the landscape. Disappearing coastlands, draining marshland and long-term temperature rises may have been mentally recorded by these people and passed on within a communal memory bank.

Some of these changes must also have been catastrophic in nature, probably on a grand scale, and broadly similar to those experienced throughout the world today. An archaeological site at Castle Street in Inverness, for example, excavated by Wordsworth and found to be of Mesolithic age, showed evidence for inundation by a tidal wave, or 'Tsunami', which was possibly caused by underwater landslips on a massive scale off the Norwegian Banks (Wordsworth, 1985). Evidence for this event has been recognised at other locations in the northeast of Scotland on Mesolithic sites, indicating the devastating scale on which this event took place.

The Early Settlement of Scotland and the development of Hunter-Gatherer Landscape Archaeology

Given the northern latitude and glacial history of Scotland, it is no surprise to learn that there is no unequivocal evidence for Palaeolithic settlement here. However, the Palaeolithic settlement of Britain in general lasted intermittently for some 300 000 years, and though it took place in a generally poor climate, it was also a time of continual environmental change (Wickham-Jones, 1994:32-44). During the warmer interstadials the northern lands would have been suitable for settlement, even if only on a temporary basis. And while the Palaeolithic settlement of England and Wales is well attested, surely the hunting grounds of Scotland would not have been ignored when they were so close to hand.

A few isolated artefacts that might relate to Upper Palaeolithic or Late Glacial activity in Scotland, hand axes and a small number of tanged points (Saville, 1997; Mithen, 2000:9-17), have been recovered from Scotland although the contexts in which they were found remains dubious. Therefore, conventional wisdom has always taught that Scotland was uninhabited until the arrival of the first Mesolithic hunters after the ice age and these finds of potential importance have been generally ignored. However, one site that has caused much debate regarding the early settlement of Scotland is Reindeer Cave, one of the so-called 'bone caves' at Creag nam Uamh, in Sutherland. Excavations at this cave in 1926 recovered over 900 Reindeer antler fragments, along with a possible ivory spear point, possibly suggesting a human presence at the cave in the Upper Palaeolithic (Smith, 1992:160-61; Wickham-Jones, 1994:32-44; Lacaille, 1954:88-90; Lawson, 1981:7-20). Although recent radiocarbon assays carried out on the antler fragments have provided a range of dates covering a period between 44 000 and 22 000 years ago, recent work by archaeologists, geologists and cave morphologists at the site suggests that the antlers may have entered the cave by natural agencies. Therefore, the controversy surrounding this site is set to continue.

Whatever the explanation for the material in Reindeer Cave it is of great significance. Elsewhere in Northern Europe, reindeer was an important resource for the late-glacial hunters and the Sutherland deposits show that there were substantial herds of these animals in the area at this time. However, deposits such as these are a rarity. The cave has clearly protected the material from the dynamic events of later glaciation events and environmental change, and it is

only from such a location that we are ever likely to find direct and stratigraphically secure evidence for the late glacial settlement of Scotland.

Before moving on to discuss the evidence we have for the earliest settlement of Scotland along the western seaboard during the Mesolithic, or Middle Stone Age, I would like to briefly discuss how the development of hunter-gatherer landscape archaeology has shaped our understanding of Scotland's past.

When he presented his paper to the Society of Antiquaries of Scotland *A review of the Scottish Mesolithic: a plea for normality*, Peter Woodman painted a rather gloomy picture of the state of Mesolithic research in the region:

Any assessment of a particular period in Archaeology must be relative, through comparison with its equivalent elsewhere or with other periods of prehistory in the same region. Even if one allows for the fact that there are always problems and biases in recognition, recovery and survival of evidence, it must be admitted that the study of the Mesolithic of Scotland lags behind both the rest of Scotland's prehistory and much of the rest of the European Mesolithic. In fact, in the case of Scotland, it would appear that nature and man have conspired in every possible way to ensure that there was no relatively easy access to information about the Mesolithic. (Woodman, 1989:1)

Although this is a rather bleak picture a renewed interest in Mesolithic studies in Scotland, including a series of new site excavations and landscape-based archaeological projects, are starting to address the underlying problems identified by Woodman.

Early Mesolithic research in Scotland differed very little from work being carried out in other regions of Europe. By the 1920s, a range of clearly comparable stone tool types of a broadly European form were being recognised and were helping to form a typological sequence on which a sound chronology could then be based (Lacaille, 1954). The work undertaken by a number of people contributed to the development of the Scottish 'Mesolithic scene'. These individuals included Peterson, (the Dee Valley, Aberdeenshire), Corrie & Callander (the Tweed Valley sites), Grieve & Anderson (the Oban caves and rock shelters), Bishop (the Oronsay and Risga middens), and Lacaille, who was to contribute so much to the Scottish Mesolithic (Wickham-Jones, 1994:62-5; Mithen, 2000:9-18; Finlayson & Warren, 2000:133). Therefore, it would seem that up until the 1940s, Mesolithic research in Scotland was keeping in touch

with new developments in the rest of Europe. However, at some point during the following two decades research on the Scottish Mesolithic became stagnant, with various factors having a dampening effect on further work. Indeed, *The Stone Age of Scotland* (1954) by Lacaille certainly seemed to be the definitive work of the time regarding the Scottish Mesolithic scene, a factor that may have contributed to the fall-off in new research work in the region.

This decline continued until the 1980s and was characterised by a lack of new ideas about how to approach the Scottish Mesolithic. The only obvious exceptions to this general stagnancy can be found in the reports from a number of small-scale excavations. These include: Starr Cottages, Galloway (Affleck, 1986), Auchareoch, Arran (Affleck, *et al*, 1988), Newton on Islay (McCullagh, 1991), the work of John Mercer and Susan Searight on Jura (Mercer 1968, 1970a, 1970b, 1971, 1972, 1974, 1980; Mercer & Searight, 1986; Searight, 1990 & 1993), and John Coles investigation of the site at Morton, Fife (Coles, 1975). While a few long-term projects were about to commence, like the excavation and re-evaluation of the Oronsay middens (Mellars, 1987), and the multi-disciplinary investigation of Farm Fields on the island of Rum (Wickham-Jones, 1990), research into the Scottish Mesolithic was in danger of proceeding on a very selective site by site basis.

A suite of other factors have also had a critical effect on the advancement of Mesolithic research in Scotland and these factors have created a disturbing bias in the record of the colonisation of the region at this time. The identification and interpretation of the Mesolithic record in Scotland is made difficult due to a variety of environmental and economic conditions of the country. Deep blanket peat and blown sand covers much of the landscape and has buried much of the early prehistoric remains. Equally, a substantial portion of the Early Holocene coastline has been lost owing to the highest stand of the maximum transgression, conventionally believed to have lasted until c.6 500 years ago. In addition to these geomorphological factors, which affect the visibility of Mesolithic evidence in Scotland, there are other elements to take into consideration. These include the geographical distribution of population centres within the area, the intensity and dispersion of agriculturally improved ground, the spread of urban developments and the nature and extent of the archaeological fieldwork conducted in the region.

The majority of lithic scatters and potential Mesolithic sites found in Scotland seem to derive from a few specific sources. The amateur archaeologist and collector has without doubt made the greatest contribution to the basic

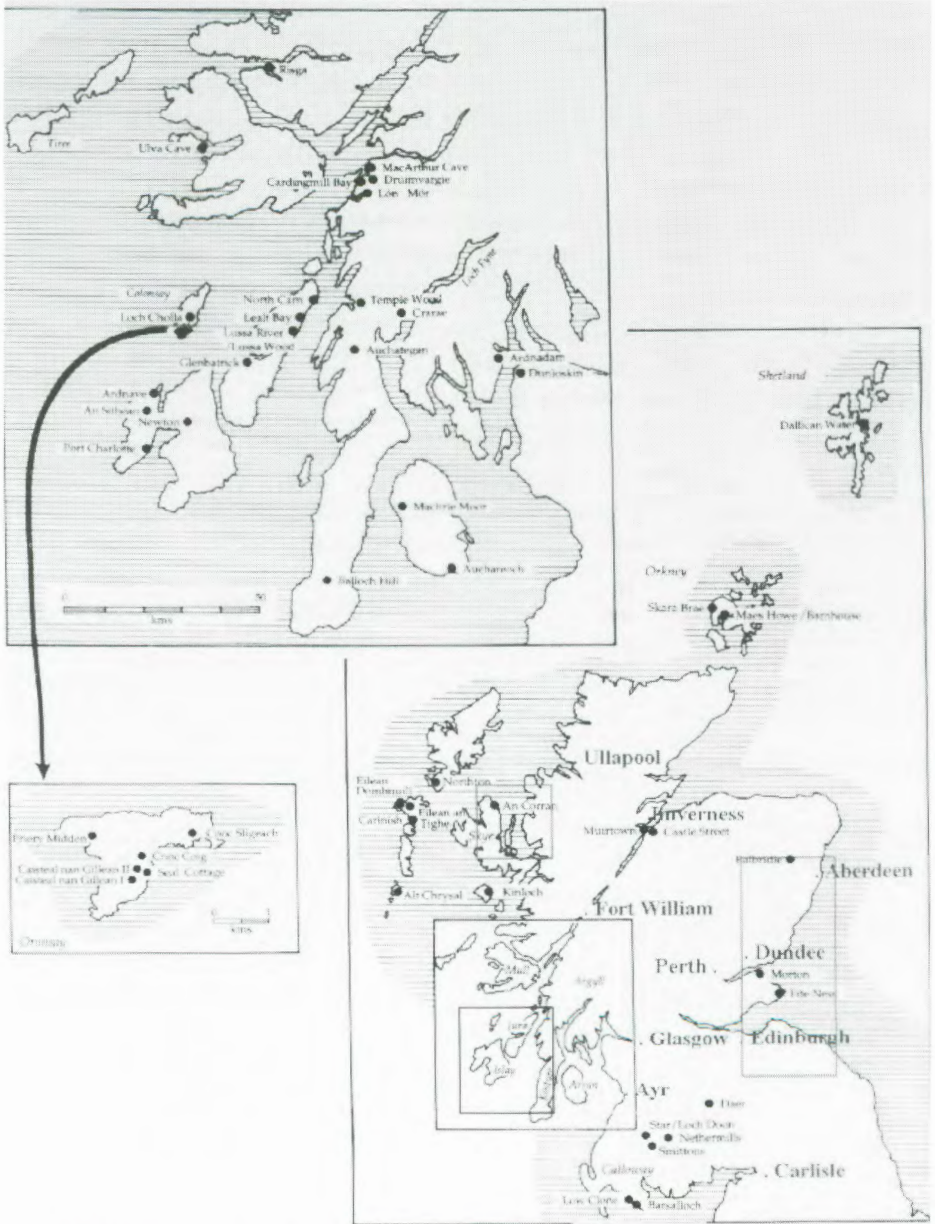


Fig.3: Map showing some of the major sites discussed in the text and areas of Scotland covered by larger landscape-based surveys. (After Mithen, 2000 & Birch, 2003.)

substructure of Mesolithic research, with many collections of artefacts deposited with local museums or still held in private hands. These amateur archaeologists often have links to local field clubs, archaeological societies and trusts, and museums, while more recently they have forged links with the larger university and research-based projects. Individuals who have played an important role in advancing the development of Mesolithic research in Scotland include John Mercer, who carried out extensive fieldwork on the island of Jura, Tom Affleck, who carried out fieldwork both in the southwest of Scotland and on the island of Arran, and Frank Newall, who recorded several new Mesolithic flint scatters on Islay (Mithen, 2000:23-5). Although principally amateurs in their field, these archaeologists published their findings within the wider public domain, a feature that has been lacking at times within the professional field. A significant proportion of the fieldwork carried out by these amateur archaeologists has now been incorporated or used as base-line data within the recent multi-disciplinary research-based projects that have taken place in Scotland.

During the later stages of the 1980s and into the turn of the new Millennium, the nature of Scottish Mesolithic studies has changed dramatically. Sites like Farm Fields on Rum (Wickham-Jones, 1990), Newton on Islay (McCullagh, 1989), Ulva Cave on Mull (Bonsall *et al*, 1991, 1992 & 1994) and Fife Ness (Wickham-Jones & Dalland, 1998), have been excavated and published. We have also witnessed the formation of larger-scale multi-disciplinary research-based projects looking at the study of hunter-gatherer archaeology on a landscape-based scale. The ten years of research, survey and excavation work undertaken as a part of the *Southern Hebrides Mesolithic Project* (Mithen, 2000) has just been published, and in a way replicates the impact of Lacaille's *Stone Age of Scotland* (Lacaille, 1954) some fifty years ago. The quality and breadth of fieldwork and post-excavation analysis, and the overall impact of the publication itself will now set the standard to which all future work will be judged and compared. Hopefully, the publication of this work will not hold back the advances being made in Scottish Mesolithic studies.

Following in the shadow of the *Southern Hebrides* work is the *Scotland's First Settlers Project*, based firmly within the northern region of the Hebrides. This project is now progressing into its fifth and final year of fieldwork and publication should be forthcoming in the near future. There are also further Mesolithic landscape projects concentrating on the major eastern river systems of Scotland such as the Tweed, Lunan and Ythan (Finlayson & Warren, 2000). Some archaeologists have brought a fresh approach to Mesolithic studies in

Scotland. Graeme Warren, based at the University of Edinburgh, is attempting to address the more complex intellectual, social and economic issues surrounding the Mesolithic within a landscape perspective. Most of his fieldwork has been undertaken around the east-coast of Scotland and along the major river valleys that penetrate the hinterland. He has also introduced the dimension of 'Mesolithic Seascapes', where he presents a focus on the interaction between the skilled practice of sailing and the environment, seascape perception and potential maritime lore and knowledge amongst the foraging communities of the maritime west coast (Warren, 2000).

Tony Pollard of Glasgow University has also taken the study of the Mesolithic Period in Scotland to new dimensions, searching for evidence of these communities beyond the flints and lithic scatters that pervade the pages of most journals and reports specialising on this subject (Pollard, 1996). Like Warren, he has also attempted to discuss the motives which may have drawn Mesolithic people to the small islands of the western seaboard of Scotland and has undertaken a significant core of research relating to potential Mesolithic burial rites and the exploitation of marine resources in Scotland.

Therefore, the following ten or twenty years should witness a wealth of new fieldwork and published data relating to the post-glacial settlement of Scotland. This fieldwork combined with advances in archaeological methodology is already amending the earliest dates for this settlement phase with inland sites such as Daer 1 in the Lowther Hills, Clydesdale, producing a radiocarbon date of 9075 \pm 80 BP (Mithen, 2000:20-21). However, the recent discovery of a small lithic assemblage and burnt hazelnut shells has provided dates for the earliest known remains of human settlement in Scotland.

The site, found by a team of amateur archaeologists from the Edinburgh Archaeological Field Society, was uncovered during the excavation of a Roman settlement at Crammond, near Edinburgh, and has produced radiocarbon dates ranging between 8 600 and 8 200 BC (Saville, *pers comm.*). The site also provides the earliest date in Britain for the 'geometric' style of microlith tool manufacture, an advanced style traditionally regarded as a Late Mesolithic development, not found in England before 7 800 BC. This information raises intriguing questions regarding the origin and spread of this new stone tool technology, while the age of the site in general will open a discussion about the early post-glacial climate in Scotland and when it became suitable for permanent habitation.

Prospecting for new Mesolithic sites and my Integration into the Scotland's First Settlers Project

By Autumn 1998, I had gained valuable experience in the field of landscape archaeology and my studies and research into the prehistory of Scotland had provided a general framework for the early settlement record of the region, particularly for the Mesolithic/Neolithic transition and its wider implications within Scotland. Fieldwork in the Skye and Lochalsh area had resulted in the discovery of several lithic scatters and rock shelter sites with associated midden deposits. These sites were recorded and I also collected any potentially diagnostic artefactual material eroding from them. This included a number of sites close to my home on the island of Scalpay, Skye, mainly scatters of struck stone centred on eroding animal tracks on the surface of raised beach platforms. Casual surveys of this ground in the past had failed to find such sites and this shows the importance of the amateur within his home territory. By looking at the same erosion features over a prolonged period of time and differing weather conditions, I was able to detect five distinct lithic scatters in the area. These sites would be included in the *Scotland's First Settlers* Project database for future investigation and analysis.

The evidence for the earliest settlement of the Skye and Lochalsh area at this time was fairly sparse. However, the work of Pollard on the Ardnamurchan Peninsula, particularly the re-assessment of the open midden site on the island of Risga, Sunart (Pollard *et al*, 1996), and the large-scale excavations of Wickham-Jones on Rum (Wickham-Jones, 1990), had already indicated the potential for Mesolithic settlement. The lithic scatter found at Redpoint, Outer Loch Torridon, Wester Ross, by fellows of the Society of Antiquaries and revisited later by A.F. Gray during 1954 and 1956, had produced stone tools to suggest a Mesolithic presence there (Gray, 1960). While to the south of Redpoint, 'rescue' excavations by Micheal Walker at Shildaig revealed a microlithic assemblage of stone tools and a limited amount of organic material. Radiocarbon determinations for the organic material, mainly on fragments of charred wood and a wooden implement, provided dates ranging between 2230 \pm 540 BC and 2650 \pm 160 BC (Walker, 1973). Unfortunately, the final results of Walkers work at Shildaig remain unpublished and the context from which the C14 samples were obtained remains dubious.

However, the most significant Mesolithic site discovered in the Skye and Lochalsh area at this time was the rock shelter at An Corran, near Staffin, Skye.

Initially identified by Martin Wildgoose during fieldwork in the area in 1988, salvage excavations were carried out at the site during December 1993 and January 1994, in advance of rock blasting for road works (Saville & Miket, 1994). Unfortunately, although the archaeological deposits remaining at the site after the excavation were protected by a covering of Teram and rock armour fill, most of the cliff face including the shelter was eventually destroyed. Although the excavation of the rock shelter at An Corran only removed around one-fifth of the in-situ archaeological deposits, it produced a substantial assemblage of stone tools and well preserved bone artefacts. The quality of the organic remains on site was due to several important factors, including the presence of midden deposits (including marine shellfish, fish and animal remains) sealed below a layer of wind-blown sand. Radiocarbon determinations on bone artefacts from the site produced dates ranging between 7590 \pm 90BP and 3885 \pm 65BP, indicating the prolonged use of the shelter through time.

Therefore, except for the Mesolithic sites of An Corran, Shieldaig and Redpoint (although the latter two sites have provided Mesolithic artefacts, but

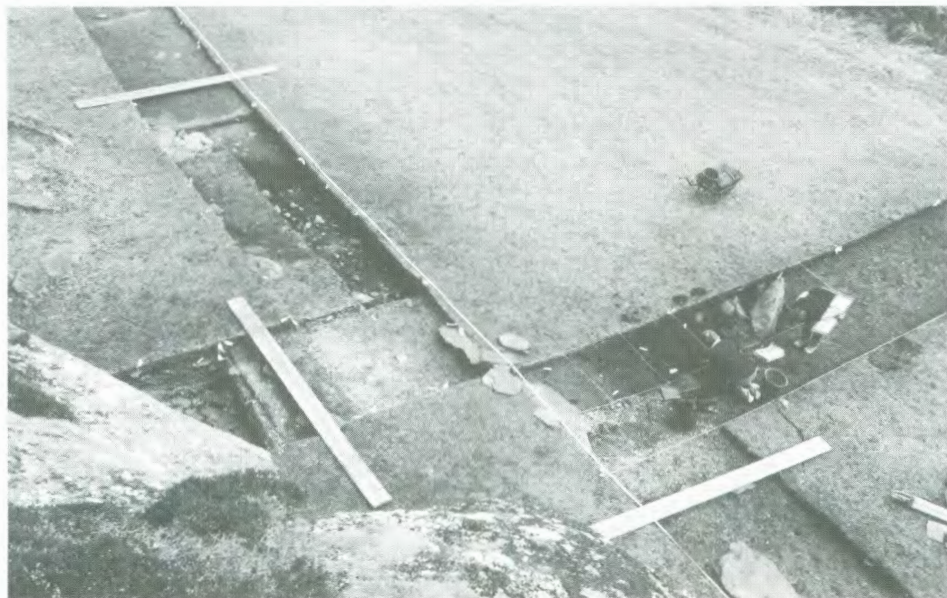


Fig.4: Aerial view of the excavations carried out at the Sand rock shelter by the Scotland's First Settlers Project in April/May 2000. The shell midden is indicated by the light-coloured area in the image, where the two trenches meet (after Birch, 2002)

no Mesolithic dates), the landscape seemed to be devoid of further evidence for settlement during this early prehistoric phase. However, it would seem rather that this situation was a result of the geomorphology of the area and a general lack of fieldwork, rather than an absence of a Mesolithic presence. Of the three new rock shelter and midden sites discovered by the close of 1998, two of these, Loch a' Sguirr on Raasay and Sand at Applecross, had produced unstratified artefacts which seemed to fit a Mesolithic typology. Trial excavations at these sites would later prove these initial interpretations.

The Scotland's First Settlers Project (SFS Project) was initially brought to my attention during the autumn of 1998. The Project Directors, Dr. Bill Finlayson, Dr. Karen Hardy and Caroline Wickham-Jones (Bill Finlayson left the project during 2000 to take up an archaeological post in Jordan) contacted me through Martin Wildgoose, who had already agreed to assist with the fieldwork aspects of the project. The Project was designed as a small-scale regional study of the area of the Inner Sound, a large expanse of water enclosed by the east coast of Skye and the western shore of the adjacent Scottish Mainland. The principal chronological focus of the project is the Mesolithic and the earliest evidence of the Neolithic, while still recognising more recent developments, which display cultural and economic continuity.



Fig.5: Excavations at the Early Mesolithic site at Camas Daraich, in the south of Skye, during 2000 (Birch, 2000)

Having contacted me at this early stage in the project, I produced for the Directors results of my fieldwork at the new rock shelter sites. Along with the already known Mesolithic sites identified within the project area, these would provide the primary focus for the 1999 fieldwork season and were included in the Project's Research Design. Therefore, test-pit excavations of the rock shelters of Crowlin, Loch a' Sguirr and Sand 1, ran concurrently with a large block of coastal survey, which was designed to identify and record new potential sites in the area.

The results of the first season of fieldwork were published within the Data Structure Report (Finlayson *et al*, 1999). Radiocarbon determinations from two of the three rock shelter sites, Loch a' Sguirr and Sand 1, produced Mesolithic dates; while the most impressive shelter of the three, on the Crowlin Islands, produced a range of dates starting within the Iron Age. The quality of the sites and the artefactual material they produced had provided the necessary impetus and encouragement to take the project forward, while the coastal survey had identified a significant number of new sites for inclusion in the database. With these initially exciting results, the Project Directors secured the necessary funding for the 2000, 2001 and 2002 field seasons (Hardy & Wickham-Jones, 2000, 2001 and 2002). The aims and objectives were to continue with the coastal survey, which would include the remaining sections of the east coast of the island of Skye, the adjacent Mainland coastline between Kyle of Lochalsh and Red Point, Outer Loch Torridon, and the offshore islands within the Inner Sound basin. In addition to this work, the Sand 1 rock shelter was targeted for more detailed investigations including a major excavation during the months of April and May 2000.

Designed to run alongside these various avenues of investigation within the project, a team of archaeologists would follow in the wake of the coastal survey to test-pit new sites, and to carry out a series of shovel-pitting surveys. The latter strategy was designed to sample four distinct areas of raised beach platform, in order to assess the possible distribution of sites within the landscape that were not detectable within the usual coastal survey parameters. In addition, fieldwork was carried out by Robert Shiel and Andrew Stewart to gather evidence regarding the environment of the Applecross Peninsula, while Mike Cressey completed a series of shovel-pit transects around the Sand site and a reconnaissance around Sand Bay, to determine the geomorphology of the area.

The Sand rock shelter site was excavated using an open area strategy, which covered a section of the midden deposits and an adjacent area of terrace

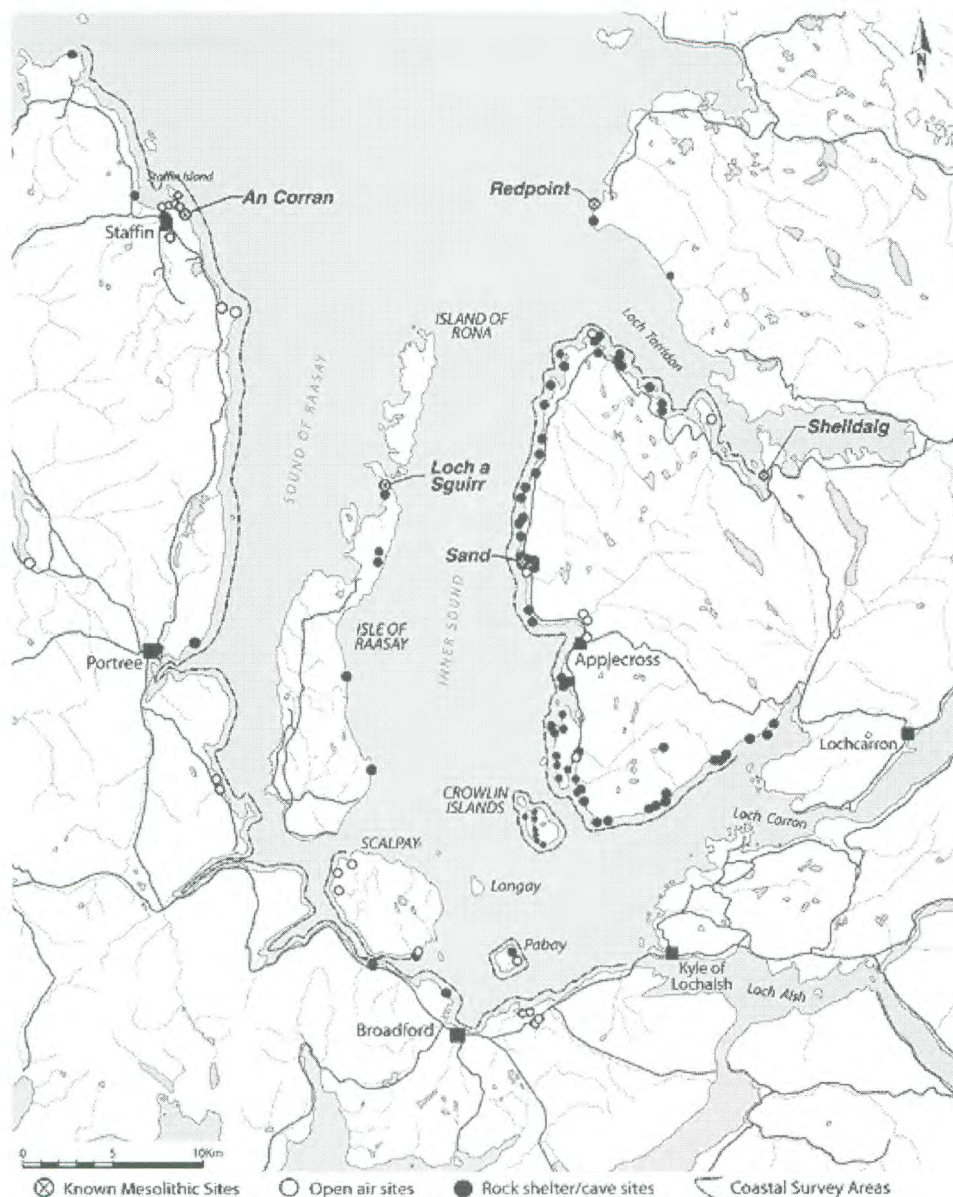


Fig.6: Map of the Inner Sound showing the distribution of archaeological sites identified during fieldwork in 1999/2000 by the Scotland's First Settlers Project. (After Hardy & Wickham-Jones, 2000.)

to north and east. The excavation work identified the extent of a discrete organic midden deposit dating to the early Mesolithic period, overlying further archaeological remains in the form of bone and antler waste as well as lithic material. Though detailed post-excavation work has yet to be completed, it is clear that the Sand site has much to offer in assisting our interpretation and understanding of the Scottish Mesolithic and later prehistoric periods (Hardy & Wickham-Jones, 2003). A wealth of new sites were also identified and test-pitted during the coastal survey phase, several of these producing artefacts of possible Mesolithic age, while the excavation of the Sand rock shelter produced some important archaeological finds and a wide-range of faunal remains. However, the most surprising information to derive from the excavation at Sand was the radiocarbon dates, the earliest C14 date from Sand (8 470 years BP) making the rock shelter there the most northerly settlement site of this period in Scotland.

One particular site of some potential and significance found during the SFS survey was the inter-tidal peat deposits and tree remains at Clachan Old Harbour, on the island of Raasay. The site on Raasay when first identified were exposed over an area of approximately 3500 square metres, the rafts of peat, tree boles and trunks being interspersed with more recent marine deposits (sand and shingle). Small stands of seaweed tend to obscure the remains of this eroding ancient ground surface and it is only accessible during the low tide. The site was surveyed during a later visit and a detailed plan was drawn of some of the better-preserved tree remains. It was during this visit that we discovered a single flake of baked mudstone attached to a tree root, while a second lithic (a weathered piece of Rum Bloodstone) was located in close proximity within surface shingle deposits. The combination of ancient forest and ground surface, and the two struck lithics, caused some excitement with the prospects of a prehistoric site nearby.

Inter-tidal sites of this type are quite rare in the Inner Hebrides and can provide a wealth of information relating to vegetation sequences through time, including their associated radiocarbon dates (for example see Edwards, 2000). However, the geomorphology of the surrounding area can also be investigated, especially with regard to fluctuations in sea level (eustatic rise and fall) and isostatic uplifting of the land after the retreat of the last Ice Age (Dawson & Dawson, 2000). Having discussed and stressed the importance of the Clachan site with the Project Directors we have recently returned for a third visit, along with Prof. Kevin Edwards from the University of Aberdeen's Geography Department, to collect environmental samples. Core samples of the peat and the

associated marine deposits were taken, along with wood samples for species identification. Initial results from the work at Clachan Harbour suggest the presence of woodland in the area some 9100 years ago, with birch the predominant tree species. However, the presence of hazelnut shells also implies hazel was present within the mixed deciduous woodland (Green, *pers comm.*).

So far, the SFS Project has demonstrated the survival of a remarkable density of sites around the Inner Sound, although we cannot be certain as yet how many of these sites indicate a Mesolithic presence. The marine topography, with its numerous islands, no doubt facilitated travel and settlement, both of which are central to the nomadic hunter-gatherer way of life, as envisaged for the Scottish Mesolithic. A certain aspect of this travel through the landscape is represented by the different stone raw materials, procured for manufacturing stone tools. Recent work carried out around the Staffin Bay area on Skye and on the island of Rum, has identified possible extraction sites for these raw materials (Hardy & Wickham-Jones, 2000, 2001 and 2002; Birch, 2002).

Many of the lithic scatter sites identified and recorded during SFS fieldwork contain Rum Bloodstone, the source of which has been known for some time on the flanks of Bloodstone Hill on the island of Rum. This distinctive stone, derived from volcanic sources, must have had some form of special attraction for the early stone-age communities of the Scottish west coast, and was later mined for the manufacture of jewellery during the later stages of the nineteenth century. The material is not particularly well suited to knapping and the manufacture of stone tools, although it has a reasonably good conchoidal fracture. However, this material has been recovered from Mesolithic sites some sixty to seventy km away from Rum, indicating some special significance for the material.

Additional sites of Mesolithic date have also been located in areas bordering the SFS Project area, such as those at Camas Daraich at the Point of Sleat, on Skye (Wickham-Jones & Hardy, 2000), and Rudh an Dunain Cave, near to Glen Brittle on Skye (Scott, 1934). For a people dependant on local resources for their survival, the Inner Sound and the Scottish west coast in general would have provided an excellent environment.

The topography provided a rich resource base from which various niches could be exploited, including salt and freshwater, shallow and deep water, coastal, lowland and upland habitats. This type of resource base would fit well with the traditional view of the Scottish Mesolithic, one of mobility, especially within the fluid seascape of the west coast.

The SFS Project has identified a number of Mesolithic sites in the area which all have dates ranging between the seventh to the sixth millennia BC. Although it is not yet possible to relate one site directly to another, they all appear to be linked by various aspects of the material culture. The Project has noted close similarities in the types of tools found at the sites, as well as the types of raw materials exploited from which to manufacture the stone tools. The Project has also confirmed the existence of a well-established Mesolithic presence further north in Scotland than previously thought, although since the start of the project, new Mesolithic sites have been located in Caithness (Humphreys, *pers comm.*).

However, as more sites are found, so the picture of Mesolithic settlement on the Scottish west coast becomes more complex. The precise date of the initial colonization of Scotland after the end of the last glaciation may never be known, but our picture of the Mesolithic in Scotland has changed dramatically in the last couple of decades. The SFS Project is contributing significantly to this changing picture with general interpretations regarding raw material source areas and their influence on early settlement patterns; material culture, mobility, and economic interpretation; changes with time and assimilation or isolation as the Neolithic took hold in the area. But, while some interpretations can be put forward regarding the Mesolithic settlement of the west coast of Scotland, the work of the SFS Project has opened up other areas of study. What were the attractions of this area during the early Holocene? How far did people range? What were the bases for the necessities of life? How was the area affected by contemporary climate change and how did its inhabitants cope with this? The work of the Project, combined with the fieldwork undertaken on the Scottish west coast during the past 20 years, is starting to address these questions, helping us to get closer to the hunter-gatherer's of the Scottish Mesolithic.

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