

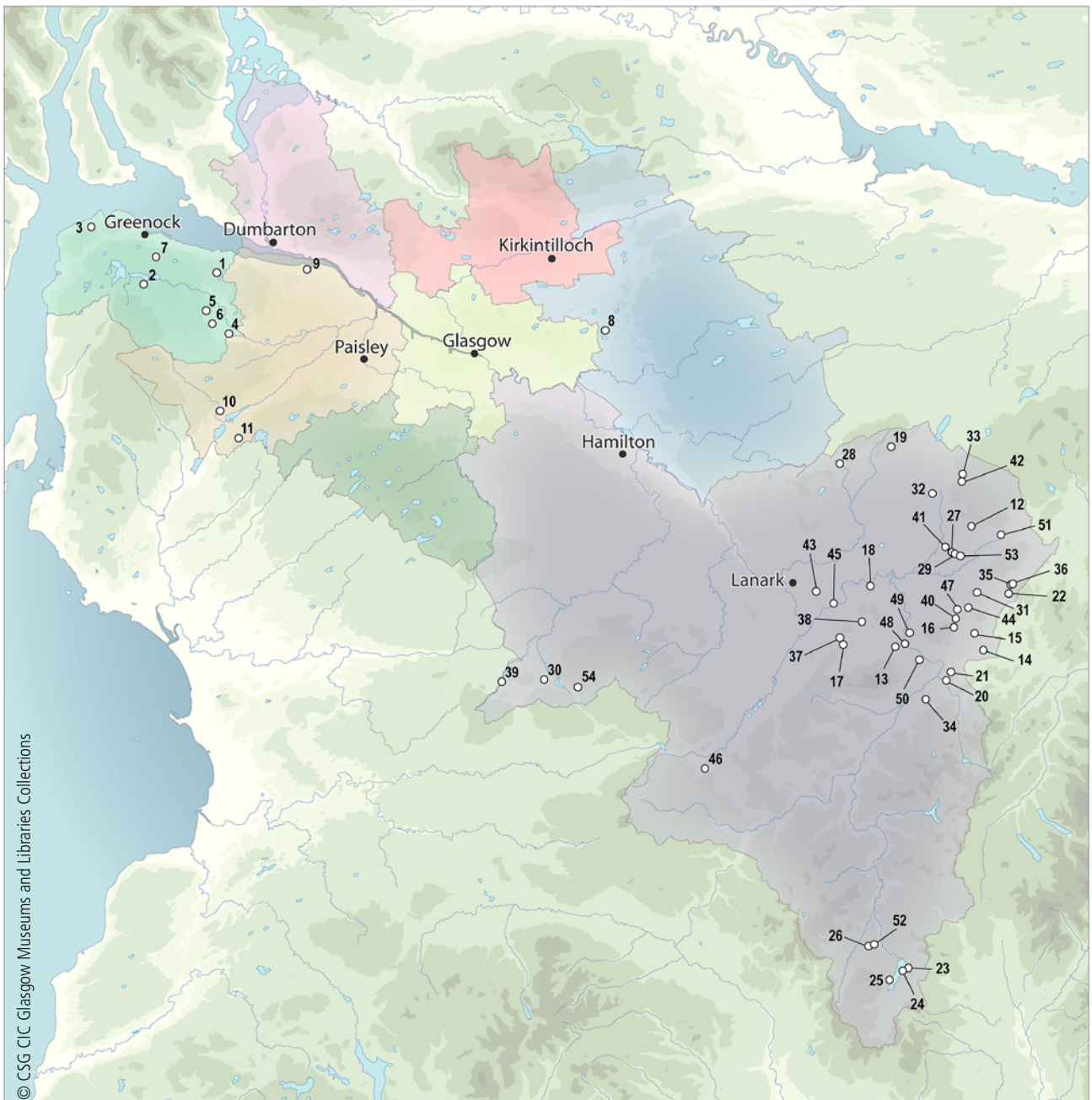


The Mesolithic

Nyree Finlay

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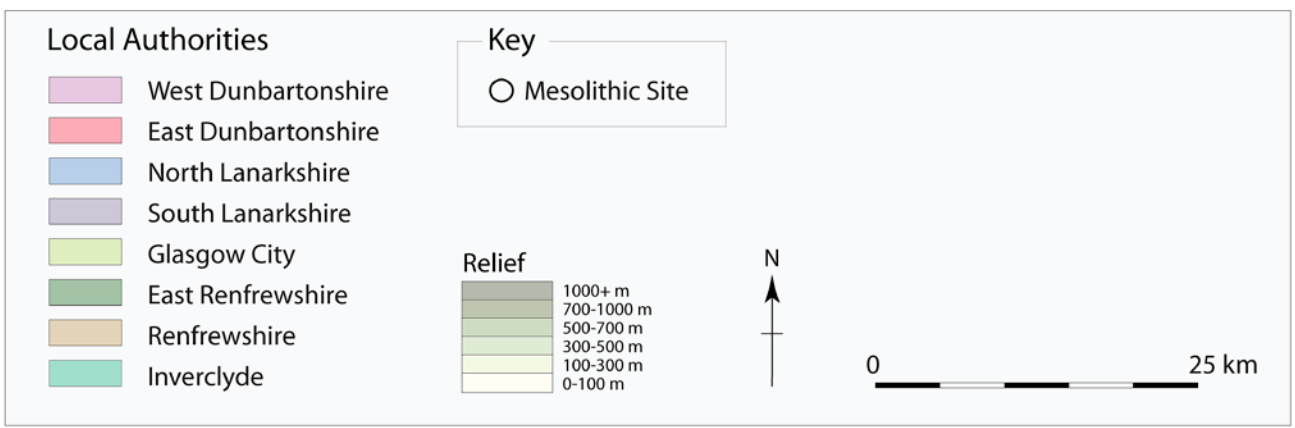


Figure 1. Distribution of known and potential Mesolithic sites in the study area. For site identifications see table 1. Produced by the former GUARD (Glasgow University Archaeological Research Division), created by Ingrid Shearer (Northlight Heritage), based on information supplied by the author.

Introduction

The Mesolithic or 'Middle Stone Age' represents the first real chapter of human occupation in Scotland and one where we have widespread evidence of settlement throughout the country by the mid eighth millennia BC. It corresponds with the start of the Holocene era and the onset of post-glacial conditions, around 10,000 years ago, and in archaeological terms it ends with the beginning, around 4200 BC in Scotland, of the Neolithic, or 'New Stone Age', and the adoption of domesticated resources and ceramic technology, (see *The Neolithic* in this series).

Evidence of an earlier Palaeolithic presence is still largely contested and no real conclusive evidence has emerged for occupation. Many of the flint implements identified as possible tools are now dismissed as 'eoliths' – naturally modified pieces, or are of dubious provenance (Saville 1997). In Scotland, evidence of pre-Mesolithic occupation is currently based solely on the presence of some distinctive tanged points from Shieldaig in Wester Ross, Ballevullin, Tiree and elsewhere which share affinities with stone artefacts used in northern Europe about 10,500–9800 years ago (Ballin and Saville 2003). One promising site within the study area is at Howburn Farm, South Lanarkshire, where a distinctive tanged point and other tools suggest even earlier activity, potentially dating as far back as 14,000 years ago (fig. 2; Ballin, Saville, Tipping, Ward 2010; Saville, Ballin and Ward 2007). While such artefacts are suggestive of early occupation, we still await sites which provide independent radiocarbon-dated verification of the date and presence of these, and potentially even earlier, foragers who may have only been transitory visitors to the land we now call Scotland.

Over the 4000-year period represented by the Mesolithic, we can document traces of mobile groups who lived by gathering, hunting and fishing in a landscape that was transforming as a result of wider climatic and environmental changes (see *Environmental Change* earlier in this series). Through time their engagement with the natural world around them would have changed from tentative exploratory reconnaissance to increased familiarity and undoubtedly an intimate knowledge of both land and seascapes inscribed with cultural values, built on generational experience and rich in mythology and meaning. About these people we actually know very little, for few physical traces remain. It is only in the very latter part of the period that we have some human bones in Scotland, although earlier burials are known from Britain and Ireland. Population size has been estimated at 1560–7020 individuals, but this is more based on speculation and modelling of the environmental potential than on tangible fact (Gamble 1999).

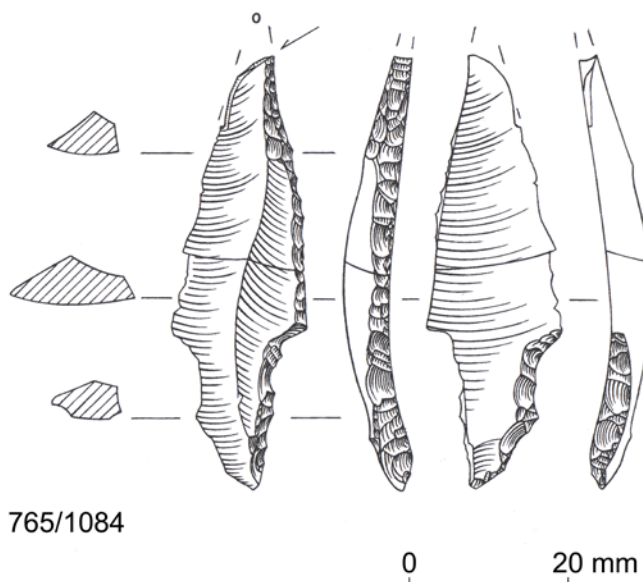


Figure 2. Flint tanged point from the Upper Palaeolithic, found at Howburn, South Lanarkshire. This implement is a rare piece of evidence for pre-Mesolithic visitors to the study area. It is similar to tanged points found in Continental Europe and of a type that dates to the Late Glacial around 12,000 years ago; the point at Howburn may have been left behind by nomadic groups following reindeer migrations.

Drawn by Hazel Martingell, reproduced by kind permission of the artist and Alan Saville, National Museums Scotland

The Nature of the Evidence

The material signatures of hunter-gatherers leave few traces of their presence in the landscape and this has a number of consequences for modes of discovery as well as excavation and recovery strategies. Unlike later periods, where there is often a relative abundance of monumental and cropmark sites to indicate occupation, the mainstay of the evidence for this period is artefactual. Archaeological evidence from the Mesolithic in Scotland is widespread but often meagre and particularly so within much of the study area. The most enduring aspect of human action is the vestiges of stoneworking and the presence of stone tools and from this period a distinctive lithic artefact type, the microlith. There are also a number of diagnostic bone and antler implements which are often discovered as isolated finds.

The creation of chipped stone artefacts is termed knapping and is a reductive process; all stages are available for analysis and through detailed studies some insights into skill, techniques and traditions can be ascertained. The sequence moves from the lump or nodule of the raw material, often chert or beach-pebble flint, which is struck using a hammer – either a stone cobble or piece of modified antler. A series of removals, or flakes from the nodule, creates a core which retains evidence of this systematic reduction (fig. 3, left). Generally, the goal of Mesolithic knapping was the creation of a series of long, narrow parallel flakes termed blades, which were either used without modification or altered by crushing one edge



Figure 3. Cores, flakes and blades from Woodend Loch, North Lanarkshire. This selection of artefacts highlights the types of stone used for tool creation at the site – chert, flint and mudstone – and some of the various by-products of the knapping process. There are cores on the far left, two groups of flakes in the centre and more regular blades on the far right.

or more (fig. 3, right). This modification creates a tool class known as a microlith through the abrupt blunting of the sides and/or ends. This was achieved by applying force against the piece using another stone or organic implement, and a diagnostic waste product often associated with microlith production is the microburin (see fig. 8, nos 53–55 for examples). This small notched piece with an angular break facet is the remnant of a technique to remove the end from a blade, often the end retaining the thicker part or the bulb of percussion where force to detach the original blade was applied. When discovered the presence of microliths, microburins and other backed microlithic fragments signals a location for microlith creation or retooling and are conclusive evidence of Mesolithic activity, for these pieces were seldom made in later stoneworking traditions or are accidentally created. Such implements were fashioned in a matter of minutes and large quantities of debris could be created in the course of a few hours knapping. Therefore we can often see the results of moments of individual action that accumulates over millennia.

Mesolithic chipped stone artefacts are small – microliths are often less than 10mm in length and the cores and other products frequently less than 20mm in maximum dimension – which also hinders recognition. Microliths occur in many forms ranging from simple backed pieces (where the blade is blunted along one side) to a variety of geometric shapes – scalene triangles, triangles, crescents, rhomboids and trapezoidal pieces – often retaining one unmodified naturally sharp edge from the original blade. Other types such as rods and needle points show a concern with reinforcing or creating a pointed or sharp end (see figs 4 and 8 for examples of microlith forms). Functional studies have identified a range of microscopic use-wear

present on microliths from a number of sites in Scotland (e.g. Finlayson 1990a and Finlayson and Mithen 1997). These small stone implements would have served as elements in composite tools where several individual microliths were hafted together using pine resin or birch tar to set them within wooden or other types of organic hafts. These were used for a variety of cutting, piercing and projectile purposes.

Potentially, any stone product could have been used for daily subsistence and processing related tasks and manufacturing activities to create other tools or artefacts in less archaeologically durable materials (wood, basketry, hides) or even to modify the human body. Other larger flake and blade tools such as scrapers (for example fig. 8, nos 28–39) could have been used for whittling wood and bone and preparing soft tissues such as animal skins for clothing. It is likely that heavier woodworking equipment was fashioned from antler rather than stone, in contrast to the practice in England and Ireland at this time, where ground and flaked stone axeheads are common finds on sites. From the onset, the character of stoneworking traditions in Scotland appears to be distinctively regional, with the earliest dated assemblages in Scotland currently predating those of similar character in England (Saville 2008).

The distinctive array of stone resources available in Scotland also enables inferences to be made regarding the movement of people (Wickham-Jones 1986). The range of lithic types is extensive and includes chert, flint, mudstone, quartz, quartzite and other rock types that range in colour, texture and knapping quality. The choice of stone resources would have been significant in creating forms of group identity, perhaps tied with the intimate knowledge of particular places as well as signalling aesthetic and personal preferences. Within the study area, a number of lithic raw material types can be identified and are often found together, as can be seen in the selection of cores and microliths from Powbrone in figure 4. The most common material in this area is radiolarian chert, which comes in a range of



Figure 4. Microliths and cores from Powbrone Burn, Avondale, South Lanarkshire. Mesolithic stone tools are small and were highly portable – like these typical blade cores and microliths from a site discovered by a keen local collector, Hugh McFadzean, in the 1970s on a forestry track by Powbrone Burn. Top row and left: chert; centre: jasper; bottom right: flint.

colours but is predominately grey-green and occurs as outcrops in the Southern Uplands. A chert quarry site has been excavated in the Borders (Warren 2001) and scree deposits, moraines and riverbeds would also have supplied suitable pebbles (Ballin and Johnson 2005; Wright, 2012). Flint is also found and this too would have been collected from coastal beaches or moraine deposits. Smaller quantities of more unusual materials such as agate, jasper, chalcedony and mudstone were also used, as well as quartz and quartzites which are common minerals in the Scottish landscape.

The other main artefactual evidence for the period is a series of bone and antler implements including antler mattocks, bevelled tools and bone and antler points (Bonsall and Smith 1990; Saville 2004a). Several of these have been radiocarbon dated, such as the biserial antler point found a few years ago on the foreshore of the Forth at Carriden, Falkirk,

Figure 5. Barbed antler point. Whilst stone artefacts are more likely to have survived to be discovered by archaeologists, most of a hunter-gatherer-fisher's tool-kit would have been made from organic items. This 15cm barbed point is fashioned from antler and was found on the bed of the River Dee near Kirkcudbright in 1895. It is one of several chance discoveries of this implement type from Scotland and this piece has been radiocarbon dated to the later Mesolithic, around 4500 BC.



dated to 5080–4790 BC (Saville 2001). Unfortunately, no examples are recorded from within this region although others have been found in south-west Scotland (fig. 5; Morrison 1982).

A different category of evidence for Mesolithic activity comes in the form of coastal shell middens. These are accumulated dumps of marine shells, fish bones and other discarded organic materials that survive due to the alkaline micro-environment created by the calcium in the shells. The rebound of the land surface following glaciation has resulted in the uplift of coastal areas, particularly on the west coast. This process has resulted in the formation of raised beaches and the survival of earlier coastlines. A number of shell midden deposits were found in the latter part of the nineteenth century on the southern Hebridean island of Oronsay and in caves and rock-shelters around Oban, and were considered to be a distinctive cultural complex (Bonsall 1997). A series of large oyster middens are also known from the Forth valley, many of which appear to date to the Mesolithic–Neolithic transition or later. Unfortunately, no such shell midden sites of Mesolithic age have been discovered within the study area and consequently we have to infer diet and subsistence from evidence outwith the region. Information on plant resources is also limited. As well as the ubiquitous hazelnut (fig. 6), a range of other plant resources are known to have been exploited in Scotland and management of these could have been quite sophisticated (e.g. Mithen, Finlay, Carruthers, Carter and Ashmore 2001). In acid soils bone rarely survives and it is mostly stone artefacts, sometimes with charcoal, burnt hazelnut shells and other carbonized or charred plant remains, which indicate the locations where people sat, ate and warmed themselves by the fire. This paucity of direct subsistence evidence gives a limited understanding of what people fed themselves with and the ways resources were exploited.

Figure 6. Burnt hazelnut shells. Fragments of burnt hazelnut shells are commonly found on Mesolithic occupation sites, like these from Kinloch, Isle of Rum. They reflect the importance of plant gathering and the value of storable resources to the earliest communities.



In this period, the actual structures used by people are often ephemeral – a consequence of mobile lifestyles. The evidence frequently comprises hearths and fire spots, stakeholes and pits, although more substantial hut structures have been identified and several excavated (see Wickham-Jones 2004 for a review of the Scottish evidence and Waddington 2007 for the structure at Howick, Northumbria). More recently, a number of large postholes and pit alignments have been identified as having been constructed during this period, for example, near Stonehenge several large three-metre-high pine posts were erected (Cleal, Walker and Montague 1995). At Warren Fields near Crathes, Aberdeenshire, a 90m-long pit alignment was first constructed around 8000 BC (Murray, Murray and Fraser 2009). There is growing appreciation of the potential ritual complexity and concern with monumental construction within Mesolithic societies, and of the consequent impact on the environment of systematic burning and woodland management regimes which have been identified in pollen diagrams. We know little of Mesolithic peoples' ideology or society, but they probably shared many traits found in modern hunter-gatherer groups, namely an ethos of sharing and beliefs that were

shaped by an intimate relationship with the natural world and notions of the cultural fluidity between people and animals (Chatterton 2006). Human burials, both inhumations and cremations, are known from this period (Conneller 2006; Meiklejohn, Merrett, Nolan, Richards and Mellars 2005), although none have been found so far in the study area.

Mesolithic archaeology is therefore particularly challenging. By its very nature it necessitates a more embedded landscape focus and targeted research strategies. Looking at one site alone is insufficient to explore the character of these groups who frequently moved around their environment and exploited different resources at particular times and in certain ways. Mesolithic remains often turn up during the excavation of sites of later periods or are found through active fieldwork where characteristic stone tools are encountered during systematic inspection of ploughed fields, drainage ditches or forestry plantations, or as chance finds eroding from deposits which may signal the presence of a lithic scatter site or reveal an isolated antler point. Therefore knowledge of this period is fragmented and often we have the mere traces of activity on which to base narrative accounts.

Figure 7. Satellite view of the Clyde today, with developed areas showing as light grey. In the early post-glacial period the Clyde Estuary was more extensive and would have been an attractive wetlands location for settlement and a vital routeway for hunter-gatherer-fisher groups. Dredging of the river and more recent land use have destroyed and transformed the original

riverscape, although many Mesolithic sites probably remain to be discovered – even if preserved beneath deep deposits. To date, there has been little systematic research to model and identify early prehistoric occupation in this part of the study area.



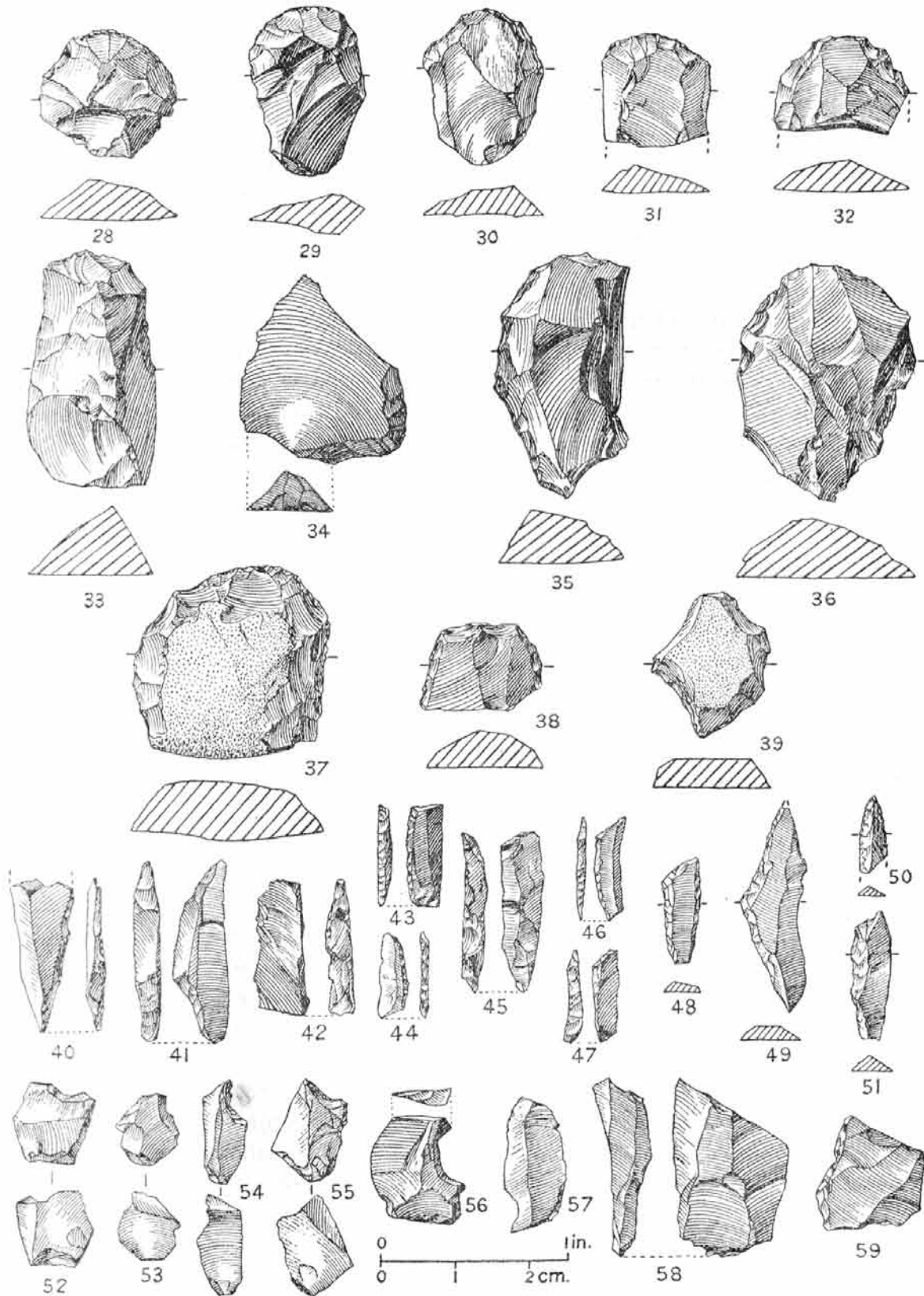


Fig. 5. Woodend Loch site: 28-39, scrapers; 40-57, microlithic elements; 58, graver; 59, perforator.

Figure 8. Artefacts from Woodend Loch, North Lanarkshire. This illustration of some of the lithic artefacts collected beside Woodend Loch shows scrapers, microliths, microburins and other tool types. The presence of microliths and microburins identify this location as a Mesolithic encampment, but although

it was the first Mesolithic site in the study area to be described it has never been excavated. (The drawing is by JM Davidson and was first published in the 1940s. We are grateful to the Society of Antiquaries of Scotland for permission to reproduce this image.)

History of Research

Our understanding and appreciation of the character of Mesolithic occupation within the west of Scotland is reliant upon commercial archaeological discoveries and focused research. Most of the latter is, or has been, undertaken by dedicated amateurs and non-professionals, often within the context of local archaeological societies. Much of this research is, as yet, unpublished and has only taken place in the last decade or so. As it is not fully in the public domain, only a relatively provisional evaluation of the wider significance and nature of the sites can be attempted here.

The area of west central Scotland related to this series of essays has until relatively recently not figured significantly in Mesolithic research (fig. 7). It is fair to say that the area has not been at the forefront of dictating wider Mesolithic research agendas in Scotland. The identification of sites has been a rather punctuated process and limited in terms of wider impact. Research into the Mesolithic in west Scotland more generally has been dominated by the attention given to the coastal 'Obanian' sites and lithic scatters on various islands such as Rum, Jura and Islay. In contrast, in the east of the country the pattern of recovery has been dominated by the major river-valley systems, notably the Dee and the Tweed, and has benefited from several generations of active local collectors (Mulholland 1970; Warren 2001) and a focus on several key sites such as Morton, Tayport (Finlay, Warren and Wickham-Jones 2003; Saville 2004b).

The study area is entirely devoid of Mesolithic sites in a distribution map created in 1935 which features find spots at Shewalton, Irvine and several localities along the River Tweed (Lacaille 1937). The first reported site in the study area, and still one of the best documented, is at Woodend Loch near Coatbridge (Davidson, Phemister and Lacaille 1951), situated on the south-facing slope overlooking the edge of this small inland loch. The context of discovery is one that is quite typical of Mesolithic sites where repeated campaigns of surface examination yield results. Struck flint and chert pieces were first collected in the early years of last century and subsequently shown to the Glasgow Archaeological Society in the 1930s. Later sporadic collection at the loch edge, especially during periods of lowered water level, resulted in the collection of an assemblage of 771 pieces in which microlith manufacture and the working of chert, flint and mudstone is well represented (figs 3 and 8). No evidence of hearths or other features were identified, though no actual excavations took place. Significantly, Woodend Loch has not been the subject of detailed re-examination since it was published nor did it serve as a catalyst for further investigation in the vicinity or immediate region.

Mesolithic discoveries in the area occurred later, despite early and continued interest in neighbouring Ayrshire and the south-west (Morrison 1982; Morrison and Hughes 1989). It is only in the last decade that the process of site discovery has accelerated. For example, in 1978, only eight possible lithic scatter sites of this period were identified from the whole of Lanarkshire (RCAHMS 1978, 3); these are the same sites reported previously in *The Stone Age in Scotland* by AD Lacaille in 1954. Contrast this with the fact that more than seven Mesolithic scatter sites alone have been identified in recent years in the Daer Valley, Lanarkshire (Ward 2004). This recent research highlights that the paucity of known hunter-gatherer sites is not due to a genuine absence of a human presence but is a consequence of a lack of targeted and systematic research.

A number of factors are responsible for this historical legacy. In terms of becoming favoured locations for research, the post-industrial hinterlands faced serious competition from the more scenic Ayrshire coast and islands. Similarly, the survival, visibility and identification of sites is conditioned by environmental factors such as agriculture and land-use practices. Site discovery is often heavily reliant on local fieldwalkers and collectors, and frequently the windows of opportunity for the discovery of remains are few or demand repeat visits.

The presence of a small number of dedicated individuals can have a significant impact on the identification of lithic scatter sites of all periods, not just those relating to the earliest phases of human occupation. Within the study area, the contribution of the late Frank Newell is noteworthy (Newell 1972 and 1974; Alexander 1996). He was an important contributor to the journal *Discovery and Excavation in Scotland*, especially in the 1960s. Equally, Hugh McFadzean, who often collected with members of his family, is noteworthy. He led to the discovery of a series of interesting scatter sites at Powbrone Burn, Avondale (fig. 4), and in East Ayrshire (McFadzean 1981 and 1983). The majority of probable Mesolithic find spots can be attributed to the enthusiasm of these and other collectors. Commercial archaeology and academic research has yet to make a significant impact on site discovery and investigation (although see Ballin and Johnson 2005 and Barrowman 2000 for exceptions). In recent years a group of enthusiastic local fieldworkers have begun to transform understanding of Mesolithic settlement within Lanarkshire, notably Tam Ward and members of the Biggar Museum Archaeology Group and others in the Lanark and District Archaeology Society (fig. 9). By monitoring forestry plantations and water-edge erosion at reservoirs and fieldwalking arable land, these groups have made significant discoveries of sites of all periods and excavated Mesolithic sites that are of national importance.



Courtesy of Tam Ward, Biggar Museum Trust

Figure 9. Excavations at Daer Reservoir, South Lanarkshire. Many new sites have been discovered in South Lanarkshire in recent decades through community archaeology projects, such as the rescue excavation at Daer Reservoir Site 2, where falling water levels revealed an occupation site radiocarbon dated to 7044–6779 BC.

While the successes in Lanarkshire can be highlighted, the situation in the other areas within the study region is currently less promising. In particular, Mesolithic sites within East and West Dunbartonshire and Inverclyde are particularly under-represented. Few Mesolithic finds are as yet reported from the city of Glasgow or the immediate environs (MacGregor and Cullen 2003), and this is perhaps not that surprising in light of the environmental history of this area and the Clyde. There was large-scale flooding in the area 6000 years ago as a result of a marine transgression, when the rising sea levels penetrated Loch Lomond (Dickson, Stewart, Thompson, Turner, Baxter, Drndarski and Rose 1978; Price 1980; Jardine 1986). This would have destroyed sites located on the earlier shorelines and it submerged much of the area in estuarine deposits, especially within Glasgow and in the Linwood area around Paisley. Although the Clyde estuary would once have been attractive to game and wildfowl and afforded a productive environment for hunter-gatherer-fishers, after the inundation the sites of human activity would have been covered in sediment or likely to have been destroyed by erosion.

In Renfrewshire, the evidence is equally scant and confirmation of the Mesolithic remains elusive. As Frank Newell confidently stated in 1974, 'the Mesolithic will inevitably emerge', but despite

systematic fieldwalking by the Renfrewshire Local History Forum to specifically target potential Mesolithic sites in that area, only one field at Bishopton produced several blades that may signal Mesolithic activity (Macneill, McCrae and McCrae 1994; Alexander 1996). A possible Mesolithic awl from the Gryfe Reservoir (Newell 1972, 46) could not be located during a recent re-examination by the author of Newell's finds housed at Paisley Museum, nor promising material collected by him from Lurg Moor in neighbouring Inverclyde. Inspection of the pre-cairn lithic assemblage from South Mound, Houston, (Stables 1996) did reveal, however, that the 'microliths' are in fact unmodified small blades of pitchstone, a form of volcanic glass sourced to the island of Arran (Williams Thorpe and Thorpe 1984). These pieces are not actually microliths and are in all probability Early Neolithic in date, especially given the ceramic associations. Small pitchstone blades and cores are relatively common finds at numerous Early Neolithic sites across Scotland, where they were often deposited in pits.

The misidentification of these small pitchstone blades as potential Mesolithic signifiers is significant, for it highlights the reliance on lithic technology for the recognition of Mesolithic sites and the fact that 'microlith' has often been misused as a category to refer to any small chipped stone piece rather than a typologically diagnostic form. As a result, the identification of artefacts and consequently find spots to this period requires some caveats, especially in the absence of specialist confirmation. The association of

microliths with the Mesolithic also means that we are faced with challenges in identifying possible activity from this period that does not conform to the expected patterns of tool production and traditional assemblage expectations. Towards the end of the period this may be more significant with the demise of microlithic technologies, a process which is currently very poorly understood (Saville 2004a), but it also potentially obscures both regional and raw material variation. The same may hold for even earlier assemblages which have the potential to look quite different from those elsewhere as a result of these factors.

Sites and Settlement

Figure 1 is a tentative representation of sites in the region that have been identified as Mesolithic, although a number of caveats need to be discussed in relation to this distribution and its interpretative significance. In most cases it has not been possible to evaluate the importance of sites from published sources, or undertake examination of the assemblages, or even in many cases confirm the Mesolithic identification. Regrettably it appears that many artefacts are unaccounted for in local museum collections or their current whereabouts unknown. Around 30 or so sites exist for the entire region; several areas are devoid of possible sites and the number identified for South Lanarkshire is known to be an underestimate.

Radiocarbon dates are only available for a handful of sites within the study area, and these are all in Lanarkshire. One of the earliest carbon-dated sites is at Daer Reservoir (fig. 9). Charcoal from a pit feature is dated to 8550–7950 BC and is associated with a predominately chert assemblage of 2000 pieces containing small geometric microliths (Saville 2004a, fig. 10.19). Similar and slightly earlier dates have emerged from a site at Cramond, Edinburgh (Saville 2008), and suggest that the typical narrow-blade ‘Later’ Mesolithic assemblages occur at this early chronological horizon. Several assemblages in the region may indicate an even earlier phase of Mesolithic occupation for some have produced microliths and other artefact types – scrapers and burins (chisel-type tools) – that contain broad-blade microliths. These artefacts are similar to some dated to before 9500 years ago, found in England (Saville, Ballin and Ward 2007), or others from an even earlier time (Ward et al. 2009). The final report on the Daer site is eagerly awaited because at least five other Mesolithic scatters have been identified, with one adjacent site producing dates of 7350–6650 BC. These sites were identified during the monitoring of erosion at low water levels at the artificial reservoir, a similar situation to Loch Doon, Dumfries and Galloway, where many thousands of artefacts have been recovered (Edwards Ansell and Carter 1983). During the Mesolithic these types of locations would have been small upland lochs that

would have attracted prolonged seasonal settlement or served as stopping points on routes across the country, perhaps from the coast to the interior. At Starr, one of the Loch Doon sites, flint resources were brought from the coast and intensively worked. The pattern of raw material use hints at the possible presence of discrete social territories (Finlayson 1990b) and it may be that we will be able to identify differential uses of particular watersheds as well as favoured routes between areas by different groups.

More recently, a couple of discrete lithic scatter sites have been excavated at 340m above sea level at Coomb Rig in the Daer Valley. Although the site was heavily disturbed by forestry activity, a small hearth or fire pit and a discrete lithic scatter only 10m in diameter was excavated (Site 84, dated to 4350–4040 BC; Ward 2005a). At another site, 50m to the west, another discrete concentration of microliths and stoneworking debris is associated with two charcoal-rich features comprising birch, oak and hazel, as well as some burnt hazelnut shells (Site 85, Ward 2004).

Excavations at a multi-period lithic scatter site with plough truncated features at Weston, South Lanarkshire, also yielded radiocarbon dates, one of 7050–6650 BC (Barrowman 2000; Ward 2005b). The location of this site in the Weston plateau is further evidence of hunter-gatherer activity away from the major rivers (Ward 1999). At the end of the period there is also, underneath a long cairn on Biggar common, an intriguing sub-rectangular structure which was built with oak stakes. This produced radiocarbon dates of 5490–4908 BC and 5220–4847 BC, but was not associated with a diagnostic lithic assemblage (Johnston 1997).

The evidence from Upper Clydesdale and Lanarkshire is revealing dense concentrations of Mesolithic occupation and excavated and dated sites that will contribute much to our understanding of occupation in the wider region. Mesolithic sites occur in a number of landscape locations and it should be stressed that even the isolated find spots may be evidence of more extensive activity, but until these locations have been the subject of more intensive and systematic investigation we can do no more than highlight their presence. Equally, it would be erroneous to use the current known distribution of sites to attempt to reconstruct or infer settlement patterns and we must await full publication to elucidate the character of activities and how it compares with the picture emerging elsewhere.

It is clear that a number of different types of sites have been identified; there are larger sites that are often quite spatially extensive as well as more discrete smaller scatters. The former were probably the focus of repeated occupations over many generations becoming persistent places in the landscape. These

occupations may have been brief, as at smaller scatter sites, or potentially may have extended over longer periods of time. The more discrete scatter sites may well be residues of overnight or even shorter stays. The character of upland Mesolithic sites within the study area is emerging, and excavated sites reveal the relatively intimate tasks that took place around fires away from the main river valleys or loch margins, possibly during seasonal movements between different areas or linked with certain subsistence tasks or comprising the residue of activities undertaken by smaller social groups.

These discrete sites provide a contrast to the often larger more diffuse spreads of lithic pieces encountered in the river valleys and in particular at the confluences of the main river tributaries. Sites are often found on terraces overlooking known salmon pools and fishing spots, favoured locations during the period. This type of site is well known from the Tweed Valley and they represent large palimpsests of multi-period activity. Within the region, Corse Law, Carnwath (Clarke 1989) and Brownsbank Farm (Ward 2000), are quite typical examples. There may be other indicators of Mesolithic activity hidden within other predominately later assemblages, such as the few microliths reported at scatters at Dunsyre and Elsrickle, South Lanarkshire. Such finds highlight the need for a more holistic approach to the lithic scatter evidence in order to fully appreciate the extent of possible Mesolithic activity (Barrowman 2000 and 2005). Fieldwalking and excavation as part of the Blackhouse Burn Environs Project in the late 1990s produced a late Mesolithic knapping floor at Carmichael possibly associated with a hearth scoop and windbreak/cooking installation as well as a sparse but significance scatter of mesolithic pieces in other fields, including a large triangular microlith (Lelong, Barrowman, Donnelly, Hamer and Sharpe 2005).

One of the few sites excavated through commercial activity in South Lanarkshire is that of Climpy (Hare Hill) where a Mesolithic scatter site at about 280m above sea level was found during the excavation of a later turf-banked enclosure in advance of open-cast coal mining. Several discrete concentrations of lithic artefacts and a series of possibly related stakeholes were excavated. The lithic assemblage of around 1000 pieces is predominately chert and the focus appears to be on microlith retooling (Innes and Duncan, no date; Wright, 2012). A similar sized chert assemblage with Mesolithic elements was found at Glentaggart, South Lanarkshire, within a later turf-banked structure also in advance of quarrying (Ballin and Johnson 2005). The excavation of other later sites has also produced residual finds of microliths, blades and blade cores. For example, the excavation of a Bronze Age ring cairn at Cloburn Quarry, Lanarkshire, produced a couple of flint microliths (Lelong and Pollard 1998).

Elsewhere within the study area the evidence is less conclusive and significantly absent. Recent commercial excavations at Midross, Loch Lomond, outside the regional boundary, have produced evidence of Mesolithic activity and new radiocarbon dates (Beckett, Macgregor, Maguire and Sneddon, no date). Prior to this there were only proxy indicators of human activity (Dickson Stewart, Thompson, Turner, Baxter, Drndarski and Rose 1978). The few surface finds from Inverclyde and Renfrewshire are highly suggestive of Mesolithic activity but little more can currently be said about the nature of occupation in these areas and that within the current Glasgow city boundaries.

Summary and Recommendations for Future Research

This review has identified various elements characterizing the history of research and the nature of the Mesolithic archaeological record within the study area. A combination of natural environmental factors, urban and industrial development and traditional research biases has resulted in a somewhat overlooked and neglected resource. Happily the situation is changing and the outlook in several parts of the region is very promising. The importance of this current research lies in the character of these inland sites for challenging traditional biases about predominately coastal occupation during this period. Many of these recent discoveries in South Lanarkshire are of national significance and complement a picture emerging elsewhere of the Mesolithic use of the uplands such as at Ben Lawers, Perthshire (Atkinson, in preparation), and Chest of Dee, Aberdeenshire (Fraser 2003).

The early commercial development of the Clyde took place at a time when the concept of a Mesolithic age was formative and despite tantalizing accounts of preserved logboats, one containing an antler implement (Mowat 1996), we have little appreciation of the true extent of possible Mesolithic activity in this area. Sealed Mesolithic deposits have been found in Aberdeen (Kenworthy 1982) and Inverness (fig. 10; Wordsworth 1985) and these highlight the potential for material to appear unexpectedly in urban as well as rural contexts. Therefore we should not underestimate the possibility of site survival in isolated pockets – early post-glacial deposits have been identified in borehole data in Glasgow (Stevenson 1990) and it would benefit from a campaign of targeted prospecting and landscape modelling to highlight zones of high potential.

The possibility of organic survival is raised by finds such as the Clyde logboats, the discovery of Late Mesolithic wooden fish traps during recent development work along the waterfront in Dublin (McQuade and O'Donnell 2007) and the Rotten Bottom bow fashioned from a piece of yew around 4040–3640 BC and found eroding from upland peat

at 660m above sea level in the Tweedsmuir Hills, Dumfriesshire in 1990 (Sheridan 1996). The recovery of Mesolithic human footprints in the estuarine muds of the Severn, including those of children as young as three (Scales 2007) also highlight the breadth of potential unusual discoveries that could await us within the study area and the need for responsive recovery and mitigation strategies. Given the recent successes in South Lanarkshire, we perhaps need to initiate more proactive research to discover sites in other parts of the study area, and confirm Lacaille's prediction in 1935 that such finds 'may reasonably be expected in certain localities' (Lacaille 1937, 73). There is no reason whatsoever to believe that the absence of currently known evidence represents a genuine absence of occupation.

Our understanding of the Mesolithic era in Scotland has relied heavily on non-professional archaeologists and local people. There needs to be a framework to support and integrate this research within a wider research context. At a basic level, many of these

Figure 10. Mesolithic stone tools found during an excavation of medieval remains. Buried Mesolithic occupation sites often do survive in heavily developed areas, although none are yet known from the city of Glasgow. The excavation of medieval remains at Castle Street, Inverness, in 1979 produced evidence of these typical Mesolithic stone tools. Such sites highlight the potential for site discovery even in urban contexts, and the challenges of finding occupation areas from this period that are usually characterized by the presence of stone tools, hearths and often ephemeral structural remains.

assemblages still require specialist identification. There is also an urgent need for more research and assemblage analysis in order for the significance of recently excavated material to be fully assessed and disseminated. At present, information is limited to interim reports or provisional statements and Woodend Loch remains the main published assemblage, although this too would benefit from modern re-evaluation. Detailed specialist examination of lithic assemblages and wider quantification and synthesis will help to tease out further nuanced understandings of the ways people negotiated this landscape and other dimensions of their lives from what is often a challenging and fragmentary record.

The windows of opportunity for identifying and excavating new sites is often short and demands quick action to deal with remains exposed through forestry activity or seasonal erosion. A balance needs to be struck between accelerating new discoveries of lithic scatters through arable fieldwalking and the preservation of what is essentially a fragile archaeological resource. Any future local research developments need to take cognizance of a number of national research frameworks and strategic research objectives (e.g. Gamble 1999; Gardiner 2004; ScARF – the Scottish Archaeological Research Framework). At the Scottish level, the region contains several key sites that will make important contributions to understanding issues of chronological change,



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potential regional traditions of stonecraft and settlement patterns. Almost nothing is known about the diet of Mesolithic people in the region. As yet, there are no human remains from this period on which to base dietary studies nor any faunal assemblages. The recovery of sites with waterlogged or good organic preservation is a high research priority for Britain as a whole (Gamble 1999).

Finally, the Mesolithic offers us a radically different lifestyle to modern urban living and is a powerful

trope against which to consider the impact and experience of environmental change, and to more generally appreciate the natural world. The current popularity of television programmes such as Ray Mears' *Wild Food* and interest in the traditional crafts and survival skills offers connections between past and present (Mears and Hillman 2006). Marshalling public interest and increasing awareness are fundamental for ensuring that the future of Mesolithic studies in west-central Scotland is more promising than has been its recent past.

Table 1. Known and potential Mesolithic sites in the study area

Map no.	Site name	National Grid Reference	Local Authority	Site category*
1	Craigmarloch	NS 3497 7219	Inverclyde	possible
2	Gryfe	NS 28 71	Inverclyde	possible
3	Gourock Golf Course	NS 2345 7642	Inverclyde	possible
4	Quarrier's Homes	NS 361 666	Inverclyde	possible
5	Lawpark	NS 340 687	Inverclyde	possible
6	Duchal Mains	NS 346 675	Inverclyde	possible
7	Lurg Moor	NS 2940 7364	Inverclyde	possible
8	Woodend Loch	NS 707 669	North Lanarkshire	site
9	Bishopton	NS 433 725	Renfrewshire	possible
10	Crook Hill, Lochwinnoch	NS 353 595	Renfrewshire	possible
11	Wateryett/Water Yett, Lochwinnoch	NS 37 57	Renfrewshire	possible
12	North Deanhead (Salla Burn)	NT 044 489	South Lanarkshire	find-spot
13	Thankerton	NS 974 378	South Lanarkshire	possible
14	Heavyside	NT 055 375	South Lanarkshire	possible
15	Biggar, Bizzyberry Hill	NT 0468 3904	South Lanarkshire	possible
16	Carwood Hill (Biggar Common)	NT 028 396	South Lanarkshire	possible
17	Brookfield	NS 926 380	South Lanarkshire	site
18	Bagmoors	NS 951 434	South Lanarkshire	site
19	Mountainblaw Farm	NS 970 562	South Lanarkshire	site
20	Cornhill Farm	NT 021 347	South Lanarkshire	site
21	Cornhill Farm, Culter	NT 025 355	South Lanarkshire	site
22	Brownsbank Farm	NT 078 427	South Lanarkshire	site
23	Daer Reservoir (Site 1)	NS 9860 0827	South Lanarkshire	site dated
24	Daer Reservoir (Site 2)	NS 9842 0802	South Lanarkshire	site dated
25	Daer Reservoir (Site 5)	NS 96868 07188	South Lanarkshire	site
26	Daer Valley (Site 85)	NS 9519 1029	South Lanarkshire	site dated
27	Weston Farm, alternative Firpark Wood	NT 026 465	South Lanarkshire	site dated
28	Hare Hill/Climpy	NS 9229 5463	South Lanarkshire	site excavated
29	Weston Farm	NT 0286 4636	South Lanarkshire	site excavated and dated
30	Woollen Burn, Avondale	NS 651 348	South Lanarkshire	possible

Map no.	Site name	National Grid Reference	Local Authority	Site category*
31	Hyndshawland, Walston	NT 049 428	South Lanarkshire	possible
32	East Yards, Carnwath	NT 008 519	South Lanarkshire	possible
33	South Tabrax, Dunsyre	NT 036 537	South Lanarkshire	possible
34	Netherhangshaw	NT 00195 32974	South Lanarkshire	find-spot
35	Brownsbank Farm	NT 080 435	South Lanarkshire	site
36	Howburn Farm, Elsrickle	NT 082 436	South Lanarkshire	site
37	Carmichael (Field M)	NS 384 925	South Lanarkshire	site
38	Blackhouse (Field D)	NS 398 945	South Lanarkshire	find-spot
39	Avon Water	NS 612 346	South Lanarkshire	find-spot
40	Carwood Farm	NT 0295 4040	South Lanarkshire	find-spot
41	The Greens, Newbigging (Green's Farm)	NT 020 470	South Lanarkshire	site
42	Darby Burn (Dykefoot Farm)	NT 035 530	South Lanarkshire	possible
43	Lanark Racecourse	NS 901 429	South Lanarkshire	possible
44	Elsrickle, Cocklaw Farm	NT 041 414	South Lanarkshire	possible
45	Charleston Farm	NS 917 418	South Lanarkshire	possible
46	Glentaggart	NS 7989 2663	South Lanarkshire	site
47	Muirlea Farm	NT 0309 4124	South Lanarkshire	site
48	Quothquan Law Farm	NS 983 381	South Lanarkshire	site
49	Parkhouse	NS 987 391	South Lanarkshire	site
50	Annieston	NS 996 366	South Lanarkshire	site
51	Dunsyre	NT 071 481	South Lanarkshire	site
52	Daer Valley (Site 84)	NS 9529 1031	South Lanarkshire	site dated
53	Weston Farm	NT 0337 4617	South Lanarkshire	site dated

*Site category

- find-spot** location where diagnostic lithic artefact(s) have been found
- possible** potential location of Mesolithic activity/undated lithic scatter site
- site** positive identification with Mesolithic material present
- site dated** excavated Mesolithic site with radiocarbon dates

Bibliography and Further Reading

Abbreviations

Proc. Soc. Antiq. Scot. = *Proceedings of the Society of Antiquaries of Scotland*
Glasgow Archaeol. J. = *Glasgow Archaeological Journal*

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Further reading

A number of publications offer accessible accounts and popular summaries of the Scottish Mesolithic – see in particular:

- *Mesolithic Lives in Scotland* by Graeme Warren (2005, Tempus).
- *Wild Harvesters* by Bill Finlayson (1998, Canongate Books).
- *Scotland's First Settlers* by Caroline Wickham-Jones (1994, Batsford) – now more out-dated but still very readable.

Readers wanting a more academic approach should consult:

- *Mesolithic Scotland and its neighbours*, papers from a conference in 2001 edited by A Saville (2004, Society of Antiquaries of Scotland).

And for a readable thematic review see:

- *Mesolithic Britain and Ireland new approaches*, edited by C Conneller and G Warren (2006, Tempus).

Online resources

- www.biggararchaeology.org.uk
Several of the interim reports on the Daer sites can be accessed via the Biggar Archaeology website.
- www.socantscot.org
This website contains a section about ScARF (the Scottish Archaeological Research Framework).