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ETHNO-FACTS OR ETHNO-FICTION? SEARCHING FOR THE STRUCTURE OF SETTLEMENT PATTERNS

Penny Spikins

ABSTRACT

This paper offers a critical consideration of current approaches to the modelling of Mesolithic settlement patterns in Britain. It questions the automatic retention of traditional ideas on seasonality and variation in site functions that are based on a too ready acceptance of models derived from a simplistic understanding of ethnographic evidence. It also suggests that our desires to force the available archaeological data into a unified 'Mesolithic settlement pattern' may have led to potential settlement variation going un-noticed. In the final section the author questions the role of what are termed 'ethno-facts' and 'ethno-fictions'.

INTRODUCTION

When considering the British Mesolithic we appear to have a clear notion of a 'structure' to settlement patterns. Thus, we use a series of widely accepted 'rules' when making interpretations. These rules have been derived from studies of ethnographically recorded hunter-gatherers (especially those in presumably similar environments to Mesolithic Europe) and they have made a major contribution to the interpretation of different types and locations of Mesolithic sites. It is only because of these 'rules' that we can routinely discuss such concepts as 'base camps', or phases of 'aggregation' and 'dispersal', or 'seasonal rounds'.

Although regularly employed, it can be difficult to define the 'rules' governing past settlement patterns as they are rarely explicitly stated. The rules do not have a clear relationship to ethnographic examples and most authors are very careful to avoid making potentially misleading, direct, analogies between particular ethnographic societies and those in the Mesolithic (for a discussion of the use of analogy *see* Orme 1981). The accepted structure, or 'blueprint', for Mesolithic settlement is more a kind of accumulated knowledge of what generally defines hunter-gatherer settlement, rather than any explicit

analogy. Nonetheless, whilst the roots of the rules may be somewhat intangible, the basic elements of the 'accepted structure' can be relatively easily discerned.

Essentially, the 'accepted structure' for Mesolithic settlement consists of two main components that are seen as being firmly grounded in ethnographic evidence. First, a settlement pattern with a clear winter-summer seasonal round (although occasionally seen as including subsidiary spring and autumn phases). Secondly, an associated period of aggregation and dispersal. A contrast between opposed and clearly defined activities (incorporated into the notion of the division of site types into base camps and hunting camps) and a contrast between upland and lowland occupation is linked to these two phases. As a result, this structure is often conceived of as a seasonal balance between hunting game in the uplands and more diverse activities such as fishing or catching wildfowl at lowland camps (particularly lowland lakes or rivers) (Figure 1.).

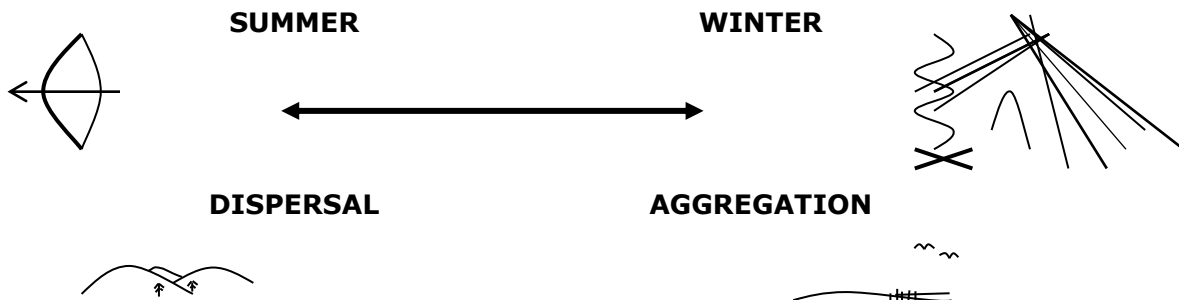


Figure 1

Although rarely discussed, this model of settlement structure is fundamentally important since it serves as the filter through which we view evidence for settlement. Interpretations are structured by the model, with excavated Mesolithic sites in the uplands almost always being viewed as hunting sites for example, and therefore occupied on a transitory basis during a summer or autumn 'dispersal' phase of settlement. Moreover, even the questions we ask of the Mesolithic are typically voiced in terms of commonly accepted 'rules' or oppositions. Thus a typical question asked on excavating any Mesolithic site may be whether it is a base camp or hunting camp? In the uncertain world of interpreting lifestyles and settlement from discarded remnants of activity patterns, the accepted structure of settlement patterns provides an important sense of order.

Where did the structure and the 'rules' of settlement patterns come from? A closer consideration reveals that the perceived ethnographic link is actually tenuous.

THE ORIGINS OF THE 'RULES' OF SETTLEMENT

The main components of the 'rules' of settlement can be easily traced back to Clark's seminal paper *Star Carr: A case study in bio-archaeology* (1972). Clark began from the basis of a predictable annual round of activities amongst hunter-gatherer populations, using observations of the Wik Monkan, as studied by Thomson (1939), in support of this idea. This seasonal round was known to be geared towards exploiting resources where and when they were available, and would involve variations in the size of the band and in the length of settlement in any one place. Most importantly, he believed that seasonally varying activities should, in theory, be *predictable* from basic environmental characteristics. Clark suggested that in Temperate Europe we might expect winter to be a time of long term settlement, when communities 'sheltered longest at one base' (Clark 1972, 21-22). On the basis of red deer ecology, and apparently confirmed by seasonality studies at Star Carr (Frazer & King 1954), Clark specifically proposed that Mesolithic populations in Britain would *aggregate* in the *lowlands* in *winter* and *disperse* to hunt red deer in the *uplands* in *summer* (tied to red deer movements and patterns of aggregation and dispersal). Clark (1972, 36) even suggested that:

Wherever areas of high ground exist within range of a low-lying winter settlement, one may expect to find scattered traces of hunting dating from the warmer time of the year. Conversely, the recovery of scattered microliths on high ground should prompt for a search for a winter base on low ground within the annual range.

(Clark 1972, 36)

Mellars (1976) followed up Clark's initial model. Like Clark (1972) Mellars suggested that populations would aggregate, or concentrate seasonally, where resources were concentrated, following a repetitive seasonal cycle. He justified this view with reference to Birdsell's proposals (1968) which were based on Australian Aboriginal data and Watanabe's (1968) work on the Ainu of Japan. Mellars also suggested that populations would be expected to aggregate in winter in the lowlands when food resources were in short supply, and where herd animals aggregated. Here, long-term base camps would also provide protection from predators and allow groups to share food. Again, like Clark,

Mellars also suggested that the uplands would be occupied by small dispersed hunting groups.

Mellars (1976) addressed the archaeological evidence for the above activities by exploring the patterning of site size and the diversity of the retouched tool component of lithic assemblages between upland and lowland sites in Mesolithic Britain. He identified a prominent division between large lowland sites, with either 'balanced' assemblages (Type B sites) or assemblages dominated by scrapers (Type C sites), and small upland sites dominated by microliths which were typically seen as hunting implements and which he termed Type A assemblages. He thus interpreted the Type B sites as base camps and the Type A sites as hunting camps. The base camp/hunting camp distinction was also followed up by Jacobi, who explored the characteristics of upland hunting sites in detail (1973, 1976, 1978). Furthermore he even identified two possible 'ends' of an early Mesolithic settlement system in northern Britain (Jacobi 1978).

The concept of summer-winter/upland-lowland patterns of aggregation and dispersal has had a pervasive and far-reaching influence on British Mesolithic research. Of course, both Clark and Mellars based their concept of aggregation and over-wintering at large lowland base camps on the idea that red deer would concentrate in the lowlands in winter and provide a vital resource. Since the 1970s however, ideas about subsistence have changed. Interpretations now favour the idea of red deer living in relatively small herds without necessarily migrating seasonally, and, moreover, it is suggested that these animals made up only a part of the Mesolithic subsistence base (Legge & Rowley-Conwy 1988, 1989). The idea of the long-term occupation of winter base camps has been perpetuated however. This is perhaps because it fits the logical and ordered general model, but also partly because of ethnographic accounts of long-term sites such as those occupied by the boreal hunters which Price (1973) and Jochim (1976) studied in detail. Our own concepts of being less mobile in harsh winter weather may even have had a role to play in the ready acceptance of the winter base camp model.

It would not be true to say that the Clark's model has remained accepted and unchanged since the 1970s. Later authors *have* amended the summer-winter model and the idea of upland summer hunting sites has been questioned. Myers (1986, 1989) for example, has suggested that the exploitation of upland game would have occurred in autumn, prior to a winter period of scarcity. Likewise, Simmons (1996) introduced more clearly the idea of

relatively temporary summer 'base camps' relating to upland hunting sites, with more permanent winter base camps located, in his model, near the coast.

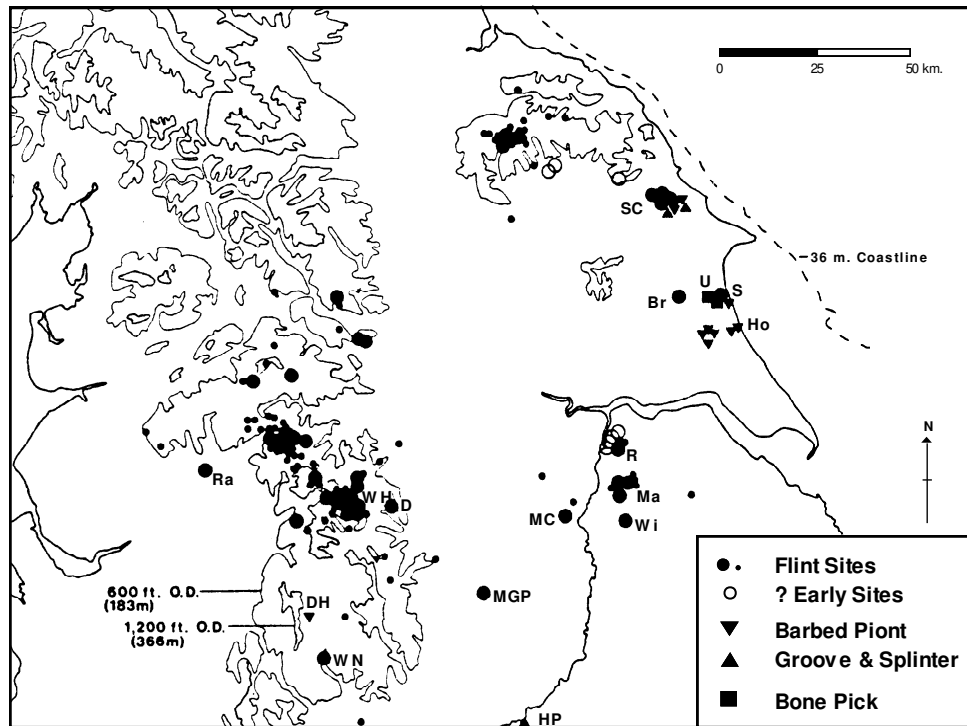
The basic 'rules' to settlement, however, still remain a firm structuring principle. Often cited ethno-archaeological research, such as that of Binford (1980) has, if anything, appeared to support the idea of a simplification of activities into basic types. There thus continues to be a natural acceptance of a division of site types into 'base camps' and 'hunting camps' (or even 'extraction sites') and of activities into seasonal upland and lowland phases. Furthermore, the concept of repetitive seasonal rounds, with associated seasonal aggregation and dispersal, remains at the core of settlement models.

Evidently, whilst ideas about settlement patterns differ between different authors, the accepted structure to settlement patterns in Mesolithic Britain remains apparent from the earliest reconstructions to the present day. As the above discussion has highlighted, this structure has obviously been partly inspired by ethnographic accounts. Today, not only the 'general model' of settlement, but also concepts such as 'ethnographically documented societies' (seen as unified wholes, displaying common settlement characteristics) are naturally accepted. Ethnographically recorded societies have, however, been little more than an *inspiration* for the general model. Rather than consider the breadth of ethnographically recorded hunter-gatherer activities (*e.g.* Kelly 1995) archaeologists typically pick either a single example or refer to the 'common knowledge' of activities (in effect the accepted general model itself). In fact, it has not been ethnographic accounts, but archaeological evidence, that has provided the most support for the model.

There are several, seemingly clear cut, lines of archaeological evidence which appear to support the accepted structure of settlement.

ARCHAEOLOGICAL EVIDENCE FOR SETTLEMENT PATTERNS

First, there is the evidence for two 'ends' of a seasonal system in northern England. As Jacobi (1978) noted, there are two clear clusters of Early Mesolithic sites in the Pennines and the Yorkshire and Lincolnshire Wolds with very similar technologies which might relate to winter and summer occupation sites (Figure 2, and illustrated graphically in Figure 3).



Distribution of Early Mesolithic sites in northern England: Br - Brigham; D - Deepcar; DH - Dowel Hall Cave; Ho - Hornsea; HP - Holme Pierrepont; Ma - Manton Warren; MC - Misterton Carr; MGP - Mother Grundy's Parlour; Ra - Radcliffe Ees; R - Risby Warren; S - Skipsea; SC - Star Carr; U - Ulrome; WH - Warcock Hill; Wi - Willoughton Site A; WN - Wetton Mill Minor Rock-shelter.

Figure 2.

There also appears to be clear evidence for differences between upland (supposedly summer) and lowland (supposedly winter) activities. For one thing, the distribution of sites appears to be important. While sites are present below 100m, and even dense above 300m, there are relatively few 'intermediate' sites. More than simply locational differences, upland and lowland sites also tend to have very different artefactual assemblages (*see* Mellars 1976; Jacobi 1973, 1976; Myers 1986, 1987).

Upland sites tend to be small in size whilst lowland sites are larger. Moreover, upland assemblages are almost always dominated by microliths, and lowland sites display a variety of different tool types, including a preponderance of scrapers (traditionally associated with 'domestic' activity). In addition, the locations of upland sites in their landscape, at a local scale, (Fig. X) have also been interpreted as implying transitory hunting sites. Typically such sites are found on south-facing slopes, at valley heads, where it is argued that there would be a good view of game (such as deer), (Radley &

Marshall 1963, 96; Barnes 1982, 25; Jacobi 1978, 325; Simmons 1996, 33-34). These factors are also illustrated in Fig. 3.

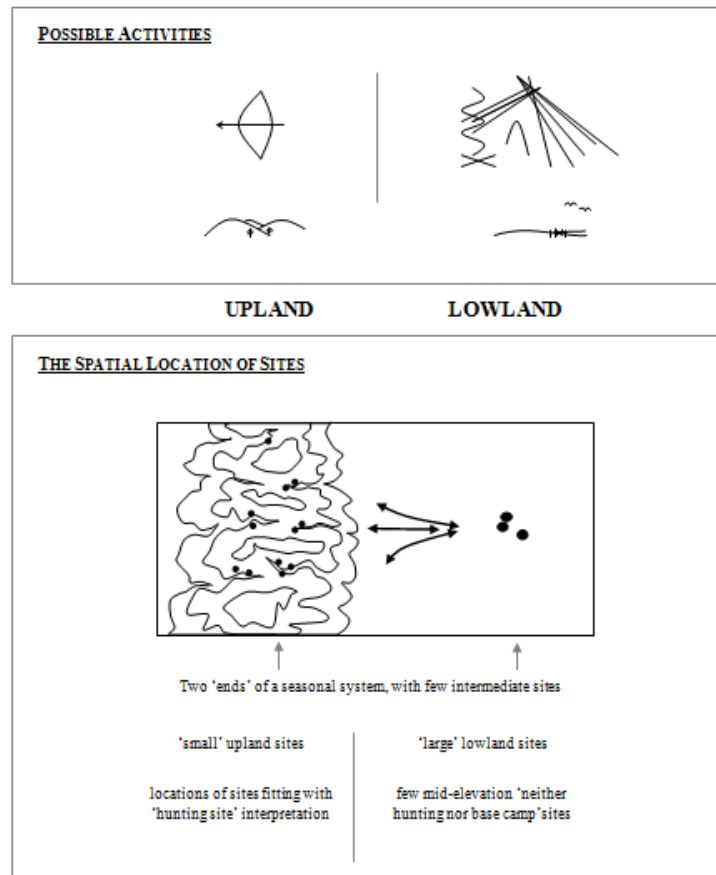


Figure 3. Schematic illustration of a winter-spring aggregation and dispersal model of Mesolithic settlement

If the archaeological record appears to support the accepted structure to settlement, does it matter that, although perceived as firmly grounded in ethnographic examples, the ethnographic basis for the rules is somewhat limited? It may be important, since the development of the accepted structure has been cumulative, with each piece of evidence, or 'building block', for the model, serving to support the next. Clearly the accepted structure is a simplification but if the rules of its operation, built up over the last twenty years, compare poorly with what we *now* know about ethnographically recorded settlement, we may argue that the rules themselves require re-assessment. It is thus possible that, far from being merely an oversimplification, the accepted structure may be fundamentally flawed.

ETHNOGRAPHIC EVIDENCE FOR THE RULES OF SETTLEMENT RE-ASSESSED

1) DEFINED SEASONAL ROUNDS

Recent re-assessments of ethnographic literature *have* called into question the fundamental basis of the accepted structure of settlement, namely the idea of clear seasonal patterns in ethnographically documented settlement activity. It is now obvious that ethnographic comments and literature have been used very selectively and Jochim (1991) has noted that most archaeological models of settlement have failed to consider that ethnographic interpretations of seasonal rounds were a *simplification* of the actual activities of hunter-gatherers. He observes, for example, that even in any given year (let alone longer time-scales) members of a group often follow different seasonal patterns. He remarks that :

In their attempts to portray the broad patterns of behaviour many ethnographers describe seasonal rounds, giving little attention to differences among individuals or families. Such normative descriptions have shaped archaeological expectations... We often expect to determine the winter base camp, without giving consideration to the possibility that there may be many different patterns simultaneously expressed.

(Jochim 1991, 310)

Jochim highlights evidence for considerable variability in activities within any supposed 'settlement system' as recorded in the ethnographic literature. In fact, he has even suggested that 'Archaeologists should not expect to follow ethnographies in reconstructing the 'seasonal round'. It may not exist' (1991, 315).

A brief review of ethnographic literature supports Jochim's contentions. Taking the Selk'nam of Tierra del Fuego for example, substantial variability in settlement appears to have been the norm, with periods of aggregation even being regularly determined by chance factors such as whale beachings (*see* Bridges 1948, 313). Moreover, Price (1973), one of the earliest authors to draw explicitly on ethnographic evidence, did in fact note substantial variability in settlement among boreal hunter-gatherers. He noted that the Mistassini Cree (Rogers 1963; Rogers & Rogers 1959) and the Round Lake Ojibwa (Rogers 1962) used a series of different types of residential camps and short and long

term occupations to exploit different resources. He also commented on changes in resource availability (in this case fluctuating rabbit populations) which affected settlement patterns, and the fact that procurement and settlement systems varied even between groups in apparently similar environments. Ironically it was Price's general comments about the settlement patterns of boreal hunter-gatherers, rather than the substantial variability which was noted, which appeared in later interpretations.

2) PERIODS OF AGGREGATION AND DISPERSAL

Although periods of aggregation and dispersal do appear to be a common element in settlement patterns of mobile groups (for the simple reason that aggregation is necessary to maintain social and reproductive contacts where population densities are sparse), the concept of long-term winter aggregation sites, a key component of the archaeological model, is also problematic.

First, long-term occupation and aggregation are separate issues. Studies of ethnographically documented hunter-gatherer groups which have been concerned with aggregation patterns (*see Kelly 1995, 111-160*), demonstrate that these groups tend to aggregate (to maintain wider contacts than the normal co-resident group) only at times and places where natural resources are particularly abundant and even then rarely for long periods. The Canadian boreal hunter-gatherers who have provided the most popular analogies for occupation of environments similar to Mesolithic Europe, occupied separate long-term winter sites and short-term aggregation sites in spring when resources were plentiful for example (Price, 1973).

The potential distinction at 'large' archaeological sites (interpreted as 'base camps') between long-term occupation and occupation by a larger group is one that is rarely highlighted, although it is clearly very significant. Any 'ideal' model of Mesolithic settlement, if such a model is even an appropriate tool to use, ought, at the very least, to incorporate important distinctions between aggregation sites and long-term occupation sites.

Secondly, in the highly seasonal environment of Temperate Europe, the winter is a period of scarcity (Rowley-Conwy & Zvelebil 1989) particularly in inland environments, with fewer resources for aggregation (or for long term occupation) available than at any other time. Longer-term occupation of winter camps is unlikely to have been possible without

using stored food and it is only the availability of stored foods that allows boreal groups such as the Cree to spend the winter in long-term camps (Rogers 1963; Rogers & Rogers 1959; Tanner 1979). Storage is certainly a possibility for inland Mesolithic groups (Rowley-Conwy & Zvelebil 1989) but it is rarely considered, and has certainly not been a clear component of the general settlement model. For long term occupation at winter camps to be a reasonable interpretation it requires that storage of resources be seen as a major component of any model. Without storage, high levels of flexibility and mobility would be the only means of coping with sparse and variable winter resources.

3) UPLAND AND LOWLAND / BASE CAMPS AND HUNTING CAMPS

Defined seasonal rounds and periods of aggregation and dispersal are key elements in the accepted model for the structure of Mesolithic settlement. The most obvious criticism of this, which can be drawn from ethnography evidence, is that in contrast to any simple model, settlement patterns tend to have a very complex structure. As well as longer-term occupation sites and aggregation sites, seasonal and task specific sites, and sites occupied by different members of a co-resident group (which may include all female as well as all-male overnight camps) (Whitelaw 1990) are typically recorded. Ethnographic studies such as those cited by Price (1973) and Binford (1978) actually emphasise a *diversity* of site types - for example, large group aggregation sites, short and long term residential camps, specialist exploitation camps for specific resources (such as catching salmon) as well as hunting 'blinds', short term hunting camps, kill sites and butchery sites. There is little which can be found to match the upland/lowland, base camps/hunting camps distinction envisaged in the British Mesolithic.

Where did the idea of dividing archaeologically recorded sites into two basic types come from? For an ethnographic basis many would point to Binford's (1980) discussion of 'forager' and 'collector' settlement systems. Binford did suggest that 'foragers' would leave fewer distinct site types than 'collectors' (specifically base camps, extraction camps and aggregation sites). Thus, Binford *clearly did* break down one type of settlement pattern into three (*not two*) types of site. Binford envisaged the two types of settlement strategies as a simplification, however, with 'real' settlement expected to lie between the two extremes (even potentially varying from year to year). Moreover, his 'extraction sites' cover many different activities, far more than any concept of a 'hunting camp'.

Evidently, clear contrasts do not exist between any two types or phases of ethnographically recorded settlement. The idea of two types of sites comes not from ethnographic examples but from the interpretation of the archaeological record of Mesolithic Britain (discussed below).

4) THE IDEA OF A 'UNIVERSAL' SETTLEMENT PATTERN.

Perhaps the most fundamental problem though, is that a common/universal settlement pattern or common structure to settlement patterns tends to be proposed for all of Mesolithic Britain, and this is expected to 'hold true' and be unchanged for many millennia. 'Real' recorded hunter-gatherer settlement patterns, however, are almost always very variable in time and space. This variability places perhaps the most fundamental limitation on the usefulness of the 'general model' for Mesolithic settlement as outlined above.

A good example of small-scale spatial variability is provided in the Great Basin of North America where Thomas (1981, 36) documents the existence of three very different settlement systems amongst the Shoshone (recorded by Steward 1933, 1938, 1941), existing only 150km apart. The Kawich Mountain Shoshone were 'almost classic foragers in Binford's sense' (Thomas 1981, 35), moving frequently to 'map onto' available resources, whilst the Owen's Valley Paiute, only about 100 miles away from them, were more typical of 'collectors' with semi-permanent settlements relying on stored resources. The adjacent Reese River Shoshone used a mixture of the two strategies. These systems also showed much variation within themselves from year to year. The Reese River Shoshone, for example, sometimes stayed in one settlement all year if the summer seed crops were abundant enough, but in lean years they dispersed to collect seeds on the valley floor and roots and berries in the uplands.

A further illustration is provided by historic hunter-gatherer groups of Tierra del Fuego. Ethnographers (*see* Bridges 1948; Gusinde 1982, 1986) note that historically different groups in this region have very different settlement systems, varying from a dependence on guanaco by the very mobile Selk'nam (who only exploit marine resources at certain times) to a dominance of marine resources among the more sedentary Yamana. The Haush are somewhat intermediate between these two, and all three systems are found within an area of about 15000 sq km. There was also substantial variability within these

systems, with the relative dependence on guanaco, marine resources and small rodents varying markedly among the Selk'nam for example.

Furthermore, while it is clearly very difficult to determine effects over long time spans in ethnographically recorded settlement, changes over time can be very marked. Although evidence for short and long-term variability in hunter-gatherer settlement has always existed, it is only relatively recently that such variability has been appreciated. This is most probably because ethnographic analysis, carried out over only a few years, or even a single year, frequently presents a 'freeze-frame' approach to the societies under study. Thus, recent authors have drawn attention to potentially substantial long-term changes in settlement and adaptational patterns among hunter-gatherer groups. Schrire (1984), for example, notes substantial changes in settlement patterns even among groups recognised as apparently displaying the greatest long term continuity, such as the Northwest Alaskan Inuit (Rainey 1971) and the Caribou Eskimo (Burch 1978). These changes have been overlooked in the past.

From an ethnographic perspective it appears to be clear nonsense to expect to find one settlement pattern, or even a common structure to settlement, which could characterise the whole of an area as large as England and Wales (or moreover the whole of the British Isles). This is all the more unlikely given the highly variable environments across the region and the clearly marked changes in environmental contexts through time (*see* Spikins 1998). In this situation it is not merely that the accepted Mesolithic settlement structure is an oversimplification, but rather that it dangerously misrepresents the character of hunter-gatherer settlement as we now recognise it.

How can such a simplistic model of Mesolithic settlement, which compares so poorly with any 'real' ethnographic examples, have such clear archaeological support? The most likely explanation appears to be that our interpretation of the archaeological record may be at fault. The record is clearly biased, but more than random bias, there *could* be systematic biases at work which give the appearance of distinct upland and lowland seasonal activities, and which perhaps even appear to support a continuity and stability of these activities through time. How could such systematic bias operate? There are essentially several types of bias in operation which potentially may provide a 'better' explanation for the patterns observed in the archaeological record than does the notion of an all-embracing (and very normative) common structure to settlement (Fig. X). These biases are described below.

RE-ASSESSING THE ARCHAEOLOGICAL EVIDENCE

1) SURFACE DEPOSITS AND LAND-USE PATTERNS

A seemingly obvious, but nonetheless often overlooked, factor, which influences the observation of patterns in the archaeological record, is the nature of surface archaeological deposits and land-use practices. It may be the character of surface deposits which gives the appearance of two ends of a seasonal settlement pattern in northern England (Fig. 2). A number of factors appear to be 'inflating' the densities of sites at either end of Jacobi's (1973, 1978) settlement system, whilst at the same time the densities of sites in the 'middle' of the proposed settlement system may be artificially reduced (see Fig 5).

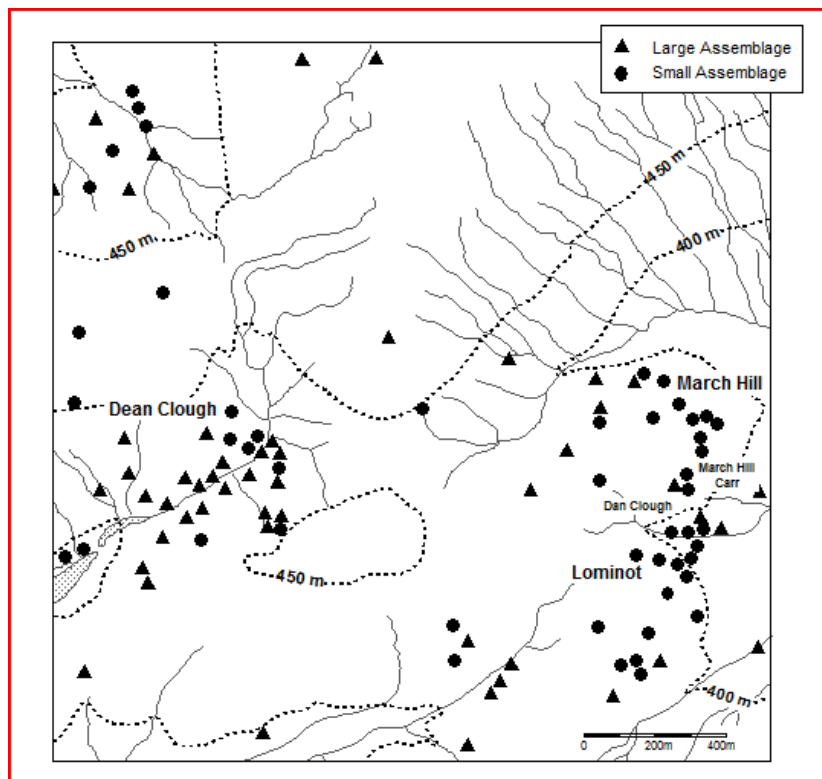


Figure 4: Upland sites appear to be good examples of sites in hunting camp locations, but does this pattern reflect where occupation really took place?

One 'end' of the seasonal system can be easily explained by processes of peat erosion. It is relatively well known that high densities of recorded sites in the Pennines are the result

of the exposure of subsoil and artefacts by the erosion of upland peat. High modern population densities, and thus many interested amateur collectors, also contribute to this effect. In contrast, finds in most of the lowlands are only occasionally recovered as a result of ploughing or other activities which disturb the sub-soil and expose artefacts to collection.

Other factors may also encourage the recovery of sites, specifically at the other 'end' of the supposed system in the Lincolnshire Wolds. These factors relate to the local predominance of soft chalk soils. First, these soils are particularly prone to erosion, and Evans (1977, 58) has demonstrated that up to 90-200mm of bed rock per year has been lost through recent erosion in chalkland areas. Secondly, the chalk soils are a major source of flint, and regions closer to a flint supply might be expected to yield a greater density of artefacts.

One other major factor may also have acted *against* the recovery of sites in the 'middle' zone of Jacobi's proposed network. Large deposits of alluvium have started to accumulate in this area since the Mesolithic (Jones 1993, 257) and this process would effectively obscure many sites beneath a dense layer of silt, preserving them at a deeper level where they would be unaffected by ploughing or construction activities and so allow them to remain undiscovered.

Essentially, while Early Mesolithic sites in the Pennines and in the Lincolnshire Wolds *may* have been linked by raw material and artefact similarities, there is little real evidence that they formed either 'end' of a settlement system. Jacobi himself (*pers. comm.*) no longer considers movement between the Pennines and the Lincolnshire Edge as a likely interpretation of the observed pattern, although his model (Jacobi 1973, 1978) still remains the key interpretation for the northern English data. At the very least, many other sites which have yet to be recovered, are likely to have been part of a wider regional pattern.

The location of Mesolithic sites has also been important in emphasising a distinct difference between upland or lowland activities. Few sites have been recorded at mid-elevations which are neither 'upland' nor 'lowland' in character. The 'bimodal' distribution of site elevations may, however, be explained by land-use processes, particularly the nature of upland farming practices.

Sheep farming is the dominant form of land-use not only on peat uplands, but also on the lower flanks of these uplands, down to flat lowland areas (Evans 1992). As a result of peat erosion, artefacts tend to be relatively more 'visible' in upland areas than in the intermediate elevation zone. Sheep farming at mid elevations, below the peat areas, is, in contrast, associated with very little erosion (and few opportunities for artefacts to be exposed). At lower elevations, however, artefacts will be more 'visible' due to arable farming and ploughing. Evans (1992, 56) notes that 'between the slopes [of peat covered uplands] which are susceptible to overgrazing and the arable fields is a zone of (now improved) grassland where erosion is rare'. In effect, it is possible that the supposed evidence for a distinct division between upland and lowland sites may be more a factor of modern land-use practices than any distinction in the intensity of past activities.

At the landscape scale within the uplands, where evidence appears to exist for 'hunting sites', the factors determining the location of such sites may be more complex. Surface deposits and land-use practices again seem to be important factors, however, and it may be significant that the elevation of 'hunting sites' coincides with the level of plateau edges where a break between wet peat plateau vegetation and the vegetation typical of drier slopes tends to erode more easily (particularly under grazing pressure). Furthermore at this height, the concentration of sites on south-facing slopes is easily explained by the influence of grazing sheep which prefer these sunnier slopes and which are able to erode large areas of peat, commonly up to 40 sq.m. in size, down to the finds level. Moreover, concentrations may also be expected at valley heads where there is a concentration of pollutants (Lee 1981), another major factor that affects erosion in upland peat areas. Extensive fieldwork and vegetation mapping, as part of the West Yorkshire Mesolithic Project (Spikins 1995, 1996, 1998), has certainly linked erosion processes to the known distribution of sites.

The location of Mesolithic sites in local landscapes has also been important in influencing ideas about a continuity of settlement patterns. In fact many of the justifications for a continuity of settlement and a 'tie to landscape' throughout the Mesolithic (and even into the Neolithic) lie in the common landscape locations of sites (Tilley 1994). Activities dating from different time periods may, in reality, have been distributed very differently across the landscape and sites that are known today probably appear to show similar distributions because of a narrow window of visibility (defined by erosion patterns) onto 'real' artefact distributions.

The last upland-lowland contrast - differences in the apparent size of sites - may also be affected by surface deposits and land-use patterns (rather than the size of any past 'occupation area'). For one thing, the nature of upland environments (often imposing limiting weather conditions) and archaeological excavations (limited to the restricted area of shallow peat) act to limit the recorded size of upland sites. Excavations at a site in the Central Pennines (Spikins 1996) have revealed that upland sites (often recorded as separate small concentrations, excavated for a few metres at the edge of a peat face) may actually extend, unrecorded, for many square meters (in one case over 3600 sq.m). Site size is, in any case, a poor reflection of the nature of activities. Large lowland sites may be the result of frequent re-occupation by a small group and conversely small upland sites may mark a temporary occupation by a large group. Thus it may be that our interpretations, as well of the quality of the data-set, are at fault.

2) BIASES IN OUR INTERPRETATION

As noted above, the idea of lowland, winter, base camps and upland, summer, hunting camps appears to be supported by several factors. Whilst problems in comparing the apparent 'size' of sites have been discussed above, there are also differences in assemblage constituents (*e.g.* the microlith:scraper ratio) and assemblage diversity between the two zones to take into account (Mellars 1976). Interpretations of these comparisons are rarely questioned but they are, nevertheless, problematic for several reasons.

First, the most obvious limitation of comparing tool ratios between the two zones is that any distinction between only two tool types (such as microliths and scrapers) will tend to oversimplify assemblages into two types regardless of other variations. More than this however, with many other uses for microliths have now being determined (Woodman 1985; Finlayson 1990; Mithen *et al.* 1992; Finlayson *et al.* 1996) and microliths are, in any case, a poor indication of only 'hunting activities'.

A more complex factor, particularly in terms of any hypothesised continuity of upland and lowland activities, is that changes may have taken place in the use of these tools through time. Myers (Myers 1986, 235, 1987, Table 5) has argued that microliths appear to have performed somewhat different functions in the Early and the Later Mesolithic. In the latter period he notes that there seems to be more microliths in each recorded haft ,

and he thus postulates that a higher proportion of microliths might be expected to be discarded in the Later Mesolithic and ultimately preserved in the archaeological record.

The use of scrapers also appears to change through time. Though frequent in Early Mesolithic assemblages, scrapers are rare on *any* recorded Late Mesolithic sites. At March Hill for example (Conneller 1996), cores were frequently used as scrapers, and it is not unreasonable to suggest that in more general terms Late Mesolithic cores may also have partly taken over the functions of earlier scrapers.

Thus, comparisons of tool ratios give only a questionable indication of specific activities on sites, and they have a tendency to create two artificial 'types' of site by default. In addition, variation in tool function over time and changes in their relative contributions to assemblages, makes microlith:scraper ratios very weak indicators of contrasting types of site function.

It is even possible to suggest that the use of contrasting ratios of two tool types may be *hiding* differences and diversity in settlement structure, especially within upland assemblages. Myers (1987), for one, has proposed that Mesolithic assemblage types can actually be divided into more complex categories than the basic groups defined by Mellars (1976). He postulates a series of different assemblage types which cross upland-lowland boundaries. Moreover, Finlayson & Edwards (1997) note that in Scotland, microliths are dominant in all Late Mesolithic 'narrow blade' assemblages, regardless of their location and that, as a result, all sites would, on the basis of microlith:scraper ratios, be defined as 'hunting camps'. This anomaly is likely to be a function of the rise of microliths and a fall-off in the occurrence of scrapers from the Early to the Later Mesolithic periods. In this situation microliths are much more likely to be dominant on Late Mesolithic sites whatever their function. Equally, (although several such Early Mesolithic sites exist) the paucity of any sites which could, on the basis of microlith:scraper ratios, be interpreted as Late Mesolithic 'base camps' in northern England may also be explained by the later dominance of microliths amongst retouched tools.

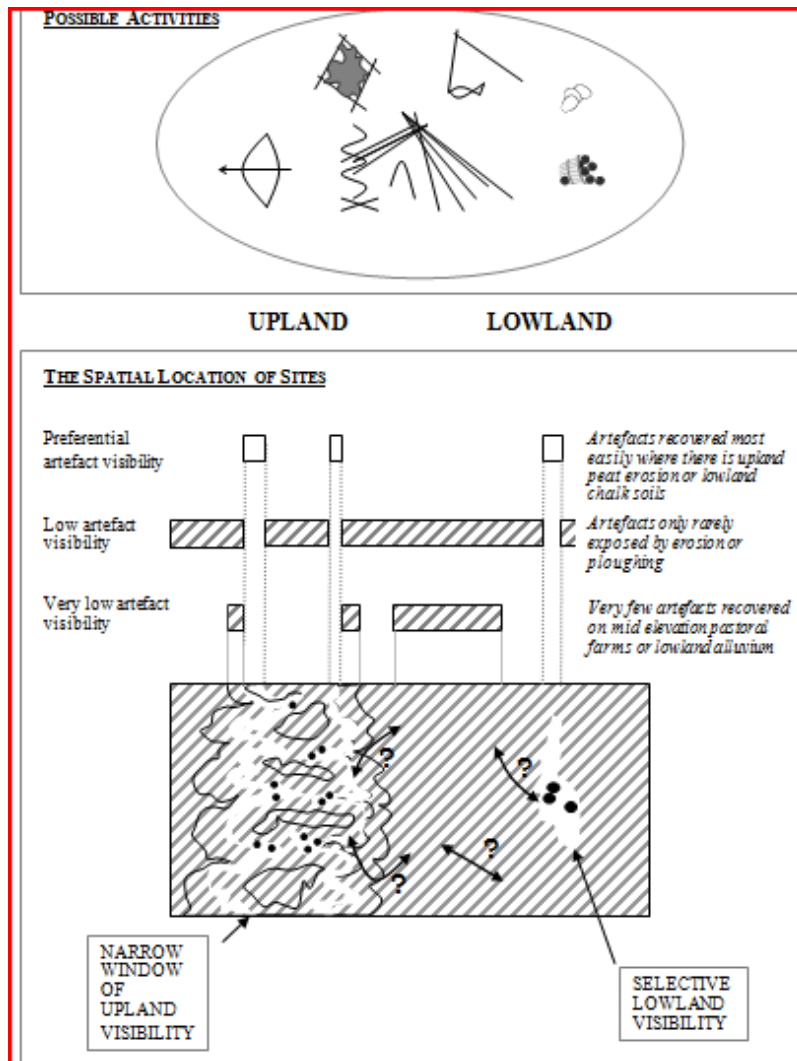


Figure 5: Biases affecting hypothesised settlement patterns – a better explanation for observed patterns?

Aside from changes in tool use, differences in assemblage diversity between the uplands and the lowlands can also be affected by sample size, with more apparently ‘diverse’ assemblages being a natural consequence of the occurrence of a larger number of artefacts.

If the simple division of site functions into upland hunting and lowland domestic activity is disregarded, then lithic assemblages at Mesolithic sites may represent more of a complex and changing set of site-based activities. Unexplored variability in upland assemblages, especially within the microlithic component and through the presence of 'non-formal' retouched tools, may point to greater variability than previously described. It is not impossible that some upland sites, especially in the Late Mesolithic, fulfilled

functions associated with either aggregation sites or base camps. Our restricted scraper:microlith distinction, however, puts these sites firmly into the category of 'hunting sites'. Certainly the presence of numerous different features, including different types of hearth, may argue that this is a possibility (Spikins 1995, 1996, 1998). At the very least, it seems that our accepted interpretational frameworks could be hiding much complexity in any period, and moreover substantial changes through time.

If we cease to argue automatically for long term continuity of settlement, it is possible to suggest evidence for long term *variability* in settlement patterns. It has been noted for some time that there are substantial changes in style zones and in raw material use through the course of the British Mesolithic. Raw materials on Late Mesolithic sites in much of England and Wales, for example, tend to be both different and derived from much closer sources than those used in the Early Mesolithic (Care 1982, Myers 1986). These changes may reflect more than a simple reduction in the size of settlement systems, especially with the appearance of marked 'style zones' in which different microlith forms show clear distributions (Jacobi 1979). The changes are not limited solely to the Early and Late Mesolithic transition. The appearance of particular lithic styles in northern England (specifically assemblages dominated by 'rod' microliths) might also be linked to a phase at the end of the Late Mesolithic which could be termed the 'Latest Mesolithic' (Switsur & Jacobi 1975, 1979; Spikins 1998).

Over the short term, substantial temporal and spatial variability in settlement patterns might be something we should expect to find as a rule rather than an exception in Mesolithic Europe. Rowley-Conwy & Zvelebil (1989) point out that Mesolithic Northern Europe would have been characterised by highly variable environmental contexts and resource availability over time. In some areas hunter-gatherers may have coped with this variability through high levels of mobility and flexibility leading to substantial variation in settlement type. Storage of resources could also have been a subsidiary or alternative strategy.

Indirect evidence for substantial settlement variability may exist in the record of Mesolithic Europe although it might not necessarily have been recognised as such. Detailed palynological reconstructions, such as those by Simmons, Turner & Innes (1989), Day (1993) and Day & Mellars (1994) for example, provide evidence for a high level of variability in the intensity and frequency of clearance events at particular sites.

The nature and causes of this variability, rather than any single 'settlement pattern', might be an interesting and rewarding area of study.

ETHNOGRAPHY AND SETTLEMENT -WHERE DO WE GO FROM HERE?

There appears to be no *a priori* reason to expect Mesolithic upland sites in England and Wales to be 'hunting sites' nor should we expect lowland sites to be 'base camps'. In addition there is also no reason to expect populations to aggregate or stay in one place for longer periods at winter sites, or for settlement patterns to be structured around two clear seasons. There is no firm evidence to support any of these expectations. Moreover, in retrospect, a search for any single 'settlement pattern' appears to be pointless.

Where do we go from here in dealing with Mesolithic settlement? It would clearly be misleading to place too much emphasis on the ethnographic record. Wobst (1978), for example, has noted the potential 'tyranny' of the ethnographic record in blinkering interpretations and ethnographic data is obviously a resource to be used with care. What is worse than being blinkered by ethnographically recorded settlement activities, however, is to depend on an 'ethnofiction' - spuriously derived ideas about ethnographically documented settlement which have little basis in fact. Rather than useful concepts, 'ethnofiction', of which one example may be the widely accepted structure to Mesolithic settlement in Britain, can limit interpretations about past settlement and restrict our queries or our re-interpretations.

Perhaps the most useful 'lesson' we can learn from ethnographically recorded societies is that settlement is a dynamic and very variable phenomenon. This realisation does, of course, make it much more difficult to interpret Mesolithic activity or settlement if we do not have a 'blueprint', but it also makes it potentially much more interesting (Rowley-Conwy 1980, 1986; Zvelebil 1986; Spikins 1998). We may have to re-think some of our questions in the light of the character of ethnographically documented societies but in doing so we can move forward to ask different questions *e.g.* 'What is the *nature* of settlement? rather than simply 'What *is* the settlement pattern?' To answer the former necessitates a better understanding of features like the temporal / spatial variability of

human activities and the changing role of different environments or resources within changing social contexts.

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References

- Barnes, B A. 1982. *Man and the Changing Landscape*. Liverpool: Merseyside County Museums and Liverpool Dept. of Prehistoric Archaeology.
- Binford, L.R. 1978. *Nuniamuit Ethnoarchaeology*. New York: Academic Press.
- Binford, L.R. 1980. Willow smoke and dog's tails: hunter-gatherer settlement systems and archaeological site formation. *American Antiquity*, 45, 4-20.
- Birdsell, J.B. 1968. Some predictions for the Pleistocene based on equilibrium systems among recent hunter-gatherers. In R. B. Lee & I. de Vore (eds.) *Man the Hunter*. Chicago: Aldine Press. 229-40.
- Bridges, L.E. 1948. *Uttermost Part Of The Earth*. London: Hodder & Stoughton.
- Burch, E.S.Jnr. 1978. Caribou Eskimo origins: an old problem reconsidered. *Arctic Anthropology* XV (1), 1-35.
- Care, V. 1982. The collection and distribution of lithic materials during the Mesolithic and Neolithic in Southern England. *Oxford Journal Of Archaeology*, 1, 169-85.
- Clark, J.G.D. 1972. *Star Carr: A Case Study In Bioarchaeology*. Reading: Addison-Wesley Modular Publications No. 10.

- Conneller, C.J. 1996. Lithics Report. In P. A. Spikins (ed.) *West Yorkshire Mesolithic Project Site Report 1995 Season*. West Yorkshire Archaeology Service for English Heritage and the National Trust.
- Day, P. & Mellars P.A. 1994. 'Absolute' dating of Mesolithic human activity at Star Carr, Yorkshire: New palaeological studies, and identification of the 9600bp radiocarbon 'plateau'. *Proceedings Of The Prehistoric Society*, 60, 417-422.
- Day, S.P. 1993. Preliminary results of high resolution palaeoecological analyses at Star Carr, Yorkshire. *Cambridge Archaeological Journal*, 3, 129-133.
- Evans, R. 1977. Overgrazing and soil erosion on hill pastures with particular reference to the Peak District. *Journal Of The British Grassland Society*, 32, 65-76.
- Evans, R. 1992. Erosion in England and Wales - The present ,the key to the past. In M. Bell & J. Boardman (eds.) *Past And Present Soil Erosion, Archaeological And Geographical Perspectives*. Oxford: Oxbow Monograph 22, 53-66.
- Finlayson, B.& Edwards K.J. 1997. The Mesolithic. In K.J. Edwards & I.B.M. Ralston (eds.) *Scotland: Environment And Archaeology, 8000BC-AD1000*. Chichester: John Wiley & Sons, 109-125.
- Finlayson, B. 1990. Lithic exploitation during the Mesolithic in Scotland. *Scottish Archaeological Review*, 7, 41-57.
- Finlayson, B., Finlay, N. & Mithen, S. 1996. Mesolithic chipped stone assemblages: descriptive and analytical procedures used by The Southern Hebrides Mesolithic Project. In T. Pollard & A. Morrison (eds.) *The Early Prehistory Of Scotland*. Edinburgh: Edinburgh University Press. 252-266.
- Fraser, F.C. & King, J.E. 1954. Faunal Remains. In J.G.D. Clark. *Excavations At Star Carr*. Cambridge: Cambridge University Press, 70-95.
- Gusinde, M. 1982. *Los Indios De Tierra Del Fuego*. Tome I: Los Selk'nam. 2 Vols. Buenos Aires.
- Gusinde, M. 1986. *Los Indios De Tierra Del Fuego*. Tome II: Los Yamana. 3 Vols. Buenos Aires.
- Jacobi, R.M. 1973. Aspects of the 'mesolithic Age' in Great Britain. In S. K. Kozlowski (ed.), *The Mesolithic In Europe*. Warsaw: Warsaw University Press, 237-265.
- Jacobi, R.M. 1976. *Aspects Of The Postglacial Archaeology Of England And Wales*. Unpublished Phd Thesis, Cambridge University.

- Jacobi, R.M. 1978. Northern England in the eighth millennium BC: an essay, In P. Mellars (ed.) *The Early Postglacial Settlement Of Northern Europe*. London: Duckworth, 295-332.
- Jacobi, R.M. 1979. Early flandrian hunters in the South-West. *Proceedings Of The Devon Archaeological Society*, 37, 49-88.
- Jochim, M.A. 1976. *Hunter-Gatherer Subsistence And Settlement: A Predictive Model*. London: Academic Press.
- Jochim, M.A. 1991. Archaeology as long-term ethnography. *American Anthropologist*, 93, 308-321.
- Jones, R.L. 1993. *Pleistocene Environments In The British Isles*. London: Chapman & Hall.
- Kelly, R. L. 1995. *The Foraging Spectrum: Diversity In Hunter-Gatherer Lifeways*. Smithsonian Institution Press. Washington.
- Lee, J. 1981. Atmospheric pollution and the Peak District blanket bogs. In J. Phillips, D. Yalden & J. Tallis (eds.), *Peak District Moorland Erosion Study; Phase 1 Report*. Peak Park Joint Planning Board. Derbyshire. 104-109.
- Legge, A.J. & Rowley-Conwy, P.A. 1988. *Star Carr Revisited: A Re-Analysis Of The Large Mammals*. London: Centre for Extra-Mural Studies, Birkbeck College, University Of London.
- Legge, A. J. & Rowley-Conwy P.A. 1989. Some preliminary results of a re-examination of the Star Carr fauna> In C. Bonsall (ed.), *The Mesolithic In Europe*. Papers Presented At The Third International Symposium. Edinburgh: John Donald, 225-230.
- Mellars, P.A. 1976. Settlement patterns and industrial variability in the British Mesolithic. In G.de G. Sieveking, I.H. Longworth & K.E. Wilson (eds.) *Problems In Economic And Social Archaeology*. London. Duckworth, 375-99.
- Mithen, S.J., Finlayson, B., Finlay, N., & Lake, M. 1992. Excavation at Bolsay Farm, a Mesolithic Site On Islay. *Cambridge Archaeological Journal*, 2, 242-253.
- Myers, A.M. 1986. *The Organisation And Structural Dimensions Of Lithic Technology: Theoretical Perspectives From Ethnography And Ethnoarchaeology As Applied To The Mesolithic Of Mainland Britain With A Case Study From Northern England*. Unpublished Phd Thesis, University Of Sheffield.

- Myers, A.M. 1987. All shot to pieces? Inter-assemblage variability, lithic analysis and Mesolithic assemblage types: some preliminary observations. In A.G. Brown & M. R. Edmonds (eds.), *Lithic Analysis And Later British Prehistory*. Oxford: British Archaeological Reports, British Series, 162, 137-153.
- Myers, A.M. 1989. Reliable and maintainable technological strategies in the Mesolithic of mainland Britain. In R. Torrence (ed.), *Time, Energy And Stone Tools*. Cambridge: Cambridge University Press. 78-91.
- Orme, B. 1981. *Anthropology For Archaeologists*. London: Duckworth.
- Price, T.D. 1973. A proposed model for procurement systems in the Mesolithic of North-Western Europe. In S.K. Kozlowski (ed.), *The Mesolithic In Europe*. Warsaw: Warsaw University Press, 455-474.
- Radley, J & Marshall, G. 1963. Mesolithic sites in South-West Yorkshire. *Yorkshire Archaeological Journal*, 41, 81-97.
- Rainey, F. 1971. *The Ipiutak Culture: Excavations At Point Hope, Alaska*. Addison-Wesley Modular Publications 8, 1-32
- Rogers, E.S. & Rogers J.H. 1959. The yearly cycle of the Mistassini Indians. *Artic*, 12, 130-138.
- Rogers, E.S. 1963. *The Hunting Group-Hunting Territory Complex Among The Mistassini Indians*. National Museum Of Canada Anthropological Series, Bulletin 195, 63.
- Rogers, E.S. 1962. *The Round Lake Ojibway*. Toronto: Toronto Museum, Art and Archaeology Division, Occasional Paper 5.
- Rowley-Conwy, P.A. 1980. *Continuity And Change In The Prehistoric Economies Of Denmark, 3700bc - 2300bc*. Unpublished Phd Thesis, University of Cambridge .
- Rowley-Conwy, P.A. 1986. Between cave painters and crop planters: aspects of the Temperate European Mesolithic. In M. Zvelebil (ed.), *Hunters In Transition: Mesolithic Societies Of Temperate Eurasia And Their Transition To Farming*. Cambridge: Cambridge University Press, 17-31.
- Rowley-Conwy, P.A & Zvelebil, M. 1989. Saving it for later: storage by prehistoric hunter-gatherers in Europe. In P. Halstead & J. O'shea (eds.), *Bad Year Economics: Cultural Responses To Risk And Uncertainty*. Cambridge: Cambridge University Press, 40-56.

- Schrire, C. 1984. (ed). *Past And Present In Hunter-Gatherer Societies*. New York: Academic Press.
- Simmons, I.G. 1996. *The Environmental Impact Of Later Mesolithic Cultures: The Creation Of A Moorland Landscape In England And Wales*. Edinburgh: Edinburgh University Press.
- Simmons, I.G. Turner, J & Innes, J.B. 1989. An application of fine resolution pollen analysis to Later Mesolithic peats of an English upland. In C. Bonsall (ed.), *The Mesolithic In Europe*, Papers Presented At The Third International Symposium. Edinburgh: John Donald, 206-17
- Spikins, P.A. 1995. *West Yorkshire Mesolithic Project Site Report 1994 Season*. West Yorkshire Archaeology Service for English Heritage and The National Trust.
- Spikins, P.A. 1996. *West Yorkshire Mesolithic Project Site Report 1995 Season*. West Yorkshire Archaeology Service for English Heritage and The National Trust.
- Spikins, P.A. 1998. 'Re-Thinking The Mesolithic Of Northern England: A Re-Evaluation Of Changes In Environment, Population And Settlement'. Unpublished Phd Thesis, University Of Cambridge.
- Steward, J.H. 1933. *Ethnography of the Owen's Valley Paiute*. University Of California Publications In American Archaeology And Ethnology, 33, 233-350.
- Steward, J.H. 1938. *Basin-Plateau Aboriginal Sociopolitical Groups*. Bureau Of American Ethnology Bulletin 120. Washington D.C.: Smithsonian Institution.
- Steward, J. H. 1941. Culture element distributions: XIII: Nevada Shoshoni. *University Of California Anthropological Records*, 4, 209-359.
- Stonehouse, W.P.B. 1987. Mesolithic Sites On The Pennine Watershed, *The Greater Manchester Archaeological Journal* Vol. 3, 5-17.
- Switsur, V. R. And R. M. Jacobi 1975. Radiocarbon Dates For The Pennine Mesolithic. *Nature* 256: 32-34.
- Switsur, V. R. And R. M. Jacobi 1979. A Radio-Carbon Chronology For The Early Post-Glacial Stone Industries Of England And Wales, In R. Berger And H. E. Suess (Eds.) *Radiocarbon Dating*, Berkeley And Los Angeles: University Of California Press. 41-68.
- Tanner, A. 1979. *Bringing Home Animals: Religious Ideology And Mode Of Production Of The Mistassini Cree Hunters*. C. Hurst. London.

Thomas, H. D. 1981. Complexity Among Great Basin Shoshoneans: The World's Least Affluent Hunter-Gatherers? *Senri Ethnological Series* 9: 19-51.

Thomson, D. 1949. *Economic Structure And Ceremonial Exchange In Arnhem Land*. Melbourne. Macmillian

Watanabe, H. 1968. Subsistence And Ecology Of Northern Food Gatherers With Special Reference To The Ainu, In R. B. Lee And I. De Vore (Eds.) *Man The Hunter*. Aldine Press. Chicago. 69-77.

Wobst, H. M. 1978. The Archaeo-Ethnology Of Hunter-Gatherers Or The Tryanny Of The Ethnographic Record In Archaeology. *American Antiquity* 43: 303-9.

Woodman, P. C. 1985. *Excavations At Mount Sandel 1973-77*. Belfast. HmsO. Northern Ireland Archaeological Research Monograph 2.

Zvelebil, M. 1986. Mesolithic Prelude And Neolithic Revolution, In M. Zvelebil (Ed.), *Hunters In Transition: Mesolithic Societies And Their Transition To Farming*. Cambridge University Press. Cambridge. 5-15.

