Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway

Lisa Hodgetts*

Explorations of Stone Age diversity take another step forward with this study of a group of neighbouring sites in Arctic Norway. While all are situated around a fjord, and only a few kilometres apart, the faunal assemblage shows that some are seal specialists, while others hunt reindeer and others again ambush dolphins. Each was creating its own local environment, hunting territory and landscape, not defended but respected, with intimate connections between people and places.

Keywords: Norway, Younger Stone Age, faunal remains, reindeer, dolphins, seals, complexity, landscape, territory

Introduction

The faunal record represents an incomplete, imperfectly preserved, time-averaged record of the daily practices of multiple individuals. While its nature masks individual and short-term temporal variability, comparing patterns of faunal exploitation between dwellings and sites that are roughly contemporary can reveal variations in food procurement practised by different households or at different sites, and shed light on the ways in which landscape was perceived and created. The northern Norwegian example presented here demonstrates marked differences between patterns of faunal exploitation at different sites, which are clearly linked to localised environmental conditions and suggest that people occupying each site utilised restricted hunting territories. There is far greater diversity than might be expected between communities with a shared material culture that lived in relatively close proximity

* Department of Anthropology, Social Science Centre, University of Western Ontario, London ON, N6A 5C2, Canada

Received: 4 December 2008; Accepted: 30 January 2009; Revised: 31 March 2009

ANTiquity 84 (2010): 41–54

http://antiquity.ac.uk/ant/84/ant840041.htm

41
Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway

around a single fjord. This variability has implications for other cases in which archaeologists assume continuity of subsistence and other practices among hunter-gatherers from a single archaeological 'culture'.

Attempts to demonstrate the presence of 'complexity' (cf. Keeley 1988) based on the presence of traits such as high population density, a high degree of sedentism, hereditary social hierarchies and defended territorial boundaries are prevalent in the archaeological literature on the late Younger Stone Age (YSA) of northern Norway (Renouf 1989; Myrvoll 1992; Olsen 1994; Schanche 1994). This reflects a persistent assumption that the traits attributed to complex hunter-gatherers always co-occur; where one is demonstrated in the archaeological record, the others can be inferred (see also Rowley-Conwy 2001: 44; Jochim 2006: 80). However, archaeologists working on the north-west coast of the Americas have begun to disentangle the concepts of storage, sedentism, population growth and social differentiation (e.g. Moss & Erlandson 1995; Cannon & Yang 2006). They recognise that these traits need not necessarily be linked, and emphasise the importance of understanding the individual developmental histories of different groups.

In light of this critique and the limitations of the available archaeological data from northern Norway's late YSA (which are drawn from dwellings that do not reflect the full range of variation), I would like to step back from the complexity debate and take a bottom-up approach to the faunal evidence as an indicator of social life, including relationships within and between sites and the social construction of landscape. Scholars increasingly recognise the emergent character of landscape, viewing it as an ongoing process of interaction between people, other animals and the land (e.g. Tilley 1994; Ashmore & Knapp 1999; Ingold 2000). This approach replaces traditional distinctions between nature and culture, humans and environment with a more encompassing concept of landscape in which 'each component enfolds within its essence the totality of its relations with each and every other' (Ingold 2000: 191). Thus, archaeological faunal remains, a direct result of interactions between (at least some of) its human and animal components, should help to elucidate the processes that bring a landscape into being.

Prehistory of northern Norway

Many archaeologists working in northern Norway have argued for a high degree of sedentism and relatively high population density around 2000 BC, which they have linked with hierarchical social organisation (Renouf 1989; Olsen 1994; Schanche 1994). Other researchers have downplayed the degree of sedentism, emphasising inter- and intra-site variation in activities, extrapolating a lower population density from the available evidence and suggesting that social organisation was fluid and lacked formal hierarchies (Engelstad 1984; Helskog 1984; Johansen 1998). Both positions assume a connection between sedentism, population density and complexity. Only Hood (1995) has separated these elements, arguing on the basis of lithic and settlement evidence that, while these communities were semi-sedentary with relatively high population density, they lacked permanent social hierarchies that resulted in differential access to resources for individual group members.
The case study presented here is an analysis of faunal remains from the final 'Gressbakken phase' of the Younger Stone Age (5000-1800 cal BC) in Varangerfjord, north Norway (Figure 1). This phase, more than any other, has prompted interpretations of social complexity. It dates from approximately 2400-1800 cal BC and is characterised by a relatively high density of known sites, which concentrate primarily in coastal areas but are also known from the interior. It is also epitomised by a standardised dwelling form, the 'Gressbakken house', found as far west as the island of Sørøy and as far east as the Kola Peninsula in Russia. These dwellings are typically rectangular semi-subterranean structures with two rectangular stone-lined hearths along the long axis. In almost all cases, these houses are oriented parallel to contemporary shorelines, with an entrance passage facing the water and often with midden deposits outside the entrance and sometimes also at the rear of the dwelling (Simonsen 1961; Schanche 1994). Johansen (1998) pointed out that there is considerable variability in the house form in terms of size, shape, depth, number of hearths, number of entrances and amount of midden accumulation. There is clearly also variability in the seasonal occupation of the dwellings, with many scholars arguing for a relatively high degree of sedentism at some sites while acknowledging that the degree of sedentism doubtless varied spatially, from year to year, and over the longer term (c.f. Engelstad 1984;
Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway

Renouf 1989; Olsen 1994; Schanche 1994; Hood 1995). As outlined above, the debate about complexity in the region has centred more on establishing the presence or absence of factors (such as sedentism and population density) that are often associated with complexity, than on direct attempts to understand the nature of social life during the late YSA.

The sites

There are currently 39 known Gressbakken phase sites in Varangerfjord (Figure 1), and the number of house depressions on each ranges from 1 to 30. There are six sites that contain only one or two dwellings, five that contain more than ten, and the remainder contain between three and ten dwellings (Schanche 1994: 67). The sites cluster into two distinct groups, those in the inner fjord, and those along the many inlets of the south coast. There is strong evidence for a difference in the seasonal use of the two areas. The inner fjord sites have deeper house depressions, with far more extensive midden deposits and abundant artefacts. The most intensive occupation of these sites appears to have taken place during winter and spring, with winter migrants well-represented among the bird remains, cod (present year round, but most abundant in spring) the dominant fish species, and harp seals (spring migrants to the fjord) the predominant mammal. However, smaller proportions of summer migrants among the birds, summer fish such as saithe, and reindeer (which migrate through the area in spring and autumn) suggest continued occupation through the summer and autumn by at least some members of the residential group at some point in the life history of the dwellings (Engelstad 1984; Renouf 1989; Schanche 1994; Hodgetts 1999). At this time other group members may have ventured farther afield, establishing short-term camps to exploit seasonally available resources.

In the southern fjord, the majority of house depressions are shallower, with limited midden deposition and few artefacts. At such sites, the faunal assemblages are relatively small, but saithe, a summer fish, clearly dominates among the fish remains and there are no indications of winter occupation. There are also a number of sites in the southern fjord with deeper house depressions and more substantial middens. These sites contain a mix of cod and saithe in proportions that suggest fishing during the spring and summer or perhaps year round. They also contain an abundance of harp and juvenile ringed seals indicative of spring sealing, and summer migrants dominate among the birds (Schanche 1994; Hodgetts 1999).

The relationship between the inner fjord sites and the south fjord sites remains uncertain. Clearly, there appears to be a higher degree of sedentism at the inner fjord sites, with strong evidence of at least occasional year-round occupation. Most south fjord sites suggest shorter-term occupation during the spring and summer. These sites could represent different seasonal elements of a single settlement system. Alternatively, Schanche (1994: 165) has suggested that they may be elements of two separate settlement patterns, one involving relatively permanent occupation in the inner fjord, another involving seasonal transhumance between the south fjord and the interior. The two propositions need not be mutually exclusive - seasonal movements could well have taken place between the inner and south fjord, and between both and the interior. However, it appears that the majority of south fjord sites were used less intensively, if at all, in the winter months.
This analysis focuses on the mammal remains from excavated Gressbakken-type houses around Varangerfjord. The excavations were carried out by Povl Simonsen (1961) and Knut Odner (Simonsen 1963) in the 1950s and by Kjersti Schanche in the 1980s and 1990s (Schanche 1994). Excavations have tended to focus on larger, more ‘classic’ Gressbakken dwellings, and smaller dwellings that are less typical in form are unfortunately not represented in the sample. This clearly represents an important area for future work if we are to understand the full range of social interactions that constituted these communities. Despite these limitations, the available fauna can provide information about the food use of selected households within these communities. The faunal sample discussed here will include sites from both the inner fjord and south fjord when comparing patterns of faunal exploitation between households at individual sites. However, because of the clear differences in seasonal patterns of use in the two regions, only inner fjord sites are considered when comparing faunal exploitation at the site level in order to reduce the possibility that season of occupation is influencing the observed patterns. All excavated Gressbakken-type dwellings from Varangerfjord with identified mammal remains totalling over 100 NISP are included in this analysis. Six sites meet these criteria (Table 1). Of these, only two have faunal assemblages from multiple dwellings: Gressbakken Nedre Vest (henceforth ‘Gressbakken’), an inner fjord site with assemblages from three dwellings, and Høybukt, a south fjord site with assemblages from two dwellings. The charcoal-based radiocarbon dates from the analysed dwellings cluster between 2600 and 1400 cal BC at two sigmas (Figure 2). Although no dates are available for the Høybukt dwellings included in this analysis, the associated artefacts bear strong typological similarities with those from the dated dwellings and they can safely be assumed to fall within this range.

The faunal evidence

At all of the dwellings in the study sample, seals are the most numerous mammal, whilst reindeer and cetaceans (whales and dolphins) comprise smaller proportions of the assemblage. These three groups together comprise over 95% of all identified mammal remains from each dwelling. Their relative proportions are presented in Figure 3. There is considerable variability in the importance of cetaceans and reindeer in the assemblages, but it is notable that the three houses at Gressbakken are very similar to one another. At all of the other dwellings, whales and dolphins comprise less than 3% of the main identified
Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway

Atmospheric data from Reimer et al. (2004); OxCal v3.10 Bronk Ramsey (2005); cub r:5 sd:12 prob usp[chron]

<table>
<thead>
<tr>
<th>Location</th>
<th>Date (BP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bergeby 18 (TUa-266)</td>
<td>3665±95</td>
</tr>
<tr>
<td>Bergeby 18 (TUa-267)</td>
<td>3690±85</td>
</tr>
<tr>
<td>Bergeby 18 (T-9869)</td>
<td>3520±105</td>
</tr>
<tr>
<td>Karlebotn 1 (T-7743)</td>
<td>3390±110</td>
</tr>
<tr>
<td>Karlebotn 1 (T-7744)</td>
<td>3640±140</td>
</tr>
<tr>
<td>Advik B (T-2058)</td>
<td>3600±80</td>
</tr>
<tr>
<td>Gressbakken 3 (T-198)</td>
<td>3650±150</td>
</tr>
<tr>
<td>Gressbakken 4 (T-234)</td>
<td>3850±100</td>
</tr>
<tr>
<td>Kalkillebukta 17 (T-9861)</td>
<td>3655±50</td>
</tr>
</tbody>
</table>

![Figure 2. Charcoal-based radiocarbon dates from dwellings included in this analysis.](image)

![Figure 3. Relative importance of the main categories of mammal in the Varangerfjord assemblages.](image)
mammals, while at Gressbakken they account for 35 to 45%. These cetacean remains are overwhelmingly dominated by dolphins (white-beaked or Atlantic white-sided), with small numbers of bones from porpoise and small whales such as orca and pilot whale. The two dwellings at Høybukt are also very similar to one another, with over 97% seal and trace amounts of reindeer and cetaceans. There are no marked differences between the dwellings at Gressbakken or those at Høybukt in the relative importance of the main mammalian species.

There are, however, marked differences between the sites in terms of the proportions of the main categories of mammals. Among the inner fjord sites, Bergeby and Advik are similar to the south fjord sites in the strong dominance of seals (over 90% in all cases). They suggest a ‘normal’ pattern of mammalian exploitation in the inner fjord from which Gressbakken and Karlebotn deviate, the former based on the prevalence of cetaceans, and the latter based on the dominance of reindeer, which comprise 48% of the assemblage.

These differences can be explored further through a closer examination of seal exploitation patterns at the inner fjord sites (Figure 4; Advik is not included in this analysis because the assemblage contained fewer than 100 identified seal specimens). Harp seal is the dominant seal species at all three sites, but comprises considerably more of the assemblage at Karlebotn (91%) and Bergeby (88%) than at Gressbakken (60-64%). The Gressbakken dwellings contain much higher proportions of ringed seal and ‘other’ seals, which include bearded seal, harbour seal and hooded seal. Again, the three dwellings at Gressbakken closely resemble one another, and differ from the other inner fjord sites.

The age distribution of the two main seal species can also shed light on the hunting strategies employed at the inner fjord sites. They suggest very different patterns of exploitation for harp seals and ringed seals. Today, harp seals migrate into Varangerfjord in the spring, between March and June. Because harp seals give birth within a restricted period of the year, there are distinct age cohorts within the population at any given time. Among the White Sea breeding population, births peak between late February and mid-March. Two months later, when they can be found in Varangerfjord, there would be clusters of individuals of approximately 2 months of age (pups), 14 months (juveniles), 26 months etc. As the younger individuals are growing quickly, these age cohorts are visible in the body size of the animals and can be picked up using long bone measurements.

Figure 5 plots femur shaft depth against shaft breadth for harp seals (after Storå 2002) at the Gressbakken site. The distribution shows a clear break between a cluster of measurements in the lower left of the graph and the remaining points in the upper right. This gap reflects the seasonal absence of harp seals from Varangerfjord during the autumn and winter. The smaller measurements represent individuals in their first year of life (pups). The larger measurements include juveniles in at least their second year, and mature adults. By this age, growth has slowed so that it is no longer possible to identify single age cohorts in the measurement distribution. Clearly, adult harp seals outnumber pups at all of the inner fjord dwellings (Table 2). The margin by which adults dominate varies between the dwellings and, as these are relatively small samples, they should probably be viewed as an indication of the relative importance of the two age categories rather than absolute values.

Figure 6 presents the same femur measurements for ringed seal bones from Gressbakken. Ringed seals are found in seasonally or permanently ice-covered waters and their movements
Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway

Figure 4. Relative importance of identified seal species at inner fjord dwellings.

Figure 5. Harp seal femur shaft depth versus breadth at the Gressbakken site.
Table 2. Relative importance of juvenile versus adult seals based on femur measurements.

<table>
<thead>
<tr>
<th>Dwelling</th>
<th>Harp Seal</th>
<th></th>
<th>Ringed Seal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Juveniles</td>
<td>Adults</td>
<td>Juveniles</td>
<td>Adults</td>
</tr>
<tr>
<td>Gressbakken 3</td>
<td>7</td>
<td>16</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Gressbakken 4</td>
<td>3</td>
<td>30</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Gressbakken 5</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Karlebott 1</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Bergeby 18</td>
<td>6</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 6. Ringed seal femur shaft depth versus breadth at the Gressbakken site.

are dictated by the advance and retreat of the ice. The highest densities of breeding adults are found in areas with stable land-fast ice. Ringed seals are found in Varangerfjord in the largest numbers in winter and spring, from December/January to May. Like the harp seal femur measurements, the ringed seal data show a marked break in the distribution, which reflects the absence of these animals from the fjord in summer and autumn. There is a large cluster of young individuals, pups in their first year (lower left of the graph), with a smaller number of adults (upper right of the graph). The age distribution for ringed seals is the reverse of that observed for harp seals. At each inner fjord dwelling, pups outnumber adults by a factor of at least 2.5 (Table 2).

Discussion

A number of trends apparent in the faunal data can help to elucidate the social relationships that mediated subsistence strategies during the Gressbakken phase in Varangerfjord. The similarities observed between dwellings at the Gressbakken site and at Høybukt suggest that
these households, and likely others at each site, shared similar dietary practices. If there were
differences in the choices of prey and the success rates of the hunters comprising individual
households, these were balanced out by food sharing, at least between people occupying the
larger dwellings. These patterns could also be explained by communal hunting practices,
with households sharing equitably in the spoils. This trend suggests continuity between
the larger dwellings at individual sites in the hunting and consumption practices associated
with large mammals. The question of whether these patterns were also shared by the
occupants of the smaller dwellings remains an important avenue for future research.

Differences between the inner fjord sites in the relative importance of various mammalian
taxa further indicate that procurement practices were highly variable around the fjord, and
the preferred mammal foods were determined at the social level represented by the site.
As outlined below, these differences reflect the micro-environments in which the sites are
located, and may also be influenced by different seasonal emphasis in the occupation of the
sites. Whether or not season of occupation plays a role, the faunal data indicate that people
exploited relatively small hunting areas from each site.

Gressbakken and Karlebotn stand out from the other inner fjord sites in terms of the
representation of the main categories of mammal. The three dwellings at Gressbakken
contain markedly higher percentages of cetacean remains, mostly dolphins, than at any
other site. Renouf (1989: 210-11) suggested that the Gressbakken site was located adjacent
to an excellent natural dolphin trap. Four thousand years ago, the sea level of Varangerfjord
was approximately 12m higher than at present (Fletcher et al. 1993). The two small islands
immediately north-west of the site (Figure 7) would have been underwater at high tide,
but would have been slightly above water or just below the surface at low tide. Both white-
beaked and Atlantic white-sided dolphins are gregarious species, and large groups of these
animals could have been driven by hunters in boats between the shore and the shoals just
off Gressbakken and then dispatched. This interpretation is supported by the prevalence of
dolphin remains at the site of Angsnes, occupied during the period immediately following
the Gressbakken phase. Angsnes is located at the mouth of an inlet, which forms a natural
trap much like that at Gressbakken (Figure 1). There, dolphins comprise 23% of the
identified mammals, suggesting that at this site too, the occupants were capitalising on the
local geography to hunt dolphins (Renouf 1989: 212).

The faunal assemblages from Gressbakken are also distinct from others in the study sample
because of the higher proportions of ringed seal. Again, this probably relates to the site's
micro-environment. As the femur measurements clearly demonstrate, there was a strong
emphasis on hunting ringed seal pups versus adults at all of the investigated dwellings. The
dominance of pups indicates that ringed seal hunting took place in the spring, following
the March–April birthing season. There is a strong direct correlation between the number
of ringed seal pups and the quality of land-fast ice in a given area (McLaren 1962). Ice will
form first, be thickest and stay longest in shallow protected bays and inlets such as that at
Gressbakken (Figure 7). Thus, the higher proportions of ringed seal at Gressbakken likely
reflect a higher density of this species in the immediate environs of the site than at the other
inner fjord sites analysed here.

The prevalence of reindeer at Karlebotn can similarly be explained based on the site's
location. Today, only domestic reindeer herds kept by the Saami remain in the Varangerfjord

50
region. The Varanger Saami traditionally move their herds between wintering areas south of the fjord, around Lake Enare, and summering grounds on the Varanger Peninsula, north of the fjord. In moving between the two, they must pass through a fairly narrow corridor between the head of Varangerfjord and the Tana River to the west. Archaeological surveys have recorded numerous drive fences and pitfall traps in this corridor (Vorren 1975), indicating intensive prehistoric hunting of wild reindeer in the area and suggesting that the area between westernmost Varangerfjord and the Tana River was an important migration route both prior to domestication as well as afterwards. The Karlebotn site is perfectly situated to take advantage of the marine resources of the fjord as well as the reindeer migration, which concentrated large numbers of animals in the area immediately west of the site each spring and autumn.

The emphasis on dolphins at Gressbakken and reindeer at Karlebotn could potentially relate to different seasonal emphasis in the occupation of the two sites. Evidence from all of the inner fjord sites suggests that they were occupied intensively in the autumn through spring, with more sporadic use during the summer. However, the intensity of occupation during any given season may have varied from site to site and from year to year. If Gressbakken had a more intensive summer occupation than the other inner fjord sites, it could result in higher proportions of dolphins, likely hunted in open water during the summer. While all...
the sites have clear evidence of spring occupation in the strong representation of harp seal remains, Karlebotn may have been more intensively occupied during the autumn reindeer migration than the other inner fjord sites, which would account for its unusually high proportions of reindeer bone. Such potential differences in the intensity of occupation at different times of year are difficult to tease out based on the available faunal evidence. However, whether or not such differences help to account for the observed patterns of faunal exploitation, the relative proportions of mammalian taxa at each site appear to reflect localised differences in the availability of these species. It seems that people exploited very circumscribed hunting territories from each site, which may further imply that systems of land tenure were in place.

Conclusion

Archaeologists have often been quick to equate high population densities and a high degree of sedentism with marked territoriality and social complexity among hunter-gatherers. Despite the previous focus on questions of complexity in the north Norwegian YSA, I have set aside the issue in an attempt to reconstruct the food-centred interactions between households and sites. This approach suggested close hunting and food sharing relationships between the occupants of the excavated dwellings on any given site. It also suggested that people at individual sites concentrated on locally available resources, implying territorial behaviour, though not necessarily in the sense of strongly defended bounded areas, as the term often implies when used in discussions of complexity.

Ingold (1987) provides a more nuanced definition of territory. He sees it as a subdivision of the earth’s surface with a (sometimes blurred) territorial boundary and argues that, although a group may control a territory, it cannot refuse anyone requesting permission to enter. Thus, because access is governed through a process of requesting and granting permission, territories function to encourage the exchange of ‘information about the locations of individuals and resources’ (Ingold 1987: 146) so that visitors and residents do not come into unnecessary competition for food. The very distinct patterns of faunal exploitation displayed at the Varangerfjord sites suggest that while the late YSA occupants of the region may not have actively defended their territories, nor did they frequently engage in cross-boundary hunting activities.

The existence in Varangerfjord of small territories and limited cross-boundary hunting suggests that individuals and groups had very distinct senses of place within the broader landscape that they shared; different areas belonged to different groups. Territorial practices likely varied as people moved through and occupied different components of their landscape at different times of year, and from year to year. For example, when occupying other regions, territories may have been larger with a greater degree of overlap and increased cross-boundary travel for hunting and other activities.

Ingold further differentiates between territoriality and land tenure, maintaining that tenure ‘is about the ways in which a resource locale is worked or bound into the biography of a subject, or into the developmental trajectory of those groups, domestic or otherwise, of which he [or she] is a member’ (1987: 137). He points out that among hunter-gatherers, people belong to the land as much as land belongs to people. In Younger Stone Age Varangerfjord,
individuals and communities would have been connected to places, paths and elements of the landscape within their territories, through stories and memories acquired over individual lifetimes and passed from generation to generation (cf. Basso 1996; Zedeño 2008).

The subsistence diversity illustrated in inner Varangerfjord during the late YSA is more marked than we might expect among local groups from a single sub-phase of an archaeological culture who occupied similar environments within a limited area. Analogous variability is increasingly being documented in the regional archaeological records from places as diverse as the north-west coast of North America during the Holocene (cf. Orchard & Clark 2005; Cannon & Yang 2006; McMillan et al. 2008), and Europe and the Near East during the Palaeolithic (Dobres 1999; Kuhn et al. 2009). It should serve as a reminder that our sequences of archaeological cultures and phases, in emphasising similarities between sites, have led to a tendency to overlook much of the variability that they contain. We must also remember that, though groups may have dwelled in the same landscapes, individuals and communities participated differentially in their creation, and mapped meaning onto particular places in different ways.

Acknowledgements
Anne Karin Hufthammer and the late Håkon Olsen of the Zoological Museum in Bergen completed the initial identifications that greatly facilitated my own analysis of this faunal material. I am grateful to Dr. Hufthammer who granted me access to the faunal collections and Olsen’s unpublished notes and manuscripts. Thanks also to Peter Rowley-Conwy for his guidance throughout the PhD on which this paper is based. Edward Eastaugh created Figures 1, 2 and 7 and provided valuable comments on earlier drafts. Charlotte Damm, Priscilla Renouf, Martin Carver and an anonymous reviewer all made suggestions that greatly improved the final paper. Greg Monks and Charlotte Damm were very helpful in pointing me to relevant literature. This research was supported by doctoral fellowships from the Commonwealth Scholarship Commission and the Social Sciences and Humanities Research Council of Canada, a Sir James Lougheed Award of Distinction from the Alberta Heritage Scholarship Commission, and the Department of Archaeology at Durham University.

References
Subsistence diversity in the Younger Stone Age landscape of Varangerfjord, northern Norway


